

# Diversity of Ethnomedicinal Plants in Bodamalai Hills Eastern Ghats, Namakkal District, Tamil Nadu

Raju Sathiyaraj<sup>1</sup>, Ariyan Sarvalingam A.<sup>1, \*</sup>, Arulbalachandran<sup>2</sup>, Rama Koti Reddy<sup>1</sup>

<sup>1</sup>Department of Botany, Bharathiar University, Coimbatore, Tamil Nadu, India

<sup>2</sup>Department of Botany, Periyar University, Salem, Tamil Nadu, India

## Email address:

slvmlingam@gmail.com (Ariyan S. A.), sathiyaraj@gmail.com (Raju S.)

## To cite this article:

Raju Sathiyaraj, Ariyan Sarvalingam A., Arulbalachandran, Rama Koti Reddy. Diversity of Ethnomedicinal Plants in Bodamalai Hills Eastern Ghats, Namakkal District, Tamil Nadu. *Journal of Plant Sciences*. Vol. 3, No. 2, 2015, pp. 77-84. doi: 10.11648/j.jps.20150302.16

---

**Abstract:** An Ethnobotanical survey was carried out among the tribes and villagers in Bodamalai Hills, Namakkal district, Tamil Nadu. The investigation revealed that, the traditional healers used 93 species of plants distributed in 85 genera and 44 families were used to treat various diseases. The documented medicinal plants were used to cure different ailments such as skin problems, cold, fever, cough, headache, diarrhea, fertility problems, toothache, stomach ache, wounds, diabetes, rheumatism, asthma, dysentery, small pox, bone fractures, ear ache, hair loss and poison (snake, scorpion and insect) bites etc. This study showed that the tribes and villagers still continue to depend on medicinal plants; however the traditional healers are on the decline because the younger members of the tribe have no interest and knowledge of this form of medicine as they have started moving towards the towns and cities. Therefore it is necessary to document the plants to effectively conserve them.

**Keywords:** Diversity, Ethnomedicine, Hindu *Malaiyali* Tribes, Bodamalai, Eastern Ghats, India

---

## 1. Introduction

The value of medicinal plants to the mankind is very well proven. It is estimated that 70% to 80% of the people worldwide rely chiefly on the traditional health care system and largely on herbal medicines [23]. India is tenth among the plant-rich countries of the world, fourth among the Asian countries [16]. Moreover, India is also one among the 12-mega biodiversity centers of the world by having over 47,000 plant species. Its diversity is unmatched due to the presence of 16 different agro climatic zones, 10 vegetation zones and 15 biotic provinces. Among these Eastern Ghats ranges is one of the major biotic provinces that may host more than 9,000 flowering plants, 15,000 fungi, 1,800 algae, 780 lichens, 960 bryophytes and over 13 million microorganisms. Scientific investigations of medicinal plants have been initiated in many parts of our country because of their contributions to health care [30]. Traditional medicine has a long history of serving people all over the world. Medicinal plants are the local heritage with global importance. The knowledge of medicinal plants has been accumulated in the course of many centuries based on the different medicinal systems such as Ayurveda, Unani, Siddha and Homeopathy in India [4, 15]. In recent years, the use of traditional medicine information on plant

research has again received considerable interest. The potential of ethnomedicobotanical investigates has proved amazing is the search for new psychoactive plant that can be used in modern medicines more than 300 species of psychoactive plants have been used in India since ancient time [18].

According to a survey of World Health Organization, the practitioners of traditional system of medicine treat about 8% of patients in India, 85% in Burma and 90% in Bangladesh [25, 31]. It is estimated that at least 2, 65,000 species of seed plants exist on earth, only less than a half percent of these have been studied exhaustively for their chemical composition and medicinal value [6, 22]. A vast knowledge of how to use the plants against different illness may be expected to have accumulated in areas of where the use of the plant is still of great importance. The plants used in ethnomedicine contain a wide range of substances that can be used to teach chronic as well infectious diseases [11].

Ethnomedical practices are preferred largely because medicinal plants are less expensive, readily available and reliable, and they are considered to have fewer side effects than modern medicines [19]. Medicinal plants are the wealthy bio-resources of drugs of traditional medicinal systems, modern medicines, nutraceuticals, food supplements, and folk medicines, pharmaceuticals, intermediate and chemical entitled for synthetic drugs [1, 7]. Around, one third

of all Pharmaceutical medicines are of plant origin, wherein fungi and bacteria are also included. The use of traditional medicine and medicinal plants in most developing countries, as a normative basis for the maintenance of good health, has been widely observed [28]. Recently considerable attention has been paid to utilize eco-friendly and bio-friendly plant based product for the preservation and cure of different human diseases. It is documented that 80% of the world's population have faith in traditional medicine, particularly plant drug for their primary healthcare [10, 13]. The objective of this study was to assess the diversity of ethnomedicinal plant species used by tribes and villagers in Namakkal district of Tamil Nadu and to document the traditional medical practices in healing the ailments.

## 2. Materials and Methods

### 2.1. Study Area

Bodamalai hills are situated in Southern Eastern Ghats comes under Rasipuram Taluk, Namakkal district. Bodamalai is at 1200 meters (3,937.0 ft) mountain in the Eastern Ghats of South India. It lies between 11°14'46" – 12°53'30" North latitude and between 77°32'52" – 78°53'05" East longitude and it has an elevation of 881 meters above sea level. Bodamalai is in an area with a humid subtropical climate, only Hindu Malayali tribes residing in this area.

### 2.2. Methods

Several field trips were carried out in Bodamalai hills from June 2012 to Jan. 2013, covering different seasons, in order to know the phenology of the plants an Intensive and extensive field survey was made in Bodamalai hills and villages in Namakkal district. The data were collected through repeated field visits and the careful interaction with the village peoples and by participating rural appraisal. The collected specimens were identified taxonomically with the help of available monographs, taxonomic revisions and floras [12, 14] and by using field keys.

The specimen was then poisoned in a saturated solution of mercuric chloride in alcohol. Further processes pressing, mounting and labeling were done following the instruction given by [15]. The voucher specimen were deposited in the Department herbarium, the Department of Botany, Periyar University, Tamil Nadu, for future reference. The data's were obtained from the informed constants of interviewed individuals. Interview of minimum 10 and

maximum of 20 traditional healers, and village elders who have been using the medicinal plant for curing the various health problems. The collected data were confirmed and compiled by repeated visits and general talk with the patients.

## 3. Results

### 3.1. Medicinally Important Plants

The present study is an aspiring to document the indigenous knowledge of the biodiversity of Bodamalai hills of Tamil Nadu. A total of 93 species belonging to 85 genera affiliated to 44 families have been documented. They include Mimosaceae-6 species, Fabaceae and Euphorbiaceae-5 species, each; Rutaceae and Zingiberaceae-4 species, each followed by Acanthaceae, Astraceae, Cucurbitaceae-3 species, each are adequately used in the preparation of ethno medicine followed by, Asclepiadaceae, Apocynaceae, Piperaceae and Rhamanaceae each with two species and rest of the families have only one species each. Analysis of habit forms indicates 32 species were Herbs; Tree species are 19; Shrub species are 28 and 14 species are climbers (Fig.-1).

The population is largely concentrated in five species: *Acacia nilotica* (L.) Willd., *Acacia leucophloea* (Roxb.) Willd., *Calotropis gigantea* (L.) R.Br, *Ficus bengalensis* L. and *Lantana camara* L. The plants are tabled with correct botanical name followed by family name, local name, part(s) used and their medicinal uses (Table-1).

### 3.2. Diseases Cured by Medicinal Plants

The villagers used various medicinal plants to remediate a variety of diseases and ailments like diarrhea, diabetes, asthma, fever, jaundice, rheumatism, wounds, cuts, stomach pain, cough, cold, poisonous bites, body heat, body pain, bowel complaint, bronchitis, dysentery, ear-ache, eczema, eye troubles, hair growth, intestinal worms, jaundice, leprosy, menstrual trouble, piles, pimples, ulcer, tooth-ache, urinary troubles, vomit, etc., the villagers used these medicinal plants in the form of juice, paste, powder, extract, decoction, cooked or raw forms.

### 3.3. Parts of Medicinal Plants Used

The villagers used diverse parts of the medicinal plants based on their ability to cure disease such parts includes leaf, roots, bark, seed, fruit, flower, stem, etc.

Table 1. Ethnomedicinal uses plants of the Bodamalai Hills

S. No	Botanical Name	Family	Vernacular Name	Habit	Part Used	Medicinal uses
1	<i>Abrus precatorius</i> L.	Fabaceae	Kundumani	S	Root	Root used for poisonous Bite.
2	<i>Abutilon indicum</i> (L.) Sw.	Malvaceae	Thuththi	S	Leaves	Juice of leaf is applied twice a day for dental problem.
3	<i>Acacia catechu</i> (L.F.) Willd.	Mimosaceae	Karungkaali	T	Leaves	The tender leaves are made into pulp and used in diarrhea and diabetes.
4	<i>Acacia leucophloea</i> (Lam) de will.	Mimosaceae	Velvelam	T	Leaves	Leaf juice is given to treat fever, stomach-ache, cure cough, inflammation, wounds, skin diseases, leukoderma, diarrhoea and

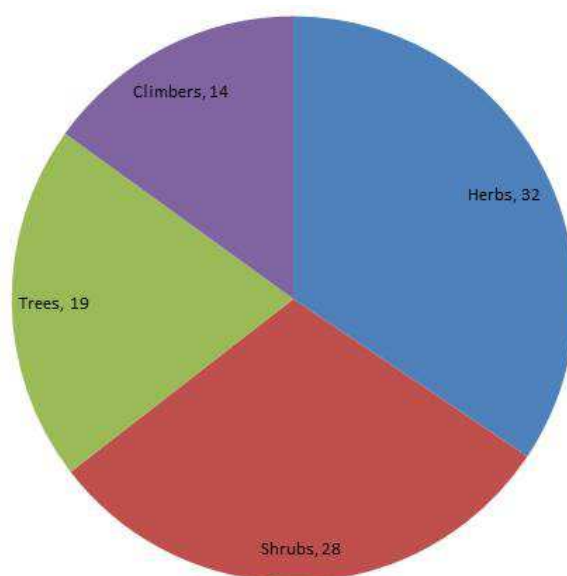
S. No	Botanical Name	Family	Vernacular Name	Habit	Part Used	Medicinal uses
5	<i>Acacia nilotica</i> (L.) Willd.	Mimosaceae	Karuvelam	T	Leaves	haemorrhage. Leaves used as a demulcent or for conditions such as gonorrhoea, leucorrhoea, diarrhoea, dysentery, or diabetes.
6	<i>Acalypha indica</i> L.	Eupehorbiaceae	Kuppaimeni	S	Leaves	Leaves ground with salt applied externally to cure scabies.
7	<i>Achyrrathes aspera</i> L.	Amaranthaceae	Naayuruvi	S	Leaves	Leaves past applied externally for dog bite and internally taken for pites.
8	<i>Acorus calamus</i> L.	Acoraceae	Vasambu	S	Rhizomes	The rhizome of alcoholic extract used as sedative, analgesic, blood pressure and reaperation.
9	<i>Adhatoda vasica</i> (L.) Nees	Acanthaceae	Aadu thinna pallai	S	Leaves	It is used for abortifacient, antiasthmatic, antispasmodic, antitussive, bronchodilator and expectorant.
10	<i>Aegle marmelos</i> (L.) Correa ex Roxb	Rutaceae	Vilvam	T	Leaves	Leaf juice used for diarrhea.
11	<i>Aerva lanata</i> Juss. Ex Schult.	Amaranthaceae	Cerupulai	H	Whole plants	It is used as diuretic, demulcent, to treat gonorrhoea and anthelmintic.
12	<i>Albizia lebbek</i> (L.) Benth.	Mimosaceae	Vahai	T	Bark	Bark used for astringent, to treat boils, cough, to treat the eye, flu, gingivitis, lung problems, and pectoral problems.
13	<i>Aloe vera</i> (L.) Burm. f.	Liliaceae	Katrashai	S	Whole plants	Used for stomach worm killing, jelly is used for hair Cleaner, lice killer, give polishes in sunlight, used as piles problem.
14	<i>Alpinia galanga</i> (L.) Willd.	Zingiberaceae	Arathai	S	Rhizomes	Rhizomes used as rheumatism and stomach disorders.
15	<i>Alternanthera sessilis</i> (L.) R. Br. ex. DC	Amaranthaceae	Ponnakanni	S	Whole plants	Cure as skin problem.
16	<i>Anacardium occidentale</i> L.	Acanthaceae	Nilavempu	S	Bark	Bark used in tanning.
17	<i>Annona squamosa</i> L.	Annonaceae	Ramanseetha	S	Root	Root paste for external application and decoction orally.
18	<i>Argemone mexicana</i> L.	Papaveraceae	Kudiyottippondu	S	Leaves	Leaf juice 50ml mixed with cow's milk used to malarial fever.
19	<i>Artocarpus heterophyllus</i> Lam.	Moraceae	Palamaram	T	Leaves	Seed powder is taken with water orally twice a day for cure jaundice, leprosy and alternative.
20	<i>Azadirachta indica</i> (L.) A. Juss	Meliaceae	Veempu	T	Bark and leaves	Latex is used to cure scorpion bite.
21	<i>Bambusa arundinacea</i> (Retz.) Willd.	Poaceae	Moongkil	T	Leaves	Leaves juice taken internally to cure ulcer.
22	<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Mookkirattai	S	Leaves	Decoction of the bark is taken as liver tonic.
23	<i>Borassus flabellifer</i> L.	Araceae	Pannai	T	Whole plant	Leaf paste is applied on affected part in skin disorders.
24	<i>Caesalpinia bonduc</i> (L.) Roxb.	Caesalpinaceae	Kaiherchohi	C	Seed	Leaf bud and young shoots—used in dysmenorrhoea, externally in ulcerations.
25	<i>Calotropis gigantea</i> (L.) R.Br.	Asclepidaceae	Erukku	S	Flower and latex	Fresh leaf paste is used externally for skin diseases.
26	<i>Canavalia ensiformis</i> (L.) DC.	Fabaceae	Kattutkappattan	S	Whole plants	The young plant is said to relieve biliousness, dysentery, and gonorrhoea.
27	<i>Cassia auriculata</i> (L.) Roxb.	Caesalpinaceae	Aavaram	T	Root	The seed are highly esteemed for the treatment of intermittent fevers, especially for malarial fever.
28	<i>Cassytha filiformis</i> L.	Cassythaceae	Erumaikkottan	C	Whole plants	The flowers powder mixed with black pepper and pinch of common salt is given orally in snake bite. Latex is applied externally for dog bite and scorpion bite.
29	<i>Cinnamomum zeylanicum</i>	Lauraceae	Elavangam	T	Bark	Used for the treatment of vomiting abdominal dropsy, kidney related lumbago, influenza diseases and swelling.

S. No	Botanical Name	Family	Vernacular Name	Habit	Part Used	Medicinal uses
	Blume.					acrid, bitter, emollient, refrigerant, alexipharmic, expectorant, vomiting, cardiac diseases, dysentery, fever, skin diseases, and general debility. The roots are bitter, refrigerant, ophthalmic, laxative, intellect promoting, alexterric, diuretic, anthelmintic, depurative and aphrodisiac.
30	<i>Clitoria ternatea</i> L.	Fabaceae	Sankupu	C	Root	Fruit have been used to treat leprosy, fever, asthma, bronchitis and jaundice.
31	<i>Coccinia grandis</i> (L.) Voigt.	Cucurbitaceae	Kovai	C	Fruit	It's used against the poison of viper
32	<i>Cocculus hirsutus</i> L. Diels	Menispermaceae	Kattukodi	C	Leaves and root	The root used as astringent, diuretic and anthelmintic.
33	<i>Cocos nucifera</i> L.	Palmaceae	Thennai	T	Root	Leaf juice cure for fever, inflammations and hypertension.
34	<i>Croton sparsiflorus</i> Morong.	Euphorbiaceae	Rail poundu	H	Leaves	Fruit used as antitussive, digestive, diuretic, emetic, expectorant, febrifuge, stomachic and vermifuge.
35	<i>Cucumis trigonus</i> Roxb.	Cucurbitaceae	Kattukumatti	C	Fruit	Storage old rhizomes are used as wound healing purpose with mixing of Neem plant, cures Herpes disease, used as Anti- allergic activity, as a Body coolant for women health.
36	<i>Curcuma longa</i> L.	Zingiberaceae	Manjal	H	Rhizomes	The leaf juice mixed with black pepper to cure cough asthma and chronic ulcers.
37	<i>Datura metel</i> L.	Solanaceae	Oomaththai	H	Leaves	The leaf extracts are anti-inflammatory.
38	<i>Delonix elata</i> (L.) Gamble	Cesalpiniaceae	Vadanaraayam	T	Leaves	Cure headache, toothache, dysentery and elephantiasis.
39	<i>Dichrosta chyscinerea</i> (L.) Wt. & Arm	Mimosaceae	Vidathaari	H	Bark	Cure toothache sore throats, wounds and skin rashes stings.
40	<i>Dodonea viscosa</i> Jacq.	Sapindaceae	Virali	S	Flower	Root is emetic, purgative, applied externally as antiseptic to clears and wounds in cattle.
41	<i>Eclipta alba</i> (L.) Hassk.	Asteraceae	Karisalanganni	H	Root	The seed are aromatic, acrid, sweet, cooling stimulant, diuretic, cardio tonic are useful in asthma and bronchitis.
42	<i>Elettaria cardamomum</i> (L.) Maton	Zingiberaceae	Elakkay	S	Seed	The whole plant is taken fresh and crushed well; juice is extracted and given in the dose of 5 – 10 ml daily for three days to cure intestinal worms. The paste of whole plant is given in the dose of 2 – 5 grams preferably with butter milk for bleeding piles. The decoction of the whole plant is effective for fever.
43	<i>Emilia sonchifolia</i> (L.) DC.	Astraceae	Myalcevi	H	Whole plant	Plant extraction used along with other for the treatment of diabetes type.
44	<i>Enicostemma littorale</i> Blume.	Gentianaceae	Vellarukku	H	Whole plants	It is used as antiseptic, anesthetic, anti-bacterial and warming properties. It cures burns, sores, ulcers, boils and wounds.
45	<i>Eucalyptus tereticornis</i> Sm.	Myrtaceae	Thailmaram	T	Leaves	Used for hypertension, edema, diarrhea, ulcers, enteritis and asthma.
46	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Ammanapacharisi	H	Whole plants	It is used as a liver and cardiac tonic, as an astringent, cures diarrhea, hiccup, sore throat and diseases of the gums.
47	<i>Feronia elephantum</i> Correa	Rutaceae	Vila	T	Fruits	It is used to cure diarrhoea, dysentery, piles, leucorrhoea, rheumatism, skin diseases, and diabetes wounds and eliminates parasitic worms.
48	<i>Ficus benghalensis</i> L.	Moraceae	Aalamaram	T	Fruits	It is used to cure diarrhoea, astringent dysentery, piles, leucorrhoea, rheumatism, skin diseases, diabetes, and wounds and eliminate worms.
49	<i>Ficus religiosa</i> L.	Moraceae	Arasamaram	T	Fruits	The fruits are refrigerant, alexipharmic, expectorant, vomiting, cardiac disease, dysuria, fever and skin diseases.
50	<i>Foeniculum vulgare</i> Mill.	Apiaceae	Sombu	S	Fruits	

S. No	Botanical Name	Family	Vernacular Name	Habit	Part Used	Medicinal uses
51	<i>Gloriosa superba</i> L.	Liliaceae	Senganthal	C	Rhizome	The juice of the tuber mixed with cow's milk is taken internally to cure aphrodisiac.
52	<i>Gynandropsis pentaphylla</i> (L.) DC	Cleomaceae	Nalavelai	H	Whole plants	Used as an anti-inflammatory.
53	<i>Heliotropium indicum</i> L.	Boraginaceae	Thetkodukku	S	Leaves	The root portion is making up a juice to mix with lemon and ice to gives Body coolant and purify the blood.
54	<i>Hemidesmus indicus</i> (L.) R.Br.	Apocynaceae	Nannari	C	Roots	The root portion is making up a juice to mix with lemon and ice to gives Body coolant and purify the blood.
55	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Semparuththai	H	Flowers	It is used in cure hair loss.
56	<i>Hybanthus enneaspermus</i> (L.) F. Muell.	Violaceae	Orithalthamarai	H	Root	The root is used as diuretic and urinary affections of children.
57	<i>Jatropha curcas</i> L.	Euphorbiaceae	Kattamanakku	S	Leaves	It cures skin diseases, cancer, piles, snakebite, and paralysis, drowsy. The leaves, seeds and oil are used to treat ulcer, tumour, scabies and wound
58	<i>Jatropha gossypifolia</i> L.	Euphorbiaceae	Kattamanakku	S	Fruit	It cures cancer, paralysis piles, snakebite, and skin diseases.
59	<i>Justicia simplex</i> D.Don	Acanthaceae	Neelamulli	H	Leaves	Leaf juice used against diabetes.
60	<i>Lantana camara</i> L.	Verbenaceae	Unnichedi	S	Leaves	Leaf past is applied topically to treat wound.
61	<i>Ichnocarpus frutescens</i> (L.) R.Br.	Apocynaceae	Oodhalkodi	S	Root	The root are used refrigerate, diuretic, depurative, demulcent. They are useful in vitiated conditions of pita, fever, skin disease and leprosy.
62	<i>Marsilea minuta</i> L.	Marsileaceae	Water clover	H	Leaves	Used for sedative and epilepsy.
63	<i>Martynia annua</i> L.	Martyniaceae	Tuelkotukki	H	Leaves	Leaves used to remove insects from fowl.
64	<i>Merremia aegyptia</i> (L.) Cufo.	Convolvulaceae	Eli kathuilai	C	Whole plant	Whole plant is taken internally to treat stomach Problems.
65	<i>Mimosa pudica</i> L.	Mimosaceae	Thottaalsunugki	H	Whole plant	Whole plants used to Prevent Excess menstrual bleeding.
66	<i>Mimusops elengi</i> L.	Sapotaceae	Magizamaram	T	Whole plant	Pulp of ripe fruit used to gastric- gent, chronic dysentery. Flowers, fruit and bark—astringent. Bark—given for promoting fertility in women. Seeds—purgative.
67	<i>Murraya koenigii</i> (L.) Spreng.	Rutaceae	Kariveppilai	S	Leaves	Leaves are used as eye problems, to cure irritate of eyes, used for ingredients for culinary preparation.
68	<i>Ocimum sanctum</i> L.	Lamiaceae	Karuttulasi	H	Leaves	The fresh leaves boiled the decoction to relief the cough, dizziness, of boiled steams inhaled to relieve the headache.
69	<i>Passiflora foetida</i> L.	Passifloraceae	Siruppunakkai	C	Fruit	Fruit powder and block pepper taken with milk to get relief asthma.
70	<i>Pergularia daemia</i> (Forsk.) Choiv.	Asclepiadaceae	Veliparuthi	C	Whole plant	It is used as bitter, expectorant, diuretic and laxative.
71	<i>Phoenix pusilla</i> Roxb.	Palmaceae	Icham	S	Leaves	Used to burning sensation, fever, cardiac debility, peptic ulcer and general weakness.
72	<i>Physalis minima</i> L.	Solanaceae	Tottakkai	H	Fruit	It is used as a bitter, appetizing, tonic, diuretic and laxative. The fruit is considered to be a tonic, diuretic and purgative.
73	<i>Phyllanthus maderaspatensis</i> L.	Euphorbiaceae	Arecipoondur	H	Seed	Seeds used in bronchitis ear-ache.
74	<i>Phyllanthus niruri</i> L.	Euphorbiaceae	Keelanelli	S	Fruit	The fruit is used for tubercular cyclo's scabies and ringworm.
75	<i>Phyllanthus reticulatus</i> Poir S.	Euphorbiaceae	Karunelli	H	Leaf and root	It is used as an astringent, cooling, diuretic. The leaves and root are used as medicine for the fractures and traumatic injury.
76	<i>Piper betle</i> L.	Piperaceae	Vetthalai	C	Leaves	Leaves are used to chewing with beetle nut.
77	<i>Piper nigrum</i> L.	Piperaceae	Milaku	C	Seed	It is used in stomachache, increasing appetite and is an aphrodisiac.
78	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Adigerradi	H	Root and seed	The root and seeds are used medicinally as stimulant, for digestion as an antiseptic, and anti-parasitic.

S. No	Botanical Name	Family	Vernacular Name	Habit	Part Used	Medicinal uses
79	<i>Polycarpaea corymbosa</i> L.	Caryophyllaceae	Nilacetachi	H	Whole plant	Used for inflammation and swelling.
80	<i>Psidium guajava</i> L.	Myrtaceae	Koiah	S	Fruit	Used to treat diarrhea, sore throats, vomiting stomach upset and vertigo. Dried seed oil used as kills the stomach worms, and body cool of both human and cattle.
81	<i>Ricinus communis</i> L.	Euphorbiaceae	Aamanakku	H	Seeds	It is used as anticancer and hypoglycemic.
82	<i>Ruellia prostrata</i> Poir.	Acanthaceae	Vdikkai	H	Whole plant	The powder of the root bark is emetic expectorant, diaphoretic and purgative.
83	<i>Schefflera racemosa</i> L.	Asclepidaceae	Paeimeratti	H	Root	A decoction of the roots is given in dyspepsia, diarrhea, rheumatism, asthma and urinary disorder.
84	<i>Tephrosia purpurea</i> (L.) Pres.	Fabaceae	Kozhinji	H	Root	The root powder is salutary for brushing the teeth, where it is said to quickly relieve dental pains and stop bleeding.
85	<i>Tephrosia villosa</i> (L.) Pres.	Fabaceae	Kaattukolingi	H	Root	Leaf paste with turmeric powder and pinch of salt is applied externally on boils twice a day for blood pressure, leaf paste mixed in one cup of fresh cow's milk is taken twice a day for itching.
86	<i>Tinospora cordifolia</i> (Willd.) Miers.	Menispermaceae	Cheenthalkodi	C	Leaves	The fruit used for cough remedy.
87	<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Plilaharani	S	Fruit	The fruits are cooling, diuretic and used in diseases of primogenital system and sexual weakness for which the drug is reputed.
88	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Nerunjii	S	Fruit	The fruits used as a cure for asthma.
89	<i>Trichosanthes bracteata</i> (L.) Voigt.	Cucurbitaceae	Aanaikuratai	C	Fruits	The fruits are used as refrigerant, alexipharmic, expectorant, vomiting, cardiac disease, dysuria, fever and skin diseases.
90	<i>Wedelia chinensis</i> (Osbeck) Merrill	Asteraceae	Manjalkarisalai	H	Fruit	Ginger is a safe remedy for nausea relief during pregnancy.
91	<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Injii	H	Rhizome	Roots as decoction is given in fever and as powder applied to old wounds. Fruits are mucilaginous, pectoral, blood purifier and improve digestion.
92	<i>Zizyphus jujuba</i> Mill.	Rhamnaceae	Elanthai	T	Root	The roots are used as astringent, anthelmintic, digestive and antiseptic properties. They are useful in hyperacidity.
93	<i>Zizyphus oenoplia</i> (L.) Mill	Rhamnaceae	Soorai	S	Root	

H- Herb; S- Shrub; - Tree; C- Climber

**Figure 1.** Life from analysis from the study

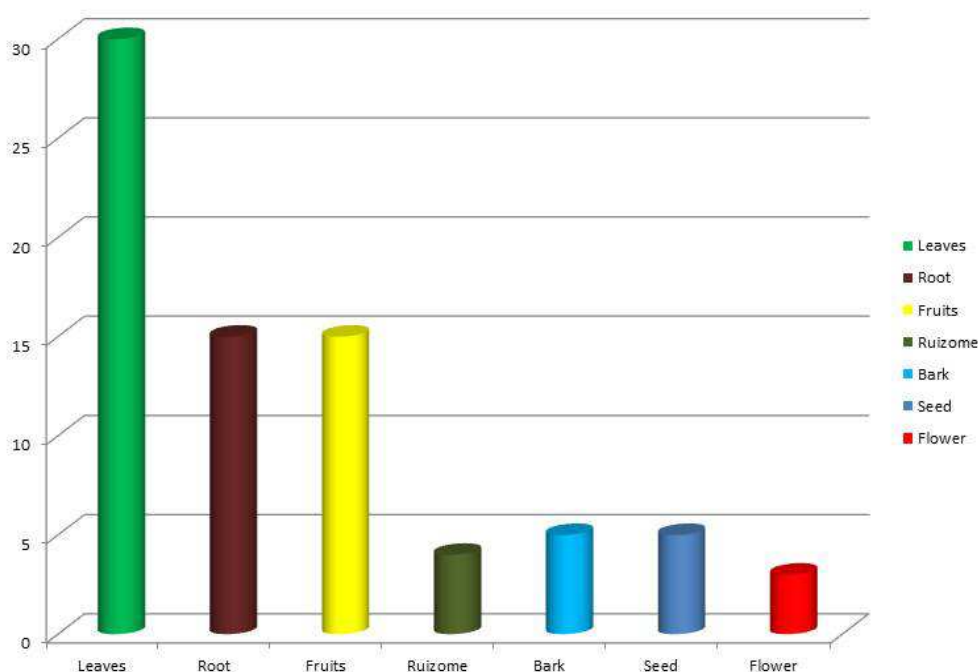


Figure 2. Proportion of plant parts used for medicinal purposes

## 4. Discussion

During the last few decades there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of India and there are many reports on the use of plants in traditional healing by either tribal people or indigenous communities of Namakkal district [8, 17, 20, 21 and 29]. But this is the first attempt medicinal plants record to Boothamalai Hills, Namakkal district, Tamil Nadu, India. All ethno medicinal plants documented in the presence study have continuously been used and the results also revealed that some of them are less known and some of them supplements to the available earlier data. Based on their experience and common sense, they have the capability to search for a number of uses of plants. Simultaneously they have also the talent to exploit the plants of even a new area where they have settled. The present investigation revealed that, the Hindu *Malaiyali* tribes of the study area possess rich knowledge of the medicinal plants and their utilization. There is a need to raise awareness and cultivation of above medicinal plants to the local people of that area to meet their own needs as well for providing them income. There is an urgent need for the scientific awareness about the importance of biodiversity and medicinal plants for the sustainable utilization of natural resources.

## Acknowledgements

We express our sincere thanks Professor and Head, Department of Botany, Periyar University, Salem, Tamil Nadu, for providing necessary facilities to carry out this study. Authors are also thanks to the tribal people, those who are shared the valuable traditional knowledge to us.

## References

- [1] Abraham, Z. (1981). Glimpses of Indian Ethno botany, Oxford & Publishing Co., New Delhi, 308.
- [2] Anitha, M. (2006). Studies on traditional medicinal plants of Palani hills, south India.
- [3] Bashar, A.B.M. A., Ahsan, S., Mou, S.M., Begum, R. and Jahan, R. (2011). *American-Eurasian Journal of Sustainable Agriculture*, 5(1), 115.
- [4] Binu Thomas, Ramachandran, V.S. and Rajendran, A. (2011). Ethno medicinal Chasmophytes of southern Western Ghats in Coimbatore District, Tamil Nadu, India. *Hamd.Med.*, 54, 3.
- [5] Chopra, R. N., Nair, S.I. and Chopra, I.C. (1986). Glossary of Indian medicinal plants (Including the supplement), council of scientific and industrial Research New Delhi.
- [6] Cox, PA. and Balick, M. (1994). The ethno botanical approach to drug discovery. *Sci. Amer.* 270: 7 - 82.
- [7] Das, K., Tiwari, R. K. S. and Shrivastava, D. K. (2010). Techniques for evaluation of medicinal plant products as antimicrobial agent: Current methods and future trends. *J. Med. Plant. Res.* 4(2): 104-111.
- [8] Dhayapriya, R. G. and Senthil Kumar, S. (2014). Studies On Ethnomedicinal Plants Of Malayali Tribes In Bodamalai Hills Of Southern Eastern Ghats, Tamil Nadu, India. *Inter. J. Pharma. Res. & Devel.* 6 (03): 115 – 118.
- [9] Diallo, D., Hveem, B., Mahamod, M.A. and Bodge, G (1999). An ethnobotanical survey of herbal drugs of Gourma district, Mali. *Pharmaceut. Biol.* 37: 80 - 91.
- [10] Dubey, N.K. (2004). Global promotion of herbal medicine: India opportunity. *Curr.Sci.*, 86(1) 37-41.

- [11] Francisca Govindasamy Bosco and Rajendran Arumugam, (2012). Ethnobotany of *Irular* tribes in Redhills, Tamil Nadu, India. *Asian Pacific J. Trop. Dis.* 874-877.
- [12] Gamble, J.S. and Fischer, C.E.C. (1957). *Flora of the Presidency of Madras* Vol. I-III Adlord and Sons Ltd., London.
- [13] Ganesan, S. (2004). Traditional oral care medicinal plants survey of Tamil Nadu. *Nat. Prod. Radi.* 7(2): 166-172.
- [14] Henry, A.N., Chitra, V. and Balakrishnan, N.P. (1989). *Flora of Tamil Nadu*, India (Series I. Vol. 3) Bot. Surv. India, Southern Circle, Coimbatore.
- [15] Jain, S.K. (1991-1936). Dictionary of Ialar folk medicine and Ethnobiology. Deep publishers, New Delhi, India.
- [16] Khoshoo, T.N. (1994). India's biodiversity: Task ahead. *Curr. Sci.* 67(25): 577-582.
- [17] Kishor Kumar, V. and Satheesh Kumar, P. (2011). Ethnomedicinal Plants from Vattamalai Hills of Namakkal District, Tamil Nadu, India. *Inter. J. Phar. Sci. Revi. Res.* 11 (2): 100-106.
- [18] Kumar, N.C. (1993). An introduction to medical botany and pharmacognosy. Embay publication. New Delhi.
- [19] Kumari Subitha, T., Ayyanar, M., Udayakumar, M. and Sekar, T. (2011). Ethnomedicinal plants used by *Kani* tribals in Pechiparai Forests of Southern Western Ghats, Tamil Nadu, India. *Inter. Res. J. Plan. Sci.* 2(12): 349-354.
- [20] Prabu, M. and Kumuthakalavalli, (2012). Folk remedies of Medicinal plants for snake bites, scorpion stings and dog bites in Eastern Ghats of Kolli hills, Tamil Nadu, India. *IJRAP*, 3(5): 696-700.
- [21] Ramanathan, R., Bhuvaneswari, R., Indhu, M., Subramanian, G. and Dhandapani, R., (2014). Survey of ethnobotanical observation on wild tuberous medicinal plants of Kolli hills, Namakkal district, Tamil Nadu. *J. Med. Plan. Stud.*, 2(4): 50-58.
- [22] Sankaranarayanan, S., Bama, P. and Ramachandran, J. (2010). Ethnobotanical study of medicinal plants used by traditional users in Villupuram district of Tamil Nadu, India. *J. Med. Pla. Res.* 4(12): 1089-1101.
- [23] Shanley, P. and Luz, L. (2003). The impact of forest degradation on medicinal plant use and implications for health care in eastern Amazonia. *Bioscience*, 53: 573-584.
- [24] Sharma, H. and Kumar, A. (2011). Ethnobotanical studies on medicinal plants of Rajasthan (India): A review. *J. Med. Plant Res.* 5(7): 1107-1112.
- [25] Siddiqui, H.H. (1993). Safety of herbal drugs - an overview. *Drugs News and Views* 1(2): 7-10.
- [26] Sindhu, S., Uma, G. and Kumudha, P. (2012). Survey of medicinal plants in Chennimallai Hills, Erode Districts, Tamilnadu. *Asian J. Pla. Sci. and Res.*, 2 (6): 712-717.
- [27] Sukumaran, S. and Raj, A. D. S. (2010). Medicinal plants of sacred groves in kanyakumari district, southern Western Ghats. *Indi. J. Trad. Knowle.* 9(2): 294-299.
- [28] UNESCO, (1991-1992). Culture and health Orientation texts World Decade for culture Development. Document Paris France. 129.
- [29] Udayan, P. S., Sateesh George, Thushar, K. V. and Indira Balachandran, (2005). Ethnomedicine of the chellipale community of Namakkal district, Tamil Nadu. *Ind. J. Tra. Knowl.*, 4 (4): 437-442.
- [30] Vethanarayanan, P., Unnikannan, P., Baskaran, L. and Sundaramoorthy, P. (2011). Survey on traditional medicinal plants used by the village peoples of Cuddalore district, Tamil Nadu, India. *Asian J. Bioche. And Pharma. Res.* 3 (1): 351-36.
- [31] World Health Organization (WHO) (1993). Survey in Medicinal plant (Eds. Haq. I.). Karachi: Hamdard Foundation Press.