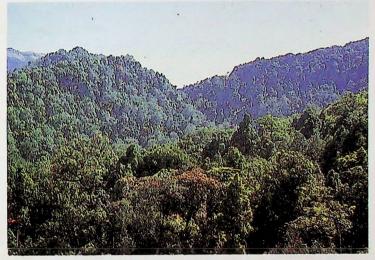


Karnataka, the land of luxuriant forests is known for the enchanting beauty of nature and bounty of natural resources.

Medicinal plants, one of the Chief Components of our natural resources comprises of nearly 25% of the total 3800 species of higher plants. About 450 species are frequently used by rural and tribal populations and the practitioners of traditional systems of medicine. The plants enjoy various types of habitats and are housed in vegetation types ranging from Evergreen, Semievergreen, Moist deciduous, Dry deciduous, Scrubs, Grass Lands, Sholas, Estuaries to Semi-arid types.

In recent days, increase in human and cattle population, demand for agriculture land, mining operation, construction of Dam etc., have resulted in fast depletion of natural forest vegetation. Further, exploitation of natural resources is increasing at an alarming rate.

In this context, Karnataka Forest Department has made pioneering effort to conserve and protect the natural resources by creating a chain of "Herbal reserves" and "Herb gardens".



Evergreen forest in Western Ghat



Interior of a Evergreen Forest

# Herbal Reserves

These are natural areas comprising of rich diversity of species especially the medicinal plants in different bioclimatic regions.

# **Objectives**

- To protect the valuable species in their natural habitats.
- To carryout Scientific studies to understand the intricacies of succession of the individual species and their interactions.
- To understand the complex nature of Ecosystems, to propagate plants and to restore degraded ecosystems.

About 12 reserves are identified along the Biogeographic regions of the state and the notable ones are

Savandurga – Bangalore District
Biligirirangana Hills – Mysore District
Bababudangiri Range – Chikmagalur District
Gangamoola – Chikamagalur District
Kodachadri – Shimoga District
Anshi Ghat – Uttara Kannada District
Kappadagudda – Dharwad District

# Herb Gardens

Herb gardens are established in various bioclimatic zones to house specific types of plant species.

# **Objectives**

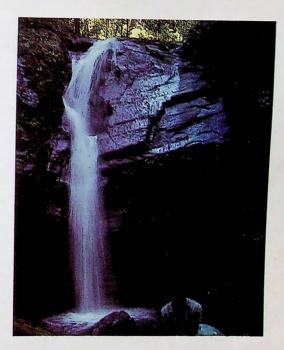
- To grow all naturally occurring species of the surrounding area.
- · To develop nursery techniques for propagation.
- To cater the needs of user vaidyas, rural people, tribals and industries in preparation of medicines.

# **Ethno Botanical Gardens**

Gardens of special nature are also established to elucidate the age old relationship of specific plants with various human practices, to high-light the aspects narrated in vedic literature, and great epics of Indian cultural heritage.



A view of Dhanvantri Vana, Bangalore.



Perennial Waterfall amidst thick forest.

Pavitra Vanas (Sacred Grooves) The medicinal plant and other plants considered as sacred in Indian cultural heritage are grown in the chain of Pavitra vanas located all over the state.

Bakkala Vana

A garden depicting various compositions of aesthetic gardens, relation of plants to stars and planets, medicinal plants etc., covering the various aspects narrated in the preachings and writings of great saints of India - located at Bakkal, Sirsi, Uttara Kannada.

Dhanvantri Vana

The garden designed and developed to help the studies in Indian systems of medicine the Ayurveda, Sidda and Unani and also to cater the needs of drug preparation by Research and study institutions – located near Jnanabharathi Campus, Bangalore.

## Aegle marmelos

Rutaceae

San : Bilwa Kan :Bilpathra

Small tree, cultivated near houses and temples, branches with strong straight spines. Leaves 3-foliate. Flowers greenIsh-white. Fruit large 5-7 cm in diameter, globose, rind grey to yellow

Part used 'Root, bark, leaf, seed. Uses Diarrhoea, constipation, worms, cardiac diseases, skin diseases.





## Aerva lanata

Amaranthaceae

San : Pashana bedha

Kan : Bilihindi

Tomentose herb. Inflorescence a spike of clustered flowers, white, softly tomentose. Frequent in waste places in dry districts.

Part used :Roots, leaves, whole plant.

Uses: Urinary calculi, dysuria, wounds, polyuria, piles, abdominal disorders, cardíac diseases, uterine diseases, pain.

# Alangium salvifolium

Alangiaceae

San : Ankola Kan : Ankole

A deciduous small tree, often with spines. Bark grey, and wood is hard. Flowers, white, scented.

Part used: Root bark, seed

Uses: Diarrhoea, Leprosy, fever, erysipelas, diseases of Vata and Kapha, Skindiseases, poisioning, urinary disorders, centipede poisoining, diseases of head.





#### Aloe vera

Liliaceae

San Kumari Kan Lole sara.

Perennial plant with a short stem, found in semi- wild state in many parts of the country. Leaves 30-60 cms long full of juice, smooth, except for the spiny teeth on the margins. Flowers reddish-yellow

Part used :Root, leaf juice.

Uses: Leprosy, piles, mental disorders, fistula, stomach disorders, dysentery. Eye diseases, burns, corns, skin diseases, colic, spleen and liver ailments. Jaundice, menstruation problems.



### Aristolochia indica

Aristolochiaceae

San : Ishwari Kan : Ishwari beru

Twining glabrous herb. Leaves lanceolate. Flowers irregular, perianth tube long with globose base, greenish-purple. Fruit a globose capsule, valves opens septicidally appears like a basket.

Part used :Root, leaves, whole plant. Uses :Snake-bite poisoning, worms, fever, wounds, spider poisoning.

# Asparagus racemosus

Liliaceae

San : Salavari

Kan : Halavumakkala balli

Armed woody climbers, cladodes linear, flowers in axillary, recemes, white. Fruit a

berry, globose, seeds black.

Part used: Tuberous roots.

Uses :Urinary diseases, gynaecological disorders, diseases of nervous system, hyperacidity, gastritis, hemorrhagia, eye diseases, galactagogue, tonic.





#### Cassia fistula Caesalpiniaceae

San : Suvarnaka — Raja vruksha Kan : Kakke

Deciduous tree 3 to 8 meters high. Flowers in long raceme. Pod to 60 cm long. cylindric, smooth, seeds many, ovate. An indicator of deciduous forests. Parts used: Root bark, Stem Bark, Leaves, Flowers, Fruits, Seeds, Uses : Rheumalism. Antidote, purgative, skin diseases, diabetes, constipation, venereal diseases, worms, jaundice, pain, indigestion, leprosy, anaemia. leucorrhoea.

#### Clitoria ternatea

Fabaceae

San : Aparajila Kan : Shankapushpa

Climbing herbs. Flowers altractive, large, white, often blue tinged. Common across the plains.

Part uses : Whole plant

Uses: Epilepsy, psychosis, mental retardation, insomina,

pain, brain tonic.





# Eclipta alba

Asteraceae

San: Bhringaraja Kan : Garuga

Herb of damp places and marshy area. Leaves linear-oblong, tomentose. Flowers white, Plant drying black.

Part used: Whole plant, seed.

Uses: Eye diseases, Hair falling, Cold, diseases of head, Dental diseases, ulcers and wounds bronchial asthma, leprosy, worms, oedema, anaemia.

### Embelia ribes

Myrsinaceae

San : Vidanga Kan : Vayu Vilanga

Climbing shrubs; stem with large tubercles at base. Leaves simple with gland dot in pits on either side of the midrib. Flowers white. Fruit a red drupe.

Uses: Worms, distaste, anaemia, oedema, fever, anorexia, urinary calculi, polyuria, rigidties lower limbs, fistula, pain, vomiting.



# Evolvulus alsinoides

#### Convolvulaceae

San :Vishnu Kranthi Kan :Vishnukranthi

Prostrate herb, root stock woody. Leaves oblanceolate. Flowers blue, solitary, pedicel slender. A frequent white hairy herb of waste places.

Part used :Whole plant

Uses: Fever, Abscess, Amenorrhoea, Diarrhoea, Brain Tonic, Hair Oil.





### Gloriosa superba

## Liliaceae

San: Langali

Kan : Karadi Kannina Gedde

Climbing branched herb with white tubers. Leaves simple, tip tendrillar. Flower solitary, reddish yellow. Fruit a capsule. Common in deciduous to moist forests.

Part used . Tuber

Uses: Leprosy, piles, oedema, pain, worms, wounds gonorrhoea

#### Gmelina arborea

Verbenaceae

San : Gambhari Kan : Shiyane

Medium sized tree. Leaves opposite, crowded at branch ends, ovate-cordate, actuate with dense yellow tomentum. Flowers large, yellowish. Fruit a drupe, oblong, green-black at maturity.

Part used : Root, bark, fruits.

Uses: Diseases of nervous system, oedema, cardiac diseases, pain, dysuria, piles,

poisoning, rejuventor.





# Gymnema sylvestre

Asclepiadaceae

San : Ajasringi Kan : Madunashini

Climbing shrubs, branches tomentose. Leaves ovateoblong, acuminate. Flower small, in cymes. Corolla pale yellow. Fruit a follicle. Common in dry districts.

Part used : Root, leaf.

Uses: Head ache, hydroceles, polyuria, leprosy, pruritus, poisoning, wounds, bronchial asthma, diseases of kapha.

# Helicteres isora

Sterculiaceae

San : Avarlanee Kan : Yadamuri

Shrubs to 4 meters high. Leaves elliptic ovate, stellate tomentose. Flowers crimson-red fading grey. Fruit of spirally twisted follicles.

Part used : Root bank, fruits.

Uses: Blood diseases, diarrhoea, dysentery, pain, polyuria, worms.





## Hemidesmus indicus

Asclepiadaceae

San : Sariva Kan : Sogadeberu

Stender twining herb, roots woody, aromatic. Leaves linearlanceolate often with white streak along the midrib. Common weed of waste places.

#### Part used : Root stock.

Uses: Poluria, haemorrhage, gout, wounds, leprosy, diseases of blood, anaemia, jaundice, colic.

# Hygrophila auriculata

#### Acanthaceae

San : Kokilakshya Kan : Kolavalike

Erect herbs. Leaves lanceolate, subsessile, brownish-yellow thorns 3-4 cm long, straight, Flowers in whorl of 4 pairs at each node, bract long linear, hairy, corolla blue, Fruit a capsule, seeds 4-8

## Part used : Root, seed, leaves.

Uses: Diuretic, employed for jaundice, dropsy, rheumatism, diseases of urinogenital tract, oedema, thirst, eye diseases, aphrodisiac, rejuvenator.





## Nelumbo nucifera

Nelumbonaceae

San : Kamala Kan : Thavare

Aquatic herb, grow in pools and tanks. Leaves 30-50 cm across, pellate. Flowers rose-pink to 25 cm across with a long spongy peduncle.

Part used :Root, flowers, Seed, Whole plant.

Uses: Thirst, burning sensation, boils, Haemorrhage, sterility, skin diseases, Diarrhoea, Menorrhagia, Bleeding piles.



Phyllanthus emblica Euphorbiaceae

San : Amalaki Kan : Nelli

3 to 10 meters high, branchlets hairy, reddish brown. Leaves alternate, simple, to 1 x 0.2 cm. Fruit globose berry, greenish- yellow.

Part used : Fruits

Uses: Chronic fever cardiac diseases, polyuria, Vomiting, constipation. Eye diseases, Haemorrhage, Tuberculosis, Cough, Dyspnoea, Disorders of blood.



# Phyllanthus fraternus

Euphorbiaceae

San : Bhoomyamalakee

Kan : Nelanelli

Herbs to 15-30 cm leaves distichous to 9 X 4 mm. Fruit a smooth capsule, A common garden land and waste land weed.

Part used: Whole plant.

Uses: Eye diseases, hiccup, polyurea, anaemia, jaundice, thirst, leprosy, urinary disorders.



#### Rauvolfia serpentina Apocynaceae

San : Sarpagandha Kan : Garudapathala

A small erect shrub to 2 ft high. Leaves in whorls of 3, thin, lanceolate, bright green above and pale beneath. Flowers white, often linged with violet in irregular cymes. Fruit a drupe, purplish black when ripe.

Part used : Root.

Uses: Insomnia, psychosis, worms, epilepsy, anorexia, diseases of nervous system, mental disorder, pains, poisoning.

## Rubia cordifolia

#### Rubiaceae

San : Manjista Kan : Manjeete beru

A climber with angular stem. Leaves with long petioles. Common in deciduous to semi evergreen forests among bushes.

Part used : Root

Uses: Oedema, diseases of blood, goul, diarrhoea, leprosy, erysipelos, wounds, polyria, gynaecological disorders, eye diseases, dysuria, ear diseases.





#### Terminalia bellirica

Combretaceae

San : Bibhitaka Kan : Shanthi, Tare Mara

A deciduous tree with leaves crowded at the ends of branchlets. Flowers small, in spikes. Fruit a single seeded drupe, oblong, faintly ridged.

Part used Fruits

Uses: Bronchial asthma, trachyphonia, eye diseases, diseases of throat, oedema, diarrhoea, constipation, worms, cardiac disease, liver disorders.



### Tribulus terrestris

Zygophyllaceae

San : Gokshura Kan : Neggena mullu

Procumbent herbs, with appressed white cottony hairs. Flowers yellow, solitary. Fruit a schizocarp, woody with a pair of unequal spines on the wall. A weed of waste places.

Part used : Root, Fruits

Uses : Dysuna, polyuria, occema, Bronchial asthma, piles, cardiac disceases, urinary calcull, Anorexia, Diseases of Nervous system.

For Further Details Contact : Conservator of Forests

Research and Utilisation Circle

Aranya Bhavan

18th Cross, Malleswaram

BANGALORE - 560 003, India.

Design and Produced by : A.N. Yellappa Reddy

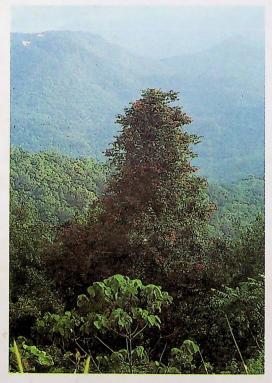
Balakrishna Gowda

Script : A.N. Yellappa Reddy

M.M. Nissar

Photo : K.N.S. lyer

Balakrishna Gowda M.R. Gurudeva



A View of Virgin Forest of Western Ghat's

Published by: Shivanna, Silviculturist, Bangalore.

Printed at Navbharath Enterprises, Seshadripuram, Bangalore 20.