

BIRDS AND BUTTERFLY SURVEY

PROGRAM TITLE: Survey of Birds and Butterfly visiting the campus.

DATE: 06/12/2023 to 09/12/2023.

ORGANIZED BY: Science and Nature Club.

STUDENTS INVOLVED:

1. Miss Shreedevi A S – I B.Sc
2. Miss Nirma V – I B.Sc
3. Miss Kshama – I B.Sc
4. Miss Daksha V Jain – I B.Sc
5. Miss Nimra Muskaan Khan – I B.Sc

VENUE: College Campus.

OBJECTIVE:The objective of the survey is to document the variety of birds and butterflies present within the campus environment.

PROGRAM DETAILS: A survey was conducted over a period of four days from 6th of December,2023 to 9th of December,2023 by the above mentioned students guided by Miss Shreedevi A S, I B.Sc(BtBM) on Birds and Butterflies visiting our campus.

OUTCOME:The observation and data collection during this period shed light on the vibrant wildlife visiting our campus.



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MMK & SDM MMV

*A Report on Survey of Birds
and Butterflies of MMK &
SDM MMV*

Nature and Science club

Created By: Shreedevi A.S, I BSc. BMBT

2023


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Kishorinagar, Mysore-575 001

MYSORE, KARNATAKA

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Summary

Duration:

The survey was conducted from 6th December, 2023 to 9th December, 2023 [four-days of survey]

Time:

- 6th December, 2023 - 9:15 am to 11:15 am
- 7th December, 2023 - 11:15 am to 1:00 pm
- 8th December, 2023 - 2: 25 pm to 3:05 pm
- 9th December, 2023 - 1:00 pm to 2:30 pm

Weather:

- 6th December, 2023 – Sunny, slightly windy and slightly busy
- 7th December, 2023 – Cloudy, slightly windy and pleasantly bright
- 8th December, 2023 – Partly cloudy, slightly windy and bright
- 9th December, 2023 – Sunny, pleasantly bright and humid

Terrain:

The terrain found in the campus of MMK & SDM MMV has a mixture of grassland, pond and forest ecosystem. There is a Nala which surrounds the campus and attracts some of the water birds and a lot of potted flowering and non-flowering plants which attract some of the butterflies and some of the smaller sized birds. There are large trees surrounding the campus which also attract some of the birds and the large trees include, African Tulip and Pongamia.





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Abstract:

In the course of 4 days of the survey, we were able to find 23 species of butterflies and 26 species of birds including water birds in our campus.

Present status of the campus:

- Untamed dry grassland outside the building for extra space and volleyball court
- Slightly dense tree concentration beside the campus
- Nala filled with flowing filthy water surrounding the campus
- Empty and untamed grassland with red soil near the canteen and parking area
- Untamed wild species of parasitic plants near the Nala
- No nesting of birds found
- Small gardens inside and bordering the building
- Visitor birds and butterflies observed
- A few stray dogs and cows observed
- Busy with vehicles as there is a main road and a circle in front of the campus

Probable reasons affecting the diversity and density :

- Non-availability of favoured depths. Change in the habitat condition –water quality affecting the primary producers and consumers and intern feed to the birds
- Extensive human traffic causing disturbance for foraging, roosting and breeding
- Secluded nesting and roosting sites are exposed to the humans and stray and pet dogs
- Lot of human activity and disturbances
- Distributed parking of vehicles

Ideas for improving birds and butterfly status:

- We can install bird baths for birds to cool down in summers as Mysuru is a warm city
- We can build a pond or a small lake to enhance the richness of ecosystem and diversity in species
- We can install a butterfly garden by planting host plants and nectaring plants of rare species of butterflies to enhance the frequency of butterfly spotting
- We can install more gardens with fruit-bearing plants and trees to attract more birds
- Using of pesticides and insecticides is harmful to host and nectar plants and directly affects the butterfly life cycle and also the macro habitats of other variety insects
- Proper distribution of parking for space management
- Installation of awareness and warning boards and dustbins for proper waste disposal

This survey was initiated and encouraged by Ms. Niharika Jain, Co-ordinator of Nature and Science Club, MMK & SDM MMV


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An Introduction to the Butterflies:

Butterflies (*Rhopalocera*) are insects that have large, often brightly coloured wings, and a conspicuous, fluttering flight. The group comprises the super families *Hedyloidea* and *Papilionoidea*. The oldest butterfly fossils have been dated to the Paleocene, about 56 million years ago, though they may have originated earlier. Butterflies have a four-stage life cycle, as like other holometabolan insects they undergo complete metamorphosis. Winged adults lay eggs on the food plant on which their larvae, known as caterpillars, will feed. The caterpillars grow, sometimes very rapidly, and when fully developed, pupate in a chrysalis. When metamorphosis is complete, the pupal skin splits, the adult insect climbs out, expands its wings to dry, and flies off.

Butterflies feed primarily on nectar from flowers. Some also derive nourishment from pollen, tree sap, rotting fruit, dung, decaying flesh, and dissolved minerals in wet sand or dirt. Butterflies are important as pollinators for some species of plants. In general, they do not carry as much pollen load as bees, but they are capable of moving pollen over greater distances. Flower constancy has been observed for at least one species of butterfly.

Adult butterflies consume only liquids, ingested through the proboscis. They sip water from damp patches for hydration and feed on nectar from flowers, from which they obtain sugars for energy, and sodium and other minerals vital for reproduction. Several species of butterflies need more sodium than that provided by nectar and are attracted by sodium in salt; they sometimes land on people, attracted by the salt in human sweat. Some butterflies also visit dung and scavenge rotting fruit or carcasses to obtain minerals and nutrients. In many species, this mud-puddling behaviour is restricted to the males, and studies have suggested that the nutrients collected may be provided as a nuptial gift, along with the spermatophore, during mating

Present Status of Butterflies:

We have noticed 23 species of butterflies representing 5 families.

Abundance: VC - Very Common, CM - Common, UC - Uncommon, R - Rare, VR - Very Rare


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List of Butterflies found in the campus of MMK & SDM MMV:

Sl.No.	Common Name	Scientific Name	Abundance
<i>Papilionidae (Swallowtails)</i>			
1.	Common Jay	<i>Graphium doson</i>	VC
2.	Tailed Jay	<i>Graphium agamemnon</i>	CM
3.	Common Mormon	<i>Papilio polytes</i>	CM
4.	Blue Mormon	<i>Papilio polymnestor</i>	UC
<i>Hesperiidae (Skippers)</i>			
1.	Common Banded Awl	<i>Hasora chromus</i>	UC
2.	Smaller Dartlet	<i>Oriens goloides</i>	UC
<i>Pieridae (Whites and Yellows)</i>			
1.	Mottled Emmigrant	<i>Catopsilla pyranthe</i>	VC
2.	Lemon Emigrant	<i>Catopsilla pomona</i>	VC
3.	Three-spot Grass Yellow	<i>Eurema blanda</i>	CM
4.	Spotless Grass Yellow	<i>Eurema laeta</i>	CM
5.	Yellow Orange-tip	<i>Ixias pyrene</i>	UC
6.	Indian Jezebel	<i>Delias eucharis</i>	VC
<i>Nymphalidae (Brush-foots)</i>			
1.	Plain Tiger	<i>Danatus chrysippus</i>	CM
2.	Glassy Tiger	<i>Parantica anglea</i>	CM
3.	Blue Tiger	<i>Trumala limniace</i>	CM
4.	Common Crow	<i>Euploea core</i>	CM
5.	Tawny Coaster	<i>Acraea terpsicore</i>	CM
6.	Great Eggfly	<i>Hypolimnas bolina</i>	UC
7.	Chocolate Pansy	<i>Junonia iphita</i>	VC
8.	Lemon Pansy	<i>Junonia lemonias</i>	VC


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9.	Common Evening Brown	<i>Melanitis leda</i>	CM
10.	Common Four-ring	<i>Ypthima huebneri</i>	CM
<i>Lycaenidae (Blues and Hairstreaks)</i>			
1.	Dark Grass Blue	<i>Zizeera karsandra</i>	VC

Pictures of some of the butterfly species found:



Three-spot Grass Yellow [Euremablanda] (DSF)

Size: Medium (4.0 to 4.5 cm)

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 Kishida, Mysore, Mysore-57 3 000



Dark Grass Blue [Zizeera karsandra]

Size: Small (1.8 to 2.4 cm)



Chocolate Pansy [Junonia iphita]

Size: Medium (5.5 to 8cm)


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Tailed Jay [Graphium agamemnon]

Size: Big (8.5 to 10cm)



Great Eggfly [Hypolimnas bolina] (Male)

Size: Big (7 to 11cm)


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Spotless Grass Yellow [Eurema laeta] (WSF)

Size: Medium (4 to 5 cm)



Common Evening Brown [Melanitis leda] (WSF)

Size: Medium (6 to 8cm)


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Tawny Coaster [Acraea terpsicore]

Size: Medium (5 to 6.5cm)



Indian Jezebel [Delias eucharis] (Bird-hit specimen)

Size: Medium (6.6 to 8.3 cm)


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Lemon Pancy [Junonia lemonias]

Size: Medium (4 to 6cm)


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An Introduction to the Birds:

Birds are a group of warm-blooded vertebrates constituting the class Aves, characterized by feathers, toothless beaked jaws, the laying of hard-shelled eggs, a high metabolic rate, a four-chambered heart, and a strong yet lightweight skeleton. Wings, which are modified forelimbs, gave birds the ability to fly, although further evolution has led to the loss of flight in some birds, including ratites, penguins, and diverse endemic island species. The digestive and respiratory systems of birds are also uniquely adapted for flight. Some bird species of aquatic environments, particularly seabirds and some water birds have further evolved for swimming. The study of birds is called ornithology. Birds are feathered theropod dinosaurs and constitute the only known living dinosaurs. Likewise, birds are considered reptiles in the modern cladistic sense of the term, and their closest living relatives are the crocodilians. Birds are descendants of the primitive avialans (whose members include Archaeopteryx) which first appeared during the Late Jurassic.

Birds' diets are varied and often include nectar, fruit, plants, seeds, carrion, and various small animals, including other birds. The digestive system of birds is unique, with a crop for storage and a gizzard that contains swallowed stones for grinding food to compensate for the lack of teeth. Some species such as pigeons and some psittacoses species do not have a gallbladder. Most birds are highly adapted for rapid digestion to aid with flight. Some migratory birds have adapted to use protein stored in many parts of their bodies, including protein from the intestines, as additional energy during migration

Present Status of Birds:

We have noticed 26 species of birds including water birds.

Abundance: VC - Very Common, CM - Common, UC - Uncommon, R - Rare, VR - Very Rare



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List of Birds found in the campus of MMK & SDM MMV:

Sl. No.	Common Name	Scientific Name	Abundance
1.	Common Myna	<i>Acridotherestrictis</i>	VC
2.	Barn Swallow	<i>Hirundorustica</i>	VC
3.	Red-vented Bulbul	<i>Pycnonotuscafer</i>	VC
4.	Red-whiskered Bulbul	<i>Pycnonotusjocosus</i>	VC
5.	Jungle Prinia	<i>Priniasylvatica</i>	CM
6.	Jungle Babbler	<i>Turdoidesstriata</i>	CM
7.	White-cheeked Barbet	<i>Psilopogonviridis</i>	CM
8.	Purple-rumped Sunbird	<i>Leptocomazeylonica</i>	CM
9.	Oriental Magpie Robin	<i>Copsychussaularis</i>	CM
10.	Grey Wagtail	<i>Motacillacinerea</i>	CM
11.	Great Tit	<i>Parus major stupae</i>	UC
12.	White-spotted Fantail	<i>Rhipiduraalbogularis</i>	UC
13.	Rose-ringed Parakeet	<i>Psittaculakrameri</i>	VC
14.	Common Pigeon	<i>Columba livia</i>	VC

15.	<i>Asian Koel</i>	<i>Eudynamys scolopaceus</i>	UC
16.	<i>Indian Grey Hornbill</i>	<i>Ocyroceros birostris</i>	UC
17.	<i>Black Kite</i>	<i>Milvus migrans</i>	VC
18.	<i>Black-eared Kite</i>	<i>Milvus migrans lineatus</i>	CM
19.	<i>Brahminy Kite</i>	<i>Haliastur Indus</i>	CM
20.	<i>Marsh Harrier</i>	<i>Circus aeruginosus</i>	UC
21.	<i>Indian Pond Heron</i>	<i>Ardeola grayii</i>	VC
22.	<i>Little Cormorant</i>	<i>Microcarboniger</i>	CM
23.	<i>Cattle Egret</i>	<i>Bubulus ibis</i>	VC
24.	<i>Little Egret</i>	<i>Egretta garzetta</i>	VC
25.	<i>Black-headed Ibis</i>	<i>Threskiornis melanocephalus</i>	VC
26.	<i>Red-naped Ibis</i>	<i>Pseudibis papillosa</i>	VC

Pictures of some of the bird species found:



Cattle Egret [Bubulus ibis]

Size: 51 cm

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Indian Pond Heron [Ardeolagrarii]

Size: 46cm



Black Kite [Milvus migrans]

Size: 60cm

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Brahminy Kite [Haliastur Indus]

Size: 48cm



Black-headed Ibis [Threskiornismelanocephalus]

Size: 75cm


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*Indian Grey Hornbill [Ocyrosbirostris]
Size: 50cm*



*White-cheeked Barbet [Psilopogonviridis]
Size: 23cm*


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Black-eared Kite [Milvus migrans lineatus]

Size: 60cm



Common Pigeon [Columbalivia]

Size: 34cm


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Grey Wagtail [Motacillanerea]
Size: 19cm



Little Egret [Egretta garzetta]
Size: 63cm


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White-spotted Fantail [Rhipidura albogularis]

Size: 17cm



Great Tit [Parus major stupae]

Size: 14cm


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Rose-ringed Parakeet [Psittaculakrameri]

Size: 42cm



Purple-rumped Sunbird [Leptocomazeylonica]

Size: 10cm


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Red-whiskered Bulbul [Pycnonotus jocosus]

Size: 20cm



Asian Koel [Eudynamis scolopacea]

Size: 40cm


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Red-naped Ibis [*Pseudibispapillosa*]

Size: 73cm

Conclusion:

There might be a few unnoticed butterfly species and bird species that might have been missed in our count but concluding the overall survey, our campus has a reasonable amount of butterfly species and bird species which denotes a good status of environment and biodiversity, considering the urbanization of the area.

Although, we found some uncommon species, we need to do more surveys to list the rare species that can be found and give an accurate report of the biodiversity of our campus.

We need to conduct biodiversity survey to enhance the environment of our college in terms of building a small lake or a pond to have a rich ecosystem as well as planting host plants, nectaring plants and fruit-bearing trees to improve the soil quality and attract more birds and butterflies species.

Nature and Science club members who were involved in the survey:

This survey was initiated and encouraged by Ms. Niharika Jain, Co-ordinator of Nature and Science Club,
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