

Flora of STSN Government Degree College Campus, Kadiri, Sri Sathya Sai District, Andhra Pradesh.

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Abstract:

The present study provides a comprehensive inventory of the flora in the STSN Government Degree College campus, Kadiri, Andhra Pradesh. A total of 223 plant species belonging to 161 genera and 52 families were recorded through extensive field surveys and herbarium techniques. The flora includes 172 dicots and 51 monocots, with life forms such as herbs, shrubs, climbers, and trees. This local floristic documentation is vital for biodiversity assessment, conservation awareness, and serves as a baseline for future ecological studies.

Key words: STSN Government Degree College Campus, Flora, Life forms, Biodiversity.

INTRODUCTION

Flora refers to the plant life occurring in a particular region or an area at a particular time, generally the naturally occurring or indigenous plants. A flora will serve as documented inventory of plants and as a historic dataset for future monitoring of native plant species.

In the context of unabated loss of biodiversity due to human interference, plant taxonomists throughout the world documenting floras at different levels-national, regional, local etc. Local floras especially pertaining to college campus areas were worked out in many parts of the world. Such flora is available in book form at S.V.University (Savithramma, 2003) and S.K. University, (Ravi Prasad Rao, 2012). Realising the importance of campus flora of STSN Govt. Degree College, Kadiri, we made an attempt to provide a precise inventory of flowering plants of the Campus.

STUDY AREA

College Campus – Physiography

STSN Govt. Degree College is located in Kadiri town near Saidapuram and was established in 1975. The campus is extended over 26.7 acres (**Map-1**). The campus lies at an elevation of 550 meters above MSL. The soil is red sandy throughout. Most of the rainwater drains into a seasonal streams located in the southern, western side of the campus.

College Campus Vegetation

Before establishment of the campus in 1975, much of the area is open and supporting grass dominated vegetation. After the establishment of the college campus, quite a number of trees have been planted and some of them are naturalized. Later, some more tree species were planted as a part of greenery improvement of the campus. Water scarcity in summer is a limiting factor, which hampered the tree growth, resulted in retarded and deformed growth of many trees.

Common trees found in the campus are: *Albizia lebbeck*, *Azadirachta indica*, *Leucaena leucocephala*, *Pongamia pinnata*, *Peltophorum pterocarpum*, *Polyalthia longifolia* and *Acacia arabica*. The ground vegetation is dominated by the grasses like *Heteropogon contortus*, *Aristida adscensionis*, *Brachiaria reptans*, *Chloris barbata*, *Chrysopogon fulvus*, *Dactyloctenium aegyptium*, *Eragrostis visciosa*, *Perotis indica* etc. Grasses, which come up during the rainy season, dry up by January. The common annual herbaceous species are *Boerhavia diffusa*, *Crotalaria medicagenia*, *Cyanotis tuberosa*, *Tridax procumbens*, *Cleome viscosa*, *Merremia tridentata*, *Evolvulus alsinoides*, *Senna italica* etc.



MAP 1: STSN Govt. Degree College Campus, Kadiri.

MATERIALS AND METHODS

The present work is exclusively oriented for providing a complete inventory of plants that are found wild and naturalized in the college campus. The college campus is surveyed randomly for the past three years. For the purpose of this inventory plant specimens representing individual taxa were collected mostly in reproductive stage and were made into herbarium following standard methodology (Jain & Rao, 1977). Whole plants (in case of small herbs) or twigs were poisoned by dipping in a saturated solution of mercuric chloride in ethyl alcohol and placed immediately between blotting papers with the help of forceps. The blotters later kept in iron pressers and changed after 24 hours for proper spreading. Drying specimens were changed on to fresh blotting papers until all specimens are completely dried.

Poisoned, pressed and dried specimens were pasted on a standard handmade herbarium sheet (42x28cm) with fevicol. Labels with relevant information were affixed on mounted sheets. All the specimens were carefully studied by dissecting the floral parts of duplicate specimens under a microscope. Provisional identification was made with the following floras: Flora of Andhra Pradesh (Pullaiah.T and Ali Moulali D.(1997), Pullaiah.T. and Chennaiah,E.(1997), Pullaiah.T. and Karuppusamy.(2008), Flora of the Anantapur Dist. (T.Pullaiiah and N.Yasoda –1986); Flowering plants of Chittoor Dist. (Madhava Chetty et al. 2008); Flora of S.K.University (Ravi Prasad Rao,2008). All the specimens collected over the period are preserved in the department of Botany, STSN Govt. Degree College, Kadiri.

RESULTS AND DISCUSSION

Floristic Analysis

A record of 223 species (Table-2) representing 161 genera and 52 families are found in STSN Govt. Degree College, Kadirī campus. Out of the 223 species, 172 are dicots, 51 are monocots. Category-wise results are presented hereunder.

Plant Group	Families	Genera	Species
Polypetalae	24	49	77
Gamopetalae	15	55	66
Monochlamydae	07	20	29
Monocotyledons	06	37	51
Total	52	161	223

Out of 223 species, 20 are trees; 14 are shrubs; 23 are climbers and 166 are herbs (**Fig-1**).

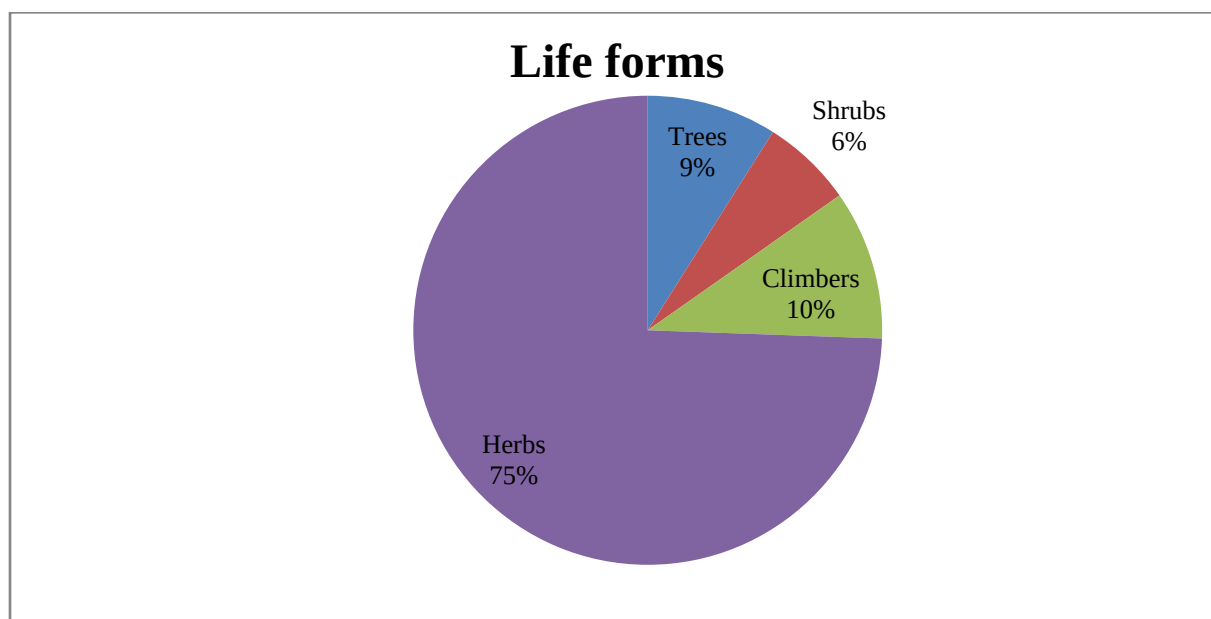


Fig.1: Plant life form-wise analysis

Out of the 52 families recorded in the college campus, 22 are represented by single genus and species. These are some families with single Genus and species: Arecaceae, Aristolochiaceae, Cactaceae, Caryophyllaceae, Geraniaceae, Lemnaceae, Loranthaceae, Meliaceae, Nyctaginaceae, Papavaraceae, Passifloraceae, Pedaliaceae, Plumbaginaceae, Scrophulariaceae, Violaceae, Vitaceae and Zygophyllaceae.

Families representing more than 5 species are: Poaceae with 27 species, Fabaceae (24 species), Amaranthaceae (13 species), Asteraceae (15 species), Cyperaceae, (12 species), Asclepiadaceae, Euphorbiaceae (11 species each), Acanthaceae (8 species) and Mimosaceae, Caesalpiniaceae (7 species each) (**Table-1**). Grasses and sedges combined represent 17% of the total plant species of college campus. All these eight largest families represent 43% of the total species.

Table-1: Top ten dominant families

S.No	Families	Genera	No. of species
1	Poaceae	20	27
2	Fabaceae	14	24
3	Asteraceae	15	15
4	Amaranthaceae	10	13
5	Cyperaceae	6	12
6	Asclepiadaceae	8	11
7	Euphorbiaceae	5	11
8	Acanthaceae	6	8
9	Mimosaceae	5	7
10	Caesalpiniaceae	3	7

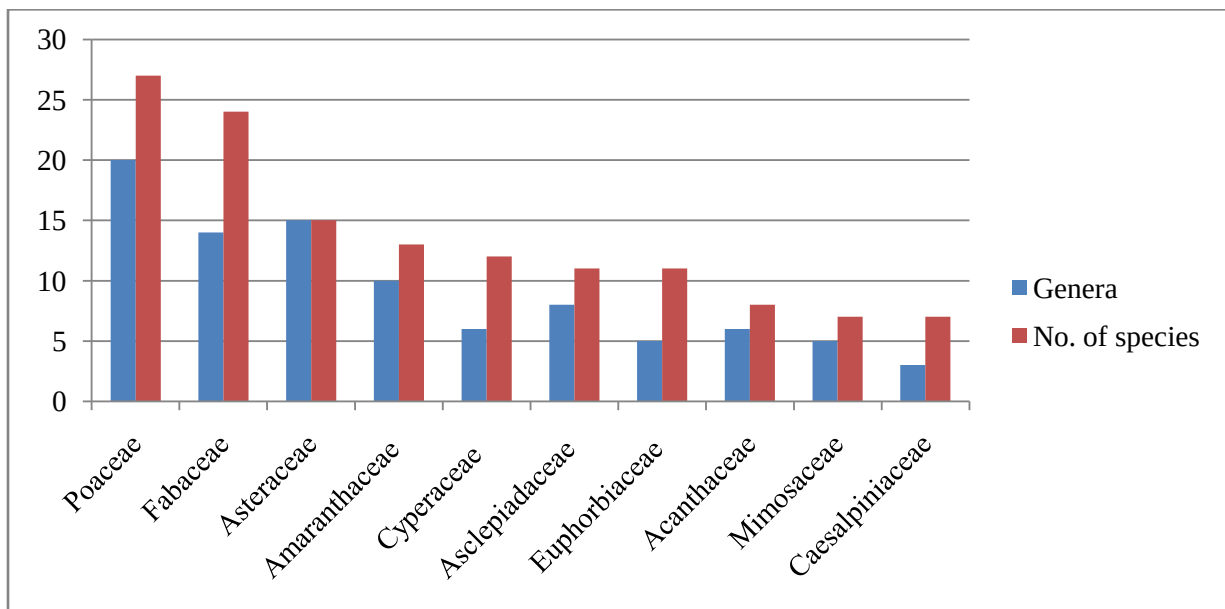


Table-1: Enumerated list of all plant species belonging to various life forms.

Table-2: Enumerated list of all plant species belonging to various life forms.

S. No.	Name of the Species	Family	Habit
1	<i>Annona squamosa</i>	Annonaceae	T
2	<i>Cocculus hirsutus</i>	Menispermaceae	C
3	<i>Tinospora cordifolia</i>	Menispermaceae	C
4	<i>Argemone mexicana</i>	Papavaraceae	H
5	<i>Cadaba fruticosa</i>	Capparaceae	S
6	<i>Capparis zeylanica</i>	Capparaceae	S
7	<i>Cleome gynandra</i>	Cleomaceae	H
8	<i>Cleome monophylla</i>	Cleomaceae	H
9	<i>Cleome viscosa</i>	Cleomaceae	H
10	<i>Cleome felina</i>	Cleomaceae	H

11	<i>Hybanthus enneaspermus</i>	Violaceae	H
12	<i>Polygala arvensis</i>	Polygalaceae	H
13	<i>Polygala elongata</i>	Polygalaceae	H
14	<i>Polycarpaea corymbosa</i>	Caryophyllaceae	H
15	<i>Abutilon indicum</i>	Malvaceae	S
16	<i>Abutilon hirtum</i>	Malvaceae	S
17	<i>Hibiscus micranthus</i>	Malvaceae	H
18	<i>Pavonia zeylanica</i>	Malvaceae	H
19	<i>Sida acuta</i>	Malvaceae	H
20	<i>Sida cordifolia</i>	Malvaceae	H
21	<i>Waltheria indica</i>	Sterculiaceae	H
22	<i>Corchorus aestuans</i>	Tiliaceae	H
23	<i>Corchorus trilocularis</i>	Tiliaceae	H
24	<i>Tribulus terrestris</i>	Zygophyllaceae	H
25	<i>Azadirachta indica</i>	Meliaceae	T
26	<i>Cissus quadrangularis</i>	Vitaceae	C
27	<i>Cardiospermum halicacabum</i>	Sapindaceae	C
28	<i>Cardiospermum corindum</i>	Sapindaceae	C
29	<i>Mangifera indica</i>	Anacardiaceae	T
30	<i>Abrus precatorius</i>	Fabaceae	C
31	<i>Aeschynomene aspera</i>	Fabaceae	H
32	<i>Alysicarpus monilifer</i>	Fabaceae	H
33	<i>Alysicarpus bupleurifolius</i>	Fabaceae	H
34	<i>Canavalia gladiata</i>	Fabaceae	H
35	<i>Clitoria ternatea</i>	Fabaceae	C
36	<i>Crotalaria bifaria</i>	Fabaceae	H
37	<i>Crotalaria hirsuta</i>	Fabaceae	H
38	<i>Crotalaria medicaginea</i>	Fabaceae	H
39	<i>Crotalaria pallida</i>	Fabaceae	H
40	<i>Crotalaria ramosissima</i>	Fabaceae	H
41	<i>Crotalaria retusa</i>	Fabaceae	H
42	<i>Dalbergia sissoo</i>	Fabaceae	T
43	<i>Indigofera astragalina</i>	Fabaceae	H
44	<i>Indigofera cordifolia</i>	Fabaceae	H
45	<i>Indigofera linnaei</i>	Fabaceae	H
46	<i>Pongamia pinnata</i>	Fabaceae	T
47	<i>Rhynchosia minima</i>	Fabaceae	H
48	<i>Stylosanthes fruticosa</i>	Fabaceae	H
49	<i>Stylosanthes scabra</i>	Fabaceae	H
50	<i>Tephrosia purpurea</i>	Fabaceae	H
51	<i>Tephrosia villosa</i>	Fabaceae	H
52	<i>Tephrosia pumila</i>	Fabaceae	H
53	<i>Zornia gibbosa</i>	Fabaceae	H
54	<i>Pterolobium hexapetalum</i>	Caesalpiniaceae	C
55	<i>Senna auriculata</i>	Caesalpiniaceae	S
56	<i>Senna italica</i>	Caesalpiniaceae	H

57	<i>Senna montana</i>	Caesalpiniaceae	S
58	<i>Senna occidentalis</i>	Caesalpiniaceae	S
59	<i>Senna uniflora</i>	Caesalpiniaceae	H
60	<i>Tamarindus indica</i>	Caesalpiniaceae	T
61	<i>Acacia nilotica</i> ssp. <i>indica</i>	Mimosaceae	T
62	<i>Albizia amara</i>	Mimosaceae	T
63	<i>Albizia lebbeck</i>	Mimosaceae	T
64	<i>Leucaena leucocephala</i>	Mimosaceae	T
65	<i>Mimosa pudica</i>	Mimosaceae	H
66	<i>Prosopis cineraria</i>	Mimosaceae	T
67	<i>Prosopis juliflora</i>	Mimosaceae	T
68	<i>Passiflora foetida</i>	Passifloraceae	C
69	<i>Citrullus colocynthis</i>	Cucurbitaceae	C
70	<i>Coccinia grandis</i>	Cucurbitaceae	C
71	<i>Cucumis prophetarum</i>	Cucurbitaceae	C
72	<i>Cucumis melo</i>	Cucurbitaceae	C
73	<i>Diplocyclos palmatus</i>	Cucurbitaceae	C
74	<i>Opuntia dillenii</i>	Cactaceae	S
75	<i>Mollugo nudicaulis</i>	Ficoidaceae	H
76	<i>Mollugo pentaphylla</i>	Ficoidaceae	H
77	<i>Trianthema portulacastrum</i>	Ficoidaceae	H
78	<i>Canthium parviflorum</i>	Rubiaceae	H
79	<i>Oldenlandia herbacea</i>	Rubiaceae	H
80	<i>Oldenlandia umbellata</i>	Rubiaceae	H
81	<i>Spermacoce articularis</i>	Rubiaceae	H
82	<i>Spermacoce pusilla</i>	Rubiaceae	H
83	<i>Acanthospermum hispidum</i>	Asteraceae	H
84	<i>Blumea mollis</i>	Asteraceae	H
85	<i>Conyza bonariensis</i>	Asteraceae	H
86	<i>Echinops echinatus</i>	Asteraceae	H
87	<i>Glossocardia bosvallea</i>	Asteraceae	H
88	<i>Lagascea mollis</i>	Asteraceae	H
89	<i>Oligochaeta ramosa</i>	Asteraceae	H
90	<i>Parthenium hysterophorus</i>	Asteraceae	H
91	<i>Pentanema indicum</i>	Asteraceae	H
92	<i>Pulicaria wightiana</i>	Asteraceae	H
93	<i>Synedrella vialis</i>	Asteraceae	H
94	<i>Tricholepis radicans</i>	Asteraceae	H
95	<i>Tridax procumbens</i>	Asteraceae	H
96	<i>Vernonia cinerea</i>	Asteraceae	H
97	<i>Xanthium strumarium</i>	Asteraceae	H
98	<i>Plumbago zeylanica</i>	Plumbaginaceae	H
99	<i>Catharanthus pusillus</i>	Apocynaceae	H
100	<i>Catharanthus roseus</i>	Apocynaceae	H
101	<i>Wrightia tinctoria</i>	Apocynaceae	T
102	<i>Nerium odorum</i>	Apocynaceae	S

103	<i>Calotropis gigantea</i>	Asclepiadaceae	S
104	<i>Calotropis procera</i>	Asclepiadaceae	S
105	<i>Caralluma adscendens</i>	Asclepiadaceae	H
106	<i>Caralluma umellata</i>	Asclepiadaceae	H
107	<i>Ceropegia bulbosa</i>	Asclepiadaceae	C
108	<i>Ceropegia juncea</i>	Asclepiadaceae	C
109	<i>Hemidesmus indicus</i>	Asclepiadaceae	C
110	<i>Pergularia daemia</i>	Asclepiadaceae	C
111	<i>Pentatropis capensis</i>	Asclepiadaceae	C
112	<i>Tylophora indica</i>	Asclepiadaceae	C
113	<i>Wattakaka volubilis</i>	Asclepiadaceae	C
114	<i>Trichodesma indicum</i>	Boraginaceae	H
115	<i>Enicostema axillare</i>	Gentianaceae	H
116	<i>Evolvulus alsinoides</i>	Convolvulaceae	H
117	<i>Merremia tridentata</i>	Convolvulaceae	H
118	<i>Datura innoxia</i>	Solanaceae	H
119	<i>Datura stromonium</i>	Solanaceae	H
120	<i>Solanum pubescens</i>	Solanaceae	H
121	<i>Solanum surattrense</i>	Solanaceae	H
122	<i>Striga asiatica</i>	Scrophulariaceae	H
123	<i>Tecomella undulata</i>	Bignoniaceae	T
124	<i>Tecoma stans</i>	Bignoniaceae	T
125	<i>Pedaliium murex</i>	Pedaliaceae	H
126	<i>Asystasia gangetica</i>	Acanthaceae	H
127	<i>Barleria mysorensis</i>	Acanthaceae	H
128	<i>Indoneesiella echioides</i>	Acanthaceae	H
129	<i>Indoneesiella longipedunculata</i>	Acanthaceae	H
130	<i>Justicia diffusa</i> var. <i>prostrata</i>	Acanthaceae	H
131	<i>Justicia glauca</i>	Acanthaceae	H
132	<i>Lepidagathis cristata</i>	Acanthaceae	H
133	<i>Ruellia patula</i>	Acanthaceae	H
134	<i>Lantana camara</i>	Verbenaceae	S
135	<i>Stachytarpheta jamaicensis</i>	Verbenaceae	H
136	<i>Vitex negundo</i>	Verbenaceae	S
137	<i>Vitex trifolia</i>	Verbenaceae	S
138	<i>Anisomeles malabarica</i>	Lamiaceae	H
139	<i>Anisomeles indica</i>	Lamiaceae	H
140	<i>Hyptis suaveolens</i>	Lamiaceae	H
141	<i>Leucas aspera</i>	Lamiaceae	H
142	<i>Ocimum americanum</i>	Lamiaceae	H
143	<i>Ocimum sactum</i>	Lamiaceae	H
144	<i>Boerhavia diffusa</i>	Nyctaginaceae	H
145	<i>Aerva lanata</i>	Amaranthaceae	H
146	<i>Achyranthes aspera</i>	Amaranthaceae	H
147	<i>Allmania nodiflora</i>	Amaranthaceae	H
148	<i>Alternanthera pungens</i>	Amaranthaceae	H

149	<i>Alternanthera sessilis</i>	Amaranthaceae	H
150	<i>Amaranthus spinosus</i>	Amaranthaceae	H
151	<i>Amaranthus viridis</i>	Amaranthaceae	H
152	<i>Celosia argentea</i>	Amaranthaceae	H
153	<i>Celosia polygonoides</i>	Amaranthaceae	H
154	<i>Digera muricata</i>	Amaranthaceae	H
155	<i>Gomphrena celosioides</i>	Amaranthaceae	H
156	<i>Pupalia lappacea</i>	Amaranthaceae	H
157	<i>Trichuriella monsoniae</i>	Amaranthaceae	H
158	<i>Aristolochia indica</i>	Aristolochiaceae	H
159	<i>Dendrophthoe falcata</i>	Loranthaceae	H
160	<i>Acalypha indica</i>	Euphorbiaceae	H
161	<i>Croton bonplandianus</i>	Euphorbiaceae	H
162	<i>Euphorbia antiquorum</i>	Euphorbiaceae	T
163	<i>Euphorbia heterophylla</i>	Euphorbiaceae	H
164	<i>Euphorbia thymifolia</i>	Euphorbiaceae	H
165	<i>Euphorbia tirucalli</i>	Euphorbiaceae	H
166	<i>Euphorbia hirta</i>	Euphorbiaceae	H
167	<i>Phyllanthus amarus</i>	Euphorbiaceae	H
168	<i>Phyllanthus emblica</i>	Euphorbiaceae	T
169	<i>Phyllanthus maderaspatensis</i>	Euphorbiaceae	H
170	<i>Tragia involucrata</i>	Euphorbiaceae	H
171	<i>Ficus religiosa</i>	Moraceae	T
172	<i>Ficus racemosa</i>	Moraceae	T
173	<i>Aloe vera</i>	Liliaceae	H
174	<i>Asparagus racemosus</i>	Liliaceae	C
175	<i>Chlorophytum tuberosum</i>	Liliaceae	H
176	<i>Gloriosa superba</i>	Liliaceae	C
177	<i>Sansevieria roxburghiana</i>	Liliaceae	H
178	<i>Scilla hyacinthina</i>	Liliaceae	H
179	<i>Commelina benghalensis</i>	Commelinaceae	H
180	<i>Commelina clavata</i>	Commelinaceae	H
181	<i>Cyanotis axillaris</i>	Commelinaceae	H
182	<i>Cyanotis tuberosa</i>	Commelinaceae	H
183	<i>Phoenix sylvestris</i>	Arecaceae	T
184	<i>Lemna perpusilla</i>	Lemnaceae	H
185	<i>Bulbostylis barbata</i>	Cyperaceae	H
186	<i>Cyperus bulbosus</i>	Cyperaceae	H
187	<i>Cyperus compressus</i>	Cyperaceae	H
188	<i>Cyperus rotundus</i>	Cyperaceae	H
189	<i>Cyperus rubicundus</i>	Cyperaceae	H
190	<i>Fimbristylis cymosa</i>	Cyperaceae	H
191	<i>Fimbristylis dichotoma</i>	Cyperaceae	H
192	<i>Fimbristylis miliacea</i>	Cyperaceae	H
193	<i>Kyllinga bulbosa</i>	Cyperaceae	H
194	<i>Pycreus flavidus</i>	Cyperaceae	H

195	<i>Pycneus pumilus</i>	Cyperaceae	H
196	<i>Schoenoplectus supinus</i>	Cyperaceae	H
197	<i>Andropogon pumilus</i>	Poaceae	H
198	<i>Apluda mutica</i>	Poaceae	H
199	<i>Aristida adscensionis</i>	Poaceae	H
200	<i>Aristida hystrix</i>	Poaceae	H
201	<i>Brachiaria ramosa</i>	Poaceae	H
202	<i>Brachiaria reptans</i>	Poaceae	H
203	<i>Cenchrus ciliaris</i>	Poaceae	H
204	<i>Chloris barbata</i>	Poaceae	H
205	<i>Chrysopogon fulvus</i>	Poaceae	H
206	<i>Cymbopogon coloratus</i>	Poaceae	H
207	<i>Cynodon dactylon</i>	Poaceae	H
208	<i>Dactyloctenium aegyptium</i>	Poaceae	H
209	<i>Digitaria ciliaris</i>	Poaceae	H
210	<i>Echinochloa colona</i>	Poaceae	H
211	<i>Eragrostiella bifaria</i>	Poaceae	H
212	<i>Eragrostis maderaspatana</i>	Poaceae	H
213	<i>Eragrostis viscosa</i>	Poaceae	H
214	<i>Heteropogon contortus</i>	Poaceae	H
215	<i>Lophopogon tridentatus</i>	Poaceae	H
216	<i>Oropetium thomaeum</i>	Poaceae	H
217	<i>Panicum repens</i>	Poaceae	H
218	<i>Perotis indica</i>	Poaceae	H
219	<i>Setaria pumila</i>	Poaceae	H
220	<i>Setaria verticillata</i>	Poaceae	H
221	<i>Sporobolus coromandelianus</i>	Poaceae	H
222	<i>Tetrapogon tenellus</i>	Poaceae	H
223	<i>Tragus roxburghii</i>	Poaceae	H

T =Tree; H =Herb; S = Shrub; C = Climber

CONCLUSION

The present study has documented the occurrence of wild and naturalized flowering plant taxa within the STSN Government Degree College campus, Kadiri, comprising 223 species across 161 genera and 52 families. This floristic survey provides an updated account of the campus flora and serves as a valuable reference for the preservation of collected specimens in the college herbarium. It also establishes a baseline for future ecological monitoring. The findings highlight the dominance of herbaceous species, while indicating that woody plants are increasingly under threat due to ongoing human activities, leading to restricted and deformed growth. Immediate and effective conservation strategies are essential to safeguard the remaining wild flora on the campus.

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