

DEPARTMENT OF LIFE SCIENCES  DEPARTMENT OF MEDIA AND COMMUNICATION

BIODIVERSITY OF CUTN VOLUME 2

FLORA

A COMPENDIUM OF
PLANT BIODIVERSITY OF
THE CENTRAL UNIVERSITY OF TAMIL NADU

CONTENT EDITORS
K. S. Dinesh Babu
Latchoumycandane Calivarathan





DEPARTMENT OF LIFE SCIENCES



DEPARTMENT OF MEDIA AND COMMUNICATION

BIODIVERSITY OF CUTN VOLUME 2 2021

FLORA

A COMPENDIUM OF
PLANT BIODIVERSITY OF
THE CENTRAL UNIVERSITY OF TAMIL NADU

BIODIVERSITY OF CUTN SERIES



Plant diversity is the basis for modern biological sciences and our understanding of the loss of diversity has introduced the global issue of climate change that in turn, requires the development of strategies to conserve nature. The Central University of Tamil Nadu is home to diverse classes of plants and animals, and 'Fauna: A compendium of the biodiversity of the Central University of Tamil Nadu' was brought out in 2019, and in continuation with the above encyclopaedia, here, we have made every endeavour to ensure that all aspects on about 150 plant species distributed within the university's academic and the residential campuses are showcased in the current edition

of 'Flora: A compendium of plant biodiversity of the Central University of Tamil Nadu'. This picture book is aimed at making a broader coverage of plant species, their descriptions, accurate naming and medicinal values (if any) and is expected to contribute to updating knowledge on the biology of plant diversity that has largely been superseded in recent years by advancements made in modern biological sciences. The current encyclopaedia is an attempt to accumulate the dimensions of plant diversity within the campus and portray the importance of indigenous plant species to preserve nature. We thank you all for your encouragement and support. ■

PREFACE

Plants are sacred living forms that habituate across almost every part of the ecosystem of our planet. In fact, plants were one of the first living forms to be worshipped by human beings. Notwithstanding newer plant species are being discovered every day, it is estimated that only about 450,000 plant species have thus far been reported globally as per available data in the literature. India is home to a plethora of plant species encompassing trees, herbs, shrubs, orchids, bromeliads, palms, cycads, grasses, cattails, sedges and rushes. Understanding the patterns of plant diversity is key to preserving several other living forms on the planet. Plants generate the oxygen that other higher living forms require for respiration. Besides, plants also serve as reservoirs of food, medicines, fibre and building materials. The Central University of Tamil Nadu spanning over 516 acres of land is home to a countless number of plant species also serving as the lead producer in the ecosystem offering niches to several species of birds, reptiles, amphibians, molluscs, crustaceans and other wildlife.

The Department of Life Sciences (DLS) in association with the Department of Media and Communication and the Internal Quality Assurance Cell (IQAC) of the Central University of Tamil Nadu had previously showcased the animal species residing on the university campus under 'Fauna: A Compendium of the Biodiversity of the Central University of Tamil Nadu' in 2019, and is now in an attempt to archive hidden indigenous plant treasures of the campus under a title 'Flora: A Compendium of the Plant Biodiversity of the Central University of Tamil Nadu'. I congratulate the authors, and the entire faculty members of the Department of Life Sciences for putting up a humon-



gous task of profusely photographing the plant species distributed within the academic and the residential campuses, and meticulously preparing the comprehensive description and the economic importance of every plant for display. I am sure the compendium will serve as a sourcebook, a visual treat and an essential sourcebook not only for the students of the university but also for researchers, environmentalists, ecologists, biologists and conservationists and for gardening specialists as well as folklore enthusiasts. I wish the authors and the entire team a successful publication of the handbook!

Prof. M. Krishnan, Vice-Chancellor of CUTN

MESSAGEBOARD



It gives me immense pleasure to pick my pen up to write the foreword for this book on the flora of CUTN. Being located in Cauvery's delta region, our CUTN campuses are blessed with an abundance of fauna and flora. I still vividly remember the discussion that took place one evening in 2018, where the proposal to bring out books on the rich flora and fauna of our campuses was made. Whereas the fantastic book on fauna was released during our Decennial celebration in 2019, the book on flora has been the most awaited one. Our dream has finally come to fruition. The beautiful green landscape of both campuses is very well documented and cataloged. It is a real feast for the eyes and has been presented in a most excellent manner. I congratulate Prof. E. M. Shankar and his entire team for this tremendous effort, and they deserve every bit of praise and appreciation that's sure to come their way.

Prof. Sulochana Shekhar, Registrar (i/c) of CUTN



Plants play a paramount role in maintaining biodiversity in large, by serving as food, shelter, and breeding grounds for a plethora of indigenous reptiles, birds, and amphibians. Plants are a gem on the crown of mother earth because it aims to balance the ecosystem, protects the landscape from watersheds, prevents soil erosion, moderates adverse climate conditions, and provides raw materials for human survival and existence. Having said that our university is always at the forefront of bio-conservation, I am awestruck to learn that the Department of Life Sciences together with the Department of Media and Communication, is launching a new biodiversity compendium. The efforts of the team has been marvelous, and I take this opportunity to congratulate the content editor, the photographers, the page designers, and the entire crew for their wonderful hard work. I wish them all the best!

Prof. S. Nagarajan, Controller of Examinations (in-charge)

MESSAGEBOARD



Research suggests that several plants are on the verge of decline, and several animal species, the primary consumers of plants in the food chain, are reportedly heading towards extinction. The decline in amphibian populations reported in recent decades is affirmative of an onslaught on global biodiversity. Plant and animal conservation, hence, is key to global well-being. With this understanding, I appreciate the latest effort of the departments of Life Sciences and Media and Communication to record the plant diversity of the university. I see it as a useful and necessary exercise that is in line with the university's commitment to ecological conservation.

CMA. V. Palani, Finance Officer, Central University of Tamil Nadu



This compendium of the plant species residing within our campus is as astonishing as the earlier one recording the fauna of CUTN, as they both showcase the plethora of living organisms that share the campus with us and are otherwise remaining unrecognised. Hundreds of plants, animals and birds are recorded in these compendia. It is interesting to know that there are so many among us. I congratulate the team from the departments of Life Sciences and Media and Communication behind these picture books and wish that more such efforts are undertaken in this domain.

Thank you and all the best.

Dr. R. Parameswaran, Librarian, Central University of Tamil Nadu

MESSAGEBOARD



I appreciate the Central University of Tamil Nadu (CUTN)'s efforts to conserve nature by harnessing the ecosystem and biodiversity within the campus, which is universally regarded as one of the best academic practices. Earlier an encyclopaedia was launched by the Department of Life Sciences on The Fauna: A Compendium of the Biodiversity of CUTN - Volume I that was an immense success. In continuation, the department is bringing out The Flora: A Compendium of the Plant Diversity of CUTN - Volume II to showcase more than 150 plant species distributed within the campus. I am sure that the current volume will be resourceful for our Students, Researchers, Conservation Biologists and to the entire campus community of our university. I congratulate the editorial team of the Department of Life Sciences for their timely contribution to the wonderful compendium, and wish them all the best.

Prof. Ram Rajasekharan, Dean, School of Life Sciences



One of the striking features of campus photos of universities across the world is the greenery that spatially locates the learners and teachers. Some campuses are bestowed with expansive spaces in rural settings, which provide them with something more than greenery. They are endowed with their unique flora and fauna. Our campus is blessed with hundreds and thousands of non-human living beings as a part of its flora and fauna. They are being documented and presented well by Prof.E.M Shankar and his team. I am very happy that the Dept.of Media and Communication has been contributing to this well-meaning effort through Dr. Francis Philip Barclay. Every best for their endeavours.

Prof. G. Ravindran, Dean, School of Communication



Biodiversity is the most complex feature of our planet, and is the most vital component necessary for human existence. It is the variety of life on earth, in all its forms and interactions. Biodiversity provides a functioning ecosystem where life interplays with the physical environment. These myriad interactions have made earth habitable for billions of years. Earth's biodiversity is so rich that many species, including plants, animals, bacteria and fungi, remains to be discovered. As the Central University of Tamil Nadu (CUTN) is committed to conserve its natural ecosystem and biodiversity, aiming to understand the biological wealth of CUTN, previously the Department of Life Sciences, in association with the Department of Media and Communication has brought out The Fauna: A Compendium of the Biodiversity of CUTN - Volume I where the Animal Kingdom of our campus were recorded. In succession, The Flora: A Compendium of the Biodiversity of CUTN - Volume II where the Plant Kingdom of the campus that encompasses various trees, herbs, shrubs, creepers and climbers is being brought out by the Department of Life Sciences in association with the Department of Media and Communication. I believe that similar to the Fauna, this book will be highly resourceful for our students, researchers and to the entire campus community, and will indeed be a precious asset to the university. The two books will further our knowledge and interest on how so many species of animals and plants coexist within single ecosystem and the nature of interactions occurring between them would be worth investigation by environmentalists. I congratulate the entire team of the Department of Life Sciences for their commitment, which has transformed our erstwhile dream into a reality today bringing out this wonderful compendium to the limelight of the campus community.

Prof. P. Rajaguru, Head, Department of Life Sciences



The Central University of Tamil Nadu provides ambiance not merely for researchers, educationists, and academicians but also for a diverse array of precious plant and animal species. Catalogueing the harmonious existence of the priceless possessions has been a dream for me since I got onboard CUTN in 2016. Special thanks to Prof. M. Krishnan and Prof. A. P. Dash for offering me an opportunity to take up the onus, and thanking also Prof. Sulochana Shekhar, Dr. Francis P. Barclay and Mr. Girishwaran T. P., for supporting and encouraging me in accomplishing the tasks successfully.

Prof. E. M. Shankar, Department of Life Sciences and Coordinator for the Biodiversity of CUTN Compendium Series



I feel privileged to be part of this cultivated and scholastic endeavour to create a scientific record of the plant species that populate and paint our university turf in green and seasonal glittering hues. Though a tedious and time-consuming travail, this second venture—in a series of efforts to bring to light the biodiversity treasures hidden on our campus—deserved all our stretch and striving, apart from the administrative encouragement, duly received. I thank the support received from all four corners and the enthusiasm of the fellow team members that helped bring out this prized compendium, which we believe will be an eye-opener, and at the same time, an entertainer.

Dr. Francis P. Barclay, Assistant Professor,
Department of Media and Communication



Dr. K. S. Dinesh Babu has a Master's degree in Botany and earned his Ph.D degree in Biotechnology from the Madurai Kamaraj University. His teaching and area of research includes Plant Anatomy, Plant Conservation Biology, Plant Virology and Protein Translation Quality Control. He has served as an Assistant Professor at the Department of Life Sciences, Central University of Tamil Nadu between 2019 and 2020. Dinesh is a member of prominent scientific societies such as Society of Biological Chemists (India) and Indian Biophysical society. He has published three research publications in leading international peer reviewed journals and has submitted several DNA sequences from Coffea species and Bhendi viral (BYVMV) genome in Genbank. Currently, he is working as a Postdoctoral fellow in the CSIR - Center for Cellular and Molecular Biology (CCMB), Hyderabad.

Dr. K. S. Dinesh Babu, Content Editor

BEHIND THIS COMPENDIUM



Prof. E. M. Shankar
Coordinator



Dr. K. S. Dinesh Babu
Content Editor



Dr. C. Latchoumycandane
Content Editor



Dr. Francis Philip Barclay
Graphics and Design



Mr. T. P. Girishwaran
Graphics and Design

Copyright © 2021 Central University of Tamil Nadu, Thiruvarur, Tamil Nadu, India. All rights reserved. No part of this picture book may be reproduced, distributed or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law.

CONTENTS

<i>Abelmoschus ficulneus</i> White wild musk mallow	1	<i>Catharanthus roseus</i> Madagascar periwinkle	27
<i>Abutilon indicum</i> Indian mallow	3	<i>Cayratia trifolia</i> Bush grape	28
<i>Acacia leucophloea</i> Distiller's acacia	4	<i>Chloris barbata</i> Swollen windmill grass	29
<i>Acalypha indica</i> Indian nettle	5	<i>Cissus quadrangularis</i> Adament creeper	30
<i>Acalypha malabarica</i> Malabar copperleaf	6	<i>Citrullus lanatus</i> Water melon	31
<i>Achyranthes aspera</i> Prickly chaff flower	7	<i>Cleome viscosa</i> Asian spider flower	32
<i>Aerva lanata</i> Polphala	8	<i>Clitoria ternatea</i> Butterfly bean	33
<i>Aeschynomene aspera</i> Pith plant	9	<i>Coccinia grandis</i> Ivy gourd	34
<i>Albizia saman</i> Rain tree	10	<i>Cocos nucifera</i> Coconut tree	35
<i>Alysicarpus monilifer</i> Necklace-pod	11	<i>Codiaeum variegatum</i> Garden croton	36
<i>Alocasia macrorrhizos</i> Giant taro	12	<i>Colocasia esculenta</i> Taro	37
<i>Aloe vera</i> Aloe vera	13	<i>Commelina benghalensis</i> Benghal day flower	38
<i>Alternanthera sessilis</i> Sessile joyweed	14	<i>Corchorus olitorius</i> Jew's mallow	39
<i>Andrographis echiioides</i> False water willow	15	<i>Cordia dichotoma</i> Indian cherry	40
<i>Aristida setacea</i> Broom grass	16	<i>Corypha umbraculifera</i> Talipot palm	41
<i>Azadirachta indica</i> Neem	17	<i>Crotalaria pallida</i> Smooth rattle pod	42
<i>Bambusa vulgaris</i> Common bamboo	18	<i>Crotalaria verrucosa</i> Blue flowered rattle pod	43
<i>Bauhinia variegata</i> Mountain ebony	19	<i>Croton bonplandianus</i> Railway weed	44
<i>Benincasa hispida</i> Wax gourd	20	<i>Cucumis callosus</i> Muskmelon	45
<i>Boerhavia diffusa</i> Common hog weed	21	<i>Cucumis maderaspatanus</i> Madras pea pumpkin	46
<i>Borassus flabellifer</i> Palmyra palm	22	<i>Cyanthillium cinereum</i> Little iron weed	47
<i>Caesalpinia pulcherrima</i> Peacock flower	23	<i>Cycas revoluta</i> Sago palm	48
<i>Calotropis gigantea</i> Crown flower	24	<i>Dactyloctenium aegyptium</i> Crow foot grass	49
<i>Cardiospermum halicacabum</i> Balloon vine	25	<i>Datura innoxia</i> Thorn apple	50
<i>Carica papaya</i> Papaya	26	<i>Delonix regia</i> Flame tree	51

<i>Dianella tasmanica</i> Variegated flax lily	52	<i>Jatropha gossypifolia</i> Bellyache bush	77
<i>Dyopsis lutescens</i> Golden cane palm	53	<i>Rungia repens</i> Creeping rungia	78
<i>Eclipta prostrata</i> False Daisy	54	<i>Kyllinga nemoralis</i> Whitehead spike sedge	79
<i>Epipremnum pinnatum</i> Silver satin	55	<i>Leucaena leucocephala</i> Leucaena	80
<i>Euphorbia hirta</i> Asthma weed	56	<i>Leucas aspera</i> Common Leucas	81
<i>Euphorbia milii</i> Crown of thorns	57	<i>Manilkara zapota</i> Chikoo	82
<i>Ficus benghalensis</i> Banyan tree	58	<i>Marsilea quadrifolia</i> Water Clover	83
<i>Ficus benamina</i> Weeping fig	59	<i>Merremia tridentata</i> Arrow leaf morning glory	84
<i>Ficus hispida</i> Hairy fig	60	<i>Merremia emarginata</i> Kidney leaf morning glory	85
<i>Ficus religiosa</i> Sacred fig	61	<i>Millingtonia hortensis</i> Indian cork tree	86
<i>Fioria vitifolia</i> Grape leaved mallow	62	<i>Mimusops elengi</i> Spanish cherry	87
<i>Flueggea leucopyrus</i> Bush weed	63	<i>Mollugo pentaphylla</i> African chickweed	88
<i>Gardenia jasminoides</i> Cape jasmine	64	<i>Morinda coreia</i> Morinda tree	89
<i>Gliricidia sepium</i> Mexican lilac	65	<i>Muntingia calabura</i> Jamaica cherry	90
<i>Gomphrena celosioides</i> Water globe head	66	<i>Musa paradisiaca</i> Banana	91
<i>Gomphrena globosa</i> Globe amaranth	67	<i>Nerium oleander</i> Indian oleander	92
<i>Graptophyllum pictum</i> Jamaican croton	68	<i>Ocimum americanum</i> Hoary basil	93
<i>Heliconia rostrata</i> Hanging lobster claw	69	<i>Ocimum tenuiflorum</i> Holy basil	94
<i>Hibiscus rosa-sinensis</i> Chinese hibiscus	70	<i>Oldenlandia umbellata</i> Chay root	95
<i>Hibiscus schizopetalus</i> Japanese hibiscus	71	<i>Operculina turpethum</i> Indian jalap	96
<i>Ipomoea carnea</i> Bush morning glory	72	<i>Passiflora foetida</i> Stinking passion flower	97
<i>Ipomoea marginata</i> Purple heart glory	73	<i>Pedaliium murex</i> Elephant caltrop	98
<i>Ipomoea pes-tigridis</i> Tiger's paw glory	74	<i>Peltophorum pterocarpum</i> Copperpod	99
<i>Ixora javanica</i> Jungle geranium	75	<i>Phoenix sylvestris</i> Wild date palm	100
<i>Jasminum sambac</i> Arabian jasmine	76	<i>Phyllanthus amarus</i> Hurricane weed	101

<i>Phyllanthus emblica</i> Amla	102	<i>Tabebuia rosea</i> Rosy trumpet tree	127
<i>Physalis minima</i> Sunberry	103	<i>Tabernaemontana divaricata</i> Grape jasmine	128
<i>Platyclusus orientalis</i> Chinese arborvitae	104	<i>Tecoma stans</i> Trumpet flower	129
<i>Plectranthus amboinicus</i> Indian borage	105	<i>Tectona grandis</i> Teak	130
<i>Polyalthia longifolia</i> Ashoka tree	106	<i>Tephrosia purpurea</i> Purple tephrosia	131
<i>Pongamia pinnata</i> Pongam tree	107	<i>Terminalia catappa</i> Indian almond	132
<i>Prosopis juliflora</i> Mesquite	108	<i>Tinospora sinensis</i> Malabar gulbel	133
<i>Psidium guajava</i> Guava	109	<i>Tragia plukenetii</i> Cannabis leaf nettle	134
<i>Ravenala madagascariensis</i> Traveler's tree	110	<i>Trianthema portulacastrum</i> Desert horse purslane	135
<i>Ricinus communis</i> Castor bean	111	<i>Tridax procumbens</i> Coat buttons	136
<i>Rosa indica</i> Rose	112	<i>Typha angustifolia</i> Narrow-leaved cattail	137
<i>Saccharum spontaneum</i> Wild sugarcane	113	<i>Vigna trilobata</i> Wild gram	138
<i>Sansevieria roxburghiana</i> Indian bow string hemp	114	<i>Vitex negundo</i> Chaste tree	139
<i>Scoparia dulcis</i> Sweet broom weed	115	<i>Xanthium strumarium</i> Common cocklebur	140
<i>Sesbania sesban</i> Common sesban	116	<i>Zizypus mauritiana</i> Indian Jujube	141
<i>Sida cordifolia</i> Bala	117		
<i>Sida cordata</i> Heart leaf sida	118		
<i>Simarouba glauca</i> Paradise tree	119		
<i>Solanum insanum</i> Mullukathiri	120		
<i>Solanum nigrum</i> Black night shade	121		
<i>Solanum trilobatum</i> Purple fruited pea egg plant	122		
<i>Spathodea campanulata</i> African tulip tree	123		
<i>Spermacoce hispida</i> Shaggy button weed	124		
<i>Swietenia mahagoni</i> Mahogany	125		
<i>Syzygium cumini</i> Jambolan	126		



White Wild Musk Mallow

Abelmoschus ficulneus (L.)

Wight & Arn.

Botanical Name: *Abelmoschus ficulneus* (L.)
Wight & Arn.

Synonym: *Hibiscus ficulneus* L.
Hibiscus sinuatus Cav.

Common name: English – White wild musk mallow,
Native rosella, Tamil – Kattu vendai,
Hindi – Jangli bhindi, Telugu –
Nellabenda, Marathi – Ran bhendi.

Family: Malvaceae

Habit: Shrub

Habitat: It is found in the areas with distinct dry season. The plant can be seen in grass lands, bush lands and as a weed near the cultivated places. The plant prefers to grow in water logged soils and places close to rivers.

Distribution: Eastern tropical African countries.
East Asian countries and Australia

Plant Characteristics: *Abelmoschus ficulneus* is an annual plant that contains thick stem and grows up to the height of about 2 to 4 meters. Branches has bulbous base, hairy at young stage of development and glabrous at maturity. The plant can be easily recognized with its prominent white colored petals and small sized fruits. The plant body is much branched and woody at base. Leaves are arranged alternatively, palmately lobed, base cordate, three

to five nerved and has serrate leaf margin.

Stipules linear and filiform. Flowers are complete, bisexual and are having attractive white colored petals. Calyx five lobed, base connate, valvate and membranous. Corolla larger, pentamerous, obovate, glabrous and has dark purple or pink color near the center. Stamens indefinite, monadelphous, forming a stamen tube that unites with corolla. Ovary superior, pentalocular, ovules many, stigma discoid with single style. Fruit is a capsule, ovoid to oblong, five angular and dehiscent with longitudinal slits. Release of seeds happens by the rupture of mature, dry fruit walls and seed dispersal happens via wind and animals.

Uses: The plant is cultivated as a food in Egypt and gives an excellent quality white colored fibers extracted from the stem. The fruits are edible and both the leaves and fruits are boiled and used as vegetable. Fruits are rich in fiber and vitamin C. ●





Indian Mallow, Country Mallow

Abutilon indicum (L.) Sweet.

- Botanical Name:** *Abutilon indicum* (L.) Sweet.
Synonym: *Abutilon vesicarium* (Cav.) Sweet
Beloere cistiflora Shuttlew. ex A.Gray
Sida albida Willd.
Sida asiatica L.
Sida indica L.
Abutilon albidum (Willd.) Sweet
Abutilon arborescens Medik.
Abutilon asiaticum (L.) Sweet
Abutilon australe malvifolium (Benth.) Baker f.
Abutilon cavaleriei H.Lév.
- Common name:** English - Indian Mallow, Indian abutilon, Tamil – Tutti, Malayalam – Velluram, Telugu – Tuturabenda, Kannada – Tutti, Hindi – Kanghi.
- Family:** Malvaceae
Habit: Erect shrub
Habitat: Open uncultivated lands and disturbed forest areas.

Distribution: Widely distributed in the East Asian countries such as India, Myanmar, Thailand and Indonesia.

Plant Characteristics: The plant is a annual or perennial medium sized under shrub, grows up to two meters of height. Stem smooth and has plenty of hairs. Leaves

simple, margin irregularly dentate, ovate, apex acute and base cordate. Petiole contains minute hairs. Flowers are solitary, axillary, complete, bisexual and pollinated by insects or by self-fertilization. Epicalyx absent. Sepals green, five lobed, campanulate, base connate, hairy and ovate with acute apex. Petals five, golden-yellow colored, obovate and glabrous. Stamens are shorter than petals, stellate, hairy, basifixed and clustered. Stigma capitate, style branched and ovary superior. Fruit is a schizocarp. Seeds many and are reniform or sub-reniform.

Flowering & Fruiting: September to April.

Uses: The leaf juice is used as a demulcent and has diuretic properties. The leaf paste is used to treat ulcers and used to apply on wounds and boils. Root infusions are used in the treatment of leprosy. It is used as a cooling remedy for coughs and fever. ●

Distiller's Acacia

Acacia leucophloea (Roxb.) Willd.

Botanical Name: *Acacia leucophloea* (Roxb.) Willd.

Synonym: *Mimosa leucophloea* Roxb.
Acacia arcuata Decne.
Acacia melanochaetes Zoll.

Common name: Tamil - Velvelam, Ven-velan, Telugu – Tella tumm, Malayalam - Vellavelam, Kannada – Tapala, Nayibela, Hindi – Reonja, Safed babul.

Family: Fabaceae

Habit: Tree

Habitat: Tropical dry and moist places.

Plant Characteristics: *Acacia leucophloea* is a moderate tree grows to a height of about 12 meters. Bark yellow to yellowish brown colored and rough. Its wood is very hard and withstands drought conditions easily. Leaves bipinnately compound, arranged alternately, stipulate and stipular spines are in pairs. Leaflets usually small and opposite. Flowers are sessile and yellow or yellowish white colored. Inflorescence heads are arranged in terminal panicles. Peduncle is zig-zag shaped and the bracts are ovate & minute. Stamens many with glandular appendages. Ovary stipitate.

Fruit is a flat pod, strap shaped or sometime curved. Pods are tardily dehiscent and the seeds are ovate in shape.

Flowering: July to November.

Fruiting: July to November.

Uses: The bark is used in the process of traditional liquor distillation. ●





Indian Acalypha

Indian Nettle *Acalypha indica* L.

Botanical Name: *Acalypha indica* L.
Synonym: *Acalypha chinensis* Benth.
Common name: English: Indian Nettle, Indian Acalypha, Tamil: Kuppaimeni, Hindi & Urdu: Kuppi, Kannada – Kalmari, Malayalam – Kuppamani.
Family: Euphorbiaceae
Habit: Herb
Habitat: Rocky hillsides, shades of thickets, road sides, wastelands and open plains.

Distribution: Widely distributed in the East Asian countries such as India, Myanmar, Thailand, Malaysia, Vietnam and Indonesia.

Plant Characteristics: *Acalypha indica* is an annual herb which is very common in southern India and considered as a major weed. The plant body contains several alkaloids. Leaves have long petiole, ovate or rhombic ovate, acute, cuneate at base, cranate-serrate, upto 3 inches long, 2 inches broad and glabrous. Spikes axillary and monoecious. Both male and female flowers are produced in the axillary spikes. Male flowers are ebracteate, minute, uppermost and few. Anthers vermiculiform. Male flowers are followed by a bunch of sterile flowers. Female flowers produced below, subtended by prominent bracts. These bracts are larger, leafy, dentate, alternate on erect spikes. Ovary hispid and trilobed. There are three numbers of bifid styles

are present. Capsules are three valved and covered with bract.

Flowering & Fruiting: June to December.

Uses: The leaves are used in the treatment of respiratory problems, rheumatoid arthritis, scabies and other skin diseases. They can also be used to treat bronchitis, pneumonia and asthma. The decoction made from the whole plant is used in the treatment of epilepsy, mouth ulcers and emmenagogue. The plant is used by many ethnic communities to treat and manage a number of diseases including Ganglions, diarrhea, leprosy, laxative, ring worms, intestinal worms, boils, swellings and venereal disease. ●

Malabar Copperleaf

Acalypha malabarica Mull.Arg.

Botanical Name: *Acalypha malabarica* Mull.Arg.

Synonym: *Risincarpus malabaricus*
(Mull. Arg.) Kuntze.

Common name: English - Malabar Copperleaf

Family: Euphorbiaceae

Habit: Herb

Habitat: Wetlands and roadsides.

Distribution: Peninsular India, South Canara
and Mysore

Plant Characteristics: *Acalypha malabarica* is a stout leafy annual herb which grows to a height of about 1 feet. Leaves alternate, ovate, acute, rough on surface, margins toothed, hispid and basally three nerved. Petioles longer than lamina. Both male and female flowers are in axillary spikes. The male flowers are few and uppermost. Male flowers are minute, very few, clustered near the tips of the spikes. Female flowers are larger than the male flowers and occupy the basal portion of the spikes. Bracts moderate sized, shortly toothed, funnel shaped, folded and bordered with glandular hairs. Capsules 3 seeded.

Flowering: July to December..

Fruiting: July to November.

Uses: Leaves are used as a vegetable and eaten along with pulses or with other greens. ●





Devil's Horsewhip

Prickly Chaff Flower,
Achyranthes aspera Linn.

Botanical Name: *Achyranthes aspera* Linn.
Synonym: *Cadelaria punctata* Raf.
Centrostachys aspera (L.) Standl.
Common name: English – Prickly chaff flower, Crocus stuff, Tamil – Nayuruvi, Malayalam – Katalati, Hindi – Chirchira, Telugu – Pratyakpushpi, Apamaargamu.
Family: Amaranthaceae
Habit: Herb
Habitat: Open dry places above 2000 feet in Nepal, forest edges, open grasslands, seasonal swamps and dried-up watercourses.

Distribution: Widespread in the tropics and sub-tropics of Europe, Africa, Asia, Australia and America.

Plant Characteristics: *Achyranthes aspera* is a dry ground plant. The plant grows well in a fertile soil and has a woody base. Leaves are opposite, entire, petioled and are highly variable. Branches pubescent and striate. Flowers bisexual and are produced in slender, simple and paniced spikes. Bracts membranous and persistent. Bracteoles are sharp and spinous with hyaline wings. Wings of the bracteoles are broad and may or may not have dorsal appendage. Perianth contains sharp tips which can easily sticks to the cloths. Stamens 2 to 5, connate at the base and the filaments are filiform. Anthers two celled. Ovary is oblong, one celled and

has pendulous ovule with long funicle. Fruit is oblong or ovoid utricle, rounded or areolate at the apex and falling off with bracteoles and perianth. Seeds are solitary and oblong.

Flowering & Fruiting: Flowering seen throughout the year.

Uses: The plant contains many medicinal properties and used to treat variety of illness. It is used as a purgative, diuretic, antimalarial, estrogenic, anti-leprotic, antibacterial and antiviral agent in the traditional systems of medicine. It is also used in the treatment of snakebite, urinary calculi, gonorrhoea, influenza, piles and abdominal pain. The leaves cooked and used as a substitute for spinach. The ash from the burnt plant often mixed with mustard oil, a pinch of salt and the mixture is used as a tooth paste. The plant is a good source of potash and the dried stem is used as a toothbrush. ●

Polphala

Aerva lanata (L.) Juss. ex Schult.

Botanical Name: *Aerva lanata* (L.) Juss. ex Schult.

Synonym: *Achyranthes lanata* L.

Common name: English - Mountain knot grass, Polphala, Tamil - Sirupulai, Hindi - Chhaya, Gora khbuti, Telugu - Pindidonda

Family: Amaranthaceae

Habit: Erect or prostrate herbs.

Habitat: Dry wastelands, open plains and roadsides.

Distribution: The plant has widely distributed in the plains of tropical, subtropical and other warmer parts of many African countries, Middle East, Asia and Australia.

Plant Characteristics: *Aerva lanata* is a perennial herb. Leaves are simple, alternate, decussate, membranous, elliptic obovate or orbicular in shape with entire leaf margin. Flowers are bisexual, minute, white colored and are arranged in axillary spicate clusters. Bracts and bracteoles are small and ovate. Tepals are small and oblong. Stigmas two in number. Stamens five. Rarely four. Staminodes subulate. Ovary ovoid or sub-globose. Ovary is one celled having pen-

dulous ovule with a long basal funicle. Style simple. Stigma bifid. Fruit is a membranous urticule.

Flowering: September to April.

Uses: *Aerva lanata* has widely used in many traditional systems of medicine. It is regarded as a valuable treatment material for cough, sore throat, indigestion, wounds, headache and diabetes. The plant contains anti-asthmatic, nephro-protective, anti-glycemic, anti-diabetic, anti-microbial and immune-modulatory properties. The herb is also used in the treatment of diarrhea, cholera and dysentery. The flowers are used to treat gonorrhoea and kidney stones. ●





Pith plant

Aeschynomene aspera L.

- Botanical Name:** *Aeschynomene aspera* L.
Synonym: *Aeschynomene aquatica* Roxb. ex Steud.
Aeschynomene lagenaria Lour.
Aeschynomene surattensis Wight & Arn.
Aeschynomene trachyloba Miq.
Hedysarum lagenarium (Lour.) Roxb.
- Common name:** English – Pith plant, Indian Joint vetch, Budda pea, Tamil – Netti, Thakkai poon du, Hindi – Didhen, Chhuimui, Telugu – Jeeluga, Bendu, Malayalam – Nelitali.
- Family:** Fabaceae
- Habit:** *Aeschynomene aspera* is an erect branched shrub.
- Habitat:** The plant prefers to grow on the flooded rice fields, swamps, ditches and the places near ponds.

Distribution: The plant can be found in India, Bangladesh, Bhutan, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand and Vietnam.

Plant Characteristics: The plant is a perennial shrub that grows up to 3 meters of height. Stem is soft and glabrous. Stem is glabrous and the wood pith is white colored. In the stem pith is a light weight material and there is a small circular hallow hole in the stem center. Leaves sessile or sub-sessile, Leaflets alternate or opposite, linear, oblong, obtuse and glabrous. Stipules more or less 1 cm long.

Inflorescence is an axillary raceme which has two to seven flowers. Peduncles and pedicel contains plenty of hairs. Bracts 3mm long, Calyx hispid and bilabiate. Corolla yellow colored. Vexillum glabrous and the keel is pubescent externally. Pods compressed and dark brown colored. Seeds reniform and black colored.

Flowering & Fruiting: September to October.

Uses: Low density pith isolated from this plant is used to make hats or sola topis. This is considered as the lightest wood from known plants and widely known as ambatch wood. The central light weight pith can be used as a cork substitute in various applications and are used to make sun helmets. The pith material is used for making artificial flowers during festival season. The plant can also be used as a green manure and forage. ●

Rain Tree, Saman

Albizia saman (Jacq.) Merr.

Botanical Name: *Albizia saman* (Jacq.) Merr.

Synonym: *Samanea saman* (Jacq.) Merr.
Acacia propinqua A. Rich.
Calliandra saman (Jacq.) Griseb.

Common name: English - Rain tree, Monkey pod, Saman,
 Tamil – Amaivagai, Thoongumoonji
 maram, Hindi – Gulabi Siris,
 Telugu – Dorisena,
 Malayalam – Mazhamaram,
 Urakkamthoongamaram,
 Bengali – Biliti siris.

Family: Leguminosae

Habit: Deciduous Tree

Habitat: Grasslands, coastal bush lands
 and forest areas. Grows well in
 the tropical climate.

Distribution: Native to tropical America and cultivated in
 all tropical countries.

Plant Characteristics: *Albizia saman* is a deciduous tree
 which grows up to 20 meters of height. It bears a heavy

umbrella shaped crown and grows well in hot and moist conditions. The main trunk is short and fissured. Bark dark grey colored. Leaves are heavy and twice pinnate. The leaflets are asymmetrical, almost rhombic and are increasing in size from base to tip. The leaflets closes in dark conditions, cloudy days, rainy conditions and during night conditions. Flowers appears like round silken tufts. Peduncles are more or less 6 cm in length. Calyx tube like. Corolla red or yellowish red colored. Flowers are bisexual, attractive and slightly fragrant. Stamens are produced in bunches, long, white at base, pink towards apex and are arranged in hemi-spherical heads. Fruit is a non-dehiscent pod, which is oblong, straight or slightly curved, green at young stage and black colored at maturity. Fruits are eaten and enjoyed by squirrels, horses and cattle. Seeds are ellipsoidal and dark brown to black colored.

Flowering: June to December.

Uses: *Albizia saman* is intercropped as a shade tree with *Coffea*, *Cacao* and other crops. Wood, Bark, leaves and seeds contain Glycosides and Saponins. Bark is used in naso-pharyngeal affections. Leaflets used as fodder, main trunk is widely used in carpentry related applications. Widely grown for shade, Bee keeping and soil conservation program. ●





Necklace-Pod

Alysicarpus monilifer (L.) DC.

- Botanical Name:** *Alysicarpus monilifer* (L.) DC.
Synonym: *Alysicarpus narimanii* S.M.Almeda & M.R.Almeda
Hedysarum monilifer L.
Hedysarum moniliferum L.
Common name: English – Necklace-Pod Alyce clover,
 Tamil – Kasukodi, Telugu – Amera,
 Hindi – Jhuhighas.
Family: Fabaceae
Habit: Prostrate low growing herb.
Habitat: Roadsides and open plains. It grows on different soil types with a pH of 5 to 6. Grows well in habitats with temperature between 26 to 29°C.
Distribution: Distributed in Asia - India, Pakistan, Africa - Ethiopia, Madagascar, Niger, Somalia, Sudan, Indian Ocean – Mauritius, Re-union islands.

Plant characteristics: The plant is low growing, branched, diffuse or prostrate herb. Leaves are broadly oblong or elliptic oblong in shape. The base of the leaf is subcordate, apex is obtuse or rounded, mucronate, glabrous or sparsely hairy. Petiole short. Stipules lanceolate, short and striate. Flowers are produced in axillary racemes. Pedicel is short. Calyx tube like, lobes lanceolate, ciliate and calyx tube is longer than the first joint of the pod. Corolla is

pink to violet colored. Pods are 3 to 7 joined, moniliform, turgid with hooked hairs.

Flowering and fruiting: November to January.

Uses: The plant contains anti-inflammatory properties and is used in the treatment of stomach ache. It is also used as an antidote for snake bite. The leaves are used in the treatment of fever and jaundice. The plant is widely used in the treatment of renal calculi and the roots are specifically used for leprosy and pulmonary troubles. ●

Giant Taro, Upright Giant Taro

Alocasia macrorrhizos (L.) G. Don

Botanical Name: *Alocasia macrorrhizos* (L.) G. Don

Synonym: *Alocasia cordifolia* (Bory) Cordem.
Alocasia indica (Lour.) Spach
Alocasia grandis N.E.Br

Common name: English: Giant Taro, Upright elephant ear, Giant ape, Tamil – Merukan, Merukan Kizhangu, Hindi – Mankanda, Kannada – Baalaraaksha, Genasoo, Marathi - Kaasaalu.

Family: Araceae

Habit: Shrub

Habitat: Grows well in lowland tropical areas with higher rainfall.

Distribution: Native to Sri Lanka and India.

Distributed in the Eastern Asia – Indian subcontinent, Indonesia and Malaysia.

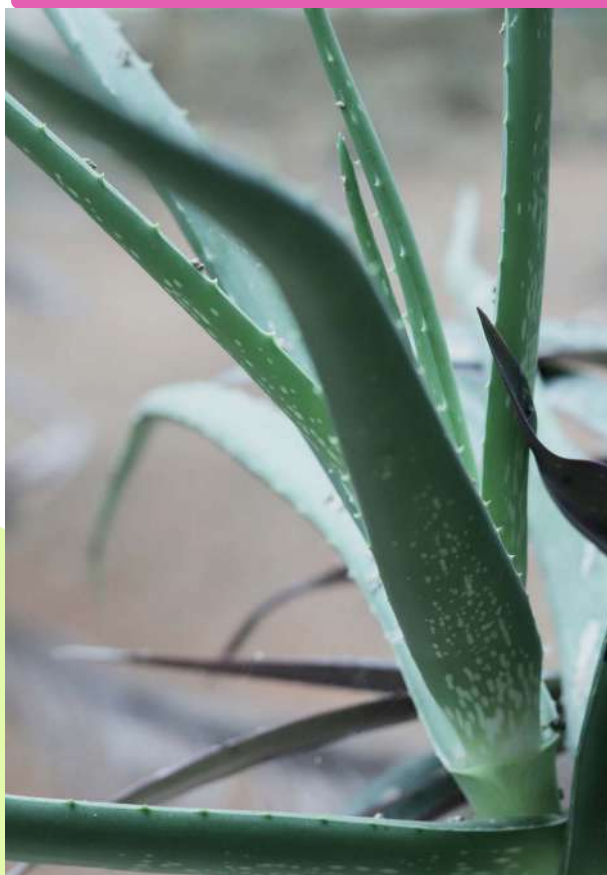
Plant Characteristics: *Alocasia macrorrhizos* is a massive, rhizomatous, evergreen perennial plant which gives a beautiful look to the garden. Plant requires regular watering and organically rich, moist to wet soil for good growth.

Leaves are produced from a stout upright trunk. Stem is erect and edible, however it contains raphids crystals of oxalic acid which can numb and swell the tongue and pharynx. The leaves come from rigid stalks and an entire fully grown leaf reaches a length of about 3-6 feet. Leaves are thick, prominently veined, margin entire, dark green colored, arrow shaped at the base and stands upright. Leaves are gigantic that resembles elephant's ear, hence the common name giant elephant ear was given for this plant. Petiole sheathing and overlapping. Inflorescence paired among leaf bases. The blossoms consist of a yellowish-green spathe and spadix which are not attractive. Spadix slightly shorter than Spathe. Female part is conic-cylindrical, pistle pale green colored, stigma yellow colored, sessile and 3 to 5 lobed. Male zone whitish and cylindrical. Fruiting spathe is green and oblong ellipsoid.

Flowering: Spring season.

Uses: Corms are edible and are thoroughly cooked before eating. The basal part of the stem is edible. Easily digestible starch has been isolated from the stem part. The roots are used to treat swollen lymph glands. The wood is used to treat stomach ache and diarrhea. ●





Aloe vera

Aloe vera (L.) Burm.f..

Botanical Name: Aloe vera (L.) Burm.f.
Synonym: Aloe barbadensis Mill.
 Aloe indica Royle
 Aloe vulgaris Lam
Common name: English - Aloe vera, Medicinal Aloe, Tamil – Kathazhai, Malayalam – Kattar vazha, cherrukkattazha, Telugu – Kalabanda, Hindi – Gheekumari.
Family: Asphodelaceae
Habit: Succulent perennial herb.
Habitat: Grows in hot dry climates, hilly areas and thickets.

Distribution: Native of south-west Arabian Peninsula. Found in arid, temperate and tropical regions of the world.

Plant distribution: Native to North Africa, Canary Islands and southern Europe. Widely cultivated in the tropical, sub-tropical, arid and semi-arid zones of the world.

Plant characteristics: Aloe vera is a succulent plant which stores sufficient water and moisture in its leaves. Leaves are fleshy and water rich fleshy tissues helps the plant to survive during drought conditions. Stem is short and the plant forms a dense clumps. The fleshy leaves are erect, greyish green, arranged in a vase shaped rosette atop the short stem. The

leaves are about 18-20 inches long and 2-3 inches wide at the base. The fleshy leaves have small teeth's in the margin and the plant reaches up to two feet of height. Flowers are small, tubular, yellow colored and are produced in raceme inflorescence. The flowers are produced at the tips of the branched panicle or flowering stalk that reaches a height of about 3 feet. Usually blooms in summer.

Uses: Aloe vera is a popular home plant, grown in most of the Indian homes. The plant contains anti-inflammatory, anti-oxidant and anti-bacterial properties. Extensively used in the cosmetic, pharmaceutical and food industries. The gel promotes intestinal mobility and relieves constipation. It is used for the treatment of burn, wound healing, skin irritations, gastric ulcer, desquamation, erythema and in the treatment of psoriatic plaques. Aloe vera contains most of the mineral nutrients, eight important amino acids and vitamins such as vitamin A, B1, B6, B12, C and E. ●





Sessile Joyweed

Alternanthera sessilis (L.) R. Br. ex DC.

Botanical Name: *Alternanthera sessilis* (L.) R. Br. ex DC.

Synonym: *Achyranthes triandra* Roxb.
Gomphrena polygonoides L.
Telanthera polygonoides (L.) Moq.

Common name: English - Tangle Mat, Sessile joyweed,
Tamil – Ponnankannikeerai, Hindi –
Gudrisag, Malayalam – Meenamgani,
Ponnamkannikeera, Kozhuppa.

Family: Amaranthaceae

Habit: Perennial Herb

Habitat: Disturbed habitats and
wetland habitats.

Distribution: *A. sessilis* is distributed throughout the old world tropics, tropical Africa, South and East Asiatic regions and Australia.

Plant Characteristics: *A. sessilis* is a prostrate perennial herb. The plant is regarded as a fast growing and highly invasive weed species. It is adapted to grow in a variety of soil types and grows well on both the water logged areas

as well as extreme dry habitats. The plant can be found in swamps, shallow ditches, rice fields and is a highly branched herb. The branches are often purplish and produces roots at the lower nodes. Stem glabrous. Leaves are simple, opposite-decussate, slightly fleshy, lanceolate to spatulate, margin entire, obtuse or sub-acute, sometimes obscurely denticulate, glabrous and has short petiole. Flowers are small, white colored and produced in axillary clusters. Perianth consists of tepals which are all equal. The ovary is compressed and contains a short style. Seeds are sub-orbicular, compressed and brown colored.

Flowering and fruiting: Almost throughout the year

Uses: Widely used in the local medicine. Along with other medicinal plants, it is used in the treatment of hepatitis, tight chest, bronchitis, asthma and other lung diseases. ●





False water willow

Andrographis echiooides (L.) Nees.

Botanical Name: *Andrographis echiooides* (L.) Nees
Synonym: *Justicia echiooides* L.
Indoneesiella echiooides (L.) Sreemadh.
Neesiella echiooides (L.) Sreemadh.
Common name: English - False Waterwillow, Malayalam – Pitumba, Copuramthangi, Tamil – Gopuram Thangi, Marathi – Ranchimani.
Family: Acanthaceae
Habit: Herb
Habitat: The plant grows well on wastelands, roadsides and plains.

Distribution: Widely distributed in India and Sri Lanka.

Plant Characteristics: *Andrographis echiooides* is an erect herb. The entire plant is villous and grows up to 50 cm of height. Leaves opposite, decussate, elliptic-oblong in shape and rounded at apex. Inflorescence is axillary, simple or branched, unilateral racemes and are shorter than leaves. The stalk bearing racemes has dense hairs. Calyx five lobed and calyx lobes are linear. Corolla is tube-like, white colored and two-lipped with violet blotches on the lips. Upper lip is two-lobed and lower lip is three-lobed. There are

two stamens with broad filaments and having hairs at their base. Anthers two-celled. Stigma is two-lobed and has slender style. Fruit is a capsule which is compressed, attenuate at the base and broadened towards the tip. Seeds are black colored.

Flowering and Fruiting: April to July.

Uses: It is a medicinal plant used in Siddha medicine. The plant contains anti-inflammatory, anti-oxidant properties and is used as a remedy for fevers. ●

Broom grass

Aristida setacea Retz.

Botanical Name: *Aristida setacea* Retz.

Synonym: *Aristida depressa* Trin.
Aristida quinqueseta Steud.
Chaetaria setacea (Retz.) P.Beauv.

Common Name: English - Broom Grass, Tamil – Thudaippam pullu.

Family: Poaceae

Habit: Herb

Habitat: Grows in open dry areas, margins of cultivated lands and road sides.

Distribution: Srilanka, India, Indo-china, Malaysia, Africa and Myanmar.

Plant Characteristics: *Aristida setacea* is a perennial herb. Culms are 50 to 120 cm long, erect and glabrous at nodes. Leaf sheaths are long and having surface. Leaf blades are filiform, flat and are 20-40 cm long structures. Leaves are linear or linear-lanceolate, base rounded, apex acuminate and has rough surface on both sides. Inflorescence is a panicle. Spikelets are lanceolate and solitary. The spikelets comprises one fertile floret and the fertile spikelets are

breaking at maturity. Glumes are long-awned (awn 4-5 mm), persistent and are thinner than fertile lemma. Lower glumes are lanceolate, aristate and single nerved. Upper glumes are lanceolate, keeled and single nerved. Lateral veins are absent on both upper and lower glumes. Flowers contain three stamens with yellow colored anthers. Ovary small and stigma pink to brown colored.

Flowering: Throughout the year.

Uses: Used in Ayurveda and Siddha. Villagers use this plant for commercial sale in the market for making brooms. ●





Neem

Azadirachta indica A. Juss..

Botanical Name: *Azadirachta indica* A. Juss.

Synonym: *Melia indica* (A. Juss) Brandis
Melia azadirachta L.
Azedarach fraxinifolia Moench
Azedarach deleteria Medik.

Common name: English: Neem tree, Margosa, Tamil – Vembu, Veppai, Sengumaru, Telugu – Vepa, Malayalam – Vembu, Nimbam, Kaippanveppu.

Family: Meliaceae

Habit: Evergreen tree

Habitat: The plant grows well in open wood lands, Shrub lands, Grasslands, river banks and coastal sites.

Distribution: Tropical Asia, Australia, Africa, Fiji, Mauritius, South and Central America.

Plant Characteristics: *Azadirachta indica* is an evergreen tree, grows up to twenty meters of height. Bark is greyish brown colored and vertically striated. Exudations are red colored and sticky. Leaves are imparipinnate, arranged alternately without stipules. Rachis contains swollen base, glabrous and has opposite or sub opposite leaflets. Leaflets contain serrate margin, reticulate venation and a short petiole. Flowers are bisexual, petals white colored, pedicellate, produced in axillary panicles and pollinated by bees and insects. Sepals 5, connate at base, ovate with

ciliate margin. Petals 5, free, oblong to obovate and spreading. Anthers 10, sessile, slightly exerted and arranged opposite to lobes. Ovary superior, glabrous and has two ovules. Style slender and stigma three lobed. Fruit is a drupe, single seeded and surrounded by a sweet pulp. Fruits are green in the young stage and turns into yellow upon ripening.

Flowering: February to April.

Uses: Widely used as a medicinal plant in Siddha, Ayurveda, Unani, Homeopathy and Folk medicine. The plant contains anti-bacterial, anti-diabetic, anti-fungal, anti-viral and anthelmintic properties. Twigs are used as toothbrush in rural India. Leaves are used as a fodder and the wood is a good source of fuel wood. ●

Common Bamboo

Bambusa vulgaris

Schrad. ex J. C. Wendl.

Botanical Name: *Bambusa vulgaris* Schrad. ex J. C. Wendl.

Synonym: *Bambusa auriculata* Kurz.
Phyllostachys striata (Lodd. Ex Lindl.)
Nakai.
Nastus viviparus Rssp.

Common name: English - Common Bamboo, Golden Bamboo, Yellow Bamboo, Tamil – Vellai mungil, Telugu – Karmaramu, Hindi – Bambu, Baans, Malayalam – Manjamula, Nepali – Baans.

Family: Poaceae

Habit: Evergreen Bamboo

Habitat: Open forest areas, River and stream banks.

Distribution: Native to Indo-china and naturalized in many parts of the world. Commonly seen in the northern and western South American nations.

Plant Characteristics: *Bambusa vulgaris* is the common Bamboo plant which is the largest and easily recognizable bamboo species. The plant is erect and produces yellow

colored culms with dark green colored leaves. Leaf blades are long 2 to 4 cm broad, lanceolate, rounded or attenuate at the base, pale green colored and glabrous. Leaf sheaths are hairy. The culms contain 10 to 15 cm width and grows up to twenty meter height. The mature culms are glossy, yellow or greenish with yellow strips. Culm sheaths are deciduous, beautifully streaked in the early stages of development, rounded at top and concavely truncate. The shoots are conical in shape. The leafless branches of the culms produces flowers or the flowers are produced in a culm which has reduced scale like leaves at nodes. Inflorescence is a large, leafy compound panicle. Flowering in *Bambusa* is uncommon. During flowering period, the culm produces much more flowers but fruit setting doesn't happens. Spikelets are erect, pedicellate, acute, compressed and are produced in clusters of 3 to 10. Lemmas are acuminate, cuspidate and attenuate at the base. Paleas are acute and 2 keeled.

Uses: The stem is widely used as a remedy for rheumatism. The leaves are useful in the treatment of heart problems, fevers and malaria. The plant is an important component of local economy and a variety of useful products were made from the plant. ●





Mountain Ebony, Ebony tree

Bauhinia variegata L.

Botanical Name: *Bauhinia variegata* L.
Synonym: *Bauhinia chinensis* (DC.) Vogel
Bauhinia Decora Uribe.
Phanera variegata (L.) Benth.
Common name: English - Ebony tree, Mountain Ebony, Tamil – Semmantharai, Telugu – Kanchanamu, Malayalam – Konnu, Mandaram, Hindi – Kachnal.
Family: Fabaceae
Habit: Evergreen tree
Habitat: The plant can be found in tropical dry deciduous and moist deciduous forest. Grows in disturbed areas, along with riversides, waterways and road sides. Grown as an ornamental plant in school and college premises.

Distribution: Distributed in Brazil, East Asia, Malaysia, Indo-Pakistan subcontinent, South China, Africa and Myanmar.

Plant Characteristics: *Bauhinia variegata* is a moderately growing deciduous tree, and can grow up to 12 meters. Bark grey colored and has too many cracks. The tree produces beautiful flowers and blooming continuously to several months. Leaves are simple, deciduous, dull green in color and are looking like cow's hoof. Leaves petiolated and leaf base is deeply cordate. The flowers are purple colored,

showy and produced as clusters at the branch tips. Flowers have irregular and slightly overlapping petals. Fruit is a flat pod. It had moderate level of drought tolerance and prefers to grow in areas with good drainage. The plant can be propagated through seeds.

Flowering: December to April

Uses: The bark contains anthelmintic and astringent properties. The bark and flower extract is used in the treatment of amoebic dysentery and diarrhea. The bark paste has been used for wound healing, ulcers and other skin diseases. The root extract is used in the treatment of dyspepsia. ●

Wax Gourd

Benincasa hispida (Thunb.) Cogn.

Botanical Name: *Benincasa hispida* (Thunb.) Cogn.

Synonym: *Benincasa pruriens* f. *hispida* (Thunb.) W.J.de Wilde & Duyfjes
Benincasa vacua (F.Muell) F.Muell.
Cucurbita alba Roxb. ex Wight & Arn.
Cucurbita hispida Thunb.

Common name: English: Wax gourd, Ash gourd, Tamil: Neer poosanikai, Kalyana poosani, Vellai Poosani, Kannada: Boodukum bala, Malayalam: Neyakumbalam, Kumbalanga, Telugu: Boodida Gummadikaaya, Hindi: Pethakaddu.

Family: Cucurbitaceae

Habit: Climber

Habitat: Grows well in river waterways, waste lands, open plains, and margins of ponds and pools.

Distribution: Widely distributed in the tropical and sub-tropical regions of the world. Cultivated in India, France, China, Japan, Polynesia, Eastern

Australia and Malaysia.

Plant Characteristics: *Benincasa hispida* is a monoecious and hispid annual climber. The plant produces stems upto six meters and having 2-3 fid tendrils. The plant spreads over the ground or climbs over the supporting tree. They climb the supporting plants easily by their tendrils. Leaves are large, dark green colored, 5 to 7 lobed, contains irregular dentate margin and orbicular-cordate leaf base. Flowers are large, axillary and solitary. Calyx broadly campanulate and lanceolate. Corolla yellow colored, obovate and upto 5 cm long. Male flowers have three stamens, inserted in the calyx lobe and having short pistillodes. Female flowers have ovoid ovary which is densely pubescent with many ovules. Fruits are large, succulent and hairy at the early stage of development. Mature fruits contain thick wax coating at maturity. Well-developed fruits carry numerous seeds and the seeds are yellowish white and compressed. Fruits are used as a vegetable in India.

Flowering: Flowers can be seen from June to January.

Uses: Fruits are edible and used as a vegetable. It is a good source of vitamin E, Alpha carotene, Beta carotene, Beta cryptoxanthin, Vitamin C, Iron and Folate. The fruit rind has diuretic property and has been used in the treatment of urinary dysfunction and summer fever. The seeds contain anti-inflammatory, diuretic properties and has



been used as a laxative and tonic. In traditional medicine, Seeds are used in the treatment of lung diseases, asthma and cough. ●



Common Hog weed

Boerhavia diffusa L.

Botanical Name: *Boerhavia diffusa* L.

Synonym: *Boerhavia adscendens* Willd.
Axia cochinchinensis Lour.
Commicarpus africanus (Lour.) Dandy.

Common name: English: Common hogweed, Spreading hogweed, Tamil: Mookkirattai kodi, Saarai, Sarandai, Hindi – Gadha-cand, Kannada – Komme, Telugu – Punar-nava.

Family: Nyctaginaceae

Habit: Spreading prostrate Herb.

Habitat: Grows in regular cultivation area, road sides, riversides, near ponds and pools.

Distribution: Distributed throughout the tropics.

Plant Characteristics: *Boerhavia diffusa* is spreading prostrate herb with trailing branches. The plant contains bioactive compounds on both the leaves and roots. The plant is considered as a weed and distributed throughout India. Stem reddish and covered with hairs. Leaves are simple, unequal, oppositely arranged, ovate and obtuse. Leaves wavy along the entire leaf margin and subcordate. Flowers are produced in axillary or terminal umbels having prominent peduncle and pink colored perianth. Stamens 2 to 3 which are protruding for a very short time. Bracts five, ovate and glandular. Bracts at the flower base

are quickly deciduous. Fruit is a capsule which is five ribbed and glandular.

Flowering: August to December

Uses: The plant contains anthelmintic and diuretic properties and has been used as a laxative. It is used in the Ayurvedic medicine in the treatment of vadhama and kabam. The plant shows anti-oxidants and hepatoprotective activities. The alkaloid 'Punarnavine' has been isolated from *B. diffusa* shows in-vitro anticancer, anti-estrogenic, anti-amoebic and immuno-modulatory activities. Young leaves and shoots are cooked and used as a vegetable. ●

Palmyra Palm

Borassus flabellifer L.

Botanical Name: *Borassus flabellifer* L.

Synonym: *Borassus flabelliformis* L.
Lontarus domestica Gaertn., nom. superfl., *Pholidocarpus tunicatus* (Lour.) H.Wendl., *Thrinax tunicata* (Lour.) Rollisson

Common name: English - Palmyra Palm, African fan palm, Tamil – Nongu Panaimaram, Karuppuppanai, Telugu – Tatichettu, Malayalam – Karimpana, Hindi – Taad, Tal.

Family: Areaceae

Habit: Tree.

Habitat: Sea shores, margins of cultivation land, margins of lakes, ponds and village waste lands. Grows on sandy and loamy soils.

Distribution: Native of tropical Africa but cultivated throughout the tropical regions of the world. Plant is widely cultivated in Bangladesh, Cambodia, South central

china, India, Malaysia and Myanmar.

Plant Characteristics: *B. flabellifer* is a dioecious plant having male and female flowers in separate plants. It is an evergreen tree grows more than 25 meters of height. Stem is hard, woody, gray, with prominent leaf scars. Leaves simple, palmate, petiolated and about 20 to 40 numbers of leaves are produced per crown. Petiole are bright yellow in color with black short teeth's in the margins. Leaflets are wide, splits longitudinally with age and has prominent veins. Peduncle sheathed with open spathes. Male flowers are small, clustered, produced in a catkin like inflorescence. Bracts are scaly and overlapping. Female flowers are large, globose, solitary and sitting on the surface of the inflorescence axis. Ovary globose, ovules basal, stigma sessile and each female flowers have 6-9 staminodes. Fruit is a drupe, globose and turns into yellow color upon ripening. Each fruit contains 1 to 3 seeds.

Flowering: March to September.

Uses: Fruits are edible at the young stage which is soft and juicy. The endosperm is edible at young stage. The ripe fruits have yellow colored edible pulp with aroma. The sugar rich fluid has been obtained from the inflorescence. This can be drunk directly or can be concentrated into a sweet syrup. The sugar rich sap can also be used for the preparation of solid and sweet sugar



called palm sugar. The palm sugar is widely used in home and traditional medicine. The sap from the inflorescence stalk is diuretic, laxative, amoebicide and anti-phlegmatic. Young roots have anthelmintic and diuretic properties. ●



Barbadoes pride, Peacock Flower

Caesalpinia pulcherrima (L.) Sw.

Botanical Name: *Caesalpinia pulcherrima* (L.) Sw.
Synonym: *Poinciana pulcherrima* L.
Poinciana bijuga Lour.
Poinciana elata Lour.
Poinciana pulcherrima L.
Common name: English: Peacock Flower, Barbados pride,
 Tamil: Mayirkondrai,
 Hindi – Krishnacharan, Guletura,
 Malayalam – Settimandaram,
 Sanskrit - Ratnagandhi.
Family: Fabaceae
Habit: Shrub
Habitat: River banks, margins of lakes and
 ponds. Cultivated as an ornamental
 plant in School and College premises.

Distribution: Native of tropical America but widely
 distributed in tropical countries and Asia,
 India and West Indies.

Plant Characteristics: *C. pulcherrima* is a fast growing
 ornamental shrub or small tree that grows up to 3 meters.
 Widely grown for its showy flowers and medicinal purpose.
 The central trunk is cylindrical and free of branches up to
 100 cm. Bark greyish brown and rough. Leaves are usually
 evergreen, bipinnately compound, maximum of 40 cm
 long, leaflets opposite and each leaves bear 3 to 10 pinnae.
 Stipules scale like. The inflorescence is raceme type and

red or orange flower colors are common. Flowers
 attractive, complete, bisexual, pentamerous and are pro-
 duced on the terminal clusters. Calyx greenish yellow and
 glabrous. Flowering can be seen throughout the year.
 Ovary flat, monocarpellary with few ovules. Style filiform.
 Fruit is a pod, glossy and winged. The plant contains
 sharp prickles along its stem.

Flowering and fruiting: April to December

Uses: The decoction or infusion of the roots, bark, and
 leaves is used as a purgative or emmenagogue and
 also used in the treatment of urinary bladder and
 Kidney problems. The root is astringent, bitter and has
 been used as an abortifacient. It is also used in
 the treatment of diarrhoea. ●

Crown Flower

Calotropis gigantea (L.) Dryand.

Botanical Name: *Calotropis Gigantea* (L.) Dryand.

Synonym: *Asclepias gigantea* L.
Madorius giganteus (L.) Kuntze.
Periploca cochinchinensis Lour.
Streptocaulon cochinchinense
(Lour.) G. Don

Common name: English - Crown Flower, Tamil - Erukku,
Telugu – Jilledi Puvvu, Hindi –
Safedaak, Malayalam –
Erikalchedi, Dinesam,

Family: Apocynaceae

Habit: Erect shrub grows up to 2-3 m height.

Habitat: Dry places, road sides and wastelands.

Distribution: The plant is widely distributed in Eastern Asia, Southern china, India, Thailand, Myanmar, Laos, Vietnam and Indonesia. Naturalized in Hawaii and Malaysia.

Plant Characteristics: *Calotropis Gigantea* is a large milky shrub, very pale in color that grows up to 2-3 m of height. Bark yellowish white. Wood is white and soft. The whole

plant contains plenty of milky sap which starts to leak when the plant parts are injured or bruised. The plant body is covered with white wool. The Leaves are large, sessile, elliptic to obovate, base cordate and glabrous upon maturity. Flowers are large, pale lavender in color which has 3 to 3.5 cm long pedicel. Fruits are a pairs of large, green colored, fleshy follicles which are ventricose and boat shaped. Seeds are broad, flattened and has a tuft of hairs.

Flowering: Flowering and fruiting happens throughout the year.

Uses: The milky sap contains, antiseptic, emetic and purgative properties which is considered as equivalent to digitalis. It is used in the treatment of Dysentery, Leprosy, Elephantiasis, Epilepsy and Asthma. The bark gives a strong fiber and the silky coma is used to stuff the pillows. ●





Balloon vine

Cardiospermum halicacabum L.

Botanical Name: *Cardiospermum halicacabum* L.
Synonym: *Cardiospermum corycodes* Kunze.
Corindum halicacabum Medic.
Common name: English – Balloon vine, Blister Creeper,
 Tamil – Mudakkatthan,
 Hindi – Kanphuti,
 Kapalphodi, Telugu – Buddakakara,
 Kasarithige, Malayalam – Jyotishmathi,
 Karavi, Katabhi
Family: Sapindaceae
Habit: Herbaceous climber
Habitat: Moist deciduous forests, scrub jungles,
 margins of Agricultural fields, dry
 marshy places, river banks and
 forest edges.

Distribution: Native to South and Central America. Widely distributed in Eastern Asia, India, North America and Africa. The plant is naturalized in southern Europe.

Plant Characteristics: It is an herbaceous climber contains branched bi-fid axillary tendrils. Leaves alternate, ovate to lanceolate, membranous, having pinnate venation and deeply dentate or lobed. Leaves have acute apex and long petioles. Flowers are white colored and produced in clusters. Peduncle has prominent tendril and is about 5 cm long. Flowers have four sepals in two pairs and the outer pair of sepal is smaller than the inner pair. Petals four, white,

unequal and has basal scales. Each flowers have eight stamens which are pilose with unequal filaments. Ovary trilobular with single ovule on each locule. Stigma tri-fid. Fruit is a capsule, sometimes small, tri-lobed and winged at the angles. Capsule cover is like a paper and the seeds are globose, black colored with a white color shade at the tip.

Flowering: Flowering and fruiting can be seen all over the year except heavy drought periods.

Uses: Leaf, stem and fruits are edible and used as a green vegetable in Tamil nadu. The fruit is used as a laxative. Salted leaves are used in the treatment of swellings and the leaf juice is used for the treatment of ear ache. The paste prepared from the root is applied on the knees to relieve pain and inflammation. It is also used in the treatment of rheumatism, limb stiffness, snakebites and nervous diseases. ●

Papaya

Carica papaya L.

Botanical Name: *Carica papaya* L.

Synonym: *Carica peltata* Hook. & Arn.
Carica posoposa L.
Papaya Carica Gaertn.

Common name: English – Papaya,

Family: Caricaceae

Habit: Small Tree grows up to 6-8 feet height.

Habitat: Widely grown on all tropical and sub tropical regions of the world having plenty of sunshine. Extreme cold and freezing temperatures will be detrimental for *Carica papaya* and preferably grows on the river banks, margins of cultivation lands, close to ponds and pools. The plant is cultivated in home gardens, premises of herbal medicine gardens and cultivated in open agricultural lands under good sunlight for its fruit and medicinal uses.

Distribution: Papaya is native to tropical America but

grown in all tropical and subtropical parts of the world. Plant Characteristics: *Carica papaya* is a small, fast growing evergreen tree. Leaves are sub orbicular, palmately lobed, arranged alternatively and each leaves have a long petiole. The plant is dioecious and the flowers have good aroma. The male flowers are produced in the axillary panicles and female flowers are solitary or comes below the leaves. Fruit is a greenish orange berry, oblong or globose, fleshy and sweet at maturity. Secretion of milky latex was observed when the plant parts are bruised or injured. Abundant, black colored small sized seeds are present inside the fruit. Though the plant is usually unbranched, branching happens upon injury or by the removal of growing apical region.

Flowering: June to December.

Uses: The ripen fruits are sweet and edible. Fruits contain essential nutrients, vitamins and carbohydrates. The unripe fruits are nutritious and used as a vegetable in southern India. Fruits are used in the preparation of jellies, ice creams, salads and fruit juices. Male flowers and young leaves have bitter taste. The unripe fruit skin and leaves contain a metabolite called 'Papain' which is used as digestive stimulant and in the treatment of digestive disorders. The infusion of flowers can be drunk to induce menstruation, bronchitis treatment and other venereal diseases. Latex rich green unripen fruit is used as a vermifuge. The fruit juice is used



in the treatment of diabetes and hypertension. The green leaves are used in the treatment of malaria and Dengue treatment. The leaves contain wound healing properties. ●



Madagascar Periwinkle

Catharanthus roseus (L.) G. Don

- Botanical Name:** *Catharanthus roseus* (L.) G. Don.
Synonym: *Ammocallis rosea* (L.) Small
Lochnera rosea (L.) Rchb. ex Endl.
Pervinca rosea (L.) Gaterau
Common name: English – Madagascar periwinkle, Hindi – Sadabahar, Kannada – Sadaapushpa, Nithyapushpa, Malayalam – Shavamnaari, Tamil – Nithya Kalyani, Telugu – Billa Ganneru, Marathi – Sadaphuli.
Family: Apocynaceae
Habit: Herb
Habitat: *C. roseus* can be seen in sandy locations along the coasts, river banks, savannah vegetation, waste places and road sides.
Distribution: Pantropical distribution. Native to Madagascar.

Plant Characteristics: *Catharanthus roseus* is an erect, profusely branching perennial herb. It is a popular medicinal herb that produces alkaloids and phenolic compounds in all parts of the plant body. It is an evergreen herb that attains a height of about 1 meter. Well grown plants are drought tolerant and prefers fertile, moist and well-drained soil for better growth. Leaves simple, oval to oblong, arranged as opposite decussate, margin entire, apex acute, hairless and glossy green colored. Leaves contain a prominent pale green

colored midrib and short petiole. Flowers axillary, solitary or Spaired, have 2.5 to 3 cm long basal tube with 5 white to dark pink colored petal like lobes. Each flower ranges between 2 to 5 cm diameters with a dark red center. The fruit is a pair of follicles about 2 to 4 cm long and 3 mm diameter. Fruits contains numerous black colored seeds. Different cultivars with different flower colors are available. It is self-fertile but self-incompatible strains are commonly exist in the wild. Flowering can be seen throughout the year.

Uses: Leaves and roots are considered as useful parts. Many of the alkaloids and phenol compounds of *Vinca* are used in the treatment of leukemia and Hodgkin's disease. *C. roseus* contains many pharmacological properties such as anti-oxidant, anti-malarial, wound healing, hypotensive and hypolipidemic properties. The plant is grown commercially as well as collected from the villages. It is exported in bulk for the drug preparation. ●

Bush Grape

Cayratia trifolia (L.) Domin

Botanical Name: *Cayratia trifolia* (L.) Domin

Synonym: *Causonis trifolia* (L.) Raf.
Cayratia carnosa (Lam.) Gagnep.
Vitis trifolia L.
Vitis carnosa (Lam.) Wall.

Common name: English – Bush grape, Fox grape, Tamil – Kattupirandai, Telugu – Kanupu tige, Hindi – Amalbel, Malayalam – Amar cakkodi, Corovalli, Bengali – Amal-lata.

Family: Vitaceae

Habit: The plant is a deciduous climbing shrub which grows more than 10 meters of height.

Habitat: Commonly found on forest areas above 400 meters and places close to rivers and adjacent disturbed forest lands.

Distribution: Widely distributed in Southern and Eastern Asia.

Plant Characteristics: *Cayratia trifolia* is a vine that climbs the support by using tendrils. The main stem is produced from the tuberous roots. Leaves glabrous, trifoliate, leaflets

ovate to oblong-ovate, contains pointed tips and have long petioles. The plant contains tendrils, which are produced opposite to the leaves at the nodal region. The leaves contain serrate margin and oblique base on each leaflet. Inflorescence produced opposite to the leaves or terminal. Flowers are small and produced on cymose inflorescence. Calyx cup shaped and calyx lobes are absent. Style pyramidal. Fruit is a berry, purple to black colored and more or less spherical shaped.

Flowering: Flowering and fruiting can be seen from June to December.

Uses: The root is used as an astringent medicine. The stem sap is used to drink to relieve thirst. The leaf decoction is considered as antiscorbutic. The leaf juice along with pineapple juice has been used for relieving dandruff problem. The leaves and roots are used to treat ulcers of the nose. The tuber extract along with seeds has been used in the treatment of diabetes. The paste of tuber is used in treatment of snake bite and the leaf past contains wound healing properties. ●





Swollen windmill grass

Chloris barbata Sw.

- Botanical Name:** *Chloris barbata* Sw.
Synonym: *Andropogon barbatus* L. nom. illeg.
Chloris inflata Link.
Chloris longifolia Steud.
Chloris rufescens Steud., nom. illeg.
Common name: English – Swollen wind mill grass,
 Swollen finger grass, Tamil –
 Kuruthupillu, Chevvarakupul, Telugu –
 Uppu Gaddi, Malayalam – Mayil pullu,
 Konda-pullu
Family: Poaceae
Habit: Herb
Habitat: The plant grows well on moist habitats,
 degraded forest lands and riverbanks.

Distribution: Native of tropical Africa the plant has distributed to almost all tropical countries.

Plant Characteristics: *Chloris barbata* is an erect annual grass which grows up to 100 cm height. Stem is smooth, glabrous at nodes and purple or pink colored at the base. The stem bends at the base and usually roots at the lower nodes. The leaves are linear to lanceolate, flat, rounded at base and long blades which are bluish green in color. Inflorescence is terminal which comprises several digitate spikes. The spikes are clustered, ascending, purple colored and spikelets sub-sessile and 2 seriate. The glumes are unequal, narrow and acute. The florets are purple colored and the lemmas

are tri-nerved. Fertile lemmas are obovate, awned, densely stiff and scabrid. The awn is more or less 10 mm long. Paleas are oblong to elliptic and hyaline. Sterile lemmas are truncate. Stamens three and the grains are trigonous.

Flowering: Flowering can be seen from March to December. ●

Adament Creeper

Cissus quadrangularis L.

Botanical Name: *Cissus quadrangularis* L.

Synonym: *Vitis quadrangularis* (L.) Wall.ex Wight & Arn.
Cissus bifida Schum & Thonn.
Cissus edulis Dalz.
Cissus quadrangula Salisb.
Saelanthus quadragonus Forssk.
Vitis quadrangularis (L.) Wall.
Vitis succulenta Galpin

Common name: English – Adament Creeper, Devil's Backbone,
Tamil – Pirandai, Hindi – Hadjod, Had jora, Malayalam – Changalamparanda, Telugu – Nalleru, Bengali – Harbhanga, Hasjora.

Family: Vitaceae

Habit: Climber

Habitat: Common in plans, scrub jungles, dry places, margins of cultivation lands, upon fences, dry land bushes, thickets and wastelands.

Distribution: Widely distributed in Asia, Africa and Arabia.
Plant Characteristics: *Cissus quadrangularis* is a succulent xerophytic climber. Stem succulent, quadrangular, nodes constricted, glabrous and has simple tendrils. Tendrils opposite to the leaves. Leaves simple or three lobed, ovate to sub-orbicular, apex obtuse, petiolate, leather like and thick. Flowers produced in umbellate cymes. Calyx tube like, reddish and four lobed. Petals four, greenish yellow, ovate and recurved. Stamens four, filaments slender anthers oblong and yellow colored. Ovary two chambered with two ovules on each chamber. Fruit is a globose, fleshy berry, usually single seeded but occasionally two or more. Seeds are ellipsoid, black and smooth.

Flowering: July to November.

Uses: It is traditionally used as a medicinal plant in India and Southern Asia. The plant contains anti-oxidant, anti-microbial, anti-ulcer and bone healing properties. The root contains saponins and root extract shows the property of depressing central nervous system. The whole plant is rich in flavonoids such as luteolin and Beta-sitosterol. The whole plant extract shows analgesic, anti-inflammatory and venotonic effects. Young stem pieces are collected for food purpose from the local scrub jungles by village people. ●





Water melon

Citrullus lanatus (Thunb.) Matsum. & Nakai

- Botanical Name:** *Citrullus lanatus* (Thunb.) Matsum. & Nakai
- Synonym:** *Citrullus vulgaris* Schrad.
Citrulus edulis Spach.
- Common name:** English – Watermelon, fodder melon, Tamil – Dharboosani, Hindi – Tarbooz, Kannada – Kallangadi Balli.
- Family:** Cucurbitaceae
- Habit:** The plant is a prostrate and basally branched herb.
- Habitat:** Open scrub jungles, close to cultivated lands, moist wastelands and road sides. Prefers habitats with full sunlight and sandy loam soil.
- Distribution:** Native of tropical Africa. Distributed in India, Australia and Tropical Asian countries.

Plant Characteristics: *Citrullus lanatus* is a monoecious species (Individual flowers are either male or female and both the flowers can be seen within the same plant) and an annual herb that grows as a weed on the margins of agricultural lands, dry lakes and floodplains. Leaves are simple, alternatively arranged, pinnately lobed, long, pubescent and ovate to deltoid in shape. The plant uses its tendrils to climb other plants or supporting structures. It has long, pubescent, trailing stem that grows up to 5 meters in length. Flowers

axillary, actinomorphic and solitary in nature. Both male and female flowers have campanulate, villous and five lobed calyx. Corolla is yellow colored. Male flowers have three stamens, filaments short, free and having a gland. Female flowers have three staminodes, short style with three stigmas. Ovary ovoid, unilocular, inferior with many ovules. The common edible watermelon is a cultivated variant of this species. Fruits are sweet, edible, contains very high water content and has refreshing property. Seeds many, elliptic-oblong, compressed and smooth. Flowering can be seen from July to August.

Uses: The fruits is a rich source of water, vitamins, pectin and fibers. The fruits are widely used in the treatment of edema, Kidney stones and in the prevention of heart diseases. Oil obtained from seeds can be used to make cosmetics and for domestic cooking. The seeds are diuretic, tonic and used as a medicine for the removal of intestinal worms. ●

Dog mustard, Asian spider flower

Cleome viscosa L.

Botanical Name: *Cleome viscosa* L.

Synonym: *Arivela viscosa* (L.) Rafin.
Cleome acutifolia Elmer
Corynandra viscosa (L.) Cochrane & Iltis.
Polanisia icosandra Wight & Arn.
Sinapistrum viscosum (L.) Moench.

Common name: English – Asian spider flower, Dog mustard, Tamil – Naikkadugu, Telugu – Svasabarbara, Malayalam – Vaikadugu, Aryaval, Manjavela, Hindi – Hurhur, Ujla Hulhul.

Family: Cleomaceae.

Habit: Erect annual herb.

Habitat: The plant grows in dry areas, wood lands, grasslands, wastelands with sandy loamy soils, open bare lands and scrub slopes.

Distribution: Native of tropical Americas and distributed throughout the tropical regions.

Plant Characteristics: The plant is an erect, profusely branched herb. The whole plant body is viscous since

it has plenty of glandular hairs. Leaves are 3-5 foliolate, leaflets are sub-sessile and obovate to spatulate. Flowers complete, bisexual, produced in terminal racemes or solitary and each flowers have four sepals and petals. Petals ascending, yellow colored, imbricate in the bud and has rounded apex. Stamens have broadened tip, ovary sessile and densely glandular. Ovules many on parietal placentas. Style short. The fruit is a capsule that contains plenty of glandular hairs on its surface. Seeds many, reniform and reddish brown in color.

Flowering: March to October.

Uses: The coumarinolignoids isolated from the seeds of *Cleome viscosa* shows significant hepatoprotective activity. Experimental studies proves that *cleome viscosa* promotes wound healing activity by specific molecular mechanisms. The seeds are anthelmintic, carminative and rubefacient, stimulant and vesicant. The root past is applied externally in the treatment of ear aches. ●





Butterfly Bean

Clitoria ternatea L.

Botanical Name: *Clitoria ternatea* L.
Synonym: *Clitoria mearnsii* De wild.
Clitoria tanganicensis Micheli.
Clitoria zanzibarensis Vatke.
Common name: English – Butterfly bean,
 Tamil–Shangupoo, Sangu kannikodi,
 Telugu – Gentana, sankhu-pushpamu,
 Hindi – Aparajitha, Gokarni,
 Malayalam – Sangu pushpam.
Family: Fabaceae
Habit: Herbaceous Climber.
Habitat: It can be seen in grasslands,
 hedges, thickets, scrub jungles, open
 woodlands, riverine areas and
 other disturbed places.

Distribution: Native to tropical America but cultivated
 in many parts of the world for its attractive flowers.
 In India, the plant is distributed throughout the
 tropical regions including Assam, Maharashtra,
 Kerala, Rajasthan and Tamilnadu.

Plant Characteristics: The plant is an herbaceous climber
 that can climb up to nine feet. New stems are produced
 annually from the woody base. The leaf arrangement is
 alternate distichous and the leaves are imparipinnate.
 Leaflets are ovate, obtuse at apex and has entire leaf margin.
 Flowers are produced in late summer and the flowers are

deep blue with yellow or white pattern in the lower side
 of the flower. Flowers prominently bracteolate. Calyx
 membranous, tubular, corolla much exerted and narrowed
 at base. Stamens diadelphous. Ovary stipitate, having many
 ovules and has elongated style. Fruit is a compressed pod,
 and many seeded. Seeds reniform and compressed. Fruiting
 happens throughout the year.

Flowering: September to February.

Uses: The plant is cultivated in gardens and parks for its
 beautiful blue and white flowers. All the plant parts are used
 in Ayurveda, Siddha, Unani and other traditional medical
 systems of India. The powdered mature seeds are used as
 aperient and purgative. The roots tastes bitter, cathartic,
 diuretic and laxative. The plant is used in the treatment of
 snakebite. The plant extract is used as an insecticide. ●





Ivy Gourd

Coccinia grandis (L.) Voigt.

Botanical Name: *Coccinia grandis* (L.) Voigt.

Synonym: *Coccinia indica* Wight & Arn.
Physedra gracilis A. Chev.
Bryonia grandis L.
Coccinia palmatisecta Kotschy.
Coccinia cordifolia auct.

Common name: English – Ivy Gourd, Scarlet gourd, Tamil – Kovaikai, Hindi – Kunduru, Telugu – Donda kaya, Malayalam – Kava, Koval, Kannada - Tondikay.

Family: Cucurbitaceae

Habit: Perennial climber.

Habitat: Dry evergreen forest, savannah, moist abandoned places, particularly on hedges, near cultivation sites and wastelands near ponds and pools.

Distribution: The plant is of cosmopolitan distribution and can be found in tropical Africa, Asia, Arabia, India, Srilanka, Malaysia and Fiji Islands.

Plant Characteristics: *Coccinia grandis* is a perennial climber, contains deeply grooved stem, simple tendrils and palmately lobed broad leaved. Leaves palmately lobed, petiolate, broadly ovate to orbicular, base cordate, margin denticulate with acute apex. Leaves glandular beneath. Flowers contains white colored petals, axillary and solitary in nature. Male flowers have small bell shaped, five lobed calyx tube. Petals are white colored, bell shaped and contains three stamens inserted in the calyx tube. Filaments connate and pistillod absent. Female flowers have small tube like and bell shaped calyx and white colored corolla. Ovary is glandular, pubescent and has many ovules. Stigma tri-partite and densely papillose. Mature ripe fruits are indehiscent berries which contains red colored pulp, sweet. Seeds are small, oblong and compressed.

Flowering and Fruiting: July to February

Uses: Leaves have blood sugar lowering property and the fruits in the immature stage have been used as a vegetable in India. The juice of roots and leaves is used in the treatment of diabetes. The leaves are used as a poultice in the treatment of skin eruptions. Long slender stem tops along with young leaves are used in salad preparation and often cooked and eaten along with other vegetables. Fully ripen fruits are fleshy, sweet and are edible. ●





Coconut tree

Cocos nucifera L.

Botanical Name: *Cocos nucifera* L.
Synonym: *Cocos nana* Griff.
Common name: English – Coconut, Hindi – Nariyal, Tamil – Thennai, Malayalam – Thenga, Telugu – Narikel, Kannada – Tengu
Family: Arecaceae
Habit: Tall woody tree
Habitat: Largely cultivated in agricultural farms, home gardens, parks, Botanical gardens, school & college premises, margins of cultivation land, riverine areas and tropical seashore gardens.

Distribution: Native to tropical islands of western pacific but widely distributed in almost all the tropical regions of the world.

Plant Characteristics: *Cocos nucifera* is a monoecious palm commonly called as coconut tree which is a tall single stem containing evergreen tree. It has a well-developed tall woody, erect, unbranched trunk and fibrous root system. Trunk contains annular petiolar scars. The light grey trunk is swollen at the base and has a crown of downward facing pinnate green fronds in the apical region. The inflorescence is more or less long structure, enclosed by two spathes with numerous side branches. Large female flowers are arranged at the base of the inflorescence, globose, woody, ovary three celled, 1 ovule per cell with short style. Rest of the male flowers are arranged above the female flowers. Male flowers are ovate, often paired and having 6 stamens. Mature fruits are

ovoid or ellipsoid in shape. The fruit is a drupe have three layers, such as the outer exocarp, tightly packed fibrous husk (Mesocarp) and the inner hard endocarp. The inner surface of the shell is covered by white colored fleshy material and the inner cavity is filled with nutrient liquid called coconut water. Fruits are readily floating in the water and has been dispersed via ocean water to most of the tropical zones of the world.

Uses: It is one of the most useful trees in the world. All the plant parts are used for different needs. The wood from the main trunk is used for house constructions and the husk obtained from the fruit is used to make fibers and thermal insulating boards. The fibers obtained from the fruits are used for the production of coir mats, carpets and ropes. The leaves are used for thatching and the leaf midrib was used to make excellent brooms. The white fleshy part of the fruit is edible and rich in nutrients. This fleshy part gives coconut milk and oil. A sugary liquid is obtained by tapping the inflorescence can be converted into coconut sugar. ●

Garden Croton

Codiaeum variegatum (L.) Rumph.
ex. A.Juss.

- Botanical Name:** *Codiaeum variegatum* (L.) Rumph. Ex.A.Juss.
- Synonym:** *Codiaeum albicans* G.Nicholson
Codiaeum angustifolium (Mull.Arg.) auct., *Croton aigburtensis* auct., *Crozophyla angustifolia* Raf.
Junghuhnia glabra Miq.
Oxydectes variegata (L.) Kuntze
Phyllaurea codiaeum Lour.
- Common name:** English – Croton, Garden Croton,
Malayalam – Kozhivalan,
Assamese – Pata bahar
- Family:** Euphorbiaceae
- Habit:** Evergreen shrub to small tree
- Habitat:** The plant prefers to grow on shady places with medium level of sunlight. Generally grown as an ornamental plant in home gardens, school and college premises due to its attractive leaves.
- Distribution:** Distributed in Southeast Asia, India, Malaysia and Pacific Islands.

Plant Characteristics: *Codiaeum variegatum* is an evergreen shrub to small sized tree which is grown for its attractive colorful foliage. It requires moist soil for better growth. Branches comes from the bottom and the entire plant reaches a height of about two to three meters. Leaves alternate, lanceolate, margin entire, apex and base are acute. Flowers produced in axillary racemes. Male inflorescence is about 25 cm long and are whitish-yellow colored. Male flowers have five petals, white colored and contain many stamens. Female inflorescence are panicles and the ovary is ovate in shape. Fruits are small tripartite capsules which contains three small seeds. Seeds are sub-globose and smooth. The plant can be propagated through seeds and cuttings.

Flowering and fruiting: July to January

Uses: Mainly grown as an ornamental plant for its colorful leaves and widely grown as an indoor plant. This plant is harvested from the wild condition for the local garden cultivational use but the species may be poisonous if consumed in excess. The plant contains a poison called 5-deoxyingenol and leaves contain abortifacient property. ●





Taro

Colocasia esculenta (L.) Schott.

Botanical Name: *Colocasia esculenta* (L.) Schott.
Synonym: *Alocasia dussii* Dammer
Arum Chinense L.
Caladium acre R. Br.
Calla gaby Blanco
Leucocasia esculenta (L.) Nakai
Steudnera virosa (Roxb.) Prain
Zantedeschia virosa (Roxb.) K. Koch

Common name: English – Taro, Cocoyam, Tamil – Chem bu, Neerchembu, Malayalam – Chemb, Manam, Telugu – Chama, Chema, Hindi – Arabi, Aruwi.

Family: Araceae

Habit: Tuberous shrub

Habitat: The plant mainly prefers to grow in wetlands and in the margins of ponds, pools, canals and riverbanks.
 Distribution: Native to tropical Asia and South West Pacific and widely distributed in India, Burma, Vietnam, China, Pakistan, Philippines and Srilanka.

Plant Characteristics: It is a tuberous perennial plant with broad leaves that grows up to the height of about five feet.

It grows well in open and damp places near water bodies. Leaves contain stout petioles with prominent sheath below. The lamina is peltate, cordate, ovate and dark green on upper surface. Flowers are monoecious with yellow colored spathe. Flowers small, densely crowded on the upper part of the spathe. The underground corm contains rough ridges, lumps and roots. The corm weighs from 0.5 kg to 1 kg. The outer skin of corm is brown colored but the inner flesh is white or pink colored. Fruits are small berries.

Flowering & fruiting: May to October.

Uses: Young leaves and underground tubers are edible and used as a vegetable. The plant is widely used in traditional systems of medicine such as Siddha, Ayurveda, and Unani. The corm juice is demulcent, laxative, and anodyne properties. The leaves contain anti-diabetic, anti-helminthic and anti-inflammatory properties. ●

Benghal day flower

Commelina benghalensis L.

Botanical Name: *Commelina benghalensis* L.

Synonym: *Commelina canescens* Vahl.
Commelina cavaleriei H. Lev.
Commelina cucullata L.
Commelina delicatula Schltld.
Commelina nervosa Burm.f.
Commelina prostrata Regel.

Common name: English – Day flower, Tropical spider wort, Benghal day flower,
Hindi – Kanchara, Kaua-kaini,
Tamil – Aduthinthalai, Kanavazhai,
Malayalam – Vazhaplaachi,
Adukkavettila.

Family: Commelinaceae

Habit: Perennial herb.

Habitat: It invades places with moist soil, scrub jungles, marshy places, forests edges, roadsides and disturbed areas.

Distribution: Native to Asia and Africa but distributed in all the tropical and sub-tropical regions of the world.

Plant Characteristics: It is a spreading and creeping annual herb. Stem long, branched and diffuse. Produces roots

at the lower nodes, Leaves are ovate or elliptic ovate and alternatively arranged. Leaves margin is ciliate, base rounded or sub-truncate, contains leaf sheath, spathe funnel shaped, apex acute or obtuse. Sepals are sub-equals. Petals blue colored, larger petal is ovate and can be seen in the terminal parts of the plant. Flower contains three stamens two staminodes. Fruits are ovoid capsules, three celled and having five seeds.

Flowering: June to November.

Uses: A natural dye is obtained from the flower sap. The plant sap is used in the treatment of eye ailments, sore throat and burns. Crushed leaf paste in warm water has been used in the treatment of diarrhea. ●





Jew's Mallow

Corchorus olitorius L.

- Botanical Name:** *Corchorus olitorius* L.
Synonym: *Corchorus catharticus* Blanco.
Corchorus decemangularis Roxb. ex G. Don
Corchorus longicarpus G. Don
Common name: English – Jew's Mallow, Tossa Jute, Tamil – Perumpinaku, Peratti, Telugu – Parinta, Hindi – Pat-sag, Mithapaat, Oriya – Kaunria.
Family: Tiliaceae
Habit: Shrub grows 2 to 3 feet height.
Habitat: The plant prefers to grow on open waste lands, road sides and places close to rivers.
Distribution: Native of Africa. Distributed in India, Myanmar and most of the tropical regions of the world.

Plant Characteristics: *Corchorus olitorius* is an erect annual herb, prefers to grow in fertile and well-drained soil with hot humid conditions. Stem red colored, rough, fibrous and it can tolerate different soil conditions. Leaves simple, stipulate, margin serrate, petiolate, petiole red colored and ovate to lanceolate. Flowers small, bisexual, regular, pentamerous and has free sepals. Petals free, yellow colored, obovate and caducous. Stamens numerous, ovary superior, five celled with many ovules. Fruit is a capsule, sub-globose and

are two inches long. Fruits have many seeds and the seeds are small and dark grey in color. Some varieties of this plant is grown for their edible leaves (varieties with a height lower than 2 meter) and some for the extraction of their fiber content (Tall varieties).

Uses: The specific varieties of this plant is used as a leafy mucilaginous vegetable where the leaves are used in soup and salad preparation. It is considered like Okra and used as a thickening agent in cooking. Immature fruits are also useful in the preparation of slimy souse. Other tall varieties are grown for the fiber extraction and jute production. The entire jute stems are alternatively used as a raw material for paper pulp preparation. Root scraping are used in the treatment of tooth ache. Root decoction is used as a tonic. Young leaves are used to treat heart troubles and the leaf infusions are used to treat constipation. ●

Indian cherry

Cordia dichotoma G. Forst.

Botanical Name: *Cordia dichotoma* G. Forst.

Synonym: *Cordia brownie* A. DC.
Cordia griffithii C. B. Clarke
Cordia indica Lam.
Cordia latifolia Roxb.
Varronia sinensis Lour.
Cordia obliqua Willd.

Common name: English – Sebesten, Indian Cherry, Clammy cherry, Hindi – Lasora, Tamil – Narivilee, Telugu – Nakkera, Malayalam – Naruviri, Naruvari, Kannada – Challekaayi.

Family: Boraginaceae

Habit: Medium sized evergreen tree.

Habitat: The plant is commonly found in tropical and subtropical regions. It is reported in different types of forest such as dry deciduous forest to moist deciduous forest and prefers to grow in moist shady valleys.

Distribution: India, Myanmar, Philippines, Southern China, peninsular Malaysia to tropical Australia and Polynesia.

Plant Characteristics: The plant is a medium sized deciduous tree and is distributed on the warmer parts of India. Stem bark is greyish brown. Leaves are simple elliptic to broad ovate, cordate at base and has entire leaf margin. Flowers are bisexual with a short pedicel, corolla white to light pinkish and are produced in corymbose cymes. Calyx bell shaped and five lobed. Sepals are unequal and triangular. Fruits are edible, contains a sticky flesh, light pink colored drupe with a saucer like calyx. The fruit turns to black upon ripening and the pulp becomes mucilaginous. The tree is often cultivated for its fruits in some natural habitats. The plant can be propagated by seeds.

Flowering: March to May.

Uses: The leaves and fruits are used in Indian traditional medicines as a cough & appetite suppressant, urinary infections and to treat leprosy. Fruits have anthelmintic and wound healing properties. Fruits are used in pickle making. Fruits are used in the treatment of dyspepsia, ulcers, headache, worm infestations, blood disorders, lungs and spleen. ●





Talipot Palm

Corypha umbraculifera L.

- Botanical Name:** *Corypha umbraculifera* L.
Synonym: *Bessia sanguinolenta* Raf.
Corypha guineensis L.
Common name: English - Talipot Palm, Tamil – Talipanai,
 Telugu – Sritalam,
 Malayalam – Kodappana, Talippana,
 Hindi – Bajar battu,
 Kannada – Indi, Srithali Mara,
 Marathi - Tali.
Family: Arecaceae
Habit: Tall woody tree
Habitat: Grows on moist regions below the
 elevations of 600 meters in Sri Lanka.

Distribution: Native to India and Sri Lanka. The tree can be found in eastern Asia, southern India, Thailand and Sri Lanka. Cultivated in botanical gardens.

Plant Characteristics: It is a monocarpic plant and one of the largest palm trees in the world. It reaches the height of about 25 meters and contain a single unbranched stem. The single stem is woody, cylindrical, straight and has prominent leaf scars. The apical region of the stem contains a crown of fan like leaves. Each fully developed leaflets contains long petiole and a large sized single leaf blade which are ranging more or less five meters in length. Inflorescence is terminal, erect which contains tiny cream colored bisexual flowers.

Flowering happens once in the life time where the starch molecules stored during the life time helps to produce a huge inflorescence. Fruits are single seeded drupes and when the fruit ripening completed, the plant dies and the plant reproduces by means of seeds only. The plant produces plenty of round, dark green colored fruit and it takes around a year for the fruits to ripe fully. The tree dies after bearing the fruit.

Uses: The sap obtained from the inflorescence is used to prepare natural sugar. The immature endosperm from the seed can be prepared into a sweet meat. The leaves are strong and durable. The leaves are used for a variety of purposes such as thatching, making mats, fans and tents. In place of paper, pieces of leaves can be used for writing. It is grown as a temple tree in Southern India. Few decades before, the leaves of Talipot palm are commonly used to make umbrellas for the village people and students in rural areas. ●

Smooth Rattle Pod

Crotalaria pallida Aiton

Botanical Name: *Crotalaria pallida* Aiton

Synonym: *Crotalaria mucronata* Desv.
Crotalaria siamica F.N.Williams.
Crotalaria striata DC.

Common name: English - Smooth Rattle Pod, Smooth Crotalaria, Streaked Rattle pod,
Malayalam – Kilukkampettichedi,
Kilukkachedi, Kilukilukki,
Telugu – Giligitcha,
Kannada – Gigigigi gida,
Marathi – Jungli tag. Family: Fabaceae

Habit: Herb to medium sized shrub

Habitat: Open plains, river banks, margins of lakes, wastelands, grasslands, sandy areas and degraded forest lands.

Distribution: Native to tropical Africa and distributed on most of the tropical and sub-tropical regions of the world. Plant Characteristics: *Crotalaria pallida* is a perennial erect undershrub which can be easily identified with its erect inflorescence and yellow colored flowers. Stem hairy and has longitudinal grooves. Leaves tri-foliolate, alternate, spiral, margin entire, elliptic ovate, leaflets are sub-equal, apex

obtuse, petiolate and stipulate. Flowers papilionaceous, pedicellate, bracteate, subulate and produced in the terminal racemes. Petals yellow, broadly elliptic, keels curved and the petals have prominent red colored veins. Stamens ten and monadelphous. Stigma oblique. Ovary sub-sessile and covered by dense mass of white hairs. Fruit is a pod, oblong-cylindrical, glabrate, contains 10 to 15 seeds per pod and the mature seeds are brown colored. Seeds are dispersed by water and animals. The plant is considered as a major weed in the rain fed crops cultivation.

Flowering: April to September.

Uses: The whole plant can be used as a green manure. ●





Blue Flowered Rattle Pod

Crotalaria verrucosa L.

Botanical Name: *Crotalaria verrucosa* L.
Synonym: *Anisanthera hastata* Raf.
Anisanthera versicolor Raf.
Phaseolus bulai Blanco.
Quirosia anceps Blanco.
Crotalaria arnottiana Benth.
Crotalaria caerulea Jacq.
Crotalaria coerulea Bedd.
Common name: English – Blue flowered Rattle pod,
 Tamil – Salangai chedi, Kilukiluppai,
 Hindi – Banshan, Jhunjhunia,
 Telugu – Giliginta,
 Malayalam – Kilukilukki, Kilukiluppa.
Family: Fabaceae
Habit: Erect branched herb.
Habitat: Roadsides, River banks, Rocky hills,
 sandstones and limestone boulders.

Distribution: Native of southern and south eastern tropical Asia but cultivated throughout the tropical regions of the world.

Plant Characteristics: *Crotalaria verrucosa* is a much branched herb that grows up to 2 to 3 meters of height. Plant contains blue or sometimes white colored flowers. Stem striate and four angled. Leaves simple, alternate, ovate to triangular shaped, apex and base acute, stipulated and the stipules are foliaceous. Inflorescence is racemose

type. Flowers produced at the terminal as well as in the lateral branches with 10 to 12 pods in each inflorescence. Each raceme inflorescence is about 25 cm long, petals blue or white colored with dark blue streaks. Wings obovate and keels are oblong. Pods are oblong, densely hairy at young stage and limited minute hairs observed on the surface of the pods at maturity. Seeds are yellow to brown colored.

Flowering: February to November.

Uses: The plant can be used as a green manure. ●

Railway weed, Ban Tulusi

Croton bonplandianus Baill.

Botanical Name: *Croton bonplandianus* Baill.

Synonym: *Croton sparsiflorus* Morong.
Croton pauperulus Mull. Arg.
Croton rivinoides Chodat.
Oxydectes bonplandiana (Baill.) Kuntze.
Oxydectes pauperula (Mull. Arg.) Kuntze.

Common name: English – Dog Chilli, Wild Chilli, Railway weed, River side weed, Hindi – Kala bhangra, Tamil – Aathu poondu, Reil poondu, Telugu – Bhoothalabhairi, Galivana chettu, Kannada – Nela bedi soppu, Alpa Bedhi Soppu.

Family: Euphorbiaceae

Habit: Perennial herb.

Habitat: It grows well in sandy clay soil with open sunny places, uncultivated lands and road sides.

Distribution: Native to South America. Now grows in the tropical regions of Africa and Asia.

Plant Characteristics: The plant is a densely branched undershrub that grows up to a height of about 1 meter. Leaves simple, alternate or opposite, ovate to lanceolate or sub-lanceolate, contains prominent petiole, apex acute with serrate leaf margin. Stem cylindrical, hard and has many white spotted glands. Flowers produced in raceme inflorescence which develops vertically at shoot terminals with unisexual flowers. Male flowers are greenish white, contains many stamens and are produced at the tip of the inflorescence. Female flowers are few in number and produced towards the inflorescence base with distinct ovary. Ovary sub-globose, having 3 stigmas with short style. Fruit is a capsule. Seeds globose and three in number.

Flowering & Fruiting: November to June.

Uses: It is used as a medicinal plant in Siddha and folk medicine. Stem latex is used to treat cuts and wounds to stop bleeding. The plant extract shows anti-bacterial activity. It is a potent hypotensive agent and used in the treatment of fever, inflammation and hypertension. ●





Muskmelon

Cucumis callosus (Rottb.) Cogn.

- Botanical Name:** *Cucumis callosus* (Rottb.) Cogn.
Synonym: *Cucumis melo* Blanco
Cucumis prophetarum Wall.
Ecballium lambertianum (Ser.) M. Roem.
Momordica lambertiana Ser.
Common name: English – Muskmelon, Sweet melon,
 Malayalam – Vellari, Kaattuvellari,
 Tamil – Mulvellari, Mulampalam, Thum
 mattikai, Hindi – Baro-Kachro, Kachra,
 Khurbuza, Telugu – Mulam-pandu,
 mullu-dosakaya-vittulu.
Family: Cucurbitaceae
Habit: Climber
Habitat: Wastelands, disturbed forest lands and
 scrub forest lands.
Distribution: Widely distributed in Western Asia,
 Indo-Malaysia, Northern African
 countries and Australia.

Plant Characteristics: The plant is a monoecious perennial climber commonly found in scrub jungles, road sides and disturbed forests. Stem angular, rough, contains plenty of minute hairs, alternatively arranged leaves. Leaves alternate, base cordate, palmately lobed, rounded or ovate to oblong, dentate or lobulate, contains long petiole. Petiole slender and hispid. Male flowers are solitary, Calyx narrow,

tube like and bell shaped. Petals yellow colored, lobes ovate and oblong. Stamens have short filaments, ovary densely hairy, style is short and stigmas converging. Fruits are obovoid. Seeds are thick, oblong and white.

Flowering: flowering and fruiting can be seen from July to January.

Uses: The plant is used in the Ayurvedic, Siddha, Unani, Folk medicines and Sowa Rigpa. Powdered seeds are useful in diabetic treatment. Root paste is used to apply on scorpion bite. Root decoction is used to treat indigestion and dropsy. ●

Madras Pea pumpkin

Cucumis maderaspatanus L.

Botanical Name: *Cucumis maderaspatanus* L.

Synonym: *Bryonia cordifolia* L.
Bryonia scabrella L.
Coccinia cordifolia (L.) Cogn.
Melothria maderaspatana (L.) Cogn.
Mukia maderaspatana (L.) M. Roem.
Mukia scabrella (L.) Arn.

Common name: English – Madras pea pumpkin, Tamil – Musumusukkai, Malayalam – Chitrati, Hindi – Bilari, Paripushkara, Telugu – Nugudosa, Kannada – Chitrati, Bengali - Bilari.

Family: Cucurbitaceae

Habit: Herbaceous trailing climber.

Habitat: Roadsides, open places, grasslands, forest thickets and tropical plains.

Distribution: Widely distributed in the tropical Africa, Asia and Australia.

Plant Characteristics: It is an annual, trailing, much branched climber which has a prominent tendril. Stem angular, pale green colored and covered with plenty of hairs.

Leaves dark green, alternate, deltoid, base chordate, apex acuminate and margin finely toothed. Petiole prominent and hairy. Flowers small, pale yellow colored, produced on the nodes where tendrils and leaves are produced. Male flowers are axillary, clustered, pedicel short or absent, calyx tube campanulate, petals five, yellow colored, stamens three which are attached to the calyx tube. Female flowers are in clusters or solitary. Ovary green, globose with forward pointing hairs. Fruit is a berry, sub-sessile, axillary, smooth, small globe like structure which becomes deep red colored when ripened. Seeds ovate and both of its surfaces are scrobiculate.

Flowering: September to December.

Uses: The whole plant extract contains significant level of anti-oxidant properties. It is widely used in the traditional and folk medicine as a medicine and contains hypoglycemic, hypo-lipidemic, immune-modulatory and anti-microbial properties. ●





Little Iron weed, Ash Colored Fleabane

Cyanthillium Cinereum (L.) H. Rob.

Botanical Name: *Cyanthillium cinereum* (L.) H. Rob.
Synonym: *Blumea esquirolii* H. Lé v. & Vaniot
Cacalia arguta Kuntze
Cacalia cinerea (L.) Kuntze
Crassocephalum flatmense Hochst. & Steud. ex DC.
Cyanopsis decurrens Zoll. & Mor.
Eupatorium arboreum Reinw. ex de Vriese
Eupatorium myosotifolium Jacq.
Pteronia tomentosa Lour.

Common name: English – Little iron weed, Ash Colored Fleabane, Hindi – Sahadevi, Tamil – Poovamkurunthal, Telugu – Sahadevi, Marathi – Sadodi, Bengali – Kuksim.

Family: Asteraceae

Habit: Herb

Habitat: It can be seen in open places, slopes, roadsides and bushes near cultivation lands, disturbed areas in the tropical and sub-tropical regions.

Distribution: Native to Central America. Distributed in Africa, Arabia, Asia, New Guinea and Australia. Naturalised in tropical America and pacific islands.

Plant Characteristics: *Cyanthillium cinereum* is an

annual and perennial herb which is of cosmopolitan in distribution. It is considered as an invasive species in many countries and islands of Pacific Ocean. It grows up to 50 cm of height. Stem contains repeated branches in the top where each branches bears many small and cylindrical inflorescence. Leaves simple, alternate, ovate to elliptic, lanceolate, apex acute, hairy and the margins are irregularly dentate. Inflorescence five to numerous. Flowers bracteate, small, pinkish violate and are produced in terminal corymbs as small heads. Each inflorescence contains many heads. Pappus hairs are white colored. Stamens five. Ovary inferior. Stigma bifid. Fruit is a cypsela, hairy and oblong.

Flowering: November to February

Uses: It is a common weed plant and its flowers are used in the treatment of fever. Seeds contain fatty oil which has anthelmintic and alexipharmic properties. ●





Sago Palm

Cycas revoluta Thunb.

Botanical Name: *Cycas revoluta* Thunb.

Synonym: *Cycas miquelii* Warb.

Common name: English – Sago cycas

Family: Cycadaceae

Habit: Perennial evergreen shrub.

Habitat: The plant grows well on Moderate to deep shade areas with clay rich fertile soil. Commonly found in Hill sides, Forest Thickets and steep to precipitous stony sites.

Distribution: Eastern Asia, China, Bangladesh, Myanmar, Nepal and Japan. Commonly found on the sea shores of southern Japan.

Plant Characteristics: *Cycas revoluta* is a dioecious plant where male and female cones are produced on separate plants. It is a popular landscape plant and widely grown in Indian gardens. The plant is erect, contains sturdy trunks and crown of leaves. When the plant reaches the reproductive stage, the male and female cones are produced in the center of the apical crown. It is a slow growing plant and

very old plants have more than four feet of height. Male cones are pale yellow and the female cones are yellow to pale brown in color, densely tomentose, two to three ovules on each side of the stalk. Seeds are obovoid, orange to red colored. Pollination is done by wind and beetles. Due to the curl back nature of the leaflets, the name revolute was given for the plant.

Reproduction: The cones are the reproductive parts of the plant.

Uses: It is an excellent specimen or container plant that can be grown in home garden or school college premises. The leaves contain antimicrobial and antibacterial properties. Leaves used in the treatment of Cancer and Hepatoma. The terminal shoots are astringent and diuretic. The seed is an emmenagogue, expectorant and tonic. Leaves are used in traditional and Chinese medicine. ●





Crow foot Grass

Dactyloctenium aegyptium (L.) Willd.

Botanical Name: *Dactyloctenium aegyptium* (L.) Willd.

Synonym: *Aegilops saccharina* Walter
Cenchrus aegyptius P. Beauv
Chloris guineensis Schumach.
Ctenium nukaviense Steud.
Cynosurus aegyptius L.
Dactyloctenium aegyptiacum Willd
Eleusine egyptia Raf.
Rabdochloa mucronata (Michx.) P. Beauv.
Syntherisma aegyptiaca Schult. ex Steud.

Common name: English – Crow foot grass, Egyptian grass, Malayalam – Kavarapullu, Kakkakalan pullu

Family: Poaceae

Habit: Annual herb.

Habitat: Moist places, marshy lands and open areas.

Distribution: Native of South America and widely grows in all tropical regions of the world.

Plant Characteristics: *Dactyloctenium aegyptium* is erect or creeping monocot herb commonly found on waste lands, roadsides and grows on poor soils. It is an annual plant having erect culm which reaches from 30 to 60 cm. Nodes are glabrous and rooting can be seen in the nodes.

Leaves linear, rounded or cordate at base, acuminate, leaves have leaf sheath, Ligules ovate and membranous. There are two to six spikes, digitate, oblong and two to five centimeter each. Spikelets are sessile and laterally compressed. Lower glume, boat shaped, ovate when spread and are keeled. Upper glume ovate to elliptic and keeled. Lemmas broad, ovate and aristate. Palea ovate to lanceolate and acuminate. Stamens three. Grains are obovate or triangular. Grains obovate or triangular.

Flowering & Fruiting: Throughout the year.

Uses: The plant can be used as a stock material for making biofertilizer and as a fodder and cattle feed. Analysis of aqueous extract of this plant reveals the presence of saponins, flavonoids, alkaloids, tannins and the plant shows prominent anti-bacterial property. ●

Thorn Apple, Sacred Datura

Datura innoxia P. Miller

Botanical Name: *Datura innoxia* P. Miller

Synonym: *Datura guayaquilensis* Kunth
Datura meteloides Dunal
Datura velutinosa V.R. Fuentes

Common name: English – Sacred Datura, Thorn apple & Downy thorn apple,
Malayalam – Ummam, Ummata,
Tamil – Seemai Oomatthai, Vellam mattai, Assamese – Dhatura.

Family: Solanaceae

Habit: Much branched shrub.

Habitat: Road sides, margins paths, waste lands and uncultivated grounds.

Distribution: Native to Tropical America.
Distributed in most of the tropical areas of the world.

Plant Characteristics: It is an annual plant grows up to a height of about 1 meter. It is considered as a common weed and can be seen on roadsides and open wastelands. The plant can be easily propagated by seeds. The stem and leaves are covered with soft hairs. Branchlets pubescent.

Leaves simple, ovate to elliptic, apex acute with entire or shallowly lobed leaf margin. Flowers solitary, axillary and white colored. Fruit is an egg shaped, spiny capsule. Fruit spines are long, weak and sharp. Upon ripening, the fruit splits open for seed dispersal. Seeds many, circular, compressed and rugose.

Flowering: Throughout the year.

Uses: Used in Ayurveda and traditional Chinese medicine. The raw plant material is toxic and contains several alkaloids and one of the active alkaloid is scopolamine. ●





Gulmohar, Flame tree

Delonix regia (Bojer ex Hook.) Raf.

- Botanical Name:** *Delonix regia* (Bojer ex Hook.) Raf.
Synonym: *Poinciana regia* Hook.
Common name: English – Flame tree, Royal Poinciana, Hindi – Gulmohar, Kannada – Kempu torai, Tamil – Semmayirkondrai, Bengali - Krishnachura.
- Family:** Caesalpinaceae
Habit: Evergreen tree
Habitat: The plant prefers sandy and loamy soil for better growth and can be seen on Road margins and forest areas with warm humid conditions.
- Distribution:** Native to Africa – Madagascar but distributed throughout the tropical countries.

Plant Characteristics: It is a fast growing evergreen tree with an umbrella shaped spreading crown with horizontally growing branches. It is a multipurpose tree and grows more than twenty feet of height. It is an evergreen tree but the plant becomes deciduous in the dry seasons or in the place where dry climate prevails for most of the months. The bipinnately compound leaves are arranged alternatively which contains 10 - 25 leaflets and more sub-leaflets. The delicate fern like leaves contains small leaflets. Flowers are showy, produced in clusters on the terminals of branches. Petals are spoon shaped, easily recognizable even from

long distance. There are five large petals, which are bright red in color. One of the petal is upright, slightly larger and marked with yellow and white. The petals have narrow bases with broad rounded tips. There are ten stamens in monodelphous condition. The ovary is superior with single locule. Fruit is a flattened woody pod, initially green but dark brown to black at maturity. The bark is gray colored and contains more lenticels.

Flowering: April to June.

Uses: *Delonix regia* is mainly grown as an ornamental plant for its colorful flowers. It is widely grown in the gardens and along the margins of the road in many of the tropical countries. The leaf extract contains cardio protective properties. Methanolic leaf extracts contains analgesic properties. ●

Flax Lily

Dianella tasmanica Hook.f.

Botanical Name: *Dianella tasmanica* Hook.f.

Synonym: *Dianella archeri* Hook.f.
Dianella densa Lindb.
Dianella hookeri Baker.
Dianella divaricata f. *dentifera* Schlittler.

Common name: English – Variegated Flax lily

Family: Xanthorrhoeaceae

Habit: It is a broad leaved evergreen perennial bush plant.

Habitat: Woodland gardens and cultivated beds.

Distribution: South east Australia and Asia. India and widely distributed/cultivated in tropical regions as an ornamental plant.

Plant Characteristics: It is a clump forming perennial plant and a mature plant reaches up to 2 meter height. Leaves are sword like and has green and white strips. Flowers small, blue colored and are produced on long inflorescence stalk. Fruits are dark blue colored berries and are very attractive than flowers. The contrast leaves with green and white stripes makes it attractive and preferred to grow as a ground cover in gardens.

Flowering: Flowers can be seen from October to February.

Uses: It is used as an ornamental plant and grown in school, college and university premises. The leaves are attractive and the plant can be seen in botanical gardens and institutional gardens. A strong silky fiber is obtained from the leaves and the leaves are in general used for basket making. Fruits are a source of dye. ●





Golden Cane Palm, Areca Palm

Dypsis lutescens (H.Wendl.)
Beentje & J.Dransf.

- Botanical Name:** *Dypsis lutescens* (H.Wendl.)
Beentje & J.Dransf.
- Synonym:** *Areca flavescens* Voss
Chrysalidocarpus baronii littoralis Jum.
- Common name:** English – Areca Palm, Butterfly Palm,
Golden Cane Palm.
- Family:** Arecaceae
- Habit:** Large shrub.
- Habitat:** The plant prefers to grow in river mar-
gins and places with well
drained loamy soil. Grows well in full
sun light, partial shade and in the place
where it can access plenty of water.
- Distribution:** Native of Africa – Eastern Madagascar.
Cultivated in the gardens of all the
tropical countries.

Plant Characteristics: *Dypsis lutescens* is endemic to East-
ern Madagasca. It is an evergreen clustering palm and is a
best indoor palm throughout the tropical countries. Nursery
grown plants may have many number of stems. Stems 4 to
9 meters tall and requires humid and loamy soil for bet-
ter growth. The color and number of stem trunks are quit
variable with different places and nutrient availability. The
height of the plant is also variable with age and soil nutrient
content. The stem is unbranched and each stem contains a
crown of 6 to 8 feather like leaves in the top. Seedlings grown

in the tropical climate are tend to be taller and robust. In
some places, the mature stem clumps may have upto fifty
numbers of stems. Inflorescence is about 1 meter long. Both
male and female flowers born in the same plant and are yel-
low colored. Fruits are spherical, about 2 to 2.5 cm diameter
and upon ripening they turn to yellow to purple color. The
plant grows well in full sunlight and prefers good drainage
soil with adequate moisture.

Flowering: Blooming happens in the summer.

Uses: *Dypsis lutescens* is generally used as an ornamental
plant in school and college premises and also used as a
hedge or screen. The areca palms can be planted in clusters
and the clusters eventually make a natural screen and the
fronds will spread horizontally. Yellowing of stem is natural
and the stem with yellow shade is attractive. ●

Trailing Eclipta, False Daisy

Eclipta prostrata (L.) L.

Botanical Name: *Eclipta prostrata* (L.) L.

Synonym: *Acmella lanceolata* Link ex Spreng.
Amellus carolinianus Walter
Anthemis abyssinica J.Gay ex A.Rich.
Artemisia viridis Blanco
Bellis racemosa Steud.
Buphthalmum diffusum Vahl ex DC.
Chamaemelum foetidum Garsault
Cotula alba (L.) L.
Eclipta alba (L.) Hassk.
Eclipta angustifolia C.Presl
Grangea lanceolata Poir.
Paleista brachypoda (Michx.) Raf.
Polygyne inconspicua Phil.
Spilanthes pseudo-acmella (L.) Murray
Verbesina alba L.

Common name: English – False Daisy, Trailing eclipta,
Tamil – Karisilanganni, Hindi –
Bhringaraj, Kesharaj, Malayalam –
Kannunni, Telugu – Galagara,
Kannada – Ajagara.

Family: Asteraceae

Habit: Perennial Herb

Habitat: The plant can be seen as a weed in the rice field, margins of cultivation lands, road sides, river margins, damp places where abundant water is available.

Distribution: Native of Asia, widely distributed in the tropical, sub-tropical and warm temperate regions of the world.

Plant Characteristics: It is a prostrate and erect up to 2 feet height. Leaves simple, opposite, spatulate, dull green in color, ovate to lanceolate in shape, apex acute, cuneate at base and have entire leaf margin. Leaves are hairy, sessile and have wavy leaf margin. Stem cylindrical, green or purple colored and covered with white colored hairs. Inflorescence comes on both terminal as well as axillary branches, white or cream colored and has prominent ray and disc florets. Disc florets numerous, corolla campanulate, stamens 4 to 5, style branched, ovary small and hairy at apex. Fruit is an achene, 2-3 mm long, dorsiventrally compressed and are brown or black colored. The plant has adapted to a range of environments and the seeds germinates quickly.

Flowering: Throughout the year.

Uses: It is used as a medicinal plant in Siddha, Ayurveda, Unani, Chinese and Sowa Rigpa. The whole plant is used in the form of oil, powder and juice in the treatment of filariasis, wound healing, head ache, digestion problems,



Jaundice, abdominal pain, cough and skin diseases. Along with other medicinal plants *Eclipta prostrata* is used as an effective hepatoprotective and anti-aging medicine in traditional medical systems of India. ●



Silver satin

Epipremnum pinnatum (L.) Engl.

Botanical Name: *Epipremnum pinnatum* (L.) Engl.
Synonym: *Epipremnum angustilobum* K.Krause
Monstera caudata (Roxb.) Schott
Philodendron dilaceratum Engl.
Common name: English - Silver satin, Dragon tail plant, Taro vine, Silver vine
Family: Araceae
Habit: Perennial evergreen climber.
Habitat: The plant grows well in warm and moist places. It adapts with the prevailing acidic and alkaline soil conditions and thrives in full sunlight and shade conditions.

Distribution: Native to Singapore. Eastern Asia – China, Assam, Bangladesh, Myanmar, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia, Australia and Western Pacific.

Plant Characteristics: The plant is an evergreen perennial climber, prostrate or climbing and very variable. Stem is about 15 meters long and is much branched or more complex towards the apex. Aerial roots can be seen on the nodes which adheres to the nodal region and the rock surfaces on which it climbs. Leaf morphology varies with age. In the juvenile stage, it is a terrestrial creeper and at maturity it is huge climber with large leaf blades. The leaves have prominent petiole and mature leaves are about 80 cm long and 30 cm broad. The leaves are alternate, leathery,

elliptic-lanceolate with entire margin in the young stage. Mature leaves are oblong–ovate, leather like, from pinnatifid to pinnatisect. The lobes are regularly arranged, intense green above and pale green below. Inflorescence produced in long peduncle and are formed by a cylindrical spadix. Flowers are bisexual, sessile and arranged in strict contact with one another without any tepals. The fruit is a syncarp and the seeds are reniform, immersed in red–orange pulp.

Flowering: September to October.

Uses: *Epipremnum pinnatum* is widely grown as an ornamental plant in the school and college premises for its attractive leaves. Leaves are used as a poultice in the treatment of rheumatism. Exposure to Extracts of *Epipremnum pinnatum* shows growth arrest and non apoptotic cell death in T-47D breast tumor cell. Fresh juice of *Epipremnum pinnatum* shows antimicrobial activity. ●

Asthma Weed

Euphorbia hirta L.

Botanical Name: *Euphorbia hirta* L.

Synonym: *Euphorbia pilulifera* L.
Chamaesyce gemella (Lag.) Small
Desmonema hirta (L.) Raf.
Euphorbia bancana Miq.
Euphorbia capitata Lam.
Euphorbia chrysochaeta W.Fitzg.
Euphorbia gemella Lag.
Euphorbia globulifera Kunth
Euphorbia karwinskyi Boiss.

Common name: English: Common spurge, Asthma weed,
Tamil – Ammam Patcharisi, Malayalam
– Nelapaalai, Hindi – Bara Dudhi,
Telugu – Nanapala.

Family: Euphorbiaceae

Habit: Prostrate herb

Habitat: *Euphorbia hirta* can be located in
wastelands, roadsides, cultivation
areas and gardens.

Distribution: Native to tropical America.
Distributed in most of the tropical
regions of the world.

Plant Characteristics: *Euphorbia hirta* is a prostrate annual herb with a milky latex. It is a very common weed in the tropical and sub-tropical regions. Leaves are simple, dark green or reddish green, opposite, decussate, basally three nerved, petiolate, stipulated, margin serrate, apex acute, hispid on both the sides of leaf. Stem covered with small hairs and exudes latex upon injury. Cyathium inflorescence arranged in either single or paired clusters, glands five, male flowers are four to six in number, female florets are just like a pendulum, style is bifid from the base. Capsule is tiny and the seeds are very minute. Seeds reddish, four angled and minutely furrowed.

Flowering: Flowering can be seen throughout the year.

Uses: *Euphorbia hirta* has been used as a medicinal plant in siddha, Ayurvedha, Unani and other traditional systems of medicine to treat respiratory system disorders, asthma, fever, coughs, colds, dengue, gastrointestinal disorders, diarrhea, vomiting and amoebic dysentery. ●





Crown of Thorns

Euphorbia milii Des Moul.

Botanical Name: *Euphorbia milii* Des Moul.
Synonym: *Euphorbia breonii* Nois.
Euphorbia splendens Nois.
Common name: English – Crown of thorns, Siamese Lucky Plant, Tamil – Aynkona Kalli
Family: Euphorbiaceae
Habit: It is a semi succulent shrub.
Habitat: The plant prefers to grow in open sunny places with lower to moderate drought conditions.

Distribution: Native of Madagascar but distributed and grown in many tropical countries.

Plant Characteristics: *Euphorbia milii* grows as a shrubby plant with a woody stem. It is a drought tolerant species which contains thick stems that grows up to three meters of height with prominent grey colored thorns. Stem greyish brown, branched, 5 to 7 sided and adapted for water storage. Upon injury, the stem exudes milky latex which is poisonous. The exudate produces irritation in skin and eyes, when it comes in contact. Leaves narrow, succulent, obovate, bright green to greyish green colored, smooth edged and spirally arranged. The spines are abundant in the stem which are straight and two to three centimeter long. It has large leaves and bunch of flowers at the stem top. The red colored flowers can be seen for many months in a year. Cyathium contains a single female flower surrounded by

male flowers. Each male flowers have a single stamen and nectar glands. Upon injury, the plant produces milky latex. In cultivation areas, the plant is available with all different flower colors. *Euphorbia milii* can be easily propagated by prunings or stem cuttings. It can also be propagated through seeds but seed formation happens rarely. The plant grows well in good sunlight but required midday shade during very hot summers.

Flowering: Throughout the year.

Uses: *Euphorbia milii* is widely grown as an ornamental plant for its attractive flowers. It can also be used to grow in the garden margin where the plant with spines will serve as a good natural fence. ●





Banyan Tree

Ficus benghalensis L.

Botanical Name: *Ficus benghalensis* L.

Synonym: *Ficus banyana* Oken
Ficus cotoneifolia Vahl
Ficus cotonifolia Stokes
Ficus indica L.
Ficus karet Baill.
Ficus lancifolia Moench

Common name: English - Banyan tree, Indian Banyan,
 Hindi – Barh, Bargad, Tamil –
 Aalamaram, Telugu – Marri chettu,
 Kannada – Alada mara, Malayalam –
 Ala, Marathi – Vada.

Family: Moraceae

Habit: Evergreen tree.

Habitat: The plant prefers to grow in moist
 places but the well-developed trees
 are drought tolerant. *Ficus benghalensis*

can be found near river basins, lakes, fresh water wells and
 marshy places.

Distribution: Native to Asia (India and Pakistan).

Distributed in many tropical, sub-tropical and
 warmer parts of the world.

Plant Characteristics: It is a huge evergreen tree, found in almost all parts of India. The tree reaches up to twenty meters of height and the formation of aerial roots from the mature branches is common in this species. Bunches of many aerial roots are produced on many branches which later touches the ground and helps on water and mineral absorption and eventually becomes a new supporting trunk for the tree. Thus a single banyan tree spreads over a large area and ensures its survival for a long period of time. In the initial stages of seedling growth, it grows on the top of many other trees as an epiphyte and upon maturity it kills the host plant completely. Leaves obtuse, elliptic to ovate, base rounded, thick and a mature leaf is about four to six inches long. Receptacles in axillary pairs. Male and female flowers are produced in the same receptacle. Male flowers many near the receptacle mouth with four segments of perianth and a single stamen. Female flowers have smaller perianth with elongated style. The prominent fruit like structure is a hallow flower (Hypanthodium), inside which male and female flowers are arranged. Hypanthodium is sessile pairs, axillary, globose, contains three bracts and becomes red upon maturity. The tree bark is thick and whitish grey colored. Pollination is effected by insects and the plant can be easily propagated by cuttings. *Ficus benghalensis* produces abundant seeds which are dispersed by both native and exotic birds.



Flowering & Fruiting: Throughout the year.

Uses: It is considered as a sacred tree for Hindu and Buddhist religion and can be found nearby Hindu temples in India. Tree bark contains anti-atherogenic properties. Extracts of bark shows the presence of anti-stress and anti-allergic compounds. Fruit extracts contain anti-tumor activity. Root extract shows potent anthelmintic property. The tree attracts diverse birds and bats during fruiting season. The leaves are stitched in such a way that can be used as a biodegradable eating plates. ●



Weeping Fig

Ficus benjamina L.

Botanical Name: *Ficus benjamina* L.
Synonym: *Ficus striata* Roth
Ficus umbrina Elmer
Ficus xavieri Merr.
Urostigma benjaminum (L.) Miq.

Common name: English – Weeping Fig, Benjamin tree, Golden fig, Tamil – Vellai aal, Vellal, Malayalam – Putra juvi, Telugu – Kondagolugu, Hindi – Pukar.

Family: Moraceae
Habit: Evergreen tree

Habitat: Village forest areas, margins of rivers and streams.

Distribution: Native to south and South East Asia. Widely distributed in tropical countries of East Asia, Australia and Pacific islands.

Plant Characteristics: It is an evergreen tree that grows more than twenty feet in the natural outdoor conditions. It grows well in full sunlight and can also tolerate shade conditions. It is also grown as an indoor plant for its decorative and showy leaves where it grows up to six feet. Leaves simple, alternate, oval, like a thin leather, ovate to elliptic, stipulated, bluntly acuminate, shiny and dark green, light green or creamy white colored. Stipules deciduous. Flowers are creamy white to yellow colored. The plant produces

short styled and long styled female flower. The flowers are enclosed in a spherical structure that people normally considered as fruit. The fruits are small, paired in the leaf axils, globose, smooth, dark red colored upon ripening and becomes the favorite food for variety of birds. The plant is sensitive to cold temperatures and grows well under good sunlight. The plant produces aerial roots and can survive in a variety of soil types. It can be easily propagated through cuttings.

Uses: This plant is cultivated in the college and university premises and botanical gardens for its white and light green colored attractive leaves. Its small fruits are one of the favorite food for birds. The plant is widely used for the agroforestry purposes. The extracts isolated from root, stem and leaf shows significant range of antimicrobial activity. the bark is rich in tannins and the inner bark is a source of fiber. The wood is of low quality and used for the fuel purpose by local people. ●

Hairy Fig

Ficus hispida L.f.

Botanical Name: *Ficus hispida* L.f.

Synonym: *Gonosuke scabra* Raf.
Sycomorphe roxburghii Miq.
Covellia assamica Miq.
Covellia courtallensis Miq.
Ficus caudiculata Trimen
Ficus compressa S.S.Chang
Ficus daemonum K.D.Koenig ex Vahl
Ficus fecunda Blume
Ficus goolereea Roxb.
Ficus heterostyla Merr.

Common name: English – Hairy Fig, Devil Fig, Hindi – Gobla, Kagsha, Kala umbar, Tamil – Peyatthi, Malayalam – Kaat tathi, Paarakam, Telugu – Bomma medi, Kannada – Kada atthi.

Family: Moraceae

Habit: Shrub to small tree

Habitat: Open places, swamp forests, margins of rivers and streams.

Distribution: Widely distributed in Eastern Asia, Australia and New Guinea.

Plant Characteristics: It is a branched shrub to small tree, contains dense foliage with plenty of hairs on the plant body. Bark grey colored which exudes milky fluid upon injury. Young shoots are covered with plenty of hairs and the internodes of branchlets are hollow in nature. Leaves simple, opposite, ovate, oblong, thick, papery and covered with coarse hairs. Leaf base wedge shaped, margin entire or bluntly toothed. Flowers unisexual, dioecious, inflorescence is a syconia and fascicled on trunk. Male flowers have three broad tepals and single subsessile stamen. Female flowers have short perianth. Perianth is tubular and glabrous. Ovary superior, reddish brown, and hairy. Syconium globose and yellow.

Flowering: June to July.

Uses: The bark is rich in antioxidants and ethanol extracts of bark shows hypoglycemic properties. The leaf extract shows significant anti-diarrheal, hepatoprotective and cardio protective activity. Leaf extracts shows significant inhibition of lipid peroxidation. Roots have anti-ulcerogenic properties. In villages, the leaves of this plant is used to pack the veg and non-veg foods. ●





Peepal tree, Sacred Fig

Ficus religiosa L.

- Botanical Name:** *Ficus religiosa* L.
Synonym: *Ficus caudata* Stokes, *Ficus peepul* Griff., *Ficus rhynchophylla* Steud., *Ficus superstitiosa* Link, *Urostigma religiosum* (L.) Gasp.
Common name: English – Peepal tree, Sacred Fig tree, Tamil – Arasamaram, Hindi – Pipal, Aswattha, Malayalam – Arayal, Arasu, Aal, Telugu – Raavichettu, Bodhi-drum amu, Pippalamu, Kannada – Aralimara, Ashvattha.
Family: Moraceae
Habit: Evergreen tree.
Habitat: Places close to river basin, lakes and open lands. Cultivated in Hindu temple as a sacred tree. Grown in botanical gardens and village disturbed forests.
Distribution: Widely distributed in East Asia.

Plant Characteristics: It is a deciduous tree, grows well in tropical and subtropical regions and prefers full sunlight for better growth. Barks grey and smooth. Aerial roots absent. It requires moist and well-drained soil for its growth but tolerates a wide variety of soils and also succeeds in areas with maximum shade. Leaves simple, arranged alternatively, broadly ovate, stipulate, glossy, leathery, margin entire with 8-10 pairs of lateral nerves. Mature leaves are dark green

colored, new leaves pink colored and have tail like tip. Flowers axillary, sessile, in pairs and unisexual. Male flowers sessile, free, have two tepals and red colored. Female flowers sessile, having 3 to 4 tepals, free, brownish and glabrous. Ovary superior, ovoid to oblong, reddish brown colored with rounded stigma. Pollination effected by insects. Figs are produced in axillary position, spherical, sessile and purple with red dots upon ripening.

Uses: *Ficus religiosa* is extensively used in traditional medicine for the treatment of central nervous system, endocrine system, gastrointestinal tract, reproductive system and infectious disorders. Freshly isolated extracts shows anti-bacterial, anti-diabetic, wound healing, anti-oxidant and immune modulatory properties. The bark contains tannins and has astringent property. It is considered as a sacred tree. Village meetings are often takes place under this tree. It is considered as a symbol of fertility for womens. ●

Grape leaved Mallow

Fioria vitifolia (L.) Mattei.

Botanical Name: *Fioria vitifolia* (L.) Mattei.

Synonym: *Hibiscus vitifolius* L.

Common name: English – Grape leaved Mallow, Tropical Fan leaf, Hindi – Ban Okra, Kannada – Mani thutthi gida, Malayalam – Kaattu vellooram, Tamil – Siru thutthi, Telugu – Adavi patthi.

Family: Malvaceae

Habit: Medium sized shrub.

Habitat: Road sides and waste lands near paddy fields.

Distribution: Distributed in the tropical areas, semi-evergreen and dry deciduous forests.

Plant Characteristics: The plant is an erect, branched shrub having terete stem with glandular hairs. Leaves ovate, three to five lobed, basally five to seven nerved, sub-cordate to rounded at base, apex acute, margin serrate, densely pubescent on both surfaces, have triangular segments and long petiole. Leaves looking like grape leaves, hence the name vitifolia. Flowers are solitary

or in clusters and having two to three centimeter long pedicel. Calyx five lobed. Corolla campanulate, six to seven, yellow colored with dark purple colored inside. Stamens many, Stigmas five and capitate. Ovary is five celled, glandular and hairy. Fruit is a capsule. Seeds reniform, glabrous and brown in color.

Flowering: April to December

Uses: This plant is used in the Indian traditional systems of medicine for the treatment of common cold, problems of upper respiratory system. Methanolic extract of whole plant shows anti-inflammatory, anti-pyretic and analgesic activity. ●





Indian Snow Berry, Bush weed

Flueggea leucopyrus Willd.

- Botanical Name:** *Flueggea leucopyrus* Willd.
Synonym: *Acidoton leucopyrus* (Willd.) Kuntze.
Cicca leucopyrus (Willd.) Kurz
Flueggea xerocarpa A. Juss.
Phyllanthus lucena B. Heyne ex Roth
Xylophylla lucena Roth
- Common name:** English – Bush Weed, Indian Snow Berry, Hindi – Shinar, Ainta, Tamil – Mulluppulatti, Malayalam – Cerimklaav, Telugu – Pulugudu, Kannada – Kandekuvana, Gujarathi - Humri.
- Family:** Euphorbiaceae
Habit: Shrub to small tree
Habitat: The plant can be seen in scrub jungles, foot hills and dry evergreen to dry deciduous forest areas.
- Distribution:** Widely distributed in India, Srilanka and Myanmar.

Plant Characteristics: Medium sized shrubs, branchlets are stiff, angular and ends with spines. Wood is hard. Leaves simple, alternate, obovate, distichous, apex obtuse, margin entire, membranous with cuneate base. Flowers dioecious, tiny, greenish white with many bracts. Flowers attract numerous honey bees. Male flowers are produced in axillary clusters with concave tepals, stamens five. Female flowers are sub-solitary, ovary 1-3 celled, style free and two

fid. Flowers pollinated by butterflies and beetles. Fruit is a capsule, globose, outside fleshy and white. Fruits are edible and goats prefers this plant.

Flowering and fruiting: February to November.

Uses: The plant is a good deworming medicine and used in Ayurveda and folk medicine. Leaves contain antioxidant and anti-proliferative properties. ●

Gardenia, Cape jasmine

Gardenia jasminoides J.Ellis

Botanical Name: *Gardenia jasminoides* J.Ellis
Synonym: *Gardenia longisepala* (Masam.) Masam.
Gardenia maruba Siebold ex Blume.
Gardenia pictorum Hassk.
Gardenia radicans Thunb.
Genipa florida (L.) Baill.
Genipa grandiflora (Lour.) Baill.
Genipa radicans (Thunb.) Baill.
Jasminum capense Mill.
Varneria augusta L.

Common name: English – Gardenia, Cape jasmine, Hindi – Gandhraj, Kannada – Suvasane malle, Marathi – Gandroya, Bengali – Gandharaj, Urdu – Gulchand.

Family: Rubiaceae
Habit: Medium sized shrub.

Habitat: Forest areas near streams, river lines, hills and valleys.

Distribution: Distributed in East Asian countries such as south china, Japan, Vietnam, Laos, Cambodia and India.

Plant Characteristics: It is a shrubby evergreen plant which produces beautiful cream colored fragrant flowers. Widely distributed in the tropical, sub-tropical and warm temperate regions of the world. The plant reaches a maximum height of about four feet. Leaves opposite, petiolate, shiny adaxially, base acute, oblong to elliptic, leathery, stipules calyprate and glabrous. The plant has a long flowering period starting from the middle of the spring to early summer season. Calyx puberulent or glabrous. Flowers solitary, terminal with short pedicel, white to creamy yellow colored and have good fragrance. Fruit is a berry, ovoid to sub-globose, contains persistent calyx and the seeds are sub-orbicular. Calyx lobe size, corolla size and leaf size varies with different varieties.

Flowering: March to July.

Uses: Cultivated in flower gardens, school and college premises for its attractive flower. The plant contains anti-oxidants, hypoglycemic, anti-depression properties, and improves sleeping qualities. ●





Gliricidia, Mexican Lilac

Gliricidia sepium (Jacq.) Walp.

Botanical Name: *Gliricidia sepium* (Jacq.) Walp.
Synonym: Galedupa pungam Blanco
Gliricidia lambii Fernald
Gliricidia maculata (Kunth) Walp.
Lonchocarpus rosea (Mill.) DC.
Common name: English – Mexican Lilac, Mother of Cocoa, Tamil – Semai Agathi, Malayalam – Seema Konna, Telugu – Madri, Kannada – Gobbarada mara, Bengali - Saranga.
Family: Fabaceae
Habit: Evergreen tree
Habitat: Disturbed coastal areas, river banks and floodplains.

Distribution: Native of South America. Distributed in South and Central America, Asia and most of the tropical regions of the world. Distributed throughout India.

Plant Characteristics: *Gliricidia sepium* is a deciduous tree species which grows to a maximum height of about 15 meters. The plants is either single stemmed or multi stemmed. Bark is smooth, whitish grey to reddish brown color. Small sized lenticels can be seen in the stem and branches. Leaves are alternate, elliptic, bright green above and pale below, apex acuminate, margin entire and pinnately compound. Flowers pink colored, having a white tinge, and a diffuse pale yellow spot in the standard petal.

Flowers are produced in short and erect racemes. Flowers pollinated by bees and insects. The fruit is a dehiscent pod which turns reddish pink to pale brown color upon ripening. Seeds are lenticular, turn light brown to dark brown with age.

Flowering: February to April.

Uses: The leaves are used as a green manure. Leaves are nutritious and are used to feed live stocks to enhance the productivity. Flowers are fried and eaten with vegetables. The flower attracts honey bees and is an important flower plant for the honey collection. The wood is durable and useful for making railway tracks. The name “*Gliricidia*” means the rat killer. The leaves, seeds and bark are poisonous to rats, mice and other rodents. The dry bark, leaves and seeds along with cooked maize are used to prepare rat poison. ●

Water globe head

Gomphrena celosioides Mart.

Botanical Name: *Gomphrena celosioides* Mart.

Synonym: *Gomphrena decumbens* Jacq.
Gomphrena alba Peter.
Gomphrena lutea Rusby.

Common name: English – Cockscomb *Gomphrena*,
Water globehead, Soft Khakiweed,
Malayalam – Neervadamalli.

Family: Amaranthaceae

Habit: Herb

Habitat: It can be seen on roadsides, near
cultivation areas and scrub jungles.

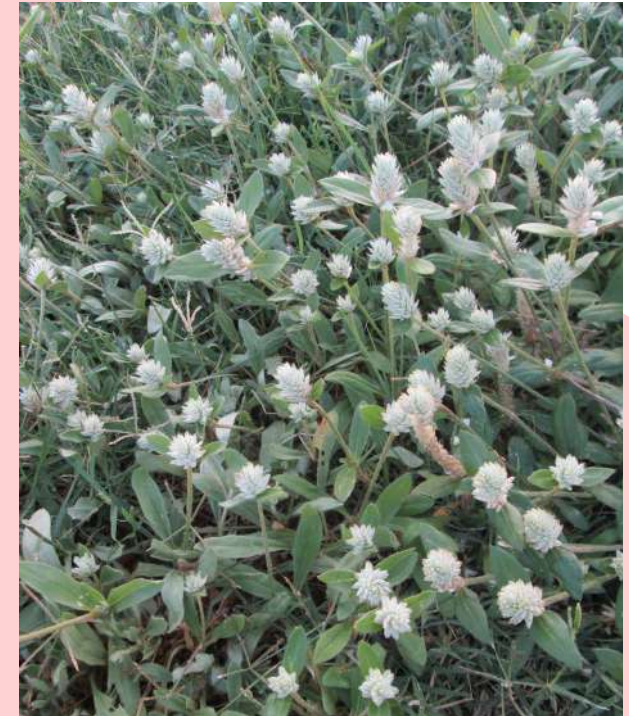
Distribution: Native of Ecuador-Argentina,
distributed in Africa, Islands of Indian
ocean, India, South East Asia
and Australia.

Plant Characteristics: It is a prostrate, perennial annual
herb that have extensive branching. The plant contains a
deep taproot. Leaves are simple, opposite, elliptic, lance-
olate with acute to obtuse apex. Leaves contains minute
white colored hairs. Stem white to pale green colored. In-
florescence is a short, globe like structure which are cream

to silver colored spikes, gradually elongates into a wide
spike. Spikes terminal and sometimes axillary. Individual
flowers whitish or pink. Flowers bracteate, produced from
five tepals, soft and silvery gray in color. Stamens five,
ovary contains single ovule and the stigma is two fid. Fruit
is a small capsule. Single seeded. Seeds are ovoid, brown,
bright, dispersed by water, ants and animals. The plant is
considered as a potential weed and adapts to a wide range
of climatic conditions.

Flowering: September to December.

Uses: The plant extract shows anti-fungal and Hepato-pro-
tective properties. It is considered as diuretic. In
Ethnopharmacology, it is used to treat urinary tract
disorders and kidney stones. ●





Globe Amaranth

Gomphrena globosa L.

Botanical Name: *Gomphrena globosa* L.
Synonym: *Amaranthoides globosus* Maza
Common name: English – Bachelor's button, Gomphrena, Globe Amaranth, Tamil – Vaadamalli, Hindi – Gul-e-makhmal, Malayalam – Vaadamalli, Nepali – Supaaree phool, Kannada – adike hoo.

Family: Amaranthaceae
Habit: Annual Herb
Habitat: Road sides, margins of gardens and grasslands.

Distribution: Native to South America but grows widely in all tropical and sub-tropical regions.

Plant Characteristics: *Gomphrena globosa* is an erect annual herb having a bushy appearance with a globe like red or purple colored inflorescence head. It grows up to 1 to 1.5 meters height. It grows well in full sun light with moist soil. Stem erect, much branched, hard, greenish white and hairy at maturity. The plant can be easily recognized by the colored inflorescence head. Leaves are opposite, oblong, contains short petiole and plenty of white colored hairs. The flowers are produced in an erect spike where stiff and papery bracts are very colorful and showy. Sepals five, stamens five, ovary one celled and has a single ovule. A very common flower head color is magenda but varieties of *G.*

globosa is available with differently colored flower heads. It is drought and heat tolerant and also grows on poor soil. The plant can be easily propagated through seeds.

Flowering: September to March.

Uses: It is commonly cultivated for its attractive purple or red colored flower heads. Hindus collect these flowers to worship their god. Widely cultivated in Tamil Nadu and also in the gardens of school and colleges for its attractive flowers. It is a suitable plant to grow in the border places of plant gardens. ●

Jamaican croton

Graptophyllum pictum (L.) Griff

Botanical Name: *Graptophyllum pictum* (L.) Griff.

Synonym: *Graptophyllum hortense* Nees
Graptophyllum picturatum W.Bull
Justicia carayana F.Newman ex Nees
Justicia klotzschiana Hoffm. ex Nees
Justicia nitida Nees
Justicia picta L
Justicia violacea Noronha
Marama picta (L.) Raf.
Monechma violaceum Nees

Common name: English – Joseph's coat, Jamaican croton, caricature plant, Konkani – Kala adulsa, Pandhara adulsa.

Family: Acanthaceae

Habit: Shrub to small tree.

Habitat: It grows well in full sun light to partial shade. Prefers moist well drained soil with good organic nutrient content.

Distribution: Native to New Guinea but largely grown in tropical and sub-tropical regions such as India, United States, Ghana, Mexico and Bolivia.

Plant Characteristics: It is an evergreen shrub. Leaves variegated, deep green colored, oval to elliptic and differently blotched with cream colored patches along the midvein. Flowers are produced in the terminal clusters, flowers red to purple colored, tubular with protruding stamens. Flowering occurs during summer season. Various cultivars are developed with varying leaf color.

Flowering: Flowering can be seen from March to May.

Uses: *Graptophyllum pictum* is widely grown for its beautiful leaves and appearance in the institutional premises, botanical gardens and herbal gardens. It is used in folklore medicine and Siddha for the treatment of fertility related problems, wound healing, Urinary tract infections, swelling, ulcers and hemorrhoids. ●





Hanging Lobster Claw

Heliconia rostrata Ruiz & Pav.

- Botanical Name:** *Heliconia rostrata* Ruiz & Pav.
Synonym: *Bihai rostrata* (Ruiz & Pav.) Griggs
Bihai poeppigiana (Eichler ex Petersen) Kuntze
Heliconia poeppigiana Eichler ex Petersen
Common name: English – Hanging Lobster Claw, Hanging Heliconia
Family: Heliconiaceae
Habit: Shrub
Habitat: Prefers moist and well drained place for growth.
Distribution: Native of Peru and Equador. Cultivated throughout the tropical areas.

Plant Characteristics: It is the most common *Heliconia* species and the stalks can reach upto 5 feet of height. It contains a pendent inflorescence having red colored bracts with greenish yellow edges. The colored bract is looking like a lobster claw. It is a perennial shrub grown for its attractive inflorescence. Leaves are simple, alternate, dark green colored, leathery, contains very long petiole which arise directly from the ground. Stem reaches a maximum height of 5 feet and is terminated by an inflorescence. The pseudo stems are produced directly from the underground rhizome. Flowers are produced in clusters, attractive, bracts reddish in the base and green to yellow colored at the tip.

Most commonly propagated by dividing the underground rhizome where germination percentage is higher. Very few plants sets seeds and seed germination takes long time to establish a seedling and seed propagation is not preferred for this species. It can tolerate cold climates and can be grown at temperatures from 15 degree Celsius.

Flowering: January to May

Uses: It is widely grown in the institutional premises for its attractive flowers. The inflorescence is widely used for indoor decoration. The inflorescence is cut for indoor decoration where they last for several weeks. ●





Chinese Hibiscus

Hibiscus rosa-sinensis L.

Botanical Name: *Hibiscus rosa-sinensis* L.

Synonym: *Hibiscus javanicus* Mill.
Hibiscus festivalis Salisb.
Hibiscus storckii Seem.

Common name: English – China rose, Chinese Hibiscus,
Hindi – Gurhal, Tamil – Chembaruthi,
Malayalam – Chembarati, Kannada –
Dasavala, Konkani – Dosni Phool,
Telugu – Japapuphamu,
Daasaanachettu.

Family: Malvaceae

Habit: Shrub or small tree.

Habitat: Residential road sides, unused lands,
private gardens and river margins.

Distribution: Native to tropical Asia. Distributed in all
tropical and sub-tropical regions.

Plant Characteristics: *Hibiscus rosa-sinensis* is an erect
evergreen shrub, grows up to 6-10 feet of height. Leaves
simple, stipulate, dark green, shiny, alternate, rarely lobed,
margin serrate and has prominent petiole. Stipules short,
lanceolate and glabrous. Stem cylindrical and woody.

Flowers are axillary, solitary, bell shaped and has a central tube which has anthers and stigma at the tip. Flowers pedicellate, attractive, bisexual, actinomorphic, complete and hypogynous. Epicalyx 5-8, Sepals five, campanulate, base connate and green colored. Petals five, polypetalous, variously colored depending on specific variety. Stamens monadelphous, fused to form staminal tube around the style. Staminal tube much exerted. Style simple, long, stigma discoid, red colored, five-lobed, ovary superior, pentalocular with axile placentation. Fruit is a globose capsule and fruit formation happens very rarely.

Flowering: July to December

Uses: Cultivated in tropical gardens as an ornamental plant. Flowers are used as an ornamental in Hindu ceremonies. It is a cooling herb, helps to stop cough, bleeding and can be used in the treatment of venereal diseases. The roots are rich in mucilage and can be used to treat coughs and cold. The paste prepared from the roots can be used to treat venereal diseases. ●





Japanese Hibiscus

Hibiscus schizopetalus (Dyer.) Hook. f.

Botanical Name: *Hibiscus schizopetalus* (Dyer.) Hook. f.

Synonym: *Hibiscus rosa-sinensis schizopetalus*
Dyer
Hibiscus sinensis var. *schizopetalus*
Mast.

Common name: English: Japanese lantern, Japanese Hibiscus, Manipuri – Juba kusum

Family: Malvaceae

Habit: Evergreen shrub

Habitat: It grows well in moist, well drained, fertile soils with partial shade.

Distribution: Native to tropical east Africa, now grows on all the tropical regions including India, Africa and Pakistan.

Plant Characteristics: It is a fast growing evergreen shrub, having decorative flower petals and grows up to six feet height. Stem glabrous, woody, branches pendulous. Leaves simple, alternate, petiolate, ovate to lanceolate, margin serrate with acute apex. Epicalyx 6 to 7, Flowers solitary, bisexual, axillary, pendulous with a slender pedicel and are produced on the top of the branches. Calyx campanulate, sparsely hairy and five lobed. Corolla five, large, attractive, deep red colored, having finely slashed edges with many linear segments. Staminal column is long, anthers basifixed. Stigma reddish, discoid, Ovary superior, pentalocular with axile placentation. Style glabrous.

Fruit is a capsule, glabrous or hairy and fruit formation is rare. Seeds reni form, dark brown.

Flowering: Throughout the year

Uses: The plant contains anti-oxidant, anti-pyretic, anti-inflammatory, analgesic, Hypoglycaemic and hypolipidemic properties (S K Wong et al., 2016). ●

Bush Morning Glory

Ipomoea carnea Jacq.

Botanical Name: *Ipomoea carnea* Jacq.

Synonym: *Batatas crassicaulis* Benth.
Batatas pareirifolia (Bertero ex Spreng.)
 Choisy, *Convolvulus batatilla* Kunth
Convolvulus carneus (Jacq.) Spreng.
Convolvulus fistulosus (Mart. ex Choisy)
 Kuntze, *Convolvulus pareirifolius* Bertero
 ex Spreng., *Ipomoea fruticosa* Kuntze
Ipomoea gossypoides D.Parodi
Ipomoea nicaraguensis (Donn.Sm.)
 House, *Ipomoea pareirifolia* (Bertero ex
 Spreng.) G.Don,
Ipomoea texana J.M.Coult.
Ipomoea tragulifera Miers
Saccia elegans Naudin

Common name: English – Bush Morning Glory, Hindi –
 Behaya, Marathi – Besharam.

Family: Convolvulaceae

Habit: Evergreen shrub

Habitat: Shallow wetlands, Marshy places, mar-
 gins of canals, rivers, abandoned ponds.

Distribution: Native to South America. Distributed in

tropical Asia, Africa, Panama, Mexico, Ecuador, Venezuela,
 Peru, Bolivia, Brazil and other Central American countries.

Plant Characteristics: *Ipomoea carnea* is an erect ever-
 green shrub which attains a maximum height of 5 meters.
 Stem erect, woody, hairy, Sap milky, branches cylindrical or
 angular. It grows preferably in marshy areas. Leaves simple,
 alternate, ovate to oblong, contains dense hairs, margin
 entire and has long petioles. Inflorescence contains few
 to many flowers. Flowers are attractive and produced at
 the ends of the tall branches. Sepals ovate, circular, corolla
 campanulate or funnel shaped, pink colored,
 darker inside, funnel shaped. Staminal filaments unequal
 with linear anthers, stamens included, stigma bi-lobed,
 and ovary covered with fine soft hairs. ovary two celled a
 nd stigma capitate. Fruit is a capsule, rarely indehiscent.
 Seeds glabrous and black colored. It spreads rapidly and
 occupies maximum land surface in the habitat. It is
 considered as a strong competitor for the native plants in
 terms of water and other nutrients.

Flowering: Flowering can be seen in summer
 and spring seasons.

Uses: It is widely used in the preparation of green manure
 and Biogas. It is grown as a living fence for marking land
 boundaries. Extracts of *I. carnea* shows anti-bacterial,
 anti-diabetic, anti-oxidant and immunomodulatory



properties. Widely used in the traditional system of
 medicine in many countries. ●



Purple Heart Glory

Ipomoea marginata (Desr.) Verdcourt

Botanical Name: *Ipomoea marginata* (Desr.) Verdcourt
Synonym: *Ipomoea maxima* G. DON.
Convolvulus marginatus Desr.
Convolvulus verrucosus (Blume) D. Dietr.

Ipomoea sepiaria Koenig ex Roxb.
Ipomoea subtrilobans Miq.
Ipomoea verrucosa Blume.

Common name: English – Purple Heart Glory,
 Malayalam – Chuttithiruthali, Tamil –
 Senthali, Manjigai, Telugu –
 Lakshamana, Tellatuti. Hindi – Ban
 kalmi, Lachumana.

Family: Convolvulaceae

Habit: Prostrate climber

Habitat: Road sides, margins of cultivated lands,
 water bodies and bushes.

Distribution: Southeast Asia, India, China, Africa,
 Australia and Pacific islands.

Plant Characteristics: It is a prostrate and slender vine which can be seen in the margins of bushes and cultivation lands. Leaves alternate, triangular, margin entire, petiolate, heart shaped with acute apex. Some leaves have purple spots. Stem red colored, covered with white hairs and the aerial parts are spreading. Flowers white to purple colored, funnel shaped, having narrow tube with a flat open mouth.

Bracts ovate or oblong and persistent. Flowers contain glabrous, sub-equal calyx lobes and are produced in cymose inflorescence. Stamens and pistil are kept in the flower tube and stamens are not protruding out of the corolla tube. Corolla contains a darker center. Fully opened flowers can be seen during sunrise and the petals closes before noon. Fruit is a globose capsule. Seeds pubescent.

Flowering: Flowering can be seen throughout the year.

Uses: Used as a medicinal plant in Ayurveda and folk medicine. Used to treat fertility problems. ●

Tiger's Paw Glory

Ipomoea pes-tigridis L.

Botanical Name: *Ipomoea pes-tigridis* L.

Synonym: *Convolvuloides palmata* Moench.
Convolvulus bryoniifolius Salisb.
Convolvulus capitellatus Bunch-Ham. ex Wall.

Ipomoea hepaticifolius Spreng.

Ipomoea tamnifolia Burm. Fil.

Ipomoea tigripes Stokes

Neorthosis tigrina (Pers.) Rafin.

Common name: English – Tiger's Paw Glory, Bind weed,
Hindi – Panchpatia, Tamil – Pulichuvadi,
Telugu – Mekamuadugu, Malayalam –
Pulichuvadi, Bengali – Anguli lota.

Family: Convolvulaceae

Habit: Prostrate and twinning climber

Habitat: Marshy places, abandoned lands, road sides and margins of water canals.

Distribution: Native of tropical Africa and Asia.
Distributed in all tropical and sub-tropical regions.

Plant Characteristics: It is a prostrate twinnings with dense

hairs, leaves broad, deeply five to nine lobed, lobes obovate with acute apex. The species specific name is derived from the shape of the leaf that resembles paws of tiger. Stem and leaves have trichomes. Peduncle is long. Bracts oblong. Flowers are sub-sessile and are produced in axillary capitate inflorescence and are open in the evening. Calyx lanceolate, lobes unequal and pubescent. Corolla white colored and funnel shaped. Fruit is a capsule, ovoid and brown colored. Seeds are pubescent and black.

Flowering: September to December.

Uses: It is used as an antidote for dog bite. The leaves are applied as a poultice on boils and sores and the root contains purgative properties. ●





Jungle Geranium

Ixora javanica (Blume) DC.

Botanical Name: *Ixora javanica* (Blume) DC.
Synonym: *Ixora amara* Steud.
Ixora amoena Wall. ex G. Don
Ixora cyathosperma Wall.
Ixora mutabilis Reinw. ex Miq.
Ixora stricta amoena (Wall. ex G. Don) Ridl.
Ixora stricta blumeana Kurz
Ixora stricta javanica (Blume) Kuntze
Ixora stricta pubistyla S. Moore
Pavetta javanica Blume

Common name: English - Jungle Geranium, Hindi – Rugmini, Tamil – Vedchi, Malayalam – Chethi, Bengali – Rangan.

Family: Rubiaceae

Habit: Shrub to small tree

Habitat: It grows well in sandy and loamy soil with rich nutrients.

Distribution: Native of South East Asia, Thailand, Malaysia, Sumatra, Java and Borneo.

Plant Characteristics: It is a under shrub plant widely cultivated in flower gardens for its beautiful and colorful inflorescence. Leaves simple, stipules prominent, opposite and glabrous. Inflorescence sub-sessile or peduncled, peduncle glabrous, bracts ovate, acute and glabrous. Flowers

are yellowish orange or bright red colored, four merous and are produced in panicles. Bracteoles ovate and acute. Calyx glabrous and pubescent. Flowers have long corolla tube and corolla tube is pubescent, ovate to acute, orange to red colored. Stamens four on the mouth of the corolla. Anthers slender and two fid. Ovary two celled and the ovules are solitary. Stigma fusiform. Fruit is a berry, globose and reddish purple.

Flowering & Fruiting: November to July

Uses: It is cultivated as an ornamental plant for its flowers. Flowers and leaves have anti-cancer properties. ●





Arabian Jasmine

Jasminum sambac (L.) Aiton.

Botanical Name: *Jasminum sambac* (L.) Aiton.

Synonym: *Jasminum quadrifolium* Buch.-Ham. ex Wall.
Jasminum quinqueflorum B. Heyne ex G. Don
Jasminum sanjurium Buch.-Ham. ex DC.
Jasminum undulatum (L.) Willd.
Jasminum zambac Roxb.
Mogorium gimea . Zuccagni
Mogorium goaense Zuccagni
Mogorium sambac (L.) Lam.
Mogorium undulatum (L.) Lam.
Nyctanthes goa Steud.
Nyctanthes sambac L.
Nyctanthes undulata L.

Common name: English – Arabian Jasmine, Hindi – Bela, Mogra, Telugu – Malli, Tamil – Kodi malli, Manipuri – Jati pushpa.

Family: Oleaceae

Habit: Evergreen shrub

Habitat: Moist, well drained nutrient rich soils near river sides and cultivation lands.

Distribution: Widely distributed in East Asian coun-

tries such as India and Bhutan.

Plant Characteristics: It is an erect, climbing and ever-green shrub. Widely cultivated in gardens. It grows well in the places with tropical climate with full sun light and partial shade. Stem reaches a height of about three meters. Stem produces roots at the nodal region. Leaves variable, opposite, simple, glabrous, broad, ovate or obtuse acute, membranous and dark green colored. The plant produces small, waxy white colored fragrant flowers in clusters which are very attractive. Inflorescence produced as terminal or axillary cyme, bracts and bracteoles are linear, calyx glabrous, calyx lobes linear, curled and pubescent. Corolla white and corolla lobes are oblong or sub-orbicular. Stamens included in the corolla tube. Ovary two celled. Stigma bifid. Fruit is a berry, globose and pulple-black in color. It can be easily propagated by using seeds and stem cuttings.

Flowering: June to August

Uses: it is cultivated as an ornamental plant in tropical and subtropical regions. Flowers are important commodity products. Roots are leaves are used in the preparation of some Ayurvedic medicines. Flowers are used to scent the tea. Flowers are commercially sold for the preparation of perfumes. The aromatic water prepared using the flowers is used in the preparation of deserts. ●





Bellyache Bush

Jatropha gossypifolia L.

- Botanical Name:** *Jatropha gossypifolia* L.
Synonym: *Manihot gossypifolia* (L.) Crantz.
Adenoropium gossypifolium (L.) Pohl.
Common name: English – Bellyache bush, Black physic nut, Assamese – Bhot-era, Bodo – Enda gwja, Tamil – Vellai kaattu kottai, Irula - Karkottai.
Family: Euphorbiaceae
Habit: Evergreen shrub.
Habitat: Forested areas, forest edges, roadsides, scrub jungles, plains, waste lands, margins of rivers and streams.
Distribution: Common in tropical Africa, Brazil, Peninsular India, Srilanka.

Plant Characteristics: It is a medium sized deciduous shrub and grows up to 2 meters of height. Stem circular, newly formed stem is red colored with stipitate glands. Leaves simple, palmately three lobed, red colored, trinerved, margin finely serrate, hairy and reddish glanded. Petioles long, red colored and has glands on particular side. Inflorescence is a terminal cyme with green colored bracts. Corolla five, free, reddish above and light yellowish below. Stamens eight. Female flowers are red colored, pedicellate, long and pubescent. Calyx five, green colored and glanded. Corolla five, free, red colored above and light yellow colored below. Stigma bifid and yellow colored.

Flowering: Flowering can be seen throughout the year.

Uses: Seeds used in the preparation of Bio-diesel. In some places, it is grown as an ornamental plant. ●

Creeping Rungia

Rungia repens (L.) Nees

Botanical Name: *Rungia repens* (L.) Nees

Synonym: *Justicia repens* L.

Adhatoda spicata Burm. ex Steud.

Common name: English – Creeping Rungia, Hindi –

Kharmor, Ghati-pitpapa,

Tamil – Cataikarandi, Kodagasaleh,

Telugu – Palakavelli, Sanskrit –

parpata, parpatha.

Family: Acanthaceae

Habit: Herb

Habitat: Road margins, along with bushes, paddy fields, marshy areas and gardens.

Distribution: India, Srilanka

Plant Characteristics: *Justicia repens* L. is an annual herb which grows to a maximum of 30 cm height. It is commonly found in grasslands and paddy fields. Stem slender, prostrate and roots produced near the base. Leaves opposite, elliptic-lanceolate, sub-sessile, acute at both ends, spikes terminal, bracteate, bracts elliptic to lanceolate, covered with fine soft hairs. Bracteoles lanceolate, acuminate and ciliate. flowers two lipped, upper lip short and lower lip

larger, calyx five lobed, corolla pink colored with white striations, stamens two, ovary globose, fruit is a capsule and seeds are sub-orbicular.

Flowering: November to February

Uses: Used in Siddha, Ayurveda, folk medicine and Unani. ●





Whitehead spike sedge

Kyllinga nemoralis (J.R.Forst. & G. Forst.)
Dandy ex Hutch. & Dalziel

Botanical Name: *Kyllinga nemoralis* (J.R.Forst. & G. Forst.)

Dandy ex Hutch. & Dalziel

Synonym: *Cyperus kyllingia* Endl.

Kyllinga monocephala Rottb.

Kyllinga cephalotes (Jacq.).

Common name: English – Whitehead spike sedge,
Hindi – Nirvishi, Malayalam – Velutta
nirvasi, Palnivasi, Tamil – Velutta
nirvasi, Telugu – Gandala, Sanscrit –
Svetanirvisa.

Family: Cyperaceae

Habit: Herb

Habitat: Places with moist fertile soils, on the
margins of small water canals,
lakes, marshy places and open wet
grasslands.

Distribution: Distributed in Central America, central and
western Africa, Asia, New Zealand and Pacific islands.
Also found in most of the tropical and sub-tropical
regions of world.

Plant Characteristics: It is an erect perennial creeping
sedge, contains underground rhizome and fibrous roots.
Leaves simple, linear, margin entire, contains leaf sheath
and sessile. Stipules absent. Stem triangular, solid, gla-
brous. Inflorescence is a globose spikes. Three to four
leafy bracts can be seen below the inflorescence. Flowers

bisexual, together produced in the apical head which is
white or light brown in color. Fruit is a nut. The plant can
be easily propagated by seeds and rhizome.

Flowering: July to November.

Uses: Used in the traditional and folk medicine. ●

Leucaena

Leucaena leucocephala (Lam.) De Wit.

Botanical Name: *Leucaena leucocephala* (Lam.) De Wit.

Synonym: *Acacia glauca* Willd.
Acacia leucocephala (Lam.) Link
Leucaena glauca Benth.
Leucaena glabra Benth.
Leucaena latisiliqua (L.) Gillis
Mimosa glauca Koenig ex Roxb.
Mimosa leucocephala Lam.

Common name: English – *Leucaena*, Wild tamarind, Hindi – shoobabool, Safed Babool, Bengali – Subabul, Tamil – Perunthagarai, Malayalam – Subaabul, Oriya – Rossokodombo.

Family: Fabaceae (Mimosoideae).

Habit: Evergreen tree

Habitat: Waste grounds, Roadsides, open woodlands, and dry coastal regions.

Distribution: Naturalized in parts of South America, Asia, Southern USA, Southern Europe, Australia, Africa and countries with warm climates.

Plant Characteristics: It is a fast growing evergreen tree, can be seen in school and college premises. Grows well in full sunlight and needs little care. Leaves alternate, bipinnately compound, each pinnae is about ten centimeter long and have a maximum of twenty two pairs of leaflets. Leaflets are oblong to lanceolate with acute apices. Leaves contain an unusual amino acid called Mimosene and this particular compound in large quantity can become harmful for the grazing animals. Flowers are produced in dense globose clusters having prominent peduncles. Flowers have tiny calyx which is campanulate, Corolla greenish white, funnel shaped. Stamens numerous, white or pale yellow in color. Ovary glabrous. Fruit is a flat brown pod. Each pod is elongated with pointed tip and having 10 to 25 seeds on each pod. Several pods are produced from each flower cluster. Seeds are glossy brown, flat and oval shaped.

Flowering: flowering and fruiting can be seen throughout the year.

Uses: It is a multipurpose tree that provides fodder, fuel wood, and a range of commodities for the local people. In many places it is cultivated as an ornamental plant and due to rapid growth it occupies the adjacent areas quickly. Largely used as an agroforestry crop for the land development, erosion control and land reclamation. It is a good food crop for ruminants and can be used for biomass production. ●





Common Leucas

Leucas aspera (Willd.) Linn.

Botanical Name: *Leucas aspera* (Willd.) Linn.
Synonym: *Leucas dimidiata* (Roth) Spreng.
Leucas minahassae Koord.
Leucas obliqua Buch.-Ham. ex Dillwyn
Leucas plukenetii (Roth) Spreng.
Phlomis aspera Willd.
Phlomis dimidiata Roth
Phlomis esculenta Roxb.
Phlomis obliqua Buch.-Ham. ex Hook.f.
Phlomis plukenetii Roth

Common name: English – Common Leucas, Wild Ocimum, Hindi – Chhota halkusa, Gophaa, Tamil – Thumbai, Malayalam – Thumba, Telugu – Tummachettu, Kannada – Tumbe guda, Bengali – Ghal ghase.

Family: Lamiaceae

Habit: Herb

Habitat: Dry places, walking paths, open grass lands, road margins and scrub jungles.

Distribution: East Asian countries such as India, Pakistan, China, Nepal, Bangladesh, Myanmar, Vietnam, Malaysia, Indonesia, Philippines, New Guinea and Africa.

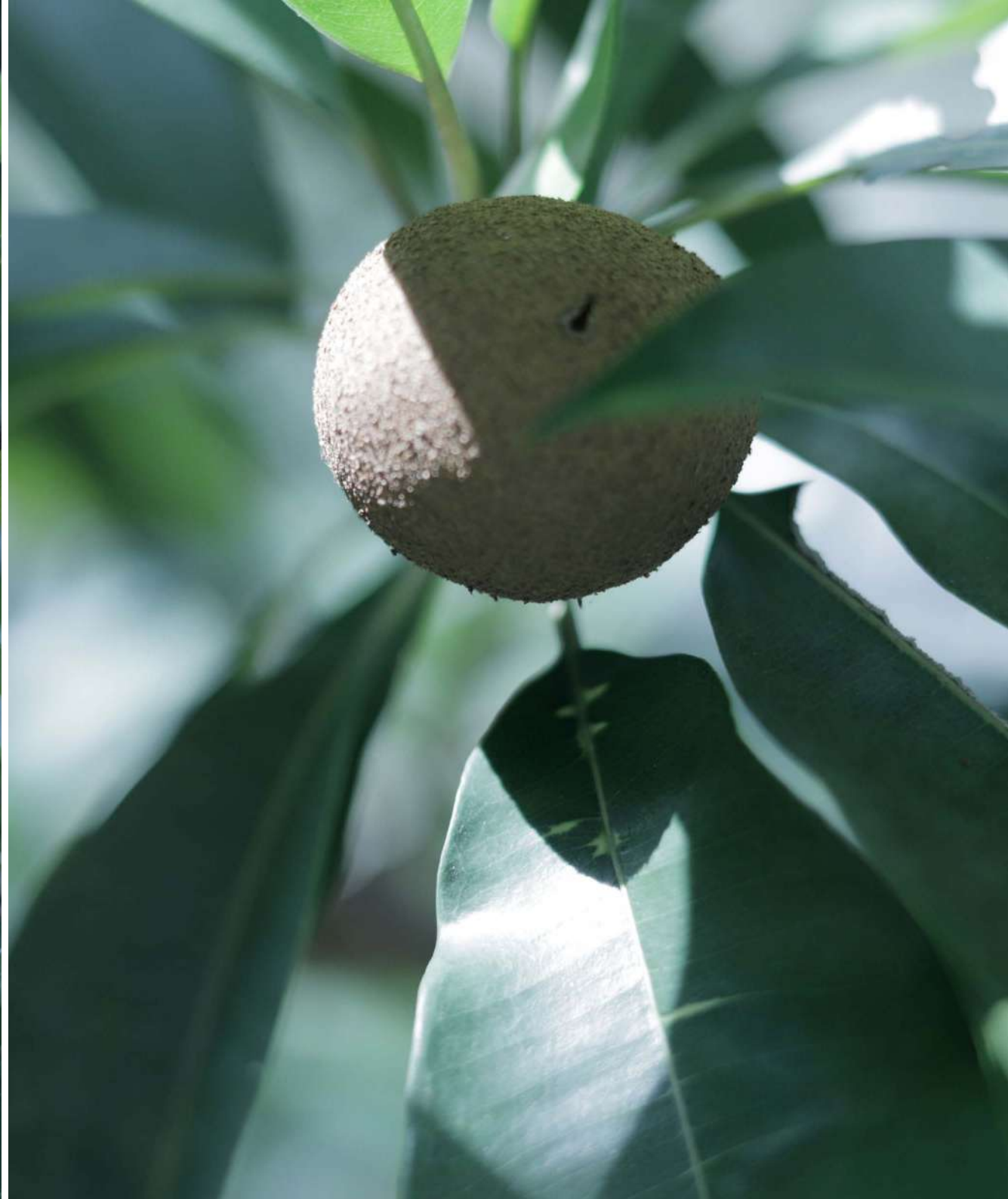
Plant Characteristics: It is an erect annual herb which can be easily identified with its globe like inflorescence and

white petals. Leaves linear, lanceolate, margin toothed, apex blunt and covered with tiny hairs. Stem much branched, contains minute hairs. Inflorescence whorls large, either terminal or axillary, contains tightly packed flowers. Bract linear, Calyx tubular, mouth oblique, green to pale green, variable, provided with tiny teeth. Corolla white colored, hairy, bell shaped flowers. Stamens four, didynamous. Ovary four lobed and stigma bifid.

Flowering: September to March

Uses: The extract obtained from the plant is used in the treatment of cough, cold and fever. The plant contains anti-microbial, antioxidant, anti-fungal, nociceptive properties. It is a source of medicinally active compounds. ●





Chikoo

Manilkara zapota (L.) P.Royen.

Botanical Name: *Manilkara zapota* (L.) P. Royen.

Synonym: *Manilkariopsis tabogaensis* (Gilly) Lundell

Mimusops grisebachii Pierre

Nispero achras (Mill.) Aubrév.

Pouteria mammosa (L.) Cronquist

Sapota achras Mill.

Sapota zapotilla (Jacq.) Coville ex Safford

Vitellaria mammosa (L.) Radlk.

Achradelphia mammosa (L.) O.F.Cook

Achras breviloba (Gilly) Lundell

Achras calderonii (Gilly) Lundell

Common name: English – Nose berry, Tamil – Sappotta maram, Hindi – Chikoo, Telugu – Sima ippacettu, Bengali – Sapeta, Urdu – Chikoo, Marathi – Chikku.

Family: Sapotaceae

Habit: Small to medium sized tree.

Habitat: open areas, low lands and coastal forests.

Distribution: Native to Central America but grown in

all tropical and sub-tropical regions of world.

Plant Characteristics: It is a slow growing evergreen tree which secretes white milky and gummy latex upon injury. It is commonly known as Sapodilla or Chikoo. Leaves are stiff, elliptic, pointed, alternate, glossy, spirally arranged clusters at the tip of the twigs. Flowers axillary or clustered at the branch terminals, small, pinkish-white, looking like a bell and produced at the leaf bases. Sepals brown colored, hairy, petals pale green. Stamens six. Fruit is a berry, spherical or oval to ellipsoidal, covered with brown scurf, inner fleshy part is brown or reddish brown, becomes very sweet at maturity. Fruits contains minimum of three seeds which are black or brownish, glossy, oval shaped and loosely attached inside.

Flowering: August to October.

Uses: It is widely cultivated as a fruit crop throughout the tropical and sub-tropical regions. The ripe fruits are sweet and eaten fresh. The plant extract contains anti-oxidant property. ●





Water Clover

Marsilea quadrifolia L.

Botanical Name: *Marsilea quadrifolia* L.

Synonym: *Lemma quadrifolia* (L.) Desr. ex Lam.
Marsilea europaea Desv.
Pteris quadrifoliata (L.) L.
Spheroidia quadrifoliata (L.) Dulac.
Zalusianskya marattioides Neck.
Zalusianskya quadrifolia (L.) O. Kuntze.

Common name: English - Water Clover, four leaf clover,
 Tamil – Neer arai-keerai,

Family: Marsileaceae

Habit: Aquatic herb

Habitat: Low land water bodies, Marshy places,
 ponds and pools, margins of lakes.

Distribution: Native to Europe and Asia. Distributed
 in Europe, Asia, United States and most
 of the tropical and sub-tropical
 regions of the world.

Plant Characteristics: *Marsilea quadrifolia* is a herbaceous
 and perennial pteridophyte which can be seen in the mar-
 gins of fresh water ponds and pools. Leaves pale green or
 pale bluish green, palmately reticulate venation, leaf upper
 surface glabrous, leaflets folds or units together at night.
 The petioles are slender, pale green colored and circular in
 cross section. It has a long, well branched rhizome which
 anchors the muddy bottom of water bodies. Rhizome pro-

duces tufts of leaves continuously each year
 after desiccation of older leaves. Each erect stalk bears four
 wedge shaped leaflets. In-between the petiole base and
 rhizome, a spore producing structure called “sporocarp” is
 produced. Sporocarp is a flat, ovoid, yellow hairy at young
 stage and glabrous at maturity. Inside, the sporocarp, there
 are compartments which bears microsporangium and
 megasporangium.

Flowering: It is a non flowering fern, produces a special-
 ized structure called sporocarp for reproduction.

Uses: Young stems and leaves are edible. It is a feminine food
 and eaten at the time of scarcity. It is also cultivated as an
 ornamental plant in aquaria and garden ponds. ●

Arrow Leaf Morning Glory

Merremia tridentata (L.) Hall. f.

Botanical Name: *Merremia tridentata* (L.) Hall. f.

Synonym: *Ipomaea tridentata* Roth.

Common name: English – Arrow leaf morning glory, African morning wine, Tamil – Avvaiyar koonthal, Muthiyar Koonthal, Hindi – Jhamar Bel, Tompar Bel.

Family: Convolvulaceae

Habit: Herb

Habitat: Plains, wooded savannah, sandy places, grassy savannah and dry localities.

Distribution: Widely distributed in Tropical Africa, Asia and Australia. Also occurs in the islands of Indian Ocean.

Plant Characteristics: *Merremia tridentata* is a prostrate perennial herb. It has a thick root stock from which many prostrate and slender branches are produced. Stem wiry, produced up to four meters, twine into other plants and also spreads over the ground. Leaves alternate, simple, petiolate, apex acuminate, base truncate, glabrous or hairy and toothed. Inflorescence axillary with slender peduncle. Flowers bisexual, regular, pentamerous, pedicel short, calyx

oblong or lanceolate. Corolla funnel shaped, pale yellow or cream colored, five lobed, contains a darker reddish or brown colored center. Stamens inserted in the corolla. Ovary superior, ovoid and two celled. Stigma bilobed. Generally recognized as a weed, it is commonly found on dry plains and at least of four subspecies were recognized. Flowers are pale yellow colored. Fruit is a globose capsule.

Flowering: July to February.

Uses: It is widely used in the traditional medicines. Leaf decoction is used in the treatment of snakebite, fungal infection and digestive tract problems. ●





Kidney Leaf Morning Glory

Merremia emarginata (Burm.f.) Hallier f.

- Botanical Name:** *Merremia emarginata* (Burm.f.) Hallier f.
- Synonym:** *Convolvulus excisus* Zipp. ex Span.
Convolvulus reniformis Roxb.
Evolvulus emarginatus Burm.f.
Evolvulus glechoma Welw.
Ipomoea cymbalaria Fenzl
Ipomoea emarginata (Burm.f.) Kuntze
Ipomoea gangetica Voigt
Ipomoea reniformis (Roxb.) Sweet
Lepistemon reniformis (Roxb.) Hassk.
- Common name:** English – Kidney leaf morning glory,
 Hindi – Musakani, Tamil – elikkadhu keerai, Telugu – Elikajemudu,
 Malayalam – Elicevi,
 Marathi – Undirkani.
- Family:** Convolvulaceae
- Habit:** Perennial Herb.
- Habitat:** Moist bushy areas, damp places, black cotton soils, margins of railway lines, waste lands and grasslands.
- Distribution:** Tropical regions of Africa and East Asian countries such as India, Malaysia, China, Philippines and New Guinea.
- Plant Characteristics:** *Merremia emarginata* is a prostrate herb with a very long stem up to 70 cm which is

commonly confused with *Centella asiatica* (L.) Urb. Leaves small, alternate, broadly ovate, toothed, broad at the base, kidney to somewhat heart shaped. Stem maroon to red colored, covered with white hairs, prostrate, emergence of new roots can be seen in the stem nodal region. Flowers axillary, solitary or two to three flowers are produced in clusters. Sepals obovate to orbicular. Petals pale yellow, campanulate and are double the length of sepals. Fruit is a capsule, subglobose, glabrous and brown to black colored. Seeds glabrous, dotted and greyish brown colored.

Flowering: December to April.

Uses: *Merremia emarginata* is collected from the wild as a source of food and medicine. Leaves are used as deobstruent and diuretic substance and is also used in the treatment of cough, headache, neuralgia and rheumatism. ●

Indian Cork Tree

Millingtonia hortensis Linn. f.

Botanical Name: *Millingtonia hortensis* Linn. f.

Synonym: *Bignonia hortensis* (L.f.) Oken
Bignonia suberosa Roxb.
Bignonia azedarachta Kon. & Sims.
Bignonia cicutaria Koen ex. Mart.
Nevrilis suberosa Raf.

Common name: English – Indian cork tree, Tree jasmine,
 Hindi – Akashneem, Tamil – Kattumalli,
 Kirmalligai, Telugu – Kavuki,
 Malayalam – Katesam,
 Marathi – Kaval nimb,
 Kannada – Birate mara.

Family: Bignoniaceae

Habit: Evergreen Tree.

Habitat: It is cultivated as an avenue tree throughout India and can be seen in the school, college and institutional premises.

Distribution: Native of Malaysian region and widely distributed in South Eastern Asia and Malaysia.

Plant Characteristics: *Millingtonia hortensis* is a fast growing evergreen tree, grows more than 15 meters of height. It is said to have come from Burma. The distinct features of this tree are having clusters of fragrant flowers, quick growth and tolerance to salinity. It is a good shade producing tree. Leaves opposite, pinnately compound, imparipinnate, margin entire, leaflets opposite, petiolate. Flowers short lived and are produced in terminal as well as in the axillary position in corymbose panicles. Calyx short, bell shaped, five lobed, dark to pale green coloured and puberulus. Corolla tube is long, pale green coloured which divides into four white coloured petals at the flower opening. Ovary sub-sessile, ovules many, style slender and the stigma is bi-lobed. Anthers yellow coloured. Fruit is a long, narrow capsule and is pointed on both ends. Bark contains cracks and furrows and strips of barks can be easily removed from the cork. Seeds many, flat and winged.

Flowering: June to December.

Uses: It is grown as an ornamental tree in the institutional premises. The attractive flowers are woven using a cotton thread and used for the hair decoration. Essential oils isolated from the fresh flowers shows significant larvicidal activity. Aqueous alcohol extract of leaves shows the presence of antibacterial activity. ●





Spanish Cherry

Mimusops elengi L.

- Botanical Name:** *Mimusops elengi* L.
Synonym: *Imbricaria perroudii* Montrouz.
Kaukenia elengi (L.) Kuntze
Kaukenia javensis (Burck) Kuntze
Kaukenia timorensis (Burck) Kuntze
Magnolia xerophila P.Parm.
Manilkara parvifolia (R.Br.) Dubard
Mimusops erythroxyton Llanos ex Fern.-Vill., *Mimusops javensis* Burck
Mimusops latericia Elmer, *Mimusops lucida* Poir., *Mimusops parvifolia* R.Br.
Mimusops timorensis Burck
- Common name:** English – Spanish cherry, Hindi – Maul sari, Tamil – Magizhampoo Maram, Malayalam – Ilanni, Kannada – Ranjal, Telugu – Pogada, Marathi – Bakuli.
- Family:** Sapotaceae
Habit: Small to medium sized tree
Habitat: Cultivated as an ornamental plant in the tropical and sub-tropical regions and can be found in the gardens and parks.
- Distribution:** Native to India, Sri-Lanka and Indo-China. Distributed in East Asian countries, Australia, New Caledonia, and Vanuatu.

Plant Characteristics: It is an evergreen fruit tree, which is widely cultivated in the institutional premises. Bark

Fissured and dark grey colored. Leaves simple, alternate – spiral, ovate to elliptical, shiny, apex acuminate, margin entire and pointed at both ends. Leaves are provided with long petioles. Flowers bisexual, axillary, tiny, white to creamy white colored, fragrant, produced either single or in pairs with long hairy pedicels on the nodes. Sepals four, red to pale rust colored and persistent. Petals creamy white colored with eight lobes, stamens eight, ovary superior and pubescent. Fruit is a fleshy berry, orange to pale red sweet when ripe. Seeds endospermic and laterally compressed.

Uses: The plant is widely cultivated for its fruits and as an ornamental plant in the botanical gardens and institutional premises. The ripe fruit is sweet and edible. The oil obtained from the seeds can be used for cooking. *M. elengi* contains anti-bacterial, anti-fungal, anti-hyperglycemic and gastro protective properties. ●

Five-leaved carpetweed, African chickweed

Mollugo pentaphylla L.

Botanical Name: *Mollugo pentaphylla* L.

Synonym: *Mollugo stricta* L.
Pharnaceum pentaphyllum (L.) Spreng.
Pharnaceum strictum (L.) Spreng.

Common name: English - African chickweed, five leaved carpet weed, Malayalam – Parpadaga pullu, Telugu – verri chatarasi, Marathi – Jharasi, Kannada – Parpadaga, Hindi – Chamas, Khet papar.

Family: Aizoaceae

Habit: Herb

Habitat: Margins of cultivation lands and grasslands.

Distribution: Distributed in the tropical and sub-tropical regions such as South East Asia, Malaysia, china, Australia, Japan and Caledonia.

Plant Characteristics: It is an erect, tufted annual herb which can be seen as a minor weed in the cultivation lands, road margins and moist waste lands. Branching at the base from the root system. Leaves simple, narrow, ovate to lanceolate, sessile or having very tiny petiole, apex acute,

arranged in whorl, margin entire, pointed on both ends and has a prominent midrib. Stem erect, glabrous and branched from the base. Flowers produced on terminal cymes, bisexual and each flowers contain a prominent pedicel. Sepals five, nearly circular or oval shaped with white, thin, membranous margin. Stamens three to five. Ovary three chambered, ovules many with axial placentation. Fruit is a capsule, more or less spherical, seeds many, dark brown colored.

Flowering: July to December.

Uses: Aerial parts of *Mollugo pentaphylla* contains antifungal compounds such as Mollugogenol A and B. The plant contains anti-hyperglycemic, antibacterial and hepatoprotective properties. The plant extract shows the presence of anti-inflammatory and anti-arthritis properties in mouse models. ●





Morinda Tree

Morinda coreia Buch.–Ham

Botanical Name: *Morinda coreia* Buch. –Ham.

Synonym: *Morinda pubescens* Sm.
Morinda tinctoria Roxb.

Common name: English - Morinda tree, Hindi – Aal, Auch, Kannada – Maddi, Konkani – Bar tondi, Malayalam – Manjanathi, Tamil – Manjanaari, Nuna, Telugu – Togaru, Maddi.

Family: Rubiaceae

Habit: Small to medium sized tree.

Habitat: Prefers to grow in the moist and dry deciduous habitats. Can be found in scrub jungles, plains and road margins.

Distribution: India, Malaysia and most of the tropical regions of the world.

Plant Characteristics: *Morinda coreia* is a deciduous tree which grows more than 10 meters of height. Bark pale brown colored with irregular cracks and vertical fissures. Leaves simple, opposite, decussate, elliptic-lanceolate, petiolate, sheathing, leaf base and apex are acute, margin entire and has prominent midrib and lateral nerves. Twigs contains characteristic interpetiolar stipules. The wood beneath the bark is bright yellow colored. Flowers bisexual, produced in globose heads, white colored, corolla four lobed. Corolla tube is funnel shaped, short and valvate in bud. There are four stamens, attached to the corolla and

the stamens are exerted. Ovary inferior, two or four celled, ovules solitary and the slender stigma is two-lobed, fruit is a syncarp which is a sphere or ball shaped. Seeds do not have wings.

Flowering: March to December.

Uses: It is used as a medicinal plant in indigenous systems of medicines such as Siddha, Ayurvedha, Unani, Tibbi and Amchi. Leaves contain strong antioxidant, wound healing, anti-microbial, hepatoprotective and plant growth promoting properties. Leaf extracts were used to treat inflammation, hernia, dyspepsia, diarrhoea and stomach ulcer. ●

Jamaica Cherry

Muntingia calabura L.

Botanical Name: *Muntingia calabura* L.

Synonym: *Muntingia rosea* H.Karst.
Muntingia glabra Spreng.

Common name: English – Jamaica Cherry, Panama Cherry, Tamil – Then Pazham, Telugu – Nakkaraegu, Kannada – Gasagase han nina mara, Marathi - Paanchara.

Family: Muntingiaceae

Habit: Evergreen tree

Habitat: Prefers to grow in the places with dense growth of bushes and disturbed tropical low lands. Also cultivated as an ornamental plant in the institutional premises.

Distribution: Native to Tropical America and West Indies. Distributed in South America, Asia, Mexico and the Caribbean.

Plant Characteristics: *Muntingia calabura* is a fast growing evergreen tree and is well known for its sweet fruits. It is a drought tolerant species and needs very little care. It has horizontally spreading branches. Leaves simple, evergreen,

alternate, margin serrate, base oblique, leathery, apex acute and ovate to lanceolate. Flowers bisexual and short lived. Sepals five, contains minute hairs and green colored. Petals five and white colored. Stamens many, prominent, short lived, anthers yellow colored and free. Flowers looking like strawberry bloom, hence the tree is also known as strawberry tree. Ovary superior. Fruit is a red colored berry, round, smooth and has many, tiny, yellow colored seeds. Immature fruits are green colored which turns into deep red color upon ripening.

Flowering: July to December

Uses: Fruits are sweet and edible. Fruit contains anti-inflammatory properties and can be eaten raw or cooked. Leaves contain anti-oxidative property. Flowers have antiseptic property and are used to prepare tea. Flowers and bark is used as an anti-septic in the Peruvian folklore medicine. The boiled leaves are used to treat gastric ulcer, headache, cold and swellings. ●





Banana

Musa paradisiaca L.

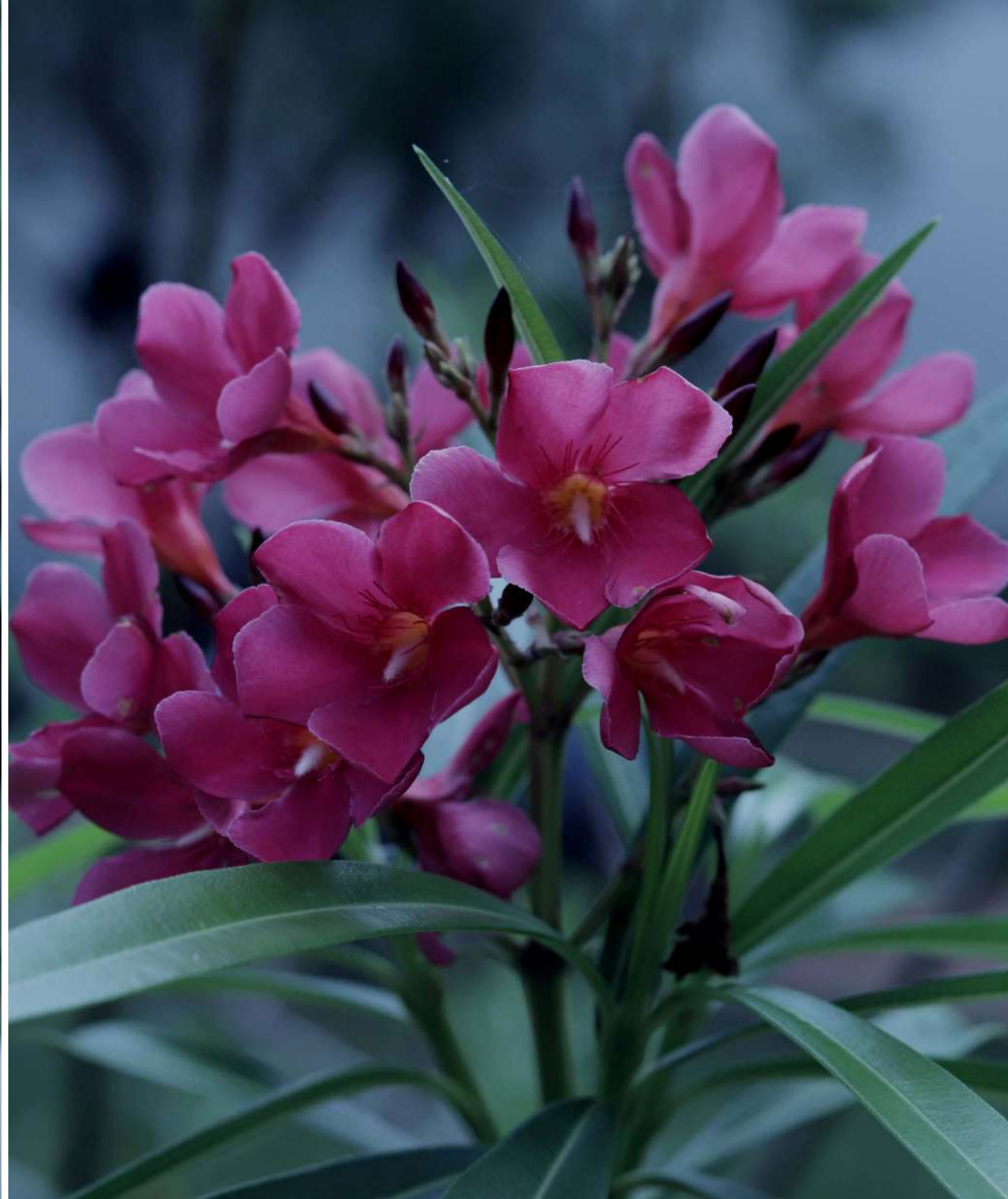
- Botanical Name:** *Musa paradisiaca* L.
Synonym: *Karkandela malabarica* Raf.
Musa acutibracteata M. Hotta
Common name: English – Banana, Tamil – Vaazhai
 pazha maram, Hindi – Kela,
 Kannada – Baale, Bale, Baale hannu,
 Urdu – Kela, Malayalam – Vazha.
Family: Musaceae
Habit: Herb
Habitat: Fertile forest areas, banks of rivers and
 other fresh water bodies.
Distribution: Distributed and largely cultivated in the
 tropical and sub-tropical regions
 of the world.

Plant Characteristics: *Musa paradisiaca* is a medium sized
 tree like herb which is popular for its sweet and tasty fruits.
 It is a type species for the family Musaceae. Leaves simple,
 oblong, contains long petiole, parallel venation and a
 prominent central midrib and mature leaves reaches more
 than 2 meter of length. The leaf sheath is tubular and the
 leaf sheaths are closely packed to produce a pseudostem.
 Inflorescence terminal and is produced from the pseu-
 do stem. Spikes contains clusters of flowers enclosed in
 spathe. There are two rows of flowers were enclosed
 by each spathe. Flowers bracteates, sessile, complete, zygo-
 morphic, bisexual, epigynous and cyclic. Perianth six,

androecium five, anthers bithecous and basifixed. Ovary
 inferior, tricarpeal, syncarpous with axile placentation.
 Fruit is a berry, fleshy and sweet. The plant contains a well
 grown underground rhizome which regenerates the shoot
 system when the shoot system was cut removed.

Uses: It is widely used as a medicine in Siddha, Ayurvedha,
 Unani and other Folk medicines. Ripe fruits are sweet and
 edible which contains pectins, vitamins, minerals and car-
 bohydrates. Ripe fruits are used to treat constipation. The
 ripe fruits are recommended for the treatment of intestinal
 lesions, acidity and heartburn. The white fleshy tissue of
 unripe fruits are edible and is cooked with other vegeta-
 bles. The cylindrical white colored tissue in the center of
 the pseudo stem is rich in fiber and is edible. The flowers
 are edible and the leaves are used like a plate for serving
 and eating food. ●





Indian Oleander

Nerium oleander L.

Botanical Name: *Nerium oleander* L.

Synonym: *Nerium carneum* Dum.Cours.
Nerium flavescens Spin
Nerium floridum Salisb.
Nerium grandiflorum Desf.
Nerium indicum Mill.
Nerium japonicum Gentil
Nerium kotschy Boiss.

Common name: English – Oleander, Indian Oleander, Tamil – Arazhi, Bengali – Raktakarabi, Hindi – Kaner, Telugu – Ganneru, Kannada – Paddali, Chandaatha.

Family: Apocynaceae

Habit: Shrub

Habitat: It grows well in the dry habitats tropical and warm temperate zones. It can also be seen in river banks and Rocky River beds. It is grown as an ornamental plant for its colorful flowers in Indian Hindu temples, roadsides, and institutional premises.

Distribution: Native to Mediterranean region but cultivated throughout the world.

Plant Characteristics: *Nerium oleander* is a large evergreen shrub which is considered as a poisonous and drought tolerant plant. It is a poisonous plant species and the whole plant body is rich in cardiac glycosides. When the animals consumes the plant parts in excess, it affects nervous, heart and gastrointestinal tissues. But some invertebrate, moths and butterflies which feeds on *Nerium oleander* leaves remain unaffected. Leaves simple, narrow, linear to lanceolate and arranged in whorls. Flowers pedicellate, bisexual, complete, tubular and five lobed. Flowers may be white, pink or yellow colored, fragrant and produced in terminal cymes on each branches. Sepals five, gamosepalous and campanulate. Petals five, gamopetalous, twisted, valvate and contains corona. Androecium five, epipetalous, anthers bithecous and basifixed. Gynoecium bicarpellary and Ovary superior. Fruit is a pair of follicle. Seeds endospermic, oblong and contains two cotyledons.

Flowering: Flowers can be seen throughout the year.

Uses: The leaves and flowers have diuretic, emetic and diaphoretic properties. All the plant parts contain anti-cancer properties. It is grown in the school and college premises for its attractive flowers. Leaf and bark powder can be used



as an insecticide. The plant contains some important pharmacological properties such as anti-bacterial, anti-inflammatory, anti-fungal, anti-cancer and hepatoprotective properties. ●



Hoary Basil

Ocimum americanum L.

Botanical Name: *Ocimum americanum* L.
Synonym: *Ocimum africanum* Lour., *Ocimum album* Roxb., *Ocimum brachiatum* Blume, *Ocimum canum* Sims
Ocimum dichotomum Hochst. ex Benth.
Common name: English – Hoary Basil, Wild Basil, Hindi – Kali Tulasi, Tamil – Nai Tulasi, Malay alam – Kaattu Thulasi, Telugu – Kukka Thulasi, Kannada – Nayi Tulasi, Marathi – Ran Thulasi.
Family: Lamiaceae
Habit: Herb
Habitat: Roadsides, waste lands, plains, grass lands, forest margins and bushes with dry locations.
Distribution: Widely distributed in the tropical Africa, Asia, America and West Indies.
Plant Characteristics: *Ocimum americanum* is an erect, small, much branched, aromatic and annual herb. Stem erect, woody at the base, quadrangular and covered with minute hairs. Leaves elliptic, petiolate, base flat, dark green colored with serrate margin. Inflorescence terminal racemes, produced in the tip of all branches. Flowers arranged in whorls, sepals green colored, nearly circular and covered by dense hairs. Petals small, white and smooth. Stamens four, slender and didynamous. Ovary

four lobed and has four ovules. Stigma contains four lobes. Nutlets tiny and dark brown in color.

Flowering: Maximum flowering shoots can be seen between July to February.

Uses: Leaves are eaten raw or cooked. Essential oil obtained from the leaves is used in soap and cosmetics preparation. Leaf paste can be used to apply on wounds and the seeds are used to prepare a cooling drink along with coconut milk. ●

Holy Basil

Ocimum tenuiflorum L.

Botanical Name: *Ocimum tenuiflorum* L.

Synonym: *Geniosporum tenuiflorum* (L.) Merr.
Lumnitzera tenuiflora (L.) Spreng.
Moschosma tenuiflorum (L.) Heynh.
Ocimum anisodorum F.Muell.
Ocimum caryophyllinum F.Muell.

Common name: English – Holy Basil, Sacred Basil, Tamil – Nalla thulasi, Assamese – Kola tulasi, Telugu – Tulasi, Brynda, Gaappaara chettu, Kannada – Thulasi, Hindi – Tulsi, Marathi – Tulshi, Malayalam - Trittavu.

Family: Lamiaceae

Habit: Herb

Habitat: Plains, roadsides, grasslands, thickets and dry lands.

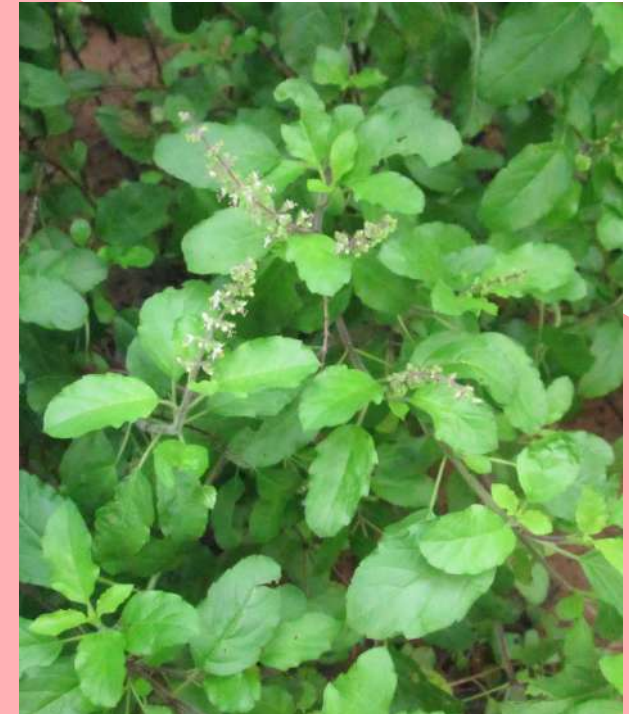
Distribution: Distributed in tropical and sub-tropical regions. It can be easily found on South West Asian countries such as India, Sri Lanka, Bangladesh, Burma, China, Thailand and Malaysia.

Plant Characteristics: *Ocimum tenuiflorum* is generally known as Holy basil, since all parts of this plant contains immense medicinal properties and has been used to treat

a range of human illness. It is an erect, much branched perennial aromatic plant which prefers to grow in open sunlight and grows well even with minimal water supply. Stem woody, branched, dark red or purple colored and densely covered with minute hairs. Leaves opposite, ovate or elliptic-oblong, petiolate, margin serrate and apex obtuse. Inflorescence is a raceme, sometimes branched and fully purple colored. Flowers small, axillary or terminal racemes, pink or white colored, arranged in whorls, each whorl has 5-6 flowers. Calyx two lipped, glabrous, corolla white or purple colored. Corolla two lipped and upper lip four lobed. Stamens four, exserted, filaments free and anthers are one celled. Anther thecus is yellow colored and the anther filaments are white colored. Fruit is a nutlets of four, brown and covered with hairs.

Flowering: Flowering can be seen throughout the year.

Uses: Widely used in Siddha, Ayurveda and folk medicines as a medicinal plant. It is also grown as a holy plant in Hindu homes where they treat it as a sacred plant. Leaves are edible and eaten raw or cooked. Leaves are used to control bronchitis and blood pressure. The essential oil isolated from the leaves contain anti-microbial activity. Traditionally the aqueous extract of tulasi is used to treat various problems such as colds, inflammation, heart diseases, Malaria and stomach ache. ●





Indian Madder, Chay Root

Oldenlandia umbellata L.

Botanical Name: *Oldenlandia umbellata* L.
Synonym: *Gerontogea umbellata* (L.) Cham. & Schlttdl.
Hedyotis brevicalyx Sivar.
Hedyotis indica Roem. & Schult.
Hedyotis linarifolia R.Br. ex Wall.
Hedyotis puberula (G.Don) Arn.
Hedyotis umbellata (L.) Lam.
Hedyotis wightii (Hook.f.) K.K.N.Nair
Oldenlandia puberula G.Don
Oldenlandia wightii Hook.f.

Common name: English - Chay root, Tamil – Chayam, Chayaver, Imbura ver, Malayalam – Chayaveru, Telugu – Cherivelu.

Family: Rubiaceae

Habit: Herb

Habitat: Roadsides, coast sands, unused open plains and abandoned dry places.

Distribution: Widely distributed in Peninsular India, Deccan Carnatic and Sri Lanka.

Plant Characteristics: It is a stiff prostrate annual herb with a woody root system. Leaves sessile, linear-lanceolate, single nerved, rough, apex acute, stipules connate with petioles and stipules have many bristles. Flowers produced in terminal umbellate inflorescence, bell shaped and

axillary flowers are also found. There are four persistent calyx, calyx teeth short, petals four lobed, pinkish white colored, lanceolate and lance shaped. Stamens four, found in the throat of the corolla tube, exerted and having linear filament. Ovary inferior, spherical, hairy, stigma recurved and bifid. Fruit is a capsule, rough and spherical. Seeds are angular and reticulate.

Flowering: September to March

Uses: A red colored dye is isolated from the root bark of well developed plant. Pharmaceutically it has styptic properties and has been used as a medicinal plant in Siddha. One of the anthroquinone isolated from *Oldenlandia umbellata* called Alizarin which contains anti-bacterial activity. ●

Indian Jalap

Operculina turpethum (L.) Silva Manso

Botanical Name: *Operculina turpethum* (L.) Silva Manso

Synonym: *Argyreia alulata* Miq.
Convolvulus anceps L.
Convolvulus turpethum L.
Ipomoea anceps (L.) Roem. & Schult.
Ipomoea turpethum (L.) R.Br.
Merremia turpethum (L.) Bojer
Spiranthera turpethum (L.) Bojer

Common name: English – Indian Jalap, Tamil – Sivadai, Pagandrai, Hindi – Nisoth, Panila, Pitohri, Telugu – Tegada, Malayalam – Thrikoolpakkonna, Chivaka, Kannada – Bilitigade, Aluthi gida.

Family: Convolvulaceae

Habit: Climber

Habitat: Prefers to grow close to water sources, open forest areas, Margins of river, hedges, ponds and pools, wastelands, plains, thickets, margins of canals and moist localities.

Distribution: East Africa, Tropical Asia, Australia and

Micronesia. Distributed throughout the warmer parts of the world.

Plant Characteristics: *Operculina turpethum* is a large and perennial climber species. It grows rapidly and forms a mat of leaves on the road margins or upon other plants. Leaves large, ovate or oblong, margin entire, broad and more or less heart shaped. Stem is very long, purple colored, very strong, twinning and angled. Roots are long, fleshy and branched. Flowers large, axillary, solitary or produced in cyme inflorescence. Each inflorescence contains few straight flowers. Bracts are oblong and deciduous. Sepals are green colored, ovate to oblong, hairy, fleshy and purple colored. Petals white colored and bell shaped. Stamens five and anther filaments are closely attached to petals. Ovary glabrous, superior, glabrous and contains two cells. Fruit is a capsule which is round and has four seeds. In Fruits, enlarged calyx and thick pedicels are conspicuous. Seeds trigonous to globular, smooth and dull black colored. Flowering: Flowering and fruiting can be seen on both winter and summer.

Uses: It is used as a medicinal plant in Siddha, Ayurvedha, Unani and Folk medicine. Dry root and stem is used as raw drugs. Root has unpalatable taste. Root and leaf decoction is used to remove hookworms. Leaf decoction contains strong purgative property. The root and root bark contains laxative property. The root bark and leaves are used in the



treatment of fever, abdominal problems, infected wounds and heart disorders. The root contains Coumarins, Scopoletins and the root aqueous extract contains strong anti-inflammatory activity. ●



Stinking Passion Flower

Passiflora foetida L.

Botanical Name: *Passiflora foetida* L.
Synonym: *Dysosmia foetida* M.Roem., *Passiflora hastata* Bertol., *Passiflora hibiscifolia* Lam., *Passiflora hirsuta* Lodd., *Passiflora hispida* DC., *Passiflora variegata* Mill.
Common name: English – Common passion flower, Goat scented passion flower, Stinking passion flower, Kannada – Kukkiballi, Marathi – Vel-ghani, Hindi – Jhumka lata, Telugu – Tella jumiki, Bengali – Jhumka lota, Malayalam – Poocha palam.
Family: Passifloraceae
Habit: Climber
Habitat: Roadsides, Thickets, Bushes, River margins, margins of cultivation lands and unused open plains.

Distribution: Native to Tropical South America and distributed in India, Brazil, West Indies, Africa, China, Sri Lanka and South East Asia.

Plant Characteristics: *Passiflora foetida* is a trailing climber with the whole body covered with minute hairs. Leaves simple, alternate, distichous, three to five lobed, sub-orbicular, apex acute, margin dentate and base cordate. Stem is round and hairy. Flowers axillary, solitary, fragrant, more or less 4 cm across, bracteate, glandular and pubescent. Calyx lobes are ovate to lanceolate, short

and saucer like. Flowers have gynandrophore. Flowers have filamentous corona which are purple colored at base and white colored at the tips. Stamens five from the gynandrophore and anthers are dorsifixed. Style 3 with prominent stigma. Ovary globe like, single celled and has many ovules. Fruit is a fleshy indehiscent berry, green colored at young and turns to red when ripe, contains many seeds, sub-globose and smooth. Young fruits are toxic.

Flowering: November to May

Uses: Young leaves are edible. The aqueous extract of leaves can be used as an antidote for the Papuan black snake bite. The leaf aqueous extract along the aqueous extract of *Erythrina variegata* can be used to treat sleep disorders. The root is anti-spasmodic. ●

Elephant Caltrop

Pedalium murex L.

Botanical Name: *Pedalium murex* L.

Synonym: *Pedalium microcarpum* Decne
Pedalium muricatum Salisb.
Rogeria microcarpa Klotzsch

Common name: English – Elephant Caltrop, Crow thorn,
Hindi – Bada Gokhuru, Tamil – Anain
erunji, Perunerunji, Kannada – Aane
neggilu, Malayalam –
Kakkamulla, Telugu – Enugu palleru.

Family: Pedaliaceae

Habit: Herb

Habitat: Common in roadsides, riversides, grass
lands and places close to water bodies.

Distribution: Tropical Africa, India, Pakistan
and Sri Lanka.

Plant Characteristics: It is a spreading much branched,
glabrous and succulent annual herb commonly found
on roadsides. Leaves simple, opposite, petiolate, ovate to
oblong and irregularly serrate. Flowers axillary, solitary,
yellow colored, pedicellate with short pedicel, calyx small,
calyx teeth linear, five partite, scaly outside and persistent.

Corolla united to form a tube, corolla tube slender, five
lobed, lobes obtuse, stamens kept within this tube, fila-
ments dilated, glandular and hairy at the base. Fruits are
spinous. Fruit is an indehiscent, narrowed at the base and
contains two seeds per chamber. Seeds oblong.

Flowering: September to December.

Uses: The leaves were cooked and eaten as a vegetable. In
Ayurveda, *Pedalium murex* is mainly used as a tonic, aph-
rodisiac and appetite improving agent. The plant renders
water or milk into a mucilaginous fluid. It is also used to
treat cough, asthma, pain, skin diseases, piles and leprosy.
Roots are used to treat leucorrhoea. The mucilage obtained
from the plant is used in the treatment of gonorrhoea. The
aqueous extract of the whole plant possess analgesic and
anti-inflammatory properties and the fruits are tradition-
ally used in the treatment of reproductive disorders. ●





Copperpod

Peltophorum pterocarpum (DC.)
Backer ex K. Heyne

Botanical Name: *Peltophorum pterocarpum* (DC.) Backer ex K. Heyne

Synonym: *Baryxylum inerme* (Roxb.) Pierre
Caesalpinia ferruginea Decne.
Caesalpinia inermis Roxb.
Inga pterocarpa DC.

Common name: English – Copperpod, Rusty shield bearer, Hindi - Peela gulmohar, Tamil – Perunkondrai, Kondrivakai, Telugu – Konda cinta, Pacha sunkesula.

Family: Fabaceae

Habit: Deciduous tree.

Habitat: It is grown as an Avenue tree. It can also be seen on roadsides, open forests, beach sides, Parks, nurseries, mangrove forests and botanical gardens.

Distribution: Native to South Eastern Asia.

Plant Characteristics: *Peltophorum pterocarpum* is a deciduous tree grows up to the height of 15 meters with huge crown like branches and has been considered as a good shade giving tree. Leaves are large, bipinnately compound, margin entire, each contains 8-10 pairs of pinnae and each pinnae contains 10 to 20 pairs of leaflets. Leaflets are small, oblong, having oblique and asymmetrical bases. Inflorescence is erect, brown colored, terminal panicles with many globose rust colored buds. Flowers are bright yellow

colored, fragrant and bisexual. Petals bright yellow, thin and crinkled. Stamens 10 and the staminal filaments are woolly at base. Ovary superior and hairy. During the time of flowering, the entire tree has covered with golden yellow colored blossoms. Fruits are dark brown colored, flat and thin pods. Each pods contains 1 to 4 seeds, dark red when ripe and turns into black at maturity. Bark smooth and gray colored. This plant contains a deep root system and can be easily propagated through seeds.

Uses: It has symbiotic relationship with nitrogen fixing soil bacteria which fixes atmospheric nitrogen and forms nodules in the root system. It is treated as a significant plant species in traditional system of medicine. The plant parts are used in the treatment of stomatitis, insomnia, skin problems, constipation and dysentery. Bark is used in the treatment of Bruises, swellings and eye problems. ●

Wild Date Palm

Phoenix sylvestris (L.) Roxb

Botanical Name: *Phoenix sylvestris* (L.) Roxb.

Synonym: *Elate sylvestris* L.

Elate versicolor Salisb.

Common name: English – Wild date palm,
Indian wild date, Indian wine palm,
Silver date palm, Hindi – Khajur, Sendhi,
Tamil – Enthupanai, Echai, Kaatinchu,
Telugu – Ita, Kannada – Ichalu,
Kharjura, Ichal,
Malayalam – Kaatinthal.

Family: Arecaceae

Habit: Evergreen tree.

Habitat: River margins, dense thickets,
dry areas, scrub jungles and margins
of cultivation lands.

Distribution: Native to India and Pakistan.
Distributed and cultivated in the
tropical and sub-tropical regions
of the world.

Plant Characteristics: *Phoenix sylvestris* is an erect, tall
and unbranched single main stem containing dioecious

tree species with bulged base. The plant reaches a height of more than 20 meters. The main stem is slender and the stem base is covered with hard and persistent leaf petioles. Rarely branched. Leaves are pinnate, large, many, narrow, longitudinally folded, persistent, more than 5 meters long and are produced in the terminal tufts. The top large leaflets are bluish green colored and many leaflets on the lowermost regions remain as sharp spines. Inflorescence yellow colored, more or less 1 meter long, staminate and pistillate flowers are produced in different plants. Staminate flowers are sessile, creamish, polyandrous, stamens 6 which produces white pollens. Pistillate flowers sessile, globose, perianth green colored, cup shaped, Carpels 3 with a small curved style. Fruits ovoid, orange-yellow colored when immature and turns into reddish-purple colored upon ripening. Fruits are fleshy and takes nearly a year for ripening.

Flowering: August to June.

Uses: *Phoenix sylvestris* is widely cultivated as an ornamental plant in gardens and institutional premises. The stem is tapped for toddy. The leaves are widely used to prepare mats and cleaning brooms. The sugary liquid obtained from the plant is used for the preparation of Palm sugar and sugar based secondary products. This sugary liquid can be used freshly as a drink or it can be incubated and converted into an alcohol containing drink.



The fruits are edible. Wood is useful for construction works and it can also be used as a fuel wood. ●



Hurricane weed

Phyllanthus amarus Schumach. & Thonn.

Botanical Name: *Phyllanthus amarus* Schumach. & Thonn.

Synonym: *Diasperus nanus* (Hook.f.) Kuntze
Phyllanthus nanus Hook.f.

Phyllanthus niruri baronianus (Leandri)

Common name: English – Hurricane weed, Carry me seed, Gale of wind, Tamil – Keezha Nelli, Keezhkai Nelli, Kannada – Kiru Nelli, Malayalam – Kilanelli, Telugu – Nela usiri, Hindi – Bhui aonla, Jangliamli.

Family: Phyllanthaceae

Habit: Herb

Habitat: Moist places, plains, roadsides, margins of cultivation lands and fresh water canals.

Distribution: Native to tropical America. Distributed throughout the tropical regions of the world.

Plant Characteristics: *Phyllanthus amarus* is a small annual herb that reaches the maximum height of about 50 cm. Leaves are small, alternate-distichous, numerous, oblong to elliptic, obtuse, margin entire, glabrous, apex rounded or apiculate. Flowers monoecious, actinomorphic, tiny, yellow to cream colored, hanging in a beautiful row below the leaves. Male flowers are situated near the tip of the branchlets, axillary with five tepals, have short pedicels,

stamens 3, sessile and the filaments connate. Female flowers are solitary, erect, tepals five, ovary globose, style erect and recurved. Fruit is a capsule. Fruits are very small, globose which simply burst open to disperse their seeds to the nearby places. Roots are stout, tortuous and woody.

Flowering: July to October.

Uses: Traditionally *Phyllanthus amarus* is widely used as a medicinal plant for the treatment of Hepatitis B, diarrhea, jaundice, intermittent fevers and wounds. It can also be used to treat skin ulcers, swellings, itchiness, bruises, scabies and sores. The root extract is used to cure stomach pain. Infusions from the young shoots are used to treat chronic dysentery. ●

Amla

Phyllanthus emblica L.

Botanical Name: *Phyllanthus emblica* L.

Synonym: *Cicca emblica* (L.) Kurz
Diasperus emblica (L.) Kuntze
Dichelactina nodicaulis Hance
Emblica arborea Raf., *Emblica officinalis*
 Gaertn., *Phyllanthus glomeratus* Roxb.
 ex Benth., *Phyllanthus mairei* H.Lév.
Phyllanthus mimosifolius Salisb.
Phyllanthus taxifolius D.Don

Common name: English – Indian Gooseberry, Amla,
 Gooseberry, Emblic myrobalan
 Hindi – Amla, Tamil – Nelli, Kaattu Nelli
 Malayalam – Nellikka, Nelli
 Kannada – Betta Nelli, Amalakka
 Telugu – Usiri, Nelli.

Family: Phyllanthaceae

Habit: Evergreen tree

Habitat: Dry and moist deciduous forests, hill
 slopes. Cultivated in all tropical and
 sub-tropical regions of the world.

Distribution: Distributed in India, Malaysia, and Sri
 Lanka. Cultivated throughout the world.

Plant Characteristics: *Phyllanthus emblica* is a medium sized deciduous tree that grows up to 10 meters of height. Bark greyish brown. Leaves pinnately compound, leaflets small, alternate, base oblique, sub-sessile, glabrous, apex obtuse, margin entire and light green in color. Flowers monoecious, greenish yellow and clustered on the leaf axiles. Male flowers have six tepals, stamens 3, anthers connate and has six disc glands. Female flowers have 6 tepals, ovary superior, three celled with two ovules on each cell, styles 3, recurved and are broadly fimbriate. Fruits are globose, fleshy, smooth and light greenish yellow colored with vertical stripes.

Flowering and fruiting: July to February

Uses: Fruits are edible. Fruits contain high quantity of Ascorbic acid, vitamins, and minerals. Fruits are the rich source of anti-oxidants and treated as a medically valued part. Fruits are used as an ingredient in a variety of medicine preparation in Ayurveda, Siddha, Unani and traditional systems of medicine. The plant is a good source of polyphenols, phyllembin, curcuminoids and emblicol. Various plant parts contain anti-microbial, anti-oxidant, anti-diabetic, hepatoprotective and anti-ulcerogenic properties. Fruits are highly traded and can be used to prepare juices, candies and pickles. The plant is used as a tonic to build the lost vitality and vigor. ●





Sunberry

Physalis minima L.

- Botanical Name:** *Physalis minima* L.
Synonym: *Physalis angulata villosa* Bonati.
Physalis micrantha Link.
Physalis parviflora R.Br.
Common name: English – Sunberry, Little Gooseberry
 Hindi - Rasbhari, Tamil – Sodakku thak
 kali, Kannada – Gadde Hannu
 Malayalam – Notinotta
 Telugu – Kupanti
Family: Solanaceae
Habit: Herb
Habitat: Plains, Grasslands, moist places, river
 margins and margins of cultivation
 lands, rice fields and
 unused wastelands.
Distribution: Widely distributed in tropical Africa,
 Asia and Australia.

Plant Characteristics: *Physalis minima* is a herbaceous plant which reaches a maximum height of about 2 feet. It is a perennial species and is well known for its medicinal properties. The leaves and fruits are mostly harvested from wild conditions. Stem is angular, highly branched and green colored. Leaves alternate, petiolate, oblique, stipulate, more or less 10 cm long, margin toothed, apex acute and leathery. Flowers solitary, axillary, pedicellate

and yellow colored. Calyx united, green hairy and persistent. Corolla five, yellow colored, gamopetalous and cup like. Stamens five, epipetalous and having greenish yellow colored anther lobes. Ovary round shaped, yellowish and the stigma is greenish yellow colored. Fruit is a small berry, globose, fleshy and overtopped by inflated calyx. Upon ripening the berry turns from green to yellow color and the outer shell turns from pale green to light brown color. Seeds many, compressed and can be propagated through seeds.

Flowering: November to February.

Uses: It is a traditional medicinal plant used by the local village people. It is generally used as a diuretic agent and is a preferable medicinal plant in the treatment of various urinary problems. The ripe fruits are sweet and edible. It is a commonly available medicinal plant in southern India. ●





Chinese Arborvitae

Platycladus orientalis (L.) Franco

Botanical Name: *Platycladus orientalis* (L.) Franco
Synonym: *Biota orientalis* (L.) Endl., *Platycladus stricta* Spach, *Retinispora juniperoides* Carrière, *Thuja chengii* Bordères & Gausson, *Thuja orientalis* L., *Thuja orientalis* f. *juniperoides* (Carrière) Asch & Graebn., *Thuja orientalis* var. *argyi* Lemée & H. Lévl., *Thuja orientalis* var. *aurea* (Carrière) Rehder

Common name: English – Arborvitae, Chinese cedar and Oriental arborvitae, Assamese – Thuja, Hindi – Mayurpankhi, Manipuri - Lairik heibi.

Family: Cupressaceae

Habit: Shrub or small tree.

Habitat: Occurs in hilly areas between 300 to 3000 meters of elevation.

Distribution: Native to China, Siberia and Korea. Widely distributed in Asia and cultivated in Europe and tropical Africa.

Plant Characteristics: *Platycladus orientalis* is a monoecious

plant grows moderately faster in the full sun light and prefers to grow in a sandy and loamy soil. Commonly known as oriental arborvitae that grows as a dense, conical and columnar tree often forms multiple branches. Plant height varies from 3 to 30 feet. Bark is thin and reddish brown colored. Leaves scale like, facial leaves are rhomboid, apex bluntly pointed, decussately opposite and closely packed. Lateral leaves are boat shaped and ridged. Initially leaves are yellowish green and turns into dark greenish with age. Leaves turn brownish purple on places with cold winter weather. Flowers inconspicuous and are not showy. Male cones are produced in the terminals. Female cones are either axillary or terminal. Male cones contains 8-12 microsporophylls, each with 3-6 pollen sacs. Female cones are greyish green colored, oblong contains scales with a recurved horn. Young seed cones are sub-globose and mature cones are sub-ovoid. Scales remain closed until fruits become ripe and ready to disperse seeds upon maturity. Seeds are wingless, greyish brown or purplish brown, slightly ridged, ovoid and flattened. It grows well in a manure rich soil and is a drought tolerant species. This plant can be easily propagated by cuttings.

Flowering: March to May.

Uses: Grown as a barrier, support or a shade giving plant in the Parking lots, highways and urban areas where poor drainage and high pollution are common. Grown as an



ornamental plant in the school and college premises. Widely planted in cemeteries and known as a cemetery plant. Local community people use the mature stem parts as a fuel wood. The leaves and cones contains essential oil



Indian Borage, Sugandha

Plectranthus amboinicus (Lour.) Spreng.

Botanical Name: *Plectranthus amboinicus* (Lour.) Spreng.

Synonym: *Coleus aromaticus* Benth.

Coleus amboinicus LOUR.

Majana amboinica (Lour.)

Ocimum vaalae Forssk.

Coleus suganda (Blanco) Kuntze.

Common name: English – Indian Borage, Cuban Oregano, Tamil – Karpooravalli, Muttainari, Telugu – Sugandhavalkam, Karpooravalli, Karuvaeru, Malayalam – Kannikkurkka, Panikkurka, Hindi – Patharcur, Patharchur.

Family: Lamiaceae

Habit: Semi succulent perennial herb.

Habitat: It grows well up to the elevation of 1500 meters and can be seen in roadsides river margins and waste places.

Distribution: Native to East Indies but cultivated in many countries. Distributed in the tropical and sub-tropical regions of the world.

Plant Characteristics: It is an evergreen perennial succulent plant grown for the ornamental purpose in the home gardens and medicinal plant gardens. The whole plant is aroma rich and has various medicinal properties. It is a much branched highly aromatic pubescent green herb that

grows up to 90 cm height. The essential oil obtained from the plant organs contain “Carvacrol” as major constituent. Leaves succulent, heart shaped, hairy with toothed margin. Flowers small, produced in distant whorls, contain bell shaped calyx and pale purplish colored corolla. The upper lip of the calyx is ovate and the lower lip has four narrow teeth. Corolla is longer than calyx. Stamens are fused to form a tube.

Uses: The plant is widely used in Siddha, Ayurvedha, folk medicine, Unani and widely cultivated for its aromatic leaves. Mostly leaves are used for the medical purpose. The plant is used to treat malarial fever, cough, chronic asthma, bronchitis, helminthiasis and epilepsy. The plant also contain anti-microbial and insecticidal properties. Leaves contain appetite inducing activity and free radical scavenging properties. Macerated leaves are applied on burns and the bruised leaves are applied on the scorpion bites. ●

Ashoka tree

Polyalthia longifolia (Sonn.) Thwaites

Botanical Name: *Polyalthia longifolia* (Sonn.) Thwaites

Synonym: *Guatteria longifolia* (Sonn.) Wall.
Unona longifolia (Sonn.) Dunal
Uvaria longifolia Sonn.

Common name: English – Ashok, Mast tree
Hindi – Ashok,
Marathi – Devdar
Malayalam – Hemapushpam, Ashokam
Telugu – Devdaru, Asokamu
Tamil – Vansulam
Kannada – Ubbina
Konkani – Asok

Family: Annonaceae

Habit: Evergreen tree

Habitat: Prefers to grow on evergreen forests but can be seen on avenues, roadsides, gardens, parks, dry places and institutional premises.

Distribution: Widely distributed in South East Asia and many other tropical countries.

Plant Characteristics: *Polyalthia longifolia* is a tropical

evergreen tree, grows more than 15 meters of height with a straight main trunk. Bark smooth dark greyish brown. Leaves simple, alternate, long, narrow, dark green, glossy with wavy margin. Flowers complete, bisexual, pedicellate, delicate, star like, fascicled on short umbels, yellowish green colored and produced in clusters on slim green stems. Calyx 3, tiny, base connate, apex acute and ovate to triangular shaped. Corolla six, long, yellowish green, valvate, fleshy, narrow and wavy. Stamens many with broad anthers. Carpels many with sessile stigma. Pollination effected by insects. Fruits sub-globose or ellipsoid, green when young and turns into dark purplish black upon ripening. Fruits are single seeded. Seeds are ovoid and brown colored.

Flowering: February to May

Uses: *Polyalthia longifolia* is grown as an ornamental tree in the gardens. It is also grown as an avenue tree in the school, college and institutional premises. Wood is used for making packing cases. Small stem fragments can be used as a fuel wood. The leaves and bark contains anti-microbial, cyto-toxic and anti-ulcer properties. ●





Pongam Tree

Pongamia pinnata (L.) Pierre

Botanical Name: *Pongamia pinnata* (L.) Pierre
Synonym: *Cajum pinnatum* (L.) Kuntze
Cytisus pinnatus L., *Dalbergia arborea* Willd., *Derris indica* (Lam.) Benn.
Galedupa indica Lam., *Galedupa pinnata* (L.) Taub
Common name: English – Pongam, Indian Beech tree, Hindi – Karanj, Tamil – Pungai, Malayalam – Ponnu, Unnu, Kannada – Honge, Telugu – Pungu
Family: Fabaceae
Habit: Evergreen tree.
Habitat: River banks, along the sides of irrigation channels and margins of streams. Grown in the school and college premises as campus tree.

Distribution: South East Asia and India

Plant Characteristics: *Pongamia pinnata* is an evergreen tree that grows more than 10 meters of height. Bark smooth and greyish brown. Leaves imparipinnate and arranged alternatively. Stipules small and oblong. Rachis long, slender, pulvinate and arranged oppositely. Leaflets ovate or ovate to oblong, margin entire and apex acuminate. Numerous galls can be seen on the leaf surface which are produced by insects. Flowers bisexual, fragrant, purple-white colored, produced in axillary racemes and bracts

are small. Calyx tube bell shaped, petals five, suborbicular, clawed. Wings oblong, stamens 10 and monadelphous. Ovary inferior, sessile and one celled. Stigma capitate. Fruit is a pod, single seeded, flat and indehiscent.

Uses: The whole plant contains variety of metabolites in various plant organs such as flavones, Methylene dioxy flavone, furanoflavone, chromenoflavones, flavonoid glycosides, isofuranoflavones and diflavones. Seeds are traded, oil obtained from the plant contains medicinal value. It is applied as a crude drug for the treatment of skin diseases and ulcers. The roots are used to treat gastric problems, wounds, gonorrhoea, ulcers, vaginal and skin diseases. Flowers are useful in the treatment of diabetes. Fruits are anthelmintic and used to treat abdominal tumors. Leaves are used to treat fever, piles, dyspepsia, scabies, and rheumatism. ●

Mesquite

Prosopis juliflora (SW.) DC.

Botanical Name: *Prosopis juliflora* (SW.) DC.

Synonym: *Algarobia juliflora* (Swartz.) Benth. ex Heynh.
Mimosa juliflora Sw.
Mimosa salinarum Vahl
Netuma juliflora (Sw.) Raf.
Prosopis cumanensis Kunth
Prosopis dominguensis DC.
Prosopis vidaliana Naves.

Common name: English – Algaroba, Mesquite, Hindi – Junglee Kiker, Vilayati, babul, Tamil – Velikaruvai, Malayalam – Sali, Vanni, Kannada – Jaali,

Family: Fabaceae

Habit: Medium sized tree

Habitat: Dry habitats, roadsides, semi-arid areas and over-grassed places.

Distribution: North and South America, Mexico and tropical Asia.

Plant Characteristics: *Prosopis juliflora* is a perennial, fast growing, drought tolerant thorny deciduous tree. Bark yel-

lowish brown. Branchlets zigzag, smooth and has straight spines. Leaves alternate, bipinnately compound, petiolate, pinnae is slender, flat, 2-4, maximum of 11 cm long and there is a circular gland at the base of lower pinnae. Leaflets opposite, glabrous, petiolate, linear oblong, margin entire, contains obtuse base and apex. Flowers bisexual, axillary, sub-sessile, produced in solitary spikes and pale green to cream colored. Calyx campanulate, smooth, and toothed. Petals five, stamens ten, free and slightly exerted. Ovary superior with many ovules. Stigma minute. Flowers pollinated by bees and insects. Fruit is a pod, pale yellow, smooth and flattened. Seeds ovoid and brown colored. Seeds are dispersed by water and animals.

Flowering: October to February.

Uses: It is a widespread hyper accumulating plant. Dried main stem and branches of *Prosopis juliflora* are a good source of fuel wood in the rural India. *P. juliflora* has already proved for its property of accumulating heavy metals in its tissues at higher levels. Hence it can be used for phytoremediation of heavy metal contaminated soils and for the control of soil erosion. The extract of *P. juliflora* are proved to have good reducing property towards chloride, sulfate, chromium, and nitrates present in the leather industry effluents. ●





Guava

Psidium guajava L.

Botanical Name: *Psidium guajava* L.

Synonym: *Guajava pyrifera* (L.) Kuntze
Guajava pyriformis Gaertn.
Myrtus guajava (L.) Kuntze
Psidium aromaticum L.
Psidium pomiferum L.
Psidium pyrifera L.
Psidium sapidissimum Jacq.

Common name: English – Guava,
 Tamil – Koiya, Koiyapazham,
 Malayalam – Pera,
 Kannada – Pearaley,
 Telugu – Goyyapandu,
 Hindi – Amrood.

Family: Myrtaceae.

Habit: Medium sized tree.

Habitat: Disturbed areas, plantation gardens,
 thickets, riparian zones, hill slopes and
 forests edges.

Distribution: Tropical and sub-tropical America,
 Caribbean, Tropical Asia and Africa.

Plant Characteristics: *Psidium guajava* is a shrub to small tree, widely cultivated for its sweet and tasty fruit. It commonly reaches 6 meters of height but pruned to maintain required height. Mature bark is light reddish brown that peels off in flakes. Leaves simple, opposite, dark

green colored, oval or oblong-elliptic and aromatic when crushed. Flowers axillary, solitary and white colored. Peduncle short and pubescent. Sepals 4-5, persistent and green colored. Petals 4-5, soft and white colored. Stamens many, white colored. Fruits is a berry, globose, fleshy and turns from green to yellow color upon ripening. The fruit pulp can be white, yellow or reddish pink colored upon ripening. Seeds numerous, yellowish and reniform.

Flowering: May to June

Uses: Cultivated for its nutrients rich fruit. Ripe fruits are fleshy, sweet and edible. *P. guajava* fruits are a rich source of vitamin C and dietary fibers. The leaves are rich in polyphenols and are used in the treatment of various human health issues such as diarrhea, cough, painful menstruation, sore throat, diabetes and hyper-tension. The leaves contain anti-oxidant, anti-hyperlipidemic, and anti-cancer properties. ●

Traveler's tree

Ravenala madagascariensis Sonn.

Botanical Name: *Ravenala madagascariensis* Sonn.

Synonym: *Heliconia ravenala* Willemet
Urania madagascariensis (Sonn.)
Raeusch.
Urania ravenala (Willemet) A.Rich.
Urania speciosa Willd.

Common name: English – Travelers Palm Tree, Tamil –
Visiri Vazhai, Assamese – Pantho Padop.

Family: Strelitziaceae

Habit: A tall palm like tree.

Habitat: Fresh water wetlands, mountain slopes,
rainforests and tropical coastal forest
areas. Cultivated in botanical gardens
and institutional premises.

Distribution: Native to Madagascar, Africa and
distributed to tropical Asia, Europe
and Australia.

Plant Characteristics: *Ravenala madagascariensis* is en-
demic to Madagascar islands but now it is cultivated as an
ornamental plant throughout the tropical and sub-tropical
regions of the world. It is commonly known as “Travellers

Palm” but it is not a true palm tree and transported from
Madagascar islands to all parts of the world. The apical half
of the plant body resembles banana shoot and the bottom
part resembles a palm tree. It is an evergreen tree with a
huge fan like crown. It has a cylindrical stem at the base
which grows to more than 15 meters of height. It produces
large banana like leaves which reaches a length of about
4 meters. Petiole stout, 5-6 meters long and pale yellow
to pale green colored. In some places, the fan shaped
architecture contains more than twenty leaves. Flowers are
produced intermittently. Flowers many, produced with in
a green, folded, distichous, single cluster of boat shaped
bracts. Tepals five, sub-equal and white to yellow colored.
Fruits are brown and the seeds are blue colored. Fruit is
an oblong capsule, seeds many and seeds covered with
blue colored arils. Propagation can be done using seeds.
The plant can also be propagated through underground
suckers.

Flowering: Flowers produced intermittently.

Uses: *Ravenala madagascariensis* is a famous ornamental
plant. The seeds are edible. The common name “Travellers
Palm” is due to the reason that significant quantity of rain
water or liquid plant secretions are get collected in the bas-
es of leaves or bracts, which are been used as a refreshment
by thirsty travelers. ●





Castor Bean Plant

Ricinus communis L.

Botanical Name: *Ricinus communis* L.

Synonym: *Cataputia major* Ludw., *Cataputia minor* Ludw.
Ricinus africanus Mill., *Ricinus angulatus* Thunb.

Common names: English - Castor Bean Plant, Castor oil plant, Malayalam – Chittamanakku, Tamil – Amanakku, Vilakkennai Kottai muthu, Kannada – Oudla, Hindi – Arandi, Bengali – Veranda

Family: Euphorbiaceae

Habit: Shrub or small tree

Habitat: River margins, road sides and disturbed areas. Cultivated in tropical Asia for its oil rich seeds.

Distribution: Native of tropical Africa.

Plant Characteristics: *Ricinus communis* is a fast growing perennial shrub which can reach the height of a small tree. It is a sucker forming shrub that grows more than 5 meters of height. Leaves are large with long leaf stalks, alternate, dark green and palmately divided into 6-12 lobes. In some varieties, the young leaves are reddish purple and gradually becomes dark green upon maturity. The Flowers produced in terminal inflorescence. Male flowers are yellowish green, produced in the bottom of the spikes with cream colored stamens. Female flowers are produced at the tips of the

spikes with red colored stigmas. Depending upon the variety the inflorescence may be green or red colored. Fruit is a greenish and spiny capsule which bears oval shaped seeds inside. Seeds are large, oval shaped, shiny and has brown mottling on their surface. *Ricinus communis* can be propagated by seeds and these seeds are dispersed by rodents and birds. Seeds contain a toxin compound called Ricin.

Flowering: May to June

Uses: Seeds are economically important since a slow burning oil use to light small size lamps was extracted from the seeds. The oil is highly viscous and has been used to treat stomach constipation. It is used as a strong laxative and purgative in Ayurveda, Unani and other traditional systems of medicine. Castor oil is widely used as a lubricant in the paint and soap industries. Seeds contain 3% of a toxin protein called 'Ricin' which acts as a blood coagulant. ●

Rose

Rosa indica L.

Botanical Name: *Rosa indica* L.

Synonym: *Rosa amoyensis* Hance

Rosa bodinieri H.Lév. & Vaniot

Rosa cavaleriei H.Lév.

Rosa chaffanjonii H.Lév. & Vaniot

Rosa cymosa Tratt.

Rosa cymosa f. plena Z.X.Yu & G.Z.Liu

Common name: English – Rose, Tamil – Roja, Hindi – Gulab, Telugu – Tellagulabi, Assamese – Kanta-golab.

Family: Rosaceae

Habit: Shrub

Habitat: Cultivated throughout the tropical and sub-tropical regions of the world.

Distribution: Native of south East Asia but cultivated in all the tropical and sub-tropical regions of the world.

Plant Characteristics: *Rosa indica* is one of the most popular ornamental plant which is an erect, perennial and thorny shrub. The plant contains essential oils such as rose

oil, geraniol, citronellol, and other long chain hydrocarbons. Stem erect, well branched and has prominent spines. Leaves alternate, long, pinnately compound, margin serrate and apex acute. Flowers are attractive and can be white, red or yellow colored. Sepals 4-5. Petals and stamens many. Fruits ovoid, pulpy and bright red colored. Propagation of *Rosa indica* can be done by seeds, grafting, layering and cutting.

Flowering: February to August.

Uses: *Rosa indica* is cultivated as an ornamental plant in the home gardens, school and college premises. Flowers are the commercially valuable plant part. It is used as a medicinal plant in Siddha and Ayurvedha. The Flower extract contains tannins, flavonoids, alkaloids and terpenoids. Petals are used as a coolant in Indian traditional and home medicine. Flowers are fragrant and has been used on religious and social events. The flower petals are used to prepare a tasty aqueous cool drink called Panner which is very famous in Southern India. The leaves and petals contain anti-bacterial and anti-oxidant activity. Tea prepared from the petals is used to treat fever, common cold, sore throat and runny nose. ●





Wild Sugarcane

Saccharum spontaneum L.

Botanical Name: *Saccharum spontaneum* L.

Synonym: *Imperata klaga* Jungh.
Imperata spontanea (L.) P.Beauv.
Saccharum angustifolium Reinw. ex
 Buse, *Saccharum arenicola* Ohwi
Saccharum caducum Tausch
Saccharum canaliculatum Roxb.

Common name: English – Wild Sugarcane, Kans grass,
 Hindi – Kaans, Telugu – Kaki Ceruku,
 Malayalam – Nannana, Kannada – Kadu
 Kabbu, Tamil – Peikkarumbu.

Family: Poaceae

Habit: Perennial Grass

Habitat: River banks, Marshy places, margins of
 water canals, river islands and margins
 of rice cultivation lands.

Distribution: Native of southern Asia.
 Distributed in the tropical and sub-tropical Africa,
 Eastern Asia and Indo-China.

Plant Characteristics: *Saccharum spontaneum* is a peren-
 nial grass species that reaches up to 3 meters height. It can
 be easily recognized by its white colored, soft and shiny
 inflorescence. It has a well-developed rhizomatous stock
 below the ground. Stem is long, silky below the panicles
 and contains white colored hairs. Leaves linear lanceolate,
 contains rounded base, apex acuminate, margins

serrulate and leaves contain long leaf sheaths. Panicles
 oblong with ascending branches. The caryopses are light,
 soft and dispersed by winds. Ligules are ovate and membra-
 nous. Panicles are long and silky white colored. Spikelets are
 lanceolate, paired, one is sessile and another one contains
 small pedicel. Lower florets are empty and upper florets are
 bisexual. Florets contains 3 stamens where anthers yellow
 colored. Ovary oblong and stigma white colored.

Flowering & Fruiting: November to February.

Uses: *Saccharum spontaneum* is used as a medicinal plant
 in Ayurveda, Siddha, Unani and Folk medicine. Young
 shoots and rhizomes are sweet and edible. It is used for
 land re-vegetation and restoration programs. Root decoction
 is used to treat excessive thirst and burning sensation.
 Root decoction is also used to treat blood mixed diarrhea. ●

Indian Bow String Hemp

Sansevieria roxburghiana Schult. & Schult.f

Botanical Name: *Sansevieria roxburghiana* Schult. & Schult.f

Synonym: *Acyntha roxburghiana* (Schult. & Schult.f.) Kuntze
Cordyline roxburghiana (Schult. & Schult.f.) Merr.
Sansevieria zeylanica Roxb.

Common name: English : Indian Bowstring Hemp, Bow string hemp, Hindi – Marul, Murahri, Kannada – Heggurutike, Malayalam – Hatukapel, Tamil – Marul kalang, Telugu – Ishaura-Koda-udr.

Family: Asparagaceae

Habit: Stem-less fleshy herb.

Habitat: Dry forest slopes, rock crevices, plains and foot hills.

Distribution: Distributed in Eastern Asia, India and Sri Lanka.

Plant Characteristics: *Sansevieria roxburghiana* is a stem-less perennial plant. Plant contains underground rhizome or stolone. Leaves erect, succulent, fleshy, rigid and reaches

more than 70 cm of length with 2-3 cm wide. Leaves simple, linear lanceolate, deeply concave, green, transversely marked with many darker bands, sheathing, apex acute, margin entire and produced from the rhizome. Flowering stem is more or less 1 feet long and flowers are produced in clusters. Flowers are greenish with a purple tinge and has a long flower stalk. Fruit is an indehiscent berry, contains 1 to 3 seeds, fleshy and globose. Propagated via leaf cuttings from fleshy leaves, root stocks and seeds.

Flowering: July to February

Uses: It is used as a medicinal plant in Siddha, Ayurveda and Sowa-Rigpa medical system. Fibers isolated from the leaves are used for various purposes. Aqueous extract of Rhizome shows the presence of anti-diabetic activity. The plant contains anti-microbial, anti-cancer, anti-oxidant and analgesic property. ●





Sweet Broom Weed

Scoparia dulcis L.

Botanical Name: *Scoparia dulcis* L.

Synonym: *Ambulia micrantha* Raf.
Gratiola micrantha Nuttall
Scoparia grandiflora Nash
Scoparia ternata Forssk.
Scoparia purpurea Rldl.
Scoparia nudicaulis Chod. & Hassl.

Common name: English – Sweet broom weed, Hindi – Mithi patti, Ghoda tulusi, Tamil – Sarak kotthini, Kannada – Mrigandi, Bengali – Bon dhonya.

Family: Plantaginaceae

Habit: Herb

Habitat: It grows well in moist thickets, margins of stream beds and unused cultivation lands.

Distribution: Distributed in American tropics and widely naturalized throughout the tropical and sub-tropical regions of the world.

Plant Characteristics: *Scoparia dulcis* is an erect perennial herb grows to a height of about 40 to 60 cms and can be seen on open areas. Leaves simple, contains long petiole, margin serrate, apex acute, arranged in decussate or whorled manner and oblong to elliptic in shape. Flowers axillary, solitary or in pairs, calyx lobes are ovate to oblong

and the margins are ciliate. Corolla white, long, corolla throat contains dense hairs and the lobes are spatulate. Stamens four and are sub-equal. Ovary is globe like, contains two chambers with many ovules. Fruit is a capsule which contains reticulate and four angled seeds. Seeds four angled and reticulate.

Flowering and fruiting: Flowering happens throughout the year but can be readily seen between June to September.

Uses: It is a medicinal herb used in the treatment of problems related to digestion, fever, skin, hypertension, dysentery, insect bites, and diabetes. Young shoots can be used as vegetable. The angular bushy stem is used as brooms. ●

Common Sesban

Sesbania sesban (L.) Merr.

Botanical Name: *Sesbania sesban* (L.) Merr.

Synonym: *Aeschynomene sesban* L.
Coronilla sesban Willd.
Emerus sesban (L.) Kuntze
Sesban aegyptiaca Poir.
Sesbania aegyptiaca var. *picta* Prain
Sesbania confaloniana (Chiov.) Chiov.
Sesbania pubescens Sensu auct.

Common name: English – Common Sesban,
Egyptian rattle pod, Hindi – Jayanti,
Kannada – Jeenangi,
Malayalam – Nellithali, Shempa,
Telugu – Samintha,
Marathi – Shewarie.

Family: Fabaceae

Habit: Shrub or small tree

Habitat: Open marshy places, edges of swamps,
banks of streams and rivers, canal
margins, water reservoirs and
uncultivated lands.

Distribution: Native of tropical Africa and Asia.
Distributed and cultivated throughout the tropical coun-

tries in the world.

Plant Characteristics: *Sesbania sesban* is a fast growing, perennial multi-stemmed shrub or small tree, grows to a maximum height of about 8 meters. The plant fixes atmospheric nitrogen and withstands waterlogging conditions. Some varieties can tolerate acidic and saline soil conditions and helps in the soil improvement. Leaves contains paripinnate rachis with prominent stipules. Leaflets opposite, linear-oblong, glabrous, margin entire with obtuse apex. Flowers produced in axillary raceme clusters. Flowers contain long, campanulate and penta nerved calyx. Corolla yellow, orbicular with two keel like appendages, spotted on the back and the keels are straight and obtuse. In the petals, a tiny recurved auricle is present above the claw. Fruit is a pod which is long, cylindrical, pendulous, twisted and grows upto a length of 23 cm. Each pod contains about 10 to 50 seeds which are having significant quantity of Saponin and oil.

Flowering and Fruiting: August to December.

Uses: Flowers are edible. The tree is used in the production of fertilizer. The leaves contain high phosphorous and nitrogen content and are considered as an excellent forage source for cattle. A kind of gum has been isolated from seeds and bark. Freshly harvested roots and leaves are used in the treatment of scorpion bite. Leaf



decoction is used to treat jaundice during pregnancy and to treat sore throat, gonorrhoea and syphilis in children. It improves soil quality and can be grown as a boundary crop. ●



Bala

Sida cordifolia L.

Botanical Name: *Sida cordifolia* L.
Synonym: *Sida herbacea*
Sida holosericea
Sida rotundifolia Lam.
Common name: English – Bala, Heart leaf sida, Hindi – Kharenti, Barial, Tamil – Kuperikai, Arivalmanaipoondu, Telugu – Chirubenda, Tellagorra, Malayalam – Velluppan, Kattooram, Kannada – Kisangi, Cittuharalu.
Family: Malvaceae
Habit: Shrub/Small tree
Habitat: Marshy places, scrub thickets, road sides, wastelands and dry open places.

Distribution: Distributed in Pan-tropical regions.

Plant Characteristics: *Sida cordifolia* is an erect shrub or small tree that grows to a height of about 1.5 meters. Commonly seen on the unused open lands and can be easily identified with its heart shaped leaves and flowers. Leaves have long petiole, leaves 3 or 5 nerved at base, apex acute, serrate leaf margin with cordate base and ovate in shape. Leaves soft above and the nerves have minute simple hairs. Stem greenish and covered with simple, minute and stellate hairs. Tap roots are branching at the tips which are stout, strong and bitter in tastes. Flowers small, solitary, axillary, complete and bisexual. Calyx contains dense hairs

and prominent ribs. Corolla yellow colored with truncated apex. Ovary sub-globose and pubescent. Stigma capitate and yellow colored and pollination is mostly effected by insects. Seeds are smooth, brown or black colored and mostly dispersed by animals, wind as well as by humans.

Flowering: Flowering and fruiting can be seen throughout the year.

Uses: Widely used in Siddha, Ayurvedha, Folk, Sowa-Rigpa, traditional Chinese medicine and Tibetan medical systems. In Ayurveda it is used as anti-rheumatic, analgesic, antipyretic, anti-asthmatic, antiviral and diuretic medicine. The paste obtained from the whole plant along with garlic and pepper is used in the treatment of asthma. ●

Heart Leaf Sida

Sida cordata (Burm.f.) Borss.Waalk.

Botanical Name: *Sida cordata* (Burm.f.) Borss.Waalk.

Synonym: *Melochia cordata* Burm.f.
Lamarkia morifolia Medic.
Sida beddomei Jacob
Sida humilis Cav.
Sida multicaulis Cav.
Sida veronicifolia Lam.
Sida pilosa Retz.
Sida radicans Cav.
Sida unilocularis L'Herit.

Common name: English – Heart leaf sida, Gujarathi – Bhoibala, Hindi – Bhuinii, Tamil – Koraippasi, Mayirmanickam, Telugu – Benda, Tirunala, Malayalam – Palkurunthotti, Vallikurunthotti.

Family: Malvaceae

Habit: Herb

Habitat: Road sides, open shaded places and wastelands.

Distribution: Pan-tropical Distribution.

Plant Characteristics: *Sida cordata* is a perennial branched

prostrate or trailing herb. Stem covered with simple as well as stellate hairs. Leaves are broad with cordate base, serrate margin with acute to acuminate leaf apex. Petiole and pedicel covered with minute hairs. Stipules linear, filiform and hairy. Flowers axillary, solitary, complete, bisexual and contains a long pedicel. Calyx campanulate, apex acuminate, triangular shaped and five lobed. Corolla yellowish, obovate with round apex. Anthers numerous, basifixed and yellow colored. Ovary sub-globose pentacarpellate with one ovule on each locule, there are five style, one for each carpel and stigma is capitate. Pollination effected by self or by insects. Fruit is globose, having rounded angles, covered by persistent calyx and is an indehiscent or partly dehiscent schizocarp. Seeds are small, reniform and brownish to black colored. Seed dispersal happens by self, wind or by humans.

Flowering: July to January.

Uses: The juice obtained from the plant is used to apply on the boils and wounds. The root extract is used as a tonic and is being used in the treatment of indigestion. The roots are useful in the treatment of gonorrhoea and venereal diseases. ●





Paradise Tree

Simarouba glauca DC.

Botanical Name: *Simarouba glauca* DC.
Synonym: *Quassia simarouba* L. Fil.
Simarouba officinalis DC.
Common name: English – Paradise tree,
 Kannada – Lakshmi taru.
Family: Simaroubaceae
Habit: Tree
Habitat: Grows well in the moist or dry forest,
 thickets, and rocky hill sides.
 Widely grown as a campus tree species
 in the institutional premises.
Distribution: Native to North America and
 distributed in Central America,
 Caribbean and tropical Asia.

Plant Characteristics: *Simarouba glauca* is an evergreen tree, grows to a height of about 15 m. Leaves alternate, pinnately compound, dark green above and light green below, margin entire, contains maximum of twenty leaflets on each compound leaf with rounded leaf tip. Flowers produced in panicles on the tips of each branches. Sepals five, unfused and are green in color. Petals overlapping and yellowish white in color. There are ten stamens in the staminate flowers without ovaries. Female flowers have five ovaries, each with single ovule in each locule. In addition to unfused ovaries, female flowers have ten non-functional stamens. Fruit is a oval shaped drupe and fruits turn into

dark purple or black at maturity. Raw fruits are edible and a kind of edible oil is obtained from the seeds. *Simarouba glauca* forms a well-developed root system and grows well in the warm as well as humid tropical regions. The plant can be easily propagated through grafting or by seeds.

Flowering: Flowers produced in spring season.

Uses: Grown as an ornamental tree in institutional premises and as a shade giving tree in the residential streets and highways. Leaves and bark contains medicinal properties. A specific compound called Tricaproin isolated from *Simarouba glauca* has shown promising results on the growth inhibition of human colorectal carcinoma cell lines by targeting Histone deacetylases. Ethanolic and methanolic extracts are rich in alkaloids, phenols, flavonoids, tannins, steroids, glycosides, saponins, terpenoids which are more effective against the growth of fungi. ●

Mullukathiri

Solanum insanum J.B.Fisch.

Botanical Name: *Solanum insanum* J. B. Fisch.

Synonym: *Solanum melongena* L. var. *insanum* (L.)
Pranin.
Solanum cumingii Dunal
Solanum undatum Lam.

Common name: Tamil - Mullukathiri

Family: Solanaceae

Habit: Prostrate herb or under shrub.

Habitat: Roadsides, open places, plains and unused agricultural lands.

Distribution: Naturally distributed in South and South East Asia, Madagascar and Mauritius. It is a common plant distributed throughout India.

Plant Characteristics: *Solanum insanum* L. is a neglected wild progenitor of common eggplant *Solanum melongena* L. The plant reaches to a height of about 40 to 150 cm and all the plant parts contains sharp prickles. Young stem is terete, prickly, contains minute simple hairs and occasionally purplish. Bark of older stem is grey to brown colored. Leaves simple, alternate, ovate, apex acute, have prominent

petioles with obtuse or truncate leaf base and has prickles on both sides. Flowers hermaphrodite and are produced in racemes or extra axillary cymes. Calyx five lobed, lanceolate and stellate pubescent. Corolla five lobed, rotate, stellate pubescent and violate to bluish colored. Stamens five, ovary two lobed, tetra locular with many ovules. Style slender, stigma two lobed. Fruit is a berry, spherical to ellipsoid in shape, contains smooth outer surface and mucilaginous mesocarp. Flower and fruit base contains many prickles. Seeds circular or reniform.

Flowering: Flowers and fruits can be seen throughout the year.

Uses: It is used in different medicinal and culinary preparations among various Asian ethno and linguistic groups. Seeds used to treat toothaches. Leaves used in the treatment of cholera, bronchitis and asthma. Roots are useful in treating ulcer, poisonous infections, fever and dyspepsia. ●





Black night shade

Solanum nigrum L.

Botanical Name: *Solanum nigrum* L.
Synonym: *Solanum cestrophyllum* Dunal
Solanum decipiens Opiz
Solanum dillenii Schult.
Solanum humile Salisb.
Solanum judaicum Besser
Solanum morella Desv.

Common name: English – Black night shade, Tamil – Manathakkali keerai, Milagu thakkali keerai, Hindi – Mokoī, Malay alam – Mulaku thakkali, Telugu – Kasa ka, Urdu – Makoya, Manipuri – Leipung khangga.

Family: Solanaceae

Habit: Herb

Habitat: Margins of cultivation lands, rivers, canals, uncultivated lands and gardens.

Distribution: Native to tropical Africa but distributed throughout the world.

Plant Characteristics: *Solanum nigrum* is an erect herb and an annual plant. Leaves simple, ovate to lanceolate, margin entire, thin, glabrous, toothed and acute. Stem greenish or purple greenish when young, sparsely hairy or occasionally hairless and rough. Flowers small, produced in umbels, facing downwards, petals white, anthers prominent, yellow colored and fused together. Pollination effected by

insects. Fruit is a berry, shiny, many seeded, produced in clusters, greenish at young stage and become black at maturity.

Flowering and fruiting: December to April.

Uses: *Solanum nigrum* is used as a medicine in Ayurveda, Siddha, Unani, Sowa-Rigpa and other traditional way of medicines. It is widely used as a source of green leafy vegetable food in India. Along with other herbs, it is used as medicine for a range of human health problems. The whole plant extract contains analgesic, anti-inflammatory, sedative and vasodilator properties. The fruit juice is used as an analgesic for tooth and gum pain. A paste obtained from the unripe fruit is used as a poultice to treat headaches and ringworm. Solanine, a glycol alkaloid is found throughout the plant and rich in unripe fruits. ●

Purple Fruited Pea Eggplant

Solanum trilobatum L.

Botanical Name: *Solanum trilobatum* L.

Synonym: *Solanum canaranum* Miq.
Solanum griffithii (C.B.Clarke) Kuntze
Solanum hainanense Hance
Solanum maingayi Kuntze
Solanum miyakojimensense T.Yamaz. & Takushi
Solanum procumbens Lour.
Solanum sarmentosum Nees

Common name: English – Purple fruited pea eggplant, Thai night shade, Marathi – Thoodalam, Mothiringnee, Tamil – Tho othuvalai, Sandunayattan, Surai, Malayalam – Tutavalam, Putharichunda, Telugu – Alarkapatramu, Mullamusti, Kannada – Kakamunji, Oriya – Bryhoti.

Family: Solanaceae

Habit: Thorny climber/creeper

Habitat: Margins of canal, water reservoirs, Unused waste lands, gardens and roadsides.

Distribution: Distributed in South-East Asian countries such as India, Myanmar, Malaysia, Vietnam, Thailand and parts of Indo-Malaysian regions.

Plant Characteristics: *Solanum trilobatum* is a thorny creeper or scrambling shrub which is distributed throughout India and can be seen near water bodies in villages. Leaves and stem contains sharp curved prickles and has glabrous leaf surface. Leaves ovate, maximum of 8 cm long, three to five lobed and has prickles along the veins and leaf midrib. Flowers contains long pedicel with small prickles nearby and narrow short calyx. Corolla purple colored, deeply lobed and pubescent outside. Stamens protruding, prominent and yellow colored. Fruits globose, greenish when young and deep red upon maturity. Seeds tiny and compressed.

Flowering: January to September.

Uses: *Solanum trilobatum* is a well-known medicinal plant in India, mainly harvested for the local use. It is used in the treatment of asthma, cough and runny nose. It is added as an ingredient in the formulations of many medicines in Siddha, Ayurvedha, folk and traditional way of medicines. The whole plant contains antibacterial, antifungal, antitumor and antioxidant properties. It is also used in the treatment of fever, leprosy, rheumatism and Phlegm. It is sold as a green vegetable in local market. ●





African Tulip Tree

Spathodea campanulata P.Beauv.

Botanical Name: *Spathodea campanulata* P. Beauv.

Synonym: *Bignonia tulipifera* Thonn.
Spathodea danckelmaniana Büttner
Spathodea nilotica Seem.
Spathodea tulipifera (Thonn.) G. Don

Common name: English – African tulip tree, Bengali – Rudrapalash, Hindi – Rugtoora, Kannada – Neerukayi mara, Malayalam – Phaauntanmaram, Marathi – Akash shevga.

Family: Bignoniaceae

Habit: Evergreen Tree

Habitat: Grows from plains to higher altitudes, dry humid forest areas, savannah forest and places with tropical climate.

Distribution: Native to tropical Africa. Cultivated in institutional premises and flower gardens.

Plant Characteristics: *Spathodea campanulata* is a large, evergreen and fast growing tree with a dense crown of branches. It grows to a maximum height of about 35 meters and has been harvested from the forest areas for the local use. The tree contains tapering buttressed trunk. Leaves are large, compound leaves which has maximum of 19 deeply veined leaflets. Lateral branches are short. Velvety, horn like, olive colored buds are produced at the tip of the

branches. Upon maturation, the lower tier of buds bend outwards and start to open into a reddish orange tulip like bells with red streaked gold throats. Flowers are very attractive and each flowers have crinkled yellow corolla margin with four brown anthered stamens in the center. The prominent intense brown colored stamens are easily recognizable and visible above the reddish corolla. Flowers pollinated by birds and bats. Fruit is a greenish-brown pod which is finger like and facing upward and outward directions. Each pod contains numerous soft tissue papery seeds which are easily dispersed by wind.

Flowering: Flowering can be seen in the spring season.

Uses: It is cultivated as an ornamental plant in the school, college and university premises, gardens and road sides. Widely used for reforestation schemes. ●

Shaggy button weed

Spermacoce hispida L.

Botanical Name: *Spermacoce hispida* L.

Synonym: *Borreria articularis hispida* (L.) Sivar. & Manilal
Borreria hispida (L.) K.Schum.
Spermacoce avana R.Br. ex G.Don
Spermacoce mutilata Blanco
Spermacoce rigida Salisb.

Common name: English – Shaggy button weed, Malay alam – Natthachoori, Tartaval, Thartha val, Kudalchurukki, Sanskrit – Vasuka, Booka.

Family: Rubiaceae

Habit: Herb

Habitat: Moist places, sandy low lands, road sides, marshy swamps, margins of ponds and pools.

Distribution: Widely distributed in southern china, Malaysia, Indonesia, Philippines and peninsular India.

Plant Characteristics: *Spermacoce hispida* is a perennial herbaceous plant that can be readily seen on road

sides and moist sandy places. Stem angular and covered with dense mass of hairs. Leaves elliptic to obovate, apex acute, contains dense hairs on both the sides. Stipules are prominent and sheathing. Flowers produced in the axillary verticillate cymes. Calyx forms a short tube which is four lobed, ovoid and hispid. Corolla pinkish white, four lobed, forms a slender tube and contains much hairs in the throat. Fruit is a capsule, sub-globose and has two grooved seeds.

Flowering and fruiting: May to August

Uses: It is used as a medicinal plant in Siddha, Ayurveda and Folk medicines. The leaves and seeds have cooling effect and the leaves are applied as a poultice to treat headache. ●





Mahogany

Swietenia mahagoni (L.) Jacq.

Botanical Name: *Swietenia mahagoni* (L.) Jacq.

Synonym: *Cedrela mahagoni* L.
Cedrus mahogani Mill.
Swietenia acutifolia Stokes
Swietenia fabrilis Salisb.

Common name: English – Mahogany, Others –
Madeira red wood, West Indian mahog
any, Cuban mahogany.

Family: Meliaceae

Habit: Medium sized tree.

Habitat: Natural woodlands, Pastures and Road
sides.

Distribution: Widely distributed from North America
to Florida. Cultivated throughout the
tropical regions of the world.

Plant Characteristics: *Swietenia mahagoni* is a popular ev-
ergreen tree species that contains a large spherical crown
with heavy branches and grows up to 25 meters of height.
Barks are deeply fissured. Leaves alternate, elongated, ob-
long lanceolate, base oblique, apex acuminate, margin en-
tire, glabrous above with long petiole. Flowers produced in
panicles with prominent peduncles. Calyx ovate, five lobed
and pubescent. Corolla 5, creamy yellow colored, obovate
and pubescent outside. Anthers 10, ovary pentalocular,
contains tapering narrow style. Fruit is a capsule which is
oblong and has winged seeds. *Swietenia mahagoni* can be

easily propagated through seeds. Seeds should be sown
immediately as soon as ripening observed in tree branches
as the seeds have short viability period.

Flowering and Fruiting: April to November.

Uses: The timber obtained from the genus *Swietenia* is
considered as world's finest timber for the production of
high quality furniture and cabinet work. The wood is
resistant to many wood rotting fungi. It is cultivated in
the tropical countries as a source of high quality wood.
Also grown as an ornamental tree in the university and
college premises. Planted in the garden boundaries for
getting deep shade. ●

Jambolan

Syzygium cumini (L.) Skeels.

Botanical Name: *Syzygium cumini* (L.) Skeels.

Synonym: *Eugenia cumini* (L.) Druce.

Eugenia jambolana Lam.

Jambolifera sinensis Spreng.

Myrtus cumini L.

Syzygium jambolanum (Lam.) DC.

Common name: English – Jamun, Tamil – Naval, Hindi –

Jamun, Chiraijan, Kannada – Nirale,

Neeram, Malayalam – Hjaval, Porinjara,

Telugu – Neredu, Marathi – Jambool.

Family: Myrtaceae

Habit: Evergreen tree

Habitat: Village sacred grooves, river banks, temple premises, roadsides, gardens and community forests.

Distribution: Widely distributed in the East Asia, India, Srilanka, Malaysia, Northern Australia and other tropical regions of the world.

Plant Characteristics: *Syzygium cumini* is a fast growing evergreen tree species that grows more than 15 meters of

height and mainly cultivated for its dark blue colored juicy fruits. Bark greyish brown colored and has large flakes of breakage. Leaves are simple, opposite decussate, elliptic to oblong, smooth, glossy, margin entire, aromatic when crushed and have close parallel veins. Flowers greenish white colored and produced in the branch terminals as well as in the axillary branches. Pollination is effected by bees and other insects. Fruit is a globose berry, oblong, fleshy outside, contains a seed in the center and shiny upon ripening. This plant can be easily propagated by seeds and the seeds are dispersed by birds, bats and other mammals.

Flowering & Fruiting: April to July.

Uses: Fruits are edible and the seeds are used as a medicine in the treatment of Diabetes. Birds and bats relish on the fruits. Fruits have high levels of folic acid and considered as nutrient rich fruit. ●





Rosy Trumpet Tree

Tabebuia rosea (Bertol.) DC.

- Botanical Name:** *Tabebuia rosea* (Bertol.) DC.
Synonym: *Bignonia pentaphylla* L.
Couralia rosea (Bertol.) Donn.Sm.
Sparattosperma rosea (Bertol.) Miers
Tabebuia mexicana (Mart. ex A.DC.) Hemsl., *Tabebuia pentaphylla* (L.)
Common name: English – Rosy trumpet tree, Pink trumpet tree, Hindi – Basant Rani.
Family: Bignoniaceae
Habit: Evergreen tree
Habitat: Open fields, road sides, steep hillsides, evergreen forest and coastal thickets. Cultivated as an ornamental tree in the college and university premises.
- Distribution:** Native to Central America. Distributed in North and South America. Widely grown as an ornamental tree in all the tropical regions of the world.

Plant Characteristics: *Tabebuia rosea* is an evergreen semi-deciduous tree which can be easily recognized by its rose colored flowers. Leaves opposite, palmately foliolate, leaflets elliptic-oblong with long petioles, apex acute to acuminate, margin smooth, glabrous and rounded at base. Flowers produced in clusters in sub-umbelliform panicles. Calyx glabrous and having two lips (bilabiate). Corolla funnel shaped, glabrous outside, pink or magenta or white

in color, whereas the corolla tube is yellow colored. Flowering lasts for many days and the flowers fall down after desiccation. During this period, the fallen flowers produce a pink colored carpet around the tree. Fruits linear and cylindrical. Fruits split open when matured and the winged seeds are released. Seeds are dispersed by wind.

Flowering: January to April.

Uses: Cultivated in the flower gardens for its beautiful flowers. It shows variation in flower color and mainly grown as an ornamental plant. Fallen leaves are the good source of organic manure which enhances soil nutrient content. It is a shade giving tree species grown on the road sides. It is a salt stress tolerant species and most suitable for the coastal garden areas. ●





Grape Jasmine

Tabernaemontana divaricata (L.)
R.Br. ex Roem. & Schult.

Botanical Name: *Tabernaemontana divaricata* (L.) R.Br. ex Roem. & Schult.

Synonym: *Ervatamia coronaria* (Jacq.) Stapf
Ervatamia divaricata (L.) Burkill
Jasminum zeylanicum Burm.f.
Kopsia cochinchinensis Kuntze
Nerium coronarium Jacq.
Nerium divaricatum L.
Nyctanthes acuminata Burm.f.
Reichardia grandiflora Dennst.
Reichardia jasminoides Dennst.
Taberna discolor (Sw.) Miers

Common name: English - Crape Jasmine, Moon beam, Cornation of India, East Indian Rosebay, Hindi – Chandini, Tagar, Tamil – Nandhiyar vattai, Kannada – Nandi Battalu, Marathi – Ananta, Gujarathi – Sagar.

Family: Apocynaceae

Habit: Shrub to small tree.

Habitat: It grows well in the tropical and subtropical regions with full sunlight to partial shade and can be seen in sparse forest areas.

Distribution: Widely distributed in Eastern Asia, Southern china, India, Thailand and Myanmar.

Plant Characteristics: *Tabernaemontana divaricata* is a shrub to small tree which is commonly found in India. It prefers fertile and well-drained soil for better growth. Branches dichotomous. Leaves opposite, glabrous, elliptic or narrowly elliptic, apex acuminate with glabrous petiole. Mature leaves are about 6 inches long, shiny and deep green in color. Peduncle and pedicels are glabrous, bracts are scale like and the flowers are fragrant. Flowers are produced in small clusters of dichotomous cymes in the branch terminals with white colored five petaled pin wheels. Sepals are pale green colored, ovate, corolla white colored, elliptic or obovate, overlapping, spreading. Stamens present in the corolla tube and are narrowly oblong. Ovary ovoid, gradually narrowed into a filiform style and Ovules are approximately twenty on each carpel. Seeds are about two ten on each fruit. Upon injury, stem and other plant organs exudes milky latex. Propagation can be done by seeds and stem cuttings.

Flowering: Flowering can be seen throughout the year.

Uses: *Tabernaemontana divaricata* is grown as an ornamental plant for its beautiful white colored flowers. In India, flowers of this plant are commonly used in pooja. The



whole plant extract shows significant anti-inflammatory and analgesic activity. The plant extract contains antioxidant, anti-infection and anti-tumor properties. Wood is used to make charcoal. ●



Trumpet Flower

Tecoma stans (L.) Juss. ex Kunth

- Botanical Name:** *Tecoma stans* (L.) Juss. ex Kunth
- Synonym:** *Bignonia frutescens* Mill.
Bignonia incisa DC.
Bignonia sorbifolia Salisb.
Bignonia stans L.
Gelseminum molle (Kunth) Kuntze
- Common name:** English – Yellow bells, Yellow elder, Trumpet flowers, Tamil – Manjarali, Swarnapatti, Hindi – Piliya, Telugu – Pachagotla, Marathi – Ghanti Phul, Kannada – Koranekelar, Bengali – Chandaprabha.
- Family:** Bignoniaceae
- Habit:** Large shrub or small tree.
- Habitat:** River banks, forest areas, road sides and gardens.
- Distribution:** Native of South America. Distributed in regions with tropical climate conditions. Can be commonly seen in Asia, North and South America and Caribbean Islands.
- Plant Characteristics:** *Tecoma stans* is a large shrub or a small tree, grows to a height of about 5 – 10 meters. Leaves opposite, pinnately compound, usually with 3 to 7 leaflets and in some cases maximum of 13 leaflets, leaflets ovate-oblong to lanceolate, margin serrate, leaf base oblique and has acuminate apex. Young stem is glabrous and green colored, which turns into reddish brown upon

aging. Bark light brown to pale grey colored and slightly rough in texture. Flowers bright yellow colored, attractive, tubular, five lobed and are produced in clusters at the branch terminals. Axillary flower clusters also found with side branches. There are several faint reddish lines in the flower throat which is slightly ruffled and hairy. Calyx campanulate and 5 lobed. Corolla contracted towards base. Lobes undulate. Fruits are elongated flat capsules. Upon maturity, fruits turn from green to brown color and splits open to release seeds. The papery seeds are dispersed by wind and flood.

Flowering: Flowering occurs throughout the year.

Uses: Mature stem is used for firewood and as a source of charcoal. Wood is used in building construction. *Tecoma stans* is widely grown as an ornamental plant in the institutional premises for its showy yellow colored flowers. ●

Teak

Tectona grandis L.f.

Botanical Name: *Tectona grandis* L. f.

Synonym: *Jatus grandis* (L.f.) Kuntze
Tectona theca Lour.
Theka grandis (L.f.) Lam.

Common name: English – Teak, Indian Oak, Tamil –
Thaekku, Hindi – Sagwan,
Sagun, Kannada – Thega, Saguvani,
Malayalam – Thekku, Thaek
ku, Assamese – Segun, Irula – Thaekku.

Family: Lamiaceae

Habit: Deciduous tree

Habitat: Cultivated in plains, river margins and
forest thickets. Grown in many parts
of Southern and Western
Ghats of Tamilnadu, Kerala
and Karnataka.

Distribution: Cosmopolitan in distribution. Widely distrib-
uted in the tropical regions of Africa, Asia, North America,
Oceania and South America.

Plant Characteristics: *Tectona grandis* is a popular and
economically important deciduous timber yielding tree

species, mainly grown for its wood. Leaves simple, oppo-
site, very broad at maturity, estipulate, contains prominent
and long petiole, margin entire, apex acute, glabrous above
and pubescent below. It's a deciduous tree and shedding
of leaves happens from November to April. Central trunk
is cylindrical with opposite branches. Bark pale yellowish
to brown, rough, fibrous and vertically fissured. Flowers
bisexual, white and are produced in the terminal cymous
panicles. Calyx campanulate, 5-6 lobed, ovate and tomen-
tose. Corolla five to six lobed and oblong. Stamens equal,
erect, with oblong anthers. Ovary superior, globose and
four celled. Each cell contains one ovule. Flowers pollinat-
ed by bees and insects. Fruit is a drupe, brown colored,
globose with spongy epicarp and stony endocarp. Seeds
oblong and are dispersed by self, river water as well as by
anthropogenic agents. Propagation can be done by seeds.

Flowering and Fruiting: May to January.

Uses: *Tectona grandis* is mainly grown for its valuable,
highly priced wood. It is widely grown in community for-
ests, agroforestry lands, forest thickets, gardens and home
backyards. The wood is strong and durable which is used to
make plywood, industrial and domestic wood ware, wood
carvings, sports equipment, toys, tool handles, windows,
doors and furniture with supreme quality. ●





Purple Tephrosia

Tephrosia purpurea (L.) Pers.

- Botanical Name:** *Tephrosia purpurea* (L.) Pers.
Synonym: *Cracca purpurea* L., *Galega piscatoria* Aiton, *Tephrosia canescens* E.Mey. *Tephrosia delagoensis* H.M.L.Forbes *Tephrosia leptostachya* DC. *Tephrosia piscatoria* (Aiton) Pers. *Tephrosia wallichii* Graham ex Fawc. & Rendle
- Common name:** English – Purple Tephrosia, Common Tephrosia, Hindi – Dhamasia, Sarphan ka, Kannada – Empali, Malayalam – Kolinnil, Kattamari, Kozhenjil, Tamil – Kattukozhinji, Avuri, Irula – Kolingi.
- Family:** Fabaceae
Habit: Herb
Habitat: Moist deciduous forests, grasslands, roadsides, plains, margins of ponds and streams, unused wastelands and forest thickets.
- Distribution:** Distributed in Central America, Africa and Asia (Indo-Malaysia).

Plant Characteristics: *Tephrosia purpurea* is an erect, perennial herb that grows to a height of about 50 centimeters. Leaves imparipinnate, Leaflets obovate or oblanceolate, stipulate and apex truncate or obtuse. Flowers few, purple

colored, small sized and produced opposite to leaves in pseudo-racemes. Calyx pubescent and has subulate lobes. Corolla pink to purplish, stamens grouped in staminal tube and orbicular. Fruit is a linear pod, slightly falcate that contains 5-7 seeds. Presence of fruits can be seen throughout the year. Seeds are dark brown and ellipsoid and the plant can be easily propagated by seeds.

Flowering and fruiting: August to December.

Uses: *Tephrosia purpurea* is a best green manure for the agricultural crops. The whole plant is used as a medicine for various ailments in Ayurvedha and Unani medical systems. In Ayurvedha, it is widely used in the treatment of liver cirrhosis and splenomegaly. The plant is a reservoir of various phytochemical constituents such as Lupeol, Rutin, Tepurindiol, tephron and contains anti-diabetic as well as anti-hyper lipidemic properties. The dry plants are used as a source of fuel. ●

Indian Almond

Terminalia catappa L.

Botanical Name: *Terminalia catappa* L.

Synonym: *Terminalia intermedia* Bertero ex Spreng.
Terminalia latifolia Blanco Non Sw.
Terminalia mauritiana Blanco
Terminalia moluccana Lamk.
Badamia commersoni Gaertn.

Common name: English – Indian Almond, Hindi – Badam, Jangli-Badam, Tamil – Saraparupu, Nattu-vadam, Telugu – Badamu, Kannada – Taree, Assamese – Kath-Badam.

Family: Combretaceae

Habit: Semi-deciduous tree.

Habitat: Riverine areas, littoral habitats, coastal plains and open beaches.

Distribution: Widely distributed in Africa, Eastern Asia and New Guinea to Australia.

IUCN Status: Least concerned.

Plant Characteristics: *Terminalia catappa* is the type spe-

cies for the genus *Terminalia*. It is a fast growing semi-evergreen deciduous and spreading tree, widely grown in the institutional premises as an ornamental plant. This tree reaches maximum of 20 meters of height. Bark brownish black and peels longitudinally. Leaves alternate, leathery, oval shaped, glabrous on both sides, apex obtuse, crowded at the tips of the branchlets and upon maturity green colored leaves turns into red. Inflorescence axillary, long slender spikes and contains many fragrant flowers. Flowers attractive, small, greenish white in color and both male and female flowers are produced at the tips of branches. Calyx tubular. Stamens 10, smaller and exerted. Fruits are pale greenish, looking like almond and upon ripening the fruits in some varieties turns green to attractive reddish purple color. The fruits are attractive to bats which helps in seed dispersal. Fruits may remain viable for longer period even after floating in the sea salt water for months. The nuts are edible.

Flowering: February to June.

Uses: *Terminalia catappa* is grown as an ornamental tree in the institutional campuses, avenues, parks and flower gardens. The nuts are edible and tastes like almond. ●





Malabar Gulbel

Tinospora sinensis (Lour.) Merr.

- Botanical Name:** *Tinospora sinensis* (Lour.) Merr.
Synonym: *Campylus sinensis* Lour.
Cocculus tomentosus Colebr.
Menispermum malabaricum Lam.
Common name: English – Malabar Gulbel, Chinese *tinospora*, Hindi – Gilai, Gulancha, Gurch, Kannada – Sudarsana balli, Malayalam – Pee-amerdu, Kaattu amerdu, Marathi – Gulvel, Tamil – Potchindil, Telugu – Thippatheega.
Family: Menispermaceae
Habit: Climbing shrub.
Habitat: Stream margins in the evergreen forests and deciduous forests, sacred grooves, roadsides and scrub jungles.
Distribution: Widely distributed in Asia.

Plant Characteristics: *Tinospora sinensis* is a dioecious deciduous climber where the male and female flowers are produced in different plants. Stem striate, fleshy, greenish when young, contains papery and greyish white bark with prominent lenticels scattered throughout the stem surface. Additionally stem contains long aerial roots. Leaves simple, alternate, broadly ovate with cordate base, apex acuminate and has 5 to 7 strong basal veins. Leaves have long puberulous petioles. Inflorescence axillary and are produced on

old leafless stem. Male flowers are produced in groups with prominent pedicels. Male flower contains six sepals in two whorls and there are six small sized petals. Stamens 6, free with orbicular anthers. Each female flowers contains 6 staminodes, 6 sepals, 6 petals, 3 carpels with bilobed stigma. Fruit is a drupe which are ovoid, red colored and glabrous. Pollination is effected by insects. Seeds are endospermic, curved and has flattened cotyledons. Seeds dispersed by humans, birds and animals. *Tinospora sinensis* can be easily propagated by seeds and stem cuttings, since stem produces aerial roots naturally.

Uses: Stem and leaf preparations are used in the treatment of rheumatism. The plant contains valuable secondary metabolites and has been used in Siddha, Ayurveda and other medical systems in India. Leaf and stem juice is used in the treatment of ulcerated wounds, diabetes, gastritis and piles. The stem decoction is used in the treatment of bone fractures. ●

Cannabis Leaf Nettle

Tragia plukenetii Radcl. –Sm.

Botanical Name: *Tragia plukenetii* Radcl. –Sm.

Synonym: *Croton hastatus* L.
Tragia cannabina L.f.
Tragia involucrata cannabina Müll.Arg.
Tragia tripartita Beille

Common name: English – Nose burn, Cannabis leaf nettle, Tamil – Karunchendhatti.

Family: Euphorbiaceae

Habit: Herb

Habitat: Grasslands, evergreen broad leaved forests, Margins of irrigated fields, scrub jungles and plains.

Distribution: East Asian countries such as India and Sri Lanka, tropical African countries such as Nigeria, Somalia, Congo, Uganda, Kenya, Tanzania, Mozambique, Zambia, Zimbabwe.

IUCN status: Not evaluated.

Plant Characteristics: *Tragia plukenetii* is a sub-erect or prostrate perennial herb with occasionally twinning stem.

Stem covered with plenty of stinging hairs. Leaves have cuneate or rounded base and coarsely serrate leaf margin with triangular teeth or rarely rounded teeth. Leaves provided with long petioles and the leaf blades are tri-lobed. Middle lobe is linear and the lateral lobes are shorter. The main and lateral nerves are often reddish. Stipules lanceolate, acuminate and sub-glabrous. Inflorescence is racemose type provided with 5 to 7 cm long peduncles. Inflorescence is produced opposite to the leaves and are surrounded by painful stinging hairs. Male flowers have short pedicels with 3 ovate greenish white calyx lobes. Anthers minute and the male flowers may or may not have minute pistillodes. Female flowers have 6 elliptic-ovate calyx lobes, short pubescent pedicels and trilobite ovary. Ovary is spherical and has 3 ovules. Styles 3 in number, long, united to halfway, incurved and glabrous. Stigma contains smooth surface. Fruit is a capsule that is trilobite and smooth. Seeds are orange to reddish brown colored. *Tragia plukenetii* can be propagated by seeds.

Flowering: January to June.

Uses: *Tragia plukenetii* is harvested by the local people for medicinal purpose. Leaves and stem is used in folk medicine. ●





Desert Horse Purslane

Trianthema portulacastrum L.

- Botanical Name:** *Trianthema portulacastrum* L.
Synonym: *Portulaca toston* Blanco
Portulacastrum monogynum (L.) Medik.
Trianthema flexuosa Schumach. & Thonn.
Common name: English – Black pig weed, Desert horse purslane, Malayalam – Manal vallikeera, Pasalikeera, Vallikeera, Tamil – Mookiratai.
Family: Aizoaceae
Habit: Prostrate herb.
Habitat: Roadsides, wastelands, gardens, paddy fields, Marshy places, river margins and open places.
Distribution: Distributed throughout the tropics and subtropical regions. It can be commonly found in Southeast Asia, tropical America and Africa.

Plant Characteristics: *Trianthema portulacastrum* is a prostrate succulent herb having thick branchlets at the nodes. Stem succulent, prostrate or slightly rising, smooth or slightly velvety. Plant with red colored stem is found abundant. However the plant with green colored stem appears earlier in the season. Leaves unequal, opposite or sub-opposite, elliptic or oblong, margins entire, undulate and apex obtuse. Stipules dilated at base. Leaves have

prominent petiole which is green or slightly red colored. Flowers bisexual, axillary, solitary, sessile and inserted in the petiolar sheath. Calyx forms a short tube, adnate to the petiole base, five lobed, petals linear or narrowly deltoid, white or pink colored. Stamens 15 to 20. Ovary cylindrical with short style. Fruit is a capsule, apex truncate, two lobed, prominent, erect, brown colored, basal portion remain embedded in the stem and has 2 apical wings. Seeds kidney shaped, black colored and has some muricate concentric lines.

Flowering and fruiting: April to June.

Uses: *Trianthema portulacastrum* has been used as a medicinal plant in Siddha, Ayurveda and Unani systems of medicine. The powder prepared from the dried plant parts are used in the treatment of throat problems and fungal infections. Decoction prepared from the plant is used to treat rheumatism. ●

Coat Buttons

Tridax procumbens L.

Botanical Name: *Tridax procumbens* L.

Synonym: *Amellus pedunculatus* Ortega ex Willd.
Balbisia canescens Rich.
Balbisia divaricata Cass.
Balbisia elongata Willd.
Balbisia pedunculata Ortega ex Hoffmanns.
Chrysanthemum procumbens (L.) Sessé & Moc

Common name: English – Coat buttons, Tridax daisy,
 Tamil – Thathapoo chedi,
 venkayapoondu, kinatrupasan,
 Hindi – Kanphuli, Kumra, Kannada –
 Addike, Malayalam –
 Cheeravanakumminipachcha,
 Telugu – Gaddi Chamanthi.

Family: Asteraceae

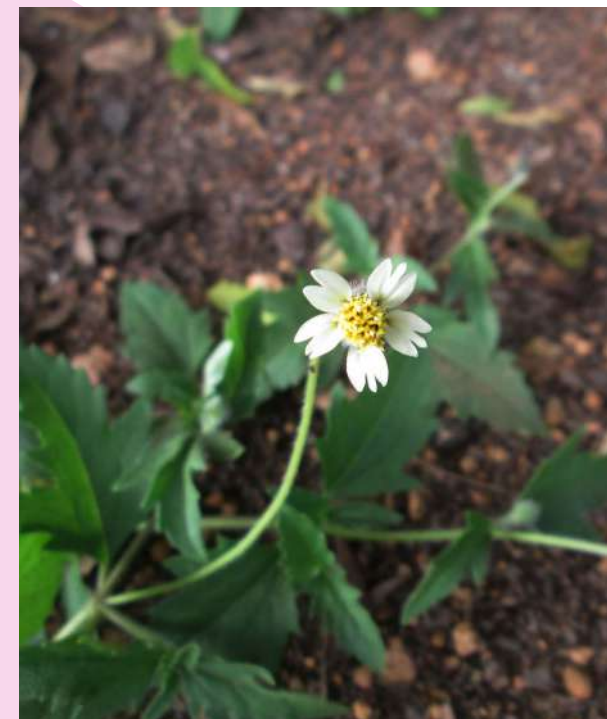
Habit: Prostrate herb.

Habitat: Roadsides, Agricultural lands, wall crevices, river and pond margins, grass lands, gardens, margins of fresh water canals, wastelands and open places.

Distribution: Native to tropical America. Widely distributed as a weed in all the tropical and sub-tropical regions of the world. This plant can be found in all districts of Tamil Nadu and Karnataka.

Plant Characteristics: *Tridax procumbens* is a perennial herb. Stem is hard, long, creeping via roots of stem nodal regions and erect at the ends. Stem produces new roots at each leaf nodes and the tips of stem bears inflorescence with a long inflorescence stalk. Leaves simple, opposite, ovate or lanceolate, margin serrate, fleshy, pubescence, hairy, apex acute and has a prominent petiole. Inflorescence is a capitulum, solitary, contains long erect peduncle. Its flowers are favorite for the low flying butterflies. The inflorescence comprises two types of flowers such as ray florets and disc florets. Inflorescence contains a central disc, upon which tube like disc florets are tightly arranged. The disc florets are yellow colored, bisexual and calyx lobes reduced to scales or Pappus bristles. Ray florets are unisexual female florets which are creamy white colored and have three toothed ligule. Fruit is an achene, dark brown to black colored, covered with hairs and feathery plume like bristles called Pappus. Seeds are small, numerous, contains a silky bunch of Pappus bristles. Seeds are dispersed by wind. Flowering and fruiting can be seen throughout the year.

Uses: *Tridax procumbens* is used in folk medicine. Extracts



from the aerial parts shows the presence of anti-bacterial activity against *E. coli*, *Salmonella*, *Mycobacterium smegmatis* and *Staphylococcus aureus*. The plant contains anti-diabetic, anthelmintic and anti-oxidant properties. ●



Narrow-Leaved Cattail

Typha angustifolia L.

Botanical Name: *Typha angustifolia* L.
Synonym: *Massula angustifolia* (L.) Dulac
Typha elatior Boenn.
Typha foveolata Poved.
Typha media C.C.Gmel.
Common name: English – Narrow-leaved cattail, Lesser Bulrush, Small reed mace, Malayalam – Chambu, Aattudharbapullu, Payapullu, Anapullu.
Family: Typhaceae
Habit: Perennial herb.
Habitat: Wetlands, marshy places, wastelands, margins of river and stream, uncultivated margins in the agricultural areas.

Distribution: Cosmopolitan in distribution. It is a common plant in the tropical and subtropical regions of Asia, temperate northern hemisphere, Japan, tropical Africa, North and South America.

Plant Characteristics: *Typha angustifolia* is a competitive plant species commonly found in the wetlands and marshy places. It has creeping underground rhizome with fibrous roots. It grows well in shallow water bodies of rivers and streams with full sunlight. Stem terrete and basically submerged in the water bodies. Leaves more or less 2 meters long, contains leaf sheaths, linear, distichous,

thick and flattened towards apex. Flowers unisexual and are produced in cylindrical spikes. Male spikes produced above the female spikes. The length of male spikes ranges between 7 to 18 cm. Compared to female flowers, male flowers are slender, paler, densely packed and mixed with simple and linear hairs. Once after shedding the pollen, the staminate spikes quickly withers away. Female spikes are reddish to brown colored and reaches a maximum length of 20 cm. Female flowers found mixed with bracts and sterile flowers. Gynophore is white colored and the stigma is flattened. Cross pollination happens by wind and the plant produces very large number of pendulous seeds.

Flowering: December to February.

Uses: Pollens have diuretic property. Pounded roots are used as a poultice for burns and sores. ●





Wild Gram

Vigna trilobata (L.) Verdc.

Botanical Name: *Vigna trilobata* (L.) Verdc.

Synonym: *Dolichos trilobatus* L.
Phaseolus trilobatus (L.) Schreb.

Common name: English – Wild gram, Three lobe leaf cowpea, Hindi – Mungan, Mungani, Telugu – Pilli Pesalu, Tamil – Naripayaru, Panipayar, Kannada – Kaadesaru, Kohesaru, Sanskrit – Mudgaparni.

Family: Fabaceae

Habit: Perennial Herb

Habitat: Grasslands, plains, Roadsides, Rocky areas, forest edges, moist places and margins of canals.

Distribution: It is distributed in East Asia, China, India, Indonesia, Malaysia, Myanmar, New Guinea and Thailand.

Plant Characteristics: *Vigna trilobata* is a perennial herb. Branches are trailing, smooth, Stipules are peltate and ovate. Leaves divided into three leaflets. Flowers are produced in few flower containing racemes with more than 8

cm long peduncle. Flowers bracteate, have prominent pedicel. Sepals campanulate, cup shaped and petals are yellow colored. Stigma oblique. Fruit is a pod, cylindrical terete and puberulus. Each pod contains six to twelve seeds.

Flowering: July to December.

Uses: *Vigna trilobata* is used as a local food and is collected from the wild. The whole plant can be used as a green manure. ●





Chaste tree

Vitex negundo L.

Botanical Name: *Vitex negundo* L.
Synonym: *Agnus-castus incisa* (Lam.) Carrière
Agnus-castus negundo (L.) Carrière
Verbena cannabifolia Siebold & Zucc.
Common name: English – Chaste tree, Negundo, Hindi – Sindvar, Sambhalu, Tamil – Nocchi, Nirkkundi, Nalla nocchi, Telugu – Sinduvaaramu, Vavili, Kannada – Nochi, Karilakki, Malayalam – Vennoch, Karunochi.
Family: Lamiaceae.
Habit: Shrub or small tree.
Habitat: Deciduous forests, riverbanks, roadsides and plains.

Distribution: Widely distributed in the tropical and sub-tropical regions.

Plant Characteristics: *Vitex negundo* is an aromatic deciduous shrub or small tree. Stem four angled. Leaves opposite decussate, pale green colored, 3-5 foliate, leaflets lanceolate, margin entire, crenulate and apex acute. Flowers lavender to blue colored, complete, bisexual, many, fragrant, produced as terminal panicles and attracts butterflies and moths. Calyx campanulate and five toothed. Corolla sub-infundibular, five lobed, two lipped and purple or lavender colored. Upper lip two lobed and lower lip is three lobed. Corolla tube is narrow, densely villous at throat and

pubescent outside. Stamens four, didynamous, filaments slender and filiform. Anthers oblong, light brown colored and two celled. Ovary glabrous, bicarpellary and four lobed. Stigma subequal, subulate and bilobed. The whole plant body is susceptible to pests and moulds. Pollination effected by insects. Seeds dispersed by birds, humans, animals and wind. Fruit is a drupe which is globose, slightly ribbed and has dotted glands.

Uses: *Vitex negundo* is widely used in Chinese medicine and commonly grown as a hedge plant in Indian villages. Leaves are aromatic, astringent, febrifuge, sedative, tonic and vermifuge. Leaf extract has bactericidal and anti-tumor activity. The stem decoction is used in the treatment of burns and scalds. Roots are used in the treatment of colds and rheumatic ailments. ●

Common cocklebur

Xanthium strumarium L.

Botanical Name: *Xanthium strumarium* L.

Synonym: *Xanthium abyssinicum* Wallr.
Xanthium brasiliense Velloso
Xanthium californicum E.L. Greene
Xanthium chinense Mill.
Xanthium italicum Moretti
Xanthium macrocarpum DC
Xanthium occidentale Bertol.

Common name: English – Burweed, Cocklebur,
 Hindi – Chota Dhatura, Sankhahuli,
 Chota Gokhura, Kannada – Maruluum
 matti, Tamil – Marul-
 oomathai, otrachedi,
 Telugu – Marulutige.

Family: Asteraceae

Habit: Herb

Habitat: Marshy places, roadsides, wastelands,
 plains, riversides and margins of water
 canals.

Distribution: Native of Central and South America.
 Widely distributed in the tropical and
 sub-tropical regions.

Plant Characteristics: *Xanthium strumarium* is an erect annual herb that produces many conspicuous prickly cockleburs. It is considered as a major weed plant in soybean, cotton, maize and groundnut cultivation fields and acts as an alternative host plant for a number of crop pests. It causes significant reduction in the yield of different crop species. Stem short, tough, stout, hairy and turns maroon to black at maturity. Leaves large, broad, irregularly toothed or lobed, cordate, 3 to 5 lobed, alternate, spirally arranged, apex acute with serrate or crenate leaf margin. Flowers monoecious and yellowish green. Male flowers are inconspicuous and produced in terminal clusters. The corolla is true, tubular and the stamens are free. Female flower heads are axillary, greenish and enclosed by an involucre. Fruit is an achene, enclosed in a prickly, glandular hispidulous envelop. Each individual fruit is an elliptic or egg shaped structure which are produced in clusters around the stem. Fruits easily sticks to cloths and animal surfaces and thereby disperse from place to place.

Flowering: August to September.

Uses: It is a traditional Chinese medicinal plant used for thousands of years. It has been used to treat rhinitis, nasal sinusitis, gastric ulcer, head ache, arthritis, bacterial and fungal infections. Recent research findings indicate the presence of specific pharmacological properties such as



anti-inflammatory, anti-tumor, anti-parasitic, anti-oxidant and insecticidal properties in the extracts and compounds from *Xanthium strumarium*. ●



Indian Jujube

Zizypus mauritiana Lam.

Botanical Name: *Zizypus mauritiana* Lam.

Synonym: *Paliurus mairei* H.Lév.

Rhamnus jujuba L.

Rhamnus mauritiana Soy.-Will.

Ziziphus jujuba (L.) Gaertn.

Common name: English – Jujube tree, Common jujube, Hindi – Ber, Kannada – Yelchi, Malay alam – Cherumali, Lanthapazham, Eletha, Tamil – Ilantha, Ilanthai.

Family: Rhamnaceae

Habit: Small to medium sized tree.

Habitat: Dry deciduous forests, roadsides, waste lands, plains and river margins.

Distribution: Cosmopolitan.

Plant Characteristics: *Zizypus mauritiana* is a much branched, evergreen, thorny tree commonly found in India. It grows to a maximum height of about 8 meters with a thorny spreading crown. It is a compact tree and tolerant to severe drought conditions. Bark dark grey to black colored with vertical cracks. Petiole and underside of the leaf is a white buff. Leaves simple, alternate, glabrous above, strongly 3 ribbed from base, distichous and has solitary or pairs of stipular spines. Lamina ovate or elliptic ovate, base oblique, apex round or retuse, margin glandular-denticulate, lateral nerves 2-3 pairs which are prominent and slender. Flowers bisexual, greenish yellow, produced in dense

axillary cymose fascicles. Calyx tube is very short with five lobes. Corolla 5, round at apex, stamens 5, enclosed in the petals. Ovary two celled, embedded in the disc, ovule one, style 2 which are connate at the middle. Stigma 2-fid. Flowers pollinated by bees and other insects. Fruit is a drupe, roundish to oblong, contains white fleshy part and inner hard seed.

Uses: Leaves contain astringent and febrifuge properties. Ripe fruits are eaten raw or preserved. Fruits have sour to sweet tastes depending on the variety. Fruits considered as a tonic to enhance liver function, helps in weight gain, increases stamina and muscular strength. Dried fruits contains saponins and alkaloids. It contains anti-cancer, antidote, sedative and styptic properties. The roots are used in the treatment of dyspepsia. The plant produces excellent firewood and good charcoal. ●



