

**GOVERNMENT DEGREE COLLEGE
BHADRACHALAM**



DEPARTMENT OF BOTANY

STUDENT STUDY PROJECT

TITLE

**A STUDY ON PLANT DIVERSITY OF GOVERNMENT
DEGREE COLLEGE BHADRACHALAM AND ITS
SURROUNDINGS.**

Supervisor

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CERTIFICATE

Certified that this study is a bonafide Student Study Project done by the following B.Sc.
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INTRODUCTION

Nature has everything for everyone's needs but has nothing for anyone's greed. Nature has created a great variety of life on earth to provide for man's needs over thousands of years. We must keep biodiversity, so in the future, we don't weep. Here, the most prominent features of the earth are the subsistence of life and that of life's diversity (Tilman, 2000).

The plant life that is concerned with microhabitats and supports distinct plant assemblages reflects the diversity of the ecosystem, habitats, and prevailing environmental circumstances. Variation in the formation of varieties is not only spatial, but also temporal (Batanouny, 2001).

A Green Campus is a place on campus where environmentally friendly practices and education aim to encourage sustainable and eco-friendly practices. The green campus feature enables an institution to take the lead in creating its environmental culture and new paradigms by creating sustainable solutions to mankind's environmental, social, and economic needs (Sen & Keshari, 2019).

Plants that grew around them are used by different different cultures around the world. Plant diversity is influenced by species distribution and abundance patterns at any place (Reddy et al., 2014).

The richness of flowering plants makes India one of the mega diversity countries in the world, with four biodiversity hotspots and three mega centers of endemism. India was ranked seventh in the world among 17 mega-diversity countries, with over 17,000 species of higher plants reported (Anonymous 1993, Shiva 1996).

Biodiversity keeps the ecological processes in a balanced state, which is necessary for human survival (Kaur & Sharma 2014).

Bhadrachalam is located in the semi-arid region of Telangana and has a predominantly hot and dry climate. Summer starts in March and peaks in May, with average high temperatures in the 42°C range. The monsoon arrives in June and lasts until September, with about 550 mm of precipitation. A dry, mild winter starts in October and lasts until early February, when there is little humidity and average temperatures in the 22–23 °C range.

REVIEW OF LITERATURE

Warner (1982) predicted that 80% of the geographical areas of India were under forest cover in 3000 BC, which is now left with 19.1% of the total land area. Among the 34 biodiversity hotspots (Myers et, al., 2000; CIF, 2004) recognized, two are in India.

The most imperative topographic attribute of Peninsular India is the 1400 km long Western Ghats along its western margin, traversing the states of Tamil Nadu, Kerala, Karnataka, Goa, Maharashtra, and Gujarat.

The Western Ghats are the second largest endemic centre in India, with 1550 endemics out of an estimated 4250 species of vascular plants (Nayar, 1997). Recent studies (Sasidharan, 2007) showed that more than 5000 species of vascular plants with 1700 endemics were reported from Kerala, part of the Western Ghats itself.

Since many hills in Peninsular India were formed during the Archaean and Precambrian periods, the Western Ghats are more senile than the Himalayas (Mani, 1974), and hence the genetic stock of the biodiversity of the Western Ghats is the most attractive for both evolutionists and ecologists.

Bradley (1849) and Walker (1849) were probably the first to publish accounts of agricultural, medicinal and other economically important species of Daulatabad and Warangal districts in Nizam's dominions. Patridge (1911) published a consolidated list of 450 species of arborescent forest elements in a book entitled, "Forest Flora of Hyderabad". Sayeeduddin (1935, 1936, 1941) recorded 370 vascular plant species from Hyderabad and Mulugu forests of Warangal.

P.S. Reddy (1985) investigated the flora of Warangal city and surroundings, and recorded 715 plant species.

Ragan & Raju (1990) discovered *Eleocharis setifolia* and *Scleria multilacunosa* from Pakhal as new to peninsular India.

Reddy & Raju (1999) reported *Gnaphalium coarcatatum* as a new record for southern India.

Reddy et al. (1999b) found *Youngia japonica* as a new record from Warangal district for the Flora of Andhra Pradesh.

Reddy et al. (1999b) published a paper on angiosperms flora and biological spectrum of Jakaram Reserve Forest.

Reddy & Raju (2001) described a new taxon, *Cleome chelidonii* var. *pallai* from Pakhal.

Reddy (2001) described a new species, *Hybanthus vatsvayae*, from Telangana region. Reddy (2002) recorded 1223 species of Magnoliophyta and Pteridophyta in his Ph.D. thesis on "Floristic Studies in Warangal District, Andhra Pradesh". Since then, Ragan et al. (2005) reported *Flemingia involucrata* (Fabaceae) as new record for the State from Warangal district.

Raju et al. (2005) collected *Cucurma inodora*, an endemic species to Deccan extending its distribution to Tadvai and Pasra Reserve forests of Warangal district in Andhra Pradesh. While working on the biodiversity characterization study of Warangal district (2004-05).

OBJECTIVES

To evaluate the diversity of plant species in Government Degree College Bhadrachalam and its surroundings.

MATERIAL AND METHODS

Field Study

The Flora is prepared based on repeated seasonal collections of plant specimens from the campus, either in the flowering or fruiting stage. Regular field visits were made during the year 2021 in different seasons to explore the various plant species.

Documentation

Documentation of information during and after field work was carried out on scientific lines. Data was noted in specially designed field-diaries covering floristic entries. Voucher plant specimens tagged with field-numbers along with products or produce were invariably collected. Photographs were taken and presented in this report along with scientific names.

Laboratory Work

Laboratory work mainly consisted of processing, study of morphology, identification, matching, mounting, labeling and preservation of the Specimens. At the conclusion of each field trip, the collection was brought to Department of Botany, Government Degree College, Bhadrachalam and all the above processes were completed in the laboratory. Herbarium of all the plants were Prepared as per standard practices (Jain and Rao, 1977), identified with the help of Gamble flora and preserved in the Department of Botany, Government Degree College, Bhadrachalam.

Processing

The plant specimens were collected either in flower or fruit, preferable both. Herbaceous plants were collected entirely. Of woody plants, twigs of about 25 cm length were collected. At least three specimens of each plant were collected. The detail notes related to it were entered in the field note book. The plant specimens were placed on the blotters or newsprint, avoiding folding or hiding of the parts. The extra leaves/branches, etc. were removed, if necessary. The pressing sheets with specimens were placed one over the other and were then tightly bound in a plant press applying uniform pressure. The pressing sheets were changed every day till they are perfect dried. The plant specimens were then transferred to newspaper folds for drying and later mounted.

Mounting

Before mounting, the specimens were poisoned by dipping them in ethyl alcohol saturated with mercuric chloride. Herbarium sheets are used for mounting. Animal glue or plaster was used for sticking the specimens to the sheets. To hold the specimen better, they were stitched from the back at points. Dissected parts and spare organs such as fruits and seeds were placed in plastic packets pasted to the mounting sheets.

Labelling

A label of 6.5×10.5 cm dimension is pasted on the lower right corner of the herbarium sheet. It contains general information about the specimen on the herbarium sheets. It carries the information on the locality of collection, name of the collector, family name, scientific name, habit, habitat, data collection, vernacular name, etc.

Identification

Identification of the specimens was done with the help of standard floras (Gamble 1915- 1935) and monographic studies of the taxa concerned. All the studied plant species have been arranged alphabetically, along with their scientific name, family, vernacular names Habit. The families are arranged according to Bentham and Hooker"s system of classification.

DATA ANALYSIS

The collected plant data were entered into Excel spreadsheet 2007 and Summarized.

Descriptive statistics

Descriptive statistical methods such as number, percentage were employed and graphs and tables showing the results generated.

RESULTS AND DISCUSSIONS

In the present investigation, a total of 97 species representing 87 genera belonging to 46 families have been recorded (Table-3). Of the 46 families, the most dominant is Fabaceae-Caesalpinioideae with 08 species (8.24%), followed by Fabaceae-Faboideae with 07 species (7.21%), Euphorbiaceae with 6 species (6.18%), and the families Amaranthaceae, Apocynaceae, Arecaceae, Malvaceae, Myrtaceae, Solanaceae, Verbanaceae by each of 03 species (3.09%), Asclepiadaceae, Commelinaceae, Fabaceae, Liliaceae, Nyctaginaceae, and Tiliaceae by each of 2 species (2.06%), and the other 26 consisting of 1 species. (Table.2).

Herbs constitute the highest species representative by 43 species (44.32%), trees 34 species (35.05%), shrubs 14 species (14.43%), climbers 4 species (4.12%), Creepers 02 species (2.06%). (Table:1)

Table-1: Habit of collecting plants from the study area.

Habit	Number of Species	Percentage of Species
Climber	4	4.12%
Herbs	43	44.32%
Trees	34	35.05%
Shrubs	14	14.43%
Creepers	2	2.06%

Table: 2. The number of species represented by each family and the percentage of species represented by each family

Families	Number of Species	Percentage
Acanthaceae	3	3.09%
Agavaceae	1	1.03%
Alangiaceae	1	1.03%
Amaranthaceae	5	5.15%
Anacardiaceae	1	1.03%
Annonaceae	1	1.03%
Apocynaceae	3	3.09%
Araucariaceae	1	1.03%
Arecaceae	3	3.09%
Asclepiadaceae	2	2.06%
Asteraceae	5	5.15%
Bignoniaceae	1	1.03%
Cannaceae	1	1.03%
Cleomaceae	1	1.03%
Combretaceae	1	1.03%
Commelinaceae	2	2.06%
Convolvulaceae	1	1.03%
Crassulaceae	1	1.03%
Cucurbiaceae	1	1.03%
Cupressaceae	1	1.03%
Cycadaceae	1	1.03%
Euphorbiaceae	6	6.18%
Fabaceae- Caesalpinioideae	8	8.24%

Fabaceae-Faboideae	7	7.21%
Fabaceae-Mimosoideae	2	2.06%
Lamiaceae	2	2.06%
Liliaceae	2	2.06%
Malvaceae	3	3.09%
Menisoermaceae	1	1.03%
Moraceae	5	5.15%
Moringaceae	1	1.03%
Myrtaceae	3	3.09%
Nyctaginaceae	2	2.06%
Oleaceae	1	1.03%
Onagrace	1	1.03%
Passifloraceae	1	1.03%
Phyllanthaceae	1	1.03%
Plantaginaceae	1	1.03%
Plumbaginaceae	1	1.03%
Portulacaceae	1	1.03%
Rhamnaceae	1	1.03%
Salvadoraceae	1	1.03%
Solanaceae	3	3.09%
Tiliaceae	2	2.06%
Ulmaceae	1	1.03%
Verbanaceae	3	3.09%

Table.-3. List of plants collected from the Government Degree College Bhadrachalam and its surroundings.

Sl.No	Scientific Name	Family	Common Name	Habit
1	<i>Acalypha indica</i>	Euphorbiaceae	Muripinda	Herb
2	<i>Acalypha wilkesiana</i>	Euphorbiaceae	Acalypha	Herb
3	<i>Achyranthes aspera</i>	Amaranthaceae	Uttareni	Herb
4	<i>Acmella paniculata</i>	Asteraceae	0	Herb
5	<i>Aerva lanata</i>	Amaranthaceae	Pindi kura	Shurb
6	<i>Agave attenuate</i>	Agavaceae	Kitti nara	Herb
7	<i>Alangium salviifolium</i>	Alangiaceae	Oodugu chettu	Tree
8	<i>Albizia lebbeck</i>	Fabaceae- Mimosoideae	Dirisena	Tree
9	<i>Alstonia scholaris</i>	Apocynaceae	Edakula ponna	Tree
10	<i>Alternanthera ficoidea</i>	Amaranthaceae	Adavi ponnagantti	Herb
11	<i>Annona squamosa</i>	Annonaceae	Seethapalum	Tree
12	<i>Araucaria araucana</i>	Araucariaceae	Araucaria	Tree
13	<i>Azadiracta indica</i>	Meliaceae	Vepa	Tree
14	<i>Azima tetracantha</i>	Salvadoraceae	Tellauppi	Shurb
15	<i>Bauhinia racemosa</i>	Fabaceae- Caesalpiniodeae	Aare	Tree
16	<i>Blumea mollis</i>	Asteraceae	Kukka pogaku	Herb
17	<i>Boerhavia diffusa</i>	Nyctanginaceae	Atikamamidi	Herb
18	<i>Borassus flabellifer</i>	Arecaceae	Taati	Tree
19	<i>Bougainvillea glabra</i>	Nyctanginaceae	kagithpu pulu	Climber
20	<i>Breynia disticha</i>	Phyllanthaceae	Snow bush	Herb
21	<i>Bryophyllum pinnatum</i>	Crassulaceae	Ranapala	Herb
22	<i>Butea monosperma</i>	Fabaceae-Faboideae	Mooduga	Tree
23	<i>Calotropis gigantea</i>	Asclepiadaceae	Tella jilledu	Shurb

24	<i>Canna indica</i>	Cannaceae	Satyanarayan pulu	Shurb
25	<i>Celosia argentea</i>	Amarantheceae	Gunugu	Herb
26	<i>Cleome viscosa</i>	Cleomaceae	Kukka vaminta	Herb
27	<i>Cocculus hirsutus</i>	Menisoermaceae	Dusseru theega	Creeper
28	<i>Codium variegatum</i>	Euphorbiaceae	Croton	Herb
29	<i>Commelina benghalensis</i>	Commelinaceae	Neeru kasulu	Herb
30	<i>Corchorus aestuans</i>	Tiliaceae	Nela beera	Herb
31	<i>Cordyline fruticosa</i>	Liliaceae	Blood red leaves	Herb
32	<i>Crotan bonplandianum</i>	Euphorbiaceae	Galivana Mokka	Herb
33	<i>Cycas revolute</i>	Cycadaceae	Cycas	Tree
34	<i>Dalbergia sisso</i>	Fabaceae-Faboideae	sisoo	Tree
35	<i>Delonix regia</i>	Fabaceae- Caesalpiniodeae	Gulmohar	Tree
36	<i>Dracaena reflexa</i>	Lilliaceae	0	Herb
37	<i>Dypsis lutescens</i>	Arecaceae	Butterfly palm	Shurb
38	<i>Eclipta prostrata</i>	Asteraceae	Guntagalgaraku	Herb
39	<i>Eucalyptus obiiliqua</i>	Myrtaceae	Jaamaayal	Tree
40	<i>Euphorbia indica</i>	Euphorbiaceae	0	Herb
41	<i>Ficus benghalensis</i>	Moraceae	Marri	Tree
42	<i>Ficus benjamina</i>	Moraceae	Weeping fig	Tree
43	<i>Ficus hispida</i>	Moraceae	Bommedi	Tree
44	<i>Ficus racemosa</i>	Moraceae	Medi	Tree
45	<i>Hemidesmus indicus</i>	Asclepiadaceae	Sugandapala	Creeper
46	<i>Holoptelea intgrifolia</i>	Ulmaceae	Nemalinara	Tree
47	<i>Hygrophila auriculata</i>	Acanthaceae	Nerugobbi	Herb
48	<i>Indigofera linnaei</i>	Fabaceae-Faboideae	Erra palleru	Herb
49	<i>Ipomoea carnea</i>	Convolvulaceae	Rubbaru chettu	Shurb
50	<i>Iresine herbstii</i>	Amaranthaceae	Iresine	Herb

51	<i>Lantana camara</i>	Verbanaceae	Akshinthalapulu	Shurb
52	<i>Leucaena leucocephala</i>	Fabaceae-Faboideae	Subabul	Tree
53	<i>Ludwingia decurrens</i>	Onagrace	0	Herb
54	<i>Mangifera indica</i>	Ancardiaceae	Mamidi	Tree
55	<i>Momordica charantia</i>	Cucurbiaceae	Kakara	Climber
56	<i>Moringa oleifera</i>	Moringaceae	Munaga	Tree
57	<i>Nerium odorum</i>	Apocynaceae	Ganneru	Shurb
58	<i>Nyctanthes arbor-tristis</i>	Oleaceae	Parijatham	Tree
59	<i>Ocimum basilicum</i>	Lamiaceae	Bhuthulasi	Herb
60	<i>Parthenium hysterophorus</i>	Asteraceae	Carrot grass	Herb
61	<i>Passiflora foetida</i>	Passidloraceae	Jookamalle	Climber
62	<i>Peltophorum pterocarpum</i>	Fabaceae- Caesalpiniodeae	Paccha sunkesula	Tree
63	<i>phoenix sylvestris</i>	Arecaceae	Eetha	Tree
64	<i>Phyllanthus reticulatus</i>	Euphorbiaceae	Pulseru	Shurb
65	<i>Plectranthus scutellarioides</i>	Lamiaceae	0	Herb
66	<i>Plumbago zylanica</i>	Plumbaginaceae	Chitramulam	Shurb
67	<i>Pongamia pinneta</i>	Fabaceae-Faboideae	kanuga	Tree
68	<i>Portulaca grandiflora</i>	Portulacaceae	Gaddi pulu	Herb
69	<i>Prosopis juliflora</i>	Fabaceae- Mimosoideae	Sarkari thumma	Tree
70	<i>Pseuderanthemum carruthersii</i>	Acanthaceae	Eranthemum	Herb
71	<i>Psidium guajava</i>	Myrtaceae	Jaamaayal	Tree
72	<i>Rungia repens</i>	Acanthaceae	0	Herb
73	<i>Scoparia dulcis</i>	Plantaginaceae	0	Herb
74	<i>Senna auriculata</i>	Fabaceae- Caesalpiniodeae	Tangedu	Shurb
75	<i>Senna occidentalis</i>	Fabaceae- Caesalpiniodeae	Kassida	Herb

76	<i>Senna siamea</i>	Fabaceae- Caesalpinioideae	Adavi thangedu	Tree
77	<i>Senna tora</i>	Fabaceae- Caesalpinioideae	Tarigisa	Herb
78	<i>Sida acuta</i>	Malvaceae	Polikatta	Herb
79	<i>Sida cordata</i>	Malvaceae	Thirunal Benda	Herb
80	<i>Solanum nodiflorum</i>	Solanaceae	0	Herb
81	<i>Solanum surattense</i>	Solanaceae	Nela mulaga	Herb
82	<i>Solanum trilobatum</i>	Solanaceae	0	Climber
83	<i>Spathodea campanulata</i>	Bignoniaceae	African tulip	Tree
84	<i>Streblus asper</i>	Moraceae	Barrenka	Shurb
85	<i>Syzygium cumini</i>	Myrtaceae	Neredu	Tree
86	<i>Tabernaemontana divaricatum</i>	Apocynaceae	Nadivardanam	Shurb
87	<i>Tamarindus indica</i>	Fabaceae- Caesalpinioideae	Chinta	Tree
88	<i>Tecoma trans</i>	Verbanaceae	paccha pulachettu	Tree
89	<i>Tectona gandriss</i>	Verbanaceae	Teak	Tree
90	<i>Tephrosia purpuria</i>	Fabaceae-Faboideae	Vempalli	Herb
91	<i>Terminalia catappa</i>	Combretaceae	Baadam	Tree
92	<i>Thuja occidentalis</i>	Cupressaceae	Thuja	Herb
93	<i>Tradescantia spathacea</i>	Commelinaceae		Herb
94	<i>Tridax procumbens</i>	Asteraceae	Gaddi chamanthi	Herb
95	<i>Triumfetta rhomboidea</i>	Tiliaceae	0	Herb
96	<i>Vigna stipulacea</i>	Fabaceae-Faboideae	0	Herb
97	<i>Ziziphus nummularia</i>	Rhamnaceae	Nela regu	Shurb

Plate-1: Photos of some selected plants from the study area.



Epipremnum aureum



Dracaena marginata



Syngonium podophyllum



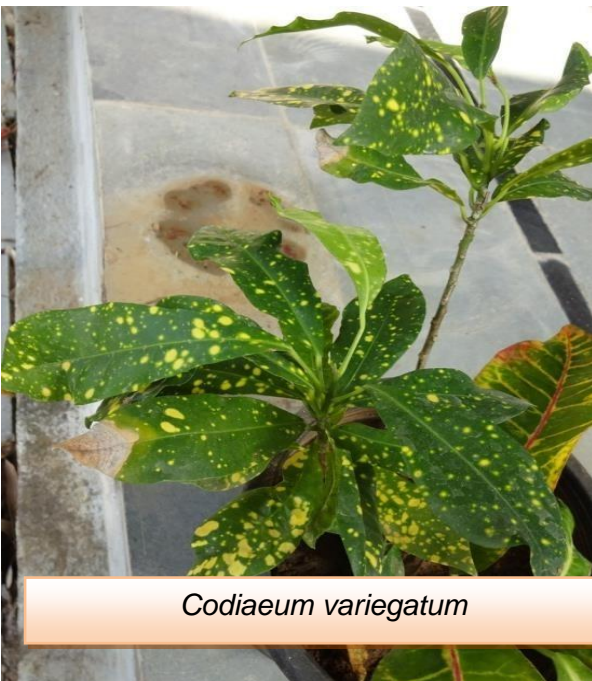
Bryophyllum pinnatum



Pandanus veitchii



Tradescantia spathacea



Codiaeum variegatum



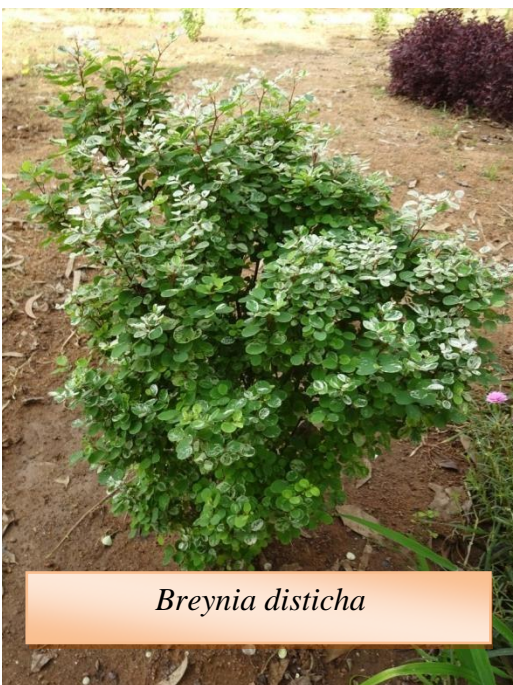
Coleus scutellarioides



cocculus hirsutus



Pseuderanthemum carruthersii



Breynia disticha



Portulaca grandiflora



Dalbergia sisso



Alstonia scholaris



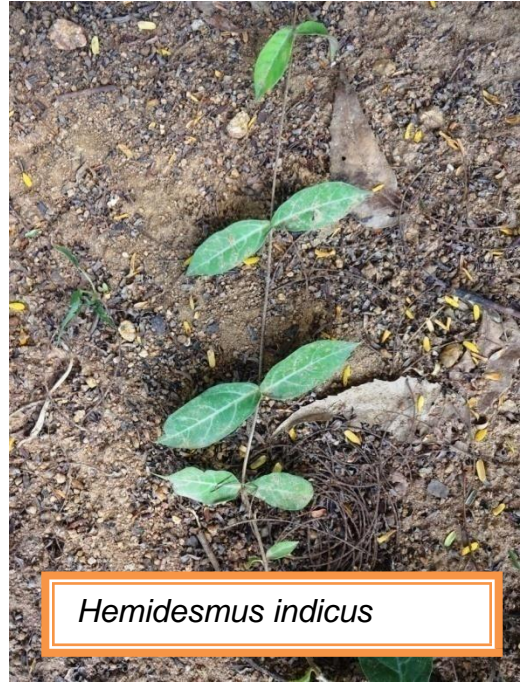
Euphorbia indica



Celosia argentea



Nerium odorum



Hemidesmus indicus



Phyllanthus reticulatus



Thuja occidentalis



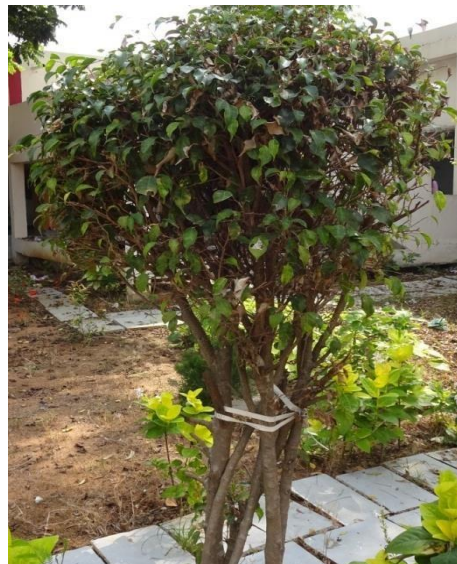
Acalypha wilkesiana



Cycas revoluta



Agave attenuate



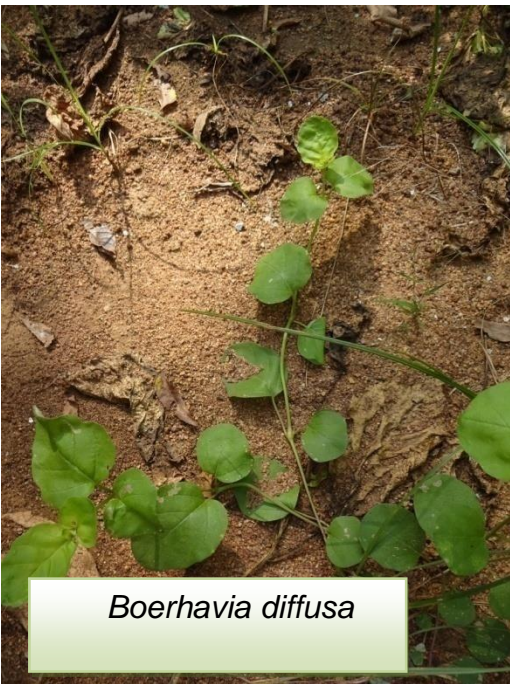
Ficus benjamina



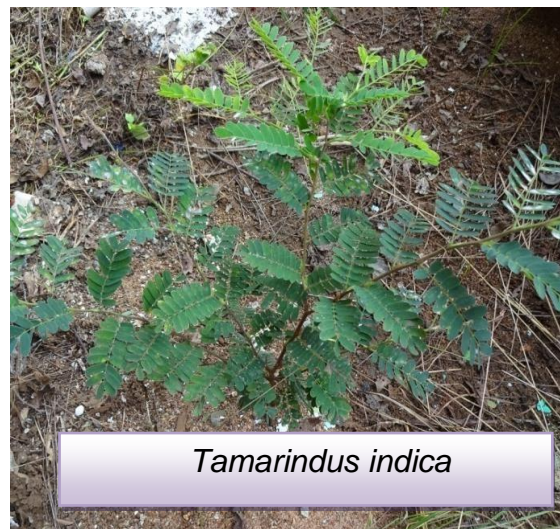
Codium variegatum



Blumea mollis



Boerhavia diffusa



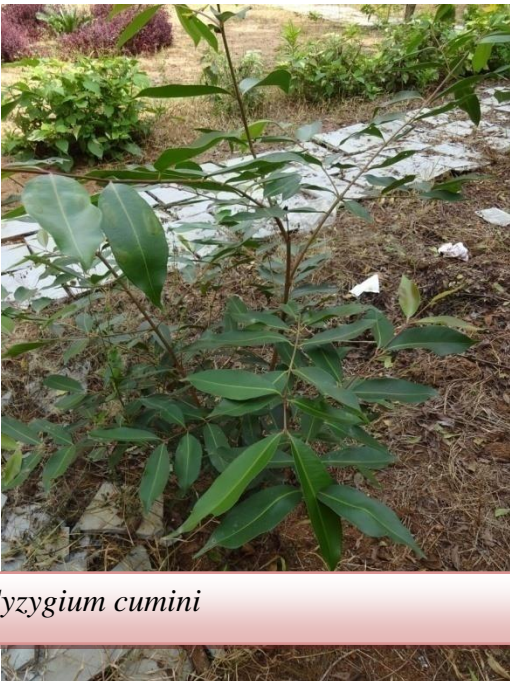
Tamarindus indica



Canna indica



Nyctanthes arbor-tristis



Syzygium cumini



Leucaena leucocephala



Butea monosperma



Vigna stipulacea



Azadiracta indica



Acmea paniculata



Acalypha indica



Cordyline fruticosa



Mangifera indica



Ludwingia decurrens



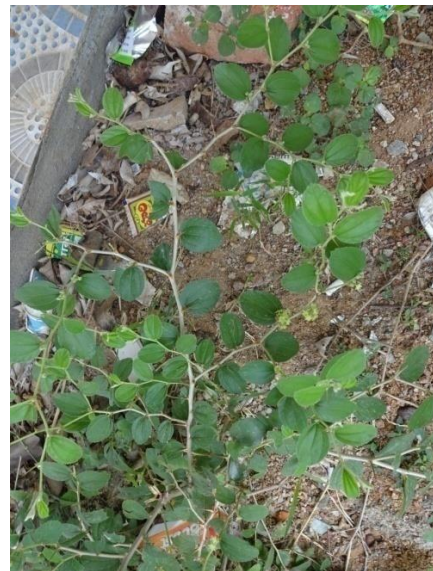
Achyranthes aspera



Aerva lanata



Parthenium hysterophorus



Ziziphus nummularia



Sida acuta



Agave attenuate



Tabernaemontana divaricatum



Croton bonplandianum



Sida cordata



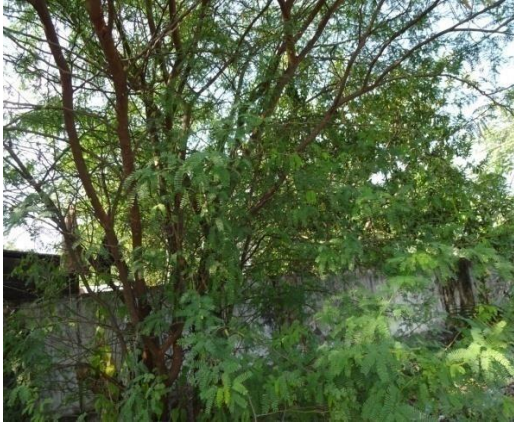
Senna siamea



Senna auriculata



Tephrosia purpuria



Prosopis juliflora



Psidium guajava



Momordica charantia



Borassus flabellif



Lantana camara



Annona squamosa



Solanum surattense



Phyllanthus reticulatus



Senna occidentalis



Ipomoea carnea



Cleome viscosa



Azima tetracantha



Ocimum basilicum



Eclipta prostrata

Rungia repens



Alternanthera ficoidea





Triumfetta rhomboidea



Plumbago zeylanica



Ficus hispida





Streblus asper



Alangium salviifolium



Hygrophila auriculata



Ficus benghalensis



Solanum trilobatum



Senna tora



Pongamia pinnata



Calotropis gigantea

CONCLUSION

In terms of preserving the floral biodiversity, it is very important to set up a botanical garden in the confines of the campus, cultivate these plants, and protect the ones that grow naturally on the grounds.

The study found that the plants recorded from the campus area are economically very important. Some of them have medicinal value, some have ornamental value, and a few are edible.

Since in recent years the usage of plants for medicinal purposes is increasing, knowledge of ethnobotany should be made available to all students and faculties.

Plant documentation is the only way to preserve the fundamental knowledge of the plant resources and will be useful to the campus students and faculties for further research.

Due to over exploitation and deforestation in the natural habitat, few of the presently reported plant species are endangered. Strict conservational measures are to be taken to protect these plant species from becoming rare or endangered.

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**A
Project Work
On**

**AN ETHNO BOTANICAL SURVEY OF MEDICINAL
PLANTS USED BY VILLAGERS OF BURGAMPAHAD**



Supervised by

Dr.Ch. G. Gupta

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Department of Botany
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Carried out by

B.Sc (B.Z.C) ,IIIYEAR Students

CERTIFICATE

This is to certify that the student study project “**AN ETHNO BOTANICAL SURVEY OF MEDICINAL PLANT USED BY VILLAGERS OF BURGAMPAHAD.**” that is being submitted by **B.Sc. Students** for fulfillment of the STUDENT STUDY PROJECT in Botany is a record of bona fide work carried out by

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Dr. Ch. G. Gupta

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INTRODUCTION

Ethno botany is the study of relationship between plants and people. From “Ethno” means study of people and botany means study of plants. Ethno botany studies the complex relationships between plants and cultures.

Plants have been used in the prevention and cure of various disease of humans and their pets. With the advent of human civilization, many systems of therapy have been developed primarily based on plants. Ayurveda ,homeopathy, siddha, unani etc. ,are our traditional systems of medicines .About 60 and above medicinal plants identified in various survey in Bugampahad village.

Especially here most of the people belong to tribal families and they are since long time directly depends on traditional medicinal plants, these tribal villages cure several regular health disorders.

They are used as ethno medicines for various diseases like Asthma ,Arthritis ,Abortion Bleeding, blood pressure, cough,Diabetes,Diarrhea,fever,Jaundice, kidney disease, pains,paralysis ,Ringworm,snake bite, Skin allergy, Stomach pain,Tooth ache etc.,

ETHNOBOTANY

- **ETHNOBOTANY:** Ethnobotany as an interdisciplinary science is , therefore , in a position to contribute to development of the wealth of traditional knowledge of the indigenous people concerning their natural systems and environment , their knowledge on utilization and maintenance of plant resources on a long -term basis without damaging or destroying their habitats.
- Ethnobotanical data can be utilized by economy botanists to discover new plant resources, to provide fresh ideas for environment planners, as a tool for basic selection of plant species for development of drugs by pharmacologists, physiochemists and clinicians, as a new source of history through the study of plant names by linguists , as a source for locating new germ plasm for agriculturists, etc. Some works in ethnobotany performed only in last decades of 20th century. The surrounding environment directly and indirectly influences the human life and culture.
- “Many living groups of people, having diversified ethnic culture, history of rituals and performance, who are more or less isolated from modern world and are closely associated with their ambient vegetation is the emporia od ethnobotanical research“people depend on plants around them for many purposes like; food, shelter, dyes, cosmetics, clothing, medicine etc. They classify the plants on the basis of their use, store the information and knowledge of plant use and these information and knowledge passed from one generation to other. The term ethnobotany was first coined by an American botanist.
- John Harsh burger, in 1896, in an attempt to study plants used by the primitive and people make use in ingenuous plants round their localities.
- Ethnobotany involves the study of how communities of a particular region make use of a particular region make use of indigenous plants in the region for food, clothing and medicines that are used in the treatment of various categories of human diseases.
- Historically all medicinal preparations were derived from plants, whether in the simple form of plant parts or in the more complex form of crude extracts, mixtures, etc. Today a substantial number of drugs are developed from plants which are active against number of diseases. The developed countries 25% of the medical drugs are based on plants is well known among the indigenous people in rural areas of many developing countries.

- The importance of medicinal plants, and the contribution of phytomedicine to the well-being of a significant number of the world's population, has attracted interest from a variety of disciplines, method.
- The success of ethnobotanical documentation depends on the cooperative relationship between the researcher and local informants. It is very important to locate knowledgeable informants for the study of ethnobotany. Documentation has been made by taking random interviews of the herbalists, elderly men, and women. In field interview technique, the informants accompany with the author and data has been collected in the field.

Objectives:

The main objective of this study was to explore the medicinal plants available in the Burgampahad village and to know about their medicinal properties, local popular uses of plant parts, and their mode of application.

Materials and methods:

- Data presented here is based on personal interviews with village dwellers, traditional healers, and herbal medicine practitioners.
- Information gathered was documented in data sheets prepared.
- In the present survey we have observed and gathered the information.
- Species have been identified and documented as per the scientific name, local name and parts used for medicinal values.

QUESTIONNAIRE FORM

Identity of the interviewed person

A. Name:

B. Surname

C. Residence

D. Gender

E. Age

F. Place of Birth

G. Present Place

H. Place of Formation of Traditional Knowledge

I. Name of the Plant Used for health problems

J. Which part of plant is used

Signature

Field survey at Burgampahad



Field survey at Burgampahad Village





What are Medicinal Plants?

Medical plants refer to using a plant's seeds, berries, roots, leaves, bark or flowers for medicinal purpose.

Example:

i. Tulasi

ii. Alove-vera

iii. Turmeric ...etc.,

SOME OF THE EXAMPLES OF MEDICINAL PLANTS INFORMATION COLLECTED DURING THE SURVEY

TULASI :

- Blood purifier
- Preventative against malaria & dengue fever.
- Chewing tulsi leaves cold & flu
- Chewing 12 leaves of basil, twice a day prevent stress.
- The leaves are a nerve tonics & also sharpen memory.
- decoction of the leaves + honey + ginger = effective remedy for bronchitis, asthma, influenza, cough and cold
- juice of basil leaves + honey expel renal stone via the urinary tract.
(if taken regularly for 6 months)

NEEM

- Neem inhibits allergic reactions when applied externally or eaten.
- Oral doses of neem leaf extracts
- Reduced insulin requirements by between 30% and 50% of diabetes.
- Neem extracts give significant protection from discomfort and speed the healing of gastric problems.
- Neem quickly kills external parasites, and a neem decoction is safer and just as effective as standard treatments for head lice and scabies.

ALOE-VERA

- Green leaves contain aloe gel and a sticky yellow residue called latex.
- Burn healing
- Wound healing
- Treat Sunburn
- Radiation -induced skin reactions
- Aloe with conditioner for silkier, smooth the hair.
- Take orally to reduce cholesterol and triglycerides for a healthy heart.

Bhringaraj

- The main herb for the hair care and cinrrhosis
- Works to rejuvenate kidneys and liver. As oil , it treats graying and blading, makes the hair darker, and promotes deep sleep. It also improves complexion.
- The root powder is used for treating hepatitis, enlarged spleen and skin disorders.
- Anti-inflammatory properties, the herb is also used for treating hyper acidity.

TURMERIC

- Stimulate digestion
- Boost liver function
- Curcumin a means of reducing breast cancer risk among women
- When paired with vitamin D, curcumin may help protect against Alzheimer's disease
- Curcumin can protect against liver damage

GINGER

- Stomach -soothing effects
- Easing post-surgery nausea and
- Sipping, ginger tea can help calm and stomach, as well as ease congestion you've got a clod
- Ginger extract may slow the growth of colorectal and ovarian cancer cells
- Useful in treating chronic inflammation because it partially inhibits two important enzymes that play a role in inflammation gone away—cyclooxygenase (COX) and 5-lipoxygenase (LOX)

AMLA

- **To stimulate appetite** Use pickles and preserves made from the green fruits
- For hemorrhage, diarrhea and dysentery

- Seed fried in ghee stop bleeding from the nose.
- For hiccup and for painful respiration Use juice or extract of the fruit combined with honey and pipli
- Due to vitamin C and polyphenols, is a antioxidant
- Benefits heart, eyes, and brain

LAVENDER

- Using unsweetened tea as a hair rinse to help reduce hair loss and dandruff
- Using the dried flowers in sleep and dream pillows, in potpourris, sachets and tucked in drawers to freshen clothing and repel moths
- Putting a few drops of oil into warm both water for a refreshing and relaxing treat.
- The stems with the leaves stripped can be burned like an incense stick and can also be used in crafts such as basket weaving and making lavender wands
- A rub down of lavender oil before retiring to bed has been used to relieve night-time leg muscles spasms. A few drops of oil rubbed into the skin has been used traditionally to ease neuralgic pain.
- The straw- stems of dried lavender-have been burned in bundles as a deodorant and disinfectant in sick rooms.

BRAHMI

- Anxiety (studies suggest as effective as benzodiazepine drugs), neuroses, irritability and insomnia associated with stress
- Study, poor memory and concentration, work-related mental fatigue
- Poor brain function after head trauma
- Asthma and bronchial spasm and /or inflammation
- Possess anticancer activity

mint

- Peppermint leaf tea is used for relief of an upset stomach
- Mint oils can dissolve gallstones
- It is imperative to maintain a low-fat diet, lose weight, and exercise regularly to help the peppermint oil work best
- Used as an appetite stimulant
- For a refreshing and cleaning facial wash

HENNA/MEHDI

- Henna is effectively used in the treatment of rheumatic pains
- The bark of the plant is quite effective in the treatment
- The bark is used in treating several liver disorders
- Paste of flower mixed with vinegar is quite reliving in case headache

- Henna leaf is very useful in promoting hair growth. A henna boiled with mustard oil is applied in the hairs to simulate
- Henna leaves are quite useful in the treatment of various disorders
- Like skin burns, boils, eczema, scabies, fungal in and vitiligo
- Henna is also used for the treatment of inflammation, burning leprosy
- The oil of the fruits is used for the treatment to trat the disorder and diaphragms
- The leaves are known for the treatment of typhoid and haemorrhages
- It is also useful in sore throat.

Benefits

- They cost less- the rising cost of prescription drugs have led the people to look for alternatives. While medicinal herbs may not be as strong or as fast acting as conventional medicine, there is a growing body of scientific evidence that shows their efficacy and in what doses.
- They may have fewer side effects: while the side effects of any herbal medication depend on the drug in question, many have fewer side effects than conventional medicine. For example, St. John's wort, which is used for mild to moderate depression, has fewer side effects than most other prescriptive antidepressants.
- There is a choice on hoe to use them- medicinal herbs can be used in a variety of ways, depending on the kind of herb that is to be used. Some herbs can be mixed with food, some can be made into tea, and there are some that are available in capsule or tablet form.
- They are good for more than one condition- most prescript drugs are designed for one specific health problem. By contract, many herbal medicine act on several parts of the body at once.

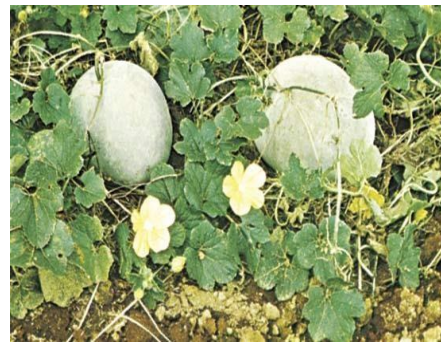
Data Analysis

Sno	Botanical name	Common name	Family	Part used	Medicinal uses
1	<i>Abrus precatorius</i>	Gunjala	Fabaceae	Seed	Snake bite
2	<i>Abutilon indicum</i>	Thuthurubenda	Malvaceae	Leaves	Remove kidney stones
3	<i>Achyranthes Aspera</i>	Uttareni	Amaranthaceae	Root	Tooth ache
4	<i>Aloe barbadensis</i>	Aloe-vera	Agavaceae	Stem	Skin allergy and hair growth
5	<i>Azadirachta indica</i>	Neem	Meliaceae	Leaves	Hair growth
6	<i>Bambusa</i>	Veduru	Graminae	Leaves	fever, stomach pain, allergies, abortion
7	<i>Benincasa hispida</i>	Budida Gumma di	Cucurbitaceae	Fruit	Abortion , regulation of body temperature
8	<i>Butea monosperma</i>	Moduga	Fabaceae	Leaves	Body pains
9	<i>Coccinia grandis</i>	Donda	Cucurbitaceae	Leaves	Remove kidney stones
10	<i>Curcuma longa</i>	Pasupu	Zingiberaceae	Rhizome	Antiseptic, anti-helminthic, jaundice, cold-cough, allergies on skin.
11	<i>Carica papaya</i>	Boppavi	Caricaceae	Fruit and leaves	Stomach problems and fever
12	<i>Citrus lemons</i>	Nunma	Rutaceae	Fruit	Diarrhoea and dandruff, hair fall
13	<i>Calotropis gigantea</i>	Jilledu	Asclepiadaceae	Stem and leaves	To reduce knee joint pains
14	<i>Coriandrum sativum</i>	Danivahu	Umbellifera	Leaves	Anti-stress activity
15	<i>Cassia auriculata</i>	Tangedu	Fabaceae	Leaves, flowers, seeds	Urinary infections, skin diseases, rheumatism

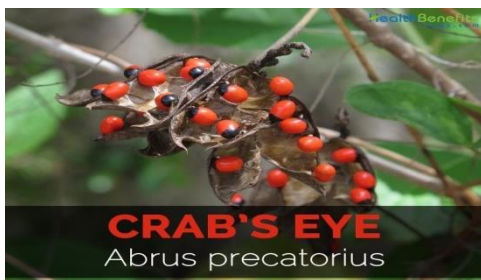
16	<i>Datura stomium</i>	Ummetta	Solanaceae	Flower seeds	Pain relievers to treat bronchitis
17	<i>Eclipta alba</i>	Bhringraj	Asteraceae	Leaves	Hair growth, dandruff
18	<i>Emblica officianalis</i>	Usiri	Euphorbiaceae	Fruit	c- vitamin , cough, acidity
19	<i>Ficus bengalensis</i>	Marrichettu	Moraceae	Aerial root, bark, fruit	Anti diabetic, swellings, diarrhea
20	<i>Ficus religiosa</i>	Raavi	Moraceae	Stem, bark	Hepatitis
21	<i>Lawsonia inermis</i>	Gorintaku	Lythraceae	Leaves	Anti helminthic, liver disorders, body heat, hair growth
22	<i>Moringa</i>	Munaga	Moringaceae	Leaf, fruits	Skin diseases and digestion, growth
23	<i>Momordica charantia</i>	kakarakava	cucurbitaceae	fruit	Diabetes
24	<i>ocimum tenuiflorum</i>	tulasi	lamiaceae	Leaves	Skin allergy
25	<i>Phyllanthus Amarus</i>	Nelausiri	Euphorbiaceae	Fruit	Ringworm, vomiting, fever, jaundice,
26	<i>Pongamia pinnata</i>	Kanuga	Jabaceae	Leaves	Ladies white discharge
27	<i>Psidium guava</i>	Jama	Myrtaceae	Fruit	Mouth ulcers, digestion problems
28	<i>Euphorbia antiquorum</i>	Bramajemudu	Euphorbiaceae	Leaves	Cancer and diabetes
29	<i>Vitex nigunda</i>	Vaavali	Lamiaceae	Leaves	pains
30	<i>Zingiber officinale</i>	Allam	Zingiberaceae	Rhizome	asthma



*Cassia***arucilata**



*Benicasa***hispida**



*Abrus***precatorius**



Moringa



Henna



Antiquorum



Bambusa



Euphorbia

Results and Discussion:

- The study reveals that in absence of modern health facility, people in the area depend on plants for medicinal purposes.
- Younger generation is ignorant about the vast medicinal resources available in their surroundings.
- All the resource persons identified were in the age group of 45 to 80 years and all of them were familiar with the medicinal plants growing in their vicinity.
- It was found that men knew more comparatively than females.
- Leaf was most widely used plant parts compared to seeds, roots, bark and flower.

Advantages

Its having following advantages.

- I. With the following growing interest in health and wellness, alternative medicines are becoming increasingly popular worldwide.
- II. Also, with the increasing prices of prescription medicine, herbal medicines are often cheaper than their conventional medicine counterparts.
- III. In addition, a growing body of scientific research shows that herbal medicines can be highly effective for certain diseases and conditions. Moreover, as research in this area increases, the optimum doses for herbal medicines are known to ever greater accuracy.

Conclusion:

- Kamepally village has good ethno botanical potential for medicinal plants. We have gathered some considerable knowledge about local medicinal plants for treating common health problems.
- Many of plants are used by local people.

- By the process of modernization and urbanization percent off deforestation is reduced. So we have to conserve valuable medicinal plants for our future.
- Medicinal herbs can be a good alternative for many diseases and conditions. They are low cost and tend to have fewer side effects. Moreover, they can be bought in health food shops, pharmacies and on-line without the need for a prescription. However, herbal medicines can still unwanted health effects. Especially when used in combination with other drugs. If you are using more than one herbal medicine, or using them for a serious condition, it's also important to tell your physician that you are using an alternative medicine to prevent drug interaction.

Acknowledgement

We are thankful to the Burgampagad people those who have shared their knowledge and information regarding health care practice's and we are also grateful and thankful to our principal Sri D. Bhadraiah and Asst. Prof. of Botany Sri. S. SyamPrasad and all the staff members for their encouragement and support during survey.

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Thank You

