EVALUATION OF ETHNOBOTANICAL PLANTS USED BY THE MALAMUTHANS TRIBAL COMMUNITY IN THE MEDAPPARA FOREST, WESTERN GHATS OF KERALA

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ABSTRACT

Medappara forest of Kerala was surveyed to list out the ethnobotanical plants used by Malamuthans tribal community. Totally 250 plants belonging to 86 families were reported to be present in the study area, in which Fabaceae family was the dominant one contributed 25 species followed by the families, Euphorbiaceae (16 species), Asteraceae (13 species) and Acanthaceae with 12 species and the distribution of species in the study area includes various life-forms viz, trees (81 species), shrubs (53 species), herbs (78 species), climbers (35 species) and epiphytics (3 species) habits respectively. Of the 250 plant species, 237 (95%) were recognized as medicinally important and also cures 127 types of ailments. Of the 250 plant species encountered at all life-form levels. Sixteen ailment categories were classified, among them a higher number of 110 species were prescribed by the Malamuthan ethnic community for Gastro Intestinal Ailment (GIA).

Keywords: Ethnobotany, Malamuthan tribal, Medappara, Kerala.

1. INTRODUCTION

The indigenous people nurture rich knowledge about medicinal plants developed over generations by bold experimentation through trial and error methods (Sahai, 2003). This treasure of knowledge has been passed orally without any written documents and is still retained by them (Perumalsamy and Ignacimuthu, 2000). In the last few years, there has been an exponential growth in the field of herbal or traditional medicine and these drugs are gaining popularity because of their natural origin and exhibit remarkable efficacy in the treatment of various ailments (Siddiqui et al., 1995). A vast knowledge of how to use the plants against different illness may be expected to have accumulated in areas where the use of plant is still of great importance (Diallo et al., 1999).

Ethnomedicinal studies are the suitable source of information regarding useful medicinal plants that can be targeted for domestication and management (Kunwar and Duwadee, 2003). These studies assume great importance in enhancing our traditional skills and technology about the plant grown and used for native or tribal communities for their sustenance. The use of ethnobotanical information in medicinal plant research has gained considerable attention in segment of the scientific community (Heinrich, 2000). Also, traditional medicine and ethnomedicinal information play an important role in scientific research, particularly when the literature and field work data have been properly evaluated (Awadh et al., 2004). Many reports on ethnomedicinal studies in the Nilgiri Biosphere Reserve of Western Ghats are available (Abraham, 1981; Parthasarathy, 1995; Rajan et al., 2003; Sivakumar and Murugesan, 2005; Pradheeps and Poyyamoli, 2013; Sharmila et al., 2014).

However no studies on ethnobotanical significances have been carried out in the Medappara Forest, Poovaranthode of Kerala, and a part of Nilgiri Biosphere Reserve where rich diversity of plant species is available. Hence the present study is aimed to document the medicinal plants of ethnobotanical importance in the study area of Medappara forest during the period between June, 2014 and February, 2015.

2. MATERIALS AND METHODS

2.1. Study area

The present study was made in Medappara Forest at Poovaranthode, Thamarassery Range which belongs to western parts of Nilgiri Biosphere Reserve, the Western Ghats, Kerala which spreads over an area of about 1400 hectares (Fig.1). It is a tropical moist evergreen forest consisting of multistoreyed structure encompasses high species content. The geographical location of the study forest is 11° 23’ 45” N and 76° 06’ 18” E and its altitude is ranging from 800 m to 2000 m above msl.
2.2. Ethnic community

Malamuthans are one of the primitive tribal groups of Kerala living in Malappuram and Calicut districts including the study area, Medappara Forest. They are also known as Mala Namboothiris (tribal Brahmins) due to their strict beliefs and customs. The Malamuthan consider themselves as a very superior people and prefer to live isolated. They are fearless and loyal and clime to be the Malanamboothiris.

2.3. Data Collection

Ethnobotanical surveys were conducted during March, 2014 – February, 2015 in the Medappara forest of Kerala. The information was gathered through questionnaires, personal interviews and discussions among them (Schultes, 1962; Jain, 1989; Jain and Goel, 1995). The questionnaire contains the details of the plants, parts used, medicinal uses and mode of preparation of remedies. The taxonomic identification of the plant specimens were done with the help of local and regional floras viz., Flora of Presidency of Madras (Gamble and Ficsher, 1957) and Flora of Tamilnadu Carnatic (Mathew, 1983). The collected plant species were dried for herbarium preparation and the same were maintained in the Department of Botany, Kongunadu Arts and Science College, Coimbatore.

2.4. Ailment Categories

Based on the information obtained from the traditional healers in the study area, all the ailments were grouped into 15 categories viz., Gastro-Intestinal Ailments (GIA), Dermatological Infections/Diseases (DID), Respiratory Systems Diseases (RSD), Genito-Urinary Ailments (GUA), Fever (Fvr), Skeleto-Muscular System Disorders (SMSD), Poisonous Bites (PB), Circulatory System/Cardio-vascular Diseases (CSCD), Endocrinial Disorders (ED), Dental Care (DC), Hair Care (HC), Ear, Nose, Throat problems (ENT), Cooling Agents (CA), Liver Problems (LP), General Health (GH) and Insecticidal (IC).

3. RESULTS

3.1. Documentation of indigenous ethnomedicinal knowledge

The present study revealed the use of 237 species of plants distributed in 196 genera belonging to 86 families which were commonly used by most of the Malamuthan traditional healers for the treatment of 127 types of diseases. The prominent family of medicinal plants was Fabaceae with 25 species followed by Euphorbiaceae, Asteraceae and Acanthaceae with 16, 13 and 12 species respectively. For each reported species, botanical name, family, parts used and ailments treated were provided (Table 1).

The medicinal uses of plants gathered in the present study were compared with the previously published information from various parts of India (Dasture, 1962; Pal and Jain, 1998; Maheswari, 2000; Sahoo et al., 2001; Suresh Babu, 2001; Shiva et al., 2002; Anilkumar, 2003; Kirtikar and Basu, 2005; Alice and Asha Sankar, 2007; Deshpande et al., 2010; Hrudayanath and Rout, 2011; Ayyanar and Ignacimuthu, 2011; Venkatachalapathi et al., 2015). The data showed that no plant was reported as a new medicinal plant as all the plants were reported with different uses elsewhere.

3.2. Ailment Categories

Based on the information obtained from the traditional healers in the study area, all the reported ailments were categorized into 16 categories (Table 2). Among the various ailment categories analyzed, higher number of 110 species was prescribed for a Gastro-Intestinal Ailments (GIA). Next to this, 86 plants were used for the treatment of Dermatological Infections or Diseases (DID) followed by 82 species for Skeleton-Muscular System Disorder (SMSD). For all other ailment category except insecticidal property, generally more than 5 species were used by the Malamuthan tribal communities in the study area, Medappara forest. However, for insecticidal properties (IC) only 2 species viz., Cycas circinalis and Duranta erecta were used. This data indicates the usefulness of various species for many ailment categories by the tribal community in the study area.

3.3. Life-form and parts used

The percentage of species distribution in various life-forms was varied markedly (Fig 2). Trees were the primary source of medicine (78 species) followed by herbs (71 species) and shrubs (52 species). Among the different plant parts used, the leaves (79 species) were most frequently used for the treatment purposes. Similarly, the root parts were also prescribed mainly (from 71 species) for many ailments. Very less number of species, less than 2 were used for their parts like corm, petiole, tuber, buds, twigs and grains.

4. DISCUSSION

Ethnobotany is perhaps the most important method to identify and study natural plant resources and their management by indigenous people.
| Sl. No. | Name of Species | Family        | Parts used                      | Medicinal/other economic uses                                                                 | *Ailment category |
|--------|-----------------|---------------|---------------------------------|-------------------------------------------------------------------------------------------------|-------------------|
| 1      | *Abrus precatorius*, L. | Fabaceae     | Roots, seeds, leaves             | Roots, seeds and leaves are anti-phlogistic, aphrodisiac and anti-ophthalmic properties. It is used as diuretic tonic and emetic affections of nervous system and hair growth. The bark is used to produce a substance for washing hair, which can be used to headlice. It can also be used to stupefy fish. The flowers may be used ornamentally. Tender leaves are used in the treatment of migraine. The liquid is very good for people suffering from obesity. The extract of the plant is good for curing sore throat, bronchitis and body pains. Bark used as an antipyretic as well as anti-inflammatory substance. It cures psoriasis, anaemia, ulcers, constipation and pain in the chest. The tree is food for the larvae of the butterfly. The “fruit for hair” used as a traditional shampoo. An infusion of the leaves has been used in anti-dandruff preparations. The leaves have an acidic taste and are used in chutneys. Decoction is used in fever and stomach diseases. Root ash is used as tooth powder in pyorrhea. Used as antispasmodic, astringent, Diuretic, odentalgic. Used by the Malays externally and internally. Decoction used for coughs. Decoction of roots used for desentery. In Cameroon plant used in prescriptions for articular rheumatism. The plant is used for aging, atherosclerosis, cancer, diabetes, dysentery, mania, urinary disorders and wound. Rhizome boiled is used for curing dandruff. The plant is used in bronchitis and gynaecological disorders. Leaves are used against glandular tumors. The leaf extract is used in the treatment of asthma for many centuries. It relieves breathnesses. Fronds either in decoction or syrup utilized as Adiantum capillus veneries. Roots used for strangury and for fever due to elephantiasis. Used for cough, leprosy, hair falling. Decoction of fresh leaves used as stomachic and diuretic; | ENT, SMSD, HC |
| 2      | *Acacia caesia*, (L.) Willd. | Fabaceae   | Bark, leaves                     |                                                                                                  | HC, SMSD          |
| 3      | *Acacia catechu* (LF) Willd. | Fabaceae   | Bark                            |                                                                                                  | GH, RSD, DID, GIA, |
| 4      | *Acacia concinna* DC. | Fabaceae     | Fruit, leaves                    |                                                                                                  | HC,               |
| 5      | *Achyranthes aspera* L. | Amaranthaceae | Whole plant, leaves, root        |                                                                                                  | GIA, DC, SMSD     |
| 6      | *Achyranthes prostrata*, (L.) Blume. | Amaranthaceae | Roots, whole plant               |                                                                                                  | RSD, GIA, SMSD |
| 7      | *Actinodaphne hookeri*, Bedd. | Lauraceae   | Rhizome                         |                                                                                                  | GH, ED, GIA, RSD, SMSD, GUA |
| 8      | *Adhatoda zeylanica* Medic. | Acanthaceae | Leaves                          |                                                                                                  | RSD, SMSD         |
| 9      | *Adiantum philippense* L. | Adiantaceae | Frond, root                     |                                                                                                  | GUA, Fvr, RSD, HC, GIA, GH, ED |
Aegle marmelos (L.) Correa
Rutaceae
Fruits, root, bark, leaves
10

Aerva lanata (L.) Juss.
Amaranthaceae
Whole plant
11

Ageratum conyzoides, L.
Asteraceae
Whole plant
12

Aerva lanata (L.) Juss.
Amaranthaceae
Whole plant
11

Aerva lanata (L.) Juss.
Amaranthaceae
Whole plant
11

Aglaia elaegnoidea (Juss.) Benth.
Meliaceae
Fruit
13

Albizia falcataria (L.) Fosberg.
Fabaceae
Leaves, seeds, wood
14

Albizia chinensis (Osbeck.) Merr.
Fabaceae
Wood
15

Albizia labbeck (L.) Benth.
Fabaceae
Bark, flower, seed
16

Allmania nodiflora, (L.) R. Br. exwight in Hook
Amaranthaceae
Ripe fruits, leaves
17

Alpinia galanga (Linn.) Willd.
Zingiberaceae
Rhizome
18

Alstonia scholaris (L.) R. Br.
Apocynaceae
Bark, milky latex
19

Alstonia venenata R. Br.
Apocynaceae
Bark, fruit
20

Alternanthera brasiliiana, L.
Amaranthaceae
Leaves
21

Fruits are used in chronic dysentery conditions, accompanied by loose stools alternating with occasional constipation, the ripe fruit is widely used in different formulations. The plant is useful in treating insomnia. Used as cooling agent and in diarrhoea. The leaves are used in the treatment of diabetes. Used for treatment of snakebite. Leaves used for soup and spinach, plants included in Dasapushpam. The plant also used against cephalalgia and strangury. Whole plant is used as a nerve tonic. Decoction or infusion of whole plant is used in diarrhoea, dysentery, colic with flatulence. Leaves are styptic, vulnerary and useful in haemorrhoids and sores. Fruit is antidiarrhoeal, alternative, astringent, tonic, employed in leprosy, burning sensation of the body, inflammations and febrile complaints; seeds used in painful maturation.

Leaves and seeds are used for eye problems. Wood is used for making paper pulp.

Wood is used for making furniture, packing box, tea box etc.

Bark, flower and seed is used against cough, asthma, leprosy and seminal weakness.

Ripe fruits are used in the treatment of constipation and dysentery. Leaves; febrifuge.

Rhizome is useful in rheumatism, bronchial catarrh, tonic, stomachic, carminative, stimulant, expectorant, antispasmodic, anti-amphetamine and diuretic properties.

Bark and milky latex is used in the treatment of malarial fever, ulcer and helminthiasis.

The plant is used as snake antivenom by the tribals. Roots and fruits are useful for skin diseases, leprosy, cobra and other venomous bites, epilepsy, fatigue, fever, syphilis, insanity, helminthiasis as remedy for impure blood.

The plant is used against cough and diarrhoea in Brazilian
22 Alternanthera sessilis, (L.) R.Br.ex.DC. Amaranthaceae Whole plant popular medicine. Also used in inflammation. The leaves used in wounds.
The plant is bitter, sweet, astringent, acrid, constipating, depurative, digestive and useful in vitiated conditions of kapha and pitha, burning sensation, diarrhoea, leprosy and skin diseases.

23 Amorphophallus hohenackeri A.raceae Corm Corm is used for the treatment of piles, prostatic hyperplasia. Corm is prescribed for bronchitis, asthma, dysentery, enlargement of spleen, elephantiasis etc. The plant is used in the treatment of fevers, skin diseases, intestinal worms and flatulence. The decoction of plant is administered against chronic fevers, intestinal worms and dyspepsia. The stem and rhizome are used in treatment of indigestion and other bowels related problems of cattle and goats. The portion of bark is given orally to cattle in dysentery occurring during rainy seasons.

24 Andrographis paniculata (Burm.)Wall. Acanthaceae Whole plant Fvr, DID, GIA, GH, RSD
The plant is used in the treatment of fevers, skin diseases, intestinal worms and flatulence. The decoction of plant is administered against chronic fevers, intestinal worms and dyspepsia. The stem and rhizome are used in treatment of indigestion and other bowels related problems of cattle and goats. The portion of bark is given orally to cattle in dysentery occurring during rainy seasons.

25 Angiopteris helferiana, C.Presl. Angiopteridaceae Frond, rhizome, stem GIA, PB
Leaves are considered as an antidote to the sting of cobra. Fruits are edible. The roots are used to treat malaria, typhus fever, small pox and pneumonia. Poultice of roots are used on open wounds and skin ulcers. Leaves used as antidote for poisonous stings and also to treat skin diseases.

26 Antidesma montanum Blume. Euphorbiaceae Leaves, fruits Fvr, DID, GIA, PB
The roots are used to treat malaria, typhus fever, small pox and pneumonia. Poultice of roots are used on open wounds and skin ulcers. Leaves used as antidote for poisonous stings and also to treat skin diseases.

27 Aristolochia acuminata, Roxb. Aristolochiaceae Root, leaves PB, PB
The root is used for the treatment of snake bite. Shoot extract is used for abdominal pain.

28 Aristolochia indica, L. Aristolochiaceae Root, shoot SMSD, GIA
Latex applied externally on burns. Fruits are edible, sweet taste used in treatment of cancer. Wall of the young fruit is removed and the inner portion is cooked in goat milk and eaten for ulcers. Juice applied externally to glandular swelling and abscesses to promote suppuration.

29 Artocarpus heterophyllus, Lamk. Moraceae Fruit, latex GIA, ENT
Exude gum is used for boils. Roots are used for diarrhoea and dysentery. Root bark is utilized in the treatment of fractures. Petiole used for eyesores and irritation. Fruits are edible.

30 Artocarpus incisus (Thunb.) L.f.suppl. Moraceae Roots, bark, petiole, fruits, exude gum
| No. | Scientific Name                          | Family   | Part Used          | Uses and Properties                                                                 |
|-----|----------------------------------------|----------|--------------------|-------------------------------------------------------------------------------------|
| 31  | *Asparagus racemosus*, Willd.           | Asparagaceae | Tuberous roots     | The roots are bitter, sweet, emollient, cooling, nervine tonic, constipating, ophthalmic and tonic. They are useful in nervous disorders, dyspepsia, diarrhoea, dysentery, tumours, burning sensation, inflammations and ophthalmopathy. CA, SMSD, GH, GIA, DID, ENT |
| 32  | *Asystasia gangetica* (L.) Anders.      | Acanthaceae | Whole plant        | Juice of the plant administered to children suffering from swellings, worms and rheumatism. SMSD, GIA |
| 33  | *Atlantia racemosa*, W.& A.             | Rutaceae  | Leaves             | Fresh leaves are used against honey bee sting. PB |
| 34  | *Averrhoa bilimbi* Linn.                | Oxalidaceae | Flower, stem, fruit | Flowers and stems are good source of iron, vitamin B and C. Fruit is astringent, stomachai and cooling; in the form of curry useful in piles and scurvy. GIA, CA, GH, PB |
| 35  | *Baccaurea courtallensis* (Wight.) Muell.Arg. | Euphorbiaceae | Fruits             | The fruits are acidic in taste and are edible. GH |
| 36  | *Baliospermum axillare* Willd.          | Euphorbiaceae | Root               | Root is used in the treatment of dropsy, constipation, anaemia. GIA, Fvr, GIA, RSD, PB, DID |
| 37  | *Bambusa bambos* (L.) Voss              | Gramineae | Leaves, buds, root | Tender leaves or buds decoction are used to relieve menstrual irregularities. Decoction of tender buds used for leucorrhoea, fever in children and diarrhoea. Natural cure for bronchial ailments for asthma. The dried roots are powdered and prepared into paste with water and externally applied over scabies. GUA, SG, Fvr, GUA, PB, RSD, DID |
| 38  | *Begonia malabarica*, Lam.              | Begoniaceae | Leaves             | Leaves used for treatment of respiratory infections, diarrhoea, blood cancer and skin diseases. Very few reports on cultivation. RSD, SMSD, PB, DID, PB, |
| 39  | *Beloperon plumbaginifolia* (J.Jacq.) Nees | Acanthaceae | Leaves, root, stem | Snake grass use initial treating snake bites. It is used for cancer. The leaves, root, stem of vishapacha is used kapha, pitha, poison bites and swelling due to viper bite. SMSD, RSD, PB |
| 40  | *Bidens pilosa*, L.                     | Asteraceae | Whole plant        | Leaf paste is applied on cuts and wounds. DID |
| 41  | *Biophytum sensitivum*, DC.             | Oxalidaceae | Whole plant        | Plant juice is applied on the injured part and also for bleeding. Plant paste is applied on forehead for migraine. Fruit used as an astringent, purgative. Root bark- antiper, antipyrr. Seeds cordial good remedy for gonorrhea. Leaves used in jaundice and snake bite. Seed pulp used for making dye called “Arnotto” once largely used in dyeing silk and cotton. PB, LP, GUA |
| 42  | *Bixa orellana* Linn.                   | Bixaceae  | Fruit, seed, root bark | |


| No. | Scientific Name                  | Family       | Part Used     | Uses                                                                                     |
|-----|---------------------------------|--------------|---------------|--------------------------------------------------------------------------------------------|
| 43  | *Blumea belangeriana*, DC.      | Asteraceae   | Whole plant   | The plant is used in traditional Chinese medicine. It is also used as decorative dry plant. The plant have pungent, bitter and antipyretic properties. Bark is used in diseases of nervous system, oedema, disorders of blood and conjunctivities. Leaves are employed as poultice to hasten suppuration and as a galactagogue. |
| 44  | *Breynia retusa* (Dennst.) Alston, Ann. | Euphorbiaceae | Bark, leaves  |                                                                                           |
| 45  | *Bridelia retusa* (L.) Spreng.  | Euphorbiaceae | Bark          | Bark is used in the treatment of rheumatism.                                               |
| 46  | *Bryophyllum pinnatum*          | Crassulaceae  | Leaves        | Leaves used as astringent, antiseptic and counterirritant against poisonous insect bites. Pounded fresh material is applied as a poultice for a variety of conditions: sprains, eczema, infections. Leaves used for asthma and headache. |
| 47  | *Caesalpinia mimosoides*, Lam.  | Fabaceae      | Leaves        | The plant is used as a fresh dietary vegetable. The cane is used for reinforcement of walls, making basket. Barks are used to extract tannin and also for ayurvedic medicinal purposes. |
| 48  | *Calamus pseudotenuis*, Becc.   | Arecaceae     | Cane, bark    |                                                                                           |
| 49  | *Calamus rheedii*, Griff.       | Arecaceae     | Cane          | Used in Ayurvedic system of medicine for curing cough and oedema. Decoction of root used as a protective medicine after child birth. The leaves applied hot are reported to give relief in rheumatic pains. Preparation of flowers are used as a diuretic for diseases and ailments of the kidneys and the lower urinary tract. The stem bark is evaluated for wound healing activity used in treatment of cuts and wounds. The wood is suitable for general construction, house building, posts, cabinet work, railway sleepers, furniture, musical instrument etc. |
| 50  | *Calophyllum calaba* L.         | Clusiaceae    | Root, leaves, flowers |                                                                                           |
| 51  | *Carallia brachiata* (Lour.) Merr. | Rhizophoraceae | Stem, bark, wood | The stem bark is evaluated for wound healing activity used in treatment of cuts and wounds. The wood is suitable for general construction, house building, posts, cabinet work, railway sleepers, furniture, musical instrument etc. |
| 52  | *Careya arborea* Roxb.         | Lecythidaceae | Wood, bark, fruits, flowers, stem | Wood useful; bark and fruits astringent flowers and bark used in the treatment of cough and cold; fruits edible. Stem used for tooth cleaning. |
| 53  | *Caryota urens* L.             | Arecauceae    | Leaf, seed    | The plant is used in hyperdypsia, fatigue and hemicarnia. Leaf bud, seed and toddy are used for diarrhoea, migraine and scorpion - sting poisoning. |
| 54  | *Cassia fistula* L.             | Fabaceae      | Bark, root, fruit | Bark, root and fruit is used in the treatment of syphilis, colic, leprosy, rheumatism, jaundice and cardiac disorder. |

**Abbreviations:**
- **Fvr**: Fever
- **SMSD**: Systemic Mahadeo
- **GUA**: General Ayurveda
- **SM**: Systemic Malgudi
- **DID**: Diarrhoea
- **PB**: Pulmonary Bacterial
- **RSD**: Respiratory System Disease
- **ED**: Ear Disease
- **SMSD**: Systemic Malgudi
- **GIA**: General Indian Ayurveda
- **CSCD**: Common System of Complementary and Alternative Medicine
- **GH**: Gastroenteritis
- **LB**: Lower Respiratory System Disease
- **CSCD**: Common System of Complementary and Alternative Medicine
| Page | Plant Name                        | Family       | Part(s)        | Uses                                                                                                                                                           | Diseases and Treatments                                      |
|------|----------------------------------|--------------|----------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 55   | *Centella asiatica* (L.) Urb.    | Apiaceae     | Leaf, whole plant | The plant extract is used in the preparation of hair oils and tonics. It is also used as a vegetable. Leaf paste used for scorpion sting. Whole plant used in the treatment of cardiac debility, abdominal disorders, epilepsy and leprosy. | HC, PB, CSD, SMSD                                           |
| 56   | *Centratherum intermedium*, Less. | Asteraceae    | Whole plant     | The perennials are best planted in groups suited for rockeries, as well as ground cover. The plants extensive root system makes it useful for stabilizing soils and controlling erosion. Make a poultice from the leaves with a pinch of salt and use to reduce swelling. | -                                                          |
| 57   | *Centracema virginianum*, L.     | Fabaceae     | Leaves          | Leaf paste used for scorpion sting. Whole plant used in the treatment of cardiac debility, abdominal disorders, epilepsy and leprosy. | SMSD                                                        |
| 58   | *Chassalia curviflora* (Wall.exKurz) Thw. | Rubiaceae   | Root            | Root decoction used for cough and malaria. It is also used as an adulterant for “sarpagandha”.                                                                    | RSD, Fvr                                                   |
| 59   | *Chromolaena odorata*, (L.) king & Robins | Asteraceae | Leaves          | Leaf juice is applied externally on cuts and wounds to stop bleeding.                                                                                             | DID                                                        |
|      | *Cinnamomum malabatrum*          |              |                | The wood is used for making furniture. The plant have anti-inflammatory properties. The leaves used to making traditional food.                                             | DID                                                        |
| 60   | (Burm.f.) Blume.                 | Lauraceae    | Wood, leaves    | Whole plant cooked with jaggery is used for burning fever and pleuritics. Water dripped from the trunk with sugar is useful for cough, purifies blood, cure the ulcer of lungs. Crushed root boil in water is good toothache. | RSD, CSCD, GIA, DC                                         |
| 61   | *Cissus latifolia*, Lam.         | Vitaceae     | Whole plant     | Fruits are given in low doses in cases of urticarial, constipation and toxemia.                                                                                   | RSD, CSCD, GIA, DC                                         |
|      |                                  |              |                | The leaves and seeds are used as a rubefacient and vesicant by traditional medicinal practitioners in Africa and Asia. They are also used to treat infections, fever, rheumatism and headache. | GH                                                         |
| 62   | *Citrullus colocynthis* (L.)     | Cucurbitaceae | Fruits          | Bark is used for diabetes. Leaves are used as bitter tonic, vermifuge, laxative and cholagogue; fresh leaf juice used to remove ascarids, leprosy. Crushed leaves are used in the treatment of dysentery. Roots contains an antidote for certain snake bites. A paste of the leaves applied to infected burns. | Fvr, SMSD, GIA, PB                                         |
| 63   | *Cleome burmannii*, wight. &Arn. | Capparaceae  | Leaves, seeds   | The leaves and seeds are used as a rubefacient and vesicant by traditional medicinal practitioners in Africa and Asia. They are also used to treat infections, fever, rheumatism and headache. | Fvr, SMSD, GIA, PB                                         |
| 64   | *Clerodendrum infortunatum* L.   | Verbenaceae  | Bark, leaves    | Bark is used for diabetes. Leaves are used as bitter tonic, vermifuge, laxative and cholagogue; fresh leaf juice used to remove ascarids, leprosy. Crushed leaves are used in the treatment of dysentery. Roots contains an antidote for certain snake bites. A paste of the leaves applied to infected burns. | GIA, PB                                                   |
66  *Clitoria ternatea* L.  Fabaceae  Root, leaf, seed  Root, leaf and seed are used against leucoderma, pulmonary tuberculosis and otalgia.  

67  *Coccinia grandis* (L.) Voigt  Cucurbitaceae  Whole plant  Whole plant is taken orally along with water three times a day for a period of two days to get relief from burning micturition.  

68  *Commelina benghalensis*, L.  Commelinaceae  Whole plant  Whole plant is used for haemorrhage, leprosy and rheumatism.  

69  *Costus*  speciosus, (Koenig).E.Smith.  Costaceae  Rhizome  Rhizomes are aromatic and used for haemorrhage, fever, cough, and other respiratory diseases, diabetes, blood diseases, leprosy and other skin diseases.  

70  *Crassocephalum crepidiodes*,(Benth.)S.Moore.  Asteraceae  Leaves, stem  Its fleshy mucilaginous leaves and stems are eaten as a vegetable. A lotion of leaves is used as a mild medicine that strengthens the stomach and excites its action. Leaves used in treatment of wounds, headache.  

71  *Crotalaria pallida* (Dryand.)Ait.  Fabaceae  Roots, leaves  Roots and leaves are used for diarrhoea, dysentery, bleeding disorders, swelling, leprosy and other skin diseases.  

72  *Crotalaria verrucosa* L.  Fabaceae  Root, leaf, seed  Plant is used for vomiting, diarrhoea, dysentery, bleeding, emetic, swellings, leprosy and other skin diseases.  

73  *Cuphea hyssopifolia*, Kunth in HBK, Nov.Gen.  Lythraceae  Whole plant  Oils and serums derived from the plant often used in prevention of organ stones. Subsidence of consumption and fever, curing of infection especially with eyes.  

74  *Curculigo orchioides* Gaertn.  Hypoxidaceae  Root stalk  It is used in piles. It also used in the treatment of leucorrhoea, asthma, hydrophobia. The root poultice is applied for itching sensation and rashes.  

75  *Cyathia gigantia*,(Wall.ex Hook)Hottum.  Cyathiaceae  Whole plant  The plant useful in continuous fever. Gum is used as a binder and disintegrater in tablets. Male cone marketed and used to prevent the entry of mosquitoes and other insects in to houses /dwellings including cowsheds. Children are given bath in water soaked with bark and peeling to prevent skin diseases.  

76  *Cycas circinalis* Linn.  Cycadaceae  Male cones, bark  Tuber is used for dysentery.  

77  *Cyclea peltata* (Lam.) Hook.  Menispermaceae  Tuber  Tuber is used against leucoderma, pulmonary tuberculosis and otalgia.
78 *Cyperus cyperinus* (Retz.) Sur.  
Cyperaceae  
Rhizome, root  
Astringent, appetiser, stomachic, anthelmintic, leprosy, thirst, fever and used for the treatment of blood diseases. The plant is used for making baskets and mats.

79 *Cyperus haspan*, L.  
Cyperaceae  
Whole plant  
Paste of the stem bark is internally given for diarrhoea. Decoction of the bark is given in dyspepsia and obesity. Two-three drops of leaf juice are poured in to the ear to get relief from ear pain. Root paste applied on forehead to reduce headache.

80 *Dalbergia latifolia* Roxb.  
Fabaceae  
Leaf, stem bark, root  
Used as a raw material in paper mills. Leaves are used as forage, and decoction of the leaves, nodes and silicious matter is used in traditional medicine.

81 *Debregeasia longifolia* (Burm.f.)Wedd.  
Urticaceae  
Stem, wood, fruits  
Stem fibre is used for ropes and cordage. The wood is used for making charcoal. Fruits are edible.

82 *Dendrocalamus brandisii* (Munro)Kurz.  
Gramineae  
Leaves, nodes  
Decoction of the bark is given in dyspepsia and obesity. The boiled roots are used in Malaysia to poultice sore breasts, and a decoction of the plant is regarded as a tonic and bechic. In Taiwan a decoction of root is used against rickets in children.

83 *Desmodium triquetrum* (L.) DC.  
Fabaceae  
Whole plant  
Extract of herb used in piles.

84 *Desmodium gangeticum* (L.) DC.  
Fabaceae  
Root  
Root is used for the treatment of fever, asthma and dysentery.

85 *Desmodium heterocarpon*, (L.)DC.  
Fabaceae  
Root  
The boiled roots are used in Malaysia to poultice sore breasts, and a decoction of the plant is regarded as a tonic and bechic. In Taiwan a decoction of root is used against rickets in children.

86 *Desmodium motorium* (Houtt.)Merr.  
Fabaceae  
Whole plant  
A herbal antidote. The decoction prepared by whole plant medicinally used as an antidote. The fruit is used in promoting blood metabolism, soothing nerves and relieving insomnia. Pericarp have anti-inflammatory property. Dried and powdered fruits are applied to heal burns. A decoction of the fruit is used in gonorrhoea, biliousness and blood poisoning.

87 *Dimocarpus longan* Lour.  
Sapindaceae  
Fruit  
Dried and powdered fruits are applied to heal burns. A decoction of the fruit is used in gonorrhoea, biliousness and blood poisoning.

88 *Diospyros paniculata* Dalz.  
Ebenaceae  
Fruits  
A herbal antidote. The decoction prepared by whole plant medicinally used as an antidote. The fruit is used in promoting blood metabolism, soothing nerves and relieving insomnia. Pericarp have anti-inflammatory property. Dried and powdered fruits are applied to heal burns. A decoction of the fruit is used in gonorrhoea, biliousness and blood poisoning.

89 *Drynaria quercifolia*,(L.).Sm.  
Polypodiaceae  
Fronds, rhizomes  
Fronds used for poulticing swellings. Rhizomes astringent, aqueous extract possesses antibacterial properties.

90 *Drypetes roxburghii* (Wall.)Hurs.  
Euphorbiaceae  
Leaf, fruit  
Leaf and fruit are used in the treatment of cold and fever.
| No. | Species                              | Family      | Part(s)       | Description                                                                                                                                                                                                 | Conditions                        |
|-----|--------------------------------------|-------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 91  | *Duranta erecta* L.                  | Verbenaceae | Fruits        | Macerated fruits yield a juice diluted in water can be used as a larvicide in ponds and swamps for killing mosquitos.                                                                                 | IC                                |
| 92  | *Eclipta prostrata* (L.) Mant.       | Asteraceae  | Leaves, roots | It is good for hair and skin, expels intestinal worms, cures cough and asthma. It is specific in night blindness, eye diseases and headache.        | HC, DID, GIA, RSD, ENT, SMSD       |
| 93  | *Elaeocarpus tuberculatus* Roxb.     | Elaeocarpaceae | Fruits, bark  | The fruits are appetizer and sedative and are useful in cough. Wood used for planking. Decoction of the bark used in haemetemesis, indigestion and biliousness. Nuts used as remedy for rheumatism, typhoid fever and epilepsy. | GIA, RSD, SMSD, Fvr               |
| 94  | *Elephantopus scaber*, L.            | Asteraceae  | Root, leaves, flower | The plant is used against dysentery. The decoction of leaves used as febrifuge. The plant is used to treat digestive problems and dysentery. The paste of the leaves is applied on the wounds of the cattle for healing. Wood is used in match industries. Root have immune modulatory activity. Aromatic leaves used in cooking. Plant traditionally used for menstrual cramp. Latex is used in eye trouble and plant paste is applied to keep the eye cool. The root is given to allay vomiting. Leaves are used as antidote to snakebite and scorpion sting. | GIA, ED, RSD, DID, Fvr, ENT, SMSD |
| 95  | *Eletteria cardamomum*, Maton.       | Zingiberaceae | Capsule       | Root bark is acrid, astringent, anthelminthic, antifertility, digestive, stomachic and laxative. It is used in treating intestinal parasites and worms, abdominal disorders, skin fungal infection, indigestion and headache. Leaves useful in leprosy. Fruits laxative useful in nervous debility, dyspepsia, tumors and asthma. The root decoction used for heart diseases. | GH                                |
| 96  | *Embelia ribes* Burm.f               | Myrsinaceae | Root, bark, fruits, root | The plant is used against dysentery. The decoction of leaves used as febrifuge. The plant is used to treat digestive problems and dysentery. The paste of the leaves is applied on the wounds of the cattle for healing. | GUA, GIA, DID, SMSD, CSCD          |
| 97  | *Emilia sonchifolia*, (L.) DC.       | Asteraceae  | Leaves        | The plant is used against dysentery. The decoction of leaves used as febrifuge.                                                                                                                          | GIA                                |
| 98  | *Eiprise mallotiformis* (Muell.Arg.) Croizat. | Asteraceae | Leaves, stem | The plant is used to treat digestive problems and dysentery.                                                                                                                                             | GIA                                |
| 99  | *Erythrina indica*, Lam.             | Fabaceae    | Leaves        | The paste of the leaves is applied on the wounds of the cattle for healing.                                                                                                                              | DID                                |
| 100 | *Euodia lunu-ankeda* Merr.           | Rutaceae    | Wood, leaves, root | Wood is used in match industries. Root have immune modulatory activity. Aromatic leaves used in cooking. Plant traditionally used for menstrual cramp. Latex is used in eye trouble and plant paste is applied to keep the eye cool. The root is given to allay vomiting. Leaves are used as antidote to snakebite and scorpion sting. | GUA, ENT, PB                       |
| 101 | *Euphorbia hirta*, L.                | Euphorbiaceae | Leaves, latex, root | Wood is used in match industries. Root have immune modulatory activity. Aromatic leaves used in cooking. Plant traditionally used for menstrual cramp. Latex is used in eye trouble and plant paste is applied to keep the eye cool. The root is given to allay vomiting. Leaves are used as antidote to snakebite and scorpion sting. | ENT, PB                            |
| No. | Scientific Name                                  | Family             | Part Used                      | Use                                                                 | Authors |
|-----|-------------------------------------------------|--------------------|--------------------------------|----------------------------------------------------------------------|---------|
| 102 | *Euphorbia neriifolia*, L.                      | Euphorbiaceae      | Latex                          | The milky latex used as purgative rubefacient and expectorant to remove warts and cutaneous eruptions. The latex is drastic purgative used to treat obstinate constipation. | GH, DID |
| 103 | *Ficus benghalensis* L.                         | Moraceae           | Aerial root, Bark, latex        | Milky latex applied externally for pains in rheumatism and lumbago. Aerial root is used against leucorrhoea, haemorrhages and bruises. The fine wood is usually used for furniture. | SMSD, GUA |
| 104 | *Ficus callosa* Wild.                           | Moraceae           | Wood                           | Bark and fruits are used for ulcers, leucoderma, psoriasis, anaemia, jaundice, epistaxis and inflammations. | GIA, DID, LP |
| 105 | *Ficus hispida* L.                              | Moraceae           | Bark, fruits                   | Milky juice is used in piles and diarrhoea. Decoction of the bark is administered orally to cure dysentery. The fruit is given as a tonic for pregnant women. | GH, GIA, GUA |
| 106 | *Ficus racemosa* L.                             | Moraceae           | Bark, fruit                    | The root bark is stomachic and aperient                               | GIA     |
| 107 | *Ficus tictoria* G. Forst.                      | Moraceae           | Root bark                      | Dried leaves are used to treat asthma. The fruits and leaves are used against diarrhoea., Dried leaves used for bronchitis. Also used in treatment of dyspepsia and diabetes. | RSD, GIA, ED |
| 108 | *Flacourtia jungomas* (Lour.)Raesch.            | Flacouriaceae      | Leaves, fruits                 | Roots used for ulcers and swellings.                                  | GIA, SMsd |
| 109 | *Flemingia macrophylla* (Wild.) Prain ex Merr.  | Fabaceae           | Roots                          | Fruits are used for the treatment of dysentery. Milky juice contain arabin, essential oil, resin used in treatment of rheumatism and bowel complaints. Root used quire the swelling the body due to viper bite. Plant used in food preparation and preservation. Extract used in traditional medicine as purgative. Kudampuli (dry fruit) helps to promote digestion and a decoction used against arthritis. It is used against rheumatism. Plant used in the treatment of infertility, open wounds, snakebite, ulcers, arthritis, cholera, colic, kidney problems, typhus, itching and cancer. Rhizome used in the treatment of ulcer, leprosy and expulsion of placenta. | GIA, SMSD, PB |
| 110 | *Garcinia gummi-gutta* (L.) Roxb.               | Clusiaceae         | Fruit, root                    | The plant is used as herbal remedy for various ailments. It is used to reduce blood glucose. Leaf fresh juice orally for liver conditions. | GIA, SMSD, PB |
| 111 | *Gloriosa superba* L.                           | Liliaceae          | Seeds, tubers                  |                                                                           | SMSD, GUA, Df, PB, GIA, LP |
| 112 | *Glycosmis pentaphylla*, (Retz.)DC.             | Rutaceae           | Whole plant                    |                                                                           | CSD, LP |
113 *Gmelina arborea* Roxb. Verbenaceae Root, fruit, leaf Root, leaf and fruit is used against hallucination, piles, ulcer, growth of hair and anaemia.

114 *Helicteres isora* L. Sterculiaceae Root, fruit, bark Fruit demulcent, astringent and used in griping and flatulence of bowels and other abdominal complaints.

115 *Heliotropium indicum*, L. Boraginaceae Leaves, flowers The plant is emollient and diuretic used as local application for ulcers, wounds. Decoction of leaves used in urticaria and fevers. Flowers considered emmenagogue in small doses and abortifacient in large doses.

116 *Hemidesmus indicus* (L.) R.Br. Asclepiadaceae Root, leaf, stem The roots are bitter, sweet,astringent. They are useful in burning sensation, leucoderma, leprosy, skin diseases, bronchitis, syphilis and rheumatism. The leaves are useful in vomiting, wounds and leucoderma. Stems are laxative useful in inflammations.

117 *Hemigraphis colorata* Hallier f. Acanthaceae Leaves, whole plant In Kerala leaf juice is applied on wounds. In Indonesia the plant is astringent, antidiarrhoeal used in the treatment of diarrhoea, dysentery, kidney stones, dermatoses and wounds. The leaves are used in the treatment of oliguria, haemorrhoids and post-partum bleeding.

118 *Hibiscus hispidissimus* Griffith. Malvaceae Leaves, roots Leaves are anthelmintic and improves digestion. Infusion of roots are considered to be useful in inflammations, helminthiasis, dyspepsia and ophthalmopathy.

119 *Holarrhena pubescens* (Buch.-Ham)Wall. Apocynaceae Bark, leaf Used in the treatment of amoebic dysentery, asthma, malaria and chronic bronchitis.

120 *Holigarna arnotiana* Hook.f. Anacardiaceae Bark In Ayurveda, the plant is used in treatment of inflammation, arthritis, hemorrhoids, obesity, tumour, cancer and skin diseases. The dried bark of the plant is used to cure amoebic dysentery. It is febrifugal, stomachic.

121 *Hopea parviflora* Bedd. Dipterocarpaceae Wood, resin Wood brown, close-grained, hard, used extensively in house construction for planking, as piles for bridges, for making platform boards, agricultural implements for making railway sleepers and electric poles. The resin used as a medicine applied to sores and wounds.

122 *Hoya sp.* Acanthaceae Leaves Used as a treatment for asthma.

123 *Hypoestes sanguinolenta*, Hook. Acanthaceae Whole plant The plant is used in treatment of headache, diarrhoea and wounds. The plant also used to making bonsai.
| No. | Species                                    | Family     | Part Used           | Uses                                                                                           | References          |
|-----|-------------------------------------------|------------|---------------------|------------------------------------------------------------------------------------------------|---------------------|
| 124 | *Hyptis suaveolens*, (L) Poit.            | Lamiaceae  | Leaves              | The plant is stimulant, carminative and lactagogue. Infusion used in catarrhal conditions, uterus affections and parasitical cutaneous diseases. Leaf juice given in colic. | GIA, GUA, ENT       |
| 125 | *Ichnocarpus frutescens* (Linn.) R.Br.    | Apocynaceae | Root                | Root is used for treatment of fever, seminal weakness and diabetes. Plant is useful in amenorrhea, dysphagia, eye disorders as sores and redness, urinary, rheumatism and vomiting. Juice of leaves and branches is effective against burns, also for snakebite. | Fvr, ED             |
| 126 | *Impatiens balsamina*, L.                 | Balsaminaceae | Leaves, seeds      | The plant is used for treatment of skin diseases.                                            | DID                 |
| 127 | *Impatiens cuspidata* (Wight & Arn.)      | Balsaminaceae | Whole plant         | The plant is used for treatment of blood related diseases.                                  | CSID                |
| 128 | *Impatiens hensloviana* Arn.              | Balsaminaceae | Whole plant         | The plant is used as an ornamental and cosmetics. In North America the plant have been used as herbal remedies for the treatment of bee stings, insect bites and stinging nettle rashes. | DID                 |
| 129 | *Impatiens minor*, (DC.)Bennet.           | Balsaminaceae | Whole plant         |                                                                                               | DID                 |
| 130 | *Impatiens scapiflora*, Heyne ex Roxb.    | Balsaminaceae | Whole plant         |                                                                                               | PB                  |
| 131 | *Ipomoea hederifolia*, L.                 | Convolvulaceae | Leaf               | Leaf juice is applied for cuts and wounds.                                                     | DID, RSD            |
| 132 | *Ipomoea mauritiana* Jacq.                | Convolvulaceae | Leaves, root       | The leaves and roots are used externally to treat tuberculosis and for the treatment of external and breast infections. The decoction of the tuberous roots are used for the preparation of medicinal wine. | GUA                 |
| 133 | *Ipomoea nil*, (L.) Roth.                 | Convolvulaceae | Seeds, leaves      | Seed is acrid, light, anthelmintic, purgative and blood purifier. It cures inflammations, abdominal diseases. Juice of leaves used for fever, headache and bronchitis. | CSD, Fvr, SMSD, RSD |
| 134 | *Ipomoea obscura*, L.                     | Convolvulaceae | Leaves             | The leaves have a pleasant smell and mucilaginous taste, used as valuable application in aphtous affection. Leaves used for eye diseases. | ENT                 |
| 135 | *Ixora coccinea*, L.                      | Rubiaceae   | Roots, leaves, flowers | Roots, leaves and flowers used as a blood purifier, antiseptic, infantile skin ailments, diarrhoea, dysentery, fever, sores, chronic ulcers and catarrhal bronchitis. | CSD, DID, GIA, Fvr, ENT, RSD |
| 136 | *Justicia gendarussa* Burm.f.             | Acanthaceae | Leaves, tender shoots | In the form of decoction it is given in chronic rheumatism.                                    | SMSD                |
| 137 | *Justicia japonica*, Thunb.               | Acanthaceae | Whole plant         | Plant extract is used as antiperiodic.                                                         | Fvr                 |
| 138 | *Knema attenuata* Hook.f.&Thoms. Warb.    | Myristicaceae | Seed                | Medicated ghee is used for treatment of spleen disorders, breathing disorders and tastelessness. | RSD                 |
| No. | Species                                      | Family          | Part(s)        | Additional Information                                                                                                                                                                                                 |
|-----|---------------------------------------------|-----------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 139 | *Kyllinga nemoralis*, (J.R & G.Frost.) Dandy ex Hutch. & Dalz. | Cyperaceae      | Whole plant    | The plant widely used throughout the world and frequently used for its anti-venom property. It is having analgesic, antidiabetic, anticancer, hepatoprotective, antioxidant and antimalarial properties. The tubers are astringent and febrifuge. ED, GIA, DID, Fvr, |
| 140 | *Lagerstroemia reginae* Roxb.                | Lythraceae      | Root           | Root is stimulant and used in the treatment of fever. Fvr                                                                                                                                                                     |
| 141 | *Lantana camara* L.                         | Verbenaceae     | Whole plant    | Leaves is used for haemorrhage, disease of kapha and diarrhoea. Decoction of whole plant is given in tetanus, rheumatism, malaria and for ataxy of abdominal viscera. RSD, GIA, PB, SMSD, Fvr |
| 142 | *Leuca sambucina* (Burm.f.), Merr.          | Leeaceae        | Leaves, twigs  | Leaves and twigs have antiseptic properties and are used for poulticing. Root thirst reliever, cooling properties. DID, CA                                                                                                                                                  |
| 143 | *Lepianthes umbellata* (L.) Rafin.           | Piperaceae      | Leaves         | The leaf paste is applied on forehead for the relief of headache. The leaf decoction is used in the treatment of scabies. The root decoction is used for the treatment of snakebite, also used as an antidote to poison. SMD, DID, PB |
| 144 | *Leucas aspera* Spr.                        | Lamiaceae       | Leaf, root     | The leaf paste is applied on forehead for the relief of headache. The leaf decoction is used in the treatment of scabies. The root decoction is used for the treatment of snakebite, also used as an antidote to poison. SMD, DID, PB |
| 145 | *Lindernia viscosa*, (Hornem.) Merr.        | Scrophulariaceae| Whole plant    | The plant is used in traditional medicine. GH                                                                                                                                                                             |
| 146 | *Lipocarpha chinensis*, (Osbeck) Kern.      | Scrophulariaceae| Whole plant    | The plant is used for ornamental purposes.                                                                                                                                                                                   |
| 147 | *Lobelia nicotianifolia*, Roth ex Roem. & Schult. | Scrophulariaceae | Leaves         | It is used to treat asthma and bronchitis. It causes irritation of mucous membrane, toxic. RSD                                                                                                                                 |
| 148 | *Ludwigia octovalvis*, (Jacq.) Raven.        | Onagraceae      | Whole plant    | Whole plant is useful in dyspepsia, verminosis, flatulence, strangury, dropsy, cough, asthma and neuropathy. GIA, RSD, SMSD                                                                                                                                              |
| 149 | *Lygodium flexuosum* (L.) SW.               | Lygodiaceae     | Root           | Used as an expectorant. Fresh roots used in external applications for rheumatism, sprains, scabies, eczema and wounds. RSD, SMSD, DID                                                                                                                                 |
| 150 | *Macranga indica* Wight.                    | Euphorbiaceae   | Leaves, fruits | Different parts of the plant are used quite frequently in various traditional medicines. Sometimes a gum exuded from the cut branches, petiole bases, young shoots and fruits of the plant are applied externally to get relief from venereal sores. Leaves used in bronchial troubles and consumption. GUA, RSD |
| 151 | *Mallotus philippensis* (Lam.)              | Euphorbiaceae   | Fruits         | Glandular hair from fruits yield a reddish powder used as GIA                                                                                                                                                                |
| 152 | *Mastixia arborea* (Wt.) Bedd. | Cornaceae | Fruits, wood | It is an anthelmintic and useful in cutaneous affections. It is also used against tapeworms, abdominal disorders, haemopathy and leprosy. The plant is used against uterus diseases. Fruits green to be taken as stomach medicine. Small-sized timber used for fuel wood. | GUA, GIA |
| 153 | *Melastoma malabathricum* L. | Melastomataceae | Bark, leaves | Bark and leaves are used in diarrhoea, dysentery, mucous discharge, piles and haemorrhages. | GIA, GH |
| 154 | *Melia azedarach* Linn. | Meliaceae | Leaf | Leaf paste mixed with rice water taken cures dysentery. | GIA |
| 155 | *Merremia vitifolia*, (Burm.f) Hall.f.in Engl. | Convolvulaceae | Whole plant | Whole plant is used for urethral discharges. Roots are eaten by tribals as a stomachic. | GIA, GUA |
| 156 | *Mesua ferrea* L. | Clusiaceae | Root, flower, leaves oil | Root bark is astringent and aromatic used in rheumatism. Leaves are used as poultice for pustular eruptions. Flowers are used in cough attended with expectoration. The wood is used as fire wood. The flower is used for the treatment of kapha, pitta. Bark, flower and fruit used in the treatment of amenorrhoea, gastritis and cough. | RSD, GUA |
| 157 | *Michelia champaca* Linn. | Magnoliaceae | Wood, flower, bark, fruit | Whole plant | RSD, GUA |
| 158 | *Miconia calvecens* DC. | Melastomataceae | Wood | Root bark is astringent and aromatic used in rheumatism. Leaves are used as poultice for pustular eruptions. Flowers are used in cough attended with expectoration. The wood is used as fire wood. The flower is used for the treatment of kapha, pitta. Bark, flower and fruit used in the treatment of amenorrhoea, gastritis and cough. | RSD, GUA |
| 159 | *Microsorum nigrescens* (Burm.) Copel. | Polypodiaceae | Fronds | Decoction given with ghee as atonic; also applied in vertigo. Juice used in diarrhoea. | GIA |
| 160 | *Microstachys chamaelea*, (L.) Muell. Arg. | Euphorbiaceae | Whole plant | Decoction given with ghee as atonic; also applied in vertigo. Juice used in diarrhoea. | GIA |
| 161 | *Mikania micrantha*, Kunth in HBK, Nov. Gen. | Asteraceae | Whole plant | It is used to heal cuts and stop minor external bleeding. Used as a local antiseptic medicine. | DID |
| 162 | *Mimosa diplotricha*, C. Wight. | Mimosaceae | Whole plant | In Indonesia, the plant is used as a fodder to buffaloes. It is used as a garden flower. It is used as a herbal medicine. Root decoction is used in gravel and urinary complaints. Juice of leaves used in dressings for sinus and also for sores and piles. Whole plant is haemostatic and is used in diarrhoea, uterine disorders and skin diseases. | ED, GH, GIA, GUA, DID |
| 163 | *Mimosa pudica*, L. | Mimosaceae | Roots, leaves | It is used to heal cuts and stop minor external bleeding. Used as a local antiseptic medicine. | DID |
| No. | Species                                      | Family      | Part(s) Used          | Uses and Properties                                                                                                                                                                                                 | References |
|-----|---------------------------------------------|-------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 164 | *Mimusops elengi* L.                        | Sapotaceae  | Bark, fruit           | Bark is used treat diarrhoea and dysentery. A decoction of bark is used as gargle. The fruit and bark possess tonic and astringent properties.                                                                  | GIA, RSD   |
| 165 | *Mitracarpus verticillatus* (Schum. & Thonn.) Vatke | Rubiaceae   | Whole plant           | Extract useful in cosmetics for lightening skin, removing brown patches. Root used for making dye. “Al-Dye” red, purple, chocolate shades are produced on mordant cotton, silk or wool. The plant have an anti-inflammatory and anti-oxidative property. | DID        |
| 166 | *Morinda citrifolia* L.                     | Rubiaceae   | Root                  | Root, leaf and seed is used against dropsy, helminthiasis and sterility.                                                                                                                                             | DID        |
| 167 | *Mucuna pruriens* (L.) DC.                  | Fabaceae    | Root, leaf, seed      | It is used as fodder for animals. The plant is astringent, useful in bronchitis, cough, fever, inflammation, jaundice, leucoderma. Leaves are useful in inflammation, to expel intestinal worms, ulcers and on swellings and headache. | SMSD, GIA  |
| 168 | *Murdannia spirata* (L.) Commelinae          | Commelinae  | Whole plant           | Oil is used as a medicine to migraine in siddha medicines. Stem also used as a medicine for migraine.                                                                                                               | RSD, Fvr, DID, LP, GIA, SMSD |
| 170 | *Myristica beddomei* King.                  | Myristicaceae| Dried fruits, seeds   | Used for the treatment of rat poison and doing naseum in snake treatment. Also used for rheumatism and inflammations.                                                                                              | GIA, RSD, GH, DID, ED |
| 171 | *Myrragyna parvifolia* (Roxb.) Korth.       | Rubiaceae   | Root, bark            | Exhibited significant antitumour activity. Root is used as remedy for cobrabit, vomiting and desentry. Bark is used as a remedy for puerperal fever and pitta.                                                              | SMSD, PB, SMSD, DID |
| 172 | *Myxopyrum spilacifolium* Blume.            | Oleaceae    | Stem, oil             | Whole plant is used for cough, asthma, bronchitis, ophthalmia, giddiness, intermittent and malarial fever, catarrh, otalgia, cephalalgia, dyspepsia and spasmodic affections.                                             | RSD, ENT, Fvr, GIA, SMSD |
| 173 | *Naregamia alata* W. & A.                   | Meliaceae   | Whole plant           | Whole plant is used for cough, asthma, bronchitis, ophthalmia, giddiness, intermittent and malarial fever, catarrh, otalgia, cephalalgia, dyspepsia and spasmodic affections.                                             | RSD, ENT, Fvr, GIA, SMSD |
| 174 | *Naringi crenulata* (Roxb.) Nicolson.       | Rutaceae    | Root, stem, bark, leaf| Whole plant is used for cough, asthma, bronchitis, ophthalmia, giddiness, intermittent and malarial fever, catarrh, otalgia, cephalalgia, dyspepsia and spasmodic affections.                                             | RSD, ENT, Fvr, GIA, SMSD |
| 175 | *(Dennst.) Fischer.*                        | Poaceae     | Stem                  | Whole plant is used for cough, asthma, bronchitis, ophthalmia, giddiness, intermittent and malarial fever, catarrh, otalgia, cephalalgia, dyspepsia and spasmodic affections.                                             | RSD, ENT, Fvr, GIA, SMSD |
| No. | Name                                      | Family       | Part          | Description                                                                 | References |
|-----|-------------------------------------------|--------------|---------------|-----------------------------------------------------------------------------|------------|
| 177 | *Oldenlandia auricularia* (L.) K.Schum.   | Rubiaceae    | Rhizomes      | The rhizomes are stomachic, carminative, stimulant and tonic and are used in dyspepsia in the form of powder and decoction. | GIA        |
| 178 | *Olea dioica*, Roxb.                      | Oleaceae     | Bark, leaves  | Bark and leaves used as a febrifuge and emetic.                             | FVr        |
| 179 | *Ophiorrhiza mungos*, L.                  | Rubiaceae    | Whole plant   | Whole plant is useful in wounds, ulcers, helminthiasis, snake poison, hydrophobia, cancer, gastropathy and leprosy.          | DID, GIA, PB, SMSD |
| 180 | *Oroxylum indicum* (L.) Vent.             | Bignoniaceae | Bark          | Decoction of bark is given in toxemia, rheumatism and cancer.              | SMSD, CSCD |
| 181 | *Osbeckia aspera*, (L.) Blume.           | Melastomataceae | Whole plant | The plant traditionally to treat liver diseases. Aqueous extract should immunomodulatory effects in Taiwan, a decoction of the aerial part is used as a drink to treat dysentery. | LP, GIA    |
| 182 | *Panjanelia longifolia* (Wild.) K.Schum.  | Bignoniaceae | Whole plant   | The plant is employed in Malaya medicinally for same purposes a “Syonaka”.Nerve tonic. Extract used as a source of medicinal agents to cure urinary tract infections. The rabbits ear fern used in the treatment of earaches and as a vermifuge. | SMSD       |
| 183 | *(Roxb.Ex Hook.&Grev.) Fraser.*           | Pteridaceae  | Whole plant   | The plant is used for the treatment of asthma and rheumatism. The stem bark used as anti-inflammatory and anti-arthritic. | ED, ENT, GIA |
| 184 | *Paspalum scrobiculatum*, L.              | Poaceae      | Grains, stem  | The plant used for the treatment of asthma and rheumatism. The stem bark used as a source of medicinal agents to cure urinary tract infections. The rabbits ear fern used in the treatment of earaches and as a vermifuge. Extract used as a source of medicinal agents to cure urinary tract infections. | GIA        |
| 185 | *Persea macrantha* (Nees) Kosterm.        | Lauraceae    | Stem bark     | The plant is used for the treatment of asthma and rheumatism. The stem bark used as anti-inflammatory and anti-arthritic. | RSD, SMSD, DID |
| 186 | *Persicaria chinensis* (L.) H.Gross       | Polygonaceae | Whole plant   | Whole plant is used as a tonic, anti-scorbutic and vulnerary.               | DID        |
| 187 | *Phyllanthus amarus*, Schum.&Thonn.       | Euphorbiaceae | Whole plant   | Plant is used in jaundice, flue, dropy, diabetes, asthma, bronchial infections, and diseases of liver. In Ayurveda used in problems of stomach, liver and kidney. | LP, Fvr, ED, RSD, GIA |
| 188 | *Phyllanthus emblica* L.                  | Euphorbiaceae | Bark, root bark, leaves, fruits | The root bark is useful in ulcerative stomatitis. Bark is used in gonorrhoea and jaundice. Leaves effective for diarrhoea. Fruits are used for cardiac diseases and tuberculosis. The plant is used in gastric and intestinal troubles. Infusion is given as a diuretic. Crushed leaves are applied to bruises. | GIA, LP, CSCD, GIA, DID |
| 189 | *Pilea micropylla*, (L.) Liebm.           | Urticaceae   | Leaves        |                                                                 | GIA, DID   |
190  *Piper longum*, L.  
Piperaceae  
Fruit  
Fruit used in the treatment of cold and cough. Used to treat heartburns, indigestion and diarrhoea. The root and root bark is bitter and dry with stomachic, carminative astringent and anthelmintic used in gastrointestinal diseases, dysentery, diarrhoea and dyspepsia. This tincture is also used for the treatment of haemorrhoids.  
RSD, CSCD, GIA

191  *Plumbago rosea*, L.  
Plumbaginaceae  
Roots, root bark  
Root is used in the treatment of rheumatism, diarrhoea and piles.  
GIA, GH

192  *Plumbago zeylanica* L.  
Plumbaginaceae  
Root  
Leaves are styptic and used to clean wounds and for promoting granulation. Roots are used in uterine haemorrhage, snake bite and scorpion sting. Leaf juice is given in fever.  
SMSGD, GIA, GH

193  *Pogostemon purpurascens*, Dalz.  
Lamiaceae  
Leaves  
Bark, leaf, flower, oil  
Bark, leaf, flower and oil is used in the treatment of beriberi, diabetes, scabies and leprosy.  
ED, DID

194  *Pongamia pinnata* (L.) Prierre.  
Fabaceae  
Root, stem, leaves  
Root bruished and fried in oil for application to abscess. Stem cut smoked with camphor for relief in asthma. Powdered leaves are applied to smallpox pustules.  
RSD

195  *Pothos scandens*, L.  
Araceae  
Roots, leaves  
Roots mixed with Badra used in gastric problems, sores, boils, ulcers, de-worming and galactagogue. Used to treat stomach and liver disorders. The leaves are used in treatment of cough, headache and fever. The leaves and roots are used as a diuretic, stomachic and febrifuge. Guava seed oil used for culinary uses, pharmaceuticals or cosmetics. In cosmetic industry, the oil is used in skin care products. A tea made from young leaves useful for diarrhoea, dysentery and fever. Fruits are edible. The entire fruit is key ingredients in punch, and the juice often used in culinary sauces, dried snacks. Bark used for tanning and dyeing purpose.  
GIA, GUA, LP, RSD, SMSD, Fvr, GIA

197  *Premna tomentosa*, Willd.  
Verbenaceae  
Leaves, roots  
Fruit, seed, leaves, bark  
Heart wood, leaf, flower  
Heart wood, leaf and flower are used in the treatment of fracture, rheumatoid arthritis, asthma, boils and fever.  
DID, SMSD, RSD, Fvr
| No. | Common Name                      | Family            | Parts Used | Uses                                                                                       | Additional Information                      |
|-----|----------------------------------|-------------------|------------|--------------------------------------------------------------------------------------------|-----------------------------------------------|
| 201 | Rauwolfia serpentine Benth.      | Apocynaceae       | Roots      | The herb is effective in treating insomnia. It is very useful in lowering the B.P. Used for the treatment of hypertension and nervousness. Root is also used for the treatment of epilepsy and snakebite. | GH, CSCD, SMSD, PB                           |
| 202 | Rhaphidophora pertusa, (Roxb.)Schott. | Araceae           | Aerial part, stem | Whole plant is used in snake bite and scorpion sting. Stem used in ulcers, pain in the colon, bronchitis and very specific for abdominal tumour. | PB, GIA, RSD, SMSD                           |
| 203 | Ricinus communis Linn.           | Euphorbiaceae     | Leaves, seeds, roots, oil, fruit | Castor oil used on the skin to prevent dryness. The plant is harmless purgative and very effective in treating rheumatic and skin disorders. The leaves are poulticed and applied to sores. The fruit is diuretic, antidotal to fish poisoning, hypoglycaemic and laxative. It is used to treat constipation and articular pain and as an application to foul ulcers. | DID, SMSD                                   |
| 204 | Rosa multiflora, Thunb.          | Rosaceae          | Leaves, fruit | It is used as ornamental for acquaria.                                                      | PB, GH, CSCD, GIA                            |
| 205 | Rotala ritchiei, (Clarke) Koehne. | Lythraceae        | Whole plant | Root is used in asthma, bronchitis, abdominal disorders, epilepsy, indigestion, respiratory diseases, burning sensation and intermittent fever. Roots are used for treatment of diabetes, bleeding piles, gonorrhea, inflammations, leucorrhoea, leprosy, skin diseases, wounds, ulcers, indigestion, flatulence, colic and spermatorrhoea. | RSD, SMSD, GLA, DID, Fvr                     |
| 206 | Rotheca serrata (L.) Steane&Mabb. | Verbenaceae       | Roots      | Seed is emetic, purgative; used for bilious fevers. Seed oil applied in rheumatism. Leaves are used as a gargle in sore throat. | Fvr, SMSD, ENT                               |
| 207 | Salacia reticulata, W.           | Celastraceae      | Root       | Bark, flower and seeds are used against dyspepsia, colic, menorrhagia, hyperdipsia and bone fracture. | GIA, ED, SMSD                                |
| 208 | Samadera indica Gaertn.          | Simaroubaceae     | Seed, leaves, oil | The entire plant including the roots, possesses anti-inflammatory, anti-fertile and anti-diuretic properties. It is used in treating coryza, hyperthermia and sore throat. The plant is used to treat cirrhosis. It have antimicrobial property. Non-antibiotic source in therapeutic application of the treatment of acne development by reducing the chance of non –specific initiation and augmentation phase of the inflammatory response. | DID, GUA, ENT                                |
| 209 | Saraca asoca (Roxb.) de Wilde.   | Caesalpinaceae    | Bark, flower, seed |                                                                                               |                                               |
| 210 | Scoparia dulcis, L.              | Plantaginaceae    | Whole plant |                                                                                               |                                               |
| 211 | Selaginella involvens, (Sw.)Spring | Selaginellaceae   | Whole plant |                                                                                               |                                               |
| No. | Name                  | Family     | Part Used   | Uses                                                                 | Reference          |
|-----|-----------------------|------------|-------------|----------------------------------------------------------------------|--------------------|
| 212 | *Senna alata* (L.) Roxb. | Fabaceae   | Leaves      | Used for treating ringworm and other fungal infections of the skin.   | GIA, DID           |
| 213 | *Senna tora* (L.) Roxb. | Fabaceae   | Leaves, seeds | Leaves are purgative, used in ringworm and other skin troubles. Seeds used in leprosy, hemiplegia, skin diseases, constipation, abdominal disorders, obesity and helminthiasis. | GIA, DID, GH,       |
| 214 | *Sida acuta*, Burm.f.  | Malvaceae  | Roots, leaves, seeds | Root is astringent, cooling, useful in nervous and urinary diseases, Disorder of blood and bile. Leaves are demulcent, diuretic. | CA, SMSD, ED, CSCD |
| 215 | *Sida alnifolia*, L.   | Malvaceae  | Roots       | Roots are astringent, diuretic tonic; infusion given in urinary troubles, cystitis, haematuria, rheumatism, neurological disorders. Leaves demulcent and febrifuge; also used in dysentery. | SMSD, ENT, Fvr, ED, GUA |
| 216 | *Sida cordifolia* L.   | Malvaceae  | Roots, leaves | The stems are used to treat rheumatism and tuberculosis. The mucilaginous leaves are used as a demulcent and their stem and roots are used in treatment of wounds and leg ulcers in folkloric medicine. | ED, SMSD, GIA      |
| 217 | *Sida rhomboidea* Roxb.exfleming. | Malvaceae | Stem, leaves, roots | The plant used in the treatment of asthma, vomiting, dropsy, rat bite and hydrophobia. | SMSD, DID, GIA    |
| 218 | *Slechera oleosa* (Lour.) Oken | Sapindaceae | Bark, oil   | Bark and oil is used in the treatment of malaria, ulcer, burns and scald. | Fvr, GIA, DID     |
| 219 | *Solanum nigrum* L.    | Solanaceae | Whole plant | Part used and uses are similar to “Brihati”. It is useful in liver as well as spleen enlargement. | RSD, PB           |
| 220 | *Solanum torvum* SW.   | Solanaceae | Fruit, leaves | The flower heads are chewed to relieve the toothache and other mouth related troubles. leaves are used externally in treatment of skin diseases. Root decoction is used as | DC, DID          |
| 221 | *Spilanthes calvum* DC. | Asteraceae | Roots, flower heads, leaves | The plant used in the treatment of asthma, vomiting, dropsy, rat bite and hydrophobia. | Fvr, GIA, DID     |
Spondias pinnata (L.f.) Kurz. Anacardiaceae Root, bark, leaves, fruits

Stachytarpheta jamaicensis (L.)Vahl. Verbenaceae Whole plant

Sterculia villosa Roxburg. Sterculiaceae Bark,

Strobilanthes heyneanus Nees. Acanthaceae Whole plant

Strobilanthes ciliates Nees. Acanthaceae Whole plant

Strychnos nux-vomica L. Loganiaceae Bark, seeds leaves, fruits

Syzygium munronii (Wight.) N.P.Balakr. Myrtaceae Twigs

Tectona grandis L.f. Verbenaceae Bark, leaf, wood

Terminalia arjuna (DC.)Wight & Arn. Combretaceae Wood, stem bark, wood

Terminalia chebula Retz Combretaceae Fruit

Thottea siliquosa (Lam.)Ding Hou. Aristolochiaceae Roots

Thunbergia alata,Boj.ex Sins. Acanthaceae Leaves

Thunbergia erecta Boj. Acanthaceae Seeds

The roots are useful in regulating menstruation, Bark is aromatic, astringent useful in dysentery, diarrhoea, vomiting and muscular rheumatism. Fruit is antiscorbutic and the pulp astringent used in bilious dyspepsia. Whole plant is used for intestinal worms, venereal diseases, purulent, ulcers, dropsy, stomach ailments, vomiting, fevers and rheumatic inflammations.

The bark yields a strong fiber used for rough cordage and the cortex yields a white gum.

The ethanolic extract of whole plant is known to possess anti-diabetic, anti-implantation, estrogenic and antibacterial activities, Decoction of the whole plant used in the treatment of tooth problem.

The root bark is useful in cholera. Leaves are applied as poultice in treatment of chronic wounds and ulcers. Seeds are bitter, acrid, useful in anaemia and asthma.

The twigs are used against toothache. Twigs are also used in match box and plywood industries.

Bark and leaf is used in the treatment of hyper acidity, indolent ulcers, arthritis and eczema. Wood is also used to making furniture.

The wood is used for carts and agricultural implements. Powdered bark is used as appetizer. Stem bark paste is used as an ointment for wounds.

Fruit used in the treatment of tridosa, wounds, skin diseases, cardiac disorders and cough. Fruits are powdered and used for preventing cough and fever. Used as an appetizer.

Roots are used in ulcers, gonorrhea, leprosy, fever, cholera, rheumatism and antidote to snake-venum.

The plant mainly used as an ornamental plant. Leaves is used as infusion (internal and external). It is used in detoxification as the first-aid. Seeds used as
235 *Tinospora cordifolia*, Miers. Menispermaceae Stem, leaf, root
Stem extract is used in fevers. Stem also used for severe mouth ulcers. Leaf decoction when consumed relieve gas problem. Root is prescribed in diarrhoea and diabetes. Whole plant is used as an exanthematic ointment. Leaves are used in gonorrhoea. The leaves and stem paste is applied to arrest skin diseases.

236 *Torenia bicolor* Dalz. Scrophulariaceae Whole plant
Roots, bark, leaves, flower
Root is used in dysentery, intestinal ulcers. Bark and leaves are used in diarrhoea. Leaves and flowers are used in leprosy.

237 *Tragia involucrate* L. Euphorbiaceae Leaves, stem
A decoction is used for steam bath for arthritis and joint pains. Root, leaf and flower is used in the treatment of malarial fever, sprains, odontalgia and otalgia. Leaf tonic is used in cough, cephalalgia and alopecia.

238 *Tridax procumbens* L. Asteraceae Leaf
Leaf juice is applied on cuts and wounds as antiseptic and to stop bleeding.

239 *Triumfetta rhomboidea* Jacq. Tiliaceae Roots, bark, leaves, flower
Roots are used as folk and siddha medicine.

240 *Urena lobata* Linn. Malvaceae Roots
Decoction of root bark is given to women at the time of delivery to control fits; also used in rheumatism, bowel complaints and eczema. Leaves prescribed in rheumatism, jaundice. Stem is used for gastropathy. Roots paste is applied one in a day for 5-6 days for rheumatism.

241 *Uvaria narum*, (Dunal) Wall.ex Hook.F.Thoms. Annonaceae Root bark, leaves, stem
Decoctions of whole plant are useful in inflammation, otalgia, ulcers, baldness and greyness of hair.

242 *Vanda tessellata* (Roxb.)Hook. Orchidaceae Root
A decoction is used in inflammation, otalgia, ulcers, baldness and greyness of hair.

243 *Vateria indica*, L. Dipterocarpaceae Plant resin
Plant resin burnt for incense, used in varnish, water proofing; essential oil as antibacterial.

244 *Vatica chinensis*, L. Dipterocarpaceae Stem
It is used as food and drink. It is also sometimes grown for soil conservation.

245 *Vernonia cineea*, (L.) Less. Asteraceae Whole plant
The plants are bitter, acrid, thermogenic, antiviral, anthelmintic, antifungal. The roots are useful in diarrhoea, inflammations and skin diseases.

246 *Vigna dalzelliana*, (O.Kzte) Verdc. Fabaceae Whole plant
A decoction is used for steam bath for arthritis and joint pains. Root, leaf and flower is used in the treatment of malarial fever, sprains, odontalgia and otalgia.

247 *Vitex negundo* L. Verbenaceae Leaves, root, flower
Leaf tonic is used in cough, cephalalgia and alopecia.

248 *Wedelia chinensis* (Osbeck)Merr. Asteraceae Whole plant
Decoctions of whole plant are useful in inflammation, otalgia, ulcers, baldness and greyness of hair.

249 *Zanthoxylum rhetsa* DC. Rutaceae Bark, fruits, bark
Bark and fruits are used in dyspepsia, asthma, bronchitis,
seeds are used in cholera. Rhizomes are digestive, dispels cardiac disorders, oedema, coryza, cures vomiting, piles, filariasis, anaemia, cough, dyspnoea, fever, colic, diarrhoea, neurological diseases, diabetes, and eye diseases.

Table 2. Ailment categories included with various ailments.

| S. No. | Ailment categories | Biomedical terms | Tamil terms |
|--------|--------------------|------------------|------------|
| 1.     | Circulatory system/ cardiovascular diseases (CSCD) | Blood purification, Memory power, Heart problem, Hypotensive | Rattha sutthigarippu, Gnabaga sakthi, Idhaya noi, Rattha alutta noi |
| 2.     | Cooling agent (CA) | Body coolant | Udal kulircchi |
| 3.     | Dental care (DC) | Tooth ache | Pal vali |
| 4.     | Dermatological infections/diseases (DID) | Wound healing, Skin diseases, Antiinflammatory, Antioxidant | Kaayam, Thol noi, Alargi etirppu, Kirumi nacini |
| 5.     | Ear, nose, throat problems (ENT) | Eye pain, Ear pain | Kan vali, Kathu vali |
| 6.     | Endocrinal disorders (ED) | Diabetes, Kidney stone, Urinary problem, Cystitis | Sarkkarai/neerilivu noi, Siruneeraga kal, Siruneeraga noi, Siruneerpai alargi |
| 7.     | Fever (Fvr) | Fever, Pneumonia, Malaria | Kaichal, Jani, Murai/malaria kaichal |
| 8.     | Gastro-intestinal ailments (GIA) | Ulcer, Stomachache, Carminative | Vayitru pun, Vayitru vali, Iraippai kuṭal vali |

*CSCD – Circulatory system / cardiovascular diseases; CA – Cooling agent; DC – Dental care; ENT – Ear, nose, throat problems; DID – Dermatological infections / diseases; ED – Endocrinal disorders; Fvr – Fever; GIA – Gastro-intestinal ailments; GH – General health; GUA – Genito-urinary ailments; HC – Hair care; LP – Liver problem; PB – Poisonous bite; RSD – Respirates; SMSD – Skeleto-muscular system disorder; IC – Insecticidal.*
Gastric complaints
Digestion/indigestion
Dysentery
Dyspepsia
Diarrhea
Cholera
Vermifuge
Intestinal worms
Appetite
Piles
Tonic
Constipation
Depression
Insomnia
Obesity

9. General health (GH)

10. Genito-urinary ailments (GUA)

11. Hair care (HC)

12. Liver problem (LP)

13. Poisonous bite (PB)

14. Respiratory system diseases (RSD)

15. Skeleto-muscular system disorders (SMSD)
Cancer/tumor  Putru noi
Swelling  Veekam
Headache/One side headache  Thalai vali/oru paka thalai vali
Paralysis  Pakavatam
Nervous/ neuralgia problem  Narambu pathipu
Epilepsy
Antispasmodic  Kaka valipu

16. Insecticidal (IC)  Mosquito repellent  Kosuviratti

Fig. 1. Location of the study area

Fig. 2. Pie chart showing the percentage contribution of various life forms in the studied forest at Medappara, Kerala.
It enables us to work with local people to explore knowledge based on experiences and ages. The indigenous population still relies to a great extent on traditional healers and medicinal plants to meet their healthcare needs because of the perceived effectiveness, presumed safety with minimal side effects and affordability (Vliathan, 1998). Of the 16 ailment categories analyzed, a higher number of 110, 86 and 82 species were prescribed for Gastro Intestinal Ailments (GIA), Dermatological Infection (DID) and Muscular System Disorder (SMSD) respectively. It may be explained due to the presence of the respective bioactive compounds in the secondary metabolites produced by the species (Ayyanar and Ignacimuthu, 2011). It has been noted interestingly that a very little number of 2 species viz., Cycas circinalis and Duranta erecta were used for insecticidal property and also as mosquito repellent species. The presence of certain alkaloids may be the possible reason for this fact (Mayura and Phasomkusolsil, 2014).

The medicinal uses of plants gathered in the present study were compared with the previously published information from other parts of India. It showed that no plants were reported as a new medicinal plant as all the plants were reported with different uses. This fact exhibits that the medicinal plants enlisted in the study area are already prescribed by the healers of various areas in India. When the life-form is considered, higher number of species used for various ailments were trees. It may be explained that the studied forest at Medappara is a climax formation (Champion, 1939) and contains the trees as dominant and most established structures which might aid the sources of medicine consistently. Gonzalez et al. (2010) also reported the usage of more tree species for medicinal purpose in the climax forest in the western Spain due to its stable structure and consistency in availability. Among the different plant parts used, the leaves were most frequently used for medicinal purposes. Many indigenous communities elsewhere also utilized mostly leaves for the medicinal purposes (Ignacimuthu et al., 2006, 2008; Teklehaimanot et al., 2007; Srithi et al., 2009; Giday et al., 2010; Cakilcioglu and Turkoglu, 2010; Gonzalez et al., 2010 and Abdul Latheef et al., 2014). The reason why leaves were used mostly is that they are collected very easily than underground parts, flowers, fruits etc. (Giday et al., 2009) and in scientific point of view leaves are active in photosynthesis and production of metabolites (Ghorbani, 2005).

5. CONCLUSION

The present study indicated that the study area has numerous medicinal plants to treat a wide range of human ailments. Studies on traditional medicinal plants revealed that the local people from Medappara forest prefer traditional medicine due to low cost and sometimes it is a part of their social life and culture so it is necessary to acquire and preserve this traditional system of medical practice. Further, studies by using animal models and subsequent clinical trials are suggested to confirm the traditional knowledge on medicinal plants, thus used for drug manufacturing by pharmaceutical industries.

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