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A STUDY ON THE FLORISTIC DIVERSITY, ETHNOBOTANICAL SIGNIFICANCE, AND MEDICINAL POTENTIAL OF PLANT SPECIES IN GM UNIVERSITY CAMPUS, DAVANGERE, KARNATAKA, INDIA

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ABSTRACT

The study presents a detailed field studies of the plant species inhabiting the large green campus of 57 acres at GM University. The GM University in the Davangere district of Karnataka State in India is in an area well known for its rich floral diversity. The total number of 117 plant species in 48 different families was found using random sampling, visual survey, and transect walk techniques. The dominant plant species in this field studies; planted trees and shrubs, reflecting their ornamental, medicinal ethnobotanical importance. Field studies were conducted between February to April 2026. Plant species identification was done using both the national and state floras, field manuals, and floristic keys; difficult identifications were additionally verified by a local botanist. In the process of the field studies, we have conducted detailed field studies including plant species enumeration, morphological description, and phenology (periods of flowering and fruiting). Also, we provide the global and local distribution, common name in English and Vernacular names in Kannada of each of the studied species. Furthermore, all of the recorded plant species were thoroughly reviewed in terms of their medicinal and

ethnobotanical importance, using scientific literature. The inclusion of line drawings and photographs makes this document a valuable reference for biodiversity research, conservation, ethnobotanical studies, and environmental education.

KEYWORDS: Floristic diversity, Botanical names, Plant taxonomy, Phenology, Species enumeration, Ethnobotanical importance, Campus Checklist, GM University.

INTRODUCTION

The study of local flora is crucial for understanding the biodiversity, ecological balance, and environmental characteristics of an area. Regional floristic field studies not only document plant diversity but also help identify ecologically significant and medicinally important species. This field studies aimed to document the plant species present on the GM University campus, forming a baseline for future ecological and conservation research. The study included tree, shrub, and herb assessments, highlighting the rich plant diversity supported by this semi-urban educational environment. Understanding local plant diversity is crucial for ecological conservation, education, and sustainable development. The findings contribute not only to the botanical knowledge of the region but also foster awareness among students and faculty of the ecological and medicinal significance of native flora. Additionally, this study serves as a valuable reference for future floristic and ecological research in and around the GMU campus, supporting ongoing efforts in biodiversity conservation, environmental education, and the promotion of sustainable practices.

Medicinal plants have served as the foundation of traditional healthcare systems for centuries and continue to play a significant role in the discovery of modern therapeutic agents. Ethnobotanical knowledge provides valuable information on the traditional uses of plants for treating various human ailments and preserving indigenous healthcare practices. University campuses, with their diverse vegetation, serve as important repositories of medicinal plant diversity and associated traditional knowledge. The plant species recorded from the GM University campus in the present study were systematically documented and evaluated for their medicinal and ethnobotanical significance through a comprehensive review of published scientific literature. The documented species are traditionally used in the treatment of a wide range of ailments, including fever, diabetes, wounds, skin disorders, gastrointestinal diseases, respiratory problems, and inflammatory conditions. This assessment highlights the rich ethnomedicinal potential of the campus flora and emphasizes the importance of conserving these valuable plant resources for future pharmacological and ethnobotanical research.

GM University is committed to enhancing the quality of its academic and co-curricular activities with a strong focus on environmental sustainability. In this context, the Department of Botany plays a vital role in maintaining a green and eco-friendly campus while providing state-of-the-art facilities to promote botanical knowledge and awareness of the plant kingdom. Remarkably, more than one-third of the land is covered by trees and various plant species, forming a vibrant green space. Two dedicated gardens enhance this biodiversity, a Botanical Garden maintained by the Department of Botany and a Medicinal Plant Garden maintained by the College of Pharmacy. Together, these green zones contribute to a checklist that is not only aesthetically pleasing but also ecologically and academically significant.

To this end, the university plans to implement additional green initiatives, such as rainwater harvesting, seed ball dispersal, vermicomposting, and garden waste composting facilities. These activities aim to promote sustainability and instill eco-conscious values among students. While some plants on campus occur naturally, many have been intentionally cultivated for research, medicinal, ornamental, and educational purposes. The Department of Botany continues to play a significant role in enriching campus biodiversity and fostering a culture of environmental stewardship.

MATERIALS AND METHODS

Study Area

The present study focuses on the field studies of GM University (GMU), Davangere, Karnataka, India. The university campus extends across 57 acres and lies at an elevation of approximately 602 m above sea level, at coordinates 14.4570° North latitude and 75.9200° East longitude. Situated in the transitional zone between the Western Ghats and the Deccan Plateau, the campus hosts a unique blend of vegetation types that reflect both moist- and dry-zone characteristics **[Fig: 1, 2 and 3].**

Data Collection

Field studies were conducted between February to April 2026. The field studies were conducted using random sampling Visual Surveys, and transect walk (Cochran 1977), methods to cover various habitat types within the campus. Plant species were identified using standard field guides and floristic keys based on national, state, and regional floras, including (Gamble J. S. 1915–1934); Hooker J. D. 1876) (Saldanha and Nicolson D. H. 1976); (Singh NP 1988 & Sharma BD *et al.* 1984); (Manjunath B. K., Krishna V., and Pullaiah T. 2004); (Kotresha K. and Sidananda K. 2016); among others, have These authoritative sources

provided valuable taxonomic descriptions and helped support the accurate identification of plant specimens during the field studies **[Fig 4].**

Following taxonomic identification, the medicinal and ethnobotanical importance of all recorded plant species was systematically documented through an extensive study of published scientific literature. Ethnomedicinal information was compiled from peer-reviewed research articles, review papers, standard ethnobotanical monographs, pharmacognosy textbooks, regional floras, and authenticated online databases. Data on traditional medicinal uses, plant parts used, mode of use, along with their ethnobotanical importance were collected and cross-verified using multiple independent sources to ensure reliability. although information on the pharmacological properties was backed by scientific publications. This approach established a reliable baseline dataset for future ethnobotanical, pharmacological, and biodiversity conservation studies. The verified data were compiled in a list of the species and incorporated into the floras, thereby giving an overall view of the medicinal and ethnobotanical importance of the studied flora.

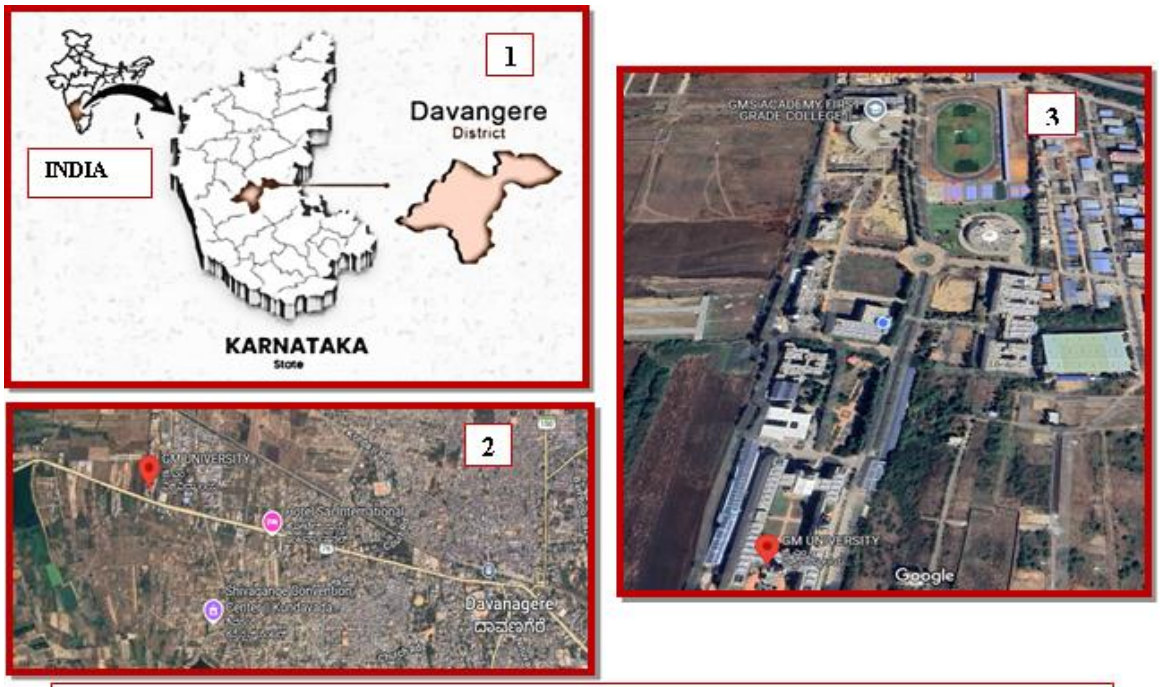

Fig: 1, 2 and 3. Map of India showing the location of Karnataka State and Davanagere district, along with the study area at the GM University (GMU) campus, Davanagere, Karnataka.

RESULTS AND DISCUSSION

The current study identified 117 unique plant species across 48 families. Among these, there were 51 species of trees, 34 species of shrubs **[Fig 5]**, and 32 species of herbs and other

plants. Among the recorded plant species, Fabaceae, with 12 species, was the dominant family. Other major contributing families included Bignoniaceae 8 species, Arecaceae and Lamiaceae with 7 species each; Apocynaceae, Euphorbiaceae, and Moraceae with 6 species each; Rubiaceae, Rutaceae Families with moderate representation (4 species each) were Families with 3 species each included Acanthaceae Asparagaceae, Lythraceae, Myrtaceae, Oleaceae, Several families, such as Boraginaceae, Cactaceae, Combretaceae, Malvaceae, Meliaceae, Phyllanthaceae, Sapotaceae, Verbenaceae, were represented by 2 species each. The remaining families, Amaryllidaceae, Anacardiaceae, Annonaceae, Araucariaceae, Asphodelaceae, Asteraceae, Caricaceae, Commelinaceae, Costaceae, Cupressaceae, Cycadaceae, Lauraceae, Magnoliaceae, Malpighiaceae, Muntingiaceae, Moringaceae, Nyctaginaceae, Passifloraceae, Plumbaginaceae, Poaceae, Rhamnaceae, Santalaceae, Solanaceae, Strelitziaceae, Ulmaceae, and Zingiberaceae, were each represented by a single species. Were a comprehensive list of all plant species collected during this floristic survey, including their botanical names, vernacular names, family affiliations, and growth forms, is presented in **[Table 1], [Fig 6].**

The field studies shows that Apocynaceae and Fabaceae are the two plant families of most medicinal importance to GM University, as they have both the highest number of species and also possess wide-ranging pharmaceutical properties (Bhadane *et al.*, 2018; Kacholi, 2026). The plant families which have many species capable of exhibiting antioxidant and anti-diabetes effects are Moraceae and Euphorbiaceae. Bignoniaceae, on the other hand, provides some ornamental tree species with anti-inflammatory and antimicrobial properties (Salehi *et al.*, 2019; Sharifi-Rad *et al.*, 2017). Even the plant families with very few species, like Magnoliaceae, Annonaceae, and Lythraceae, contain high medicinal value species like *Magnolia champaca*, *Annona squamosa*, and *Lagerstroemia speciosa* (Leone *et al.*, 2015; Jamshidi-Kia *et al.*, 2018). The Fabaceae and Apocynaceae families had maximum representation in the ethnomedicinal flora of the GM University campus with eight medicinal species each having varying ethnomedical utilities. The members of the family Fabaceae have extensive applications in wound healing, diarrhea, fever, inflammations, and diabetes, while those belonging to the family Apocynaceae find applications in the management of fever, pain, skin infections, and inflammatory conditions (Bhadane *et al.*, 2018; Kacholi, 2026). **[Fig 7].**

The Arecaceae, Euphorbiaceae, Moraceae, and Bignoniaceae families came second because of their rich species composition and ethnomedicinal use range (DebMandal & Mandal, 2011; Salehi *et al.*, 2019; Sharifi-Rad *et al.*, 2017) **[Table 2].** The leaves were the most commonly used plant part, followed by bark, fruits, roots, seeds, flowers, and latex, which corroborates the findings from ethnobotanical studies on plants medicinal utilization where leaves were the primary sources of remedies because of their abundance and bioactive metabolites (Jamshidi-Kia *et al.*, 2018). The traditional preparation techniques mainly comprised of decoctions, leaf pastes, infusions, powders, and fresh juices. Families like the Rutaceae, Lamiaceae, Combretaceae, Myrtaceae, and Malvaceae comprised of relatively lower numbers of species but held considerable ethnomedicinal importance especially in gastrointestinal, respiratory, cardiovascular, and skin problems (Monika *et al.*, 2023; Venthodika *et al.*, 2021; Hewlings & Kalman *et al.*, 2017).

Overall, the dominance of Fabaceae and Apocynaceae demonstrates their central role in the traditional healthcare practices associated with the campus flora and highlights their importance for future phytochemical, pharmacological, and conservation investigations.

Table 1: Showing checklist of plant species found in study area GMU CAMPUS, with their Botanical names, families, common and vernacular names, phenological data, and total count of plants with medicinal properties.

SL.No	Botanical Name	Family	Common name	Vernacular Name	Phenological data		Total count of plants	Medicinal properties	Citation
					Flowering period	Fruiting period			
1.	*Acalypha hispida*	Euphorbiaceae	Monkey Tail	ಮಂಗನ ಬಾಲ	Year-round	Rare	2	Antimicrobial; wound healing	(Rahman *et al.*, 2022)
2.	*Acalypha wilkesiana*	Euphorbiaceae	Copper Plant	ಕುಪ್ಪಿ ಗಿಡ	Year-round	Rare	4	Anti-inflammatory; antioxidant	(Adeleye *et al.*, 2023)
3.	*Aegle marmelos*	Rutaceae	Bael tree	ಬಿಲ್ವಪತ್ರೆ	April–June	March–June	1	Antidiabetic; gastroprotective	(Sharma *et al.*, 2023)
4.	*Agave angustifolia*	Asparagaceae	Caribbean agave	ಕತ್ತಾಳೆ	Once in lifetime (8–10 years)	Post-flowering	2	Antioxidant; antimicrobial	(López-Romero *et al.*, 2022)
5.	*Aloe vera*	Asphodelaceae	Indian Aloe	ಲೋಳೆ ಸರ	December–March	March–May	1	Wound healing; anti-inflammatory	(Hęś *et al.*, 2024)
6.	*Alstonia scholaris*	Apocynaceae	Milkwood	ಹಾಲೆ	October–January	March–June	23	Antiasthmatic; antimicrobial	(Singh *et al.*, 2022)
7.	*Annona squamosa*	Annonaceae	Custard Apple	ಸೀತಾಫಲ	April–June	August–October	2	Antidiabetic; antioxidant	(Patel *et al.*, 2023)
8.	*Araucaria columnaris*	Araucariaceae	Christmas Tree	ಕ್ರಿಸ್ಮಸ್ ಮರ	Cone-bearing (no flowers)	Cones mature in ~18 months	22	Antioxidant; antimicrobial	(Elansary *et al.*, 2022)
9.	*Areca catechu*	Arecaceae	Areca palm	ಅಡಿಕೆ ಮರ	April–May, September–October	6–8 months after flowering	1	Anthelmintic; antimicrobial	(Kumar *et al.*, 2022)
10.	*Artocarpus heterophyllus*	Moraceae	Jack Fruit	ಹಲಸು	March–June	July–December	6	Antidiabetic; antioxidant	(Sundarrajan *et al.*, 2023)

11.	*Azadirachta indica*	Meliaceae	Neem	ಬೇವು	February–May	May–July	14	Antimicrobial; anti-inflammatory	(Salehi *et al.*, 2023)
12.	*Bambusa vulgaris*	Poaceae	Bamboo	ಬಿದಿರು	Rare	Once, post-flowering	3	Antioxidant; anti-inflammatory	(Nirmala *et al.*, 2022)
13.	*Bauhinia acuminata*	Fabaceae	White Orchid-Tree	ಬಿಳಿ ಮಂದಾರ	March–July	April–August	1	Antioxidant; antimicrobial	(Islam *et al.*, 2022)
14.	*Bauhinia purpurea*	Fabaceae	Orchid Tree	ಬಸವನ ಪಾದ	October–February	February–May	3	Antidiabetic; antioxidant	(Khan *et al.*, 2023)
15.	*Bauhinia tomentosa*	Fabaceae	Yellow Orchid Tree	ವನ ಸಂಪಿಗೆ	April–September	July–October	1	Hepatoprotective; antioxidant	(Rani *et al.*, 2022)
16.	*Bougainvillea glabra*	Nyctaginaceae	Paper flower	ಕಾಗದದ ಹೂ	Year-round	Rare	14	Antidiabetic; antimicrobial	(Alam *et al.*, 2023)
17.	*Caesalpinia pulcherrima*	Fabaceae	Peacock Flower	ರತ್ನಗಂಧಿ	Year-round	Year-round	3	Anti-inflammatory; antioxidant	(Aboody *et al.*, 2022)
18.	*Carica papaya*	Caricaceae	Papaya	ಪಪ್ಪಾಯಿ	Year-round	Year-round	4	Antioxidant; platelet enhancing	(Bhardwaj *et al.*, 2023)
19.	*Cascabela thevetia*	Apocynaceae	Yellow oleander	ಕಾಡು ಕಣಗಿಲೆ	Year-round	Year-round	3	Antimicrobial; antioxidant*	(Adeyemi *et al.*, 2022)
20.	*Chamaecostus cuspidatus*	Costaceae	Insulin Plant	ಕೆಂಪು ಹೊನ್ನೆ	June–September	August–November	3	Antidiabetic; antioxidant	(Silva *et al.*, 2023)
21.	*Citharexylum spinosum*	Verbenaceae	Fiddle wood	ಬೀಲಿ ಪಾರಿಜಾತ	April–August	July–November	2	Antioxidant; antimicrobial	(Pérez *et al.*, 2022)
22.	*Dypsis lutescens*	Arecaceae	Golden cana palm	ಅರೆಕಾ ತಾಳೆ ಗಿಡ	February–May	May–August	12	Antioxidant activity	(Elansary *et al.*, 2022)
23.	*Citrus limon*	Rutaceae	Lemon	ನಿಂಬೆ ಕಾಯಿ	Year-round	Year-round	2	Antioxidant; antimicrobial	(Khan *et al.*, 2023)
24.	*Clerodendrum paniculatum*	Lamiaceae	Pagoda Flower	ರತ್ನ ಪುಷ್ಪ	April–September	June–October	1	Anti-inflammatory; antioxidant	(Nguyen *et al.*, 2023)
25.	*Cocos nucifera*	Arecaceae	Coconut	ತೆಂಗು	Year-round	Year-round	2	Antimicrobial; wound healing	(DebMandal *et al.*, 2022)
26.	*Codiaeum variegatum*	Euphorbiaceae	Croton	ಕ್ರೋಟನ್	Year-round	Rare	4	Antimicrobial; antioxidant	(Aboody *et al.*, 2022)

27.	*Coleus amboinicus*	Lamiaceae	Mexican mint	ದೊಡ್ಡ ಪತ್ರೆ	October–February	Rare	1	Antitussive; antimicrobial	(Arumugam *et al.*, 2023)
28.	*Cordia dichotoma*	Boraginaceae	Indian Cherry	ಚಳ್ಳಿ ಹಣ್ಣು	March–April	May–June	1	Anti-inflammatory; antioxidant	(Sharma *et al.*, 2022)
29.	*Curcuma longa*	Zingiberaceae	Turmeric	ಅರಿಶಿಣ	July–September	Rare	1	Anti-inflammatory; antioxidant	(Hewlings *et al.*, 2023)
30.	*Cycas revoluta*	Cycadaceae	Sago Palm	ಗೊಡ್ಡು ಈಚಲು	Not produce flowers	October–December	11	Antioxidant compounds*	(Zhang *et al.*, 2022)
31.	*Dalbergia latifolia*	Fabaceae	Indian Rose wood	ಬೀಟಿ	February–April	May–July	3	Antioxidant; antimicrobial	(Patel *et al.*, 2023)
32.	*Delonix regia*	Fabaceae	Gulmohar	ಕೆಂಪು ತುರಾಯಿ	April–June	July–January	7	Anti-inflammatory; antioxidant	(Islam *et al.*, 2022)
33.	*Dracaena angustifolia*	Asparagaceae	Narrow-Leaf Dragon Tree	ಹೀರಾ	March–June	Rare	2	Antioxidant activity	(Tran *et al.*, 2023)
34.	*Duranta erecta*	Verbenaceae	Golden Dewdrop	ನೀಲಕಂಠ	April–November	August–December	27	Antimicrobial; antioxidant	(Kumar *et al.*, 2022)
35.	*Ehretia microphylla*	Boraginaceae	Fukien Tea Tree	ಬೂಟಿ	Year-round	Year-round	42	Antidiabetic; antioxidant	(Flores *et al.*, 2023)
36.	*Epiphyllum oxypetalum*	Cactaceae	Queen of the night	ಬ್ರಹ್ಮ ಕಮಲ	June–October	Rare	2	Anti-inflammatory; antioxidant	(Singh *et al.*, 2022)
37.	*Euphorbia milii*	Euphorbiaceae	Crown Of Thorns	ಎಲೆಕಳ್ಳಿ	Year-round	Rare	4	Antimicrobial activity*	(Silva *et al.*, 2023)
38.	*Ficus benjamina*	Moraceae	Weeping Fig	ಜಾವಾಅತ್ತಿ	Year-round	Year-round	6	Antioxidant; antimicrobial	(Abdel-Hameed *et al.*, 2022)
39.	*Ficus carica*	Moraceae	Common fig	ಅಂಜೂರ	Spring, late summer	May–October	1	Antidiabetic; antioxidant	(Badgujar *et al.*, 2023)
40.	*Ficus microcarpa*	Moraceae	Chinese Banyan	ಪೀಲದ ಮರ	Year-round	Year-round	11	Anti-inflammatory; antioxidant	(Chen *et al.*, 2022)
41.	*Ficus racemosa*	Moraceae	Cluster Fig	ಅತ್ತಿ ಮರ	April–August	June–September	1	Antidiabetic; anti-inflammatory	(Kannan *et al.*, 2024)

42.	*Galphimia glauca*	Malpighiaceae	Golden Thryallis	ಅಗಾಧಿ	Year-round	Year-round	1	Anxiolytic; sedative	(Herrera-Arellano *et al.*, 2022)
43.	*Gardenia jasminoides*	Rubiaceae	Cape Jasmine	ಅನಂತ ಪುಷ್ಪ	May–August	August–October	8	Anti-inflammatory; antioxidant	(Wang *et al.*, 2023)
44.	*Gliricidia sepium*	Fabaceae	Mexican Lilac	ಗೊಬ್ಬರದ ಗಿಡ	February–April, August–October	April–June	2	Antimicrobial; wound healing	(Gutiérrez *et al.*, 2022)
45.	*Gmelina arborea*	Lamiaceae	White teak	ಶಿವನಿ	February–April	June–August	1	Hepatoprotective; antioxidant	(Kumar *et al.*, 2023)
46.	*Graptophyllum pictum*	Acanthaceae	Tricolor Caricature Plant	ಕಾಲಾಡುಸ	March–September	Rare	14	Anti-inflammatory; wound healing	(Nugroho *et al.*, 2023)
47.	*Guettarda speciosa*	Rubiaceae	Beach Gardenia	ಪನ್ನೀರು ಹೂ	March–August	May–September	1	Antioxidant; antimicrobial	(Elshamy *et al.*, 2022)
48.	*Hamelia patens*	Rubiaceae	Firebush	ಅಗ್ನಿ ಮೂಲ	Year-round	Year-round	20	Antimicrobial; antioxidant	(Sánchez *et al.*, 2023)
49.	*Hibiscus rosa-sinensis*	Malvaceae	Rose mallow	ದಾಸವಾಳ	Year-round	Rare	29	Wound healing; antioxidant	(Patel *et al.*, 2023)
50.	*Holoptelea integrifolia*	Ulmaceae	Indian Elm	ರಸಬೀಜ	February–April	April–May	1	Anti-inflammatory; antimicrobial	(Singh *et al.*, 2022)
51.	*Hymenocallis littoralis*	Amaryllidaceae	Beach Spider Lily	ಸಮುದ್ರದ ನಕ್ಷತ್ರ ಹೂವು	April–August	Rare	5	Anticancer; antimicrobial	(Roy *et al.*, 2023)
52.	*Ixora coccinea*	Rubiaceae	Red Ixora	ಕಿಸುಕಾರ ಹೂ	Year-round	Rare	12	Anti-inflammatory; antioxidant	(Rahman *et al.*, 2022)
53.	*Jacaranda mimosifolia*	Bignoniaceae	Jacaranda	ಜಕಾರಂಡ	March–May	May–August	5	Antioxidant; antimicrobial	(Silva *et al.*, 2023)
54.	*Jasminum auriculatum*	Oleaceae	Juhi Jasmine	ಕಾಡರಮಲ್ಲಿಗೆ	April–October	Rare	1	Anti-inflammatory; antioxidant	(Karthick *et al.*, 2022)
55.	*Jasminum sambac*	Oleaceae	Arabian jasmine	ಮೈಸೂರು ಮಲ್ಲಿಗೆ	Year-round	Rare	2	Antioxidant; antimicrobial	(Zhao *et al.*, 2023)

56.	*Jatropha integerrima*	Euphorbiaceae	Peregrina	ಕಾಡು ಹರಳು	Year-round	Year-round	3	Antimicrobial; antioxidant	(Abdullah *et al.*, 2022)
57.	*Lagerstroemia indica*	Lythraceae	Common crepe Myrtle	ಹೊಳೆ ದಾಸವಾಳ	April–September	October–December	9	Antidiabetic; antioxidant	(Kim *et al.*, 2023)
58.	*Lagerstroemia speciosa*	Lythraceae	Gaint crepe Myrtle	ಮರುವಾಚಲುಮರ	April–June	July–December	26	Antidiabetic; anti-obesity	(Rashid *et al.*, 2023)
59.	*Leucaena leucocephala*	Fabaceae	Wild tamarind	ಸುಬಾಬೂಲ್	February–May, Aug–Oct	March–June, Oct–Dec	1	Antioxidant; antimicrobial	(Santos *et al.*, 2022)
60.	*Madhuca longifolia*	Sapotaceae	Mahua	ಇಪ್ಪೆ ಮರ	February–April	May–June	2	Anti-inflammatory; hepatoprotective	(Verma *et al.*, 2023)
61.	*Magnolia champaca*	Magnoliaceae	Yellow Champaka	ಸಂಪಿಗೆ	March–June	July–October	5	Anti-inflammatory; anticancer	(Hasan *et al.*, 2023)
62.	*Mangifera indica*	Anacardiaceae	Mango	ಮಾವು	December–March	April–July	10	Antidiabetic; antioxidant	(Salehi *et al.*, 2023)
63.	*Manihot esculenta*	Euphorbiaceae	Cassava	ಮರಗೆಣಸು	June–September	August–October	3	Antioxidant; antimicrobial	(Silva *et al.*, 2022)
64.	*Manilkara zapota*	Sapotaceae	Chikoo	ಸಪೋಟ	January–March, June–Aug	Mar–May, Sept–Nov	3	Antioxidant; antimicrobial	(Kumar *et al.*, 2023)
65.	*Markhamia lutea*	Bignoniaceae	Nile trumpet	ಕುಂಕುಮ	April–August	June–October	8	Antimicrobial; anti-inflammatory	(Mogaka *et al.*, 2022)
66.	*Melaleuca linariifolia*	Myrtaceae	Golden Bottle Brush	ಲಿಂಗದ ಮರ	April–August	August–November	3	Antimicrobial; antiseptic	(Sharifi-Rad *et al.*, 2022)
67.	*Millingtonia hortensis*	Bignoniaceae	Indian cork tree	ಆಕಾಶ ಮಲ್ಲಿಗೆ	September–December	December–March	27	Antiasthmatic; antioxidant	(Patel *et al.*, 2023)
68.	*Moringa oleifera*	Moringaceae	Drumstick tree	ನುಗ್ಗೆ ಮರ	March–June	April–August	1	Antidiabetic; antioxidant	(Leone *et al.*, 2023)
69.	*Morus alba*	Moraceae	Common mulberry	ಹಿಪ್ಪುನೇರಳೆ	March–April	April–June	1	Antidiabetic; antioxidant	(Chen *et al.*, 2023)
70.	*Muntingia calabura*	Muntingiaceae	Jamaica cherry	ಗಸಗಸೆ ಹಣ್ಣಿನ	Year-round	Year-round	3	Anti-inflammatory; antioxidant	(Zakaria *et al.*, 2022)

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71.	*Murraya koenigii*	Rutaceae	Curry leaf	ಕರಿ ಬೇವು	April–July	July–September	1	Antidiabetic; hepatoprotective	(Rather *et al.*, 2023)
72.	*Nerium oleander*	Apocynaceae	Rose Bay	ಕಣಗಿಲು	Year-round	September–December	10	Anticancer; antimicrobial*	(El-Seedi *et al.*, 2022)
73.	*Nyctanthes arbor-tristis*	Oleaceae	Night-flowering jasmine	ಪಾರಿಜಾತ	August–December	October–February	1	Anti-inflammatory; antipyretic	(Verma *et al.*, 2023)
74.	*Ocimum tenuiflorum*	Lamiaceae	Holi basil	ತುಳಸಿ	October–February	December–March	3	Antioxidant; immunomodulatory	(Jamshidi-Kia *et al.*, 2023)
75.	*Passiflora incarnata*	Passifloraceae	Maypop	ಗಡಿಯಾರದ ಹೂವು	June–September	August–October	1	Anxiolytic; sedative	(Miroddi *et al.*, 2023)
76.	*Peltophorum pterocarpum*	Fabaceae	Copperpod	ಬಿಟ್ಟ ಹುಣಸೆ	April–June	July–September	9	Anti-inflammatory; antioxidant	(Rahman *et al.*, 2022)
77.	*Persea americana*	Lauraceae	Avocado	ಸೀಮೆಮಾವು	November–March	March–August	2	Antihypertensive; antioxidant	(Dabas *et al.*, 2023)
78.	*Phoenix reclinata*	Arecaceae	Senegal date palm	ಕಾಡು ಈಚಲು ಮರ	March–May	May–September	8	Antioxidant; antimicrobial	(Elansary *et al.*, 2022)
79.	*Phoenix sylvestris*	Arecaceae	Indian date palm	ಈಚಲು ಮರ	January–April	April–June	2	Antidiabetic; antioxidant	(Saha *et al.*, 2023)
80.	*Phyllanthus acidus*	Phyllanthaceae	Star Gooseberry	ಕಿರುನೆಲ್ಲಿ	March–May	May–August	1	Hepatoprotective; antioxidant	(Islam *et al.*, 2023)
81.	*Phyllanthus emblica*	Phyllanthaceae	Indian gooseberry	ಬೆಟ್ಟದ ನೆಲ್ಲಿಕಾಯಿ	March–May	October–February	2	Antioxidant; immunomodulatory	(Baliga *et al.*, 2023)
82.	*Plumbago auriculata*	Plumbaginaceae	Cape leadwort	ನೀಲಿಚಿತ್ರಮೂಲ	Year-round	Rare	4	Antimicrobial; anti-inflammatory	(Moyo *et al.*, 2022)
83.	*Plumeria alba*	Apocynaceae	White frangipani	ದೇವ ಕಣಗಲೆ	March–October	Rare	23	Anti-inflammatory; antimicrobial	(Rahman *et al.*, 2023)
84.	*Plumeria pudica*	Apocynaceae	Bridal bouquet	ಕಾಡು ದೇವ ಕಣಗಲೆ	Year-round	Rare	1	Antioxidant; wound healing	(Khan *et al.*, 2022)

85.	*Polianthes tuberosa*	Asparagaceae	Tuberose	ಸುಗಂಧರಾಜ	July–October	Rare	2	Antioxidant; antimicrobial	(Sharma *et al.*, 2023)
86.	*Pongamia pinnata*	Fabaceae	Pongam Oil Tree	ಹೊಂಗೆ ಮರ	March–May	June–August	29	Anti-inflammatory; antimicrobial	(Al Muqarrabun *et al.*, 2023)
87.	*Pseuderanthemum maculatum*	Acanthaceae	Purple false eranthemum	ಬಿಳಿ ಗೋರಂಟಿ	June–November	Rare	13	Antioxidant; antimicrobial	(Nguyen *et al.*, 2022)
88.	*Psidium guajava*	Myrtaceae	Guava	ಪೇರಲ	Apr–June, Aug–Sept	Aug–Oct, Dec–Feb	5	Antidiarrheal; antimicrobial	(Diaz-de-Cerio *et al.*, 2023)
89.	*Punica granatum*	Lythraceae	Pomegranate	ದಾಳಿಂಬೆ	March–June, Sept–Oct	July–August, Nov–Dec	2	Antioxidant; anticancer	(Fawole *et al.*, 2023)
90.	*Ravenia spectabilis*	Rutaceae	Pink Ravenia	ಗುಲಾಬಿ ರಾವೇನಿಯಾ	March–June	June–September	4	Antimicrobial; antioxidant	(Silva *et al.*, 2022)
91.	*Roystonea regia*	Arecaceae	Cuban royal palm	ಕೋಸುತಾಳೆ ಮರ	Year-round	Year-round	61	Antioxidant activity	(Elansary *et al.*, 2022)
92.	*Samanea saman*	Fabaceae	Rain Tree	ಮಳೆಮರ	March–June	June–August	1	Anti-inflammatory; antioxidant	(Ahmed *et al.*, 2023)
93.	*Santalum album*	Santalaceae	Sandalwood	ಶ್ರೀಗಂಧ	March–September	August–December	22	Anti-inflammatory; antiseptic	(Burdock & Carabin, 2023)
94.	*Selenicereus undatus*	Cactaceae	Dragon fruit	ಡ್ರಾಗನ್ ಹಣ್ಣು	May–October	July–November	2	Antioxidant; hypoglycemic	(Le Bellec *et al.*, 2023)
95.	*Solanum torvum*	Solanaceae	Turkey berry	ಸುಂಡೆಕಾಯಿ	May–October	Year-round	1	Antimicrobial; antidiabetic	(Jaiswal *et al.*, 2023)
96.	*Spathodea campanulata*	Bignoniaceae	African tulip tree	ನೀರುಕಾಯಿ ಮರ	February–May	April–July	29	Anti-inflammatory; antimicrobial	(Niyonzima *et al.*, 2022)
97.	*Sphagneticola trilobata*	Asteraceae	Singapore Daisy	ಗರ್ಗರಿ	Year-round	Year-round	21	Wound healing; antioxidant	(Liu *et al.*, 2023)
98.	*Strelitzia reginae*	Strelitziaceae	Bird of Paradise	ಮರ ಪಕ್ಷಿ ಹೂವು	September–	Rare	3	Antioxidant	(Elansary *et*

					May			activity	*al.*, 2022)
99.	*Swietenia mahagoni*	Meliaceae	West Indian Mahogany	ಮಹಾಗೋನಿ	February–May	July–November	12	Antidiabetic; antioxidant	(Sultana *et al.*, 2023)
100.	*Syzygium cumini*	Myrtaceae	Java Plum	ನೇರಳೆ	March–April	May–June	3	Antidiabetic; antioxidant	(Ayyanar *et al.*, 2023)
101.	*Tabebuia aurea*	Bignoniaceae	Yellow Tabebuia.	ಬಂಗಾರ ಹೂವು	February–April	April–June	24	Anti-inflammatory; antimicrobial	(Silva *et al.*, 2023)
102.	*Tabebuia rosea*	Bignoniaceae	Pink trumpet tree	ವಸಂತ ರಾಣಿ ಮರ	February–April	April–June	253	Antioxidant; wound healing	(García *et al.*, 2022)
103.	*Tabernaemontana divaricata*	Apocynaceae	Crepe Jasmine	ನಂದಿ ಬಟ್ಟಲು	Year-round	Rare	2	Analgesic; anti-inflammatory	(Kumar *et al.*, 2023)
104.	*Tecoma stans*	Bignoniaceae	Yellow trumpetbush	ಕೊಳವೆ ಹೂ	Year-round	April–August	1	Antidiabetic; antioxidant	(Rizvi *et al.*, 2023)
105.	*Tecomaria capensis*	Bignoniaceae	Cape honey-suckle	ಚಿಂಡೆಗೊರಡು	October–March	December–April	10	Antioxidant; antimicrobial	(Elansary *et al.*, 2022)
106.	*Tectona grandis*	Lamiaceae	Teak	ತೇಗ	June–September	November–January	101	Antimicrobial; anti-inflammatory	(Siddiqui *et al.*, 2023)
107.	*Terminalia arjuna*	Combretaceae	Arjun tree	ನೀರುಮತ್ತಿ	March–June	August–November	5	Cardioprotective; antioxidant	(Sharma *et al.*, 2023)
108.	*Terminalia catappa*	Combretaceae	Indian almond	ಕಾಡು ಬಾದಾಮಿ	March–May, Sept–Nov	June–Aug, Dec–Feb	18	Hepatoprotective; antioxidant	(Chen *et al.*, 2023)
109.	*Thespesia populnea*	Malvaceae	Indian tulip tree	ಬುಗರಿ ಮರ	Year-round	Year-round	8	Wound healing; anti-inflammatory	(Patel *et al.*, 2022)
110.	*Thrinax radiata*	Arecaceae	Florida thatch palm	ತಿಲ ಮರ	Year-round	Year-round	24	Antioxidant activity	(Alves *et al.*, 2022)
111.	*Thuja occidentalis*	Cupressaceae	White-cedar	ತೂಜ ಮರ	March–April	August–October	8	Antiviral; immunostimulant	(Naser *et al.*, 2023)
112.	*Thunbergia erecta*	Acanthaceae	King's Mantle	ನೀಲಕಂಠ	Year-round	Rare	7	Antioxidant; antimicrobial	(Adebayo *et al.*, 2022)
113.	*Tradescantia spathacea*	Commelinaceae	Moses-in-the-cradle	ರಿಯೋ ಸಿಂಪಿ ಸಸ್ಯ	Year-round	Rare	4	Anti-inflammatory; antioxidant	(Lim *et al.*, 2023)

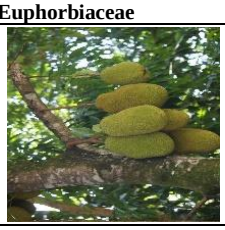
114.	*Vachellia nilotica*	Fabaceae	Indian gum arabic tree	ಕರಿಜಾಲಿ	August–October	November–February	2	Antimicrobial; astringent	(Rather *et al.*, 2023)
115.	*Vitex negundo*	Lamiaceae	Five-leaved chaste tree	ಲಕ್ಕಿ ಗಿಡ	June–December	September–February	1	Anti-inflammatory; analgesic	(Prajapati *et al.*, 2023)
116.	*Volkameria inermis*	Lamiaceae	Wild Jasmine	ಕುಂಡಲಿ ಗಿಡ	Year-round	Irregular	14	Antioxidant; antimicrobial	(Nguyen *et al.*, 2022)
117.	*Ziziphus jujube*	Rhamnaceae	Jujube	ಬೋರೆ ಹಣ್ಣು	June–August	October–February	2	Antioxidant; sedative	(Gao *et al.*, 2023)

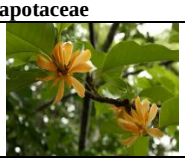
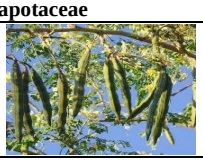
Ethnomedicinal properties.

Table 2: Showing checklist of plant species found in study area GMU CAMPUS, with their Ethnomedicinal properties.

SL. No.	Family	Botanical names	Plant part used	Major ethnomedicinal properties	Mode of use	Citation
1.	Fabaceae	*Vachellia nilotica, Pongamia pinnata, Caesalpinia pulcherrima, Gliricidia sepium, Delonix regia*	Leaves, bark, roots, seeds	Diarrhea, wounds, fever, inflammation, diabetes	Decoction, paste, powder, infusion	(Kacholi *et al.*, 2026)
2.	Apocynaceae	*Alstonia scholaris, Tabernaemontana divaricata, Nerium oleander, Plumeria alba, Cascabela thevetia*	Bark, leaves, latex, flowers	Fever, pain, skin diseases, inflammation, infections	Bark decoction, leaf paste, latex application	(Bhadane *et al.*, 2018)
3.	Moraceae	*Ficus racemosa, F. carica, F. benjamina, Morus alba, Artocarpus heterophyllus*	Bark, leaves, fruits, latex	Diabetes, ulcers, diarrhea, wound healing	Decoction, latex, fresh fruit, paste	(Chen *et al.*, 2023)
4.	Euphorbiaceae	*Acalypha hispida, A. wilkesiana, Manihot esculenta, Euphorbia milii, Phyllanthus acidus*	Leaves, latex, roots	Skin diseases, wounds, microbial infections	Leaf paste, juice, decoction	(Islam *et al.*, 2023)
5.	Bignoniaceae	*Tecoma stans, Tabebuia rosea, Tabebuia aurea, Millingtonia hortensis, Spathodea campanulata*	Bark, leaves, flowers	Diabetes, fever, inflammation, wounds	Bark decoction, leaf infusion	(Rahman *et al.*, 2022)
6.	Arecaceae	*Cocos nucifera, Areca catechu, Phoenix sylvestris, Phoenix reclinata*	Fruits, seeds, roots, oil	Wounds, digestive disorders, parasitic infections	Oil application, decoction, fresh fruit	(DebMandal *et al.*, 2022)
7.	Rutaceae	*Aegle marmelos, Citrus limon, Murraya koenigii*	Leaves, fruits, bark	Diarrhea, indigestion, diabetes	Fresh juice, decoction, powder	(Sharma *et al.*, 2023)
8.	Lamiaceae	*Ocimum*	Leaves	Cough, cold,	Herbal tea,	(Jamshidi-

		tenuiflorum, *Coleus amboinicus*		asthma, fever	leaf juice, decoction	Kia *et al.*, 2023)
9.	Combretaceae	*Terminalia arjuna*, *Terminalia catappa*	Bark, leaves	Heart diseases, liver disorders, wounds	Bark decoction, leaf extract	(Sharma *et al.*, 2023)
10.	Myrtaceae	*Syzygium cumini*, *Melaleuca linariifolia*	Seeds, leaves	Diabetes, microbial infections	Seed powder, leaf infusion	(Ayyanar *et al.*, 2023)
11.	Malvaceae	*Hibiscus rosa-sinensis*, *Thespesia populnea*	Flowers, bark, leaves	Wound healing, skin diseases, inflammation	Flower paste, bark decoction	(Patel *et al.*, 2022)

					
Vachellia nilotica **Fabaceae**	***Acalypha wilkesiana*** **Euphorbiaceae**	***Aegle marmelos*** **Rutaceae**	***Aloe vera*** **Asphodelaceae**	***Alstonia scholaris*** **Apocynaceae**	***Araucaria columnaris*** **Araucariaceae**
					
Areca catechu **Arecaceae**	***Artocarpus heterophyllus*** **Moraceae**	***Annona squamosa*** **Annonaceae**	***Acalypha hispida*** **Euphorbiacea**	***Agave angustifolia*** **Asparagaceae**	***Azadirachta indica*** **Meliaceae**
					
Bambusa vulgaris **Poaceae**	***Bauhinia acuminata*** **Fabaceae**	***Bauhinia purpurea*** **Fabaceae**	***Bauhinia tomentosa*** **Fabaceae**	***Bougainvillea glabra*** **Nyctaginaceae**	***Caesalpinia pulcherrima*** **Fabaceae**
					
Carica papaya **Caricaceae**	***Chamaecostus cuspidatus*** **Costaceae**	***Citharexylum spinosum*** **Verbenaceae**	***Citrus limon*** **Rutaceae**	***Volkameria inermis*** **Lamiaceae**	***Clerodendrum paniculatum*** **Lamiaceae**
					
Cocos nucifera **Arecaceae**	***Codiaeum variegatum*** **Euphorbiaceae**	***Coleus amboinicus*** **Lamiaceae**	***Cordia dichotoma*** **Boraginaceae**	***Curcuma longa*** **Zingiberaceae**	***Cycas revoluta*** **Cycadaceae**

					
Dalbergia latifolia Fabaceae	*Delonix regia* Fabaceae	*Dracaena angustifolia* Asparagaceae	*Duranta erecta* Verbenaceae	*Dypsis lutescens* Arecaceae	*Phyllanthus emblica* Phyllanthaceae
					
Euphorbia milii Euphorbiaceae	*Epiphyllum oxypetalum* Cactaceae	*Ficus benjamina* Moraceae	*Ficus carica* Moraceae	*Ficus racemosa* Moraceae	*Ficus panda* Moraceae
					
Gliricidia sepium Fabaceae	*Gardenia jasminoides* Rubiaceae	*Galphimia glauca* Malpighiaceae	*Gmelina arborea* Lamiaceae	*Graptophyllum pictum* Acanthaceae	*Guettarda speciosa* Rubiaceae
					
Hamelia patens Rubiaceae	*Hibiscus rosa-sinensis* Malvaceae	*Holoptelea integrifolia* Ulmaceae	*Hymenocallis littoralis* Amaryllidaceae	*Ixora coccinea* Rubiaceae	*Jacaranda mimosifolia* Bignoniaceae
					
Jasminum auriculatum Oleaceae	*Jasminum sambac* Oleaceae	*Jatropha integerrima* Euphorbiaceae	*Lagerstroemia indica* Lythraceae	*Lagerstroemia speciosa* Lythraceae	*Leucaena leucocephala* Fabaceae
					
Madhuca indica Sapotaceae	*Mangifera indica* Anacardiaceae	*Manilkara zapota* Sapotaceae	*Manihot esculenta* Euphorbiaceae	*Markhamia lutea* Bignoniaceae	*Melaleuca bracteata* Myrtaceae
					
Magnolia champaca Magnoliaceae	*Millingtonia hortensis* Bignoniaceae	*Moringa oleifera* Moringaceae	*Morus alba* Moraceae	*Murraya koenigii* Rutaceae	*Muntingia calabura* Muntingiaceae
Nerium oleander Apocynaceae	*Nyctanthes arbor-tristis* Oleaceae	*Ocimum tenuiflorum* Lamiaceae	*Passiflora incarnate* Passifloraceae	*Peltophorum pterocarpum* Fabaceae	*Persea Americana* Lauraceae
Phyllanthus acidus Phyllanthaceae	*Phoenix reclinata* Arecaceae	*Phoenix sylvestris* Arecaceae	*Plumbago auriculata* Plumbaginaceae	*Plumeria alba* Apocynaceae	*Plumeria pudica* Apocynaceae

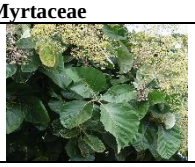
					
Polianthes tuberosa **Asparagaceae**	***Pongamia pinnata*** **Fabaceae**	***Pseuderanthemum maculatum*** **Acanthaceae**	***Psidium guajava*** **Myrtaceae**	***Punica granatum*** **Lythraceae**	***Ravenia spectabilis*** **Rutaceae**
					
Roystonea regia **Arecaceae**	***Samanea saman*** **Fabaceae**	***Santalum album*** **Santalaceae**	***Selenicereus undatus*** **Cactaceae**	***Solanum torvum*** **Solanaceae**	***Spathodea campanulata*** **Bignoniaceae**
					
Sphagneticola trilobata **Asteraceae**	***Strelitzia reginae*** **Strelitziaceae**	***Swietenia mahagoni*** **Meliaceae**	***Syzygium cumini*** **Myrtaceae**	***Tabernaemontana divaricate*** **Apocynaceae**	***Tabebuia aurea*** **Bignoniaceae**
					
Tabebuia rosea **Bignoniaceae**	***Tecomaria capensis*** **Bignoniaceae**	***Tecoma stans*** **Bignoniaceae**	***Tectona grandis*** **Lamiaceae**	***Terminalia arjuna*** **Combretaceae**	***Terminalia catappa*** **Combretaceae**
					
Thespesia populnea **Malvaceae**	***Cascabela thevetia*** **Apocynaceae**	***Thrinax radiata*** **Arecaceae**	***Thuja occidentalis*** **Cupressaceae**	***Thunbergia erecta*** **Acanthaceae**	***Tradescantia spathacea*** **Commelinaceae**
					
Vitex negundo **Lamiaceae**	***Ziziphus jujube*** **Rhamnaceae**	***Ehretia microphylla*** **Boraginaceae**			

Fig. 4. Showing floristic Diversity of study area GMU CAMPUS.

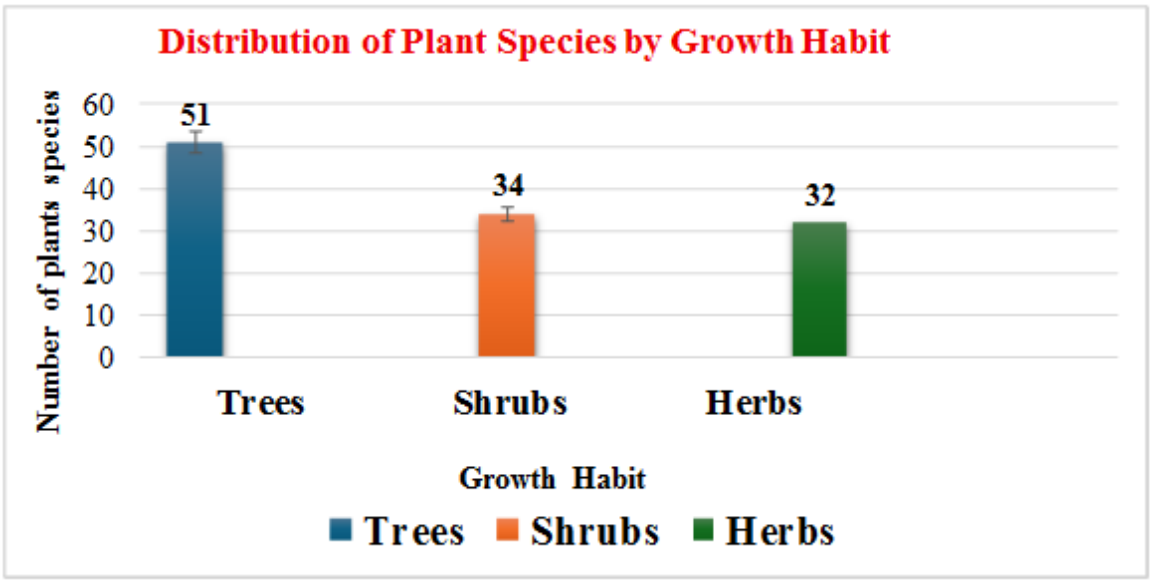


Fig 5. Distribution of Plant Species by Growth Habit.

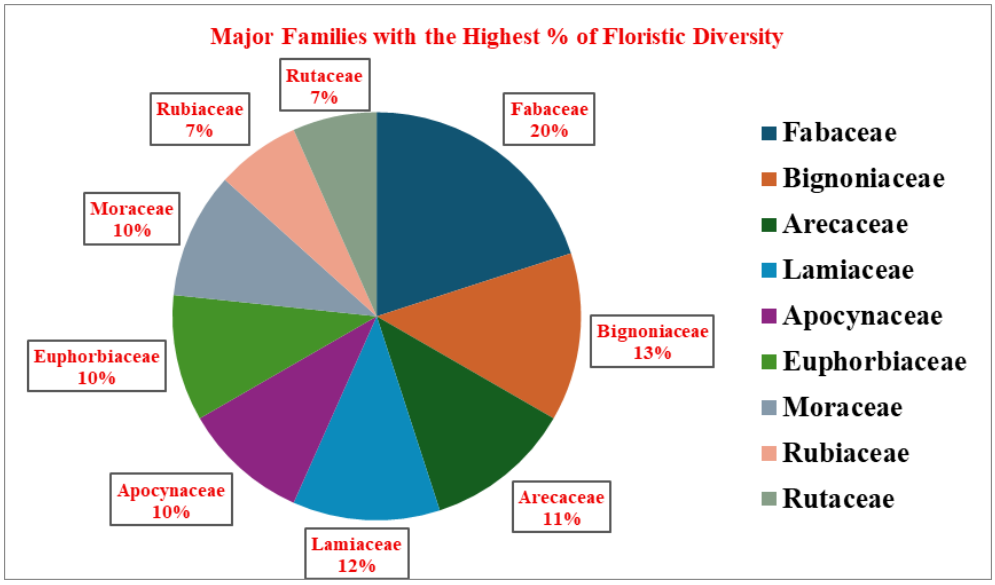


Fig. 6: Major Families with the Highest % of Floristic Diversity of the study area GMU CAMPUS.

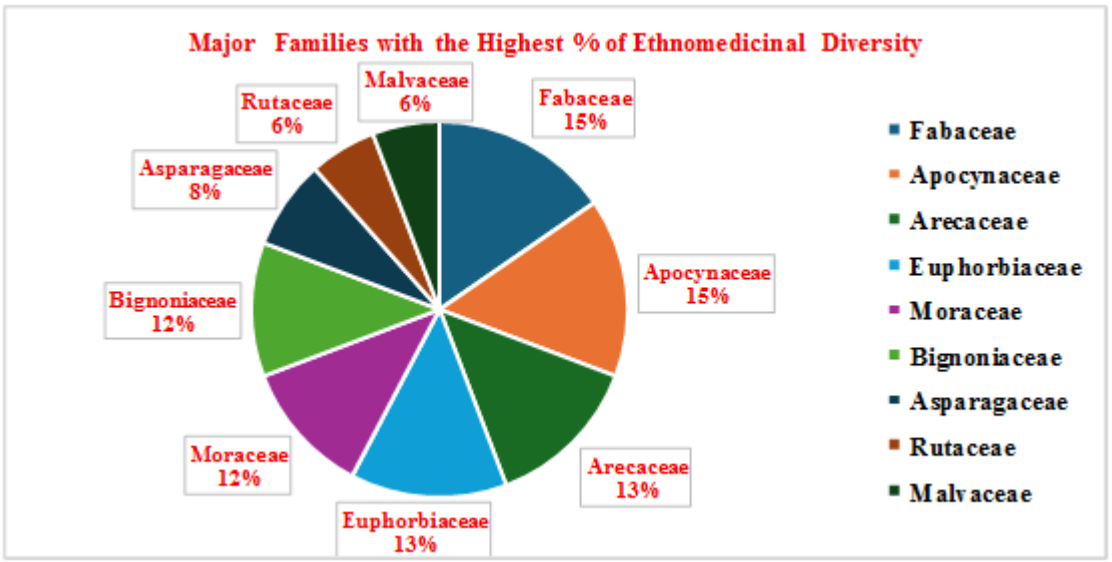


Fig. 7: Major Families with the Highest % of Ethnomedicinal Diversity of the study area GMU CAMPUS.

CONCLUSION

A floristic study on GM University, Davanagere found that there was a total of 117 plant species found in the campus belonging to 48 botanical families. Amongst the plant species, there are 51 trees, 34 shrubs and 32 herbaceous plants. This highlights the campus's role as a green haven in an urbanized environment. It is notable that the dominant families are Fabaceae, followed by Bignoniaceae, Arecaceae and Lamiaceae indicating a broad variety of life form and ecological adaptations. Moreover, there were numerous ornamental, medicinal

and economic plants which enhance the ecological, aesthetic and educational values of the campus.

In addition to the plant diversity, the study also identified the medicinal and ethnobotanical significance of the recorded plant species as it showed that the plants were extensively used in the treatment of various diseases such as fever, diabetes, skin diseases, digestive problems, respiratory infections, inflammation, injuries, and many more. This clearly indicated the vast indigenous knowledge on the uses of the plants available in the campus and its conservation.

The success in documenting the flora of this area was realized through conducting systematic field studies that used methods such as random sampling, visual surveys, transect walk surveys, field identification, and consultations. The inventory that resulted from this research will be instrumental in providing a starting point for botanical education, research on ecosystems, and biodiversity conservation. It also helps create environmental awareness among the students, researchers, and the people from the locality, in addition to sustainable management of the institution's campus. In essence, this study has helped conserve plant diversity and ethnobotanical knowledge of plants.

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AUTHORS' CONTRIBUTIONS

Mrs. Vennila S, Supervised and provided conceptual guidance as well required suggestions during the field studies, Ms. Pooja S K and Mr. Manjunath Swamy K S, assisted in identification, data collection, literature review; Mrs. Ashwini H V, supported in photography, data interpretation; Mr. Manjunath Swamy K S and Dr. Gurumurthy H helped in manuscript preparation and compilation of data, Ethnobotanical data were compiled, evaluated the data, prepared the figures and tables, and wrote the original manuscript. Mrs. Vennila S, validated the methodology and interpretation of results, critically reviewed the manuscript, and approved the final version. All authors read and approved the final manuscript.

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DISCLOSURE OF CONFLICT OF INTEREST

The authors declare that there are no conflicts of interests.

ETHICAL ISSUES

Authors do not have any ethical issues to declare.

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