

## ETHNOBOTANICAL OBSERVATIONS ON THE TRIBALS OF CHINNAR WILDLIFE SANCTUARY

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***ABSTRACT:** Studies on the flora and ethnobotany of the tribals of chinnar wildlife sanctuary were carried out. Though the sanctuary has over 200 species of medicinal plants, the tribals are using 55 species, Ethnobotanical details of 64 species used by the tribals in the sanctuary are presented in this paper.*

### INTRODUCTION

Chinnar wild life sanctuary is located along the rain shadow region of the western ghats between 10°05' to 77°22' N latitude and 77°05' to 77°17' E longitude in idukki district of Kerala state. The sanctuary occupies an area of 90.44 km<sup>2</sup>. The vegetation is dominated by dry deciduous forests having sandal trees. The other vegetation types are moist deciduous forests and semi-evergreen forests which are mostly confined to the sides of the river courses. The area bordering Eravikulam National park is under grasslands and shoal forests.

The tribals in the sanctuary are Hill pulayas and Muthuvans, living at 11 settlements, the muthuvans are considered as a superior group and do not mingle with the hill pulayas. They prepare to live in areas away from the settlement of hill pulayas, both the groups practiced shifting cultivation in the past. The muthuvans have now settled at olikkudy, ollavayal, mangappara, thayannamkudi, puthukudy, vellakkalkudy and iruttalakudy. The hill pulayas have settled at champakkad, palapetty and alampetty. At Ichampetty both the groups have settled but they rarely mingle. The groups have settled but they rarely mingle,

the locations of settlements are shown in the map.

The tribals in their settlements cultivate most of the food plants like Ragi (*Eleusine coracana*), Thuvara (*Cajanus cajan*), Rice (*Oryza stiva*), tapioca (*Manihot esculenta*), sweet potato (*Ipomoea batatas*) and vegetables lemongrass (*Cymbopogon citrates*) is widely cultivated by the tribals and the sale of oil is the main source of income. The major non-wood forest products collected and marketed are Gooseberry (*Phyllanthus emblica*), Mango (*Mangifera indica*), Kodappuli (*Garcinia gummi-gutta*) and honey. The gooseberry varies in size. The large sized variety found in champakkad, thayannamkudy and Ichampetty is very well known and fetches a high price.

### Methodology

Ethnobotanical details were collected from the tribal medical practitioners during the period of floristic study from 1994 to 1996. The voucher specimens prepared are deposited in the Kerala Forest Research Institute Herbarium (KFRI) Details on tribal

names, useful parts and the method of preparation of medicines were gathered from the tribals, besides the collection of

information, the uses of some of the plants were directly observed.

## RESULTS AND DISCUSSION

**Ethnobotanical details of 64 species used by the tribals are tabulated below.**

| Botanical Name               | Vernacular (tribal) name | Part used        | Uses  |
|------------------------------|--------------------------|------------------|---|
| <i>Acacia caesia</i>         | Incha                    | Bark In the body | Used as soap for clean  |
| <i>Acacia leucopholea</i>    | Valla –vela              | Bark             | Bark crushed with salt and the juice is applied against wounds and swellings.                           |
| <i>Acalypha Indica</i>       | Kuppament                | Whole plant      | A paste made with salt is applied to scabies.   |
| <i>Aerva lanata</i>          | Cherula                  | Whole plant      | The paste of the whole plant is applied on fore head against headache                                   |
| <i>Aibizia amara</i>         | Unjal                    | Leaves           | As hair shampoo   |
| <i>Anogeissus latifolia</i>  | Vekkali                  | Bark             | Bark juice is taken orally to cure dysentery  |
| <i>Antiaris toxicaria</i>    | Chillapattamaram         | Bark             | The bark is used as mat for sleeping  |
| <i>Argemone mexicana</i>     | Virumenchedi             | Juice            | Juice is applied against scabies  |
| <i>Asclepias curassavica</i> | Chemulichedi             | Juice of leaves  | Leaf juice is applied to wounds.  |
| <i>Asparagus racemosus</i>   | Thannivazhan-kizhangu    | Rhizome          | Given to breast feeding mothers to increase milk production. Rhizome is used in diarrhea and dysentery. |
| <i>Bacopa monneiri</i>       | Brahmi                   | Whole plant      | The juice is given to children to increase memory power   |
| <i>Bidens pilosa</i>         | Kithachedy               | Leaf             | Against wounds  |
| <i>Boerhaavia diffusa</i>    | Thazhuthana              | Whole Plant      | Juice of the plant is administered orally against snake bite  |
| <i>Boswellia serrata</i>     | Kungiliyam               | Resin            | The dried resin is burned to ward off disease germs and mosquitos.                                      |

|                               |                                |               |  |
|-------------------------------|--------------------------------|---------------|--|
| <i>Cadaba fruticosa</i>       | Vizhuthi                       | Root          | Infusion of root is applied against scorpion bite.   |
| <i>Calotropis gigantea</i>    | Erikka/achedi                  | Latex/leaf    | A paste made with leaves of <i>Calotropis gigantea</i> , lime juice and later is applied on the wounds, Sap is applied to take out spines and thorns from body. Leaf is boiled in water and apply the vapour on sprains. |
| <i>Canarium strictum</i>      | Thelli/Kungillyam              | Resin         | Dried resin is burned to ward off insects  |
| <i>Carissa carandas</i>       | Kalachedi                      | Fruit         | Unripe fruit is used to make pickles and ripe ones are eaten.  |
| <i>Chloroxylon swietenia</i>  | Porushu                        | Leaves        | Leaf paste is applied to wounds.   |
| <i>Cinnamomum zeylanicum</i>  | Santhamaram/<br>Kunthakaimaram | Bark          | Used as a spice for flavoring food   |
| <i>Cissampelos pareira</i>    | Keranakody                     | Rhizome       | Rhizome is taken orally to relieve abdominal pain.   |
| <i>Combretum ovalifolium</i>  | Manjakody                      | Bark          | Bark juice is administered orally against jaundice.  |
| <i>Commelina benghalensis</i> | Chayonnikodi                   | Leaf and stem | Made to paste and apply against same bite.   |
| <i>Cyathula prostrata</i>     | Cherukadaladi                  | Whole Plant   | The paste of the plant is applied to wounds  |
| <i>Debregeasia longifolia</i> | Pulichhi                       | Bark          | The fine fiber separated from the bark is used as thread to stitch clothes   |
| <i>Decalepis hamiltonii</i>   | Mavalikizhangu                 | Tuber         | Used as food   |
| <i>Diospyros cordifolia</i>   | Vakkana                        | Bark          | Fish poison  |
| <i>Diospyros ebenum</i>       | Marginalia, ebony              | Heart- wood   | In the preparation of catechu  |
| <i>Dryneria quercifolia</i>   | Mudavattukal                   | Rhizome       | Boiled in water is used to bath the children for two to three months to recover from paralysis.  |
| <i>Emilia sonchifolia</i>     | Muyachevi                      | Leaf          | Infusion is taken orally to reduce body  |

|                                     |                |                    |   |
|-------------------------------------|----------------|--------------------|---|
|                                     |                |                    | temperature. A paste made with salt and whole plant is applied to neck against throat infection   |
| <i>Euphorbia hirta</i>              | Nilapalai      | Whole plant        | Given to cattle to increase milk production   |
| <i>Evolvulus alsinoides</i>         | Vishnukranthi  | Whole plant        | The sap is taken orally against dysentery   |
| <i>Ficus benghalensis</i>           | Atthi          | Leaves, prop roots | Mixture of leaves and prop roots is applied to set fractured bones.                               |
| <i>Gloriosa superba</i>             | Menthonni      | Root               | The oil boiled with rhizome is applied to remove warts  |
| <i>Gmelina arborea</i>              | Kumbil         | Root, fruit        | Root extract is taken orally against fever fruits are used against cough leaves against headache. |
| <i>Gnidia glauca</i>                | Nanjimar       | Bark               | Fish poison   |
| <i>Gymnema sylvstre</i>             | Chakkarakolli  | Leaves             | Against diabetics   |
| <i>Hemidesmus indicus</i>           | Kappikodi      | Rhizome            | Rhizome powder along with coffee reduces abdominal pain.  |
| <i>Hemionitis arifolia</i>          | Naichevi       | Leaf               | Leaf paste is applied to burns.   |
| <i>Ixora pavetta</i>                | Naichulunnu    | Wood               | Fire wood, the branches burn even when they are fresh   |
| <i>Kalanchoe laciniata</i>          | Elamulachi     | Juice of leaves    | Applied on wounds   |
| <i>Leea macrophylla</i>             | Chrianathali   | Root               | Infusion is administered orally to expel worms from intestine.                                    |
| <i>Merremia hastate</i>             | Tala-neeli     | Whole plant        | Hair oil prepared with extract of whole plant to promote hair growth                              |
| <i>Mesua ferrea</i>                 | Punna          | Flowers            | Flower sap is taken orally to remove cough  |
| <i>Opuntia stricta var dillenii</i> | Chappathikalli | Fruit              | Ripe fruit is eaten raw   |
| <i>Pimpinella heyneana</i>          | Kattumalli     | Seed               | Powdered and applied to gum swellings.  |
| <i>Plumbago zeylanica</i>           | Vellakoduveli  | Root               | Past is applied against skin disease  |

|                                |                                   |             |  |
|--------------------------------|-----------------------------------|-------------|--|
| <i>Pouzolzia indica</i>        | Parapodukki                       | Fruit       | Decoction is applied against the sprains                             |
| <i>Premna tomentosa</i>        | Pincha                            | Bark        | Solidifies milk and is taken along with meals                        |
| <i>Putranjiva roxburghi</i>    | Ekkoli                            | Seed        | Decoction is administered orally against cold and fever.             |
| <i>Rubia cordifolia</i>        | Erumbarakki                       | Stem        | Paste is applied against snake bite and scorpion bite.               |
| <i>Sapindus emarginatus</i>    | Soapkaimaram/<br>Poochakottamaram | Fruit       | Substitute for soap.   |
| <i>Sarcostemma brunonianum</i> | Somalatha                         | Root        | Infusion of root causes vomiting.                                    |
| <i>Sida rhomboidea</i>         | Kurunthotty                       | Stem        | Is used for brushing teeth   |
| <i>Solanum torvum</i>          | Chithiramchunda                   | Fruit juice | Solidifies milk and taken along with meals                           |
| <i>Spathodea campanulata</i>   | Thanneerakaimaram                 | Bark        | Infusion is administered orally against malaria                      |
| <i>Streblus as per</i>         | Parrakkam,<br>Dendumaram          | Later       | Solidifies milk  |
| <i>Strychnos potatorum</i>     | Chiliam                           | Bark        | Infusion is administered orally against faintness                    |
| <i>Terminalia chebula</i>      | Kadukka                           | Fruit       | As an ingredient in triphala   |
| <i>Terasitigma sulcatum</i>    | Chithirakodi                      | Leaf, stem  | Crushed and applied on the forehead against headache.                |
| <i>Tinospora cordifoila</i>    | Chittamruthu                      | Stem        | Paste prepared from stem is given in chronic diarrhea and dysentery. |
| <i>Teema orientalis</i>        | Thundinaru                        | Fiber       | The fiber separated from bark is use as ropes.                       |
| <i>Tribulus terrestris</i>     | Njarinjal                         | Whole plant | Infusion is taken orally to remove kidney stones                     |
| <i>Wrightia tinctoria</i>      | Adukomba                          | later       | Solidifies milk, later is applied on chest to relieve chest pain.    |

Among the 64 plant species used for various purposes, 55 are used as medicinal plants, 3 as fiber yielding, 2 as fish poison and 3 as food plants of the medicinal plants, 8 species are used to heal cuts and wounds, 6 as anodyne 4 as antidote to poison, 4 against

skin diseases, 4 antidiysenteric, 2 as antipyretic, 2 insect repellents. Other species are used for setting fractured bones, against paralysis, as galactogogus against toothaches etc consumption of solidified ilk is a common practices among the tribals

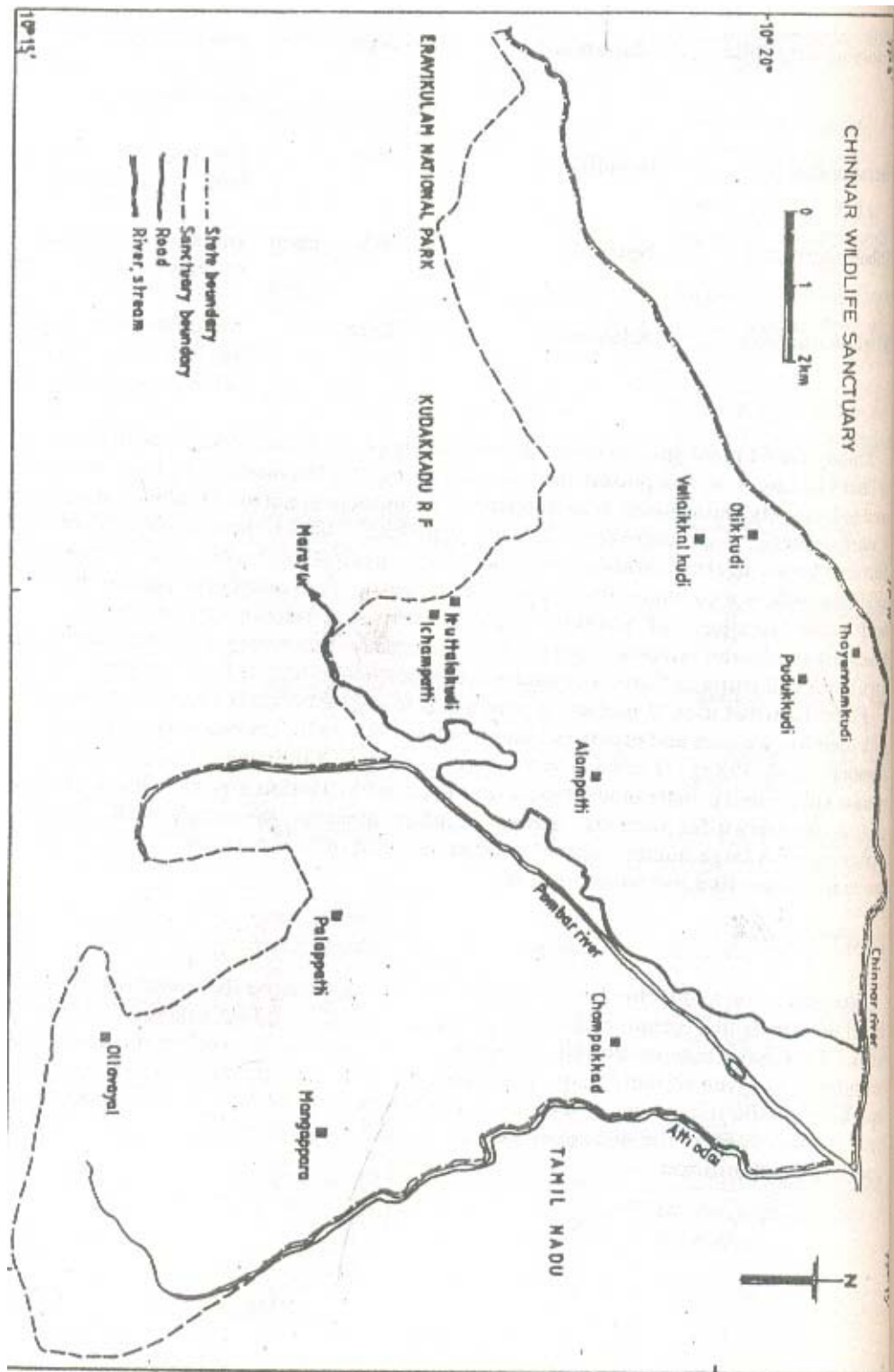
particularly the shepherd and cow-herds. The latex/juice of *wrightia tinctoria* (leaves), *solanum torvum* (Fruits), *prema tomentosa* (bark) and *streblus asper* (leaves) are used for this purpose. The tubers of *Decalepis hamiltonii* and fruits of *carissa carandas* are important delicacies for the tribals.

From the tribal uses of medicinal plants it is found that certain species are in agreement with their known uses and properties (Anonymous, 1948-1976, Chopra et al, 1956, Jain 1991, Nambiar et al 1985). *Gymnema sylvestre* is used as an antidiabetic and *Tribulus terrestris* against kidney and urinary bladder diseases, though *Phyllanthus niruri* and *Phyllanthus amarus* are known for their use against jaundice however the tribals prefer *Combretum ovalifolium*. A larger number of medicinal

plants used in Ayurveda and Siddha present in the sanctuary do not find use with the tribals.

## CONCLUSION

Modernisation and technological advancement have changed the traditional mode of living of the tribals to a certain extent. The tribals of Chinnar Wildlife Sanctuary are not exceptions. They have now developed a tendency to rely up on the modern medicine and less importance is given to their traditional medicine, the consequences of this gross neglect may have drastic impact on the existence of many important plant species and their useful need, in this context the documentation of the traditional knowledge of the tribals of the study area is significant.



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