



## Medicinal plants of Dharmapuri district of Tamil Nadu used in primary healthcare system

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### Abstract

Medicinal uses of plants used by different people from Dharmapuri district of Tamil Nadu, based on survey is presented. A total of 163 species from 134 genera and belonging to 59 vascular plants are enumerated: the dominant families along with life forms are included. The list of prioritized medicinal plants by National Medicinal plant Board along with red listed and Highly Traded medicinal plants are also included. The threat faced by these plants are indicated along with the utilization.

**Keywords:** Tamil Nadu, Dharmapuri district, medicinal plant diversity, widely used plants, highly traded plants, plants used in, various ailments

### 1. Introduction

The Indian health system which goes back to 1500 BC, and is mainly based on plants and animals, symbolizes how deep-rooted was this concern for bio-diversity conservation and its sustainable use. The Indian people know a great deal about medicinal plants. Studies reveal that the largest proportion of the biodiversity in all our ecosystems is used by village communities for human and veterinary health care. Over 7,500 species of plants are estimated <sup>[1]</sup> to be used by "the ecosystem people" who belong to some 4635 ethnic communities <sup>[2]</sup>. India probably has the oldest, richest and most diverse, cultural traditions in the use of medicinal plants. As per World Health Organization <sup>[3]</sup> estimates, almost 80% of the population of developing countries relies on traditional medicines, mostly plant drugs, for their primary health care needs. In fact it is well known that even in developed countries, the use of traditional medicines is quite prevalent. Also, modern pharmacopoeia still contains at least 25% drugs derived from plants and many others which are synthetic analogues built on prototype compounds isolated from plants. Demand for medicinal plants is increasing in both developing and developed countries due to growing recognition of natural products being non-narcotic, having no side-effects, easily available at affordable prices and sometime the only source of health care available to the poor.

Around 70% of India's medicinal plants are found in tropical

areas mostly in the various forest types spread across the Western and the Eastern Ghats, the Vindhya, Chotta Nagpur plateau, Aravalis and the Himalayas <sup>[4]</sup> although less than 30% of the medicinal plants are found in the temperate and alpine areas and higher altitudes they include species of high medicinal value. Macro studies show that, a larger percentage of the known medicinal plants occur in the dry and moist deciduous vegetation as compared to the evergreen or temperate habitats <sup>[5]</sup>.

Over 800 species of medicinal plants are used in production of traditional medicines by industry. Of these about 90% are collected from the wild. Less than 20 species of plants are under commercial cultivation <sup>[6]</sup>. In the present article, an attempt is being made to list out the medicinal plants from Dharmapuri district, Tamil Nadu.

### 2. Study Area

Dharmapuri district is located between latitudes N 11 47' and 12 33' and longitudes E 77 02' and 78 40'. The total geographical area is 4497.77 km<sup>2</sup>, i.e. 3.46% of Tamil Nadu (Fig. 1). The district has two forest divisions namely, Dharmapuri and Harur. The dominant vegetation types are: i) Moist deciduous forest ii) Dry deciduous forest iii) Scrub jungle and iv) Riparian vegetation. Due to anthropogenic pressures, over-crazing and spread of invasive alien plants has resulted in degradation of the natural forests.

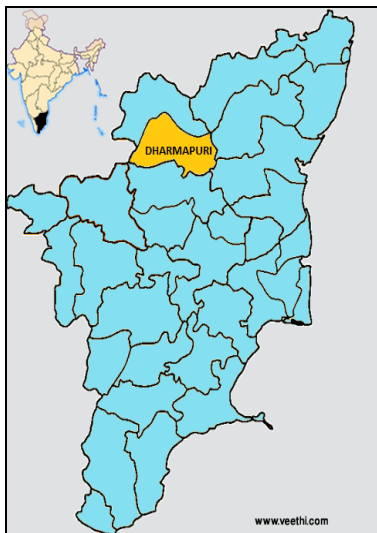
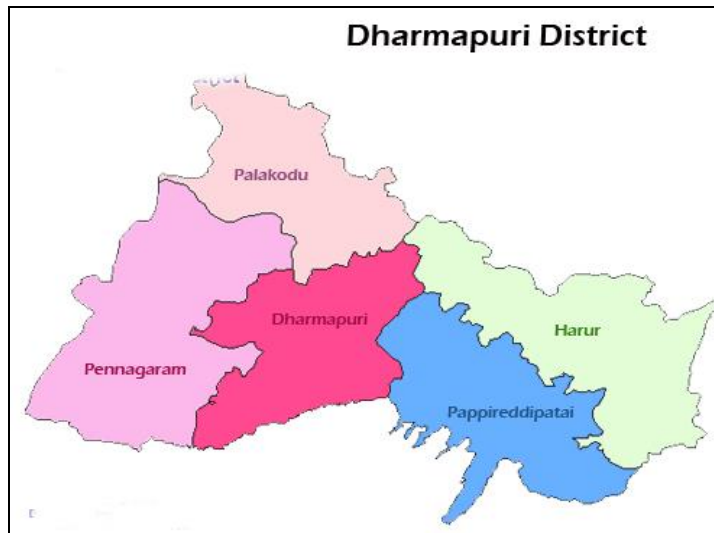


Fig 1: Map of the study area



Map showing the blocks of the Dharmapuri District

### 3. Materials and Methods

The study was conducted as a part of the documentation of the medicinal plant diversity in the flora and plant collections were made across the district covering the different types of vegetation such as Scrub jungle, Dry deciduous, Moist deciduous and Riparian and different seasons for the period of three years (April 2014-March 2017) and the plants were identified with the help of regional floras [7,8,9,10,11]. The plant species were arranged in an alphabetic order of plant names, local names if any, family, habit and habitat, parts used and their therapeutic uses. Photographs were taken by SLR camera Nikon.

### 4. Results and Discussion

The study has resulted in the collection of 163 Species from 134 genera belonging to the 59 taxonomic families (Table 1). The family Euphorbiaceae contained the highest number of species with 11 followed by Fabaceae with 10 species, Asteraceae with 8 species, Solanaceae with 7 species and Mimosaceae with 6 species respectively (Fig. 2). In the present investigation, medicinal plant species were grouped into different life forms such as: herbs 70 species, shrubs 23 species, climbers 15 and trees 55 species and their occurrence were: 41% herbs 9%, shrubs 15%, climbers and 35% trees (Fig. 3). Herbs species were the highest number in case of medicinal uses than other life forms i.e. shrubs, climbers and trees.

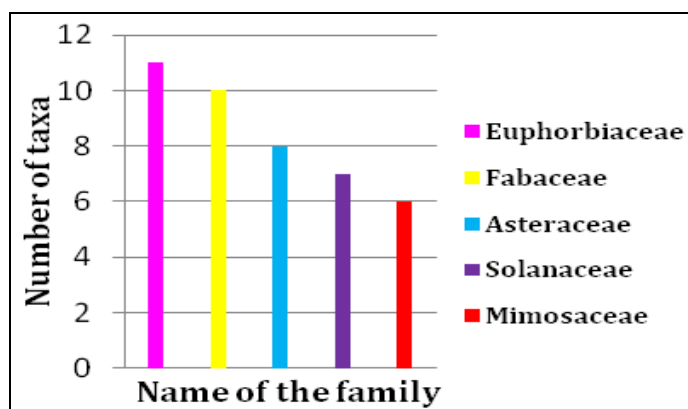


Fig 2: Analysis of the dominant families

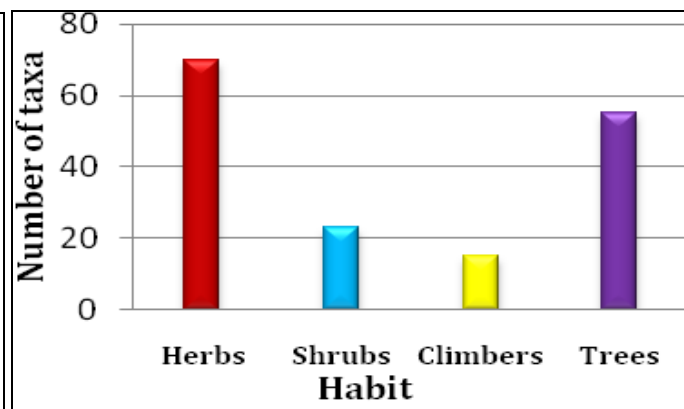


Fig 3: Analysis of the life-form

Different plant parts used were also listed out as: Rhizome root, stem bark, stem, twigs, whole plant, flower, fruit and seed. The therapeutic properties of these medicinal plants [12, 13, 14] were due to the presence of different secondary metabolites like alkaloids, terpenoids, phenolics, glycosides, tannins and others [15]. In addition, few ethnobotanical uses were also consulted [16, 17, 18, 19]. The various lists of plants which are used in the treatment of different diseases are provided under following headings:

#### Jaundice

The species such as *Cassia fistula*, *Curcuma longa*, *Phyllanthus amarus*, *Phyllanthus maderaspatensis*, *Pithecellobium dulce*, *Ricinus communis*, *Sphaeranthus indicus*, *Syzygium caryophyllatum*, *Tamarindus indica*, *Thespesia populnea* and *Wedelia chinensis* are used to cure jaundice.

**Table 1:** List of medicinal plants recorded from the Dharmapuri district, Tamil Nadu

S. No.	Botanical Name	Family	Local name(s)	Habit	Part(s) used	Uses
1.	<i>Abrus precatorius</i> L.	Fabaceae	Kundumani	CL	Leaves, Seeds	Skin diseases, Eye disease and tooth ache.
2.	<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	Thuthi	S	Seed, Root, Barks and Leaves	Urinary troubles, Nervous disorders, Leprosy and Leucorrhoea
3.	<i>Acacia catechu</i> (L.f.) Willd.	Mimosaceae	Karungaali	T	Wood	Skin diseases, mouth ulcer, dysentery and Leprosy.
4.	<i>Acacia nilotica</i> (L.) Willd. ex Del. subsp. <i>indica</i> (Benth) Brenan	Mimosaceae	Karuvelam	T	Bark, heartwood, Leaves, Seeds and gum	Urino-genital diseases, wounds, haemorrhage, ulcers, cough and tooth ache.
5.	<i>Acalypha indica</i> L.	Euphorbiaceae	Kuppaimeni	H	Whole plant	Eczema, skin diseases, cough and bronchitis, Wounds and ulcers.
6.	<i>Achyranthes aspera</i> L.	Amaranthaceae	Nayurivi	H	Whole plant	Diuretic, astringent, skin diseases and piles.
7.	<i>Aerva lanata</i> (L.) Juss. ex Schultes	Amaranthaceae	Peelai	H	Whole plant	Urinary disorders.
8.	<i>Albizia lebbek</i> (L.) Willd.	Mimosaceae	Vaagai	T	Seeds, Leaves, Bark, Flowers and Pod.	Eczema, Ulcer, rheumatism, leprosy, boils, wounds and snake bite.
9.	* <i>Aloe vera</i> (L.) Burm.f.	Asphodelaceae	Chotthukathazhai	H	Leaf juice	Dysentery, leucorrhoea, amenorrhoea, menstrual problems, intestinal worms and skin tonics
10.	<i>Alstonia scholaris</i> (L.) R.Br.	Apocynaceae	Yezhilai paalai	T	Bark and Leaves	Chronic diarrhoea, malarial fever, leprosy, skin diseases, eczema and tooth ache.
11.	<i>Alternanthera sessilis</i> (L.) R.Br. ex DC.	Amaranthaceae	Ponnanganni	H	Whole plant	Gonorrhoea, biliousness, dysmenorrhoea, rheumatism and Urinary tract infection.
12.	<i>Andrographis paniculata</i> (Burm.f.) Wall. ex Nees	Acanthaceae	Nelavembu, Siriyangai	H	Whole plant	Fever, malaria, cough, rheumatism, typhoid and all viral fevers.
13.	<i>Aristolochia indica</i> L.	Aristolochiaceae	Kozhikkundu	H	Root and whole plants	Fever, Snake bite, worms, septic ulcers, Skin diseases and wounds,
14.	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Vaambu	T	Bark, Leaves, Flower, Seeds and Oil	Antiviral, anthelmintic, insecticide, antiseptic, skin diseases, small pox and clean teeth.
15.	<i>Azima tetraclantha</i> Lam.	Salvadoraceae	Pee changam	S	Leaves and Roots	Diuretic, asthma, rheumatism, dropsy and cough.
16.	<i>Bacopa monnieri</i> (L.) Pennell	Scrophulariaceae	Neerbrahmi	H	Whole plant	Diuretic, laxative, memory power, nervine tonic, biliousness and rheumatism.
17.	<i>Blepharis asperrima</i> Nees	Acanthaceae	Elumpu otti	H	Whole plant	Bone fracture, sprain and headache.
18.	<i>Blepharis repens</i> (Vahl) Roth	Acanthaceae	Nethirappoandu	H	Leaves and Seeds	Bone fracture, rheumatism, leucoderma, cuts, wounds and diseases of nervous system.
19.	<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Mookarattai	H	Whole plant	Diuretic, rheumatism, urinary calculi and diabetes, diarrhoea.
20.	<i>Boerhavia erecta</i> L.	Nyctaginaceae	Seemai mookarattai	H	Whole plant	Diuretic, rheumatism, urinary calculi and diabetes, diarrhoea.
21.	<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae	Porasu	T	Gum, Seeds, Flowers, Barks and Leaves	Anthelmintic, leucoderma, diarrhoea, leucorrhoea, cold, fever and cough.
22.	<i>Callicarpa tomentosa</i> (L.) Murr.	Verbenaceae	Vettrilaipattai	T	Seed, flowers, shoot tip	Dysentery, diarrhoea, diabetes and skin diseases
23.	<i>Calotropis gigantea</i> (L.) R.Br.	Asclepiadaceae	Erukku	S	Whole plant	Anthelmintic, skin diseases, leprosy, snake bite, ulcers, piles, cough and asthma
24.	<i>Carmona retusa</i> (Vahl) Masamune	Boraginaceae	Kuruvinchi	S	Leaves.	Analgesic, anti-diabetic, anti-inflammatory, anti-microbial, antispasmodic and anti-mutagenic.
25.	<i>Cassia fistula</i> L.	Caesalpinaceae	Sarakkondrai,	T	Whole plant	Anthelmintic, diarrhoea, ulcer, leprosy, skin diseases, diabetes, jaundice and piles.
26.	<i>Catharanthus pusillus</i> (Murr.) G.Don	Apocynaceae	Chetthai,	H	Whole plant	Rheumatism and skin diseases.
27.	<i>Catharanthus roseus</i> (L.) G.Don	Apocynaceae	Nithyakalyani	S	Whole plant	Hypotensive, sedative, diabetes, leukemia and anthelmintic.
28.	<i>Centella asiatica</i> (L.) Urban	Apiaceae	Vallarai	H	Whole plant	Diuretic, nerve tonic, ulcer, rheumatism and biliousness.
29.	<i>Cissus quadrangularis</i> L.	Vitaceae	Pirandai	CL	Stem	Rheumatoid arthritis, appetizer, bone fracture and nervine tonic.
30.	<i>Citrullus colocynthis</i> (L.) Schrader	Cucurbitaceae	Peikkumatti	CL	Roots, fruits	Laxative, diarrhoea, snake bite, cough and asthma.
31.	<i>Clerodendrum phlomidis</i> L.f.	Verbenaceae	Thazhuthaazhai,	S	Whole plant	Rheumatism and biliousness.
32.	<i>Clitoria ternatea</i> L.	Fabaceae	Sangu poo	CL	Seeds, Roots and Leaves	Rheumatism, biliousness, diuretic, diabetes, diarrhoea, septic wounds and ulcers.
33.	<i>Coccinia grandis</i> (L.) Voigt	Cucurbitaceae	Kovai	CL	Roots, Leaves and Fruits	Nerves debility, giddiness, eczema, itches, laxative, biliousness, hypoglycaemic and jaundice.
34.	<i>Cocculus hirsutus</i> (L.) Diels	Menispermaceae	Kattukodi	S	Roots, twigs	Rheumatism
35.	<i>Commiphora caudata</i> (Wight	Burseraceae	Kiluvai	T	Gum resin	Arthritis, lowering high cholesterol and weight

	& Arn.) Engler					loss.
36.	<i>Commiphora wightii</i> (Arn.) Bhand.	Burseraceae	Mullukiluvai	T	Gum resin	Arthritis, lowering high cholesterol, and weight loss.
37.	<i>Crateva magna</i> (Lour.) DC.	Capparidaceae	Mavalingam	T	Bark, leaf	Blood purifier, gas trouble, nervous disorders, stomach ache and rheumatism.
38.	<i>Curculigo orchoides</i> Gaertn	Hypoxidaceae	Nila panai Kizhangu	H	Tuberous Root	Aphrodisiac, leucorrhoea, fever, asthma, rheumatism, bronchitis and biliousness.
39.	<i>Curcuma longa</i> L.	Zingiberaceae	Manjal	H	Rhizome	Viral fever, skin diseases, diabetes, jaundice, itches and scabies.
40.	<i>Cycas circinalis</i> L.	Cycadaceae	Madana-kaman..	T	Pith	Digestive disorders.
41.	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Arugam pullu	H	Whole plant	Blood disorders, urinary problems, oedema, bleeding menstrual problems, epilepsy and eye diseases.
42.	<i>Cyperus rotundus</i> L.	Cyperaceae	Koraikizhanghu	H	Rhizome	Digestive, heart tonic, diuretic, diarrhoea, dysentery and vomiting.
43.	<i>Cyphostemma setosum</i> (Roxb.) Alston	Vitaceae	Pulinaralai	CL	Leaves	Anti inflammatory
44.	<i>Datura metal</i> L.	Solanaceae	Karu Oomatthai	S	Leaf, fruit	Asthma, rheumatoid arthritis, mumps, anti inflammatory and Anti-spasmodic.
45.	<i>Datura stramonium</i> L.	Solanaceae	Seemai Oomatthai	H	Root, seed, leaf	Snake bite, asthma and bronchitis, headache, epilepsy, ulcers and rheumatism.
46.	<i>Decalepis hamiltonii</i> Wight & Arn.	Periplocaceae	Mahali-Kizhangu	CL	Rhizome	Appetizer
47.	<i>*Delonix elata</i> (L.) Gamble	Caesalpiniaceae	Vaadhanarayanan	T	Leaves	Rheumatism.
48.	<i>Desmodium triflorum</i> (L.) DC.	Fabaceae	Sirupulladi	H	Whole plant	General tonic, rheumatism, arthritis, leucorrhoea, wounds and galactagogue.
49.	<i>Dichrostachys cinerea</i> (L.) Wight & Arn.	Mimosaceae	Vidathalam thazhai	T	Leaf, bark	Dysmenorrhoea, rheumatism, scorpion sting, eye diseases and menstrual disorders.
50.	<i>Dodonaea viscosa</i> (L.) Jacq.	Sapindaceae	Vilaari	S	Leaf	Burns, swelling and wounds.
51.	<i>Eclipta prostrata</i> (L.) L.	Asteraceae	Vellai Karisalankanni	H	Whole plant	Headache, septic wounds, eye diseases and Heptoprotective.
52.	<i>Enicostema axillare</i> (Lam.) Raynal	Gentianaceae	Vellaragu	H	Leaves	fever, rheumatism, skin diseases, hepatoprotective and hypoglycemic
53.	<i>Erythrina variegata</i> L.	Fabaceae	Kalyana Murungai	T	Bark, twigs	Anthelmintic, asthma, bronchitis, rheumatism, obesity and leucorrhoea.
54.	<i>Erythroxylum monogynum</i> Roxb.	Erythroxylaceae	Devadhaaru	T	Leaf, wood	Biliousness, rheumatoid arthritis and polio, urticaria and rashes.
55.	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Ammanpacharisi	H	Whole plant	Urinary disorders, leucorrhoea, skin diseases and mouth ulcers.
56.	<i>Evolvulus alsinoides</i> (L.) L.	Convolvulaceae	Vishnukarandi	H	Whole plant	Fever, dysentery, cough, rheumatism and nervine tonic.
57.	<i>Ficus racemosa</i> L.	Moraceae	Atthi	T	Roots, Leaves, Fruits and Bark	Biliousness, gastritis, leucorrhoea, menorrhagia, diarrhoea and jaundice.
58.	<i>Ficus religiosa</i> L.	Moraceae	Arasu	T	Shoot, bark, fruits	Dysentery, amoebiasis, diarrhoea, gastroenteritis, aphrodisiac and rheumatism.
59.	<i>Flueggea leucopyrus</i> Willd.	Euphorbiaceae	Pulanji	S	Twig, root	Cold, dysentery, diarrhoea, sinusitis, vermifuge and leucorrhoea.
60.	<i>Gardenia gummifera</i> L.	Rubiaceae	Chinnakkambi	T	Gum resin	Rheumatism, rhinitis, diarrhoea, tooth ache and diuretic.
61.	<i>Gmelina arborea</i> Roxb.	Verbenaceae	Kumizh	T	Bark, leaf	Rheumatism, fever, giddiness, snake bite, biliousness, stomachache and burning sensation.
62.	<i>Gmelina asiatica</i> L.	Verbenaceae	Nilakkumizh	S	Root, flower, fruit	Coolant, blood purifier and pain killer.
63.	<i>Gynandropsis gynandra</i> (L.) Briq	Capparidaceae	Nal vaelai	H	Whole plant	Biliousness, septic wounds, ulcers and leprosy.
64.	<i>Hedyotis corymbosa</i> (L.) Lam.	Rubiaceae	Impura	H	Whole plant	Fever, gastritis, jaundice, biliousness, ulcers and scabies.
65.	<i>Helicteres isora</i> L.	Sterculiaceae	Valamburi-Idampuri	S	Bark, twig, fruit	Paralytic stroke and rheumatism, leucorrhoea, biliousness and whitlow.
66.	<i>Hybanthus enneaspermus</i> (L.) F. v. Muell.	Violaceae	Orilai thamarai,	H	Whole plant	Leucorrhoea, cooling agent, urinary disorders and digestive disorders.
67.	<i>Hygrophila schulli</i> (Hamilt.) M.R.Almeida & S.M. Almeida	Acanthaceae	Neermulli	H	Twig, seed	Rheumatism, back-ache, arthritis, kidney stone and oedema.
68.	<i>Indigofera linnaei</i> Ali	Fabaceae	Sheppunerunji	H	Whole plant	Urinary disorders fever and cough.
69.	<i>Indigofera tinctoria</i> L.	Fabaceae	Avuri	H	Root, leaf	Epilepsy, urticaria, leprosy, scabies, anti-dote for snake bite, rabies poison, rat bite and mouth ulcers.
70.	<i>Ixora pavetta</i> Andr.	Rubiaceae	Korivi	T	Bark, twigs	Biliousness, blood pressure, gonorrhoea and rheumatism.

71.	<i>Jatropha curcas</i> L.	Euphorbiaceae	Kaatu-amanakku	S	Latex, twig	Jaundice, constipation, laxative, rheumatism, gum diseases, diabetes and skin diseases
72.	<i>Justicia adhatoda</i> L.	Acanthaceae	Adathodai	S	Leaf	Rheumatism, tuberculosis, asthma and bronchitis, headache and gas trouble.
73.	<i>Kalanchoe pinnata</i> (Lam.) Pers.	Crassulaceae	Ranakalli	H	Leaf	Cuts and wounds, anti dandruff, kidney stones and leucorrhoea.
74.	<i>Kedrostis rostrata</i> (Rottl.) Cogn.	Cucurbitaceae	Appakovai	Cl	Leaf	Asthma, chest pain and urinary tract infections.
75.	<i>Lannea coromandelica</i> (Houtt.) Merr.	Anacardiaceae	Odhiyan	T	Bark, gum, leaf	Rheumatism, cardiac and nervine tonic, bruises, wounds, sores, sore ulcer and sore eyes.
76.	<i>Limonia acidissima</i> L.	Rutaceae	Vilangai	T	Leaf, brak, fruit	Biliousness, gastric ulcers, dysentery, diarrhoea, vomiting, cough and piles.
77.	<i>Madhuca longifolia</i> (Koen.) Macbr.	Sapotaceae	Illupai	T	Bark, wood, flower, seed	Rheumatism, arthritis, biliousness, skin diseases and digestive tract disorders.
78.	<i>Mallotus philippensis</i> (Lam.) Muell.-Arg.	Euphorbiaceae	Kapli	T	Bark, leaf, fruit	Cold, insect bite and rheumatism.
79.	<i>Mangifera indica</i> L.	Anacardiaceae	Maa	T	Bark, gum, leaf, fruit, seed	Gonorrhoea, leucorrhoea, dysentery, diarrhoea, diabetes and biliousness, ulcers, wounds and cuts.
80.	<i>Melia azedarach</i> L.	Meliaceae	Malai vembu	T	Root, bark, leaf	Mouth ulcers, eye diseases, viral fevers, kidney stones and leucorrhoea.
81.	<i>Mimosa pudica</i> L.	Mimosaceae	Thotalvadi	H	Whole plant	Scabies, eczema, kidney and bladder stones, cuts and stones, urticaria and rashes.
82.	<i>Mirabilis jalapa</i> L.	Nyctaginaceae	Andhi mantharai	H	Rhizome, leaf	Leucorrhoea, purgative and stomach ache.
83.	<i>Mollugo pentaphylla</i> L.	Molluginaceae	Parpaadagam	H	Whole plant	Septic wounds, ulcers, fever and measles.
84.	<i>Morinda pubescens</i> J.E.Smith	Rubiaceae	Nuna	T	Bark, leaf	Eczema, itches, ulcers and swelling and digestive disorders.
85.	* <i>Moringa pterygosperma</i> Gaertn.	Moringaceae	Murungai	T	Root, bark, leaf, flower, seed	Rheumatism, spleen disorders, diarrhoea, epilepsy, swelling, indigestion, mouth ulcers, jaundice, eczema and scabies.
86.	<i>Mukia maderaspatana</i> (L.) M. Roem.	Cucurbitaceae	Musumusukkai	CL	Root, leaf,	Biliousness, diabetes, gas trouble, tooth ache and liver disorders.
87.	<i>Naringi crenulata</i> (Roxb.) Nicolson	Rutaceae	Mahaa vilvam	T	Roots, leaf, fruits	Antipyretic, jaundice, biliousness, gastric ulcer and gastritis.
88.	<i>Nelumbo nucifera</i> Gaertn.	Nelumbonaceae	Tamarai	H	Rhizome, leaf petiole, flower	Biliousness, urinary disorders, anti-dote for snake bite and dysentery.
89.	<i>Nyctanthes arbor-tristis</i> L.	Nyctanthaceae	Pavazha malli	S	Bark, leaf	Scabies, skin disease, eye diseases, diuretic, digestive, leucorrhoea rheumatism and anti-inflammatory.
90.	* <i>Ocimum tenuiflorum</i> L.	Lamiaceae	Thulasi	H	Leaf	Cough and cold, bronchitis, cholera, stomach ache, dysentery, malaria and hepatitis.
91.	<i>Ormocarpum cochinchinense</i> (Lour.) Merr.	Fabaceae	Elumbotti	S	Bark	Fever, rheumatism and bone setting.
92.	<i>Pedaliium murex</i> L.	Pedaliaceae	Yanai nerunji	H	Whole plant	Fever, swellings, burning urination and rheumatism.
93.	<i>Pergularia daemia</i> (Forrsk.) Chiov.	Asclepiadaceae	Vaelipparuthi	CL	Whole plant	Asthma, rheumatism, diarrhoea, snake bite, expectorant and emetic.
94.	<i>Phyllanthus amarus</i> Schum. & Thonn.	Euphorbiaceae	Kizhanelli	H	Whole plant	Asthma, Jaundice, urinary tract diseases, skin diseases and blood dysentery.
95.	<i>Phyllanthus emblica</i> L.	Euphorbiaceae	Nelli	T	Bark, leaves, fruits	Stomachache, jaundice, diarrhoea, indigestion, dysentery and biliousness.
96.	<i>Phyllanthus maderaspatensis</i> L.	Euphorbiaceae	Mellanelli	H	Whole plant	Jaundice, liver disorders and headache.
97.	<i>Phyllanthus reticulatus</i> Poir.	Euphorbiaceae	Inki pazham	S	Root, leaf	Cough and rhinitis, septic wounds, chicken pox, measles and urticaria.
98.	<i>Phyllanthus urinaria</i> L.	Euphorbiaceae	Malai Kizhanelli	H	Whole plant	Jaundice, gonorrhoea, urinary diseases, indigestion, bleeding piles and menstrual problems.
99.	<i>Piper longum</i> L.	Piperaceae	Tippili	S	Root, fruit	Indigestion, blood purifier, tonic, rheumatism, breathing problems, epilepsy, cold, fever and skin diseases.
100.	<i>Pisonia grandis</i> R. Br.	Nyctaginaceae	Nachukottaikeerai	T	Leaves	Anti-inflammatory, anti-diabetic, diuretic, analgesic and wound healing properties
101.	* <i>Pithecellobium dulce</i> (Roxb.) Benth.	Mimosaceae	Kodukkaai puli	T	Leaf, seed	Leprosy, jaundice and poisonous bites.
102.	<i>Plectranthus amboinicus</i> (Lour.) Spreng.	Lamiaceae	Karppuravalli	H	Leaf	Cold, cough, headache, body pain, urticaria and rashes.
103.	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Chithiramoolam	H	Leaves and Roots	Uterine, stimulant, abortifacient, leprosy, oedema, bronchial asthma, piles and worm infestation

104.	<i>Pongamia pinnata</i> (L.) Pierre	Fabaceae	Pongan	T	Leaves, Seeds and Root	Antibacterial, antifungal, insecticidal, stomach disorders, worm infestation, piles, uterine disorders and ulcers
105.	<i>Premna latifolia</i> Roxb.	Verbenaceae	Erumai munnai	T	Root, leaves	Anti-inflammatory, indigestion, rheumatism, gastric ulcer and liver disorders.
106.	<i>Protasparagus racemosus</i> (Willd.) Oberm.	Asparagaceae	Thaneer vitaan kizhangu	CL	Tuberous root	General tonic for women, rheumatism, biliousness, leucorrhoea, burning urination, stomachache and ulcers.
107.	* <i>Psidium guajava</i> L.	Myrtaceae	Koyya	T	Root, bark, shoot, fruit	Diarrhoea, mouth ulcer, dysentery, skin diseases, diabetes and swelling.
108.	<i>Pterocarpus marsupium</i> Roxb.	Fabaceae	Vengai	T	Bark and Heart wood	Leprosy, leucorrhoea, skin diseases, diabetes, diarrhoea, itches and toothache
109.	<i>Pterocarpus santalinus</i> L.	Fabaceae	Sivappu Sandhanam	T	Heart wood	Jaundice, skin diseases, piles, burning urination, eye diseases, wounds and ulcers.
110.	* <i>Punica granatum</i> L.	Punicaceae	Madhulai	T	Root, Bark, fruit	Diarrhoea, dysentery, anti-anthelmintic, tuberculosis, indigestion, piles, hiccup and cholera.
111.	<i>Rhinacanthus nasutus</i> (L.) Kurz	Acanthaceae	Nagamalli	S	Whole plant	Eczema, ringworm, leprosy, rheumatism and skin diseases.
112.	<i>Ricinus communis</i> L.	Euphorbiaceae	Amanakku	S	Roots, Leaves, Seeds and Seed oil	Jaundice, rheumatism, constipation, bronchitis, anti-inflammatory, headache and purgative.
113.	<i>Sansevieria roxburghiana</i> Schultes & Schultes	Dracaenaceae	Marun	H	Leaf	Ear-ache, skin diseases, cough, bronchitis and chest pain.
114.	<i>Santalum album</i> L.	Santalaceae	Sandanam	T	Heart wood	Urinary infections, gastritis, headache, biliousness, vomiting and diarrhoea.
115.	<i>Sapindus emarginatus</i> Vahl	Sapindaceae.	Boondhikkottai	T	Bark, fruit	Asthma, bronchitis, hysteria, epilepsy and skin diseases.
116.	<i>Sarcostemma vimanale</i> (L.) R.Br.	Asclepiadaceae	---	CL	Latex	Bronchial asthma, tonic and dog-bite
117.	<i>Scilla hyacinthina</i> (Roth) Mechr.	Hyacinthaceae	Narivengayam	H	Bulb	Expectorant, diuretic and cardiac stimulant.
118.	<i>Senna alata</i> (L.) Roxb.	Caesalpiniaceae	Seemai agathi	T	Leaf	Skin diseases and anti-inflammatory.
119.	<i>Senna auriculata</i> (L.) Roxb.	Caesalpiniaceae	Avaram	S	Root, stem, bark, leaves, flowers and seed	Diabetes, constipation and urinary troubles
120.	<i>Senna tora</i> (L.) Roxb.	Caesalpiniaceae	Oosi thagarai	T	Leaf, seed	Eczema, blood dysentery, diarrhoea, rheumatism and biliousness.
121.	* <i>Sesamum indicum</i> L.	Pedaliaceae	Ellu	H	Seed	Rheumatism, toothache, cough, piles, menstrual disorders and biliousness
122.	* <i>Sesbania grandiflora</i> (L.) Poir.	Fabaceae	Agathi	T	Bark, leaf, flower, pod	Fever, cough, gastric ulcers, night blindness, biliousness and digestive disorders.
123.	<i>Sida alnifolia</i> L.	Malvaceae	Kurunthotti	H	Whole plant	Ulcer, biliousness, urinary infection, leprosy and skin infection.
124.	<i>Sida cordata</i> (Burm. f.) Borssum	Malvaceae	Malai thangi	H	Whole plant	Biliousness, insanity, bleeding piles, dysentery, indigestion and leucorrhoea.
125.	<i>Sida cordifolia</i> L.	Malvaceae	Nilatutthi	H	Roots	Arthritis, rheumatism and astringent, diuretic.
126.	<i>Solanum americanum</i> Mill	Solanaceae	Manatakkali	H	Whole plant	Mouth ulcers, blood cancer, gas trouble, skin diseases and anti-anthelmintic.
127.	<i>Solanum nigrum</i> L.	Solanaceae	Manatakkali	H	Whole plant	Mouth ulcers, blood cancer, gas trouble, skin diseases and anti-anthelmintic.
128.	<i>Solanum pubescens</i> Willd.	Solanaceae	Malaisundai	S	Roots and Leaves	Appetizer, arthritis, rheumatism, gastrouble, worms and fever.
129.	<i>Solanum torvum</i> Sw.	Solanaceae	Chundai	S	Root, stem bark, fruit	Appetizer, arthritis, rheumatism, gastrouble, worms and fever.
130.	<i>Solanum virginianum</i> L.	Solanaceae	Kandankathiri	S	Roots and Whole plant	Asthma, rheumatism, piles, digestive disorders, cough and toothache.
131.	<i>Spermaceoce hispida</i> L.	Rubiaceae	Nathaichoori	H	Whole plant	Utrine bleeding, nervine tonic, blood purifier, digestive disorders, gall bladder stones.
132.	<i>Sphaeranthus indicus</i> L.	Asteraceae	Vishnu karandhai	H	Whole plant	Nervine tonic, phlegm, piles, jaundice, tumours, lymph node swellings, diabetes and chronic skin diseases.
133.	<i>Streblus asper</i> Lour.	Moraceae	Kuruvipala	T	Root, stem bark, leaf	Urinary disorders, cuts and wounds, gastro-intestinal disorders and dysentery.
134.	<i>Strychnos nux-vomica</i> L.	Loganiaceae	Yetti	T	Bark, leaves, seeds	Skin diseases, rheumatism, leprosy, constipation and anti-inflammatory.
135.	<i>Synedrella nodiflora</i> (L.) Gaertn.	Asteraceae	---	H	Twigs	Skin diseases, cuts and wounds

136.	<i>*Syzygium aromaticum</i> (L.) Merr. & Perry	Myrtaceae	Kirambu	T	Flower bud	Cough, toothache, flatulence, cold, rhinitis, aphrodisiac, asthma and bronchitis.
137.	<i>Syzygium caryophyllatum</i> (L.) Alston	Myrtaceae	Malai naaval	T	Bark, twigs	Wounds, ulcers, pyorrhea, jaundice, cough and immunity.
138.	<i>Syzygium cumini</i> (L.) Skeels	Myrtaceae	Navaal	T	Root, bark, leaf, fruit, seed	Indigestion, diabetes, dysentery, diarrhoea and fever.
139.	<i>*Tamarindus indica</i> L.	Caesalpiniaceae	Puliyam	T	Leaf, fruit, seed	Rheumatism, skin diseases, piles, constipation, biliousness and indigestion.
140.	<i>Tephrosia purpurea</i> (L.) Pers.	Fabaceae	Kozhinji	H	Whole plant	Indigestion, chronic spleen disorders, urinary disorders, leprosy and liver tonic.
141.	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Combretaceae	Thandri	T	Bark, fruit	Bronchitis and asthma, dysentery, piles, skin diseases and rheumatism.
142.	<i>Terminalia chebula</i> Retz.	Combretaceae	Kadukaai	T	Fruit	Rheumatism, piles, constipation, urinary disorders and leucorrhoea.
143.	<i>Terminalia cuneata</i> Roxb.	Combretaceae	Neer Marudhu	T	Bark	Cardiac tonic, nervous debility and chest pain.
144.	<i>Thespesia populnea</i> (L.) Soland ex Correa	Malvaceae	Poovarasu	T	Bark, leaf, fruit	Toothache, skin disease, wounds and ulcers and jaundice and rheumatoid arthritis.
145.	<i>*Thevetia peruviana</i> K.Schum	Apocynaceae	Ponnarali	T	Root, bark, leaf	Rheumatism, bleeding piles and anti-inflammatory.
146.	<i>Tinospora cordifolia</i> (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae	Seendhil	CL	Whole plant	Diabetes, joint pain, health tonic, vomiting, fever, rheumatism, blood disorders and antiviral.
147.	<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Milagaranai	CL	Root, leaf	Fever, rheumatism and gastroble.
148.	<i>Tragia involucrata</i> L.	Euphorbiaceae	Chenthatti	H	Root, shoot, fruit	Headache, allergy, jaundice, asthma, bleeding piles and migraine.
149.	<i>Trewia nudiflora</i> L.	Euphorbiaceae	Aattharasu	T	Root	Anti-inflammatory, arthritis and rheumatism.
150.	<i>Trianthema portulacastrum</i> L.	Aizoaceae	Saralai	H	Whole plant	Tonic, diuretic, blood purifier, dropsy and urinary disorders.
151.	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Nerunji	H	Fruits and Leaves	Cardiac diseases, genito-urinary disorders, nervous disorders, piles and rheumatism.
152.	<i>Tridax procumbens</i> L.	Asteraceae	Vettukkaaya-thazhai	H	Leaves	bronchial catarrh, dysentery, diarrhoea, haemorrhages from cuts, bruises and wounds.
153.	<i>Tylophora indica</i> (Burm.f.) Merr.	Asclepiadaceae	Nangilaippiratti	CL	Roots and Leaves	Emetic, cathartic, asthma, whooping cough, leukaemia, cancerous tumours, dyspepsia and flatulence.
154.	<i>Vernonia cinerea</i> (L.) Less.	Asteraceae	Mookutthipoondy	H	Whole plant	Mouth ulcers, gastric ulcers, eye diseases, fever and skin diseases.
155.	<i>Vetiveria zizanioides</i> (L.) Nash	Poaceae	Vettiver	H	Root	Blood purifier, fever, wounds, eczema, skin diseases and cooling agent.
156.	<i>Vitex negundo</i> L.	Verbenaceae	Nochi	T	Whole plant	Gastritis, rheumatoid arthritis, sprain, asthma, cough, indigestion, skin diseases and body pain.
157.	<i>Wattakaka volubilis</i> (L.f.) Stapf	Asclepiadaceae	Kurinjan	CL	Root, leaf	Leucorrhoea, throat-ache, skin diseases, diabetes, and rheumatism.
158.	<i>Wedelia chinensis</i> (Osbeck) Merr.	Asteraceae	Manjal Karisalankanni	H	Whole plant	Jaundice, indigestion, skin diseases, headache, elephantiasis and anti-inflammatory.
159.	<i>Wrightia tinctoria</i> (Roxb.) R.Br.	Apocynaceae	Veppalai	T	Whole plant	Tonsillitis, rheumatism, psoriasis, toothache and skin diseases.
160.	<i>Xanthium indicum</i> Koen.	Asteraceae	Marul oomatham	H	Leaf	Skin diseases.
161.	<i>Zaleya decandra</i> (L.) Burm.f.	Aizoaceae		H	Whole plant	Heptoprotective, Anti-hyperglycemic, Anti-inflammatory and Toothache.
162.	<i>*Zingiber officinale</i> Roscoe	Zingiberaceae	Ingee	H	Rhizome	Indigestion, biliousness, headache, asthma, diarrhoea, cough, herpes, scabies and gastritis.
163.	<i>Ziziphus mauritiana</i> Lam.	Rhamnaceae	Illandhai	T	Bark, leaf, fruit	Mouth ulcers, stomach ulcers, rheumatic complaints, and gastro-enteritis and skin diseases.

H-Herb; S-Shrub; CL- Climber; T-Tree; \*- indicates the cultivated specie



*Acacia nilotica* subsp. *indica*



*Aristolochia indica*



*Dichrostachys cinerea*



*Erythroxylum monogynum*



*Evolvulus alsinoides*



*Indigofera tinctoria*

**Fig 4**



*Pedalium murex*



*Pterocarpus santalinus*



*Rhinacanthus nasutus*



*Santalum album*



*Senna auriculata*



*Solanum pubescens*

**Fig 5**

#### **Rheumatism**

The plants like *Boerhavia erecta*, *Catharanthus pusillus*, *Centella asiatica*, *Cissus quadrangularis*, *Clerodendrum phlomidis*, *Clitoria ternatea*, *Cocculus hirsutus*, *Desmodium triflorum*, *Dichrostachys cinerea*, *Erythrina variegata*, *Erythroxylum monogynum*, *Evolvulus alsinoides*, *Moringa pterygosperma* and *Solanum torvum* are used to treat rheumatism.

#### **Diabetes**

The species such as *Boerhavia diffusa*, *Boerhavia erecta*, *Cassia fistula*, *Curcuma longa*, *Psidium guajava*, *Senna auriculata*, *Sphaeranthus indicus*, *Syzygium cumini*, *Thevetia peruviana*, *Tinospora cordifolia* and *Wattakaka volubili* are used for diabetes.

#### **Skin ailments**

The plants like *Achyranthes aspera*, *Albizia lebbek*, *Aloe vera*, *Alstonia scholaris*, *Azadirachta indica*, *Curcuma longa*, *Mimosa pudica*, *Morinda pubescens*, *Nyctanthes arbor-tristis*, *Rhinacanthus nasutus*, *Senna tora*, *Vernonia cinerea*, *Vetiveria zizanioides*, *Xanthium indicum* and *Wrightia tinctoria* are used to treat various skin diseases.

#### **Toothache**

The species such as *Abrus precatorius*, *Acacia nilotica subsp. indica*, *Alstonia scholaris*, *Gardenia gummifera*, *Jatropha curcas*, *Mukia maderaspatana*, *Pterocarpus marsupium*, *Thespesia populnea* and *Wrightia tinctoria* are used to treat tooth-ache.

#### **Anti-inflammatory**

The plants like *Cyphostemma setosum*, *Datura metal*, *Nyctanthes arbor-tristis*, *Ricinus communis*, *Trewia nudiflora* and *Wedelia chinensis* are having the anti-inflammatory activity.

#### **Bronchial Asthma**

The species such as *Pergularia daemia*, *Ricinus communis*, *Sansevieria roxburghiana*, *Solanum virginianum*, *Syzygium cumini*, *Tamarindus indica*, *Terminalia bellirica*, *Terminalia chebula* and *Tragia involucrat* are used for bronchial and asthma.

#### **Heart diseases**

The plants like *Azima tetracantha*, *Curcuma longa*, *Cyperus rotundus*, *Phyllanthus amarus*, *Terminalia cuneata* and *Tribulus terrestris* used for cardiac diseases.

#### **Ulcers**

The species like *Acacia catechu*, *Datura stramonium*, *Euphorbia hirta*, *Hedyotis corymbosa*, *Indigofera tinctoria*, *Mangifera indica*, *Melia azedarach*, *Mollugo pentaphylla*, *Morinda pubescens*, *Naringi crenulata*, *Pterocarpus santalinus*, *Vernonia cinerea* and *Ziziphus mauritiana* used to treat ulcers.

#### **Urino-genital diseases**

The plants such as *Acacia nilotica subsp. indica*, *Aerva lanata*, *Alternanthera sessilis*, *Boerhavia diffusa*, *Boerhavia erecta*, *Euphorbia hirta*, *Hybanthus enneaspermus*, *Hygrophila schulli*, *Indigofera linnaei*, *Melia azedarach*,

*Santalum album*, *Senna auriculata*, *Spermocoe hispida*, *Streblus asper*, *Tephrosia purpurea*, *Thespesia populnea* and *Tribulus terrestris* are used for urinary disorders.

#### Arthritis & Rheumatism

The species like *Gmelina arborea*, *Gardenia gummifera*, *Helicteres isora*, *Hygrophila schulli*, *Jatropha curcas*, *Justicia adhatoda*, *Lannea coromandelica*, *Mallotus philippensis*, *Ormocarpum cochinchinense*, *Sesamum indicum*, *Sida cordifolia*, *Strychnos nux-vomica* and *Tamarindus indica* are used for arthritis.

#### Aphrodisiac

The species such as *Curculigo orchioides*, *Ficus racemosa*, *Ficus religiosa*, *Hybanthus enneaspermus* and *Toddalia asiatica* are used in the treatment of impotency.

#### Menstrual disorders

The plants like *Aloe vera*, *Phyllanthus urinaria*, *Pongamia pinnata* *Sesamum indicum* and *Spermocoe hispida* are used to treat menstrual disorders.

#### Bone fracture

The species such as *Blepharis repens*, *Blepharis asperima*, *Cissus quadrangularis* and *Ormocarpum cochinchinense* are used to treat bone setting.

#### Diuretic

The plants like *Achyranthes aspera*, *Azima tetracantha*, *Bacopa monnieri*, *Boerhavia diffusa*, *Boerhavia erecta*, *Centella asiatica*, *Clitoria ternatea*, *Cyperus rotundus*, *Gardenia gummifera* and *Sida cordifolia* are used as diuretic purposes.

#### Antiviral

The plants like *Andrographis paniculata*, *Azadirachta indica* and *Curcuma longa* are used to treat various viral fevers.

#### Appetizer

The species such as *Decalepis hamiltonii*, *Solanum torvum* and *Solanum pubescens* used as an appetizer.

Even though botanist's [20, 21, 22, 23] have reported on the ethnomedicinal and occurrence of medicinal plants from their respective study areas but they failed to indicate the list of prioritized medicinal plants provided by The National Medicinal Plant Board, New Delhi; in order to fill this gap, an attempt is being made and the same is being provided and are *Aegle marmelos*, *Albizia lebbek*, *Aloe vera*, *Andrographis paniculata*, *Azadirachta indica*, *Bacopa monnieri*, *Boerhavia diffusa*, *Catharanthus roseus*, *Centella asiatica*, *Gloriosa superba*, *Gmelina arborea*, *Gymnema sylvestre*, *Hemidesmus indicus*, *Ocimum sanctum*, *Phyllanthus amarus*, *P. emblica*, *Protoasparagus racemosus*, *Solanum nigrum*, *Terminalia cuneata*, *T. bellerica* and *Tinospora cordifolia*. Similarly the highly traded medicinal plants [24] such as *Acacia nilotica*, *Aegle marmelos*, *Albizia amara*, *Butea monosperma*, *Cassia fistula*, *Clerodendrum phlomides*, *Gmelina arborea*, *Gymnema sylvestre*, *Helicteres isora*, *Holoptelea integrifolia*, *Lannea coromandelica*, *Mimusops elengi*, *Morinda pubescens*, *Phyllanthus emblica*, *Protoasparagus racemosus*,

*Pterocarpus santalinus*, *Santalum album*, *Strychnos nux-vomica*, *Terminalia cuneata*, *T. bellerica* and *Wrightia tinctoria* were also reported.

Some of the cultivated medicinal plants like *Aloe vera*, *Azadirachta indica*, *Catharanthus roseus*, *Gloriosa superba*, *Jatropha curcus*, *Ocimum sanctum*, *Plectranthus barbatus*, *Pongamia pinnata*, *Vitex negundo* and *Ziziphus mauritiana* were also included. whereas, some of the medicinal plants collected from open waste lands are *Abrus precatorius*, *Achyranthes aspera*, *Aerva lanata*, *Andrographis paniculata*, *Bacopa monnieri*, *Boerhavia diffusa*, *Cardiospermum helicacabum*, *Cassia tora*, *Centella asiatica*, *Citrullus colocynthis*, *Cynodon dactylon*, *Cyperus rotundus*, *Datura metel*, *Eclipta prostrata*, *Hemidesmus indicus*, *Ocimum americanum*, *Phyllanthus amarus*, *Plumbago zeylanica*, *Sida rhombifolia*, *Solanum nigrum*, *S. virginianum*, *Tephrosia purpurea*, *Tinospora cordifolia*, *Tragia involucrata* and *Tribulus terrestris* could also collected during the present investigation.

#### 5. Conclusion

An attempt was made to list out the medicinal plant diversity of Dharmapuri district during April 2014-March 2017 and about 163 species was listed for their phyto-therapeutic value. It is observed that, a few threatened plants such as *Cycas circinalis*, *Gloriosa superba* *Pterocarpus santalinus* and *Santalum album* could be collected. Due to destructive harvesting, over exploitation of medicinal plants and grazing by domestic animals nearby forests have resulted in the loss of populations of plants in the wild. Hence, there is an urgent need to take an effective conservation strategy to conserve these plants in the wild by *in-situ*, as well as *ex-situ* by tissue culture method. It is realized that, there is a pressing demand for plants like *Acacia nilotica subsp. indica*, *Aegle marmelos*, *Albizia amara*, *Butea monosperma*, *Cassia fistula*, *Clerodendrum phlomides*, *Gmelina arborea*, *Gymnema sylvestre*, *Helicteres isora*, *Holoptelea integrifolia*, *Lannea coromandelica*, *Mimusops elengi*, *Morinda pubescens*, *Phyllanthus emblica*, *Protoasparagus racemosus*, *Pterocarpus santalinus*, *Santalum album*, *Strychnos nux-vomica*, *Terminalia arjuna*, *T. bellerica* and *Wrightia tinctoria* for their utility in the drug formulations and found that, the species like *Aloe vera* (aloe), *Cassia angustifolia* (senna), *Catharanthus roseus* (periwinkle), *Gloriosa superba* (kanvallikilangu), *Hemidesmus indicus* (Nannari), *Plectranthus barbatus* (coleus), *Phyllanthus amarus* (keelanelli) and *Protoasparagus racemosus* (sadavari) can be taken up for cultivation. The documentation of medicinal plants of any given area will able to provide baseline data and it will be useful to the forest managers and other stakeholders. This communication aims at emphasizing the importance of setting up conservation priorities, and sustained development of various medicinal plants of Dharmapuri district, Tamil Nadu.

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