



ISSN (E): 2277-7695

ISSN (P): 2349-8242

NAAS Rating: 5.23

TPI 2022; 11(7): 381-386

© 2022 TPI

[www.thepharmajournal.com](http://www.thepharmajournal.com)

Received: 06-04-2022

Accepted: 13-06-2022

## D Suwethaa Sri

Research Scholar, Forest College and Research Institute, Tamil Nadu Agricultural University, Mettupalayam, Tamil Nadu, India

## S Manivasakan

Assistant Professor, Department of Forest Products and Wildlife, Forest College and Research Institute, Tamil Nadu Agricultural University, Mettupalayam, Tamil Nadu, India

## P Hemalatha

Assistant Professor, Department of Agroforestry, Forest College and Research Institute, Tamil Nadu Agricultural University, Mettupalayam, Tamil Nadu, India

## C Cinthia Fernandez

Assistant Professor, Department of Agroforestry, Forest College and Research Institute, Tamil Nadu Agricultural University, Mettupalayam, Tamil Nadu, India

## Corresponding Author:

### D Suwethaa Sri

Research Scholar, Forest College and Research Institute, Tamil Nadu Agricultural University, Mettupalayam, Tamil Nadu, India

## Ethnobotanical study of medicinal plants in Kolli hills

D Suwethaa Sri, S Manivasakan, P Hemalatha and C Cinthia Fernandez

DOI: <https://doi.org/10.22271/tpi.2022.v11.i7e.13665>

### Abstract

The study was carried out in the Kolli hills, during the period of 2021 to 2022. In this present study totally 102 species belong to 58 families were documented. The information was collected from local people and traditional healers through personal interview, questionnaire method and group discussion during the survey. The identified species were used for treating various ailments like fever, cough, stomach pain, dysentery, ulcer, body pain, dysentery, asthma, poison bite, nervous problem, sugar, lactation problems, vomiting, giddiness, skin disease, rheumatism, leprosy etc., the mode of consumption is mostly decoction, paste, leaf powder, raw leaf and juice. Malayali tribes are the major tribes present in the Kolli hills, they continue to play an important role in healthcare needs. The collection and documentation of their practical knowledge preserve the valuable knowledge of Malayali tribes in kolli hills.

**Keywords:** Ethnobotanical, medicinal, plants, Kolli hills

### Introduction

India has endowed with rich biodiversity. The total number of plant species estimated are about more than 45,000 whereas more than 35% of plants are recorded as medicinal plants, 6000 - 7000 plants have therapeutic properties (IBEF, 2020) and 3000 plants are recognized for its value in India. All India trade survey of prioritized medicinal plants states that the demand for high value medicinal plants was increased by 50% and its availability declined to 26%. World health organization (WHO) states that 80% of world's population depends on plant derived medicines for their primary health care needs (Anjalum *et al.*, 2016)<sup>[6]</sup>. India has the second largest tribal population. According to the (Census 2011) the report states that tribal populations comprise 8.6% of the total population.

The tribal people are mostly depending on the forest for their livelihood and their primary health care needs (Suresh *et al.*, 2011). Indigenous Traditional Knowledge (ITK) is an integral part of the culture and history of a local community. Ethnic people are rich in Indigenous traditional knowledge. Ethnobotany is the study of the interactions and relationships between plants and people over time and space. This includes the uses, knowledge, beliefs, management systems, classification systems and language that both modern and traditional cultures have for plants and their associated terrestrial and aquatic ecosystems (Gritto *et al.*, 2015). Ethnobotanical survey is the documentation of indigenous traditional knowledge of tribal people. The indigenous traditional medicinal practices, as well as other uses of plants has been evolved through many trials and errors over the centuries, and the successful remedies and uses were passed from one generation to other generations through the verbal communication not in a written document (Gritto *et al.*, 2015). Medicinal plants and trees are the backbone of the traditional medicines. Medicinal plants are the backbone of the traditional medicine. The 25% of the drugs are derived from medicinal plants (Mohamed *et al.*, 2007) that are used in various ailments. The knowledge of medicinal plants has been accumulated in the course of many centuries based on different medicinal systems such as Ayurveda, Unani and Siddha.

Kolli hills are situated in the Eastern ghats of Tamil Nadu. Which are historically famous for medicinal plants. It comprises of 1500 green plants, which is 45% gain medicinal importance, major tribes present in the Kolli hills are Malayali tribes. They use the plants and trees to cure various diseases like fever, cold and cough, poisonous bites, dysentery, vomiting, body pain and various ailments etc., Siddhar's who lived in the caves and under the sacred grooves in the long years ago helped people to cure various diseases. The earlier studies reported the documentation of medicinal plants in the kolli hills (Muthuraja *et al.*, 2014)<sup>[1]</sup>, (Suresh *et al.*, 2011)<sup>[21]</sup>, (Anjalum *et al.*, 2016)<sup>[6]</sup>.

Where they are not much focused on the medicinal tree species and the current investigation is mainly focused on the medicinal trees as well as shrubs and herb species, determining the documentation of medicinal plants present in the Kolli hills. The research findings are expected to give scientific and baseline information of plant conservation.

**Materials and Methods**

**Study area**

The survey was conducted in Kolli hills situated in Namakkal district of Tamil Nadu, India. The hills are almost 1000 to 1350 meters in height that cover more than 280 sq.km. The hills have nearly 72 hairpin bends (Anjalum *et al.*, 2016) [6]. The average annual rainfall is 1440mm and the temperature is 13°c to 30°c. The Kolli hills have mostly sandy loam to loamy soil (Muthuraja *et al.*, 2014) [1]. The Latitude: 11.248514°N and Longitude: 78.338707°E. More than 95% of tribal people belongs to Malayali tribes.

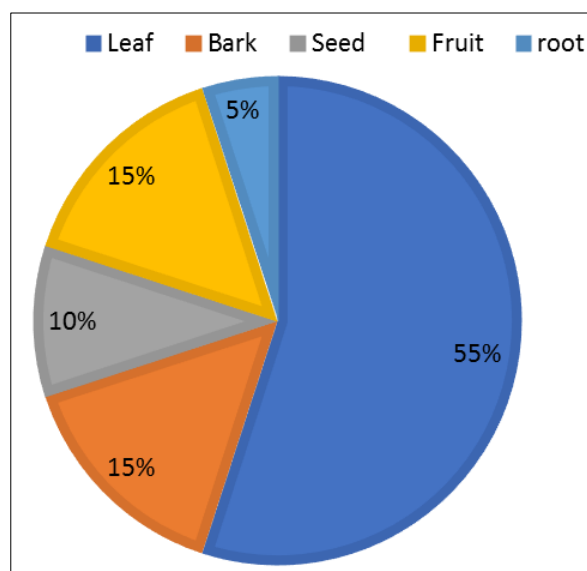
**Malayali tribes**

Malayali tribes are mostly present in hill regions (Malai - hill) (Ali - dwells). These tribes were believed to be migrated from the conjeevaram most probably at 1692 AD. They are Tamil speaking hill tribes and most of them are agriculturalist (Suresh *et al.*, 2011) [21] and these tribes are economically poor and belongs to backward classes. Their occupation is seasonal which includes collection of honey, bee wax and some other minor forest produces. They cultivate edible plants like tapioca, pine apple, banana, millets and cash crops like pepper, coffee, jack fruit, cloves, cumin seeds and cereals like Finger millet (ragi), Foxtail millet (thinai), Kodo millet (varagu), Little millet (samai), Baranyard millet (kuthiraivali), Maize (makkasolam) etc., These Malayali tribes have indigenous knowledge about the medicinal plants used for curing various remedies like cough, cold, fever, headache, poisonous bite and other ailments.

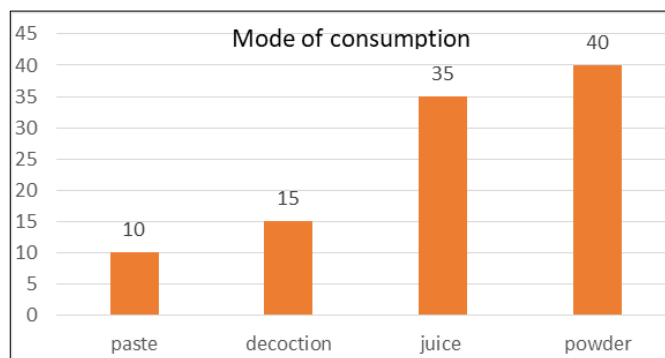
**Data collection**

The survey was carried out from October 2021 to June 2022. During this period the number of fields were surveyed and informations were gathered from several informants mostly at the age between 45 to 80 years were consulted to gather the information about the utility of the plant species used by the tribals. Data collection was mainly focused on traditional healers and age-old people as they have more indigenous traditional knowledge of species present in Kolli hills. The survey was conducted through personal interview method, semi structured interview, questionnaire method and group

discussions (Suresh *et al.*, 2011) [21]. The informations were also collected from village people, both men and women. The detailed study was conducted throughout the survey and enormous information has been gathered with the usage of plants, which cures many diseases (Anjalum *et al.*, 2016) [6]. During the process of documentation continuous exploration was made about the plant species, local name, plant parts used, medicinal value and other uses, and their preparation methods like decoction, juice, paste, powder etc., with either fresh or dried sample for application were collected in their local language (Tamil).



**Fig 1:** The percentage of plant parts that are mostly used for curing the diseases are leaf (55%) followed by bark and fruit (15%), seeds (10%) and roots (5%)



**Fig 2:** Mode of consumption

**Table 1:** Show the Scientific and Vernacular name

S. No	Scientific name	Vernacular name	Common name	Family	Uses
1.	<i>Memecylon umbellatum</i>	Valichamaram	Ironwood	Melastomataceae	Leaf paste is used for eye problem
2.	<i>Styrax benzoin</i>	Sambranimaram	Styrax benzoin tree	Styracaceae	Bark and gum used as sambrani
3.	<i>Ficus benghalensis</i>	Alamaram	Banyan	Moraceae	Leaf powder is used as vaginal wash and bark used for diarrhoea
4.	<i>Ficus tinctoria</i>	Kallathi	Dye fig or humped fig	Moraceae	Decoction and leaves juice given to women after deliver to immune strength
5.	<i>Piper sarmentosum</i>	Wild milagu	Wild pepper	Piperaceae	Used for cooking
6.	<i>Syzygium cumini</i>	Naval	Java plum	Myrtaceae	Fruit is edible, used in diabetes, barks used for period cramps, stomach pain
7.	<i>Pongamia pinnata</i>	Pungam	Indian beech tree	Fabaceae	Oil used for leprosy
8.	<i>Caryota urens</i>	Koonthapanaimaram	Fishtail palm	Arecaceae	Decoration purposes, roots used for gastric problems and ulcers
9.	<i>Michelia champaca</i>	Senbagamaram	Champak	Magnoliaceae	Used for fever, leprosy, nausea

10.	<i>Psydrax dicoccos</i>	Eerugamaram, eerkolli	Ceylon boxwood	Rubiaceae	Curing for ulcer and diabetes, leaf extract mixed with banana taken orally used for easy delivery
11.	<i>Gmelina arborea</i>	Kumil	Gamhar	Lamiaceae	Fruits are crushed and applied for dandruff
12.	<i>Symplocos cochinchinensis</i>	Vasappamaram	Laurel sapphire berry	Symplocaceae	Bark powder used for giddiness and vomiting
13.	<i>Erythrina orientalis</i>	Mulmurungai	Coral tree	Fabaceae	Used to reduce inflammations and stomach pain
14.	<i>Jasminum grandiflorum</i>	Jathi poo maram	Spanish jasmine	Oleaceae	Helps in weight loss
15.	<i>Calophyllum inophyllum</i>	Penamaram	Indian laurel	Guttiferae	Curing stomach pain
16.	<i>Mimusops elengi</i>	Mazhilamaram	Spanish cherry	Sapotaceae	Fruits are edible
17.	<i>Ficus racemosa</i>	Athimaram	Cluster fig	Moraceae	Fruit is edible, latex used for leg pain), stomach wounds
18.	<i>Ricinus communis</i>	Amanakku	Castor oil	Euphorbiaceae	Used to control dysentery
19.	<i>Murraya koenigii</i>	Karuvepamaram	Curry leaves	Rutaceae	Used in the hair oil and used as flavouring agent in cooling
20.	<i>Phyllanthus emblica</i>	Nellikai	Indian gooseberry	Phyllanthaceae	Used as pickle, diabetes, pressure, bark powder used for mouth wounds
21.	<i>Terminalia elliptica</i>	Maruthamaram	Indian laurel	Combretaceae	Diabetes
22.	<i>Aegle marmelos</i>	Vilvam	Indian bael	Rutaceae	Root extracts used for vomiting
23.	<i>Senna auriculata</i>	Aavaram	Matura tea tree	Fabaceae	Diabetes
24.	<i>Adhatoda vasica</i>	Aaduthodapalam	Malabar nut	Acanthaceae	Used for curing sugar complaints
25.	<i>Andrographis alata</i>	Periyangai	Water willow	Acanthaceae	Leaf paste is used for poisonous bite
26.	<i>Andrographis paniculata</i>	Siriyangai	Green chiretta	Acanthaceae	leaf paste is used for snake bite
27.	<i>Strychnos nux-vomica</i>	Ettipattai	Poison nut	Loganiaceae	used for poisonous bite and scorpion stings
28.	<i>Solanum trilobatum</i>	Thoothuvalai	Red Pea Eggplant	Solanaceae	Used for Asthma
29.	<i>Mukia maderaspatana</i>	Mosumosukka	Madras pea pumpkin	Cucurbitaceae	used for curing asthma
30.	<i>Acalypha indica</i>	Kuppaimeni	Indian Nettle	Euphorbiaceae	Haemorrhoids
31.	<i>Abutilon indicum</i>	Thuthi	Indian mallow	Malvaceae	Used for curing piles
32.	<i>Madhuca longifolia</i>	Mahua tree	Mahua	Sapotaceae	Flowers increase lactation
33.	<i>Pergularia daemia</i>	Veliparuthi	Trellis vine	Asclepiadaceae	Rheumatism arthritis
34.	<i>Delonix elata</i>	Vaaganarayanan	yellow gulmohur	Fabaceae	Decoction of boiled root treats ingested poison
35.	<i>Clerodendrum phlomidis</i>	Thaluthalai	Arni	Lamiaceae	Used to reduce swelling and inflammation
36.	<i>Sesbania grandiflora</i>	Agathi	Vegetable hummingbird	Fabaceae	Used for sprains, rheumatism, itching
37.	<i>Alternanthera sessilis</i>	Ponnaganni	Sessile joyweed	Amaranthaceae	Used for hair oil and dandruff
38.	<i>Phyla nodiflora</i>	Poduthalai	Turkey tangle frogfruit	Verbinaceae	Used for hair oil and dandruff
39.	<i>Hemidesmus indicus</i>	Nannari	Indian sarsaparilla	Apocynaceae	Used for controlling pimples
40.	<i>Aloe vera</i>	Kathalai	Aloe	Asphodelaceae	Gel used for cosmetics
41.	<i>Hibiscus rosa sinensis</i>	Sembaruthi	China rose	Malvaceae	Flower used for hair oil, heart attack and pressure
42.	<i>Artocarpus heterophyllus</i>	Palamaram	Jack	Moraceae	Fruit edible
43.	<i>Grevillea robusta</i>	Malaichavukku	silver oak	Proteaceae	Match stick and timber purposes
44.	<i>Punica granatum</i>	Mathulai	Pomegranate	Lythraceae	Fruit is edible
45.	<i>Benincasa hispida</i>	Neerpoosani	White gourd	Cucurbitaceae	Used to treat jaundice, epilepsy, fever, menstrual disorders
46.	<i>Centella asiatica</i>	Veerasingikutchi	Asiatic pennywort	Apiaceae	Used as tooth brush
47.	<i>Gymnema sylvestre</i>	Sakkarakolli	Gurmar	Apocynaceae	Used for sugar complaints
48.	<i>Datura metel</i>	Karuoomathai	Indian thornapple	Solanaceae	Plant powder used as drug
49.	<i>Psidium guajava</i>	Koyya	Guava	Myrtaceae	Young leaves used for indigestion
50.	<i>Phyllanthus emblica</i>	Nelli	Indian gooseberry	Phyllanthaceae	Used for pressure
51.	<i>Phyllanthus amarus</i>	Keelanelli	Gale of the wind	Phyllanthaceae	Used for jaundice, stomach wounds
52.	<i>Myristica fragrans</i>	Jathikkai	Nutmeg	Myristicaceae	Treats ulcer
53.	<i>Caryota urens</i>	Koonthapanaimaram	Fishtail palm	Arecaceae	Decoration purposes
54.	<i>Citrus medica</i>	Naarthangai	Citron	Rutaceae	Fruit used for pickle, Rasam, Bark powder used for head ache
55.	<i>Terminalia chebula</i>	Kadukkai	Chebulic myrobalan	Combretaceae	Used for diabetes and toothache
56.	<i>Ocimum basilicum</i>	Theruneerpachai	Sweet basil	Lamiaceae	Leaves were chewed for mouth ulcers, leaf used for katti
57.	<i>Andrographis paniculata</i>	Nilavembu	Green chiretta	Acanthaceae	Used for immunity strength and to maintain blood sugar levels
58.	<i>Mangifera indica</i>	Mango tree	Mango	Anacardiaceae	Fruit edible and prepared as pickle
59.	<i>Monoon longifolium</i>	Asoka	False asoka	Annonaceae	Antipyretic agent
60.	<i>Gymnema sylvestre</i>	Sirukurunjan	Australian cowplant	Asclepiadaceae	Used for sugar complaints
61.	<i>Cynodon dactylon</i>	Arugampul	Scutch grass	Poaceae	Used as a blood purifier
62.	<i>Phyla nodiflora</i>	Poduthalaiikeerai	Turkey tangle frog fruit	Verbenaceae	Used to treat ulcer
63.	<i>Annona squamosa</i>	Seethapalam	Sugar apple	Annonaceae	Dried seed powder is highly poisonous, reduces body heat
64.	<i>Aristolachia bracteolata</i>	Aaduthinnapalai	Worm killer	Aristolochiaceae	Paste from this plant applied externally to the snake bite, scorpion bite wounds
65.	<i>Asparagus racemous</i>	Thannivittankilzhangu	Liliaceae	Asparagaceae	Root powder mix with milk taken internally for the urinary disorders and to increase lactation for women.
66.	<i>Centella asiatica</i>	Vallarai	Asiatic pennywort	Apiaceae	Leaf powder used to increase memory power
67.	<i>Azadirachta indica</i>	Veppamaram	Neem	Meliaceae	Leaf used for poisonous insects bites and oil etc...
68.	<i>Jatropha curcus</i>	Kattamanakku	Physic nut	Euphorbiaceae	Latex is used for bleeding gums and toothache

69.	<i>Justica adhatoda</i>	Adathoda	Malabar nut	Acanthaceae	Leaf juice is used for curing fever
70.	<i>Marsdenia brunoniana</i> or <i>Wattakaka volubalis</i>	Perukurunjan	Sneezewort, green milkweed climber	Asclepiadaceae	Leaf powder taken for sugar complaints, root juice used for snake bite
71.	<i>Acacia concinna</i>	Siyakkai	soap pod	Mimosoidae	Fruits powder used to cure dandruff and skin diseases
72.	<i>Ptelea viscosa</i>	Virali	Florida hopbush	Sapindaceae	Leaf paste used in rheumatism
73.	<i>Stachytarpheta urticifolia</i>	Eluthanaipoondu	Blue snake weed	Verbanaceae	Leaf boiled and juice used to cure malaria fever
74.	<i>Basella alba</i>	Pasalaikodi	Indian spinach	Basellaceae	Whole leaf used for digestion
75.	<i>Ruta graveolans</i>	Aruvathampatchi	Rue	Rutaceae	Leaf paste used for baby powder
76.	<i>Solanum torvum</i>	Sundakkai	Turkey berry	Solanaceae	Fruit used for fever, ulcer and infusion
77.	<i>Abrus precatorius</i>	Kundumani	Rosary pea	Fabaceae	Roots used for poisonous bite
78.	<i>Blepharis manderaspatensis</i>	Elum poondu	Creeping blepharis	Acanthaceae	Used to treat head ache, diseases of nervous system
79.	<i>Centella asiatica</i>	Vallarai	Asiatic pennywort	Apiaceae	Memory power, leaf juice taken for nervous problems
80.	<i>Coccinia grandis</i>	Kovaiakodi	Ivy gourd	Cucurbitaceae	Leaf juice taken for curing ulcer
81.	<i>Drynaria quercifolia</i>	Mudavattukizhan gu	Oak fern tree	Poypodiaceae	Rhizome juice are taken internally for body pain
82.	<i>Mimosa pudica</i>	Tottasurungi	Sensitive plant	Mimosaceae	Whole plant is used to prevent menstrual bleeding
83.	<i>Mollugo pentaphylla</i>	Parpadagam	Riceweed	Aizoaceae	Leaf boil in water taken for cooling purpose
84.	<i>Waltheria indica</i>	Chempondu	Sleepy morning	Sterculiaceae	Plant extract boiled and taken orally for cough
85.	<i>Neolitsea zeylanica</i>	Thaguri	Shore laurel	Lauraceae	Root extract take internally for stomach
86.	<i>Catharanthus roseus</i>	Nithya Kalyani	Madagascar Periwinkle	Apocynaceae	Plant juice dried plant powder mix with honey used as anticancer agent.
87.	<i>Tephrosia purpurea</i>	Kolinji	Common tephrosia	Fabaceae	Root paste applied for stomach ache.
88.	<i>Cochlospermum religiosum</i>	Thamuka	Yellow silk cotton tree	Bixaceae	Bark gum used for bone fracture.
89.	<i>Limonia acidissima</i>	Vila	Wood apple	Rutaceae	Snake bite.
90.	<i>Boswellia serrata</i>	Kungilium	Indian frankincense	Burseraceae	Leave juice apply externally for skin disease.
91.	<i>Trichosanthes acumerina</i>	Pei pudal	Snake gourd	Cucurbitaceae	Leaf used for asthma.
92.	<i>Eclipta prostrata</i>	Karisalanganni	False daisy	Asteraceae	Leaf paste is applied externally to treat snake bite.
93.	<i>Drosera burmannii</i>	Alukanni	Tropical sundew	Droseraceae	Whole plant – blood dysentery.
94.	<i>Cassia fistula</i>	Sarakonnai	Golden shower tree	Fabaceae	Decoction of flowers is used.
95.	<i>Datura metal</i>	Ponn oomathai	Thorn apple, Devil's trumpet	Solanaceae	Leaf juice is taken internally to cure asthmatic complaints.
96.	<i>Dodonea angustifolia</i>	Virali	Hop bush	Sapindaceae	Stem and root is used.
97.	<i>Jasminum angustifolium</i>	Kattumalli	Wild jasmine	Oleaceae	Leaf paste – leprosy.
98.	<i>Bambusa arundinacea</i>	Moongil	Thorny bamboo	Poaceae	Leaf extract is consumed to keep body cool, kidney stone
99.	<i>Cardiospermum halicacabum</i>	Mudakathan	Balloon vine	Sapindaceae	Stem of crushed leaves – inhaled for tetanus. Leaf decoction given internally for joint pain.
100.	<i>Leucas aspera</i>	Thumbai	Dronapushpi	Lamiaceae	Leaf juice – asthma.
101.	<i>Solanum virginianum</i>	Kandankathiri	Yellow- fruit nightshade	Solanaceae	Bronchial asthma, chest pain, cough.
102.	<i>Euphorbia heterophylla</i>	Pal perukki	Fire plant, wild poinsettia	Euphorbiaceae	Increases lactation in mothers.

## Result and Discussion

The present study revealed that local tribes present in Kolli hills are mainly depend on the forest for their livelihood and they have in depth knowledge about the medicinal plants which are useful in treating many diseases. Most of the medicinal plant species are wild habitants which are collected from the Kolli hills, Namakkal, Tamil Nadu. Totally, 102 species belong to 58 families were documented. These species are used for treating various ailments like fever, cough, stomach pain, dysentery, ulcer, body pain, dysentery, asthma, poison bite, nervous problem, sugar, lactation problems, vomiting, giddiness, skin disease, rheumatism, leprosy etc., the consumption process is mostly decoction, paste, leaf powder, raw plant and juice. The traditional healing systems are still popular in Kolli hills.

The majority of species belongs to Fabaceae (8) followed by Acanthaceae (6), Rutaceae (5), Solanaceae (5) and Euphorbiaceae (5), Lamiaceae (4), Moraceae (3), Apocynaceae (3), Asclepiadaceae (3), Cucurbitaceae (3), Sapindaceae (3), Verbinaceae (3), Phyllanthaceae (3), Apiaceae (3), Myrtaceae (2), Combretaceae (2), Malvaceae (2), Annonaceae (2), Lauraceae (2), Styracaceae,

Melastomataceae, Piperaceae, Sapotaceae, Arecaceae, Magnoliaceae, Rubiaceae, Oleaceae, Guttiferae, Sapotaceae, Loganiaceae, Amaranthaceae, Asteraceae, Asphodelaceae, Proteaceae, Lythraceae, Cucurbitaceae, Myristicaceae, f Arecaceae, Anacardiaceae, Aristolochiaceae, Meliaceae, Mimosoidae, Basellaceae, Poypodiaceae, Mimosaceae, Aizoaceae, Sterculiaceae, Burseraceae, Droseraceae, Oleaceae, Symplocaceae, Poaceae, Bixaceae, Moraceae and Asparagaceae. Fig 1 states the percentage of plant parts that are mostly used for curing the diseases are leaf (55%) followed by bark and fruit (15%), seeds (10%) and roots (5%). Medicines were prepared mostly in the form of powder, paste, juice and decoction. Fig 2 states that, Among the four different formulation the maximum consumption is observed in the powder (40%) form and it is followed by juice (35%) and the minimum was observed in the paste (15%) and decoction (10%). Mostly the plant materials are utilized in the form of fresh or shade dried sample. In the past two decades there is gap in passing the ITK, where people in the present generation were not much aware of traditional practices. So, it is important to document the usage of different traditional practices done by the tribal communities, which will be

helpful for the future generations. Due to continuous deforestation, there is a destruction of trees with their associated knowledge. In this present generation the traditional healers are very old and younger generations are not much involved and interested in gaining these traditional knowledges (Suresh *et al.*, 2011) [21] because of migration to cities for the better job and lifestyle and the wealth of knowledge in this area is getting declining (Muthu *et al.*, 2006) [27].

### Conclusion

The information generated from the present study is to give the knowledge about the medicinal species present in the kolli hills used by the tribes. The traditional practices are still popular in Kolli hills. The herbal medicines are comparatively safer than the synergic drugs. Based on the ITK documentation, it helps as a tool for the search of new drugs and nutraceuticals and forms the basis of modern medicines and therapeutics. It may also provide base for the phytochemistry based studies because there is a minimum scientifically proven uses for these ITK based medicines. ITK should be looked at a broader perspective which helps in the development of new drugs for various human ailments. Due to unawareness about the usage of many plant species there is more exploitation. This documentation helps to know more about the uses of the plant species present in the Kolli hills. This indigenous healthcare recipes with scientific refinement can be made accessible even to the poor people. Therefore, there will be a proper utilization and conservation of medicinal plants for the future generation.

### Acknowledgement

I would like to thank Salem DFO and kolli hills ranger and guards who support and guided throughout the survey. I also acknowledge the technical guidance of Dr. K. Ramachandran botanist who helped me for the identification of tree species.

### References

- Muthuraja R, Nandagopalan V, Thomas B, Marimuthu C. An ethno-botanical survey of medicinal plants used by Kolli Malayalis of Nammakkal district, Eastern Ghats, Tamil Nadu, India. *European Journal of Environmental Ecology*. 2014;1(1):33-43.
- Ogunmefun OT. Phytochemicals-God's Endowment of Curative Power in Plants. In *Phytochemicals-Source of Antioxidants and Role in Disease Prevention*. In tech Open. 2018.
- Dar RA, Shahnawaz M, Qazi PH. General overview of medicinal plants: A review. *The journal of phytopharmacology*. 2017;6(6):349-351.
- Devanathan K, Narasimhan D. Tree Diversity Of Kolli Hills, Southern Eastern Ghats Of Tamil Nadu.
- Duke JA, Wain KK. *Medicinal Plants of the World*. 3 vol. Computer index with more than 85,000 entries. Plants genetics and germplasm Institute. Agriculture Research Service, Beltsville, Maryland. 1981.
- Anjalam A, Kalpana S, Vijai D, Premalatha S. Documentation of medicinal plants used by Malayali tribes in Kolli Hills. *International Journal of Advanced Research in Biological Sciences*. 2016;3(3):101-107.
- Dhivya SM, Kalaichelvi K. Ethno medicinal knowledge of plants used by irula tribes, nellithurai beat, the Nilgiris, Tamil Nadu, India. *Asian Journal of Medical Sciences*. 2016;7(5):124-128.
- Smita R, Sangeeta R, Kumar SS, Soumya S, Deepak P. An ethnobotanical survey of medicinal plants in Semiliguda of Koraput District, Odisha, India. *Research journal of recent sciences*. 2012;2277:2502.
- Gritto MJ, Nanadagopalan V, Doss A. Ethnobotanical survey of medicinal plants used by traditional healers in Shobanapuram village of Pachamalai Hill, Tamilnadu. *Adv Appl Sci Res*. 2015;6(3):157-164.
- Ignacimuthu S, Ayyanar M, Sankarasivaraman K. Ethnobotanical study of medicinal plants used by Paliyar tribals in Theni district of Tamil Nadu, India. *Fitoterapia*. 2008;79(7-8):562-568.
- Ayyanar M, Ignacimuthu S. Ethnobotanical survey of medicinal plants commonly used by Kani tribals in Tirunelveli hills of Western Ghats, India. *Journal of ethnopharmacology*. 2011;134(3):851-864.
- Deepak P, Gopal GV. Nilgiris: A medicinal reservoir. *The Pharma Innovation*. 2014;3(8, Part A):73.
- Sen S, Chakraborty R, De B, Devanna N. An ethnobotanical survey of medicinal plants used by ethnic people in West and South district of Tripura, India. *Journal of Forestry Research*. 2011;22(3):417-426.
- Vaidyanathan D, Senthilkumar MS, Basha MG. Studies on ethnomedicinal plants used by malayali tribals in Kolli hills of Eastern ghats, Tamilnadu, India. *Asian J Plant Sci Res*. 2013;3(6):29-45.
- Saranraj P, Bhavani L, Suganthi K. Ethnobotanical survey of medicinal plants from Vellore district, Tamil nadu, India. *Int. J Adv. Res. Biol. Sci*. 2016;3(9):238-246
- Muthuraja R, Nandagopalan V, Thomas B, Marimuthu, C. An ethno-botanical survey of medicinal plants used by Kolli Malayalis of Nammakkal district, Eastern Ghats, Tamil Nadu, India. *European Journal of Environmental Ecology*. 2014;1(1):33-43.
- Ogunmefun OT. Phytochemicals—God's Endowment of Curative Power in Plants. In *Phytochemicals-Source of Antioxidants and Role in Disease Prevention*. Intech Open. 2018.
- Dar RA, Shahnawaz M, Qazi PH. General overview of medicinal plants: A review. *The journal of phytopharmacology*. 2017;6(6):349-351.
- Devanathan K, Narasimhan D. Tree Diversity of Kolli Hills, Southern Eastern Ghats of Tamil Nadu.
- Duke JA, Wain KK. *Medicinal Plants of the World*. 3 vol. Computer index with more than 85,000 entries. Plants genetics and germplasm Institute. Agriculture Research Service, Beltsville, Maryland. 1981.
- Suresh K, Kottaimuthu R, Norman TSJ, Kumuthakalavalli R, Simon SM. Ethnobotanical study of medicinal plants used by Malayali tribals in Kolli Hills of Tamil nadu, India. *International Journal of Research in Ayurveda and Pharmacy*. 2011;2(2):502-508.
- Schippmann U, Leaman DJ, Cunningham AB. Impact of cultivation and gathering of medicinal plants on biodiversity: global trends and issues. *Biodiversity and the ecosystem approach in agriculture, forestry and fisheries*. 2002.
- Muthuraja R, Nandagopalan V, Thomas B, Marimuthu C. An ethno-botanical survey of medicinal plants used by Kolli Malayalis of Nammakkal district, Eastern Ghats, Tamil Nadu, India. *European Journal of Environmental*

- Ecology. 2014;1(1):33-43.
24. Gakuya DW, Okumu MO, Kiama SG, Mbaria JM, Gathumbi PK, Mathiu PM. Traditional medicine in Kenya: past and current status, challenges, and the way forward. *Scientific African*. 2020;8:e00360.
  25. Tangiang S, Namsa ND, Aran C, Litin A. An ethnobotanical survey of medicinal plants in the Eastern Himalayan zone of Arunachal Pradesh, India. *Journal of ethnopharmacology*. 2011;134(1):18-25.
  26. Senthilkumar K, Aravindhan V, Rajendran A. Ethnobotanical survey of medicinal plants used by Malayali tribes in Yercaud hills of Eastern Ghats, India. *Journal of Natural Remedies*. 2013;13(2):118-132.
  27. Muthu C, Ayyanar M, Raja N, Ignacimuthu S. Medicinal plants used by traditional healers in Kancheepuram District of Tamil Nadu, India. *Journal of Ethnobiology and ethnomedicine*. 2006;2(1):1-10.
  28. Sankaranarayanan S, Bama P, Ramachandran J, Kalaichelvan PT, Deccaraman M, Vijayalakshimi M. Ethnobotanical study of medicinal plants used by traditional users in Villupuram district of Tamil Nadu, India. *J Med Plants Res*. 2010;4(12):1089-1101.