



Document of the potential medicinal plants in Meghamalai, the western ghats of southern India

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Abstract

Objective: Find the knowledgeable Paliyar traditional healers in Meghamalai, of Theni District, Tamil Nadu, India, and investigate their ethnomedical knowledge.

Methods: Ten informants were questioned between October 2021 and September 2022 in a number of tribal settlements in the study area on how they used the native flora for therapeutic purposes. A modified questionnaire method was utilised to record information about the plants, including their local names, parts used and duration of medication.

Results: A total of 45 plant species from 30 families and 45 genera were identified as having ethnomedicinal applications. Asteraceae, Euphorbiaceae, Acanthaceae and Apocynaceae were the four most significant families identified in our survey, each contributing three species. The leaves were most frequently employed to treat illnesses among the various plant parts that were utilised to make medicine.

Conclusion: The Paliyar' tribal interest in ethnomedicine is reflected in their use of plants, and further study of these species could result in the identification of brand-new bioactive compounds.

Keywords: western ghats, meghamalai, Paliyar tribes, medicinal plants

Introduction

The Indian subcontinent is a great collection of medicinal plants that are employed in traditional medical practice, which also serve as a valuable source of knowledge for the medical industry (Bagchi *et al.*, 2011) [8]. In terms of medicinal resources, the Western Ghats are quite wealthy. A treasure trove of around 700 medicinal plants can be found in the forests and hills of this area, some of which are employed in conventional and traditional medicine (Babu *et al.*, 2006) [7]. Many are used for their active principles and their marketability in commercial endeavours (Kala, 2005) [18]. For instance, coumarins, alkaloids, steroids, and essential oils are all present throughout the entire plant of *Aegle marmelos* (Bael) (Singh *et al.*, 2012). Species of different life-forms in the complex forests of Western Ghats particularly in the flora rich landscapes like meghamalai are used by various tribal communities for caring ailments. Additionally, these species are defined by their seasonal distribution from the canopy to the understorey (Suja, 2008) [32]. Due to poverty and limited access to modern medicine, the World Health Organization (WHO) believes that 65–80% of the world's population lives in developing countries, a relies primarily on plants for healthcare (Calixto, 2005) [9]. Millions of individuals in developing nations continue to use medicinal plants for their basic medical demands, and this practise continues to hold a significant status. Use of ethnobotanical data in research on medicinal plants has received a lot of attention recently in several areas of the scientific community (Heinrich, 2000) [11]. The rising cost of prescribed drugs for maintaining personal health and well-being as well as the bioprospecting of new plant-derived medications have sparked interest in medicinal plants (Hoareau and DaSilva, 1999) [12].

There are an estimated 7,500 types of medicinal plants employed by various ethnic groupings in India, and it is well known that India has the second-largest tribal population in the world after Africa (Jagtap *et al.*, 2006) [14]. India is one of

the world's greatest troves of ethnobotanical treasure due to its extremely diverse ethnic communities and abundant biological resources. Indian tribal cultures keep practicing herbal therapy and collect locally available materials wild and domesticated plant species to treat a range of illnesses and diseases even today. The ethnomedical claims made by the various Tamil Nadu tribal populations have been documented in about one hundred published studies and several unpublished reports. Meghamalai is the setting of a scene from the Sanga epic Silapathikaram, which was written before the BC era. However, the available literature on ethnomedicinal plants in meghamalai is limited. To address this lacuna, the present study has been made to documents the details of medicinal plants used by the paliyar tribals of megamalai, the western ghats.

Materials and methodologies

1. Field of study

The Megamalai hill is located between latitude 9°31'N and 9°38'—1'N and 77°10'E and 77°30'E, with the highest ultimate of 2000m above m.s.l. The height is up to 2000 metres (msl.). Other names for the mountain range are Pachakumatchi Hills and High Wavy Mountains. It is a Western Ghats spur in the Agastyamalai range. The Periyar Tiger Reserve in Kerala's Idukki district and the Grizzled Squirrel Sanctuary in Tamil Nadu are both near to the Megamalai Wildlife Sanctuary (WLS), which is positioned on the border between Kerala and Tamil Nadu. Some significant perennial rivers, including Vaigai, Vaipar and Suruliari, this area as their primary catchment basin. A number of tea, coffee, and cardamom farms, as well as areas of dense forest cover, frequently provide protection for the majority of the sanctuary area. Scrub forests, dry deciduous forest, moist deciduous forest, wet evergreen forest, dry grasslands, savannas, sholas, and riparian forest have all been represented in the study area.

2. Interviews

The methods employed for the surveys and interviews were based on Heinrich *et. al.*, (1996). and Alexiades (2009). Each informant was contacted three times all throughout course of the study from October 2021 to September 2022, to gather information about the study areas indigenous

communities. The current state of tribal groups and the proper medical use of native plants. A datasheet (Figure 1) (A. Venkatachalapathi *et.al.*,2015.)^[34] has been kept for this purpose to record all the information about the species including local name, pharmacological actions, parts utilised for treatment, and mode of administration.

KONGUNADU ARTS AND SCIENCE COLLEGE COIMBATORE-641 029	
DEPARTMENT OF BOTANY	
FIELD DATA SHEET	
Field No. 1	
1. Collection No	: 35
2. Date	: 02/09/2022
3. Altitude	: 2000 m (MSL)
4. Latitude	: 9°31' E 9°-1' N and 77°10' E 77°30' E
5. Locality	: High wavy mountains / Pachakumatchi hills
6. District	: Theni District
7. State	: Tamil Nadu
8. Type of Vegetation	: Shrub forest, Dry deciduous forest, Shrub
9. Soil	: Black soil
10. Botanical Name	: <i>Vinetoicum Subramanii</i>
11. Family	: Apocynaceae
12. Occurrence	: Common in that place (endemic)
13. Vernacular Name	: Paal Kooli
14. Language	: (Tamil)
15. Habit	: Climbing under shrub
16. Phomological status	: Fruiting occur (Follicle) Type
17. Root	: -
18. Stem	: Slender climbing stem
19. leaves	: Alternate
20. Bark	: -
21. Inflorescence	: -
22. Flower Colour	: -
23. Fruit	: Fruit is (Follicle)
24. Uses	: It is used for Antitode of Blood Suckles, leaf extract used to treat Diabetes and rheumatism
25. Collector(s)	: S. Vimal Priya
26. Tribal/Local healers	: Ramar

Fig 1: Field sheet

3. Data gathering

3.1 Method of random sampling

One of the most simple methods of gathering data about the entire population is random sampling. Here, the vegetation of several flowering plants was randomly examined (West, 2016), and their ethnobotanical benefits were discovered by gathering traditional knowledge and by studying the literature pertinent to this survey. Every member of the subset has an equal chance of being chosen as part of the selecting process while using random sampling.

3.2 Species recognition

The field guides were used to recognise the plant species: The Flora of the Tamilnadu Carnatic Vol. I-III Ser. 1 (Mathew 1993). Forest Plants of the Nilgris Eastern and Northern Nilgiri Biosphere Reserve (Keystone Foundation, 2008; Keystone Foundation, 2010). The informants were shown pictures from the field guide, and collected information. The remaining plants are identified with the help of Dr. V. Aravindhan. Taxonomist and Assistant Professor in Department of Botany, Kongunadu Arts and Science College, Coimbatore. The informants have been shown pictures from the field guide, and they took notes regarding them.

Results and discussion

1. Climate of the Meghamalai Hills

For a period of 12 months, from October 2021 to September 2022, climatic data was collected from Andipatti Taluk

Office of The range of the highest temperature was existing 26.5°C and 35°C and the minimum temperature has range from 21°C to 28°C. The research area receives 883mm of precipitation annually. The relative humidity has ranged from 65% to 89%.

2. The state of the tribal community

Diverse tribal communities have inhabited the study area since time immemorial, but in more recent times, because to poverty, a lack of infrastructure like markets, hospitals, and schools, and lack of employment opportunities. They moved to the villages of Chinnamanuur, which is close to Meghamali. However, Tea and cardomum estates serve as their sole sources of income in this area.

3. Indigenous ethnomedical knowledge documentation

The current study found that the majority of traditional healers routinely employed 45 kinds of plants, spread among 45 genera and 30 families, to treat a variety of diseases. The botanical name of the plant, family, local name (in Tamil), life form, portions used, diseases treated, method of preparation, mode of administration, and its medicinal significance (S. Ignacimuthu *et.al.*,2008.)^[13] are given in a Table 1. Sixteen ailments (A. Venkatachalapathi *et.al.*,2015.)^[34] are used to classify specific illnesses, Table 2, Figure 2.

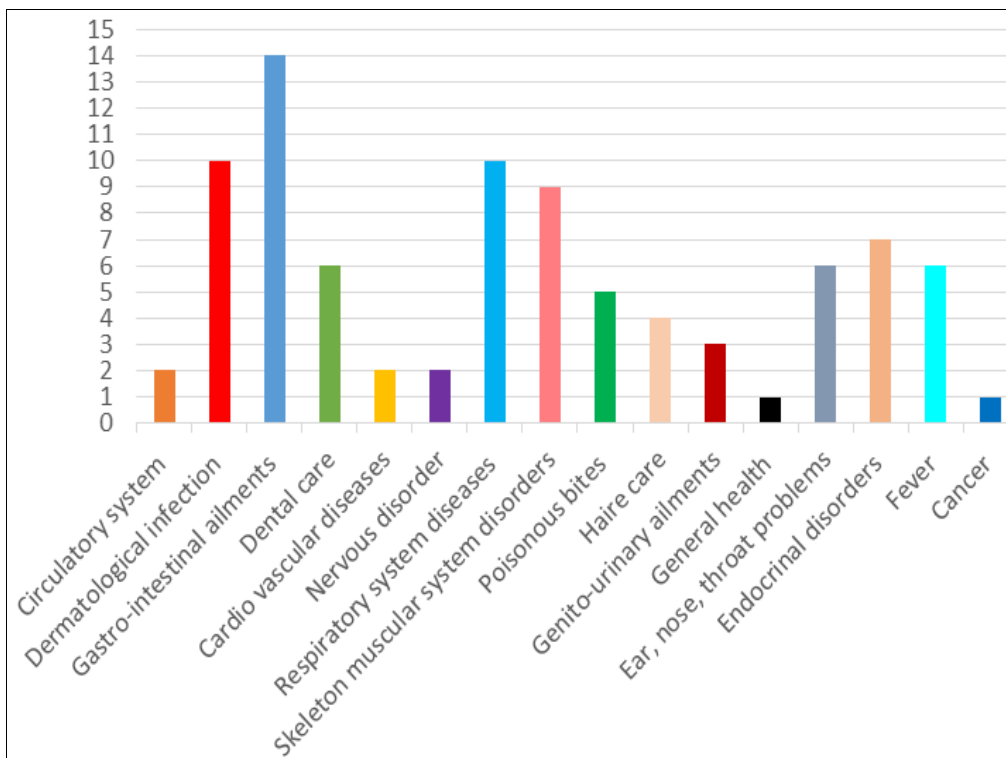


Fig2: Plants used for treating various diseases

4. Life forms and parts used

In the current study, it was found that the locals commonly use 2 types of grass, 24 types of herbs, 5 types of climbers, 9 types of shrubs, and 5 types of trees (Figure 3). Asteraceae, Euphorbiaceae, Acanthaceae and Apocynaceae are the prominent which contributed 3 species (Figure 4). Herbs are the predominant living form in the research area, according to observations from past studies on ethnobotany

(Ayyanar and Ignacimuthu,2005; Xavier *et al*, 2014; Kalaiselvan and Gopalan,2014 and Kannadhasan *et.al* 2016) [3, 37, 20].

In terms of the plant components used for medicinal preparation, leaves are the most preferred part (43.14%), followed by the entire plant (23.53%), fruits with (7.8%), roots (5.88%), and the remaining flower, seeds, tuber, bark, and stem (3.92%). (Figure 5)

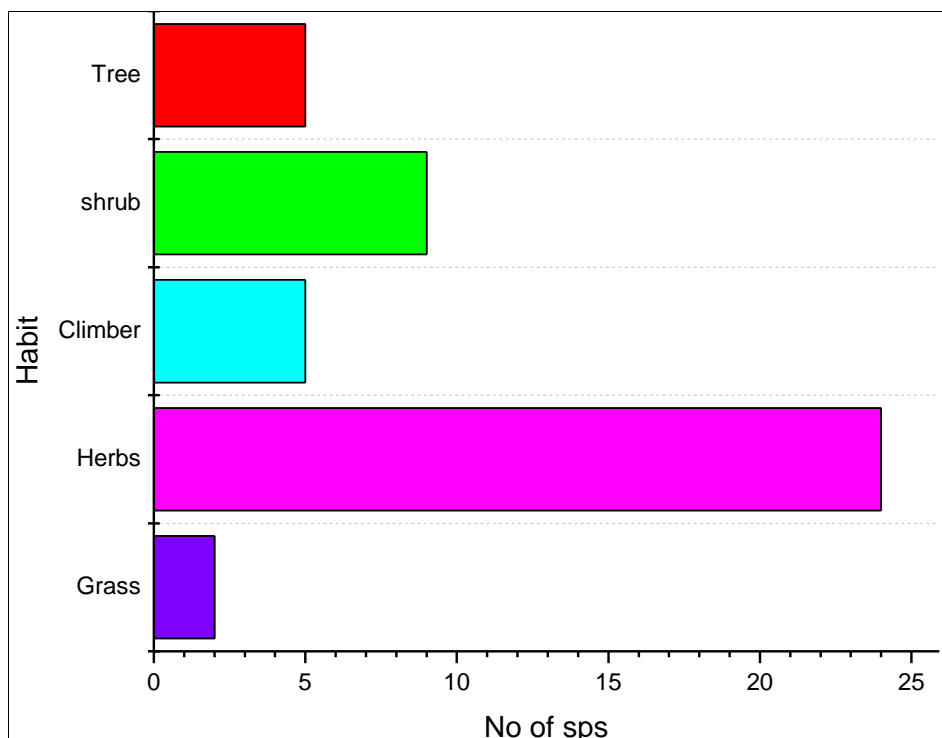


Fig 3: Contribution of various life forms in ethnomedicinal plants noted in the study area of Meghamalai.

Table 1: List of commonly used Medicinal plants by local healers of Meghamalai, Theni district, Tamil Nadu.

S. No	Botanical name	Family	Vernacular name in Tamil	Habit	Route of application	Mode of preparation	Part used	Medicinal uses	Reference
1.	<i>Cynodon dactylon</i>	Poaceae	Arukampul	Grass	Oral	Paste	Whole plants	Fresh plant parts are ground with hot water and make into a paste and taken orally in empty stomach to ensure the normal blood circulation.	S.Arisharan and P.Revathi. 2021
2.	<i>Brachiaria semiverticillata</i>	Poaceae	Erumai pull	Grass	Oral	Juice	Stem	Fresh stem is crushed. The juice thus obtained is diluted by mixing water in equal amount and the whole mixture thus obtained is applied as eye drop to cure watering of eyes of cattle by the Lodhas.	Anshaman <i>et.al.</i> ,2013.
3.	<i>Glinsoga parviflora</i>	Asteraceae	Mukkuthi	Herb	Oral and External	Juice	Leaf	The juice of the plant is applied to treat wounds and cuts. The juice of the plants leaves mixed with the lemon commonly used against dysentery and bloody stool.	P. J. Kannan <i>et.al.</i> ,2017.
4.	<i>Leucas martinicensis</i>	Lamiaceae	Karimthumba	Herb	Oral	Juice	Leaf	Leaf juice is used in traditional medicine to treat convulsions and epilepsy	C.J.Ugawah, <i>et.al.</i> ,2015.
5.	<i>Emilia sonchifolia</i>	Asteraceae	Pothu poo	Herb	External	Paste	Whole plant	plant paste with salt is applied on throat to get rid of tonsillitis	M.Saradha <i>et.al.</i> , 2017.
6.	<i>Oxalis corniculata</i>	Oxalidaceae	Puli keerai	Herb	Oral	Paste	Whole plant	The infusion of the plant is said to be a remedy for hook worm.	M.Saradha <i>et.al.</i> , 2017.
7.	<i>Commeliana benghalensis</i>	Commelinaceae	Amala chedi	Herb	Oral	Juice	Leaf	The leaf juice with Piper nigrum are orally intaken to reduce fever.	S.Soja <i>et.al.</i> ,2021.
8.	<i>Cardiospermum halicacabum</i>	Sapindaceae	Karuttakunni	Herb	Oral	Raw	Fruits	Including fruits in the diet regularly will control cholesterol, heart diseases and diabetes. A drink is made using fruits, curry leaves and curd used for digestion.	S.Soja <i>et.al.</i> ,2021.
9.	<i>Ageratum conyzoides</i>	Asteraceae	Kumminipacha	Herb	Oral and External	Extract & juice	Whole plant	Boil water using Aerva lanata and taking bath using that water will reduce body pain. Juice of leaves mixed with milk taken daily will prevent kidney stones. Leaves are made into paste and mixed with curd, taken daily prevent diabetes.	S.Soja <i>et.al.</i> ,2021.
10.	<i>Cassia auriculata</i>	Cesalpiniaceae	Aavarampoo	Herb	Oral	Paste	Flowers	Fresh flower petals are made into a paste and taken orally with honey once a day before going to bed for month to treat kidney problems.	S.Arisharan and P.Revathi. 2021
11.	<i>Ipomoea obscura</i>	Convulaceae	Siru oonun	Herb	External	Powder	Leaf	To cures wounds, Root bark is used as purgative, whole plant is used for snake bite	K.Jeyaprakash <i>et.al.</i> , 2011., S.Soja <i>et.al.</i> ,2021.
12.	<i>Tribulus terrestris</i>	Zygophyllaceae	Nerunchi	Herb	Oral	Decoction	Whole plant and Fruit	Fever,	M.Ayyanar <i>et.al.</i> ,2014.
13.	<i>Oxalis latifolia</i>	Oxalidaceae	Puliyen keerai	Herb	Oral	Juice	Leaf	the leaf juice used to treat urinary infection	M.Saradha <i>et.al.</i> , 2017.
14.	<i>Croton bonplandianus</i>	Euphorbiaceae	Rayil poondu	Herb	Oral	Paste	Leaf	Controlling high blood pressure, and for the treatment of skin diseases and cuts and wounds.	• M.V.Jeeshna, <i>et.al.</i> , 2011.

15.	<i>Plactranthus amoboinicus</i>	Lamiaceae	Karpooravalli	Herb	Oral	Decoction	Leaf	It has has been used in herbal medicines for the treatment of various disorders such as asthma, □u, eczema, and cardiovascular disorders has been used in herbal medicines for the treatment of various disorders such as asthma, □u, eczema, and cardiovascular disorders has been used in herbal medicines for the treatment of various disorders such as asthma, □u, eczema, and cardiovascular disorders has been used in herbal medicines for the treatment of various disorders such as asthma, □u, eczema, and cardiovascular disorders it has been used in herbal medicines for the treatment of various disorders such as asthma, flu, eczema, and cardiovascular disorder.	DOI:10.5455/ajpbp.20190928091007 M.Chellappandian <i>et.al.</i> ,2014.
16.	<i>Euphorbia hirta</i>	Euphorbiaceae,	Palpottuthalai.	Herb	Oral	Extract	Whole plant	Euphorbiaceae, Palpottuthalai. Four grams of fresh leaves are ground with cow's milk and taken orally once a day early in the morning to treat lactation in women	K.Jeyaprakash <i>et.al.</i> , 2011.
17.	<i>Evolvulus alsinoides</i>	Convolvulaceae,	Vishnukranthai.	Herb	Oral	Decoction	Leaf	Decoction of fresh leaves is taken orally twice a day to treat fever until cure.	K.Jeyaprakash <i>et.al.</i> , 2011.
18.	<i>Centella asiatica</i>	Apiaceae	Vallarai	Herb	Oral and External	Paste	Leaf	Paste applied externally for wounds. The leaf paste is mixed with goat milk to increase memory power. Leaf powder is mixed with Solanum nigrum to control mouth ulcer. Leaf powder with empty stomach is taken to control white discharge in women.	S.Karuppasamy.2007., M.Saradha <i>et.al.</i> ,2017.
19.	<i>Asystasia gangetica</i>	Acanthaceae	Chinese violet	Herb	Oral	Decoction	Leaf	Decoction of leaf is used for asthma	S.Sathiskumar <i>et.al.</i> ,2022.
20.	<i>Catharanthus roseus</i>	Apocynaceae	Nithya kalyani	Herb	Oral	Decoction and Paste	Whole plant	Decoction of the plant is used daily by pregnant women for normal delivery. Whole plant is made into paste and it is used by traditional people as an alternative for shampoo which helps in hair growth. A paste is made using leaf and coconut milk and applying it on hair once in a week helps in hair growth.	M.Saradha <i>et.al.</i> , 2017.
21..	<i>Blepharis maderaspetensis</i>	Acanthaceae	Naalilai naagam, Nethirappoondu	Herb	External	Raw	Whole plant	herb used traditionally for treatment of snakebites, wounds, edema and gout.	A.Sowemimo. <i>et.al.</i> ,2013.
22.	<i>Mimosa pudica</i>	Mimosaceae	Thottal sinungi	Herb	External	Paste	Leaf	External Psoriasis	K.Jayaprakash <i>et.al.</i> ,2011.
23.	<i>Achyranthes aspera</i>	Amaranthaceae	Naayuruvi	Herb	Oral	Decoction	Root and leaf	Decoction of root taken orally for stomach	K.Jayaprakash

								upped. Leaves are cooked as greens and used to reduce fever. Fresh roots are used as toothbrush. Seeds are used as nutritive food	<i>et.al.</i> ,2011.
24.	<i>Elettaria cardomomum</i>	Zigiberaceae	Elakkai	Herb	Oral	Raw	Seed	The seeds are taken orally daily morning to cure teeth decay, bad breath.	S.Arisharan and P.Revathi. 2021
25.	<i>Oldelandia umbellate</i>	Rubiaceae	Chaaya ver	Herb	Oral	Decoction	Root	This plant is well known in Siddha Medicine for its styptic property. It is also a drug that can be administered for bronchial asthma, as a decoction of the entire plant, a decoction made from its root and liquorice in the ratio-10:4, or the powdered root is given either with water or honey.	https://en.wikipedia.org/wiki/Oldenlandia_umbellata#:~:text=Oldenlandia%20umbellata%20(called%20chay%20root,growing%20plant%20native%20to%20India.
26.	<i>Withania somnifera</i>	Solanaceae	Amkura	Herb	Oral	Powder	Tuber	Shade dried root is made into powder and taken orally along with milk once a day for a week to strengthen the body. Woodford	K.Jeyaprakash <i>et.al.</i> ,2011.
27.	<i>Aristolochia indica</i>	Aristolochiaceae	Urikakodi	Climber	External	Paste	Leaf	Paste applied on the body to prevent skin diseases.	S.Karuppusamy.2007.
28.	<i>Vincetoxicum subramanii</i>	Apocynaceae	Paal kodi	Climber	Oral	Decoction	Leaf	Leaves decoction is used as an expectorant, juice of leaves is used to relieve cough. The plant is used to cure nervous disorders among Kani tribe community of Agastiyamalai hills and this plant is used for curing many rheumatic ailments. Its leaf is also used to treat cancer ailment in Thiruvananthapuram.	A.John De Brito & R.Mahesh 2009, VG.Meenu Krishnan <i>et.al.</i> ,2014, M.Jayakumar &S.Karuppusamy 2015.
29.	<i>Mukia medaraspateana</i>	Cucurbitaceae,	Musumusukkai..	Climber	Oral	Paste	Whole plant	Fresh leaves are made into a paste and taken orally to cure throat infection.	S.Soja <i>et.al.</i> , 2021.
30.	<i>Gloriosa superba</i>	Liliaceae	Senganthal	Climber	Oral and External	Paste	Tuber	Paste of tuber is used for skin diseases. A paste made using tuber and leaves is applied on throat for itching in throat.	S.Sathis Kumar <i>et.al.</i> ,2022.
31.	<i>Cissus quadrangularis</i>	Vitaceae	Pirandai	Climber	Oral	Paste	Whole plant	Paste made from the tender stem is applied over the painful places to get relief from joint pain. Used for diabetes, obesity, high cholesterol, bone fractures, allergies, cancer, stomach upset, painful menstrual periods, asthma, malaria, wound healing, peptic ulcer disease, weak bones, weak bones (osteoporosis) and as body building supplements as an alternative to anabolic steroids	K.Jeyaprakash <i>et.al.</i> ,2011. And S.Vetri velavan <i>et.al.</i> , 2022.
32.	<i>Plumbago zeylanica</i>	Plumbaginaceae	Chithiramoolam kodivaeli	Shrub	External and oral	Paste	Root	Paste is used to treat rheumatic joints pains seed decoction is prescribed to reduce the muscular pain.	S.Sarguna and Suresh 2019.
33.	<i>Abutilon indica</i>	Malvaceae	Thuthi	Shrub	Oral and external	Decoction	Leaf	Decoction of dried leaves are mixed with jaggery (an undefined sugar made from palm sap) and taken orally to treat piles, body heat	K.Jeyaprakash <i>et.al.</i> ,2011.

								and skin diseases	
34.	<i>Lantana camera</i>	Verbenaceae	Nandhana chedi, Paralai chedi, Unni chedi.	Shrub	External	Paste	Flower	Paste of the flower powder is used to cure Headache	S.Ignacimuthu <i>et.al.</i> ,2008.
35.	<i>Andrographis alata</i>	Acanthaceae	Peria nangai	Shrub	External	Extract	Leaf and stem	The whole plant has been used for several applications such as anti-dote for snake-bite and poisonous stings of some insects, and to treat dyspepsia, influenza, dysentery, malaria and respiratory infections	Ruth Sylvia <i>et.al.</i> ,2022.
36.	<i>Pteridium revolutum</i>	Dennstaedtiaceae	-	Shrub	External and oral	Extract	Leaf	Rhizome is astringent, anthelmintic and is useful in diarrhea and inflammation of gastric and intestinal mucous membranes. Rhizome is boiled in oil and is made into ointment for wounds. The dried fronds are employed as packaging materials. Also used in floral decorations.	B.Thakar, <i>et.al.</i> ,2015.
37.	<i>Cadaba fruticosa</i>	Capparaceae	Vizhthi	Shrub	Oral	Decoction	Leaf	Leaf decoction is given orally thrice a day for three days and in addition to this leaf paste is also applied on the area to cure hemiplegia [6]. Leaf juice is internally used in the case of general weakness and dysentery and diarrhoea and also to relieve general body pain, antidote against poisoning, stimulant and anti scorbutic [21]. Leaves crushed and mixed with lime juice taken orally 2 times a day to cure dysentery [P.Pandikumar <i>et.al.</i> ,2010
38.	<i>Murraya paniculata</i>	Rutaceae	Vengarai	Shrub	Oral	Juice	Leaf and bark	Leaf juice used to treat Diuretics, carminatives	S.Ignacimuthu <i>et.al.</i> ,2008.
39.	<i>Cadaba trifoliata</i>	Capparaceae	Vizhudhi, manudukkurundu, purna, viluti.	Shrub	Oral External	Extract	Leaf	A vapour from the boiled leaves is inhaled to relieve coughing and colds. The leaves are applied externally to cure rheumatic pains in joints. Their decoction is given to children in indigestion as a purgative. T	A.Venkatachalapathi <i>et.al.</i> ,2015.
40.	<i>Calotropis gigantean</i>	Apocynaceae	Erukku	Shrub	Oral and external	Raw	Whole plant	2 or 3 leaves are heated and holding it tightly to the heel will cure heel pain. Leaf is made into paste and applying it to the ear to cure ear pain. A 4-5cm long stem is taken and its tip is crushed in the tooth brush and brushing using it cure tooth pain.	S.Arisharan and P.Revathi. 2021
41.	<i>Psidium gujava</i>	Myrtaceae	Koiiyapazham	Tree	Oral	Raw	Leaf and Fruits	Having a fruit daily provides glowing skin, increase hair growth, strong teeth, boost immunity. Tea is made using tender leaves and having this daily will control diabetes. Water boiled using the tender leaves and steaming using that water cure tooth pain. Water boiled using tender leaves is used for diarrhea.	A.Venkatachalapathi <i>et.al.</i> ,2015.
42.	<i>Ricinus communis</i>	Euphorbiaceae	Amma nakku	Small tree	Oral External	Extract	Seeds	Pregnant women intake oil in size of 25	M.Saradha <i>et.al.</i> ,2017.

								paise coin every day. For normal delivery. The oil is applied on boils. The oil with neem is applied on hair in hed which causes hair fall.	
43.	<i>Vitex negundo</i>	Verbenaceae	Notchi	Tree	External	Extract	Leaves	Boiled with and out coming vapours are inhaled for cold and cough.	S.Karuppasamy.2007.
44.	<i>Azadirachta indica</i>	Meliaceae	Vembu, Veppamaram	Tree	Oral	Powder	Leaf, bark, fruit, flower.	Used to treat dental and gastrointestinal disorders, malaria fevers, skin diseases, and as insects repellent, while the Balinese used Neem leaves as a diuretic and for diabetes, headache, heartburn, and stimula	S.Vetrivelavan et.al.,2022
45.	<i>Melaleuca alternifolia</i>	Myrtaceae	Theyilai maram	Tree	Oral	Decoction & extract	Leaf	Tea leaf used as a universal hot drink it is rich in antioxidant. The essential oil from the leaves of <i>M. alternifolia</i> showed 99% effectiveness for treating pacu parasitized by <i>I. multifiliis</i> in the gills and skin.	J.K.Aronson et.al.,2003.

Table 2: Diseases are grouped under by different ailment categories

Ailment categories	Biomedical terms	Tamil terms	No of plants used for mentioned ailments
Circulatory system	Blood purification	Rattha sutthigarippu	2
Dermatological infection	Injuries, cut wounds	Pun & theekayam	10
	Skin diseases	Thol noi	
Gastro-intestinal ailments	Piles,	Moolam	14
	Intestinal ulcer,	Kudal pun	
	Constipation,	Malacchikkal	
	Dysentery	Seedhabaethi/vayutrupokku	
	Bloody stool,	Ratha moolam	
	Stomachache	Vayutruvali	
	Gastric complients	Vayvu kolaru	
Dental care	Digestion	Serimanam	6
	Tooth pain	Pal vali	
Cardio vascular diseases	Foul odour	Vai thurnatram	2
	Heart strength	Idhaya valimai	
Nervous disorder	Memory power	Gnabaga sakthi	2
Respiratory system diseases	Asthma	Mooocchu thinaral	10
	Bronchitis	Chali and irumal	
	Chest pain	Neju vali	
	Cold	Jalathosaham	
	Cough	Irumal	
Skeleton muscular system disorders	Body pain	Udambu vali	9
	Head ache	Thalai vali	
	Joint pain	Mootu ali	
	Rheumatism	Moottu vadham	
	Swelling	Veekkam	
Poisonous bites	Poison bites	Vishakadi	5
	Snake bites	Pambukkadi	

Haire care	Hair growth	Mudi valarthal	4
	Dandruff	Podugu	
Genito-urinary ailments	Lactation	Paal surathal	3
	Delivary pain	Pirasava vali	
	White discharge in women	Vellai paduthal	
General health	Body strength	Udal valimai	1
Ear, nose, throat problems	Ear ache	Kathu vali	6
	Eye pain	Kan vali	
	Throught pain	Thondai vali	
Endocrinal disorders	Diabetes	Sarkkarai noi	7
	Kidney stone	Siruneeraga kal	
	Urinary problem	Siruneeraga noi	
Fever	Fever	Kaichal	6
	Pneumonia	Jani	
	Malaria	Malaria kaichal	
Cancer	Mouth Cancer	Vai Putru noi	1

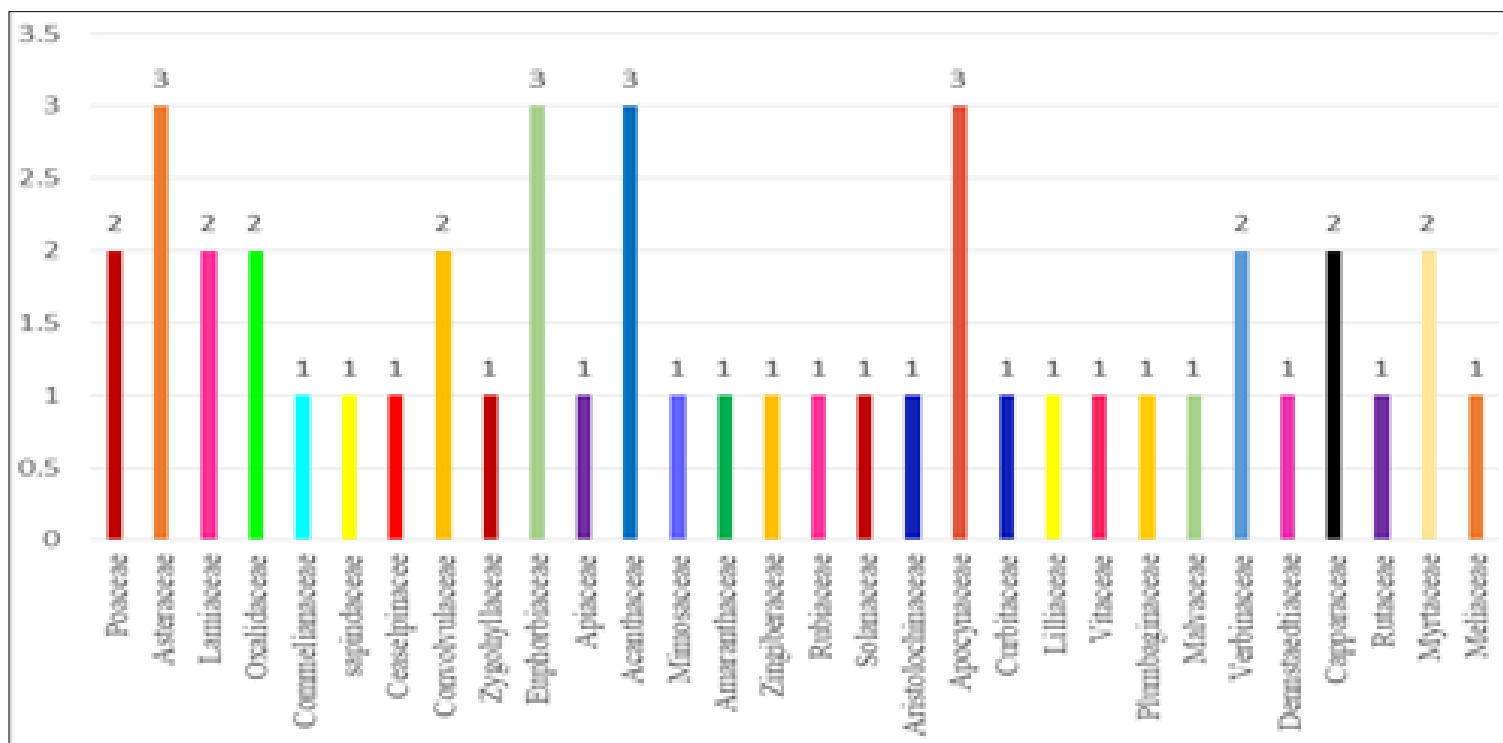


Fig 4: Family distribution of ethnomedicinal plants used by the paliyar tribes

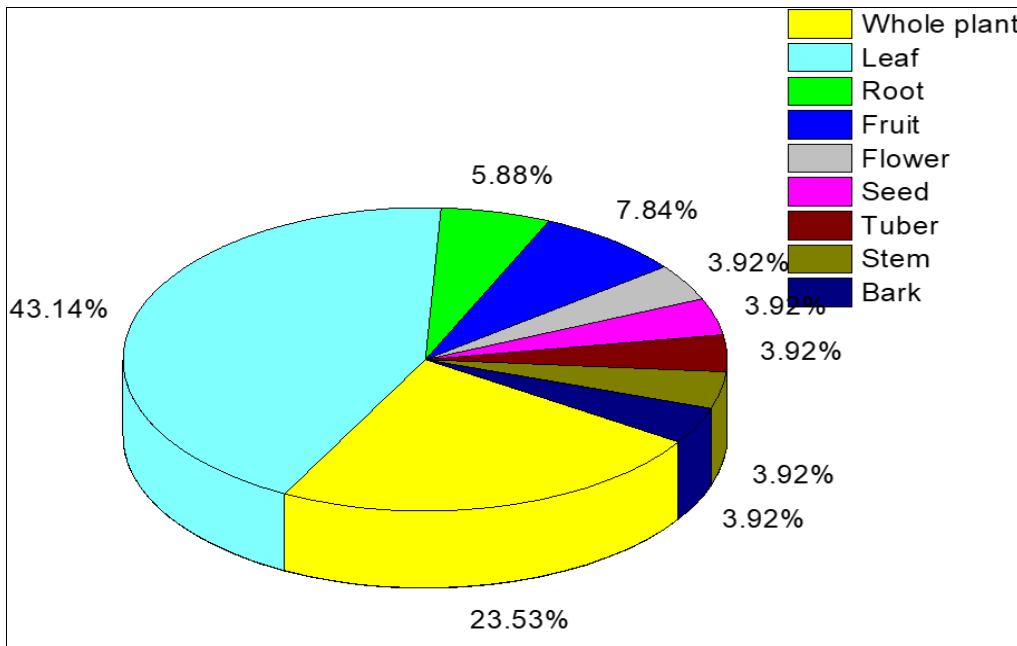


Fig 5: Statistics of plant parts used

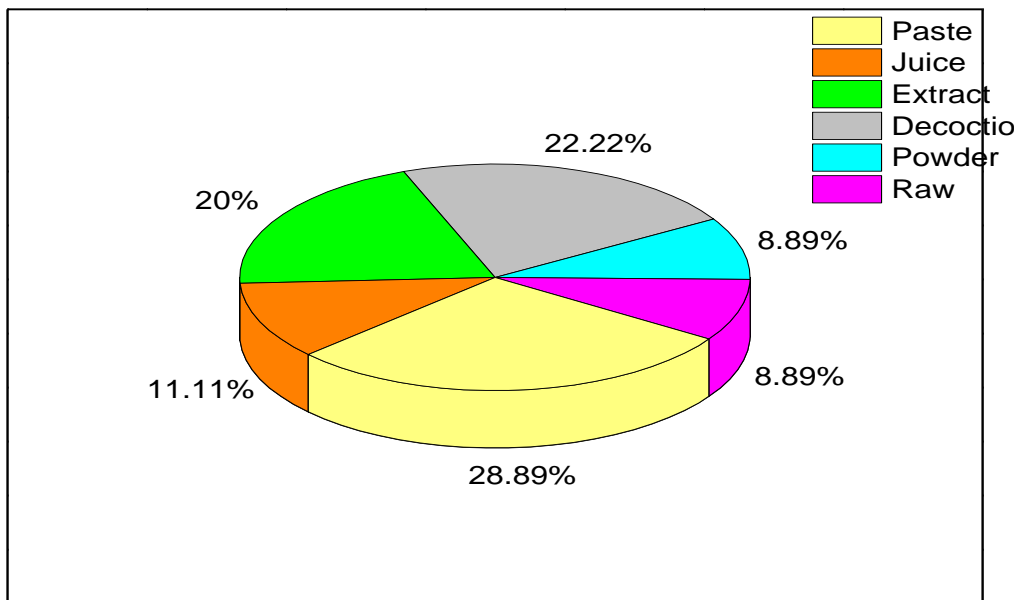


Fig 6: Categories the plant drug based on the mode of preparation.

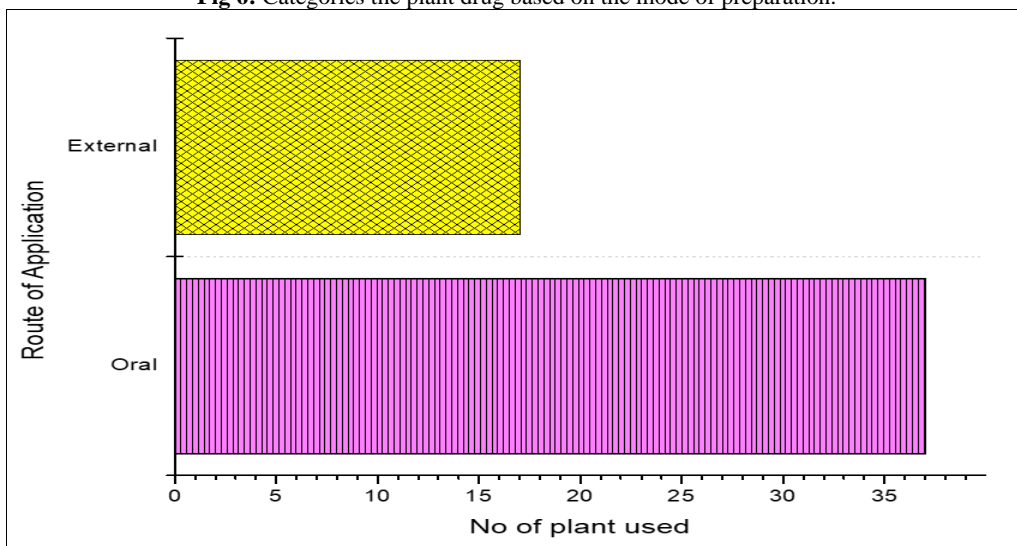


Fig 7: Route of administration

5. Plant preparation and administration procedures

Paste was the most common method of preparing and using plant parts, followed by decoction (22.22%), extract (20%), juice (11.11%), powder (8.89%), and raw (8.89%) plant parts (such as fruits, leaves, etc). (Figure 6). The decoctions were made by boiling the plants in water until the level was roughly where it needed to be. The route of drug administration reveals that most of the identified plant drug is used by in the method of oral route administration method (Figure 7). A common method of treating some tribal people in Tamil Nadu is to prepare a decoction (Ranjith and Ramachandran, 2010; Thirumalai *et al.*, 2012)^[25]. The fresh leaves were ground into a paste with milk or water.

Conclusion

The study pinpointed that a considerable number of 45 species was widely used by the paliyar tribal community in Meghamalai region of Southern Western Ghats in their day today life mostly for first and pupose. It is further known that more number of plant species of ethnobotanical significance were not worked out scientifically. To fulfil this lacuna, it is advocated that scientific validation can be carried out to know the active principle compounds efficiency of curing ability, *etc.* thus, it will be helpful to be obtain drug of specific medicinal uses.

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