

# Sree Narayana Mangalam College Maliankara

*(Affiliated to Mahatma Gandhi University, Kottayam)*



## BIODIVERSITY AUDIT REPORT

Academic Year -2022-23

By

Internal Quality Assurance Cell

SNM College, Maliankara



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# BIODIVERSITY AUDIT

## INTRODUCTION

Biodiversity is the variability among living organisms from all sources including, 'inter alia', terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. There is a loss of biodiversity due to natural and anthropogenic factors (Chaurasia and Kumari, 2015).

The conservation of biodiversity constitutes an essential aspect of sustainable development worldwide. It is biodiversity that basically determines the structure and function of all ecosystems. It is the foundation on which the future well-being of human society rests. It has a powerful role in building sustainable human societies.

Biodiversity is so immense and staggering that it is humanly impossible to analyse and understand it through the study of individual organization. So organisms are studied in groups. Thus the analysis of biodiversity entails the orderly arrangement and systematic grouping of organisms. The scientific study of the kinds, diversity and interrelationships of organisms is known as systematics.

Angiosperms are the most numerous, highly diverse and successful extant group of higher plants in tropics. Floristic diversity studies are of great importance in the development of botanical science, particularly plant taxonomy as it helps not only in the detailed documentation of plant diversity in a particular area, but also in collecting details with respect to the various conservation approaches for protecting the area.

Flora is the breathing spores of ecosystem that holds the surface of earth to its heart. It is the green mirror of the ecosystem that absorbs toxic gases (Theertha *et al*2021). Flora regulate the flow of water and the extent of erosion worldwide, and profoundly affect local climates.

A warm-humid tropical climate with perennial water resource and nutrient rich soil has attributed to the diverse vegetation with enormous species diversity in Kerala. The varied eco-climatic conditions coupled with unique geological and cultural features have contributed to an amazing diversity of habit (Lekshmi *et al.*,2022). The study helps to envisage the richness of biodiversity.

Angiosperms have well-differentiated root, stem and leaves and also have well developed vascular tissue. These show three different forms and habit ie, herb, shrub and tree. Herbs are the small sized woody bushy plants having branches arising near the base. Shrubs are medium sized woody bushy plants having branches arising near the base. Trees are the large sized hardly woody plants with distinct trunk having branches arising near the apex (Gopan *et al.*,2017).

In this work, study area is campus of Sree Narayana Mangalam College, Maliankara. It has a wide variety of angiosperms all around. Angiosperms collected were classified on the basis of Bentham and Hooker's system of classification. Dicotyledons are divided into three sub-classes, namely Polypetalae, Gamopetalae and Monochlamydae.

In Gamopetalae, flowers are with two whorls of perianth of which the inner whorl is united or gamopetalous. It is further divided into three series namely Inferae, Heteromerae and Bicarpellatae. Each series is further divided into many orders and families.

Gamopetalous families with an inferior ovary form the series Inferae, those with superior ovary and gynoecium consisting of two carpels form the series Bicarpellatae, while the remaining ones in which the ovary is superior and the gynoecium consists of more than two carpels constitute an intermediate group called Heteromerae.

In Polypetalae, petals are not fused. It is further divided in to three series namely, Thalamiflorae, Disciflorae and Calyciflorae. Monocots comprising seed plants that produce an embryo with a single cotyledon and parallel-veined leaves. Monocots are further divided

into seven series namely, Microspermae, Epygynae, Coronariae, Calycinae, Nudiflorae, Apocarpae, Glumaceae.

In Monochlamydae, flowers are mostly with a single whorl of perianth. Monochlamydae consists of eight series which are directly divided into families. Perianth, calyx and corolla is not distinguishable. Those collected plants were divided on the nature of habit and then dichotomous key was prepared. Binomial name of each plant along with author citation has been noted.

Protection of environment and life supporting systems are interwoven with the conservation and protection of nature and natural resources. Nowadays, devastation of flora is common. To some extent, it might be due to any environmental conditions prevailing in that area. This present study helps to know whether plants are becoming extinct or any alien species gets invaded there in future. Also plants can be conserved in a better way based on taxonomic classification.

Sree Narayana Mangalam College, Maliankara is situated in Paravur taluk, Ernakulam district, Kerala. Maliankara is located in 10.18°N, 76.19°E coordinates. It is a village located near Moothakunnam. It is also a boat ride away from Munambam and accessible by bridge to Pallipuram of Vypin island. Six kilometres apart from Maliankara is the Cherai beach. Along with Munambam it forms the north-west corner of Ernakulam district where the Periyar river ends in Arabian sea. It is located west of Kottuvallikadu and east of Pallipuram. Towards the north it is separated by Periyar river to Azhicode which is in Thrissur district. The study area of the present work is the campus of this college which covers an area of 25 acres. Study was conducted in order to know about the diversity of Gamopetalae and Monochlamydae in the campus. The SNM College is blessed with variety of angiosperms.

The collections were carried out extensively during months, January-March. Bentham and Hooker's system of classification was followed and divided class dicots into subclass Polypetalae, Gamopetalae and Monochlamydae. The collected Gamopetalae were identified by using 'The Flora Of Presidency Of Madras', Volume 2 and 3 by J.S Gamble and Fischer and handbook named 'Biodiversity documentation for Kerala, Part 6: Flowering plants' by Dr.N. Sasidharan.

The present study conducted in the campus has resulted in the identification of 129 angiosperms.

### **Gamopetalae**

Table 1: List of plants

<b>Sl. No.</b>	<b>Scientific name</b>	<b>Family</b>	<b>Common name</b>	<b>Habit</b>
1.	<i>Oldenlandia diffusa</i> , Roxb.	Rubiaceae	Snake- needle grass	Herb
2.	<i>Ixora coccinea</i> , L.	Rubiaceae	Scarlet jungle flame	Shrub

3.	<i>Morinda tinctoria</i> , Roxb.	Rubiaceae	Indian mulberry	Tree
4.	<i>Borreria ocymoides</i> , DC.	Rubiaceae	Purple leaved button weed	Herb
5.	<i>Centratherum anthelminticum</i> , O. Kze.	Compositae	Black cumin	Herb
6.	<i>Vernonia elaeagnifolia</i> , DC.	Compositae	Curtain creeper	Shrub
7.	<i>Ageratum conyzoides</i> , L.	Compositae	White weed	Herb
8.	<i>Eclipta alba</i> , Hassk.	Compositae	False daisy	Herb
9.	<i>Wedelia calendulacea</i> , Less.	Compositae	Singapore daisy	Herb
10.	<i>Spilanthes acmella</i> , Murr.	Compositae	Toothache plant	Herb
11.	<i>Tridax procumbens</i> , L.	Compositae	Coat buttons	Herb
12.	<i>Emilia sonchifolia</i> , DC.	Compositae	Lilac tassel flower	Herb
13.	<i>Cosmos sulphureus</i> , Cav.	Compositae	Garden cosmos	Herb
14.	<i>Mikania micrantha</i> , Kunth.	Compositae	Chinese creeper	Herb
15.	<i>Tagetes erecta</i> , L.	Compositae	Big marigold	Herb
16.	<i>Mimusops elengi</i> , L.	Sapotaceae	Spanish cherry	Tree
17.	<i>Achras sapota</i> , L.	Sapotaceae	Sapodilla	Tree
18.	<i>Jasminum auriculatum</i> , Vahl.	Oleaceae	Indian jasmine	Shrub
19.	<i>Allamanda cathartica</i> , L.	Apocynaceae	Golden trumpet	Shrub
20.	<i>Plumeria pudica</i> , Jacq.	Apocynaceae	Nosegay	Shrub
21.	<i>Lochnera rosea</i> , Reichb.	Apocynaceae	Rose perewinkle	Herb
22.	<i>Alstonia scholaris</i> , R.Br.	Apocynaceae	Devil tree	Tree
23.	<i>Adenium obesum</i> , (Forssk).Roem & Schult	Apocynaceae	Desert rose	Shrub
24.	<i>Ipomoea cairica</i> , Sweet.	Convolvulaceae	Railway creeper	Shrub
25.	<i>Solanum torvum</i> , Sw.	Solanaceae	Devil's fig	Shrub
26.	<i>Physalis minima</i> , L.	Solanaceae	Ground cherry	Shrub
27.	<i>Scoparia dulcis</i> , L.	Scrophulariaceae	Licorice weed	Herb
28.	<i>Ruellia tuberosa</i> , L.	Acanthaceae	Wild petunias	Herb
29.	<i>Crossandra undulaefolia</i> , Salisb.	Acanthaceae	Fire cracker flower	Shrub
30.	<i>Asystasia gangetica</i> , T.And.	Acanthaceae	Chinese violet	Herb
31.	<i>Pseuderanthemum malabaricum</i> , Gamb.	Acanthaceae	False eranthemum	Shrub
32.	<i>Lantana aculeata</i> , L.	Verbenaceae	Wild sage	Shrub
33.	<i>Lippia nodiflora</i> , Mich.	Verbenaceae	Matchweed	Herb
34.	<i>Stachytarpheta indica</i> , Vahl.	Verbenaceae	Indian snakeweed	Herb
35.	<i>Tectona grandis</i> , L.f.	Verbenaceae	Teak	Tree

36.	<i>Clerodendron infortunatum</i> , L.	Verbenaceae	Bhat	Shrub
37.	<i>Ocimum sanctum</i> , L.	Lamiaceae	Tulsi	Herb
38.	<i>Coleus amboinicus</i> , Lour.	Lamiaceae	Mexican mint	Herb
39.	<i>Leucas aspera</i> , Spr.	Lamiaceae	Thumba	Herb
40.	<i>Salvia splendens</i> , Sellow ex Roem. & Schult	Lamiaceae	Garden sage	Shrub

## Polypetalae

Table 2: List of plants

Sl. No	SCIENTIFIC NAME	FAMILY	COMMON NAME	HABIT
1.	<i>Polyalthia longifolia</i> , Linn.	Annonaceae	False asoka	Tree
2.	<i>Garcinia cambogia</i> ,Linn.	Clusiaceae	Malabar tamarind	Tree
3.	<i>Sidaaccuta</i> , Barum.	Malvaceae	Teaweed	Shrub
4.	<i>Hibiscus rosa-sinensis</i> , Linn.	Malvaceae	Chinese hibiscus	Shrub
5.	<i>Hibiscus abelmoscus</i> , L.	Malvaceae	Tropical jewel hibiscus	Shrub
6.	<i>Thespesia populnea</i> ,Cav.	Malvaceae	Indian tulip tree	Tree
7.	<i>Kleinhovia hospita</i> , L.	Malvaceae	Guest tree	Tree
8.	<i>Muntingia calabura</i>	Muntingiaceae	Malayan cherry	Tree
9.	<i>Biophytum sensitivum</i> , L.	Geraniaceae	Little tree plant	Herb
10.	<i>Aegle marmelos</i> , Corr.	Rutaceae	Bael	Tree
11.	<i>Murrayakönigii</i> , Spreng.	Rutaceae	Curry leaf tree	Shrub
12.	<i>Kalanchoe blossfeldiana</i> , Poelln.	Crassulaceae	Christmas kalanchoe	Tree
13.	<i>Swietenia mahagoni</i> , Jacq.	Meliaceae	Mahagoni	Tree
14.	<i>Mangifera indica</i> , Linn.	Anacardiaceae	Mango Tree	Tree
15.	<i>Dendrolobium umbelletum</i> ,(L).Benth	Caesalpiniaceae	Horse Bush	Tree
16.	<i>Bauhinia purpurea</i> , Linn.	Caesalpiniaceae	Purple Orchid Tree	Tree
17.	<i>Tamarindus indica</i> ,Linn.	Caesalpiniaceae	Tamarind Tree	Tree

18.	<i>Peltophorum guinansis</i> , Benth.	Caesalpiniaceae	Copperpod	Tree
19.	<i>Cassia fistula</i> , Linn.	Caesalpiniaceae	Golden Shower Tree	Tree
20.	<i>Cassia roxburghii</i> ,DC.	Caesalpiniaceae	Ceylon senna	Tree
21.	<i>Samaneasaman</i> , (Jacq.)Merr	Caesalpiniaceae	Monkey pod Tree	Tree
22.	<i>Saracaindica</i> , Linn.	Caesalpiniaceae	Asoka Tree	Herb
23.	<i>Mimosapudica</i> , Linn.	Mimosaceae	Sensitive Tree	Shrub
24.	<i>Calliandrahaematocephala</i> , Hassk.	Mimosaceae	Red Powder Puff	Tree
25.	<i>Acaciamangium</i> , Willd.	Mimosaceae	Mangium Tree	Tree
26.	<i>Clitoriaternetea</i> , Linn.	Papilionaceae	Butterfly pea	Herb
27.	<i>Pureriatuberosa</i> , DC.	Papilionaceae	Indian kudzu	shrub
28.	<i>Crotalariastraita</i> , DC.	Papilionaceae	Rattlebox	shrub
29.	<i>Crotalariaretusa</i> , Linn.	Papilionaceae	Rattleweed	Herb
30.	<i>Arachisglabrata</i> , Linn.	Papilionaceae	Peanut grass	Tree
31.	<i>Ailanthus malabarica</i>	Simaroubaceae	Paradise tree	shrub
32.	<i>Rosaleschenaultia</i> , W. & A.	Rosaceae	Rose	Tree
33.	<i>Terminalliacatappa</i> , Linn .	Combretaceae	Indian-almond Tree	Tree
34.	<i>Pimentadioica</i> , (L.) Merr.	Myrtaceae	Allspice Plant	Tree
35.	<i>Eucalyptusglobulous</i> , Labil.	Myrtaceae	Tasmanian bue gum	Tree
36.	<i>Syzygiumjambolanum</i> , DC.	Myrtaceae	Indian black berry	Tree
37.	<i>Psidiumguajava</i> ,Linn.	Myrtaceae	Guava tree	Tree
38.	<i>Couropita guianensis</i> ,Aubl.	Lecythidaceae	Cannanball tree	Tree
39.	<i>Lagerstromiaflos-reginae</i> , L.	Lythraceae	Pride of India	shrub
40.	<i>Turneraulmifolia</i> , L.	Passifloraceae	Holy Rose	shrub
41.	<i>Begoniasparreana</i> , L.B.Sn. & Wassh .	Begoniaceae	begonia	shrub
42.	<i>Cucumismaderaspatanus</i> ,Linn.	Cucubitaceae	Madras Pea Pumpkin.	Herb
43.	<i>Centellaasiatica</i> , Urban.	Umbelliferae	Asiatic pennywort	Herb

### Monochlamydae

Table 3: List of plants

Sl No.	Scientific name	Family	Common name	Habit
1.	<i>Bougainvillea glabra</i> , Choisy	Nyctaginaceae	Paper flower	Shrub
2.	<i>Alternanthera sessilis</i> , R.Br.	Amaranthaceae	Sessile joyweed	Herb
3.	<i>Gomphrena globosa</i> , L.	Amaranthaceae	Globe amaranth	Herb
4.	<i>Peperomia pellucida</i> , H.B.K.	Piperaceae	Shiny bush	Herb
5.	<i>Euphorbia elegans</i> , Spr.	Euphorbiaceae	Spurge	Herb
6.	<i>Euphorbia hirta</i> , L.	Euphorbiaceae	Asthma weed	Herb
7.	<i>Euphorbia tortilis</i> , Rottl.	Euphorbiaceae	Spiral cactus	Shrub
8.	<i>Euphorbia heterophylla</i> , L.	Euphorbiaceae	Milkweed	Herb
9.	<i>Emblica officinalis</i> , Gaertn.	Euphorbiaceae	Indian gooseberry	Tree
10.	<i>Acalypha indica</i> , L.	Euphorbiaceae	Indian acalypha	Herb
11.	<i>Acalypha wilkesiana</i> , M.Arg.	Euphorbiaceae	Copper leaf	Shrub
12.	<i>Codiaeum variegatum</i> , L.	Euphorbiaceae	Variegated laurel	Shrub
13.	<i>Ficus bengalensis</i> , L.	Moraceae	Indian banyan	Tree
14.	<i>Ficus religiosa</i> , L.	Moraceae	Bodhi tree	Tree
15.	<i>Artocarpus integrifolia</i> , L.	Moraceae	Jackfruit	Tree
16.	<i>Artocarpus hirsuta</i> , Lam.	Moraceae	Wild jack	Tree
17.	<i>Casuarina equisetifolia</i> , Forst.	Casuarinaceae	She - oak	Tree

### Monocotyledonae

Table 4: List of plants

Sl. No.	SCIENTIFIC NAME	FAMILY	COMMON NAME	HERB
1.	<i>Spathoglottis plicata</i> , Blume.	Orchidaceae	Philippine ground orchid	Herb
2.	<i>Curcuma aeruginosa</i> , Linn.	Zingiberaceae	Neelakuva	Herb
3.	<i>Canna indica</i> , L.	Cannaraceae	Indian shot	Herb
4.	<i>Crinum asiaticum</i> , Linn.	Amaryllidaceae	Spider lilly	Shrub
5.	<i>Trichopus zeylanichus</i> , Gaertn.	Discoraceae	Aryogyapacha	Herb
6.	<i>Musa paradisiaca</i> , (L.)	Musaceae	Banana tree	Herb
7.	<i>Cordyline fruticosa</i> ,(L)A.	Asparagaceae	Ti plant	Shrub

	Chev.			
8.	<i>Asparagus racemose</i> , Willd.	Asparagaceae	Aloe vera	Herb
9.	Aloe vera, Linn.	Liliaceae	Satawar	Herb
10.	Commelina, Linn.	Commelinaceae	Creeping day flower	Herb
11.	<i>Tradescantia spathacea</i> , Sw.	Commelinaceae	Boat lilly	Herb
12.	Areca catechu, L.	Palmae	Betal-nut palm	Tree
13.	Cocos nucifera, L.	Palmae	Coconut tree	Tree
14.	Caryota urens, L.	Palmae	Wine palm	Tree
15.	<i>Dyopsis lutescens</i> , (Wendland) Beentje & Drandfield.	Araceae	Golden cane palm	Shrub
16.	<i>Colocasia antiquorum</i> , Schott.	Araceae	Taro	Herb
17.	<i>Kyllinga brevifolia</i> , Rotb.	Cyperaceae	Green kylinga	Herb
18.	<i>Cyperus compressus</i> , Linn.	Cyperaceae	Annual sedge	Herb
19.	<i>Cyperus iria</i> , Linn.	Cyperaceae	Rice flat sedge	Herb
20.	<i>Cyperus rotundus</i> , Linn.	Cyperaceae	Nut grass	Herb
21.	<i>Cyperus pseudovegatus</i> , Steud.	Cyperaceae	Marsh flat sedge	Herb
22.	<i>Saccharum spontaneum</i> , Linn.	Gramineae	Kans grass	Herb
23.	<i>Urochloa maxima</i> , Beauv.	Graminae	Guinea grass	Herb
24.	<i>Echinochloa colona</i> , Link.	Graminae	Wild rice	Herb
25.	<i>Cenchrus ciliaris</i> , Linn.	Gramineae	Buffel grass	Herb
26.	<i>Eragrostis unioloides</i> , Nees.	Graminae	Chinese love grass	Herb
27.	<i>Chloris barbata</i> , Sw.	Gramineae	Swollen finger-grass	Herb
28.	<i>Elusine indica</i> , Gaertn.	Graminae	Wiregrass	Herb
29.	<i>Ochlandra travencorica</i> , Gamble.	Graminae	Reed bamboo	Herb



## PHOTOGRAPHS OF

### \*GAMOPETALAE



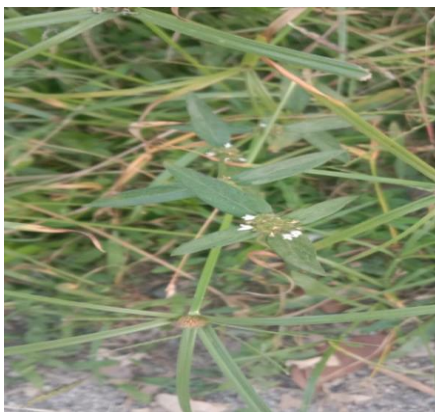
*Oldenlandia diffusa*, Roxb.



*Ixora coccinea*, L.



*Morinda tinctoria*, Roxb.



*Borreria ocymoides*, D.C.



*Centratherum  
anthelminticum*, O.Kze.



*Vernonia elaeagnifolia*, DC.



*Ageratum conyzoides*, L.



*Eclipta alba*, Hassk.



*Wedelia calendulacea*, Less.

### Plate 2



*Spilanthes acmella*, Murr.



*Tridax procumbens*, L.



*Emilia sonchifolia*, DC.



*Cosmos sulphureus*, Cav.



*Cosmos sulphureus*, Cav.



*Mikania micrantha*, Kunth.



*Tagetes erecta*, L.



*Mimusops elengi*, L.



*Achras sapota*, L.

**Plate 3**



*Jasminum auriculatum*, Vahl.



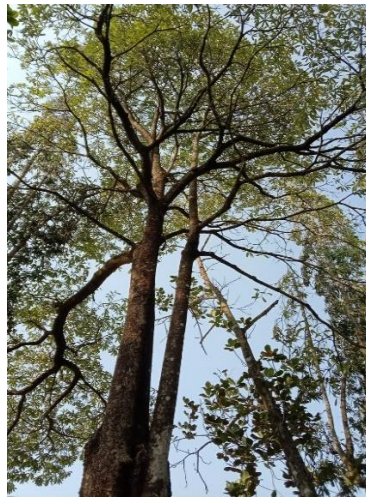
*Allamanda cathartica*, L.



*Plumeria pudica*, Jacq.



*Lochnera rosea*, Reichb.



*Alstonia scholaris*, R. Br.



*Adenium obesum*, (Forssk.)  
Roem & Schult



*Ipomoea cairica*, Sweet.



*Solanum torvum*, Sw.



*Physalis minima*, L.

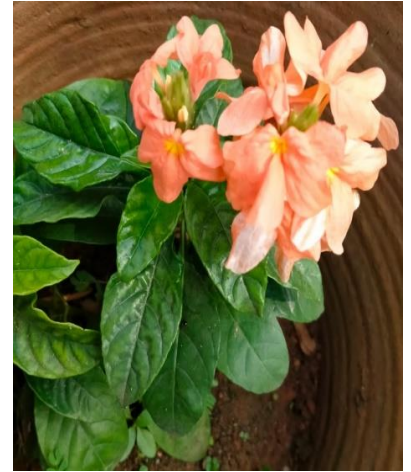
**Plate 4**



*Scoparia dulcis*, L.



*Ruellia tuberosa*, L.



*Crossandra undulaefolia*,  
Salisb.



*Asystasia gangetica*, T. And.



*Pseuderanthemum  
malabaricum*, Gamb.



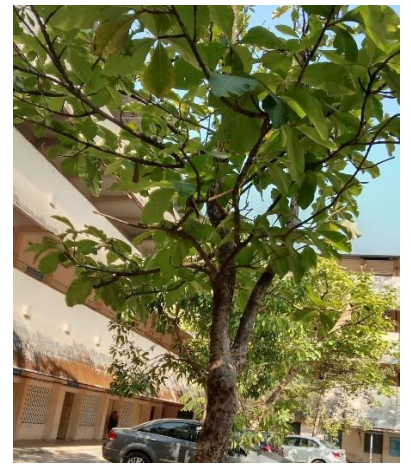
*Lantana aculeata*, L.



*Lippia nodiflora*, Mich.



*Stachytarpheta indica*, Vahl.

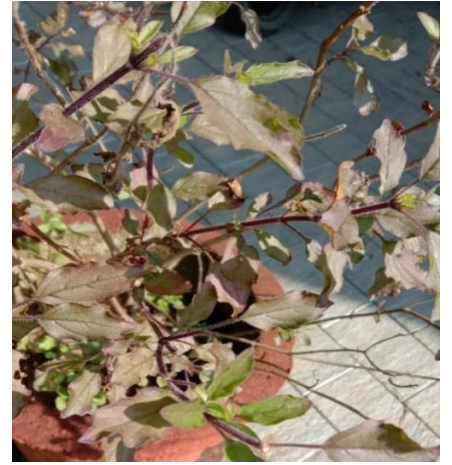


*Tectona grandis*, L.f.

**Plate 5**



*Clerodendron infortunatum*, L.



*Ocimum sanctum*, L.



*Coleus amboinicus*, Lour.



*Leucas aspera*, Spr.



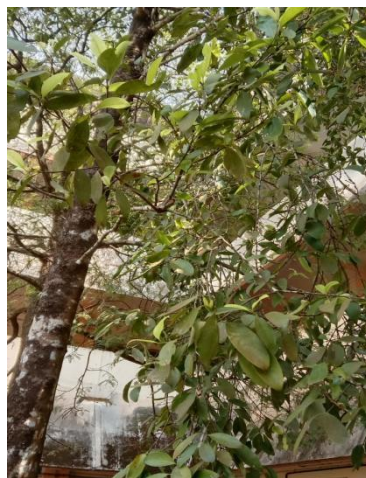
*Salvia splendens*, Sellow ex  
Roem. & Schult  
**Plate 6**

PHOTOGRAPHS OF

\* POLYPETALAE



*Polyalthia longifolia*, Linn.



*Garcinia cambogia*, Linn.



*Sida accuta*, Barum



*Hibiscus rosa-sinensis*,  
Linn.



*Hibiscus abelmoscus*, L.



*Thespesia populnea*, Cav



*Kleinhovia hospita*, L.



*Muntingia calabura*, L.



*Biophytum sensitivum*, L.

**Plate 7**



*Aegle marmelos*, Corr.



*Murrayya koenigii*, Spreng.



*Kalanchoe blossfeldiana*,  
Poelln.



*Swietenia*, Jacq.



*Mangifera indica*, Linn.



*Dendrolobium  
umbellatum*, (L). Benth.



*Bauhinia purpurea*, Linn.



*Tamarindus indica*, Linn.



*Cassia fistula*, Linn.

**Plate 8**



*Cassia roxburghii*, DC.



*Peltophorum guinansis*,  
Benth.



*Samanea saman*, (Jacq).  
Merr.



*Saraca indica*, Linn.



*Mimosa pudica*, Linn.



*Calliandra*  
*haematocephala*, Hassk.



*Accacia mangium* , Willd.



*Clitoria ternatea*, Linn.



*Pureria tuberosa*, DC.

**Plate 9**





*Crotalaria straita*, DC.



*Crotalaria retusa*, Linn.



*Arachis glabrata*, Linn.



*Ailanthus malaabarica*,  
(Dennist.) Alston.



*Rosa leschenaultia*, W. & A.



*Terminalia catappa*, Linn.



*Pimenta dioica*, (L.) Merr.



*Eucalyptus globulus*, Labil.



*Syzygium jambolanum*,  
DC.

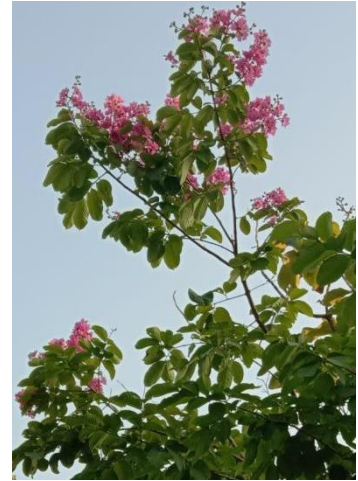
**Plate 10**



*Psidium guajava*, Linn.



*Caourouppita guianensis*, Aubl.



*Lagerstroemia flos-reginae*, L.



*Turnera ulmifolia*, L.



*Begonia sparreana*, L.B.Sn. & Wassh.



*Cucumis maderaspatanus*, Linn.



*Centella asiatica*, Urban.

**Plate 11**

**\*MONOCHLAMYDAE**



*Bougainvillea glabra*, Choisy.



*Alternanthera sessilis*, R. Br.



*Gomphrena globosa*, L.



*Peperomia pellucida*, H.B.K.



*Euphorbia elegans*, Spr.



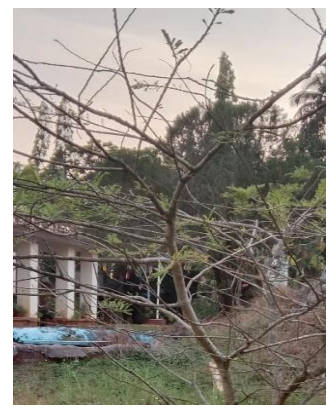
*Euphorbia hirta*, L.



*Euphorbia tortilis*, Rottl.



*Euphorbia heterophylla*, L.



*Emblica officinalis*, Gaertn.

**Plate 12**



*Acalypha indica*, L.



*Acalypha wilkesiana*, M. Arg.



*Codiaeum variegatum*, L.



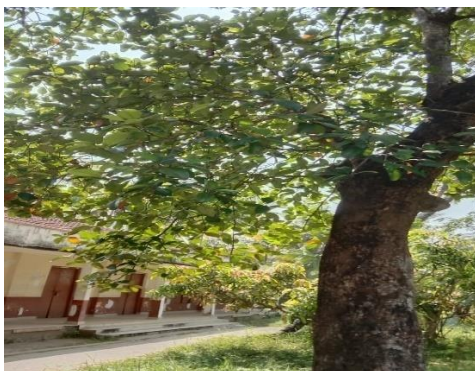
*Ficus bengalensis*, L.



*Ficus religiosa*, L.



*Artocarpus integrifolia*, L.



*Artocarpus hirsuta*, Lam.



*Casuarina equisetifolia*, Forst.

**Plate 13**

\* MONOCOTYLEDONAE



*Spathoglottis plicata*, Blume.



*Curcuma areuginosa*, Linn.



*Canna indica*, L.



*Crinum asiaticum*, Linn.



*Trichopus zeylanichus*,  
Gaertn.



*Musa paradisiaca*, (L.)



*Cordyline fruticosa*, (L)A.  
Chev.



*Asparagus racemose*, Willd.

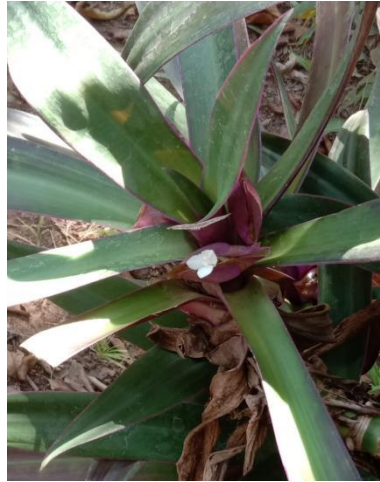


*Aloe vera*, Linn.

**Plate 14**



*Commelina* , Linn.



*Tradescantia spathacea*, Sw.



*Areca catechu*, L.



*Cocos nucifera*, L.



*Caryota urens*, L.



*Dypsis lutescens*,(Wendland)Beentje & Drandfield.



*Colocasia antiquorum*, Schott.



*Kyllinga brevifolia*, Rotb.



*Cyperus compressus*, Linn.

**Plate 15**



*Cyperus iria*, Linn.



*Cyperus rotundus*, Linn



*Cyperus pseudovegatus*,  
Steud.



*Saccharum spontaneum*,  
Linn.



*Urochloa maxima*, Beauv.



*Echinochloa colona*, Link.



*Cenchrus ciliaris*, Linn.



*Eragrostis unioides*, Nees.



*Chloris barbata*, Sw.

**Plate 16**



*Elusine indica*, Gaertn.



*Ochlandra travencorica*,  
Gamble.

**Plate 17**



## Gamopetalae

In this classification, forty species belonging to eleven families were identified. Among them, herbs, shrubs and trees were noted.

Table: 3

Habit	Number of species
Herbs	22
Shrubs	13
Trees	5

Herbaceous plants were found dominant when compared with shrubs and trees. Further to compare the families, a graph was plotted. According to the number of species and families considered, the family Compositae has more number of species. Compositae is the advanced and largest family of flowering plants. Compositae covers 11 species, Apocynaceae and Verbenaceae has 5 species, Rubiaceae, Lamiaceae, Acanthaceae has 4 species, Sapotaceae and Solanaceae has 2 species and Oleaceae, Convolvulaceae, Scrophulariaceae has only 1 species.

## Polypetalae

In this classification, forty three species belonging to twenty two families were identified.

Among them, herbs, shrubs, trees were noted.

Table 3: Shows number of species with respect to habit.

Habit	Number of species
Herbs	6
Shrubs	11
Trees	6

Shrubs are found dominant when compared with herbs and trees. Further to compare the families, a graph was plotted. During the study, 43 species of Polypetalae under 40 genera belonging to 22 families were collected. There are 26 trees, 11 shrubs, and 6 herbs included in polypetalae. (table 1). Fabaceae is the most dominant family in Polypetalae. (Caesalpiniaceae : 8 members, Mimosaceae : 3 members, Papilionaceae : 5 members). Malvaceae covers 5 species, Myrtaceae has 4 species. Rutaceae has 2 species. The families Annonaceae, Clusiaceae, Muntingiaceae, Geraniaceae, Crassulaceae, Meliaceae, Anacardiaceae, Simaroubaceae, Rosaceae, Combretaceae, Lythraceae, Lecythidaceae, Passifloraceae, Bigoniaceae, Cucurbitaceae, Umbelliferae has only 1 species in each.

## Monochlamydae

In this classification, eleven genera, seventeen species and six families were identified. Here also plants were divided on the basis of their nature as herbs, shrubs and trees.

Table: 4

Habit	Number of species
Herbs	7
Shrubs	4
Trees	6

Herbaceous plants were dominant when compared with shrubs and trees. A graph was then plotted to compare the families to show number of species with families. Euphorbiaceae is dominant and has 8 species, Moraceae has 4 species, Amaranthaceae has 2 species and Nyctaginaceae, Piperaceae, Casuarinaceae with 1 species each. Euphorbiaceae is one of the largest family of flowering plants.

### **Monocotyledone**

In this classification, twenty six genera, 29 species and 13 families ere identified. Here also plants were divided on the basis of their nature as herbs, shrubs and trees.

Table shows number of species with respect to habit.

Habit	Number of species
Herbs	23
Shrubs	3
Trees	3

Herbaceous plants were dominant when compared with shrubs and trees. A graph was plotted to compare the families to show number of species with families. Family Gramineae is the most dominant among Monocots. Graminae includes 8 plants. Cyperaceae covers 5 species, Palmae has 3 species, Asparagaceae, Commeliaceae and Araceae has 2 species, Orchidaceae, Zingiberaceae, Cannaraceae, Amaryllidaceae, Discoraceae, Lilliacae has only 1 in each.

“A flower doesn’t think of competing to the flower next to it. It just blooms”. As flora is the breathing spores of ecosystem that holds the surface of earth to its heart, it is necessary to be conserved. Since in this study 40 Gamopetalae, 43 Polypetalae, 17 Monochlamydae and 29 Monocotyledonae were collected and identified, it should be conserved in nature. Herbaceous plants are found more common in both Gamopetalae and Monochlamydae. In Gamopetalae 22 herbs and Monochlamydae 7 herbs are found. . Trees are found more common in Polypetalae and herbaceous plants are more common in Monocotyledonae.

In Gamopetalae, families in the order of dominance are; Compositae, Apocynaceae, Verbenaceae, Rubiaceae, Lamiaceae, Acanthaceae, Sapotaceae, Solanaceae, Oleaceae, Convolvulaceae and Scrophulariaceae. Thus Compositae is the leading family with 11 species.

In polypetalae, families in the order of dominance are; Fabaceae, Malvaceae, Myrtaceae, Rutaceae, Annonaceae, Clusiaceae, Rutaceae, Crassulaceae, Anacardiaceae, Simaroubaceae, Rosaceae, Combretaceae, Lecythidaceae, Lythraceae, Passifloraceae, Begoniaceae, Cucurbitaceae and Umbelliferae. Thus Fabaceae is the leading family with 16 species..

Among Monochlamydae, families in the order of dominance are; Euphorbiaceae, Moraceae, Amaranthaceae, Nyctaginaceae, Piperaceae and Casuarinaceae. Euphorbiaceae covers over 8 species. Compositae and Euphorbiaceae belong to the category of largest flowering plants. It is essential to conserve all these species belonging to different families. This diversity of angiosperms found in the campus is actually due to soil structure and climatic conditions.

Among Monocotyledonae, families in the order of dominance are; Graminae, Cyperaceae, Palmae, Commelinaceae, Asparagaceae, Arecae, Orchidaceae, Zingiberaceae, Cannaraceae, Amaryllidaceae, Discoraceae, Lilliacae. Graminae is the leading family covers over 8 species

SNM College campus can be made more beautiful by the maintaining these plants. From this study it is notable that there are more Gamopetalae when compared with Monochlamydae. Devastation can happen at any time due to climatic conditions or human actions. The present diversity of angiosperms rests scenic beauty to the college campus. In future this work can be made more relevant by checking the soil contents and planting more plants suitable to the soil conditions. Aquatic plants can be grown and maintained well. The collected plants have many economic uses but have not mentioned in this work.

Also endemic, exotic, invasive species has not been separated. It can also be included in future



## Spider diversity in SNM College Campus at Maliankara

Spiders are one of the most ubiquitous and diverse groups of organisms existing in Kerala, their study has always remained largely neglected. They have, however, largely been ignored because of the human tendency to favour some organisms over others of equal importance because they lack a universal appeal. Considering the importance of spiders in the natural suppression of many insect pests and as bioindicators, urgent efforts are needed to understand their diversity. In this context, we tried to document the spider faunal diversity of SNM college campus, Maliankara.

A total of 20 spiders representing 20 species belonging to 8 families were recorded in this study. Family wise distribution of spiders recorded during the study period is given in Table -1. Salticidae was the dominant family represented by 9 species. Family Araneidae represented 4 species. Family Oxyopidae represented 2 species. Family Thomisidae, Sparassidae, Lycosidae, Hersiliidae, Gnaphosidae represented 1 species.

Table 1: Family wise distribution of spiders recorded during the study period

SL.o	SCIENTIFIC NAME	FAMILY
1	<i>Cyrtophora cicatrosa</i>	Araneida
2	<i>Gasteracantha gemimate</i>	Araneida
3	<i>Argiope pullchella</i>	Araneida
4	<i>Anepsion maritatum</i>	Araneida
5	<i>Telamonia elegans</i>	Salticidae
6	<i>Telamonia dimidata</i>	Salticidae
7	<i>Carrhotus viduus</i>	Salticidae
8	<i>Plexippus petersi</i>	Salticidae
9	<i>Phintella vittata</i>	Salticidae
10	<i>Plexippus paykulli</i>	Salticidae
11	<i>Hyllus semicupreus</i>	Salticidae
12	<i>Asemonea tenuipes</i>	Salticidae
13	<i>Myrmaplata plataleoides</i>	Salticidae
14	<i>Oxytate virens</i>	Thomisidae
15	<i>Heteropoda venatoria</i>	Sparassidae
16	<i>Oxyopes sunandae</i>	Oxyopidae
17	<i>Oxyopes javanus</i>	Oxyopidae
18	<i>Pardosa agrestis</i>	Lycosidae
19	<i>Hersilia savignyi</i>	Hersiliidae
20	<i>Zelotes subterraneus</i>	Gnaphosidae

SPIDER DIVERSITY



*Cyrtophora cicatrosa*



*Gasteracantha geminata*



*Argiophele pullchella*



*Anepsion maritatum*



*Telamonia elegans*



*Telamonia dimidiata*



*Carrhotus viduus*



*Plexippus petersi*



*Phintella vittata*



*Plexippus paykulli*



*Hyllus semicupreus*



*Asemonea tenuipes*



*Myrmaplata plataleoides*



*Oxytate virens*



*Heteropoda venatoria*



*Oxyopes sunandae*



*Oxyopes javanus*



*Pardosa agrestis*



*Hersilia savignyi*



*Zelotes subterraneus*