

Useful Folk Mediicnal Plants and Their Diversity Status in Southern Western Ghats of Tamil Nadu, Karnataka and Kerala

*R. Murugeswaran,
K. Venkatesan, P.K. Sagar,
Kabiruddin Ahmed
and
Asiya Khanum

Regional Research
Institute of Unani Medicine,
1 West Mada Church Street,
Royapuram, Chennai-600013

Abstract

Ethno-botanical leads are invaluable for the discovery of novel active compounds from natural sources. An ethno-botanical survey has been carried out in the tribal dominated areas of Tamil Nadu, Karnataka and Kerala to document the uses and status of the folk medicinal plants among the tribal communities of Western Ghats region of Southern India. The information on folk medicinal plants used by the tribal communities and local inhabitants for various ailments are gathered from the tribal people and inhabitant of Coimbatore, Triunelveli and Kanniyakumari districts in Tamil Nadu, Wayanad forest divisions in Wayanad district, Kerala and Chamarajanagar wildlife division, Chamarajanagar district, Karnataka State. The study mainly focused on the wild plants used by the tribal and local people to cure various health care ailments. It is also revealed that the analysis of floristic diversity of 148 folk medicinal plants species belonging to 120 genus which includes 53 families. Traditional knowledge of medicinal plants and indigenous use of plant material have provided the basis for many pharmaceuticals used today and there are still many potential pharmaceutical compounds yet to be discovered. In this context further extensive field studies may help in the discovery of new plant species used in the indigenous systems of medicine for the betterment of health care needs. Present work is based on this rationale and provides first-hand information on folk medicinal claims of the area investigated.

Keywords: Ethno-medicine, Tribal, Traditional Knowledge, Western Ghats

Introduction

Ethno-botanical leads are invaluable for the discovery of novel active compounds from natural source, particularly from plants, since new diseases as well as drug resistant strains of known pathogens continue to emerge the search for novel compounds. Traditional knowledge of medicinal plants and indigenous use of plant material have provided the basis for many pharmaceuticals used today and there are still many potential pharmaceutical compounds yet to be discovered (Asolkar *et al.*, 1992). There is a risk, however, of losing this precious resource and many indigenous cultures as well as the medicinal plants themselves are threatened with extinction. Based on this rationale the present study was undertaken and provides data on ethno-pharmacological field studies and literature survey conducted in rural and suburban places, at the study areas of Tamil Nadu, Karnataka and Kerala during 2005-2010 to contribute material for further investigations in the search of new drugs of plants origin (Anonymous, 1994).

* Author for correspondence; Email : rajachennai98@gmail.com

The tribal populations inhabit varied geographical and climatic zones of the country. Living close to nature, the tribal's have acquired unique knowledge about the indigenous flora and fauna and their uses. Most of which are not known to the outside world. Therefore, ethno-botanical studies assume great importance in enhancing the knowledge about the plants grown and used by native/tribal communities, the rich diversity assembled by them for their sustenance and different means adopted by them for its preservation/conservation.

Some important contributions in this direction are those of Apparanantham and chelladurai, (1994,1986); Augustine Joy (2005); Hema (2007); Jain, (1981,1991); Jain *et al.*,1973, 1991; Mini (2007); Murgeswaran *et al.*, 2010, 2011, 2013, 2014, 2015); Narayanan (2011); Nisha (2007); Pramod and Sivadasan (2003), Subramaniam, (1999), Rosakuttyet *al.*, (1999), Ravikumaret *al.*, (2004), Udayan *et al.*, (2008) and Yoganarasimban *et al.*, (1991; 1982).

The present work embodies the data on folk medicinal plants and their uses collected during 2005-2010 on folklore medicines through extensive field studies and interviews with tribal and rural inhabitants in the study areas of states of Tamil Nadu, Karnataka and Kerala.

The study areas

The study areas covered included Coimbatore, Triunelveli and Kanniyakumari districts in Tamil Nadu, Wayanad district in Kerala and, Chamarajanagar district in Karnataka State. The studies were carried out in forest areas, tribal colonies and settlements of the above districts. The study area falls under the hill tract of Southern western Ghats of Tamil Nadu, Karnataka and Kerala. The different ethnic groups of tribal communities like Paliyar, Irular Kani, Soligar, Malayali and Kattunayakan. Apart from these tribal communities the local non-tribal communities of the study areas were also interviewed who possess good knowledge of folk medicine. All these resources have been recorded by the researchers as first-hand field data on folk medicinal plants from the study area(s).

Methodology

The information on folk drug plants were obtained in the course of a series of ethnopharmacological surveys of the study area conducted during 2005 to 2010. The information presented is essentially based on the first-hand data collected through interviewing herbal medicine men of the study area during the course of the ethnopharmacological field investigations. The study has brought to light some interesting traditional therapeutic methods applied by the native of different forest area of Tamil Nadu, Karnataka and Kerala states. 149 taxa of medical plants were collected and indentified with the help of some floras from the study area. Voucher herbarium specimens prepared and deposited in the herbarium of the Survey of Medicinal Plants Unit, RRIUM, Chennai. In most of the cases

the botanical specimens were identified and confirmed at Botanical Survey of India Coimbatore.

During survey, the informant had to be convinced that their co-operation was of great benefit to the country. The survey team therefore, visited the healers in their respective localities and they were of great help to discuss and reveal folk medicinal uses of local plants and to show their samples either in the field or in the camp. For each plant, the following information was gathered; (i) common name of the plant, or crude drug; (ii) medicinal use(s); (iii) part(s) used; (iv) other ingredients added (if any); (v) method of drug preparations; (vi) mode of application; (vii) dosage and duration of treatment, and; (viii) precautions (if any).

Plant specimens were collected and entered in the field book each day. For botanical identification, the flora of British India (Hooker, 1872-1897), Flora of Tamil Nadu Carnatic (Matthew, 1983), The flora of Tamil Nadu (Nair and Henry., 1982), (Hentry *et al.*, (1987, 1989) Flora of the Presidency of Madras (Gamble, 1936). Additions to this flora of Karnataka. (Ravikumar *et al.*, 2001) and Flora of Karnataka (Shaldanha, 1984). The literature survey for general information and biodynamic notes and therapeutic uses for identified plants was carried out. The main information sources were; the wealth of India 'Raw materials'. (Hussain *et al.*, 1992). Medicinal plants of India. (Anonymous, 1976, 1987). Notable Plants in Ethnomedicine of India (Jain *et al.*, 1991). 'Compendium of Indian Medicinal plants' (Rastogi and Mehrota, 1990-1998); Second supplementary to Glossary of Indian Medicinal Plants with Active principles' (Asolkar *et al.*, 1992); Glossary of Indian Medicinal Plants' (Chopra *et al.*, 1956).

Results

Table 1: Folk Medicinal Plants of Southern Western Ghats, India

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Abrus precatorius</i> L. RRIUM-CH: 8511, 8929	Kundumani (T)	Leaf	Swellings	Climber	C
<i>Abutilon indicum</i> (L) Sweet. RRIUM-CH: 9365	Tuthi (T) Baralukaddi (K)	Leaf	Piles, Wounds Leaf Juice Cough	Herb	C
<i>Acacia leucophloea</i> (Roxb.) Willd RRIUM-CH: 9503	Velvelam (T) Nayibela (K)	Gum	Health tonic	Tree	C
<i>Acacia nilotica</i> (L) Willd ex Del RRIUM-CH: 9412	Karovelam (T) Karijaali (K)	Bark Fruit	Diarrhoea, dysentery Sexual disorders	Tree	C

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Acacia sinuata</i> (Lour) Merr. RRIUM-CH: 9412, 9678	Shikaka (M) Cige (K)	Fruit	Expectorant, dandruff	Climber	C
<i>Ach Acyranthes aspera</i> L. RRIUM-CH: 8824,8979, 9283, 9647	Nayuruvi (T) Uttareni (K)	Leaf Stem	Dental care and Strengthen- ing gums	Herb	C
<i>Adiantum capillus-veneris</i> L. RRIUM-CH: 9897	Mangayar kunthalparani (M)	Leaf	bone fracture	Herb	C
<i>Aegle marmelos</i> (L.) Corr. RRIUM-CH: 9233, 9499	Vilvam (T) Belapatre (K)	Fruit	Asthma, laxative	Tree	S
<i>Aerva lanata</i> (L) Juss. ex Schult. RRIUM-CH: 9427	Poolanpundu (T) Bile sole gida (K)	Root leaf whole plant	scorpion stinging, headache Kidney stone, urinary irritations	Herb	C
<i>Ageratum conyzoides</i> L. RRIUM-CH: 8446	Mookuthipul (T) Helukasa (K)	Leaf	Cut injuries	Herb	C
<i>Alangium salvifolium</i> (L.f) Wangerin.	Alingil (T)	Fruit Bark	Refrigerant Hypotensive	Tree	S
<i>Albizi aamara</i> (Roxb.) Boivin. RRIUM-CH: 8351, 9477	Usil (T) Chalavagai (K)	Leaf, Seed	Hair falling, Piles	Tree	C
<i>Albiza lebbeck</i> (L) Benth RRIUM-CH: 9302	Vagai (T) Baage (K)	Bark, Seed	Skin irritation, Skin diseases	Tree	C
<i>Allium cepa</i> L. RRIUM-CH: 9432	Vengayam (T) Eetilli (Kannada)	Extraction Leaf	Asthma, Diabetic	Herb	C/C
<i>Alpinia galanga</i> Sw RRIUM-CH: 9539	Perarattai (T) Dhumarasmī (K)	Rhizome	Fever	Herb	C/C
<i>Alstonia scholaris</i> (L) R.Br. RRIUM-CH: 8371	Eazhilaipalai (T) Aelele hale (K)	Bark	Diarrhoea Headache	Tree	S
<i>Alternanthera sessilis</i> (L) R. Br. ex DC. RRIUM-CH: 8938	Ponnankani (T)	Leaf Leaf	Stomach pain Stomach ulcers	Herb	C
<i>Amaranthus spinosus</i> L RRIUM-CH: 8572, 8941, 9170, 9898	Chulai, muludantu (K)	Leaf Root	Boils, Swellings Eczema Laxative	Herb	C

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Amaranthus viridis</i> L. RRIUM-CH: 9418	Mullukeerai (T) Chelakeeraesoppu (K)	Leaf	Poisonous bites	Herb	C
<i>Anacardium occidentale</i> L. RRIUM-CH: 9012, 9668	Mundiri (T) Kapamava (M)	Seed Resinous juice	Foot crake Palpitation	Tree	C/C
<i>Andrographis paniculata</i> (Burm. f.) Wall. ex Nees. RRIUM-CH: 8690, 8931	Nilavembu (T)	Leaf	Stomach pain Itching, Fever	Herb	R
<i>Anogeissus latifolia</i> (Roxb. ex DC.) Wall. ex Guill. & Perr. RRIUM-CH: 9131	Vellai-Nagai (T) Dindal (K)	Stem Bark Leaf	Snake bite	Tree	C
<i>Argemonem exiana</i> L. RRIUM-CH: 9178	Bramathandu (T) Arasinaomathai (K)	Seed	Psoriasis	Herb	C
<i>Aristolochia indica</i> L. RRIUM-CH: 8689	Perumarunthu (T)	Leaf	Eczema	Climber	R
<i>Asclepia scurassavica</i> L. RRIUM-CH: 8673, 8952	Neeraruvi (K)	Root	Piles, Scabies Cut injuries	Herb	C
<i>Asparagus racemosus</i> Willd. RRIUM-CH: 9263, 9826	Amukrakilangu (T) Aashaadibaeru (K)	root	Stomach pain due to irregular menstruation White discharges	Climber	R
<i>Azadirachta indica</i> A Juss. RRIUM-CH:9232	Vemmbu, Balanthibaeru (K)	Stem Bark Seed	Fever, Diabetic wounds	Tree	C
<i>Bauhinia purpurea</i> L. RRIUM-CH: 9526	Mandarai (T) Akilu (K)	Bark Leaf	Malarial fever	Herb	C
<i>Boerhavia diffusa</i> L. RRIUM-CH:9383	Mookeratai (T) Adakaputhanagida (K)	Root	Jaundice, Leaf wounds	Herb	C
<i>Bixa orellana</i> L. RRIUM-CH: 8659	Kurangumanjal	Seeds bulb seed	Headache Dysentery		C
<i>Butea monosperma</i> (Lam) Taub RRIUM-CH: 8686, 9440	Kattuthee	Seed Flowers	Ring worm Swellings	Tree	C
<i>Caesalpinia crista</i> L. RRIUM-CH:9357	Kalatchikai (T) Gajaga (K)	Leaf Seed	Hydrocele Fever	Climber	S

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Calophyllum inophyllum</i> L. RRIUM-CH: 8670	Pinnai (T)	Seed	Joint pain	Tree	S
<i>Calotropis gigantea</i> (L.) R. Br. RRIUM-CH: 8592, 8963, 8883, 9114	Erukku, Aarka (K)	Latex	Insect bite	Herb	C
<i>Cardiospermum canescens</i> Wall. RRIUM-CH: 9486, 8444, 8878, 9735	Mudakuthan (T) Agniballa (K)	Leaf leaves	Stomach pain Joint pain	Climber	C
<i>Cardiospermum helicacabum</i> L. RRIUM-CH: 8444, 8878, 9169	Mudakathan (T) Battekaayiballi (K)	Seeds Leaves	Joint pain Laxative	Climber	C
<i>Cariss Carissa carandas</i> L. RRIUM-CH: 8348	Kalakai (T)	Fruit	General health Indigestion	Tree	C
<i>Cassia alata</i> L. RRIUM-CH: 8843, 8930	Seemaigathi, Kaddumardu	Leaf Stem	Skin diseases Ring worm Toothache	Shrub	C
<i>Cassia auriculata</i> L. RRIUM-CH: 8565, 8763, 9390	Aavarai (T) Aavarika (K)	Flowers leaf	Dandruff diabetes	Shrub	C
<i>Cassia fistula</i> L. RRIUM-CH: 8385, 8454, 8769, 8923, 9109, 9813,	Kondrai (T), Araghvada (K)	Flowers Fruit Bark fruit powder	Stomach pain Asthma, Knee swelling Muscular pain	Tree	C
<i>Cassia occidentalis</i> L. RRIUM-CH: 8746, 8988, 9308	Thakarai (T) Aanesogata (K)	Leaf Seed	Psoriasis Cough	Herb	C
<i>Cassia tora</i> L. RRIUM-CH: 8951, 9360, 9435	Tantemu Cagace (K)	Leaf Seed	Ringworm Jaundice	Herb	C
<i>Catharanthus roseus</i> (L.) G. Don RRIUM-CH: 9210, 9612	Nithyakalyani batelahoo (K)	Leaf Fruit	Diabetes Leach bite	Herb	C
<i>Catunaregam spinosa</i> (Thunb.) Tirveng RRIUM-CH: 8355, 8810, 8879	Madukarai (T)	Fruit	Rheumatism Worm infestation	Tree	C

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Centella asiatica</i> (L) Urban RRIUM-CH: 9679	Vallarai Brahmeesoppu (K)	Leaf	Laxative Leprosy	Herb	C
<i>Cinnamomum wightii</i> Meisner. RRIUM-CH: 8778	Kattukaruva (T)	Bark	Cold	Tree	V
<i>Cinnamomum verum</i> Presl. RRIUM-CH: 8933	Lavangampattai (T)	Bark Leaf	Vomiting Stomach pain	Tree	V
<i>Cissus quadrangularis</i> L. RRIUM-CH: 9429	Pirandai (T) Asthisamboora (K)	Stem Leaf	Stomach pain Indigestion	Climber	C
<i>Citrullus colocynthis</i> (L) Schrader. RRIUM-CH: 8377, 8705	Aathuthumatti (T)	Fruit	Dark spot Stomach pain	Climber	C
<i>Citrus limon</i> (L) Burm. f. RRIUM-CH: 9465, 8705	Elumichai (T) Brihatnimbu (K)	Fruit	Stomach pain Scabies	Tree	C
<i>Clerodendrum inerme</i> (L) Gaertn. RRIUM-CH: 8916	Pekallathi (or) Peenarisangu (T)	Leaf Fruit	Itching Scabies	Tree	C
<i>Clitoria ternatea</i> L. RRIUM-CH: 8927, 9231	Sangupushpam (T) Girikannike (K)	Whole plant Seed leaf	Snake bite Wounds, Eye diseases of cattle	Climber	C
<i>Coccinia grandis</i> (L)Voigt. RRIUM-CH: 9217	Kovai, Kaagethonde (K)	Root Root fruit	Rheumatism Joint pain Diabetes	Climber	C
<i>Coffea arabica</i> L. RRIUM-CH: 9471	Kappi, Bannugida (K)	Seed	Stimulant	Shrub	C/C
<i>Costus speciosus</i> (J Koenig.) Smith RRIUM-CH:11224	Insulinkerrai (T) Anakkuva (M)	Leaf	Swelling Irregular menstruation	Herb	C
<i>Crotalaria retusa</i> L. RRIUM-CH : 9486	Kilukillupai (T) Gijat (K)	Leaf	Scabies	Herb	C
<i>Croton bonplandianus</i> Baillon RRIUM-CH: 8984, 9174	Amanakupoendu (T) Somari (K)	Latex	Wounds	Herb	C
<i>Cryptolepis buchanani</i> Roem. & Schult. RRIUM-CH: 9313	Keeripalai (T) Karanda (K)	Stem Root bark	Malarial fever Rheumatism	Climber	C

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Curculigo orchioides</i> Gaertner RRIUM-CH: 9253	Nelatatygadda Nelalengu (K)	Rhizome	Asthma Sexual disorders	Herb	S
<i>Cuscuta reflexa</i> Roxb. RRIUM-CH: 8973, 9177, 9790	Ootuchedi Amaraballi (K) Akasavalli (M)	Whole plant	Boils Constipation Jaundice	Herb	C
<i>Cymbopogon citrates</i> (DC.) Stapf RRIUM-CH:9890	Thailapull (T) Chaahullu (M)	Leaf	Body pain Headache	Herb	C
<i>Derris canarensis</i> (Dalz) Baker RRIUM-CH: 8956	Vangaivalli (T)	Leaf	joint pain	W. Climber	R
<i>Dioscorea bulbifera</i> L. RRIUM-CH: 9816	Kattukaccil (M)	Tuber	Energy food Ulcers	Climber	C
<i>Eclipta prostrata</i> (L.) L. RRIUM-CH: 8722, 9394	Karisalangani (T) Ajaagara (K)	Leaf whole plant	Dandruff, hair falling Cuts injuries ulcers	Herb	C
<i>Elaeocarpus tuberculatus</i> Roxb. RRIUM-CH:9458	Malampinnai (M) Ruthraksham (T)	Seeds	Rheumatic pain	Tree	C
<i>Erythrina varigata</i> L RRIUM-CH: 9575	Kalyanamurungai (T), Bilivaarjipae (K)	Bark Seed	Leprosy Jaundice	Tree	C
<i>Eucalyptus globules</i> Labill. RRIUM-CH:9419	Thailamaram (T) Karpurathailaviricha (K)	Leaf Leaf	Body pain Headache	Tree	C
<i>Euphorbia cyathophora</i> Murray.RRIUM-CH: 8889	Palperukki	Latex Leaf	Headache Wounds	Herb	C
<i>Euphorbia hirta</i> L. RRIUM-CH: 8947, 9387, 9900	Amman pacharasi (T), Acchacchegida (K), Nilappal (M)	whole plant leaf	Worm infestation Asthma Diarrhoea	Herb	C
<i>Ficus benghalensis</i> L. RRIUM-CH: 9531	Aaladamara (K)	Latex Bark	Bleeding gum Dysentery	Tree	C
<i>Ficus hispida</i> L. f RRIUM CH: 8961	Peiathi (T)	Fruit Leaf	Gonorrhoea Stomach pain	Tree	C
<i>Ficus racemosa</i> L. RRIUM-CH:9573	Atthi (T)	Leaf Bark	Dysentery Leucorrhoea	Tree	C
<i>Ficus religiosa</i> L. RRIUM-CH: 8718	Acakam (K)	Bark Leaf	Scabies Diabetic	Tree	C

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Garcinia gummi-gutta</i> (L) Robs. RRIUM-CH: 8872	Kodukaipalli	Seeds Fruit	Eczema, Bone fracture	Tree	S
<i>Gloriosa superba</i> L RRIUM-CH: 8622, 9001	Senkandal (T) KalapaiKizhangu (T)	Seed whole plant	Leprosy (expect tuber) Uterine fibbers	Herb	R
<i>Gmelina arborea</i> Roxb. RRIUM-CH: 9346	Kumiltekku (T) Kumula (M) Baachanikemara (K)	Stem Bark Leaf	Laxative, Ulcer	Tree	C
<i>Gossypium hirsutum</i> L. RRIUM-CH:9439	Paruthi (T) Americanehatthi (K)	Seed	Health tonic Expectorant	Herb	C
<i>Gynandropsis pentaphylla</i> DC. RRIUM-CH: 9310	Naivelai(T) Shrikala (K)	Leaf	Scabies Joint pain	Herb	C
<i>Helianthus annus</i> L. RRIUM-CH: 9397	Suriyakanthi (T) Adityabhakti (K)	Seed Leaf	Cold and cough, Scabies	Herb	C
<i>Helicteres isora</i> L RRIUM-CH: 8749, 8884	Edampuri Valampuri (T)	Fruit Leaf Bark	Dandruff Ring worm Dry cough	Tree	C
<i>Hemidesmus indicus</i> (L) R. Br. RRIUM-CH: 9033	Nannari (T)	Root	Fever	Herb	C
<i>Hibicus rosa-sinensis</i> L. RRIUM-CH: 8917	Sembarathi (T)	Leaf Flower	Boils, Expulsion of placenta Menstrual disorders	Herb	C
<i>Hybanthus enneaspermus</i> (L) F Muell. RRIUM-CH: 8968	Orilaitamari (T)	Leaf whole plant	Dysentery Jaundice	Herb	S
<i>Hygrophila auriculata</i> (Schum.) Heine. RRIUM-CH: 8991, 9220, 9797	Neerumulli (T) Kolavalike (K) Vayalculli (M)	Leaf Root	Jaundice Uterine tonic	Herb	S
<i>Ichnocarpus frutescens</i> (L) R.Br. RRIUM-CH: 8716	Udharkodi (T)	Latex Root	Headache Fever	Herb	S
<i>Indigofera tinctoria</i> L RRIUM-CH:8825	Averi (T)	Root Leaf	Abdominal pain, Hair tonic	Herb	C

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Ipomoea nil</i> (L) Roth. RRIUM-CH: 8828	Kakatan (T)	Root Seed	Purgative Ringworm	Climber	C
<i>Jasminum malabaricum</i> Wight. RRIUM-CH: 8788, 8911	Kuruvilangkodi (M)	Leaf Flower	Scabies, Headache Brest pain	Climber	C
<i>Justicia adhatoda</i> L. RRIUM-CH: 9703	Aduthoda (T) Adalodagam (K)	Leaf Leaf	Cough and cold, Joint pain	Herb	C/C
<i>Lantana camara</i> L. RRIUM-CH: 8449, 8831	Unnichi (T)	Leaf Fruit	Antiseptic Wound healing	Herb	C
<i>Leucas aspera</i> (Willd.) Link. RRIUM-CH: 8992, 9293	KasiThumbai (T)	Leaf	Jaundice Psoriasis	Herb	C
<i>Leucas indica</i> (L.) R. Br. ex Vatke RRIUM-CH: 9828	Mosappullu (T)	Leaf	Wounds Jaundice	Herb	C
<i>Leucas martinicensis</i> (Jacq.) R. Br. RRIUM-CH: 8637	Thumbai (T)	Root Leaf	Psoriasis, Skin rashes	Herb	C
<i>Limonia acidissima</i> L. RRIUM-CH: 8564	Vilam (T)	Gums Leaf	Dysentery Gastric troubles	Tree	S
<i>Lobelia nicotianefolia</i> Roth. ex Scheltes RRIUM-CH: 8851, 9464	Kattuphuyulai (T) Doddakaadu (K)	Leaf	Asthma, Scabies	Herb	C
<i>Mallotus philippensis</i> (Lam.) Muell Arg. RRIUM-CH: 8441	Kamala (T) Kapli (K)	Bark Seed	General tonic, Eczema	Tree	C
<i>Melia azedarach</i> L. RRIUM-CH: 9336	Arabaevu (K)	Seed Bark Heart wood	Malarial fever Asthma	Tree	C
<i>Mimosa pudica</i> L. RRIUM-CH: 9125, 9673	Thotalvadi (T)	Root Leaf	Jaundice, Hydrocele	Herb	C
<i>Mirabilis jalapa</i> L. RRIUM-CH: 9281	Anthimalligai (T) Chandramallige (K)	Leaf Leaf	Jaundice Itching	Herb	C
<i>Morinda tinctoria</i> Roxb. RRIUM-CH: 9130	Nuna (T) Maddiainshi (K)	Leaf	Wounds Stomach ulcer Asthma	Tree	C
<i>Mucuna pruriens</i> (L) DC. RRIUM-CH: 9462, 9773	Punaikkali (T) Chinakeebeeja (K)		sexual disorders	Climber	R

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Nerium oleander</i> L. RRIUM-CH: 9504	Arali (T) Ashvamaaraka (K)	Root Leaf	Scabies Swelling	Tree	C
<i>Ocimum basilicum</i> L. RRIUM-CH: 8715, 8903, 8975	Jangali tulsi (T) Aamalaka (K)	Leaf	Stomach pain, ringworm	Herb	C
<i>Ocimum gratissimum</i> L. RRIUM-CH: 8634, 8932	Gaya Tulsi (T)	Leaf Seed Leaf	Asthma, cold ringworm Joint pain	Herb	C
<i>Pedaliium murex</i> L. RRIUM-CH: 10700	Yanai Nerungi (T)	Leaf Flower	Stomach pain Headache Menstrual disorders	Herb	C
<i>Phyllanthus amarus</i> Schum. &Thonn.	Keelanelli (T)	Plant	Body heat Urinary infection Jaundice	Herb	C
<i>Phyllanthus emblica</i> L. RRIUM-CH: 9268	Nelli (T) Aamalakee (K)	Leaf	Wounds Jaundice Cough, cold	Tree	C
<i>Phyllanthus reticulatus</i> Poir. RRIUM-CH: 8963	KattuKeelanelli (T)	Leaf	Toothache Bleeding gums	Herb	C
<i>Physalis minima</i> L. RRIUM-CH: 8514, 8976	Siruthakali (T) Makabari (K)	Leaf Fruit	Cold, Cough Abdominal pain	Herb	C
<i>Pergularia daemia</i> (Forsk.) Chiov. RRIUM-CH: 8671	Seenthilkodi (T)	Root Leaf	Headache Foetidal discharge	Climber	C
<i>Phoenix sylvestris</i> (L) Roxb. RRIUM-CH: 9331	Eacham (T) Andaeechalu (K)	Fruit	Gastric troubles	Shrub	C
<i>Piper longum</i> L. RRIUM-CH: 8966, 9742	Kattuthipili (T) Capala (M)	Fruit	Cough	Herb	C
<i>Piper nigrum</i> L. RRIUM-CH: 8876	Kurumilagu (T)	Seed	Fever Body pain	Climber	C
<i>Plectranthus amboinicus</i> (Lour.) Spreng. RRIUM-CH: 8635	Karpuravalli (T)	Leaf	Cold	Herb	C

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Plumbago zeylanica</i> L. RRIUM-CH: 8977, 9239, 8801	Chitarimoolam (T) Agnipaavaka (K)	Leaf Root	Menstrual disorders Itching, Headache	Herb	C
<i>Polygonum chinense</i> L. RRIUM-CH: 8747	Nelakumbala (T)	Leaf	Skin diseases	Herb	C
<i>Polygonum glabrum</i> Willd. RRIUM-CH: 8944	Sivappu Kumbakodaali (T)	Leaf	Stomach pain	Herb	C
<i>Pterocarpus marsupium</i> Roxb. RRIUM-CH: 8755, 9078	Vengai (T)	Latex	Headache Toothache	Tree	C
<i>Rauvolfia serpentina</i> (L) Benth. ex Kurz. RRIUM-CH: 8756, 8959	Sarpgandh (T) Swetbarua (K)	Leaf Root	Poisonous bite Chest pain	Herb	R
<i>Rauvolfia tetraphylla</i> L. RRIUM-CH: 9535, 9644	Serpagantha (M) Doddachandrike (K)	Root	Blood pressure	Shrub	C
<i>Ricinus communis</i> L. RRIUM-CH: 9018, 9341, 9696	Amanaku (T) Aalambuda (K) Amandam (M)	Leaf	Laxative Stomach pain Boils	Tree	C
<i>Rubia cordifolia</i> L. RRIUM-CH: 8447, 8751	Manjiti (T) Kavilaikodi (M)	Root Flower	Headache	Climber	C
<i>Ruta chalepensis</i> L. RRIUM-CH: 9538, 9747	Aruvada (T) Sadabu (K) Aruta (M)	Leaf	Rheumatic Headache	Herb	C
<i>Semecarpus anacardium</i> L. f. RRIUM-CH: 9559	Serangottai (T) Gheru, Agnimukhi (K)	Gum	Nervine tonic	Tree	S
<i>Sida acuta</i> Burm. f. RRIUM-CH: 9832	Bajramuli (K) Cerparuva (M)	Leaf Twigs Root	Boils tooth ache Bone fracture	Herb	C
<i>Solanum anguivi</i> Lam. RRIUM-CH: 8950	Mulu Sundai (T)	Fruit	Toothache	Herb	C
<i>Solanum nigrum</i> L. RRIUM-CH: No: 8632	Giwain (K)	Leaf	Ulcer	Herb	C/C
<i>Solanum pubescens</i> L. RRIUM-CH: 8647	Akranti (T)	Root	stomach pain	Herb	C
<i>Solanum surattense</i> L. RRIUM-CH: 8326, 8731, 8805, 8790	Kandamkathiri (T)	Fruit	Toothache dental care Asthma	Herb	C

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Solanum torvum</i> Sw. RRIUM-CH: 9996	Sundai (T)	Seed Fruit	Toothache Stomach pain	Herb	C
<i>Stachytarpheta indica</i> (L) Vahl. RRIUM-CH: 8962	Semainayuruvi (T)	Leaf	Fever	Herb	C
<i>Strychnos nux-vomica</i> L. RRIUM-CH: 8354	Eatti (T)	Leaf	Rheumatic pain	Tree	S
<i>Syzygium cumini</i> (L) Skeels. RRIUM-CH: 8336, 8566	Naval (T)	Fruit Leaf	Diarrhoea Muscular pain	Tree	C
<i>Tabernaemontana divaricata</i> (L.) R. Br. ex Roem. RRIUM-CH: 8873, 9242	Nanthiyavatai (T) Kokkekaayigida (K)	Latex	Wounds	Herb	C
<i>Tephrosia purpurea</i> (L) Pers. RRIUM-CH: 8920	Venipali (K)	Seed	Scabies, Itching	Herb	C
<i>Terminalia arjuna</i> (Roxb. ex DC.) RRIUM-CH: 9599, 9834	Maruthu (K) Arjunamara (M)	Bark	chest pain, Skin diseases	Tree	C
<i>Terminalia bellerica</i> (Gaertn.) Roxb. RRIUM-CH: 8349, 9498	Thani (T), Bedaro (K)	Seed	Diarrhoea Asthma	Tree	C
<i>Terminalia catappa</i> L. RRIUM-CH: 8924	Badam (T)	Latex	Swellings	Tree	C
<i>Terminalia chebula</i> Retz. RRIUM-CH: 7715, 7334	Kadukai (T)	Fruit	Tooth ache General health	Tree	S
<i>Terminalia paniculata</i> Roth. RRIUM-CH: 9135	Karumaruthu (T) Karimati (K)	Flower Bark	Fever, Carminative	Tree	C
<i>Thottea siliqusa</i> (Lam.) Ding. RRIUM-CH: 9602	Alpam (M)	Leaf Root	Injury, Fever	Herb	C
<i>Tinospora cordifolia</i> (Willd.) Miers. ex Hook. f. & Thoms. RRIUM-CH: 8602, 9426	Seenthil (T) Aganiballi (K)	Leaf	Fever Dysentery	Climber	C
<i>Trichopus zeylanicus</i> Gaertn. RRIUM-CH: 8954	Arokiyapachi (T)	Fruit	General health	Herb	S
<i>Tridax procumbens</i> L. RRIUM-CH: 8972	Aruvamookupoendu (T)	Leaf	Injuries	Herb	C
<i>Vitex negundo</i> L. RRIUM-CH: 9091	Notchi (T)	Leaf	Migraine Asthma Headache	Tree	C

Botanical Name	Local Name	Part Used	Curative diseases	Habit	Status
<i>Wedelia chinensis</i> (Osbeck.) Merr. RRIUM-CH: 8937	Manjalkarisalankani (T)	Leaf	Cough, Asthma	Herb	C
<i>Wrightia tinctoria</i> Roxb.) R. Br. RRIUM-CH: 8576, 8761, 8880	Veppalai (T)	Leaf Latex Fruit	Toothache Headache General health	Tree	C
<i>Ziziphus rugosa</i> Lam. RRIUM-CH: 8908	Kattuillanthai (T)	Fruit	Indigestion	Tree	C

C-Common, C/C-Common & Cultivation, S-Sporadic, R-Rare, V-Vulnerable
T-Tamil, M-Malayalam, K-Kanada

Discussion

The present study revealed the floristic diversity of the folk medicinal plants and records some 148 potential medicinal plant species (Table-1) belonging to 120 number of genus which includes 53 families. The life form analysis of the present study are 58 species of herbs, 23 species of shrubs, 21 species of climbers, twiners and 46 species of trees are collected and documented. During the study about 237 useful folk medicinal preparations were collected which are used in the treatment of 86 different ailments by the traditional healers of various tribal communities in the study area. The usual methods of applications are as decoction, paste, powder, juice pill etc. These are administered internally or applied externally. Most of the recipes include only one plant species however, in some preparations combination of several herbs are also included. Moreover, some plant species are used for more than one disease and in some of the treatment single diseases may be treated by many plant species. It is, therefore, difficult to say which plant is actually effective in curing disease and the laboratory investigations and clinical trials are suggested to establish therapeutic properties of these herbal preparations for their effective and safe use.

The literature survey (Anonymous, 1948-1976; Husain *et al.*, 1992; Anonymous, 1976, 1987; Jain *et al.*, 1991; Rastogi and Mehrotra, 1990-1998; Kapoor, 1990; Chatterjee and Pakrashi, 1991-1994 indicates that chemical constituents and pharmacological action of most of the species are already known to some extent. However, only meager information is available on *Abutilon indicum* L. Sweet., *Acacia sinuata* (Lour.) Merr., *Alangium salvifolium* (L.f.) Wangerin., *Alternanthera sessilis* (L.) R.Br.ex. DC. *Andrographis paniculata* (Burm.f.) Wall.ex.Nees., *Asclepias curassavica* L., *Boerhavia diffusa* L., *Bixa orellana* L., *Calophyllum inophyllum* L., *Cinnamomum wightii* Meisner., *Citrullus colocynthis* (L.) Schrader., *Costus speciosus* (J.Koenig) Smith., *Erythrina varigata* L., *Limonia acidissima*

L., *Cymbopogon citrates* (DC.) Stapf., *Garcinia cambogia* Desr., *Hemidesmus indicus* (L.) R.Br., *Ipomoea pupurea* (L.) Roth., *Leucas martinicensis* (Jacq.) R.Br., *Morinda tinctoria* Roxb., *Ocimum gratissimum* L., *Physalis minima* L., *Plumbago zeylanica* L., *Plectranthus amboinicus* (Lour.) Spreng., *Rauwolfia tetraphylla* L., *Ruta graveolens* L., *Semecarpus anacardium* L.f., *Solanum pubescens* L., *Solanum virginianum* L., *Terminalia bellerica* (Gaertn.) Roxb., *Trichopus zeylanicus* Gaertn., *Vitex negundo* L., *Wedelia chinensis* (Osbeck.) Merr., *Zizyphus rugosa* Lamk., *Wrightia tinctoria* (Roxb.) R.Br. etc. Therefore, re-investigation of all such species is suggested for their chemical constituents and pharmacological effects.

The study also revealed that out of the 148 species recorded from the study area about 123 species fall in common category, 17 species are uncommon and about 8 species such as *Andrographis paniculata* (Burm. f.) Wall. ex Nees., *Aristolochia indica* L., *Asparagus racemosus* Willd., *Cinnamomum zeylanicum* Blume., *Derris canarensis* Baker., *Mucunapuriens* (L.) DC., *Rauwolfia serpentina* (L.) Benth. ex. Kurz. and *Semecarpus anacardium* L.f. are very much restricted in their distribution to particular localities/forest areas/region only.

In conclusion, we may say that through such investigations many more new plant drugs can be discovered from the unique folklores lying hidden among the traditional communities of other ethnopharmacologically unexplored areas of India and elsewhere, which may be utilized to the well being of human health. However, experimental and clinical evidences are needed to demonstrate the effectiveness and safety of these folk drugs before they can be accepted by the modern health care systems. Therefore, studies on toxicity, pharmacological actions, and chemical constituents are suggested for all these folk drugs in the context of reported claims.

Acknowledgements

We are very grateful to the Director General, Central Council for Research in Unani Medicine (CCRUM), New Delhi and Deputy Director, Regional Research Institute of Unani Medicine, Chennai, for providing necessary facilities to conduct the study. We also express our sincere thanks to concerned district forest officers and field officials of department of forests, Tamil Nadu, Kerala and Karnataka for necessary permission and providing necessary field assistance during the field study.

References

- Anonymous, 1948-1976. The Wealth of India (Raw Materials). Vol. I – XI, CSIR, New Delhi.
- Anonymous, 1987. Medicinal Plants of India Vol.II (Eds). Satayavati, G.V.and Sharma, A.K., I.C.M.R. New Delhi.

- Anonymous, 1994. Ethno biology in India: a status report. All India coordinated Research Project in Ethno biology. Ministry of Environment and Forests-Govt of India New Delhi.
- Apparanantham, T and Chelladurai, V., 1986. Glimpses of Folk medicines of Dharmapuri forest division Tamil Nadu, *Anci. Sci. Life*, 5(3) 182-185.
- Apparanantham, T., Chelladurai, V., Subramanian, V., 1982. Some tribal folk medicines of Point Climber (Kodikkarai) in *Tamil Nadu. Bull. Med. Ethnobot. Res.*3 (2-4) 173-177.
- Asolkar, L.V., Kakkar, K.K. and Chakre, O.J., 1992. Second supplement to glossary of Indian Medicinal Plants, Part-I National Institute of Science Communication, CSIR, New Delhi.
- Augustine Jony, 2005. Wild edible plants used by the tribes of PeriyarTigar Reserve, Kerala, South India. *J. Eco. Tax. Bot.*29 (1) 227-231.
- Chopra, R.N., Nayar,S. L., and Chopra, I.C., 1956. Glossary of Indian Medicinal Plants, CSIR, New Delhi.
- Gamble, J.S., 1936. Flora of the Presidency of Madras. Vol. I-III Allard & Co. London. (Reprinted -1956) Botanical Survey of India, Calcutta.
- Hema, E. S., Sivadasan, M., Anilkumar, N., 2006. Studies on edible species of Amaranthaceae and Araceae used byKuruma and Paniya tribes in Wayanad District, Kerala. *India Ethnobot.* 18: 122-126.
- Henry A.N., Chitra V. and Balakrishnan N.P., 1989. Flora of Tamil Nadu. Vol. III.
- Henry A.N., Chitra V. and kumar C.R., 1987. Flora of Tamil Nadu. Vol. I.
- Hooker J.D., 1872-1897. Flora of British India. Vol: I-VII. Reeve and Co. London.
- Hussain, A., Virmani, O.P., Popli, S.P., Mishra, L.N.Gupta, M.M. Srivadasan, G.N., Abraham, Z. and Singh, A.K., 1992. Dictionary of Indian Medicine Plants. CIMAP Lucknow.
- Jain, S.K., 1981. Glimpses of Indian Ethnobotany. Oxford and IBH Publishing Co., New Delhi.
- Jain, S.K., 1991. Dictionary of Indian Folk Medicine and Ethnobotany. Deep Publications, New Delhi.
- Mathew, K.M., 1983. The Flora of Tamil Nadu Carnatic. The Rapinat Herbarium, Tiruchirapalli, Tamil Nadu, India.
- Mini, V. and Sivadasan, M., 2007. Plants used in Ethno veterinary medicine by the Kurichya tribe of Wayanad district in Kerala, India, *Ethnobotany*, 19(1-2) 94-99.
- Murugeswaran, R., Rajendran. A., Venkatesan. K., Binu Thomas and Aravindhan, V., 2014. Potential Plants for Unani System of Medicine from Southern

- Western Ghats of Coimbatore district, Tamil Nadu. *Journal of Science* 4(2): 106-112.
- Murugeswarn, R., Venkatesan, K., Abdul Karim, M. and Aminuddin, 2011. Ethno-pharmacological Uses of Plants among Tribal and Rural Inhabitants of Wayanad District, Kerala. *Hippocratic J. Unani Med.* 6(4): 87-95.
- Murugeswarn, R., Venkatesan, K., Aijaz Ahmed and Aminuddin, 2015. A study on Diversity of Unani Medicinal Plants Used for Non-Communicable Diseases in Southern Western Ghats of India. *Hippocratic J. Unani Med.* 10(1): 105-116.
- Murugeswarn, R., Venkatesan, K., Aijaz Ahmed and Aminuddin, 2015. A Study on Diversity of Unani Medicinal Plants Used for Non-Communicable Diseases in Southern Western Ghats of Tamil Nadu. *Hippocratic J. Unani Med.* 10(1): 105-119.
- Murugeswarn, R., Venkatesan, K., Gowher Sultana and Aminuddin, 2010. Unani Medicinal Plants of Kanniyakumari District-Tamil Nadu. National Seminar on Bioresources-Conservation and Management held at PSGR Krishnammal College, Coimbatore.
- Murugeswarn, R., Venkatesan, K., Gowher Sultana and Aminuddin, 2010. Unani Medicinal Plants of Chamarajanagar Wildlife division, Karnataka. National Conference on Herbal Medicine held at Bharathiar University, Coimbatore, Tamil Nadu.
- Murugeswarn, R., Venkatesan, K., Jameeluddin Ahmed and Aminuddin, 2013. Ethno Medicinal uses of Plants used by Malayali Tribal Community in Kolli Hills of Namakkal District, Tamil Nadu. *Hippocratic J. Unani Med.* 8(4): 137-148.
- Nair, N.C. and Henry, A.N., 1982. Flora of Tamil Nadu, Vol. I-III. Botanical survey of India, Coimbatore, Tamil Nadu.
- Narayanan, M. K R., Mithunlal, S., Sujanapal, P., Anilkumar, N., Sivadasan, M., Alfarhan, A. H., Alatar, A.A., 2011. Ethnobotanically important trees and their uses by Kattunaikka tribe in Wayanad Wildlife Sanctuary, Kerala, India. *J. Med. Plants Res.*, 5(4): 604-612.
- Nisha, V. M. and Sivadasan, M., 2007. Ethnodermatologically significant plants used by the traditional healers of Wayanad. District Kerala, India. *Ethnobotany*, 19(1-2): 55-61.
- Pramod, C. and Sivasdasan, M., 2003. Ethnobotany of religious and supernatural beliefs of Kurichya of Wayanad District, Kerala, India. *Ethnobotany*, 15. 11-18.
- Rastogi, R. P. and Mehrotra, B.N., 1990. Compendium of Indian Medicinal Plants Vol. I, CDRI, Lucknow and CSIR, New Delhi.

- Rastogi, R. P. and Mehrotra, B.N., 1991. Compendium of Indian Medicinal Plants Vol. II, CDRI, Lucknow and CSIR, New Delhi.
- Rastogi, R. P. and Mehrotra, B.N., 1993. Compendium of Indian Medicinal Plants Vol. III, CDRI, Lucknow and CSIR, New Delhi.
- Rastogi, R. P. and Mehrotra, B.N., 1994. Compendium of Indian Medicinal Plants Vol. IV, CDRI, Lucknow and CSIR, New Delhi.
- Rastogi, R. P. and Mehrotra, B.N., 1998. Compendium of Indian Medicinal Plants Vol. V, CDRI, Lucknow and CSIR, New Delhi.
- Ravikumar, R. K., Sudhakar Rao, B., Bose, S.C. and Sudhakar. K., 2004. Validity of ethnoveterinary practices adopted by farmers in Dindigul district of Tamil Nadu. *AsinAgri-History* 8(1): 55-61.
- Saldanha, C.J., 1996. Flora of Karnataka, Vol. I-IV. Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
- Yoganarasimban, S.N., Subramanyam, K. and Razi, B.A., 1982. Flora of Chikmogalur District, Karnataka, India, International Book Distributors, Dehra Dun.
- Yoganarasimhan, S. N, Togunashi, V. S, Murthy, K.R.K. and Govindaiah, 1982. Medico-botany of Tumkur district, Karnataka. *J.Econ.Tax. Bot.* 3. 391-406.

