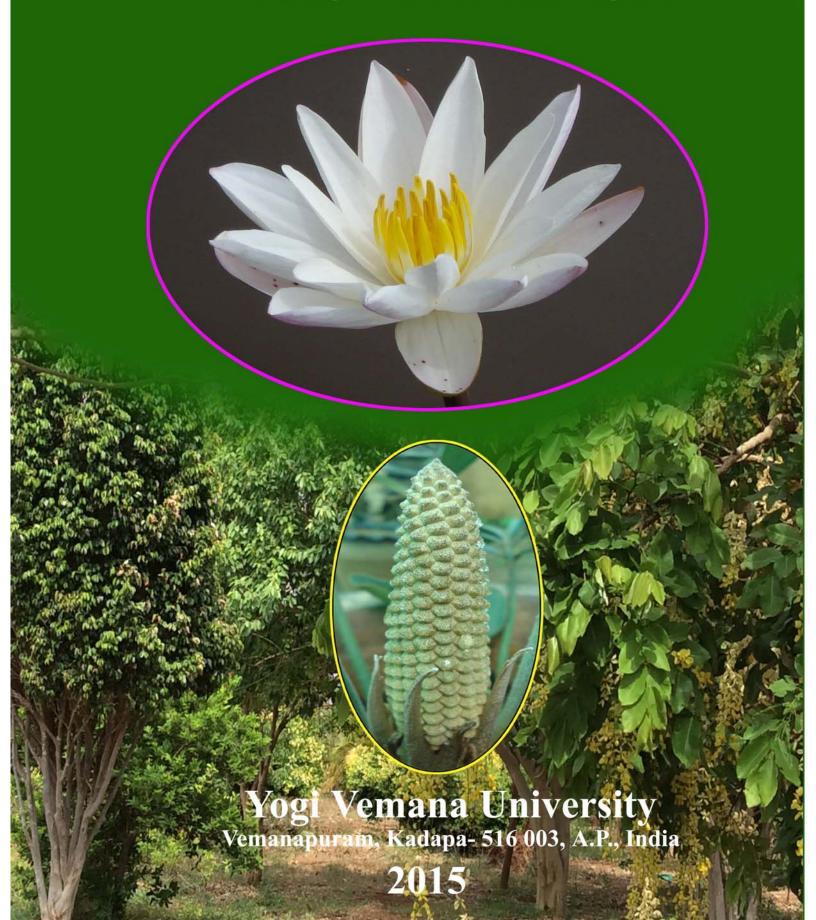
BOTANICAL GARDEN

Looking to the Future - Conserving the Past





BOTANICAL GARDEN

Looking to the Future - Conserving the Past



Dr.A. Madhusudhan Reddy

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Prof. B. Syama Sundar Vice-Chancellor Yogi Vemana University Kadapa- 516003, A.P-India

MESSAGE

It is gives me immense pleasure to give message for a brochure being brought up Yogi Vemana University on the collection and nurturing of the Botanical Garden was established in year 2007 with the objective of providing facility for placement on Plant biology, Biodiversity and Conservation. The University garden truly a regional icon representing the traditions and heritage of Rayalaseema People.

The Yogi Vemana University garden is not only to protect and nourish the plants but also to equip it for its leading role in protecting plant diversity in a world of growing environmental challenges. The garden now sprawling over 20 acres with more than 3500 plants belonging to 700 species is attracting all walks of life with its beauty and diversity. The efforts of Dr. A. Madhusudhana Reddy have to be appreciated in this regard. He has nurtured the garden as his child and developed a range of projects covering science, sustainability, propagation of indigenous fruit crops, seed bank, herbarium and garden displays. Here at the Botanical Garden, it is playing the role of a vanguard of protecting biodiversity from threats of land use challenges, climate change, invasive species, over exploitation and pollution.

On the eve of the release of this brochure second time since the beginning of the movement related to the garden, I congratulate Dr. A. Madhusudhana Reddy, the administration and academia of the University and looking forward for their commitment for protecting the garden resources in future also.

"If you are planning for a year, sow rice; if you are planning for a decade, plant trees; if you are planning for a lifetime, educate people..."

This proverb is ascribed to the Chinese philosopher and poet Kuan Tzu which was supposed to have been phrased about 2300 years ago.

I wish the project all success in its future endeavours for imparting and educating the future generations.

Dr.A.Madhusudhan Reddy Coordinater Botanical Garden e-mail: grassced@yahoo.com Mobial:9949779166





PREFACE

As you are all aware, botanical gardens are basically intended for exhibiting various plant species for aesthetic pleasure and out of conservational concerns. The plant collections serve the purpose of display, education, research, conservation, and enjoyment. It is an important instrument to promote and campaigning environmental education. The garden christened as the Yogi Vemana University Botanical Garden (YVUBG) is spread over 20.0 acres and holds a good collection of about 700 living plants species and around 3500 individual plants. With the committed efforts of the University administration, members of faculty of different departments, Research Scholars and Students, the dream of having a good botanical garden has been fulfilled.

Botanic gardens are living repositories of indigenous and exotic, cultivated and wild plants. It is a place where a wide variety of plants are cultivated for scientific, educational, and ornamental purposes, often including a library, a herbarium, and greenhouses. Botanic gardens serve as a living repository for plants of the regional and local area. Gardens useful in maintaining plant collections for the purpose of display, education, research, conservation, and enjoyment.

The medicinal plant section mainly composed of potted herbaceous plants which are having high medicinal value. All the pots are labeled with scientific names, family name, and important use. The cultivated grasses germplasm section covers all the cereal and millet species. Rock garden is basically meant for succulent species like cacti, euphorbia's. Different varieties of indigenous and exotic ornamental species will be grown in ornamental plants section. The artificial pond with submerged, floating and emergent local species representing different families. Of the five net houses, one is exclusively meant for propagating medicinal herbs, the other for shade loving plant species. With the guidance of the experts, I wish to enrich the garden further by procuring different varieties. I solicit the guidance of eminent botanists and researchers in my endeavor. In the coming years with anticipated support from the University administration I earnestly hope that garden in future will be a worth-visiting spot and besides becoming a resourceful centre for researchers. The images which were documented here taken from the Botanical Garden only.

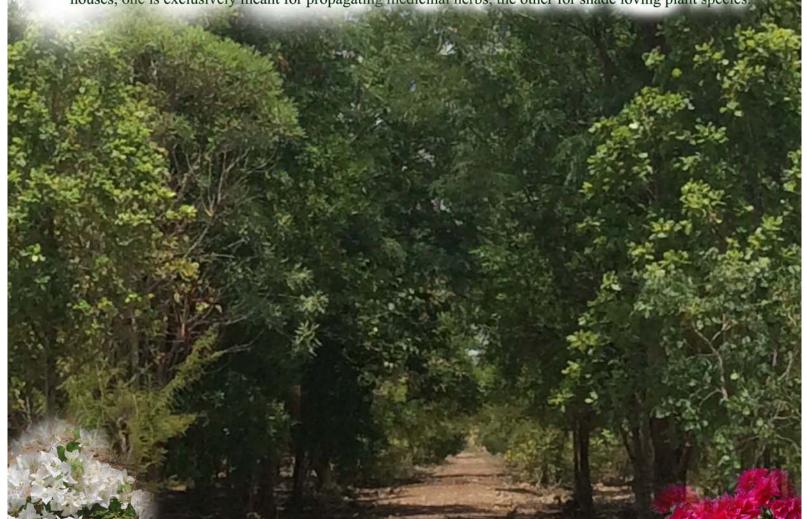
My sincere thanks to Prof. B. Syama Sundar, Vice – Chancellor, Yogi Vemana University who sustained my professional interest and promoted my ideas.

INTRODUCTION

Botanical gardens are living repositories of indigenous and exotic, cultivated and wild plants. It is a place where a wide variety of plants are cultivated for scientific, educational, and ornamental purposes, often including a library, a herbarium, and greenhouses. Botanic gardens serve as a living repository for plants of the regional and local area. They display and exhibit various plant species of conservation concern. Gardens useful in maintaining plant collections for the purpose of display, education, research, conservation, and enjoyment. They are intended to communicate the importance of plant biodiversity to students, researchers and other walks of life and address the present and future needs for training, education, institution building, and research. They are the hub for publicizing and promoting environmental education. They are the refugee for threatened flora.

The Yogi Vemana University Botanical Garden was established under the able leadership of Honorable Vice- Chancellor Prof. Arjula Ramachandra Reddy during 2007 with the financial help of Dr. Y.S. Rajasekhara Reddy, the then Chief Minister of Andhra Pradesh. Since his inception as the faculty member in 2007, Dr. A. Madhusudhana Reddy, Assistant Professor, Department of Botany, YVU is the key for development of the garden and he has taken all the efforts to make the garden as a plant conservation centre. The Botanical Garden extends over 20.5 acres and the Botanical holding more than 626 living plants species and more than 3500 individual plants. The garden has good esthetic layout that was planned at time of establishing the garden (it looks very beautiful even in Google Earth). The garden layout has various sections planned in different shapes and the plants are displayed/planted aesthetically.

The medicinal plant section is mainly composed of herbaceous plants which are having high medicinal value. All the plants are labeled with scientific names, family name, and important use. The cultivated grasses germplasm section covers all the cereal and millet species. Rock garden is basically meant for succulent species like cacti, euphorbia's. Different varieties of indigenous and exotic ornamental species will be grown in ornamental plants section. The artificial pond with submerged, floating and emergent local species representing different families. The sacred plant section is planned for growing plants representing navagrahas, nakshatras etc. The diversity of tree species grown in the garden area represents the arboretum. Of the five net houses, one is exclusively meant for propagating medicinal herbs, the other for shade loving plant species.

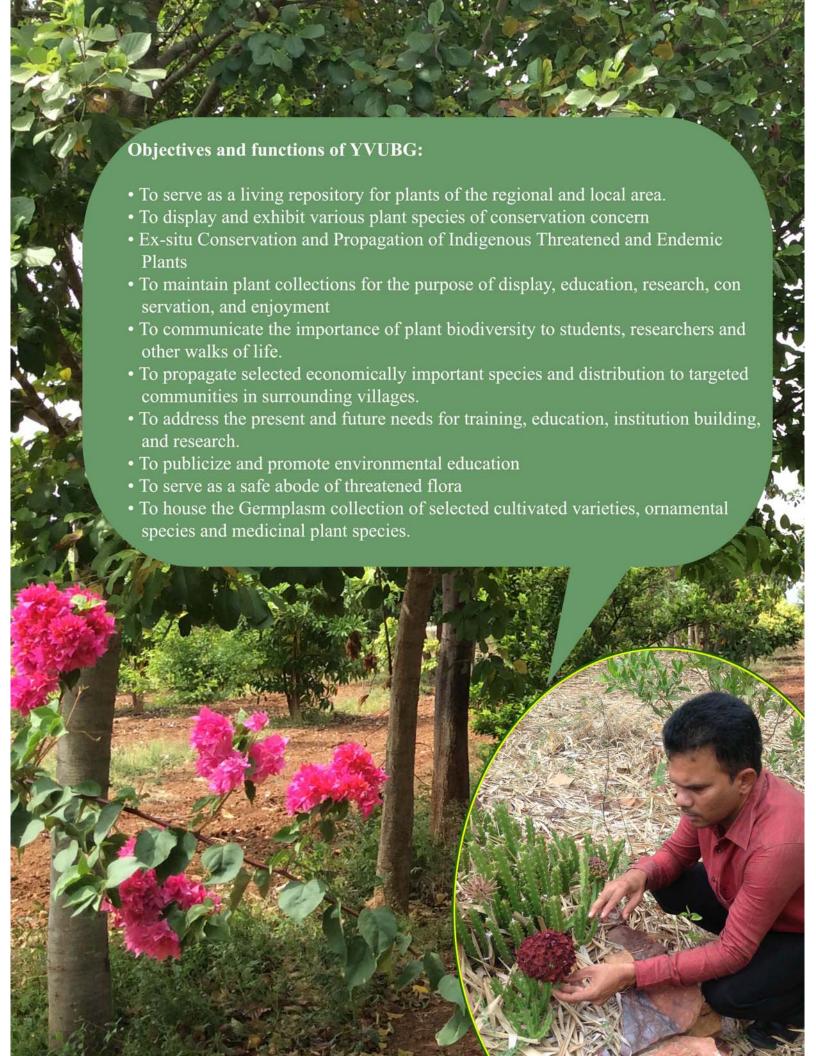






LANDSCAPES IN BOTANICAL GARDEN









PLANT COLLECTION













Infrastructural facilities

Fencing: The garden secured with good fencing consists of cement poles and barbed wire around the garden. It will protect the maximum interference.

Entrance Gate: The garden secured with iron frame gate and name board. The entrance gate has good access to vehicles.

Internal Roads: The garden consists of 3.5 Km internal roads established with red soil with iron wore according to the layout. The visitors and vehicles can make rounds easily to cover the all parts of the garden.

Store cum waiting room: The garden has 235sft room facility available for storage and waiting.

Irrigation Bore well: One bore well connected to the garden to irrigate garden, the well yielding good source of water.

Water sump: The garden has one water storage sump capacity of 45000 liters.

One 5 HP motor connected to the water sump to irrigate the garden

Drip Irrigation: In the garden 3 acres of area has drip irrigation.

Water pipeline: The entire garden has pipeline system with 75 water points to irrigate the plats through plastic pipes. The pipeline connected with the water sump and bore well.

Glass House: The house has 3000 sft glass house with all facilities

Shade Net Houses: The garden has 5 shade net houses with different shapes each with 1000 sft and one hp motor with sprinklers, total the garden has 5000 sft shade net houses.

Tractor: The garden has one Tractor with traly, water tanker and all plowing implements.

Display Boards name plates: In the garden display boards and name plates arranges all over the garden

Water ponds: Two water ponds were established in the garden one for Lilly and another for lotus and other aquatic plants.

Electricity: The garden has power supply for room, sump motor and glass house.

Garden equipments: Minor garden equipments available in the garden.

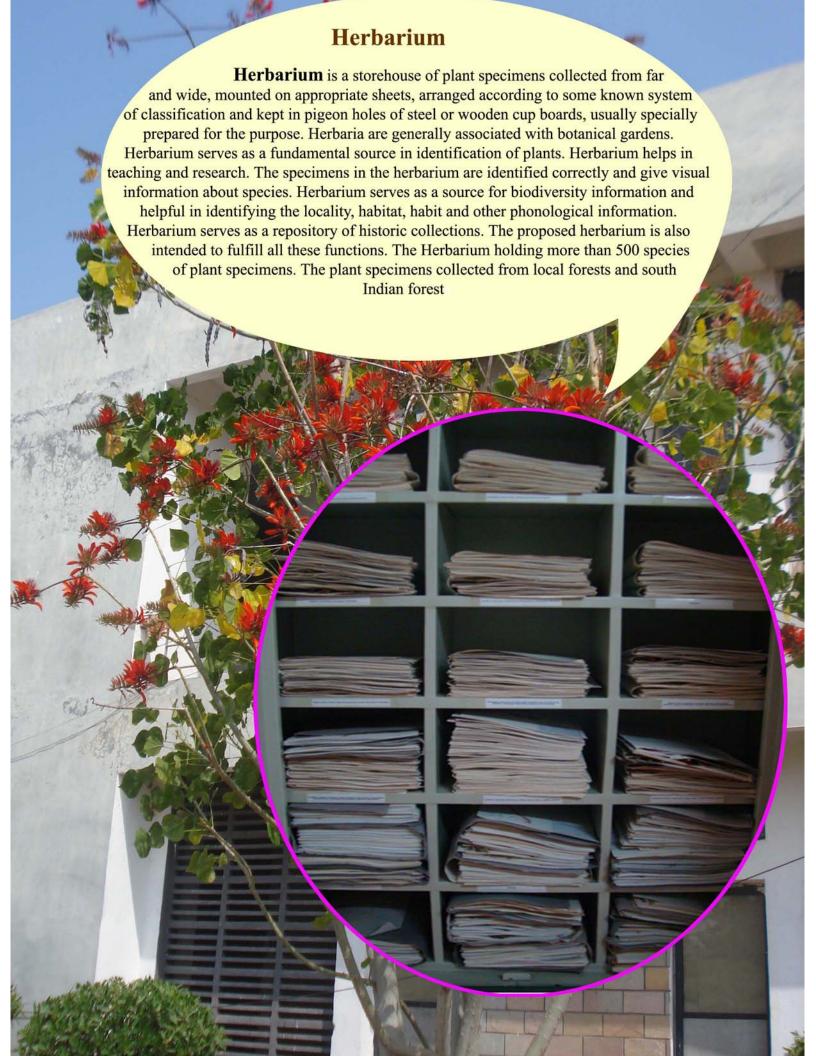
Herbarium: The Herbarium material purchased and collected more than 1000 specimens prepared Herbarium.

Hill County: In one acre of land artificial hills established to maintain natural ecosystem and named as Hill County.



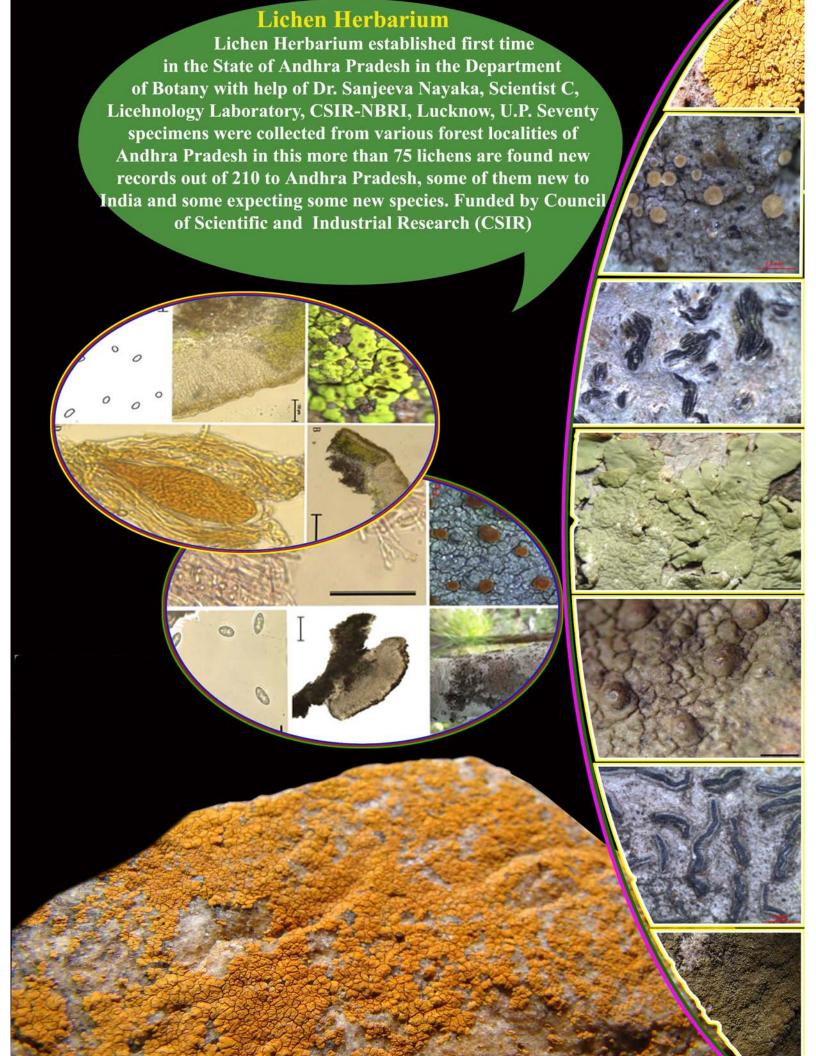










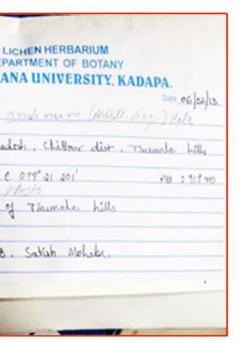




Preservation of Lichens



en sample



rium packet

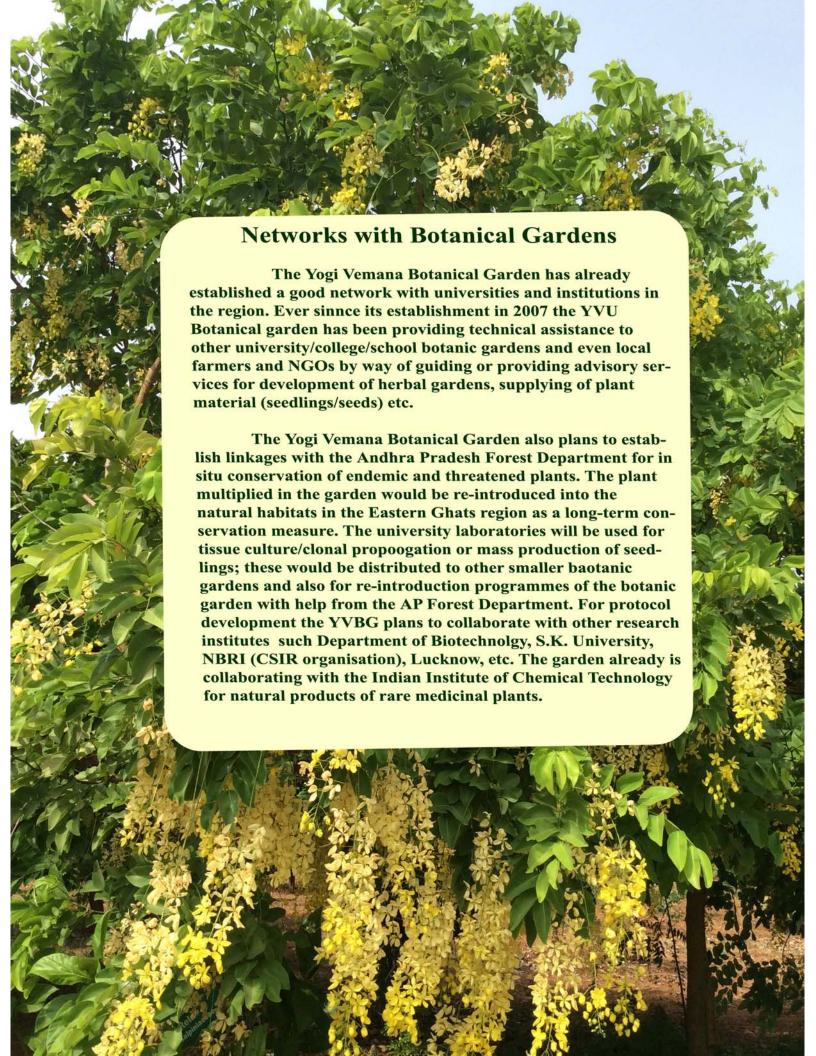


Herbarium racks with box

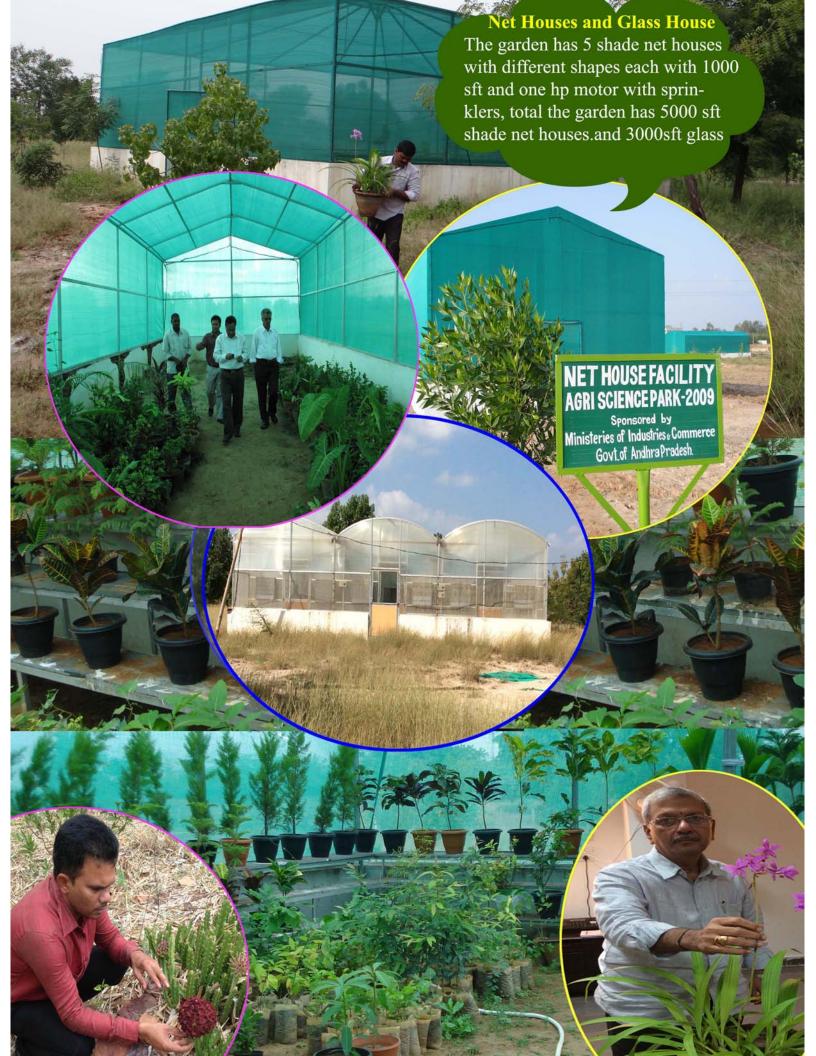












INTERESTING PLANTS





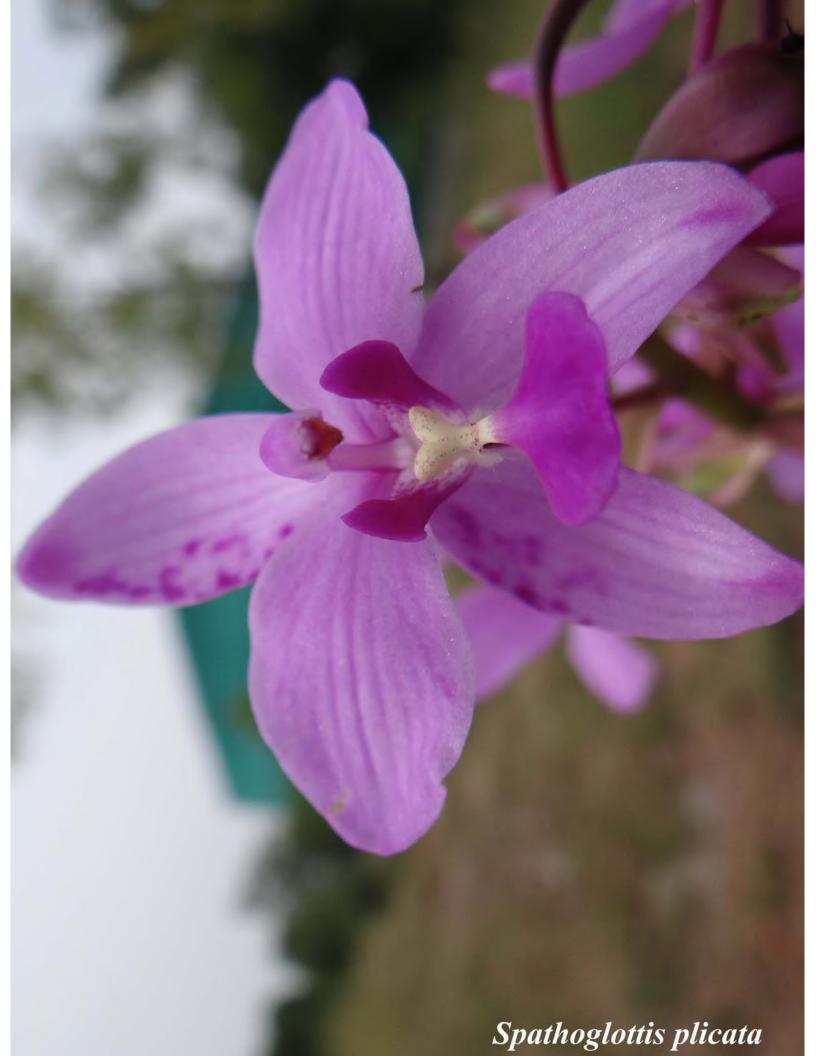


Spathoglottis sp.





| - | Life of threatened special | Tue! | Justi vation | - |
|----------|---|--------------------------------|------------------|-------------------------|
| S.No. | Name of the Species (Family) | Nayar & Sastry (1987,90) | Rao 1. (2003) | Jadhav et al. (2001) |
| 1 | Aegle marmelos (Rutaceae) | | | VU |
| 2 | Albizia thompsonii (Mimosaceae) | R | | - |
| 3 | Angiopteris et a (Marattiaceae) | | 333 | EN |
| 4 | Boswellia ovalijonolata (Bursera ceae) | | 10 | EN |
| 5 | Celastrus paniculatus (Celastraceae) | - | 11 - 11 | NT M |
| 6 | Ceropegia spiralis (Asclepia daceae) | V | R | |
| 7 | Costus speciosus (Costaceae) | (a) - | 11 - 73 | NT |
| 8 | Croton scabiosus (Euphorbiaceae) | 1.1 | // 1 | |
| 9 | Cycas beddomei (Cycadaceae) | V | CE | CE |
| 10 | Decalepis hamiltonii (Asclepia dateae) | | | EN |
| 11 | Entada pursetha (Mimosa cea | | | EN |
| 12 | Euphorbia acaulis (Euphorbiaceae) | | 4 1 1 | VI |
| 13 | Gloriosa superba (Liliaceae) | | 11.11 | VU |
| 14 | Gymnema sylvestris (Asclepiadaceae) | - / | 4 - 1 | VU |
| 15 | Holostemma ada-kodien | | 9/1/1/19 1700 | NT |
| | (Asclepiadaceae) | | 14141111 | |
| 16 | Indigofera barbata (Fabaceae) | R | R | - 18 |
| 17 | Litsea glatinosa (Lauraceae) | - 10// | | CE |
| 18 | Mer urpethum(Convolvulaceae) | - 1 | 1/1/19-1/19 | LC / |
| 19 | Oroxylum indicum (Bignoniaceae) | 100 | [1] [1] [1] | VU / |
| 20 | Pimpinella tirupatiensis (Apiaceae) | E | E | EN |
| 21 | Piper attenuataum (Piperaceae) | (- Tel | | EN |
| 22 | Pterocarpus santalinus (Fabaceae) | | -0.00 | EN |
| 23 | Rhynchosia beddomei (Fabaceae) | R | R | 1 |
| 24 25 | Rubia cordifolia (Rubiaceae) | | | VU |
| 25 | Santalum album (Santalaceae) | 40 1 200 | | EN |
| 26 | Shorea tumbuggaia (Dipterocarpaceae) | - 100 | E | EN |
| 27 | Stemona tuberosa (Stemonaceae) | 11. | | VU |
| 28 | Sterculia urens (Sterculaceae) | S. Levinson | TO THE MINE OF | VU |
| 29_ | Syzygium alternifolium (Myrtaceae) | | | EN |
| 30 | Tephrosia calophylla (Fabaceae) | /R | 1 | |
| 31 | Terminalia pallida (Combretaceae) | 1 | | EN |
| 32 | Zingiber roseum (Zingiberaceae) | 1 | TO A NO | EN |
| 33 | Ziziphus horrida (Rhamnaceae) | 100 | I | and the same |
| 34 | Hildegardia populifolia (Sterculiaceae) | 19 | The same | 200 |



List of important existing plants in the garden

| S.No | Name of the species | Family | Telugu name |
|------|--|------------------|------------------|
| 1 | Aegle marmelos (L.) Corr. | Rutaceae | Maredu, Bilvamu |
| 2 | Aloe vera ((L.) Burm.f. | Liliaceae | Manchikalabanda |
| 3 | Albizia amara (Roxb.) Boiv. | Mimosaceae | Chigara |
| 4 | Alstonia scholaris (L.) R.Br. | Apocynaceae | Edakula manu |
| 5 | Adenanthera pavonina L. | Mimosaceae | Pedda guruvinda, |
| 6 | Annona squamosa L. | Annonaceae | Seetapalam |
| 7 | Annona reticulata L. | Annonaceae | Ramapalam |
| 8 | Anthocephalus chinensis (Lam.)A.Rich | Rubiaceae | Kadamba |
| 9 | Areca catechu L. | Arecaceae | Vakkalu |
| 10 | Aristolochia indica L. | Aristolochiaceae | Nalla eswari |
| 11 | Arundo donax L. | Poaceae | Kakiveduru |
| 12 | Artocarpus heterophyllus Lam. | Moraceae | Panasa |
| 13 | Azadirachta indica L. | Meliaceae | Vepa |
| 14 | Balanites aegyptiaca (L.)Del. | Balanitaceae | Gara chettu |
| 15 | Bambusa vulgaris Schrad. Ex J.C.Wendl. | Poaceae | Golden Bamboo |
| 16 | Bauhinia purpurea L. | Caesalpiniaceae | Devakanchana |
| 17 | Bauhinia recemosa Lam. | Caesalpiniaceae | Arichettu |
| 18 | Boswellia ovalifoliolata Bal. & Henry | Burseraceae | Konda Sambrani |
| 19 | Bridelia cinerascens Gehrm. | Euphorbiaceae | |
| 20 | Butea monosperma var lutea | Fabaceae | Tella Moduga |
| 21 | Caesalpinia bonduc (L.)Roxb. | Caesalpiniaceae | Gachakaya |
| 22 | Caesalpinia pulcherrima (L.) SW. | Caesalpiniaceae | Paradise flower |
| 23 | Callistemon citrinus (Curtis) Skeels | Myrtaceae | Bottle Brush |
| 24 | Caryota urens L. | Arecaceae | Jeelugu |
| 25 | Cassia fistula L. | Caesalpiniaceae | Rela |
| 26 | Cassia siasmea L. | Caesalpiniaceae | Konda thangedu |
| 27 | Cassia suffruticosa Koen. | Caesalpiniaceae | |
| 28 | Cassine glauca (Roxb.) O.Ktze. | Celaratraceae | |
| 29 | Ceiba pentandra (L.) Gaerten | Bombacaceae | Tellaburuga |
| 30 | Centella asiatica (L.)Urban. | Apiaceae | Swarasvathiaku |
| 31 | Cereus pterogonus Lam. | Cactaceae | |
| 32 | Chlorophytum laxam | Liliaceae | |
| 33 | Chukrasia tabularis A. Juss. | Meliaceae | Konda Vepa |
| 34 | Citrus limon (L.) Burm.f. | Rutaceae | |
| 35 | Cochlospermum religiosum (L.)Alston | Cochlospermaceae | Koda pathi |
| 36 | Combritum albidum G.Don | Combretaceae | |
| 37 | Commiphora caudata (Wt. & Arn.) Engl. | Burseraceae | Konda mamidi |
| 38 | Costus speciosus (Koen.) Smith | Zinziberaceae | Vanavasa |
| 39 | Cordia sebestena L. | Boraginaceae | Native of USA |
| 40 | Cymbopogon citratus (DC.) Stapf. | Poaceae | Nimma gaddi |
| 41 | Curculigo orchioides Gaertn. | Hypoxidaceae | Nelathati |
| 42 | Dalbergia sissoo Roxb. | Fabaceae | Sisso |
| 43 | Decalepis hamiltonii Wt. & Arn. | Asclepiadaceae | Nannari gaddalu |



List of important existing plants in the garden

| List of important existing plants in the garden | | | | | |
|---|---|-----------------|-----------------|--|--|
| S.No | Name of the species | Family | Telugu name | | |
| 44 | Dioscorea pentaphylla | Dioscoreaceae | Yerra teega | | |
| 45 | Dioscorea oppositifolia | Dioscoreaceae | Eseru gaddalu | | |
| 46 | Diospyros melanoxylon Roxb. | Ebenaceae | Tumki, Beediaku | | |
| 47 | Dolichandrone atrovirens (Roth)Spr. | Bignoniaceae | Niruoddi | | |
| 48 | Dolichandrone falcata Seem. | Bignoniaceae | Chitti Niruoddi | | |
| | Drimia nagarjunae (Hemadri &Swahari) | Liliaceae | Adaviulligadda | | |
| 49 | Anand Kumar | | F1 | | |
| 50 | Euphorbia caducifolia Murr. | Euphorbiaceae | | | |
| 51 | Euphorbia antiquorum L. | Euphorbiaceae | Bontha jamudu | | |
| 52 | Euphorbia milii Der. | Euphorbiaceae | | | |
| 53 | Euphorbia nivulia BuchHam. | Euphorbiaceae | Errakalli | | |
| 54 | Erythrina variegata L. | Fabaceae | Vaarajapu | | |
| 55 | Euphorbia tirucalli L. | Euphorbiaceae | Manchikalli | | |
| 56 | Ficus benghalensis L. | Moraceae | Marri | | |
| 57 | Ficus elastica Roxb.ex Hornem | Moraceae | Rubber fig | | |
| 58 | Ficus hispida L.f. | Moraceae | Kakimedi | | |
| 59 | Ficus mollis Vahl | Moraceae | Juvi | | |
| 60 | Ficus racemosa L. | Moraceae | Medi | | |
| 61 | Ficus religiosa L. | Moraceae | Ravi | | |
| 62 | Gardenia gummifera L.f. | Rubiaceae | Bikki | | |
| 63 | Gardenia resinifera Roth. | Rubiaceae | Pedda bikki | | |
| 64 | Givotia moluccana (L.) Sreem. | Euphorbiaceae | Tella poliki | | |
| 65 | Gloriosa superba L. | Cochlaceae | Nabhi | | |
| 66 | Gymnema sylvestre (Retz.) R.Br. | Asclepiadaceae | Podapatri | | |
| 67 | Gyrocarpus americanus Jacq. | Hernandiaceae | Poliki | | |
| 68 | Gmelina asiatica L. | Verbenaceae | Nelagummadi | | |
| 69 | Couroupita guianensis Aubl. | Lecythidaceae | Nagalingamu | | |
| 70 | Hardwickia binata Roxb. | Caesalpiniaceae | Narayepi | | |
| 71 | Hemidesmus indicus (L.) R.Br. | Asclepiadaceae | Sugandipala | | |
| 72 | Helicteres isora L. | Sterculiaceae | Nulikaya | | |
| 73 | Hibiscus platanifolius (Wild.) Sweet. | Malvaceae | Kondapathi | | |
| 74 | Holoptelea integrifolia (Roxb.) Planch. | Ulmaceae | Tapase | | |
| 75 | Hymenodictyon orixense (Roxb.) Mabb. | Rubiaceae | Dudippa | | |
| 76 | Jatropha curcas L. | Euphorbiaceae | Adavi amudam | | |
| 77 | Jacaranda acutifolia Humb. | Bignoniaceae | Gulmohur | | |
| 78 | Justicia adhatoda L. | Acanthaceae | Addasaramu | | |
| 79 | Leptadenia reticulata Schult. | Asclepiadaceae | Palateega | | |
| 80 | Limonia acidissima L. | Rutaceae | Velaga | | |
| 81 | Maerua apetala (Roth.) Jacobs | Capparidaceae | | | |
| 82 | Mallotus philippensis (Lam.) MuellArg. | Euphorbiaceae | | | |
| 83 | Maytenus emarginata (Willd.) Ding. | Celastraceae | Danthi | | |
| 84 | Millingtonia hortensis L.f. | Bignoniaceae | Manumalli | | |
| 85 | Mimosa pudica | Mimosaceae | Attipathi | | |









List of important existing plants in the garden

| | List of important existing | | ar den |
|-----|--------------------------------------|-----------------|------------------------------|
| 86 | Mitragyna parviflora (Roxb.) Korth. | Rubiaceae | Battaganapa |
| 87 | Morinda pubescens J.E.Smith | Rubiaceae | Maddi |
| 88 | Muntingia calabura L. | Elaeocarpaceae | Singapur cherry |
| 89 | Mussaenda frondosa L. | Rubiaceae | Mussanda |
| 90 | Myrtus communis L. | Myrtaceae | Panneeru jama |
| 91 | Naringi crenulata (Roxb.) Nil. | Rutaceae | Kukkavelaga |
| 92 | Oroxylum indicum (L.)Benth. | Bignoniaceae | Mokka Vepa |
| 93 | Opuntia dillenii (Ker Gawl.) Haw. | Cactaceae | Nagadhari |
| 94 | Passiflora edulis Sims | Passifloraceae | Rakhi flower |
| 95 | Pandanus fascicularis Lam. | Pandanaceae | Mogali |
| 96 | Pavetta tomentosa Roxb. | Rubiaceae | |
| 97 | Peltophorum pterocarpum (DC.) Barker | Caesalpiniaceae | Kondachita |
| 98 | Phoenix dactylifera L. | Aracaceae | Datepalm |
| 99 | Phoenix sylvestris (L.) Roxb. | Aracaceae | Etha chettu |
| 100 | Phyllanthus emblica L. | Euphorbiaceae | Usirikaya |
| 101 | Plumeria rubra L. | Apocynaceae | Deva ganneru |
| 102 | Pithecellobium dulce (Roxb.) Benth. | Mimosaceae | Seemachintha |
| 103 | Prosopis cineraria (L.) Druce. | Mimosaceae | Jammi |
| 104 | Pterocarpus santalinus L.f. | Fabaceae | Yerrachandanam |
| 105 | Pterocarpus marsupium Roxb. | Fabaceae | Yogisa |
| 106 | Pterospermum xylocarpum (Gaertn.)SW. | Sterculiaceae | |
| 107 | Radermachera xylocarpa (Roxb.)K.S. | Bignoniaceae | Naguru |
| 108 | Ravenala madagascariensis Sonner. | Musaceae | Panka arati |
| 109 | Sansevieria cylindrica | Asparagaceae | Snake plant |
| 110 | Sansevieria roxburghiana Schult. | Asparagaceae | Chaga |
| 111 | Sansevieria trifasciata Prain. | Asparagaceae | |
| 112 | Schefflera stellata (Gaertn.) Harms | Araliaceae | Marrimamidi |
| 113 | Simarouba glauca DC. | Simaroubaceae | Paradise tree (USA) |
| 114 | Sesbania grandiflora (L.) Poir. | Fabaceae | Avisa chettu |
| 115 | Syzygium cumini (L.) Skeels. | Myrtaceae | Neredu |
| 116 | Soymida febrifuga (Roxb.)A.Juss. | Meliaceae | Somidi |
| 117 | Swietenia mahogany (L.) Jacq. | Meliaceae | Mahogani |
| 118 | Tabebuia aurea Benth. & Hook.f. | Bignoniaceae | |
| 119 | Tamarindus indica L. | Caesalpiniaceae | Sweet Tamarind (Thailand) |
| 120 | Spathodea campanulata P.Beauv. | Bignoniaceae | Yerraneru |
| 121 | Strychnos nux-vomica L. | Loganiaceae | Mushti |
| 122 | Sterculia foetida L. | Sterculiaceae | Adavi badam |
| 123 | Sterculia urens Roxb. | Sterculiaceae | |
| 124 | Tecoma stans L. | Bignoniaceae | Pasupuganneru |
| 125 | Tectona grandis L.f. | Verbenaceae | Teak |
| 126 | Terminalia catappa L. | Combretaceae | Badham chettu |
| 127 | Terminalia chebula Retz. | Combretaceae | |
| 128 | Terminalia arjuna Roxb. Ex DC. | Combretaceae | |
| 129 | Terminalia bellirica (Gaertn.) Roxb. | Combretaceae | |

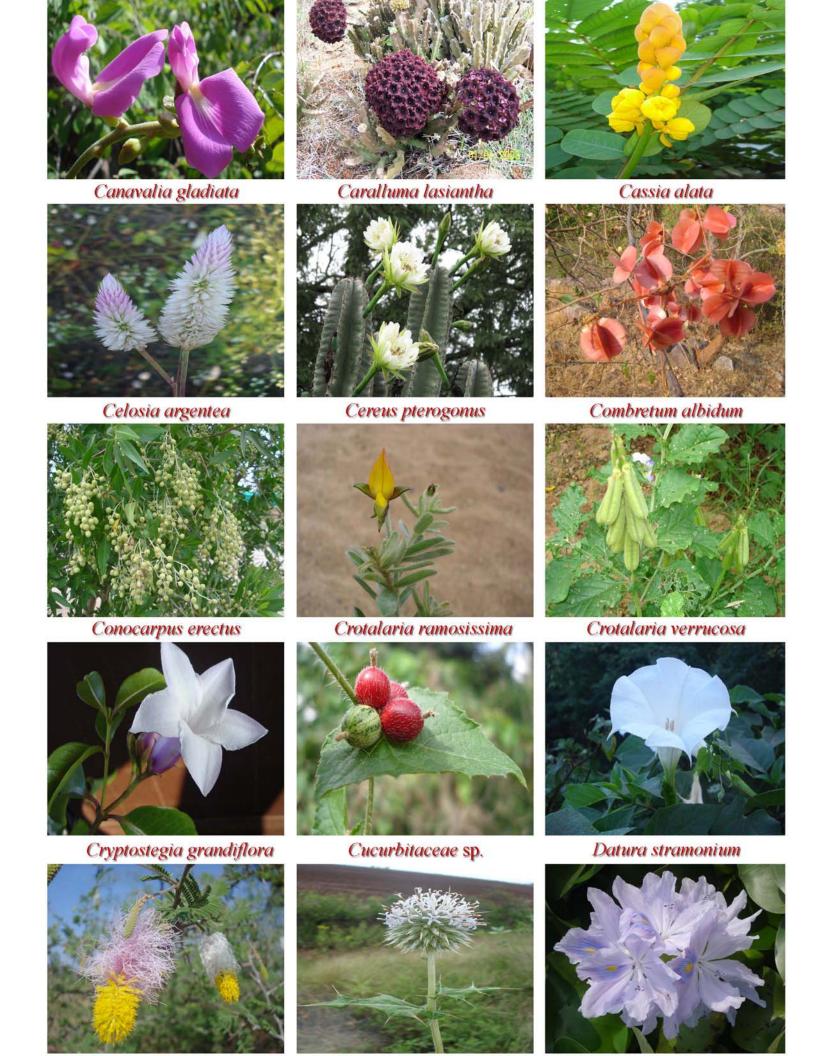


List of important existing plants in the garden

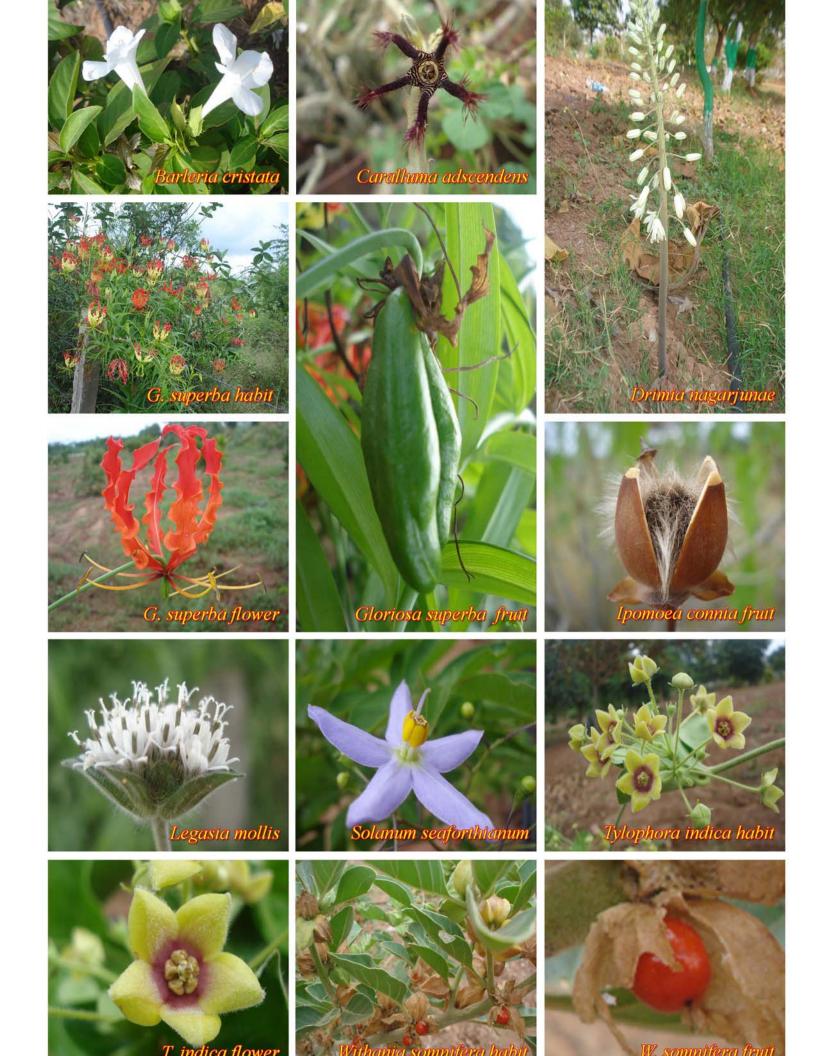


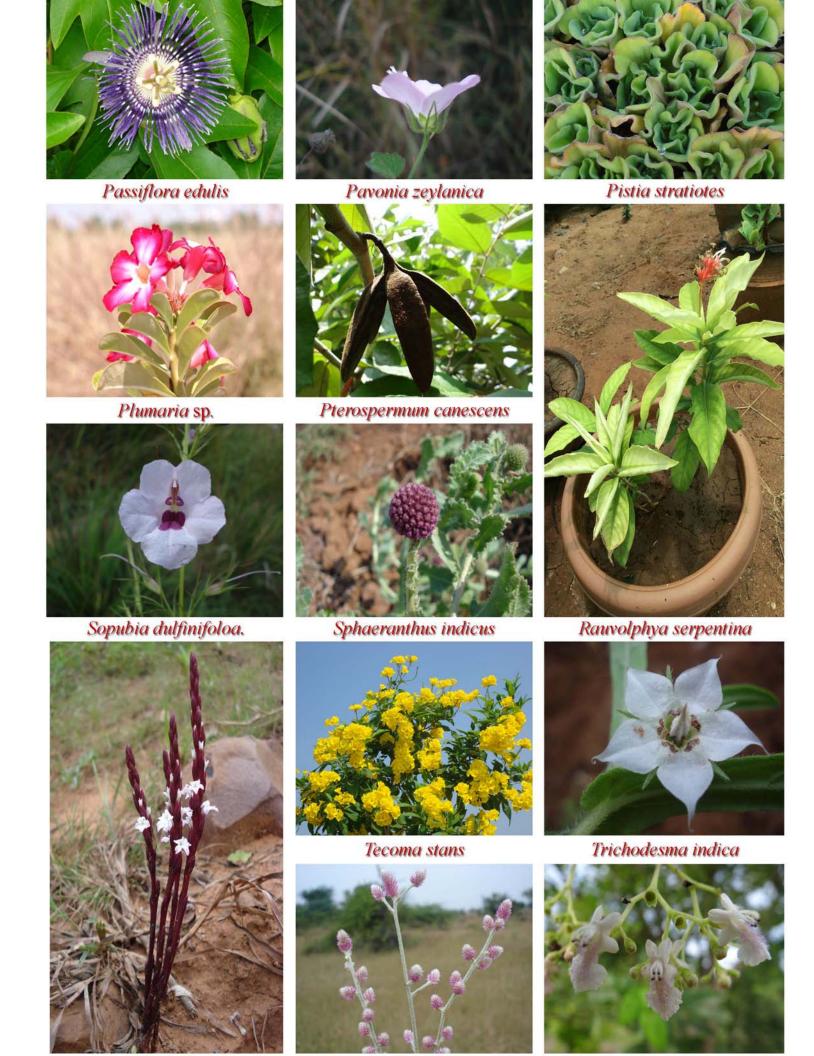


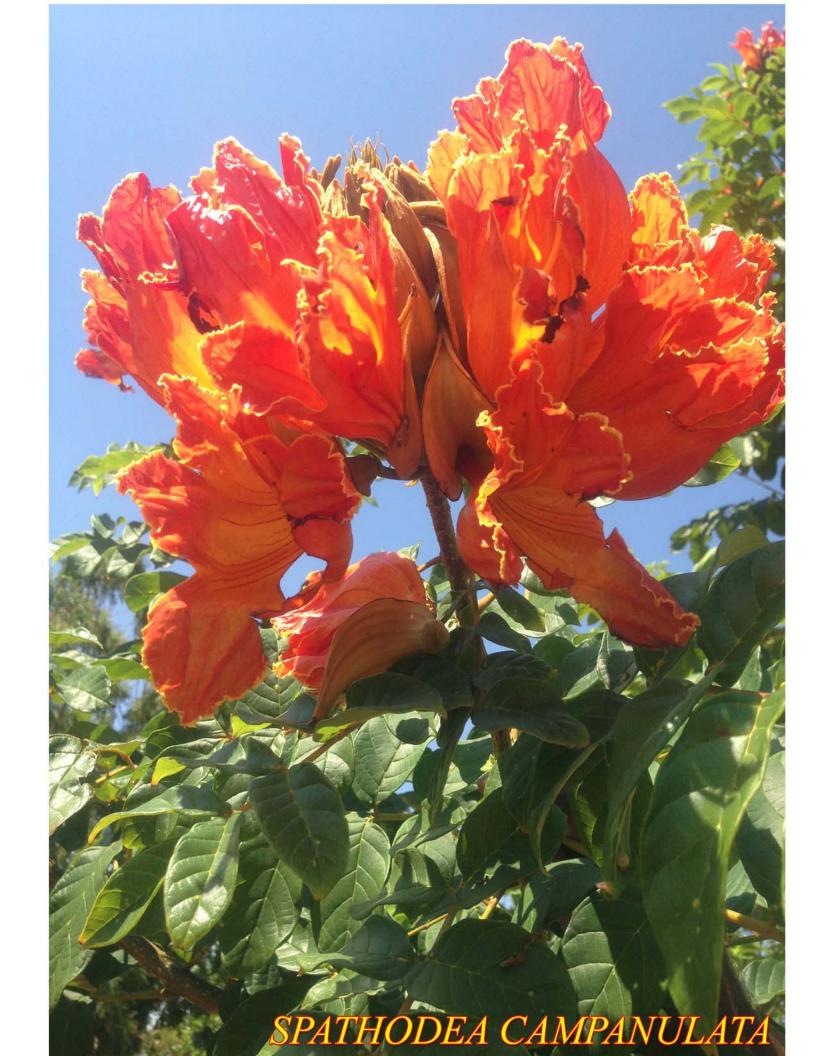


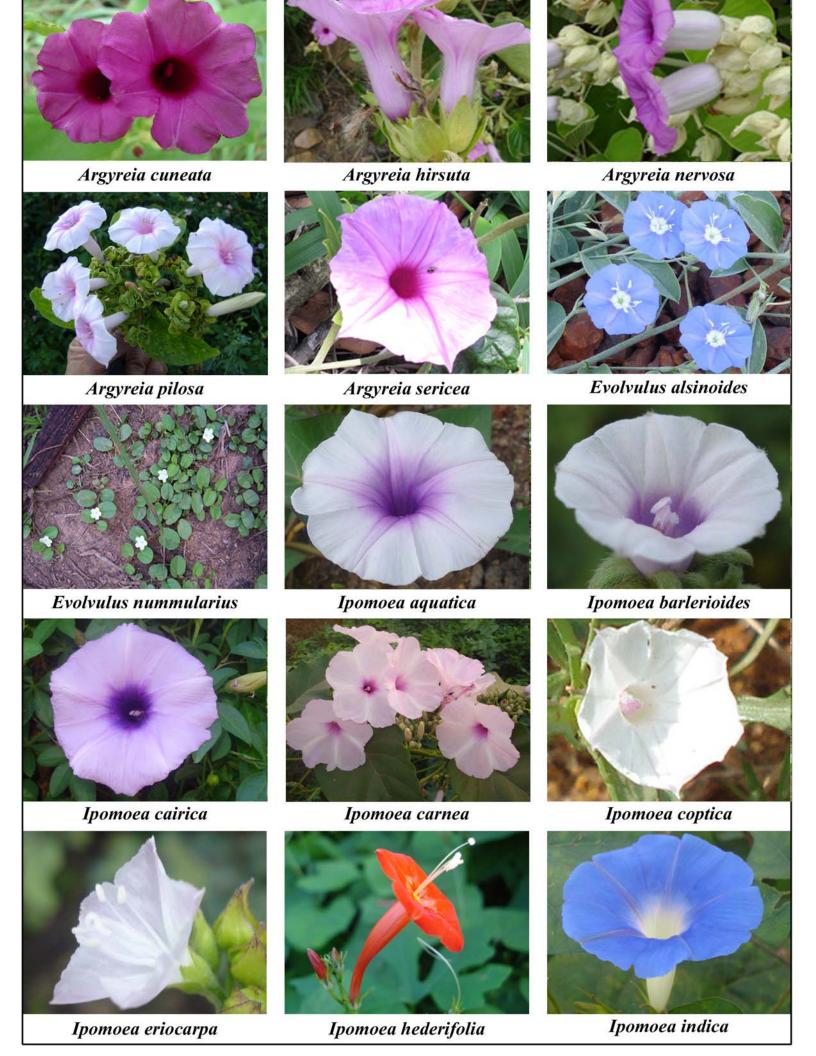




























Cactus Plants in Garden



Cactus Plants in Garden



Butterflies in the Garden on *Conocarpus erectus* fruits



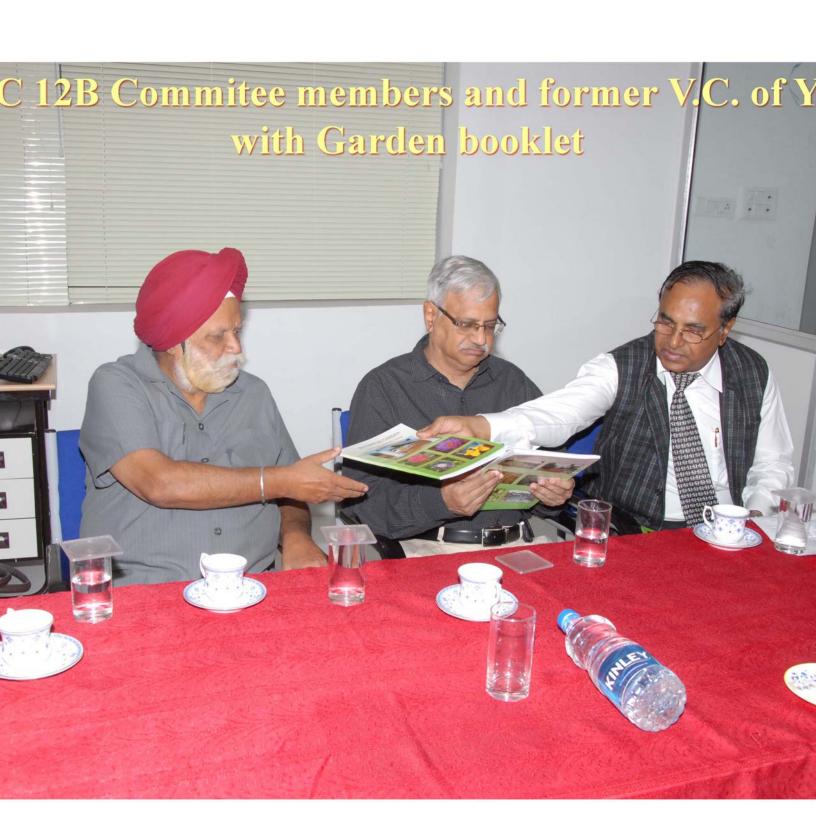


PROF. B. SYAMA SUNDAR, HONB'LE V.C. YVU PLANTING A REDSENDER SAPLING









UGC 12B COMMITTEE IN THE GARDEN





UGC 12B Commitee members visiting the Garde



UGC 12B Committee members planting saplings in the Garden













COLLEGE STUDENTS VISITS













VISITORS IN THE GARDEN



























