

## Floral Diversity and Phytosociological Analysis of Sree Narayana College Campus, Thottada, Kannur

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### **Abstract**

*The present study is regarding the diversity of flora in the Sree Narayana College, Kannur. To understand and assess richness of the species diversity a taxonomic study of the flora is very much essential. Floristic surveys are the only means by which can achieve this goal. The floristic studies are considered as the backbone of the assessment of phytodiversity, conversation management and sustainable utilization. The flora of Sree Narayana College, Kannur is not yet documented and the present paper is on the floristic survey and phytosociological analysis. A total of 213 vascular plants falling under 181 genera and 72 families were documented. Out of which, the angiosperms dominate with 210 members, while two were Pteridophytes and only one gymnosperm. With respect to their habit, there are 91 herbs, 40 shrubs, 54 trees, 21 climbers, 1 epiphyte, 1 climbing fern, 4 creepers and 1 climbing shrub. Most of them are of medicinal value.*

**Keywords:** Floristic survey, phytodiversity, phytosociological analysis, medicinal value.

### **Introduction**

Flora is the plant life in an ecosystem and make a foundation for all other life in a area. They make their own food from sunlight and provide energy for the rest of the ecosystem and it is a true fact that flora thrive in even the most harsh environment in the world. Campus flora maps the location of individual plants that provides botanical information on each species. For enumeration and quantification of plant diversity, in-depth studies are to be conducted in these region considering the potential impact of development on biodiversity. This need to be assessed from a biodiversity view point to indicate the extent to which the disturbance will have impact on biodiversity.

Phytosociology deals with plant communities their composition and development and relationships between the species within them. In here phytosociology attempts to describe the diversity in campus flora (Braun-Blanquet, 1928). In India there are a number of ecological studies on floristic and biodiversity (Ghateet *al.*,1997)assessed plant diversity in Western Ghats, while (Joshi and Suresh,1997)have carried out diversity analysis in Nilgiri Biosphere Reserve (Adhikaryet *al.*,1991).To understand and assess richness of the species diversity a taxonomic study of the flora is very much essential. Floristic surveys are the only means by which can achieve this goal. The floristic studies are considered as the backbone of the assessment of phytodiversity, conversation management and sustainable utilization (Jayanthi and Rajendren, 2013).

The main purpose of the phytosociological analysis is to understand floristic vegetation,characteristic to estimate the species richness and diversity which is existing in the study area. For this, the species richness data was obtained which involve direct analysis of species of plant seen in the campus premises. Model of analysis was through 'quadrat' method, which included twenty quadrants taken at random places that has species richness in the campus. Keeping in view the role of the local plant reported as Campus flora as treasure of repositories of variety of plant species. There are no previous studies conducted on floral diversity and phytosociological analysis of Sree Narayana College, Kannur. So the present study is conducted to find out the plant diversity in our campus, Sree Narayana College Kannur.

## **Materials and methods**

Sree Narayana College, Kannur is situated on a serene twenty acre campus, GovardhanGiri at Thottada about 6 kms South of Kannur town (Fig 1) .The college lies at a latitude of 11.85879 °N and longitude of 75.41010°E.The climate is tropical in Kannur. We have an average annual temperature of 27.2°C. The rainfall is significant in most months of the year and we have in a year an average rainfall of 3351mm.

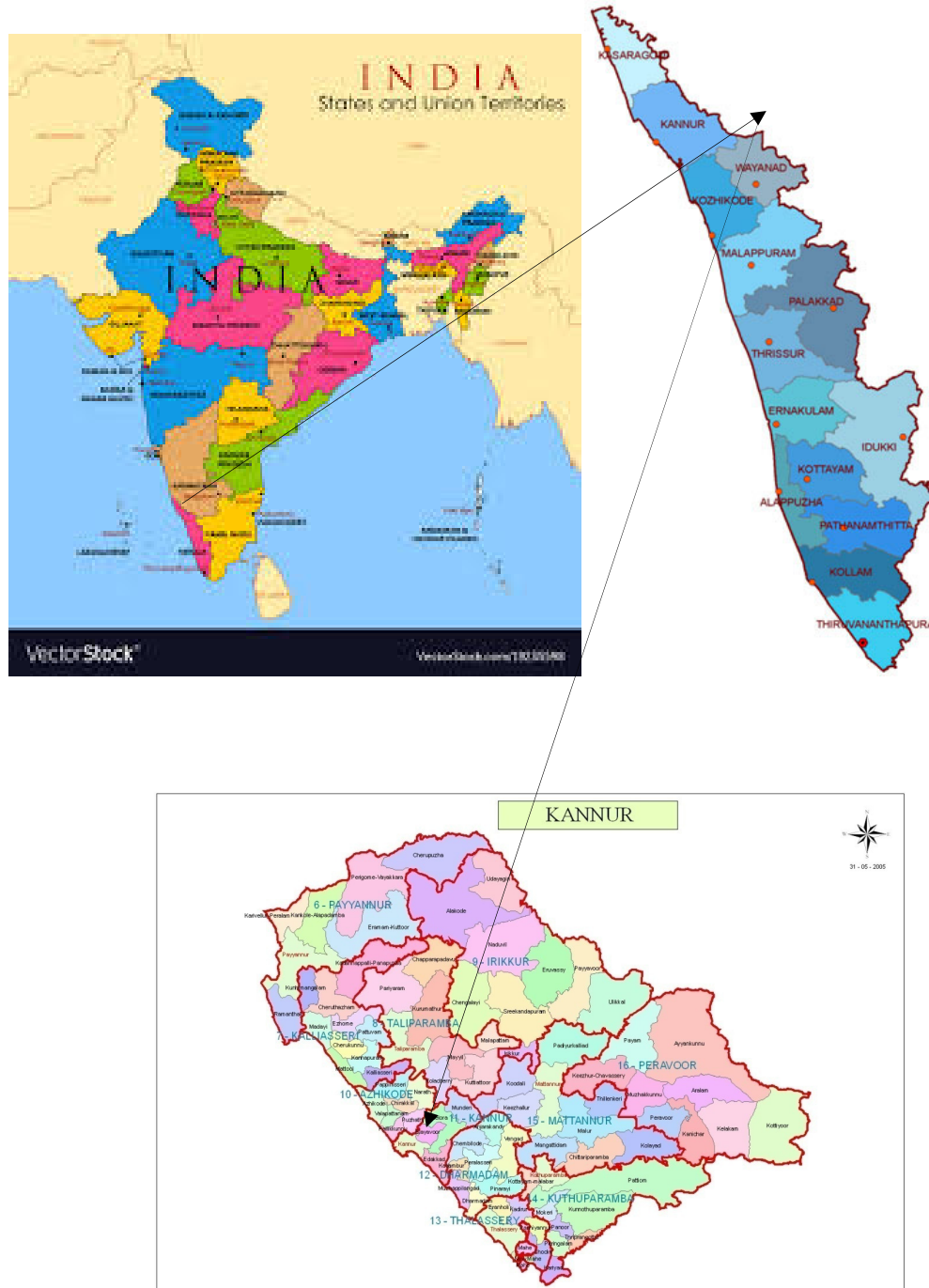


Figure 1- Location of Study Area- Sree Narayana College, Kannur

## Floristic survey

This study envisages the estimation of floral wealth of the campus and its role in conservation. A brief floristic survey of campus vascular plants were carried out during 2019 to 2020 excluding the potted plants. Plants are identified with the help of Madras Presidency (Gamble, 1915-1936), Flora of Cannanore (Ramachandran and Nair, 1988) and also by using available field keys and taxonomic bulletins. The identification was further confirmed with the help of taxonomic experts in Botany.

## Phytosociological analysis

The minimum quadrat size of 1 x 1 was fixed by the species- area curved method of phytosociological observations. Each time 20 quadrats were laid by the randomized method in each site. The minimum number of quadrat required (ie. 10) was determined as described by Greig – Smith (1974).

Frequency, density and abundance were calculated using the following formulae:

$$\text{Frequency} = \frac{\text{Number of quadrats in which the species present}}{\text{Total number of quadrats studied}} \times 100$$

$$\text{Density} = \frac{\text{Total number of individuals of the species in all quadrats}}{\text{Total number of quadrats studied}}$$

$$\text{Abundance} = \frac{\text{Total number of species in all quadrat}}{\text{Number of quadrat of occurrence of species}}$$

$$\text{Basal area} = \Pi r^2$$

Where,

$\Pi = 3.14$  and 'r' is the radius of the stem at the point of emergence.

Relative frequency, relative density and relative dominance were calculated from the following formulae:

$$\text{Relative Frequency} = \frac{\text{Number of occurrence of the species}}{\text{Number of occurrence of all species}} \times 100$$

$$\text{Relative density} = \frac{\text{Number of individuals of the species}}{\text{Number of individuals of all species}} \times 100$$

$$\text{Relative dominance} = \frac{\text{Total basal area of the species}}{\text{Total basal area of all species}} \times 100$$

$$\text{IVI} = \text{RD} + \text{RF} + \text{RDo}$$

$$\text{RIVI} = \text{IVI}/3$$

## Result

The flora are helpful in providing clues of changing floristic patterns, new invasions, current status, rare, endemic and threatened taxa (RET) in a phytogeographical area. They also form a vital component of any resource management and planning activities at the local, regional and global levels. It is essential to prepare local floras of urban areas where there is severe threat to natural vegetation due to identification of species that are in different stages of vulnerability (Padalia *et al.*, 2004) as well as the various factors that influence the existing vegetation in any region (Parthasarathy, 1999). Knowledge of vegetation and flora of any region is essential for the study of its biodiversity and environment. Today there is a pressing need for detailed surveys of plant resources, both exotic and indigenous for the development of rural as well as urban economy of a region. Preparation of the flora of smaller areas like districts, protected areas, unexplored areas, etc. is not only a pre-requisite for the revision of the flora of the vast country like India, but also for understating the ecosystem function and its conservation.

During the study of campus flora in our campus, a total of 213 vascular plants falling under 181 genera and 72 families were documented. Out of which, the angiosperms dominate with 210 members, while two were Pteridophytes (*Selaginella haematodes* and *Lygodium flexosum*) and *Cycas revoluta* the only one gymnosperm (Fig 3). With respect to their habit, there are 91 herbs, 40 shrubs, 54 trees, 21 climbers, 1 epiphyte, 1 climbing fern, 4 creepers and 1 climbing shrub (Fig 4). Among the angiosperms dicots comprise 182 species,

153 genera and 61 families while monocot comprises 28 species 23 genera and 8 families. The dominant families are Poaceae, Euphorbiaceae, Malvaceae and Asteraceae with 16,12,11 and 10 species respectively (Table1).

**Table 1.Total List of Plant Species in the Campus, Sree Narayana College, Kannur.**

Si no	Binomial name	Family	Habitat
1	<i>Abrusprecatorius</i>	Fabaceae	Herb
2	<i>Acacia auriculiformis</i>	Fabaceae	Tree
3	<i>Achyranthusaspera</i>	Amaranthaceae	Herb
4	<i>Adathodavastica</i>	Acanthaceae	Herb
5	<i>Adenantherapavonina</i>	Fabaceae	Tree
6	<i>Aeglemarmelos</i>	Rutaceae	Tree
7	<i>Aervalanata</i>	Amaranthaceae	Herb
8	<i>Aeschynomeneamericana</i>	Mimosaceae	Herb
9	<i>Ageratum conyzoides</i>	Asteraceae	Herb
10	<i>Allamandacathartica</i>	Apocynaceae	Shrub
11	<i>Allophylusserratus</i>	Sapindaceae	Shrub
12	<i>Aloe vera</i>	Liliaceae	Herb
13	<i>Alstoniascholaris</i>	Apocynaceae	Tree
14	<i>Alternantherasessilis</i>	Amaranthaceae	Herb
15	<i>Alternantheratenella</i>	Amaranthaceae	Herb
16	<i>Alysicarpusovalifolius</i>	Fabaceae	Herb
17	<i>Alysicarpusvaginalis</i>	Fabaceae	Herb
18	<i>Andrographispaniculata</i>	Acanthaceae	Herb
19	<i>Annonareticulata</i>	Annoaceae	Tree
20	<i>Aristolochiaindica</i>	Aristolochiaceae	Climber
21	<i>Arundinellasps.</i>	Poaceae	Herb
22	<i>Asystasiagangetica</i>	Acanthaceae	Herb
23	<i>Averrhoabilimbi</i>	Oxalidaceae	Tree
24	<i>Axonopuscompressus</i>	Poaceae	Herb
25	<i>Azadirachtaindica</i>	Meliaceae	Tree
26	<i>Bacopamonneri</i>	Scrophulariaceae	Herb
27	<i>Bauhinia accuminata</i>	Caesalpinaceae	Shrub
28	<i>Bauhinia purpurea</i>	Caesalpinaceae	Tree
29	<i>Bignonia grandiflora</i>	Bignoniaceae	Creeper
30	<i>Biophytumsensitivum</i>	Oxalidaceae	Herb
31	<i>Blumeaoxyodonta</i>	Compositae (Asteraceae)	Herb
32	<i>Boerhaaviadiffusa</i>	Nyctaginaceae	Herb
33	<i>Bougainvillea spectabili</i>	Nyctaginaceae	Climber
34	<i>Brachiariaramosa</i>	Poaceae	Herb

35	<i>Brachiariaremota</i>	Poaceae	Herb
36	<i>Breyniavitisidaea</i>	Phyllanthaceae (Euphorbiaceae)	Shrub
37	<i>Brideliaretusa</i>	Phyllanthaceae (Euphorbiaceae)	Tree
38	<i>Brideliascandens</i>	Euphorbiaceae	Tree
39	<i>Calotropisgigantea</i>	Asclepiadaceae	Shrub
40	<i>Capsicum frutescens</i>	Solanaceae	Shrub
41	<i>Caralliabrachiata</i>	Rhizophoraceae	Tree
42	<i>Cardiospermumhelicacabum</i>	Sapindaceae	Climber
43	<i>Carica papaya</i>	Caricaceae	Tree
44	<i>Caralliaintergersima</i>	Rhizophoraceae	Tree
45	<i>Caryotaurens</i>	Arecaceae	Tree
46	<i>Cassia alata</i>	Caesalpinaceae	Shrub
47	<i>Cassia fistula</i>	Caesalpinaceae	Tree
48	<i>Casuarinaequisetifolia</i>	Casuarinaceae	Tree
49	<i>Catharanthusroseus</i>	Apocynaceae	Herb
50	<i>Centellaasiatica</i>	Apiaceae	Herb
51	<i>Centratherumpunctatum</i>	Asteraceae	Herb
52	<i>Centrosemamolle</i>	Papilionaceae	Climber
53	<i>Chamaecristaemimosoides</i>	Mimosaceae	Shrub
54	<i>Chassaliacurviflora</i>	Rubiaceae	Shrub
55	<i>Cinnamomumzeylanicum</i>	Lauraceae	Tree
56	<i>Cissuslatifolia</i>	Vitaceae	Climber
57	<i>Cissusquadrangularis</i>	Vitaceae	Climber
58	<i>Citrus limon</i>	Rutaceae	Tree
59	<i>Cleome viscosa</i>	Capparidaceae	Herb
60	<i>Clerodendruminfortunatum</i>	Lamiaceae	Shrub
61	<i>Clitoriaternata</i>	Papilionaceae	Climber
62	<i>Coleus aromaticus</i>	Lamiaceae	Herb
63	<i>Commelinakurzii</i>	Commelinaceae	Herb
64	<i>Corchorusaestuans</i>	Malvaceae	Herb
65	<i>Costusspicatus</i>	Zingiberaceae	Herb
66	<i>Crotalaria pallida</i>	Papilionaceae	Herb
67	<i>Cryptostegiagrandiflora</i>	Apocynaceae	Climber
68	<i>Curculigoorchiooides</i>	Hypoxidaceae	Herb
69	<i>Curcuma longa</i>	Zingiberaceae	Herb
70	<i>Curcuma zedoaria</i>	Zingiberaceae	Herb
71	<i>Cyanotiscristata</i>	Commelinaceae	Herb
72	<i>Cyathulaprostrata</i>	Amaranthaceae	Herb
73	<i>Cycasrevoluta</i>	Cycadaceae	shrub

74	<i>Cycleapeltata</i>	Menispermaceae	Climber
75	<i>Cynodondactylon</i>	Poaceae	Herb
76	<i>Cyperusrotundus</i>	Cyperaceae	Herb
77	<i>Dactylocteniumaegyptium</i>	Poaceae	Herb
78	<i>Daturastramonium</i>	Solanaceae	Herb
79	<i>Delonixregia</i>	Caesalpinaceae	Tree
80	<i>Dendrocalamusgiganteus</i>	Poaceae	Tree
81	<i>Desmodiumgyrans</i>	Fabaceae	Shrub
82	<i>Desmodiumscorpiurus</i>	Papilionaceae	Herb
83	<i>Desmodiumtriflorum</i>	Papilionaceae	Herb
84	<i>Dipteracanthusprostratus</i>	Acanthaceae	Herb
85	<i>Durantharepens</i>	Verbenaceae	Shrub
86	<i>Elephantopusscaber</i>	Asteraceae	Herb
87	<i>Eleusinecoracana</i>	Poaceae	Herb
88	<i>Eleusineindica</i>	Poaceae	Herb
89	<i>Eragrostisunioloides</i>	Poaceae	Herb
90	<i>Eragrostisviscosa</i>	Poaceae	Herb
91	<i>Eryngiumcaeruleum</i>	Apiaceae	Herb
92	<i>Eupatorium odoratum</i>	Asteraceae	Shrub
93	<i>Euphorbia heterophylla</i>	Euphorbiaceae	Herb
94	<i>Euphorbia hirta</i>	Euphorbiaceae	Herb
95	<i>Euphorbia thirucalli</i>	Euphorbiaceae	Shrub
96	<i>Evolvulusnummularis</i>	Convolvulaceae	Herb
97	<i>Ficusrecemosa</i>	Moraceae	Tree
98	<i>Flueggealeucopyrus</i>	Euphorbiaceae	Shrub
99	<i>Flueggeavirosa</i>	Phyllanthaceae	Shrub
100	<i>Garciniacambogia</i>	Fabaceae	Tree
101	<i>Gardenia jasminoides</i>	Rubiaceae	Shrub
102	<i>Gmelinaarborea</i>	Lamiaceae	Tree
103	<i>Gomphrenaglobosa</i>	Amaranthaceae	Herb
104	<i>Grevillea robusta</i>	Proteaceae	Tree
105	<i>Grewia nervosa</i>	Malvaceae	Shrub
106	<i>Gymnemasylvestre</i>	Apocynaceae	Climber
107	<i>Hedyotisbrachypoda</i>	Rubiaceae	Herb
108	<i>Hemidesmusindicus</i>	Apocynaceae	Shrub
109	<i>Hemigraphisalternata</i>	Acanthaceae	Herb
110	<i>Hemigraphiscolorata</i>	Acanthaceae	Herb
111	<i>Heteropogoncontortus</i>	Poaceae	Herb
112	<i>Hibiscus rosasinensis</i>	Malvaceae	Shrub
113	<i>Holigarnaarnottiana</i>	Anacardiaceae	Tree
114	<i>Hybanthusenneaspermus</i>	Violaceae	Herb



115	<i>Hyptissuaveolens</i>	Lamiaceae	Herb
116	<i>Ipomea maxima</i>	Convolvulaceae	Creeper
117	<i>Ipomeasps.</i>	Convolvulaceae	Climber
118	<i>Ipomoea hederifolia</i>	Convolvulaceae	Climber
119	<i>Ischaemumciliare</i>	Poaceae	Herb
120	<i>Ixoracoccinea</i>	Rubiaceae	Shrub
121	<i>Jasminumsambac</i>	Oleaceae	Shrub
122	<i>Kaemferiagalanga</i>	Zingiberaceae	Herb
123	<i>Kyllinganemoralis</i>	Cyperaceae	Creeper
124	<i>Lanneacoromandelica</i>	Anacardiaceae	Tree
125	<i>Lantana camara</i>	Verbenaceae	Shrub
126	<i>Laporteainterrupta</i>	Urticaceae	Herb
127	<i>Leucasaspera</i>	Lamiaceae	Herb
128	<i>Leucaslinifolia</i>	Lamiaceae	Herb
129	<i>Linderniaciliata</i>	Linderniaceae	Herb
130	<i>Lygodiumflexuosum</i>	Lygodiaceae	Climbing fern
131	<i>Macarangapeltata</i>	Euphorbiaceae	Tree
132	<i>Magnolia champaca</i>	Magnolinaceae	Tree
133	<i>Mangiferaindica</i>	Anacardiaceae	Tree
134	<i>Manikarazapota</i>	Sapotaceae	Tree
135	<i>Marantaarundinaceae</i>	Marantaceae	Herb
136	<i>Memecylonumbellatum</i>	Melastomataceae	Tree
137	<i>Merremiatridentata</i>	Convolvulaceae	Climber
138	<i>Microstachyschamaelea</i>	Euphorbiaceae	Herb
139	<i>Mikaniamicrantha</i>	Asteraceae	Climber
140	<i>Mimosa pudica</i>	Mimosaceae	Herb
141	<i>Mimusopselengi</i>	Sapotaceae	Tree
142	<i>Mitracarpusverticillatus</i>	Rubiaceae	Herb
143	<i>Mukiamadraspatana</i>	Cucurbitaceae	Climber
144	<i>Murrayakoenigii</i>	Rutaceae	Tree
145	<i>Ocimumbasilicum</i>	Lamiaceae	Herb
146	<i>Ocimum sanctum</i>	Lamiaceae	Shrub
147	<i>Oplismenusburmannii</i>	Poaceae	Herb
148	<i>Oxalis corniculata</i>	Oxalidaceae	Creeper
149	<i>Panicumpaludosum</i>	Poaceae	Herb
150	<i>Passifloraedulis</i>	Passifloraceae	Climber
151	<i>Passiflorafoetida</i>	Passifloraceae	Climber
152	<i>Peltophorumpterocarpum</i>	Caesalpinaceae	Tree
153	<i>Pennisetumhohenackeri</i>	Poaceae	Herb
154	<i>Pentaslanceolata</i>	Rubiaceae	Shrub

155	<i>Phyllanthusamarus</i>	Euphorbiaceae	Herb
156	<i>Phyllanthusemblica</i>	Euphorbiaceae	Herb
157	<i>Phyllanthusvirgatus</i>	Euphorbiaceae	Herb
158	<i>Physalis minima</i>	Solanaceae	Herb
159	<i>Pileamicrophylla</i>	Urticaceae	Herb
160	<i>Piper longum</i>	Piperaceae	Herb
161	<i>Plumbagozeylanica</i>	Plumbaginaceae	Herb
162	<i>Plumeriapudica</i>	Apocynaceae	Shrub
163	<i>Pongamiapinnata</i>	Fabaceae	Tree
164	<i>Portulacaoleracea</i>	Portulacaceae	Herb
165	<i>Pothosscandens</i>	Araceae	Climbing shrub
166	<i>Psidiumguajava</i>	Myrtaceae	Tree
167	<i>Pterocarpussantalinus</i>	Fabaceae	Tree
168	<i>Ricinuscommunis</i>	Euphorbiaceae	Shrub
169	<i>Rosa indica</i>	Rosaceae	Shrub
170	<i>Rungiapectinata</i>	Acanthaceae	Herb
171	<i>Samaneasaman</i>	Papilionaceae	Tree
172	<i>Scopariadulcis</i>	Plantaginaceae (Scrophulariaceae)	Herb
173	<i>Selaginellahaematodes</i>	Selaginellaceae	Herb
174	<i>Sesamumindicumsubsp.malabaricum</i>	Pedaliaceae	Herb
175	<i>Sidaacuta</i>	Malvaceae	Shrub
176	<i>Sidacordifolia</i>	Malvaceae	Shrub
177	<i>Sidaretusa</i>	Malvaceae	Herb
178	<i>Simaroubaglauca</i>	Simaroubaceae	Tree
179	<i>Spermacocearticularis</i>	Rubiaceae	Herb
180	<i>Spermacoceocymoides</i>	Rubiaceae	Herb
181	<i>Spilanthesacmella</i>	Asteraceae	Herb
182	<i>Sterculiafoetida</i>	Malvaceae	Tree
183	<i>Stereospermumtetragonium</i>	Bignoniaceae	Tree
184	<i>Swieteniamahagoni</i>	Meliaceae	Tree
185	<i>Synedrellanodiflora</i>	Asteraceae	Herb
186	<i>Syzygiumaqueum</i>	Myrtaceae	Tree
187	<i>Syzygiumcumini</i>	Myrtaceae	Tree
188	<i>Syzygiumjambos</i>	Myrtaceae	Tree
189	<i>Tabernaemontanaalternifolia</i>	Apocynaceae	Shrub
190	<i>Tabernaemontanadivaricata</i>	Apocynaceae	Shrub
191	<i>Tamarindusindica</i>	Caesalpinaceae	Tree
192	<i>Tectonagrandis</i>	Lamiaceae	Tree

193	<i>Terminaliabellerica</i>	Combretaceae(Cannabaceae)	Tree
194	<i>Terminaliasp</i>	Combretaceae	Tree
195	<i>Thespesiapopulnea</i>	Malvaceae	Shrub
196	<i>Thunbergiagrandidiflora</i>	Acanthaceae	Climber
197	<i>Tinosporacordifolia</i>	Menispermaceae	Climber
198	<i>Tragiainvoluerata</i>	Euphorbiaceae	Herb
199	<i>Tremaorientalis</i>	Combretaceae	Tree
200	<i>Tridaxprocumbens</i>	Asteraceae	Herb
201	<i>Triumfettaannua</i>	Malvaceae	Shrub
202	<i>Triumfettarhomboidea</i>	Malvaceae	Shrub
203	<i>Turnerasubulata</i>	Passifloraceae	Herb
204	<i>Urenalobata</i>	Malvaceae	Shrub
205	<i>Vanda species</i>	orchidaceae	Epiphyt e
206	<i>Vanilla fragrens</i>	orchidaceae	Climber
207	<i>Vernoniacinerea</i>	Asteraceae	Herb
208	<i>Vitexnegundo</i>	Verbenaceae	Shrub
209	<i>Wattakakavolubilis</i>	Asclepiadaceae	Climber
210	<i>Zanthoxylemhetsa</i>	Rutaceae	Tree
211	<i>Ziziphusmauritiana</i>	Rhamnaceae	Tree
212	<i>Ziziphusoenopolia</i>	Rhamnaceae	Shrub
213	<i>Cocos nucifera</i>	Arecaceae	Tree

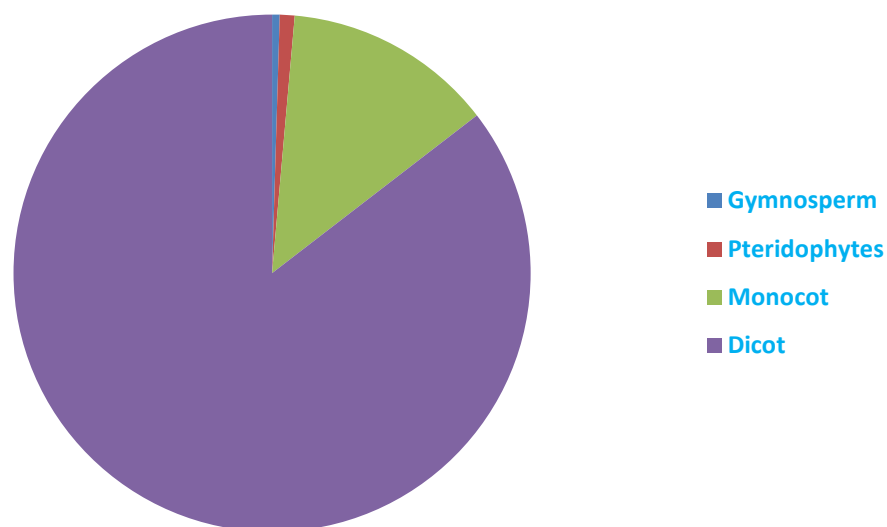
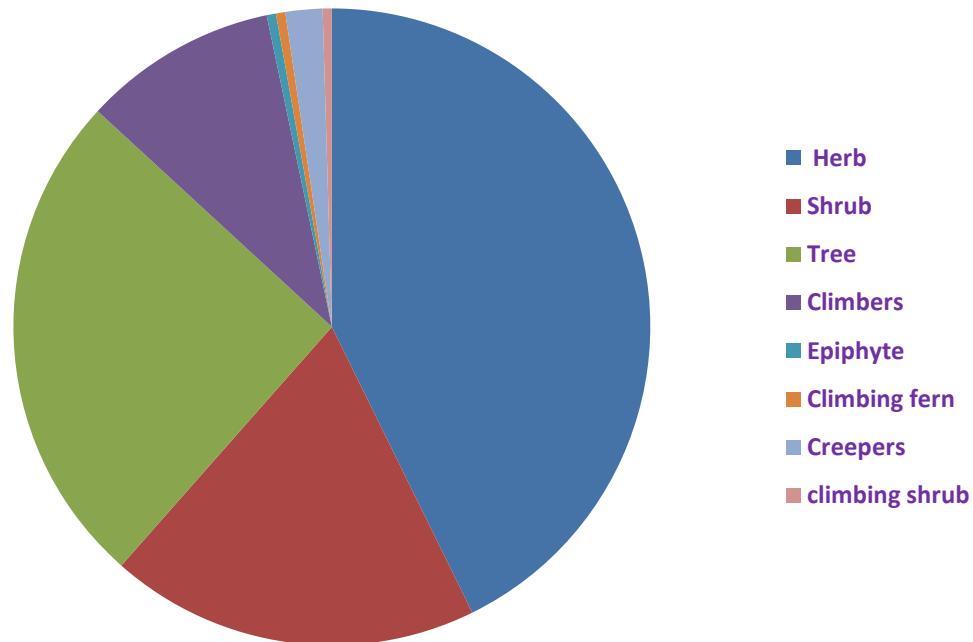


Figure.3- Systematic groups of the plants in the campus area.



**Figure.4- Analysis of Habit –Wise Distribution of Plant Species in the Campus Area.**

In the phytosociological studies of our campus a total of 96 vascular plants were documented under 20 quadrats. The quantitative ecological character such as frequency, abundance, density and basal cover and synthetic character such as relative frequency, relative density, relative dominance, importance value index and relative value of importance for all the study species present in SN college campus are given in Table 2 (Plate II, III and IV).

**Table 2. Species Composition in the campus Sree Narayana College, Kannur.**

Sl No	SPECIES	QUANTITATIVE ATTRIBUTES				SYNTHETIC ATTRIBUTES				
		Frequency (%)	Abundance (Individuals/m <sup>2</sup> )	Density (Individuals/m <sup>2</sup> )	Basal cover (mm <sup>2</sup> /m)	R.F (%)	R.D (%)	RBA (%)	IVI	RIVI
1	<i>Achyranthuspera</i>	5	6	0.3	4.6	0.45	0.22	0.65	1.33	0.44
2	<i>Adenantheravonina</i>	5	2	0.1	64	0.45	0.07	9.16	9.69	3.23
3	<i>Aervalanata</i>	5	1	0.05	1.6	0.45	0.03	0.22	0.72	0.24
4	<i>Aeschynomeneamericana</i>	25	8.8	2.2	1.16	2.27	1.65	0.16	4.09	1.36
5	<i>Ageratumconyzoides</i>	5	1	0.05	0.4	0.45	0.03	0.05	0.54	0.18
6	<i>Allophylusserratus</i>	5	1	0.05	1.4	0.45	0.03	0.20	0.69	0.23

7	<i>Alternanthera essilis</i>	50	31	15.5	1.41	4.54	11.64	0.20	16.39	5.46
8	<i>Alysicarpusova lifulius</i>	25	11.4	2.85	0.68	2.27	2.14	0.09	4.51	1.50
9	<i>Arundinellasps.</i>	5	18	0.9	1.5	0.45	0.67	0.21	1.34	0.44
10	<i>Asystasiagange tica</i>	30	36.33	10.9	1.03	2.72	8.18	0.14	11.06	3.68
11	<i>Axonopus compress</i>	25	7.4	1.85	3.92	2.27	1.38	0.56	4.22	1.40
12	<i>Azadirachtaind ica</i>	5	1	0.05	44.2	0.45	0.03	6.33	6.82	2.27
13	<i>Biophytumsensi tivum</i>	10	2.5	0.25	0.85	0.90	0.18	0.12	1.21	0.40
14	<i>Blumeaoxyodo nta</i>	10	27	2.7	1.3	0.90	2.02	0.18	3.12	1.04
15	<i>Boerhaaviadiff usa</i>	5	4	0.2	0.9	0.45	0.15	0.12	0.73	0.24
16	<i>Brachiararam osa</i>	20	18.25	3.65	0.57	1.81	2.74	0.08	4.64	1.54
17	<i>Breyniavitisida ea</i>	5	3	0.15	2.9	0.45	0.11	0.41	0.98	0.32
18	<i>Brideliascande ns</i>	5	1	0.05	4.6	0.45	0.03	0.65	1.15	0.38
19	<i>Calotropisgiga ntea</i>	10	1	0.1	4.4	0.90	0.07	0.63	1.61	0.53
20	<i>Carraliabrachi ata</i>	5	1	0.05	4.6	0.45	0.03	0.65	1.15	0.38
21	<i>Caryotaurens</i>	10	1	0.1	36.35	0.90	0.07	5.20	6.19	2.06
22	<i>Cassia fistula</i>	5	1	0.05	14.5	0.45	0.03	2.07	2.56	0.85
23	<i>Centellaasiatic a</i>	5	1	0.05	0.4	0.45	0.03	0.05	0.54	0.18
24	<i>Centrosemamol le</i>	5	4	0.2	1.2	0.45	0.15	0.17	0.77	0.25
25	<i>Chassaliacurvif lora</i>	5	1	0.05	3.6	0.45	0.03	0.51	1.00	0.33
26	<i>Cissuslatifolia</i>	5	1	0.05	4.5	0.45	0.03	0.64	1.13	0.37
27	<i>Cissusquadran gularis</i>	5	2	0.1	1.1	0.45	0.07	0.15	0.68	0.22
28	<i>Cleome viscosa</i>	25	9.4	2.35	1.12	2.27	1.76	0.16	4.19	1.39
29	<i>Clerodendrumi nfortunatum</i>	15	6.33	0.95	2.13	1.36	0.71	0.30	2.38	0.79
30	<i>Commelinakurz ii</i>	30	22	6.6	1.08	2.72	4.95	0.15	7.84	2.61
31	<i>Corchorusaest uans</i>	5	1	0.05	3	0.45	0.03	0.42	0.92	0.30
32	<i>Cyanotiscristat a</i>	5	3	0.15	1	0.45	0.11	0.14	0.71	0.23
33	<i>Cyathulaprostr ata</i>	5	3	0.15	1.6	0.45	0.11	0.22	0.79	0.26
34	<i>Cycleapeltata</i>	5	1	0.05	1.3	0.45	0.03	0.18	0.67	0.22
35	<i>Cynodondactyl on</i>	15	71.33	10.7	0.73	1.36	8.03	0.10	9.50	3.16
36	<i>Cyperusrotund us</i>	5	18	0.9	1.4	0.45	0.67	0.20	1.33	0.44

37	<i>Dactyloctenium aegyptium</i>	5	4	0.2	4.6	0.45	0.15	0.65	1.26	0.42
38	<i>Delonixregia</i>	10	1.5	0.15	6.55	0.90	0.11	0.93	1.96	0.65
39	<i>Desmodiumtriflorum</i>	35	24	8.4	0.35	3.18	6.31	0.05	9.54	3.18
40	<i>Dipteracanthus prostratus</i>	30	14	4.2	1.08	2.72	3.15	0.15	6.03	2.01
41	<i>Eleusineindica</i>	10	3.5	0.35	2.7	0.90	0.26	0.38	1.55	0.51
42	<i>Eragrostisunioloides</i>	5	10	0.5	2.3	0.45	0.37	0.32	1.15	0.38
43	<i>Eupatorium odoratum</i>	10	25.5	2.55	3.15	0.90	1.91	0.45	3.27	1.09
44	<i>Euphorbia heterophylla</i>	10	8.5	0.85	2.2	0.90	0.63	0.31	1.86	0.62
45	<i>Euphorbia hirta</i>	20	4.25	0.85	0.67	1.81	0.63	0.09	2.55	0.85
46	<i>Evolvulusnum mularis</i>	15	19	2.85	0.4	1.36	2.14	0.05	3.56	1.18
47	<i>Flueggealeucopyrus</i>	5	1	0.05	6.1	0.45	0.03	0.87	1.36	0.45
48	<i>Grewia nervosa</i>	5	1	0.05	1.1	0.45	0.03	0.15	0.64	0.21
49	<i>Hedyotisbrachypoda</i>	25	19.8	4.95	0.44	2.27	3.71	0.06	6.05	2.01
50	<i>Hemidesmusindicus</i>	10	4.5	0.45	0.65	0.90	0.33	0.09	1.34	0.44
51	<i>Hibiscus rosasinensis</i>	5	1	0.05	3.4	0.45	0.03	0.48	0.97	0.32
52	<i>Holigarnaarnotiana</i>	5	1	0.05	25.6	0.45	0.03	3.66	4.15	1.38
53	<i>Hybanthusenne aspermus</i>	5	3	0.15	0.2	0.45	0.11	0.09	0.59	0.19
54	<i>Hypitissuaveolens</i>	5	11	0.55	1.3	0.45	0.41	0.18	1.05	0.35
55	<i>Ipomeasps.</i>	15	2.66	0.4	1.03	1.36	0.30	0.14	1.81	0.60
56	<i>Ischaemunciliarre</i>	30	9.66	2.9	0.48	2.72	2.17	0.06	4.97	1.65
57	<i>Ixoracoccinea</i>	5	1	0.05	5.6	0.45	0.03	0.80	1.29	0.43
58	<i>Kyllinganemor alis</i>	10	9.5	0.95	1.37	0.90	0.71	0.19	1.81	0.60
59	<i>Lantana camara</i>	5	1	0.05	2.6	0.45	0.03	0.37	0.86	0.28
60	<i>Laporteainterrupta</i>	5	30	1.5	0.6	0.45	1.12	0.08	1.66	0.55
61	<i>Leucasaspera</i>	5	2	0.1	0.9	0.45	0.07	0.12	0.65	0.21
62	<i>Macarangapeltata</i>	10	1	0.1	12.2	0.90	0.07	1.74	2.73	0.91
63	<i>Mangiferaindica</i>	5	1	0.05	152.1	0.45	0.03	21.78	22.2	7.42
64	<i>Memecylonumbellatum</i>	5	1	0.05	4.6	0.45	0.03	0.65	1.15	0.38
65	<i>Mikaniamicrantha</i>	5	1	0.05	0.6	0.45	0.03	0.08	0.57	0.19
66	<i>Mimosa pudica</i>	50	7.2	3.6	0.84	4.54	2.70	0.12	7.37	2.45

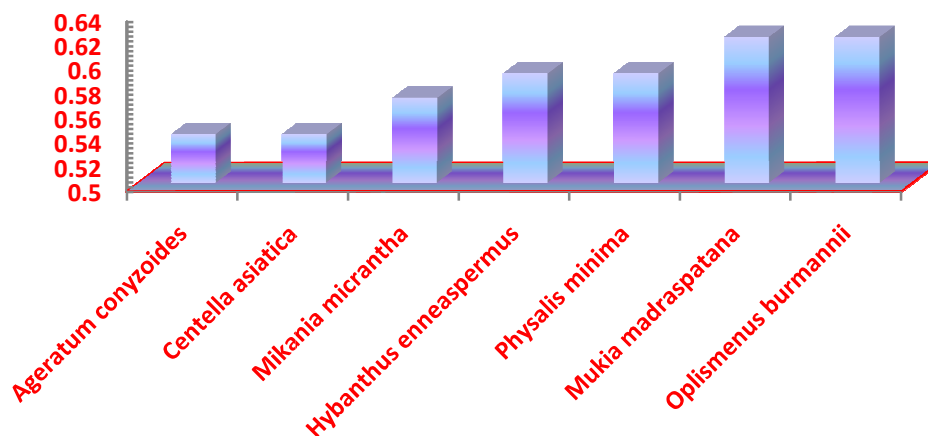
67	<i>Mitracarpusverticillatus</i>	30	30.33	9.1	0.91	2.72	6.83	0.13	9.69	3.23
68	<i>Mukiamadraspata</i>	5	1	0.05	0.9	0.45	0.03	0.12	0.62	0.20
69	<i>Oplismenusburmannii</i>	5	3	0.15	0.4	0.45	0.11	0.05	0.62	0.20
70	<i>Passiflorafoetida</i>	10	1	0.1	0.95	0.90	0.07	0.13	1.12	0.37
71	<i>Peltophorumpteroocarpum</i>	5	1	0.05	126.9	0.45	0.03	18.17	18.6	6.22
72	<i>Pennisetumhohenackeri</i>	10	7	0.7	11.95	0.90	0.52	1.71	3.14	1.04
73	<i>Pentaslanceolata</i>	5	1	0.05	5.1	0.45	0.03	0.73	1.22	0.40
74	<i>Phyllanthusamarus</i>	15	11.33	1.7	0.5	1.36	1.27	0.07	2.71	0.90
75	<i>Phyllanthusemblica</i>	10	1	0.1	4.75	0.90	0.07	0.68	1.66	0.55
76	<i>Phyllanthusvirgatus</i>	20	1	0.2	2.65	1.81	0.15	0.37	2.34	0.78
77	<i>Physalisminima</i>	5	1	0.05	0.7	0.45	0.03	0.10	0.59	0.19
78	<i>Piper longum</i>	10	1.5	0.15	0.75	0.90	0.11	0.10	1.12	0.37
79	<i>Portulacaoleracea</i>	5	2	0.1	1.4	0.45	0.07	0.20	0.73	0.24
80	<i>Pothosscandens</i>	5	4	0.2	2.3	0.45	0.15	0.32	0.93	0.31
81	<i>Rungiapectinata</i>	20	5.75	1.15	0.7	1.81	0.86	0.10	2.78	0.92
82	<i>Sesamumindicumsbsp.malabaricum</i>	5	1	0.05	1.9	0.45	0.03	0.27	0.76	0.25
83	<i>Sidaacuta</i>	15	1.66	0.25	0.4	1.36	0.18	0.057	1.60	0.53
84	<i>Sidacordifolia</i>	5	1	0.05	1.4	0.45	0.03	0.20	0.69	0.23
85	<i>Sterculiafoetida</i>	10	1.5	0.15	10.75	0.90	0.11	1.53	2.56	0.85
86	<i>Synedrellanodiflora</i>	50	30	15	1.08	4.54	11.26	0.15	15.9	5.32
87	<i>Syzygiumaqueum</i>	5	1	0.05	35.5	0.45	0.03	5.08	5.57	1.85
88	<i>Tabernaemontanaalternifolia</i>	5	1	0.05	5.2	0.45	0.03	0.74	1.23	0.41
89	<i>Tectonagrandis</i>	10	1	0.1	5.1	0.90	0.07	0.73	1.71	0.57
90	<i>Tridaxprocumbens</i>	15	3.66	0.55	0.93	1.36	0.41	0.13	1.91	0.63
91	<i>Triumfettaannua</i>	10	3.5	0.35	1.5	0.90	0.26	0.21	1.38	0.46
92	<i>Triumfettarhomboides</i>	5	1	0.05	0.9	0.45	0.03	0.12	0.62	0.20
93	<i>Urenalobata</i>	10	3	0.3	1.3	0.90	0.22	0.18	1.32	0.44
94	<i>Wattakakavolubilis</i>	5	1	0.05	1.1	0.45	0.03	0.15	0.64	0.21
95	<i>Vernoniacinerea</i>	10	7.5	0.75	0.45	0.90	0.56	0.06	1.53	0.51
96	<i>Ziziphusoenopolia</i>	5	1	0.05	3	0.45	0.03	0.42	0.92	0.30

In the study area the species *Alternantherasessilis*, *Mimosa pudica* and *Synedrellanodiflora* have higher frequency value (50) than the rest of the species and a total of 51 species have lowest frequency value. In our campus, *Cynodondactylon* distributed abundantly (71.33) than the other constituent species. The lowest abundant value 1 is shown about 39 plants. The plant species, *Alternantherasessilis* is registered highest density value of 15.5. Lowest density value (0.05) is shown by 30 species.

Based on the basal cover, *Mangiferaindica* was considered to be dominant species in SN college campus secured the basal cover of 152.1 mm<sup>2</sup>/m is occupied higher basal cover in our campus. Next to the dominant species, *Mangiferaindica*, the species *Peltoforumpterocarpum*(126.9 mm<sup>2</sup>/m) were occupied higher basal cover value. The species *Hybanthusenneaspermus* showed lower basal cover of 0.02 mm<sup>2</sup>/m.

The relative positions of constituent species in terms of frequency, density and basal cover are also presented in the Table 1. In our campus *Alternantherasessilis* and *Mimosa pudica* registered highest relative frequency (4.54). The species *Alternantherasessilis* and *Mangiferaindica* showing highest relative density (11.64) and relative basal cover (21.78) respectively.

Of the various plant species available in our campus, the species *Mangiferaindica* securing higher IVI (22.27). In this site lowest IVI was shown by *Ageratum conyzoides* and *Centella asiatica* (0.54) (Fig 2). Based on IVI score made by these species it is understood that they are poorly established species in the communities of our campus.





**Figure.2-Species Composition of Sree Narayana College, Kannur with Lowest IVI.****Discussion**

Phytosociological analysis of a plant community is the first and foremost basis of the study of any piece of vegetation as it is a pre-requisite for the understanding of community structure and organization. For understanding the community structure and organization, species composition is foremost requisite. Species composition is one of the major characters of plant community (Dansereau, 1960).

The species of least significance (lowest IVI) were shown by *Ageratum conyzoides*, *Centellaasiatica*, *Mikaniamicrantha*, *Hybanthusenneaspermus*, *Physalis minima*, *Mukiamadraspata*, *Oplismenusburmanni*etc. Due to endemism, over exploitation, shifting cultivation and other socio economic activities, there is urgent need for conservation and protection of campus flora.

At the same time development of the College infra-structure and the invasion of alien species can threaten the existence of several local species of plant in our campus. Most of the plant that are included in the quadrants and reported as campus flora has got multiple uses. Most of them are of medicinal value. This itself shows the importance of the need for conserving the campus flora.

**Conclusion**

The biodiversity of the campus is important as it is vital that native and endemic species of flora are conserved. Though there are many more life forms that need to be identified up to species level, the biodiversity of the campus holds a lot of potential in terms of conservation. Present study on the campus flora and phytosociological survey was studied over a short period of time from 2019 to 2020 at Sree Narayana College, Kannur. The floristic analysis showed that our campus was registered with 213 species of plants. The families such as Poaceae, Euphorbiaceae, Malvaceae and Asteraceae represent the dominant families at SN

College. The vegetated areas identified during the present study can be accorded special attention and if any development is planned in these areas, it should be reconsidered.

In terms of preserving the floral biodiversity, it is very important to set up a botanical garden in the confines of the campus and cultivate these plants and protect the ones that grow naturally on the grounds. Although our campus consist of varieties of plants, we find most of them to be useful mainly as medicinal plants; some are ornamental value; few are edible. Since in recent years the usage of plants for medicinal purpose is increasing, the knowledge of ethnobotany studies should be made available to all students and faculties. The documentation of plant is the only way to preserve the fundamental knowledge of the plant resources and it will be useful to the campus students and the faculties for further research. Due to over exploitation and deforestation in the natural habitat, few of the presently reported plant species are endangered. Being botany students, we find it necessary to know about the plants in our campus premises and to identify their characters. Strict conservational measures are to be taken to protect these plant species from becoming rare or endangered.

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