



SURVEY OF ETHNO MEDICINAL PLANTS, NILGIRI BIOSPHERE NATURE PARK AT THUVAIPATHY, ANAIKATTI, COIMBATORE, TAMILNADU, INDIA

Hemila P.* and Krishnaveni C.

Department of Botany, PSGR Krishnammal College for Women, Peelamedu, Coimbatore- 641 004, India

Abstract

An ethno medicinal Survey was conducted to collect information about medicinal plants used by Thuvaipathy tribal village people located in the forest area. About 180 medicinal plants are used in various health problems; Majority of the plant parts are stem, bark and leaves. The most representative families were Caesalpinaceae and Moraceae with 13 species each, Euphorbiaceae, and Mimosaceae with 9 species, Sapindaceae and Bignoniaceae with 8 species each and Annonaceae and Apocynaceae with 6 species. The other families had 5 and below 5 species each associated with the treatment of the reports. The plants were found to be used in different forms such as juice, extracts, paste, powder, infusion. These ethno medicinal plants were used to treat ailments like cold, cough, headache, stomachache, dysentery, skin disease, poison bites, cut and wounds and diabetes.

Key words: Ethno botanical survey, Medicinal plants, Thuvaipathy

Introduction

Plants are collected from Nilgiri Biosphere Nature Park, Thuvaipathy, located in Anaikatti, Coimbatore District, Tamil Nadu, India. Generally, the hills are rich in vegetation and plant biodiversity, good geographical and climate conditions. Enormous numbers of medicinal plants are available; many of the plants are used as primary healthcare in developing countries (Famsworth *et al.*, 1985). Biodiversity is the variation of life forms within a given ecosystem. Biodiversity is often used as a measure of the health of biological systems (Prabakarn *et al.*, 2011). They work on body and mind together to help cure an illness. Traditional medicinal knowledge of the medicinal plants and their uses by indigenous healers and not only useful for conservation of cultural traditions and biodiversity but also for community healthcare and drug development in the present and future (Ahmad *et al.*, 2011). Since the beginning of this Century, there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of the world. The World Health Organization (WHO) estimated that approximately 80% of world population relies mainly on traditional medicines, mostly plant drugs in their health

care. Today, Ayurvedic coexists with modern system of medicine, and is still widely used and practiced. About 30% of the currently used therapeutics is of natural origin (Ramesh *et al.*, 2011). Besides that there is a global consensus on the benefits of phytopharmacy and at present medicinal plants occupy a key position in the research and medicine. These facts associated with the progressive loss of traditional knowledge, due to rural exodus and with the threats to which plants Genetic Resources (PGR) are exposed, make the efforts to study and preserve PGR relevant in every respect (Ribeiro *et al.*, 2010). These indigenous medicinal plants need to be studied and documented in the face of emerging threats of climatic change habitat degradation over harvesting and bio-piracy (Khan *et al.*, 2004). The study highlights the importance of documenting, ethno botanical information and indigenous traditional knowledge about the medicinal plants used by the tribes in their day to day life to cure some common ailment (Gireesha and Raju, 2013). India is one of the mega biodiversity of the world. Since time immemorial man has uses various part of medicinal plants in the treatment and prevention of many ailments (Chah *et al.*, 2006). The established systems of Ayurvedic and Unani medicine, folk medicinal practitioners have dispenses thousands years of medicinal

**Author for correspondence* : E-mail : hemila14@yahoo.co.in

plants preparations for treatments of wounds (Bharadwaj and Gakhar, 2005), (Bodekar and Hughes, 1998).

Materials and methods

The plant samples were collected from Thuvaipathy, situated at Anaikatti, Coimbatore, Tamil Nadu, India. The collection was carried out 3 months interval for one year during (January, April, July) 2016 (Mustapha, 2013). Plants were identified through interviews and detailed personal discussions were conducted with local peoples, who have unique knowledge about medicinal plants. Further identification was carried out taxonomically the Indian medicinal plants literature to ascertain the nomenclature. Their specific medicinal values were verified with the knowledge of local people and also confirming the details available in recent studies (Kirtikar and Basu, 1951); (Mathew, 1985); (Chatterjee and Pakrashi, 1991).

Results and discussion

Medicinal plant diversity

The present study revealed the ethno medicinal knowledge of people in Thuaipathy, Anaikatti, Coimbatore, Tamil Nadu, India. In this study 180 plant species distributed in 61 families and 151 genera (Table 1) were identified as being used to various treatments. The dominance of trees concurs with the general pattern seen in most ethno botanical survey. This could be attributed to the abundance and year round availability of trees in the study area (Nazeruddin *et al.*, 2011). The most representative families were Caesalpiniaceae and Moraceae with 13 species each, Euphorbiaceae, and Mimosaceae with 9 species, Sapindaceae and Bignoniaceae with 8 species each and Annonaceae and Apocynaceae with 6 species. The other families had 5

Table 1 : List of Medicinal plants & their parts used in different diseases

Family	Scientific Name	Life Form	Useful Part	Medicinal Uses
MAGNOLIACEAE	<i>Michelia champaca</i>	Tree	Bark, flowers and fruits	Cure skin diseases.
ANNONACEAE	<i>Artabotrys odoratissimus</i>	Shrub	Leaves and fruits	Used in the treatment of Cholera.
ANNONACEAE	<i>Polyalthia suberosa</i>	Tree	Root	Cure for scorpion stings, controls high BP.
ANNONACEAE	<i>Annona squamosa</i>	Shrub	Root, stem and leaves	Cures Diarrhoea.
ANNONACEAE	<i>Annona reticulata</i>	Shrub	Stem and bark	Used to treat Diarrhoea and dysentery.
ANNONACEAE	<i>Annona cherimola</i>	Tree	Fruits	Boosts immunity and prevents Osteoporosis.
ANNONACEAE	<i>Annona muricata</i>	Tree	Leaves and fruits	Used to control fever and high BP.
CAPPARIDACEAE	<i>Crataeva religiosa</i>	Tree	Stem and leaves	Antidote to poison and cures cold and cough.
BIXACEAE	<i>Bixa orellana</i>	Tree	Leaves and fruits	Blood purifier.
BIXACEAE	<i>Hydnocarpus pentandra</i>	Tree	Seeds	Cure skin diseases and constipation.
CLUSIACEAE	<i>Garcinia indica</i>	Tree	Fruits	Reduces the appearance of wrinkles.
CLUSIACEAE	<i>Calophyllum inophyllum</i>	Tree	Whole plant	Treatment of Psoriasis.
DIPTEROC- ARPACEAE	<i>Hopea parviflora</i>	Tree	Fruits	Antimicrobial.
MALVACEAE	<i>Hibiscus rosa-sinensis</i>	Shrub	Leaves and flowers	Good for hair and prevents heart stroke.
MALVACEAE	<i>Bombax ceiba</i>	Tree	Root	Used for stimulant and tonic properties.
STERCULIACEAE	<i>Sterculia foetida</i>	Tree	Stem, leaves and fruits	Cure skin diseases and as carminative.
STERCULIACEAE	<i>Helicteres isora</i>	Shrub	Fruits	Used to treat diarrhoea and dysentery.
STERCULIACEAE	<i>Pterospermum reticulatum</i>	Tree	Stem and flowers	Cures cold, cough, head ache and ulcers.
RUTACEAE	<i>Glycosmis pentaphylla</i>	Shrub	Root, stem and leaves	Used to relieve pain in tooth, head and muscles.
RUTACEAE	<i>Aegle marmelos</i>	Tree and fruits	Root, stem, leaves	Used in the treatment of fever and asthma.
SIMARUBACEAE	<i>Ailanthus triphysa</i>	Tree	Stem and bark	Antidote for snake bite.

Table 1 continued

Table 1 continued

SIMARUBACEAE	<i>Simarouba glauca</i>	Tree	Leaves	Cures dysentery.
BURSERACEAE	<i>Commiphora caudate</i>	Tree	Stem and leaves	Cures ulcer.
BURSERACEAE	<i>Canaraium strictum</i>	Tree	Stem	Rheumatism.
MELIACEAE	<i>Azadirachta indica</i>	Tree	Whole plant	Control worms.
MELIACEAE	<i>Dysoxylum binectariferum</i>	Tree	Stem and fruits	Anti-inflammatory.
MELIACEAE	<i>Swietenia macrophylla</i>	Tree	Stem and seeds	Regulate blood sugar.
MELIACEAE	<i>Toona ciliate</i>	Tree	Stem	Fever and diarrhoea.
MELIACEAE	<i>Khaya senegalensis</i>	Tree	Stem	Head ache and skin rashes.
RHAMNACEAE	<i>Zizyphus mauritiana</i>	Tree	Stem	Fever, piles and dysentery.
VITACEAE	<i>Cissus quadrangularis</i>	Shrub	Leaves	Heal wounds.
SAPINDACEAE	<i>Schleichera oleosa</i>	Tree	Seeds	Skin diseases.
SAPINDACEAE	<i>Filicium decipiens</i>	Tree	Stem	Anti-oxidant.
SAPINDACEAE	<i>Sapindus laurifolius</i>	Tree	Fruits	Anti-obesity.
SAPINDACEAE	<i>Sapindus emarginatus</i>	Tree	Fruits	Asthma and dysentery.
SAPINDACEAE	<i>Dimocarpus longan</i>	Tree	Fruits and seeds	Antidote for snake bite.
SAPINDACEAE	<i>Harpullia arborea</i>	Tree	Stem and seeds	Rheumatism.
SAPINDACEAE	<i>Dodonea angustifolia</i>	Shrub	Stem, leaves and fruits	Diarrhoea and skin rashes.
SAPINDACEAE	<i>Arfeuillea arborescens</i>	Tree	Stem and seeds	Rheumatism.
ANACARDIACEAE	<i>Mangifera indica</i>	Tree	Stem, leaves, flowers and fruits	Urinary infections and hepatic disorders.
ANACARDIACEAE	<i>Spondias pinnata</i>	Tree	Root, stem, fruits and seeds	Astringent, stomach ache and rheumatism.
FABACEAE	<i>Butea monosperma</i>	Tree	Stem and seeds	Gonorrhoea.
FABACEAE	<i>Dalbergia latifolia</i>	Tree	Stem and bark	Diarrhoea and indigestion.
FABACEAE	<i>Dalbergia paniculata</i>	Tree	Stem	Controls hair fall.
FABACEAE	<i>Pterocarpus marsupium</i>	Tree	Stem	Cures body pain.
CAESALPINIACEAE	<i>Caesalpinia sappan</i>	Tree	Stem and seeds	Diarrhoea and skin diseases.
CAESALPINIACEAE	<i>Delonix regia</i>	Tree	Stem, leaves and flowers	Anti-oxidant and anti-diabetic.
CAESALPINIACEAE	<i>Acrocarpus fraxinifolius</i>	Tree	Stem, fruits and seeds	Purgative for children.
CAESALPINIACEAE	<i>Cassia fistula</i>	Tree	Flowers	Gastrointestinal disorders.
CAESALPINIACEAE	<i>Cassia auriculata</i>	Shrub	Whole plant	Urinary and skin diseases.
CAESALPINIACEAE	<i>Cassia alata</i>	Shrub	Whole plant	Uterus problems.
CAESALPINIACEAE	<i>Bauhinia racemosa</i>	Shrub	Root, stem and seeds	Treatment of liver diseases.
CAESALPINIACEAE	<i>Bauhinia purpurea</i>	Tree	Stem, leaves and flowers	Anti-inflammatory and anti-helminthic.
CAESALPINIACEAE	<i>Saraca asoca</i>	Tree	Stem	Menstrual and uterus problems.
CAESALPINIACEAE	<i>Tamarindus indica</i>	Tree	Leaves	Astringent.
CAESALPINIACEAE	<i>Kingiodendron pinnatum</i>	Tree	Stem and bark	Cures sores.
CAESALPINIACEAE	<i>Cassia hybrid</i>	Tree	Seeds	Constipation.
CAESALPINIACEAE	<i>Cassia siamea</i>	Tree	Stem and fruits	Intestinal worms and scabies.
MIMOSACEAE	<i>Xylia xylocarpa</i>	Tree	Stem and seeds	Vomit, ulcer, piles and diarrhoea.
MIMOSACEAE	<i>Adenanthera pavonina</i>	Tree	Seeds	Paralysis and skin disorders.
MIMOSACEAE	<i>Dichrostachys cinerea</i>	Shrub	Root, stem and leaves	Head ache and tooth ache.
MIMOSACEAE	<i>Acacia leucophloea</i>	Tree	Stem	Cough and bronchitis.
MIMOSACEAE	<i>Acacia planifrons</i>	Tree	Stem and leaves	Ulcers and skin infections.
MIMOSACEAE	<i>Albizia lebbek</i>	Tree	Stem, flowers and seeds	Cough, asthma and piles.
MIMOSACEAE	<i>Albizia amara</i>	Tree	Whole plant	Cough, ulcers, diarrhoea and wounds.

Table 1 continued

Table 1 continued

MIMOSACEAE	<i>Samanea saman</i>	Tree	Root, leaves and seeds	Cold, cough and sore throat.
MIMOSACEAE	<i>Pithecellobium dulce</i>	Tree	Stem and leaves	Indigestion and tooth ache.
COMBRETACEAE	<i>Terminalia bellerica</i>	Tree	Stem	Skin disorders.
COMBRETACEAE	<i>Terminalia arjuna</i>	Tree	Stem	Gastrointestinal disorders.
COMBRETACEAE	<i>Terminalia crenulata</i>	Tree	Stem	Bronchitis and burning sensation.
MYRTACEAE	<i>Psidium guajava</i>	Shrub	Leaves, fruits and seeds	Astringent, anti-inflammatory and anti-oxidant.
MYRTACEAE	<i>Syzygium cumini</i>	Tree	Stem and seeds	Anti – diabetic and tooth problems.
LYTHRACEAE	<i>Lagerstroemia microcarpa</i>	Tree	Leaves	Diarrhoea and dysentery.
LYTHRACEAE	<i>Lagerstroemia speciosa</i>	Tree	Root, leaves and fruits	Kidney problems and ulcers.
LYTHRACEAE	<i>Lawsonia inermis</i>	Shrub	Stem and leaves	Premature graying of hair and skin diseases.
LYTHRACEAE	<i>Punica granatum</i>	Shrub	Fruits	Gastrointestinal disorders.
SAMYDACEAE	<i>Homalium zeylanicum</i>	Tree	Stem and leaves	Reduces the appearance of wrinkles.
CACTACEAE	<i>Opuntia stricta</i>	Shrub	Stem and fruits	Urinary complaints and piles.
CACTACEAE	<i>Epiphyllum oxypetalum</i>	Herb	Stem and fruits	Sedative.
UMBELLIFERAE	<i>Centella asiatica</i>	Herb	Whole plant	Eye disorders.
UMBELLIFERAE	<i>Eryngium foetidum</i>	Herb	Root and leaves	Vomit, fever and stomach pain.
ASTERACEAE	<i>Eclipta prostrate</i>	Herb	Leaves	Cold, cough, fever and head ache.
ASTERACEAE	<i>Artemisia annua</i>	Herb	Leaves	Malaria.
ASTERACEAE	<i>Parthenium hysterophorus</i>	Herb	Leaves	Treat cuts and burns.
ERICACEAE	<i>Epigaea repens</i>	Shrub	Leaves and flowers	Urinary problems.
SAPOTACEAE	<i>Chrysophyllum cainito</i>	Tree	Fruits	Diabetes.
SAPOTACEAE	<i>Madhuca longifolia</i>	Tree	Stem and leaves	Leprosy and fever.
SAPOTACEAE	<i>Madhuca bourdilloni</i>	Tree	Seeds	Skin care.
SAPOTACEAE	<i>Mimusops elengi</i>	Tree	Fruits	Diarrhoea, dysentery and skin disorders.
EBENACEAE	<i>Diospyros paniculata</i>	Tree	Stem and fruits	Diarrhoea and heal burns.
EBENACEAE	<i>Diospyros ebenum</i>	Tree	Stem, leaves and fruits	Astringent.
EBENACEAE	<i>Diospyros montana</i>	Tree	Leaves	Paralysis and joint pains.
SYMPLOCACEAE	<i>Symplocos microphylla</i>	Tree	Stem	Ulcer and skin disorders.
APOCYNACEAE	<i>Carissa carandus</i>	Shrub	Root, leaves and fruits	Gastro intestinal disorders.
APOCYNACEAE	<i>Rauwolfia serpentine</i>	Shrub	Root and leaves	Hypertension and antidote to snake poison.
APOCYNACEAE	<i>Catharanthus roseus</i>	Shrub	Whole plant	Cancer, diabetes and eye disorders.
APOCYNACEAE	<i>Alstonia scholaris</i>	Tree	Stem, latex and leaves	Antidote to poison.
APOCYNACEAE	<i>Tabernaemontana divaricata</i>	Shrub	Root, leaves and flowers	Eye diseases and skin diseases.
APOCYNACEAE	<i>Nerium oleander</i>	Shrub	Leaves and flowers	Scabies, malaria and skin diseases.
ASCLEPIADACEAE	<i>Calotropis gigantean</i>	Shrub	Latex and leaves	Relief head, tooth and muscle aches.
ASCLEPIADACEAE	<i>Asclepias curassavica</i>	Shrub	Root, latex, leaves and flowers	Ulcers, dysentery and eyewash for infected eyes.
LOGANIACEAE	<i>Strychnos nux-vomica</i>	Tree	Stem, leaves and seeds	Psoriasis and tumors.
BORAGINACEAE	<i>Cordia dichotoma</i>	Tree	Stem, leaves, fruits and seeds	Astringent and for migraine.
BORAGINACEAE	<i>Ehretia ovalifolia</i>	Tree	Leaves	Fever.

Table 1 continued

Table 1 continued

CONVOLVULACEAE	<i>Ipomaea indica</i>	Climber	Leaves	Dysentery and sores.
SOLANACEAE	<i>Solanum trilobatum</i>	Shrub	Whole plant	Constipation and skin disorders.
SOLANACEAE	<i>Datura metel</i>	Herb	Leaves, fruits and seeds	Cough and asthma.
SCORPHUL ARIACEAE	<i>Bacopa monnieri</i>	Herb	Whole plant	Asthma and ulcers.
BIGNONIACEAE	<i>Oroxylum indicum</i>	Tree	Root, stem and seeds	Astringent and stomach disorders.
BIGNONIACEAE	<i>Millingtonia hortensis</i>	Tree	Root stem and flowers	Asthma and cancer.
BIGNONIACEAE	<i>Stereospermum colais mabberley</i>	Tree	Stem and leaves	Stomach disorders.
BIGNONIACEAE	<i>Spathodea campanulata</i>	Tree	Root, stem, flowers and seeds	Antiseptic, malaria and ulcers.
BIGNONIACEAE	<i>Crescentia cujete</i>	Tree	Whole plant	Cold, diarrhoea and lung diseases.
BIGNONIACEAE	<i>Tecoma stans</i>	Tree	Root, leaves and flowers	Stomach pain and diabetes.
BIGNONIACEAE	<i>Jacaranda mimosifolia</i>	Tree	Root, stem and leaves	Syphilis.
BIGNONIACEAE	<i>Tabebuia rosea</i>	Tree	Root, leaves and flowers	Fever, pain and anaemia.
ACANTHACEAE	<i>Beloperone plumbaginifolia</i>	Shrub	Root, stem and leaves	Cancer and antidote to snake bite.
ACANTHACEAE	<i>Hemigraphis colorata</i>	Herb	Leaves	Antibacterial activity.
ACANTHACEAE	<i>Andrographis paniculata</i>	Herb	Root	Antidote to snake bite and antidiabetic.
VERBENACEAE	<i>Azadirachta indica</i>	Shrub	Rhizome and latex	Cold, cough, fever and asthma.
VERBENACEAE	<i>Lantana camara</i>	Shrub	Leaves and flowers	Cuts and burns.
VERBENACEAE	<i>Tectona grandis</i>	Tree	Whole plant	Gastro intestinal disorders.
VERBENACEAE	<i>Gmelina arborea</i>	Tree	Leaves	Stomach ache.
VERBENACEAE	<i>Vitex altissima</i>	Tree	Root, stem and leaves	Ulcers, allergy and wounds.
LABIATAE	<i>Ocimum basilicum</i>	Herb	Root, leaves and seeds	Insect bite, fever and cardiac diseases.
LABIATAE	<i>Ocimum sanctum</i>	Herb	Root, leaves and seeds	Cold, cough, tonsillitis and asthma.
LABIATAE	<i>Coleus aromaticus</i>	Herb	Leaves	Cold, cough, head ache and fever.
NYCTAGINACEAE	<i>Boerhaavia diffusa</i>	Herb	Whole plant	Cures indigestion and relieves pain.
PIPERACEAE	<i>Piper longum</i>	Shrub	Fruits	Paralysis and indigestion.
PIPERACEAE	<i>Piper betle</i>	Shrub	Leaves	Indigestion and stimulative.
LAURACEAE	<i>Cryptocarya stocksii</i>	Tree	Stem and bark	Prevents cramp during pregnancy.
LAURACEAE	<i>Cinnamomum zeylanicum</i>	Tree	Stem, leaves and flowers	Bronchitis, asthma and cardiac diseases.
LAURACEAE	<i>Persea macrantha</i>	Tree	Stem	Asthma and rheumatism.
LAURACEAE	<i>Litsea coriacea</i>	Tree	Root, leaves and fruits	Asthma and paralysis.
HERNANDIACEAE	<i>Gyrocarpus asiaticus</i>	Tree	Stem	Anticancer activity.
SANTALACEAE	<i>Santalum album</i>	Tree	Stem	Fever, dysentery and skin diseases.
ELAEGNACEAE	<i>Elaeagnus conferta</i>	Shrub	Root, leaves and fruits	Indigestion and cough.
EUPHORBIACEAE	<i>Bridelia retusa</i>	Tree	Stem	Wounds.
EUPHORBIACEAE	<i>Bridelia Montana</i>	Tree	Stem, leaves and seeds	Against intestinal worms.
EUPHORBIACEAE	<i>Phyllanthus acidus</i>	Tree	Whole plant	Head, tooth and muscle aches.
EUPHORBIACEAE	<i>Emblica officinalis</i>	Tree	Leaves and fruits	Mouth ulcer and laxative.
EUPHORBIACEAE	<i>Drypetes roxburghii</i>	Tree	Leaves and fruits	Cold, fever and rheumatism.
EUPHORBIACEAE	<i>Bischofia javanica</i>	Tree	Stem and leaves	Ulcer, sore feet and stomach ache.
EUPHORBIACEAE	<i>Trewia polycarpa</i>	Tree	Root	Rheumatism and arthritis.
EUPHORBIACEAE	<i>Mallotus philippensis</i>	Tree	Whole plant	Skin infections and ulcer.
EUPHORBIACEAE	<i>Jatropha curcas</i>	Shrub	Root, latex, leaves, fruits and seeds	Fever, jaundice, dysentery and tooth ache.

Table 1 continued

Table 1 continued

ULMACEAE	<i>Holoptelea integrifolia</i>	Tree	Stem, leaves and seeds	Diabetes, leprosy and skin diseases.
ULMACEAE	<i>Celtis tetrandra</i>	Tree	Fr	Indigestion.
MORACEAE	<i>Streblus asper</i>	Tree	Root and stem	Anti-inflammatory.
MORACEAE	<i>Ficus benghalensis</i>	Tree	Root, stem, latex, leaves and seeds	Astringent, fever and syphilis.
MORACEAE	<i>Ficus amplissima</i>	Tree	Leaves	Anti-bacterial.
MORACEAE	<i>Ficus tjakela</i>	Tree	Stem and leaves	Ulcer and diseases of female generative organs.
MORACEAE	<i>Ficus religiosa</i>	Tree	Stem and bark	Gonorrhoea.
MORACEAE	<i>Ficus beddomei</i>	Tree	Fruits	Kidney problems.
MORACEAE	<i>Ficus virens</i>	Tree	Stem	Leucorrhoea.
MORACEAE	<i>Ficus racemosa</i>	Tree	Root, stem, latex, leaves and fruits	Diabetes, diarrhoea, dysentery and leprosy.
MORACEAE	<i>Ficus pumila</i>	Tree	Leaves and fruits	Rheumatism and anaemia.
MORACEAE	<i>Antiaris toxicaria</i>	Tree	Latex and seeds	Circulatory stimulant and dysentery.
MORACEAE	<i>Artocarpus heterophyllus</i>	Tree	Leaves, fruits and seeds	Fever and skin diseases.
MORACEAE	<i>Artocarpus hirsuta</i>	Tree	Stem, leaves and fruits	Diarrhoea and pimples.
MORACEAE	<i>Artocarpus gomezianus</i>	Tree	Stem	Antioxidant.
CASUARINACEAE	<i>Casuarina equisetifolia</i>	Tree	Root and stem	Dysentery and diarrhoea.
CYCADACEAE	<i>Cycas circinalis</i>	Tree	Stem, leaves and seeds	Sores and cuts.
ORCHIDACEAE	<i>Vanda roxburghii</i>	Herb	Root	Cough, asthma and skin diseases.
COSTACEAE	<i>Costus igneus</i>	Herb	Leaves	Anti-diabetic.
ZINGIBERACEAE	<i>Alpinia calcarata</i>	Herb	Rhizome and seeds	Indigestion and fever.
AMARYLLIDACEAE	<i>Crinum asiaticum</i>	Herb	Root, stem and leaves	Cold, cough and asthma.
LILIACEAE	<i>Aloe vera</i>	Shrub	Leaves	Kidney problems and heart stroke.
ARECACEAE	<i>Arenga wightii</i>	Tree	Stem	Anti-inflammatory.
ARECACEAE	<i>Phoenix sylvestris</i>	Tree	Root and fruits	Vomit, fever and abdominal complaints.
ARECACEAE	<i>Caryota urens</i>	Tree	Root, stem, flowers and seeds	Ulcer, head ache and boils.
ARECACEAE	<i>Licuala grandis</i>	Shrub	Leaves	Head ache.
ARACEAE	<i>Acorus calamus</i>	Herb	Rhizome	Hypotensive and dysentery.
ARACEAE	<i>Epipremnum aureum</i>	Shrub	Leaves	Antibacterial and anti-oxidant.
ARACEAE	<i>Anthurium spathiphyllum</i>	Herb	Leaves	Rheumatism.
CUPRESSACEAE	<i>Thuja orientalis</i>	Shrub	Root, leaves and seeds	Astringent, cough and bronchitis.
POACEAE	<i>Vetiveria zizanoides</i>	Herb	Root	Mouth ulcer, fever and head ache.
POACEAE	<i>Cymbopogon martini</i>	Herb	Stem, leaves and flowers	Rheumatism and hair loss.
POACEAE	<i>Dendrocalamus strictus</i>	Tree	Stem	Anti-oxidant.
POACEAE	<i>Bambusa bambos</i>	Tree	Root and leaves	Astringent and indigestion.

and below 5 species each associated with the treatment of the reports. Some of the families play a vital role to cure the common diseases among the tribal people of Thuvaipathy.

Growth form and plant parts used

Among the total number 180 plant species 4 growth forms were identified; Climber, Herb, Shrub and Trees.

Most of the medicinal plants were Trees (121 species), followed by shrub (36 species), Herbs (6 species), and Climber (1 species). (fig: 1). Among the various plant parts used, the bark and stem (46%) and leaves (46%) were commonly utilized followed by the roots (23%), fruits (22%), seeds (20%), flowers (12%), whole plants (7%), latex/resin (3%) and rhizome (1%) (fig: 2). The plants

were found to be used in different forms such as juice, extracts, paste, powder, infusion. From this present survey and investigation, it was clear that the people of Thuvaiopathy possess knowledge of medicinal plants and has ability to cure wound and various infectious diseases with their knowledge. These plants are cultivated and widely used in the Egyptian folk medicine (Lulekal *et al.*, 2008). This is constant with the other general observation which has been reported earlier in relation to medicinal plant studies by the Indian Traditional System of Medicine like Siddha and Ayurvedha (Hammoda, 1993); (Asolkar *et al.*, 1992). The parts of the plants mostly used for medicinal purposes are leaves, root, stem, fruits, the complete aerial parts, the whole plant, barks (root and stem) and flowers (including the flowering heads) in decreasing order. Internal uses invariably predominate over external uses. Juice (almost mixed with water and goat's or cow's milk) and paste are the main methods of preparation, either for oral or for external administration. For topical use, the most important methods used are direct application of the paste or ointment (with oil). They

mix several plants as ingredients to cure diseases immediately. Generally, fresh part of the plant is used for the preparation of medicine. Most of the reported preparations are drawn from a single plant; mixtures are used rarely. In other parts of the country, the use of mixtures of plant species in treating a particular ailment is fairly common (Ayyanar and Ignacimuthu, 2005); (Ignacimuthu *et al.*, 1998); (Rajan *et al.*, 2002); (Ganesan *et al.*, 2004)., (Udayan *et al.*, 2005).

Conclusion

This study concluded that even the accessibility of Western medicine for simple and complicated diseases is available, but many people in the study area Thuvaiopathy at Anaikatti, Coimbatore district, is still continue to depend on medicinal plants, at least for the treatment of some simple diseases such as, cold, cough, itches, skin diseases and tooth infections. Well-knowledge healers have good interactions with patients and this would improve the quality of healthcare delivery. The present-day traditional healers are very old, due to lack of interest among the younger generation as well as their tendency to migrate to cities for lucrative jobs; there is a possibility of losing this wealth of knowledge in the near future. It becomes necessary to acquire and preserve this traditional system of medicine by proper documentation and identification of species.

References

Ahmad Cheikhoussef, Martin Shapi, Kenneth Matengu, M.U. Hina and Ashekele (2011). Ethnobotanical study of indigenous knowledge on medicinal plant use by traditional healers in Oshikoto region, Namibia. *Journal of Ethnobiology and Ethnomedicine*, 1-11.

Asolkar, L.V., K.K. Kakkar and O.J. Chakra (1992). Second supplement to glossary of Indian medicinal plants with active principles. *Publication and Information Division, CSIR, New Delhi, India*, 205-206.

Ayyanar, M. and S. Ignacimuthu (2005). Traditional knowledge of Kani tribals in Kouthalai of Tirunelveli hills, Tamil Nadu, India *J. Ethnophar*, **102**: 246-255.

Bharadwaj, S. and S.K. Gakhar (2005). Ethnomedicinal plants used by the tribals of Mizoram to cure cuts & wounds. *Indian journal of Traditional knowledge*, **4**: 75-80.

Bodeker, G and M.A. Hughes (Eds.) (1998). Plants for food and medicine. *Royal Botanic Gardens, Kew* 345-359.

Chah, K.F., C.A. Emuelosi and C.O. Esimone (2006). Antibacterial and wound healing properties of methanolic extracts of some Nigerian medicinal plants. *Journal of Ethnopharmacology*, **104**: 164-167.

Chatterjee, A. and S.C. Pakrashi (1991). The treatise on Indian medicinal plants. *Council of Scientific and Industrial Research, New Delhi*, **1**: 10-103.

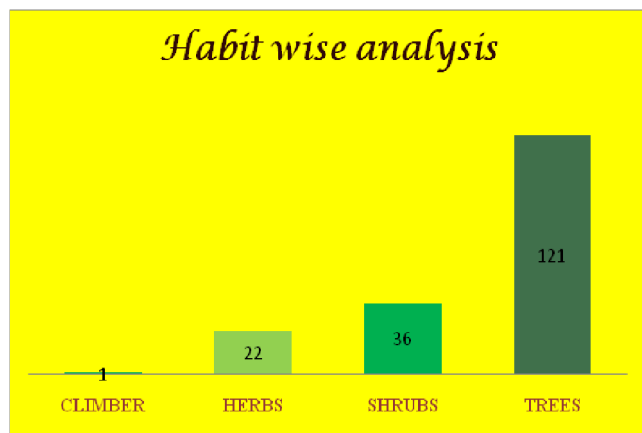


Fig. 1 : Distribution of medicinal plant species according to their life form

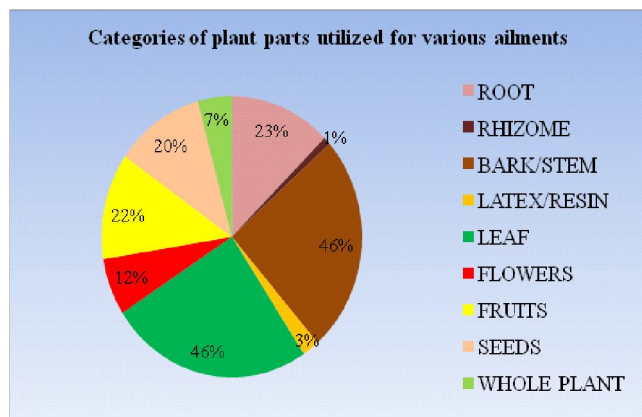


Fig. 2 : Percentage of medicinal plant part used by the traditional healers

- Farnsworth, N.R., A. Akerele Bingel, D.D. Soejarto and Z. Guo (1985). Medicinal plants in Therapy. *Bulletin of the World Health Organization*, **63(6)**: 965-998.
- Ganesan, S., N. Suresh and L. Kesavan (2004). Ethnomedicinal survey of lower Palani hills of Tamilnadu. *Journal of Traditional Knowledge*, **3**: 299–304.
- Gireesha, J and N.S. Raju (2013). Ethno botanical study of medicinal plants in BR Hills region of Western Ghats, Karnataka. *Asian Journal of Plant Science and Research*, **3(5)**: 36-40.
- Hammuda, F. (1993). Medicinal plants and Herbs. *Cairo: Al-ahram centre for translation and publication*.
- Ignacimuthu, S., K. Sankarasivaraman and L. Kesavan (1998). Medico-ethnobotanical survey among Kanikar tribals of Mundanthurai Sanctuary. *Fitoterapia*, **69**: 409–414.
- Khan, Z.S, A.A. Khuroo and G.H. Dar (2004). Ethnomedicinal uses of some plants in the Kashmir Himalaya. *Indian J. Trast. Noel*, **3(4)**: 351-357.
- Kirtikar, K.R. and B.D. Basu (1951). *Indian Medicinal Plants*. (Lalit Mohan Basu publication, Allahabad), **1-4**: 40-333.
- Kshirsagar, A.A. and B.K. Magar (2011). Morphotaxonomic Authentication of Ethno-medicinal plants from Gautala and Pitalkhora of Kannad, District Aurangabad Maharashtra. *Asian Journal Plant Sci. Res.*, **1**: 17-24.
- Lulekal, E., E. Kelbess, T. Bekele and H. Yineger (2008). An ethnobotanical study of medicinal plants in Mana Angetu District, Southeastern Ethiopia. *J. Ethnobiol. Ethnomed*, **4(10)**: 1746-1752.
- Mathew, K.W. (1985). The Flora of Tamil Nadu Carnatic, *The Rapinant Herbarium*.
- Mustapha, A.A. (2013). Ethnomedicinal studies of medicinal plants with antifungal activities in Keffi local government, Nasarawa state, Nigeria. *Asian Journal of Plant Science and Research*, **3(4)**: 109-115.
- Nazeruddin, G.M., S.S. Pingale and S.S. Sheikh (2011). Pharmacological Review of *Tridax procumbens* L. *Der Pharmacia Sinica*. *Der Pharmacia Sinica*, **2(4)**: 172-175.
- Prabakaran, M., S. Merinal and A. Panneerselvam (2011). *European Journal of Experimental Biology*, **1(2)**: 219-225.
- Rajan, S., M. Sethuraman and P.K. Mukherjee (2002). Ethnobiology of the Nilgiri Hills, India. *Phytother Res.*, **16**: 98-116.
- Ramesh K. Verma, Garima Mishra, Pradeep Singh K.K. Jha and R.L. Khosa (2011). *Alpinia galanga* – An important medicinal plant: A review. *Der Pharmacia Sinica* **2(1)**: 142-154.
- Ribeiro A., M.M. Romeiras, J. Mavares and M.T. Faria (2010). Ethnobotanical survey in Canhane village, district of Massingir, Mozambique: medicinal plants and traditional knowledge. *J. Ethnobiol Ethnomed*, **6**: 33.
- Sindhu, S., G. Uma and P. Kumudha (2012). Survey of medicinal plants in Chennimallai Hills, Erode Districts, Tamilnadu. *Asian Journal Plant Sci. Res.*, **2**: 712-717.
- Singh, M. and M. Kumar (2013). Study of plant diversity of Jind district, Haryana, India. *Asian Journal Plant Sci. Res.*, **44-53**.
- Udayan, P.S., G. Sateesh and K.V. Thushar (2005). Ethnomedicine of the Chellipale community of Namakkal district, Tamilnadu. *Indian J. Trad. Knowl.*, **4(4)**: 437–442.
- Verma, R.K., Garima Mishra, Pradeep Singh Jha K.K. and R.L. Khosa (2011). *Alpinia galanga* – An important medicinal plant: A review. *Der Pharmacia Sinica*, **2(1)**: 142-154.