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AN ETHNO-BOTANICAL SURVEY OF MEDICINAL PLANTS USED BY KOLLI MALAYALIS OF NAMMAKKAL DISTRICT, EASTERN GHATS, TAMIL NADU, INDIA

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ABSTRACT

An ethnobotanical survey was carried out among the *Malayali* tribes of Kolli Hills, Namakkal district in Eastern Ghats of Tamil Nadu for the documentation of important medicinal plants used for the treatments of various ailments occur in their daily life. There are about 75 medicinal plants belonging to 57 genera and 30 families were documented from the area. The documented medicinal plants were presented under their respective families along with their correct Botanical name, Habit, Vernacular name and their medico-potentiality.

Keywords: Ethnobotanical survey, *Kolli Malayalis*, Nammakkal, Tamil Nadu.

INTRODUCTION

The ethnic people residing in different geographical belts of India depends on wild plants to meet their basic requirements. The ethnic communities have their own pool of secret in ethno-medicinal and ethno-pharmacological knowledge about the plants available in their surroundings [1,2,3]. According to WHO, about 80% of the world's population, especially in the rural areas depends on herbal medicine for their healthcare needs [4]. All over 35,000 medicinal plant taxa are widely used in medicine in different regions of the world. Traditional medicinal practices are an important part of the primary health care system in the developing world [5,6].

The knowledge of medicinal plants has been accumulated in the course of many centuries based on different medical systems such as Ayurveda, Unani and Siddha [7].

India is one of the most important mega biodiversity of hotspot with rich in ethnic diversity and traditional knowledge [8]. The tribal people are the ecosystem people who live in harmony with the nature and maintain a close link between man-made and environment [9]. The tribals have developed their own distinct culture, religious rites, food habit and traditional knowledge related to plant medicine, which have become treasure trove and cultural heritage of our nation [10]. Traditionally, this knowledge has been passed on orally from generation to generation without any written document [11].

MATERIALS AND METHODS

Study area: Kolli Hills

The present study was conducted in the Kolli Hills and it lies at a longitude of 78° 20' to 78° 30' E and a latitude of 11° 10' to 11° 30' N with elevations ranging from 200 to 1415 MSL. Annual rainfall ranges between 300 and 2000 mm. The maximum amount of rainfall was received during north east monsoon. The vegetation varies considerably with altitudes and shows a distinct zonation of forest types, it includes evergreen forests, shola forests, deciduous forests, mixed open forest, open scrub and plantation forests. The maximum temperature ranges

between 25°C and 30°C and minimum between 13° and 16°C. Soil is variable from sandy loam to loam type, plateau region show deep sandy loam with good humus content [12.13] (Fig. 1).

Field trips & Data collection: The systematic field trips for ethnobotanical exploration were undertaken during June 2013- march 2014 in to the tribal communities of villages, namely Solakkadu, Kuzhivalavu sholai and Nachiyarkovil (Fig. 2). Data were mainly collected from resource persons like traditional medicinal-practicers, men's and women's above the age of 55- 60 years. These were recorded on field notebooks.

Plant Identification The medicinal plants which are documented from the study area were identified by available Floras and literatures [14,15]. The identified specimens were used for the preparation of herbarium and the voucher specimens were deposited in the herbaria of PG & Research Department of Botany, National College (Autonomous), Tiruchirappalli, Tamil Nadu, India for future reference.

RESULTS AND DISCUSSION

The present study was resulted in the documentation of 75 species of ethno-medicinal plants were distributed in 57 genera and 30 families. These potential medicinal plants are used by tribe *Kolli Malayalis* to treat various ailments occur in their daily life (Table-1). In most of the cases roots 48% (36 species) are used to prepare different medicinal formulations followed by leaves 40% (30 species), whole plants in 32% (24 species), stem bark 21% (16 species), root bark 2% (2 species) flowers 10% (8 species) fruits 8% (6 species), gum 5% (4 species), latex and rhizome < 1% (Fig. 3). The various diseases which are treated by using these potential medicinal plants are Diarrhea and dysentery, fever, stomach problems, cuts and wounds, inflammatory swellings, diabetic problems etc. The habit variation of medicinal plants in the study area includes Herb, Shrub, Under shrub, Trees, Climebrs, Stragglers and Trailers (Fig. 4).

Ethnobotanical studies assume great importance in enhancing our existing knowledge about the plants grows and used by native/tribal communities, the rich diversity assembled by them for their sustenance and the different means adopted by them for its preservation and conservation. Due to changing life style, extreme secrecy of traditional healers and negligence of youngsters, the practice and dependence of ethnic societies in folk medicines is in rapid decline globally, therefore, ethnobotanical exploitation and documentation of indigenous knowledge about the usefulness of such a vast pool of genetic resources is deliberately needed [16, 17].

Table. 1- Medicinal plants used by *Kolli Malayalis* of Kolli hills, Eastern Ghats, Tamil Nadu.

S. No	Botanical Name	Habit	Vernacular Name	Medico-potentiality
Annoanaceae				
1	***Annona squamosa*** L.	Herb	*Sitaaphalam, Atta*	Leaves-insecticide (seed powder, mixed with leaf juice is used for removing lice from scalp). Seeds-abortifacient. Root- purgative, used in blood dysentery. Fruit-invigorating, sedative to heart, antibilious, antiemetic, expectorant. Dried, powdered unripe Fruits- used for treating ulcers. Ripe fruit made into paste with betel leaves is applied to tumor to hasten suppuration. Leaves, bark, unripe fruit-strongly astringent; used for diarrhea and dysentery.
2	***Polyalthia suberosa*** (Roxb.) Thwaites	Tree	*Aranai maram*	The leaves contain alpha-and beta-amyrin, lupeol, beta-sitosterol, stigmasterol and campes-terol. The stems and leaves contain the triterpene, suberosol, which showed anti-HIV replication activity. The stem bark contains alkaloids, xostepha-nine and lanuginosine, which exhibited antibacterial activity against several Gram-positive (+) and Gram-negative (-) bacteria.
Cappariadaceae				
3	***Capparis zeylanica*** L.	Straggler	*Aathondai*	Root bark- sedative, stomachic, anticholerin, diuretic febrifuge. Leaves- applied as poultice to piles, swellings, boils. Aerial parts exhibited spasmolytic activity.
4	***Cleome viscosa*** L.	Herb	*Nayikkadugu, Nalvellai.*	Seed- carminative,antiseptic, anthelmintic (for round worms). Leaf- sudorific. Bark- externally rubefacient, vesicant. Root- vermifuge.

Polygalaceae				
5	***Polygala chinensis*** L.	Herb		Root- antiasthmatic; used as a substitute for Senega obtained from the American plant Polygala senega.
Malvaceae				
6	***Abutilon indicum*** (L). Sweet.	Sub-shrub	*Thutthi*	Dried, whole plant- febrifuge, anthelmintic, demulcent, diuretic, anti-inflammatory (in urinary and uterine discharges, piles, lumbago). Juice of the plant- emollient. Seeds- demulcent (used in cough, chronic cystitis), laxative. Leaves- cooked and eaten for bleeding piles. Flowers- antibacterial, anti-inflammatory. Bark- astringent, diuretic. Root- nervine tonic, given in paralysis; also prescribed in strangury.
7	***Ceiba pentandra*** (L.) Gaertn.	Tree	*Ielavum*	Gum- laxative, astringent, demulcent (given in painful mic-turition). Unripe fruit- astringent. Root- diuretic, antidiabetic, an-tispasmodic (used in dysentery). Flowers- laxative; used in lochi-orrhoea. Unripe pods- used in vertigo and migraine. Seed oil- used in rheumatism.
8	***Hibiscus abelmoschus*** L.	Shrub	*Semparathii*	An emulsion made from the seeds is said to be useful for spasmodic problems. An emulsion mad with milk can be used for itchy skin. In Egypt, the seeds are chewed to relieve stomach problems, to soothe the nerves, and to "sweeten" the breath. Egyptians also consider the seeds to have aphrodisiac powers.
9	***Pavonia zeylanica*** (L.) Cav.	Un-shrub	*Abivattam*	It has been used as a remedy for skin diseases, infections and intestinal worm's viz. leprosy, scabies, ringworm, hookworm, dermatitis, acne, sores and ulcers since time immemorial.
10	***Sida acuta*** Burm. f.	Herb	*Arivamooku kerai*	Root- astringent, cooling, stomachic, febrifuge, diuretic; used for nervous and sexual debility, haemorrhoids, biliary disorders. Leaves- demulcent; applied to testicular swellings and elephantiasis.
11	***Sida cordifolia*** L.	Un-shrub	*Nilatutti.*	Juice of the plant- invigorating, spermatopoietic, used in spermatorrhoea. Seeds- nervine tonic. Root used for the treatment of rheumatism; neurological disorders (hemiplegia, facial paralysis, sciatica); polyuria, dysuria, cystitis, strangury and hematuria; leucorrhoea and other uterine disorders; fevers and general debility. Leaves- demulcent, febrifuge; used in dysentery.
12	***Thespesia populnea*** (L.) Sol. *ex* Correa.	Tree	*Puvarsu*	The leaves of this tree are made into a paste and applied as a bandage over inflammations. Paste of flowers is applied over skin diseases like pruritis and scabies.
Sterculaceae				
13	***Pterospermum canescens*** Roxb.	Tree	*Sempulavu.*	Flowers paste with rice-water and vinegar is used externally in migraine. Leaves- applied externally in headache.
14	***Waltheria indica*** L.	Herb	*Shembudu*	Plant- emollient, bechic, febrifuge, purgative, abortifacient. Root- prescribed in internal haemo rrhages.

Zygophyllaceae				
15	***Tribulus terrestris*** L.	Herb	*Sirunenunji, Nerinjil, Nerunjil*	Fruits- diuretic, demulcent, anti-inflammatory, anabolic, spasmolytic, muscle relaxant, hypotensive, hypoglycemic. Used in strangury, calculus affections, urolithiasis, crystalluria, urinary discharges, pruritus-ani, as a tonic in sexual inadequacy; also as a supporting medicine in cough and asthma. Leaf- diuretic, haemostatic. Root- stomachic, diuretic
Rutaceae				
16	***Ruta chalepensis*** L.	Herb	*Aruvadam-chedi, Arvada*	Plant- antispasmodic, sudorific. Stimulates the nervous system; commonly used in decoction in convulsions and fever. Also used as a fumigant in infant catarrh.
17	***Chloroxylon swietenia*** DC.	Tree	*Karumboraju, Kudavuboraju, Poraju*	Leaves- anti-inflammatory, antiseptic. A paste is applied to wounds; also in rheumatism. Bark- astringent. A decoction is used in contusions and for painful joints.
18	***Atalantia monophylla*** DC.	Tree	*Kattu Narangam, Kattu Elumichai*	Oil from leaves and berry- antibacterial, antifungal. Leaves- a decoction is applied to cutaneous affections. Fruit- juice, antibilious.
19	***Ruta graveolens*** L.	Shrub	*Aruvada*	Herb- stimulating, an-tispasmodic, stomachic; irritant, abortifacient. Used as an emme-nagogue, in hysterical conditions, cough and croupy affections, colic and flatulence. Leaf- used in atonic amenorrhoea, menorrhoea and colic. Externally used for sciatica, headache, muscular chest pain, bronchitis and arthritic conditions.
Burseraceae				
20	***Commiphora caudata*** (Wight & Arn.) Engl.	Tree	*Malaima*	The leaf paste is applied over inflammatory swellings.
Vitaceae				
21	***Cissus quadrangularis*** L.	Straggler	*Perandai*	The drug exerts influence both on the organic and mineral phase of fracture-healing. Stem- alterative in scurvy (the plant is rich in vitamin C) and irregular menstruation.
22	***Cissus vitiginea*** L.	Straggler	*Neeralikodai*	Crushed plant parts are used for the treatments of microbial infections.
Fabaceae				
23	***Dalbergia latifolia*** Roxb.	Tree	*Itti, Eravadi, Karun-doroiral*	Stimulant, appetiser, anthelmintic, spasmogenic. Used in dyspepsia, iarrhoea; also in obesity, cutaneous affections and leprosy.
24.	***Dalbergia sissoo*** DC.	Tree	*Irupoolai*	Leaves- bitter, and stimulant. Leaf mucilage, mixed with sweet oil, is applied to excoriations. Wood- anthelmintic, alterative, emetic, stomachic, antileprotic; used in diseases due to vitiated blood. Bark- anticholerin. Root- astringent.
25	***Indigofera aspalathoides*** DC.	Herb	*Sivanaarvembu, Iraivanvembu*	Antileprotic, antitumour, anti-inflammatory. Used in psoriasis and erysipelas. Ash of the burnt plant is used for dandruff.
26	***Indigofera oblongifolia*** Forsk.	Herb	*Kattukkarchamathi*	Plant- antisyphilitic. All parts of the plant are found useful in enlargement of liver and spleen.
27	***Indigofera pulchella*** Roxb.	Shrub	*Nirinji*	Root- used for cough. Powder of the root applied externally for Muscular pain in chest. Leaves and roots- used for swelling of the stomach.

28	***Indigofera tinctoria*** L.	Un-shrub	*Nili, Averi, Asidai, Attipurashadam*	Plant- antiseptic, hepato-protective, hypoglycaemic, nervine tonic. Used in enlargement of liver and spleen, skin diseases, leucoder-ma, burns, ulcers, piles, nervous disorders, epilepsy, asthma, lumba-go, gout. Leaf- anti-inflammatory. Used in blennorrhagia. Root- diuretic. Used in hepatitis. Root and stem- laxative, expectorant, febrifuge, anticephalalgic, anti-tumour, anthelmintic, promote growth of hair.
29	***Mucuna prurita*** (L.) Hook.	climber	*Poonaikkaali*	Seed- astringent, nervine tonic, local stimulant, used in im-potence, spermatorrhoea, urinary troubles, leucorrhoea, traditionally used for male virility. Also used in depressive neurosis. Hair on fruit- vermifuge, mild vesicant; used for diseases of liver and gallbladder. Leaf- applied to ulcers. Pod- anthelmintic. Root and fruit- spas-molytic, hypoglycaemic.
30	***Pterocarpus marsupium*** Roxb.	Tree	*Kani*	The crushed leaf and bark juice is applied over cuts and wounds
31	***Tephrosia purpurea*** (L.) Pers	Un-shrub	*Kattu-kolingi, Kolingi, Paavali, Mollukkay, Kollukkayvelai*	The drug is considered specific for the treatment of inflammation of spleen and liver. Dried herb- diuretic, deobstruent, laxative. Given for the treatment of cough, bronchitis, bilious febrile at-tacks, insufficiency of the liver, jaun-dice (not effective in infantile cirrho-sis), and kidney disorders and for the treat-ment of bleeding piles, boils, pim-ples. Also used as a gargle. Root- de-coction used in dyspepsia, diarrhoea, cough, bronchitis, adenoids, asthma and rheumatism. Juice is applied to skin eruptions. A liniment prepared from the root is employed in elephan-tiasis. Oil from seeds- specific against eruptions of the skin, eczema, scabies, leprosy. Seed extract- hypoglycaemic.
Mimosaceae				
32	***Acacia leucophloea*** (Roxb.) Willd.	Tree	*Valval, Velvayalam*	Bark- bitter, demulcent and cooling; used in biliousness and bronchitis. Seeds- haemaggluti-nating activity has been reported. Leaves- antisyphilitic and antibac-terial. Gum- demulcent.
33	***Acacia pennata*** (L.) Willd.	Tree	*Indan, Koluntu*	Bark—antibilious, antiasth-matic. Leaf- stomachic, styptic (for bleeding gum), antiseptic (for scalding of urine). A decoction of young leaves is taken for body pain, headache and fever.
34	***Mimosa pudica*** L.	Herb	*Thottalsurungi*	Leaf- astringent, alterative, antiseptic, styptic, blood purifier. Used for diarrhoea, dysentery, haemophilic conditions, leuc- orrhoea, morbid conditions of vagina, piles, fistula, hydrocele and glandular swellings. Root- used in gravel and urinary complaints. A decoction is taken to relieve asthma.
Lythraceae				
35	***Punica granatum*** L.	Shrub	*Maathulai*	Rind of fruit- astringent, stomachic, digestive. Used for diar-rhoea, dysentery, colitis, dyspepsia and uterine disorders. Leaf- used in stomatitis. Fresh juice of fruit- refrigerant, cosive, antiemetic; given

				as an adjuvant in diarrhoea, dyspepsia, biliousness, inflammations of the stomach, palpitation, excessive thirst and fevers. Bark of stem and root- anthelmintic, febrifuge. Given for night sweats. Rind of fruit, bark of stem and root- anti-diarrhoeal. Powdered flower buds- used in bronchitis.
Aizoaceae				
36	***Trianthema decandra*** L.	Herb	*Vellai Sharunnai*	Root- deobstruent; used for asthma, hepatitis and amenorrhoea.
Rubiaceae				
37	***Gardenia gummifera*** L. f.	Tree	*Dikkamalli, Kambil, Sinna Kambil*	Gum-carminative, anti-spasmodic, stimulant, diaphoretic, anthelmintic, antiseptic, expecto-rant. Given to children in nervous disorders and diarrhoea due to dentition.
38	***Pavetta indica*** L.	Shrub	*Pavattai*	Root- bitter and aperient. Prescribed in visceral obstructions, renal dropsy and ascites. Leaves- used for fomenting piles and for haemorrhoidal pains. The root bark contains dmannitol.
39	***Randia dumetorum*** (Retz.) Lam.	shrubs	*Marukkaaraikai, Madkarai*	Fruit- nervine, calmative, antispasmodic, emetic, anthelmintic, abortifacient. Used as a substitute for ipecacuanha.
40	***Randia malabarica*** Lam.	shrubs	*Kattadai*	It is useful in abdominal pain and throat infections.
41	***Oldenlandia herbacea*** (L.) Roxb.	Herb	*Nonnnampullu*	The whole plant is useful in elephantiasis, fever, verminosis, inflammations, asthma, bronchitis and ulcers.
42	***Rubia cordifolia*** L.	Climber	*Manjitti*	Roots and dried stem- blood purifier, astringent, diuretic,emmenagogue, deobstruent, antidysenteric, antiseptic
Asteraceae				
43	***Sonchus arvensis*** L.	Tree	*Kuppaichedi*	Plant- sedative, hypnotic, anodyne, expectorant, diuretic. Used for nervous debility. Seeds- used for asthma, bronchitis, cough, pertussis, fever; decoction in insomnia. Leaves- applied to swellings. Root- used for diseases of the respiratory tract.
44	***Sonchus oleraceus*** L.	Herb	*Kuppamani*	Galactagogue, febrifuge, sedative, vermifuge. Used in indigestion and in the treatment of diseases of the liver. An ointment is made from the decoction for wounds and ulcers.
45	***Xanthium strumarium*** L.	Herb	*Maruloomatham, Marlumutta*	Plant- used for leucoderma, ulcers, abscesses
46	***Pluchea indica*** (L.) Less.	Shrub		Root and leaves- astringent, antipyretic; given in decoction as a diaphoretic in fevers. Leaf- juice is given for dysentery; an infusion for lumbago, also against leucorrhoea. Root- anti-inflammatory, hepatoprotective.
47	***Calendula officinalis*** L.	Clumps	*Thulvkka, Saamanthi*	Flowers anti-inflammatory, antiseptic, stimulant, antispasmodic, emmenagogue, antihaemorrhagic, styptic. Used in gastric and duodenal ulcers and dysmenorrheal; externally for cuts, bruises, burns, scalds. Plant- antiprotozoal. Flower- antimicrobial. Essential oil- antibacterial.
Plumbaginaceae				
48	***Plumbago zeylanica*** L.	Herb	*Chittramoolam*	Root- intestinal flora normalizer, stimulates digestive processes; used for dyspepsia. Root paste is applied in order to open abscesses; a paste

				prepared with milk, vinegar or salt and water, is used externally in leprosy and other obstinate skin diseases. A cold infusion is used for influenza and black-water fever.
49	***Plumbago indica*** L.	Herb	*Chittramoolam*	Root- intestinal flora normalizer, stimulates digestive processes; used for dyspepsia. Root paste is applied in order to open abscesses; a paste prepared with milk, vinegar or salt and water, is used externally in leprosy and other obstinate skin diseases. A cold infusion is used for influenza and black-water fever.
Sapotaceae				
50	***Madhuca longifolia*** (J.Koenig *ex* L.) J.F.Macbr.	Tree	*Illupei, Elupa, Naatu Iluppai, Iruppai*	Flowers- stimulant, demulcent, laxative, anthelmintic, bechic. Seed oil- galactogenic, anticephalgic, emetic. Used in pneumonia, skin diseases, piles. Bark- astringent, emollient. Used for tonsilitis, gum troubles, diabetes, ulcers. Bark, seed oil and gum- antirheumatic.
51	***Pergularia extensa*** (Jacq.) N.E. Br.	Herb	*Utthaamani, Veli-paruthi*	Plant- Uterine stimulant, tones up urinary bladder, stimulates gastricsecretion, expectorant, emetic. Leaf- used for amenorrhoea, dysmenorrhoea; externally applied to carbuncles.
Combretaceae				
52	***Combretum ovalifolium*** Roxb.	Climber	*Oodang kodi*	Bark juice is administered orally against jaundice.
53	***Terminalia chebula*** Retz.	Tree	*Kadukkai.*	Gentle purgative, astringent, stomachic, antibilious, alterative. Used in prescriptions for treating flatulence, constipation, diarrhoea, dysentery, cyst, digestive disorders, vomiting, enlarged liver and spleen, cough and bronchial asthma, and for metabolic harmony. Bark- diuretic.
54	***Terminalia paniculata*** Roth.	Tree	*Pekadukkai*	Bark- diuretic, cardiotonic. Juice of the bark, mixed with purified butter and rock-salt is applied in parotitis.
Salvadoraceae				
55	***Azima tetracantha*** Lam.	Stra-shrub	*Mulchangan*	Root- diuretic. Leaves- stimulant (used in rheumatism); expectorant, antispasmodic; given to women ater confinement. Bark- antiperiodic, astringent, expectorant.
Apocynaceae				
56	***Wrightia tinctoria*** R. Br.	Tree	*Irum-paalai, Nila-paalai*	Bark- antidysenteric. Also used in piles and skin diseases. Seeds- antidysenteric, astringent, febrifuge, anthelmintic. Bark and seeds- prescribed in flatulence and bilious affections.
57	***Holarrhena antidysenterica*** (Roth) Wall. *ex* A.DC.	Tree	*Kudasappaalai-pattai*	Root and bark- used in amoebic dysentery. Bark- astrin-gent, anthelmintic, amoebicidal, diuretic. Used in colic, dyspepsia, piles, diseases of the skin and spleen. Seed- antibilious. Used for promoting conception, also for toning up vaginal tissues after delivery.
Asclepiadaceae				
58	***Sarcostemma brevistigma*** Wight & Arn.	Shrub	*Somamum, Kodi-Kalli*	Dried stems- emetic. Plant- insecticidal.
59	***Gymnema sylvestre*** (Retz.) R.Br. *ex* Sm .	Climber	*Kannu Minnayam-kodi, Passaam, Shirukurinja*	Leaf- antidiabetic. Stimulates the heart and circulatory system, activates the uterus. Used in parageusia and furunculosis. Plant- diuretic,

				antibilious. Root- emetic, expectorant, astringent, stomachic.
Loganiaceae				
60	***Strychnos nux-vomica*** L.	Tree	*Yettikkottai*	Nervine tonic and a potent CNS stimulant. Seeds-usedinemotionaldisorders, insomnia, hysteria, epilepsy, paralytic and neurological affections, retention or nocturnal incontinence of urine, spermatorrhoea, sexual debility and impotence, general exhaustion; as antidote to alcoholism; GIT disorders. Bark- juice given in acute dysentery, diarrhoeaandcolic. Root- giveninin-termittent fevers. In Chinese medicine a paste made of *Strychnos nux-vomica* seeds is applied topically for treating facial paralysis.
Solanaceae				
61	***Solanum trilobatum*** L.	Trailer	*Toothuvilai*	Berries and flowers - a decoction is used for cough and chronic bronchitis.
62	***Solanum xanthocarpum*** Schrad. & H. Wendl.	Herb	*Kandankatthiri*	Stimulant, expectorant, diuretic, laxative, febrifuge. Used in the treatment of cough, bronchitis, asthma, for dislodging tenacious phlegm; also used against rheumatism, enlargement of liver and spleen, vomiting, difficult urination, bladder stones, skin diseases. Fruit- used as an adjuvant for promoting conception.
63	***Solanum ferox*** L.	Shrub	*Mulli, Pappara-mulli, Karimulli*	Plant and root- stimulant, digestive, carminative, astringent, expectorant, diaphoretic, anthelmintic. Used for catarrhal affections, asthma, dry cough; dysuria; intestinal worms; colic, flatulence, vomiting. Berries- used in asthma and rheumatism.
Acanthaceae				
64	***Andrographis panicultata*** Wall. *ex* Nees	Herb	*Nilavembu*	Hepatoprotective, cholinergic, antispasmodic, stomachic, anthelmintic, alterative, blood purifier, febrifuge. It acts well on the liver, promoting secretion of bile. Used in jaundice and torpid liver, flatulence and diarrhoea of children, colic, strangulation of intestines and splenomegaly; also for cold and upper respiratory tract infections.
65	***Andrographis echioides*** (L.) Nees.	Herb	*Gopuram tangi*	Febrifuge, diuretic.
Verbenaceae				
66	***Clerodendrum phlomidis*** L.f.	Shrub	*Karukanni, Perugilai*	Leaves- used as a substitute for Chiretta. Leaves and roots- employed externally for skin diseases and alopecia. Leaves are prescribed in headache. Roots are given in cramps and rheumatism.
67	***Gmelina asiatica*** L.	Shrub	*Kumizham*	Root and leaf- demulcent,alterative, blood purifier, anticatarrhal, astringent, antirheumatic.
68	***Clerodendrum serratum***(L.) Moon	Shrub	*Kandoorbarangi, cherutekku*	Root- Antiasthmatic, antihistaminic, antispasmodic, carminative, febrifuge. Leaf- febrifuge.
Lamiaceae				
69	***Anisochilus carnosus*** (L.f.) Wall.	Herb	*Karpuravalli*	Stimulant, expectorant and diaphoretic. Juice of fresh leaves is used in urticaria and other allergic conditions; a domestic remedy for coughs and cold. Alcoholic extract of the whole plant- antibacterial. Essential oil- antitubercular.
70	***Anisomeles malabarica*** (L.) R. Br. *ex* Sims	Un-shrub	*Irattaipeyameratti*	Antispasmodic, antipyretic, diaphoretic, antiperiodic, emme-nagogue, antirheumatic. The oil is used externally as an embrocation in

				rheumatic arthritis.
71	***Ocimum basilicum*** L.	Herb	*Tiruneetruppachhilai*	Flower- stimulant, carmi-native, antispasmodic, diuretic, demulcent. Seed- antidysenteric. Juice of the plant- antibacterial. Essential oil- antibacterial, antifungal, insecticidal.
Amaranthaceae.				
72	***Alternanthera sessilis*** (L.) R. Br. *ex* DC.	Herb	*Ponnonkanni keerai*	Febrifuge, galactagogue, cholagogue.
Euphorbiaceae				
73	***Euphorbia neriifolia*** L.	Shrub	*Ielaikkali, Perumbu-kalli*	Latex- purgative, diuretic, antiasthmatic, expectorant, rube-facient. Used in ascites, polyuria, anasarca, chlorosis, tympanitis; externally on warts, cutaneous eruptions, scabies, unhealthy ulcers.
Zingiberaceae				
74	***Alpinia officinarum*** Hance	Herb	*Chitrarattai*	Rhizome a circulatory stimulant and carminative.
Colchicaceae				
75	***Gloriosa superba*** L.	Climber	*Kalappankizhangu*	Tuberous root- anti-inflammatory, alterative, anthelmintic, antileprotic. Used for piles, swollen joints, parasitical affections of skin. Fresh juice of plant- uterine stimulant.

Fig. 1. Map of India with Tamilnadu state & Namakkal district with Kolli Hills

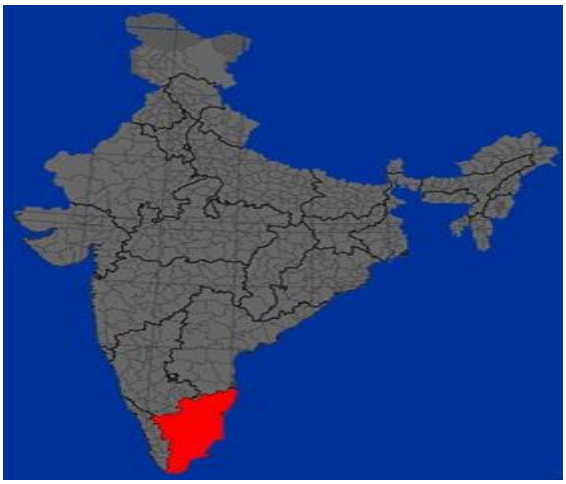


Fig. 2. Views of tribal huts in the Kolli Hills

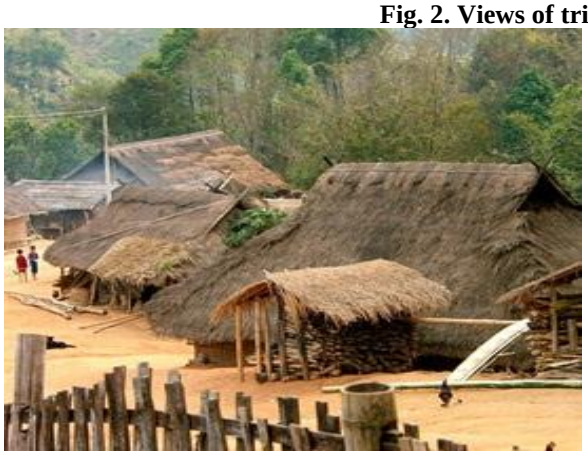


Fig. 3. Therapeutic uses of various medicinal plant parts

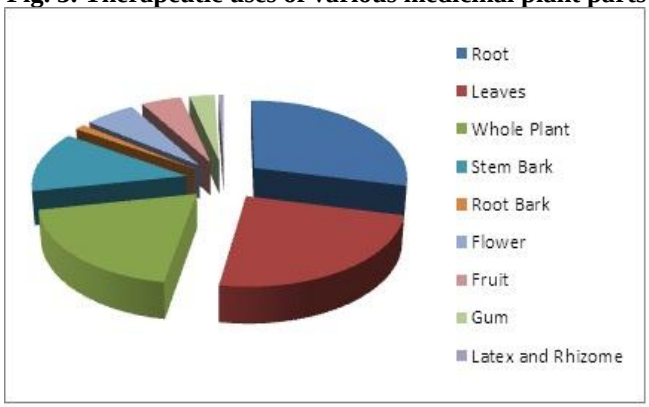
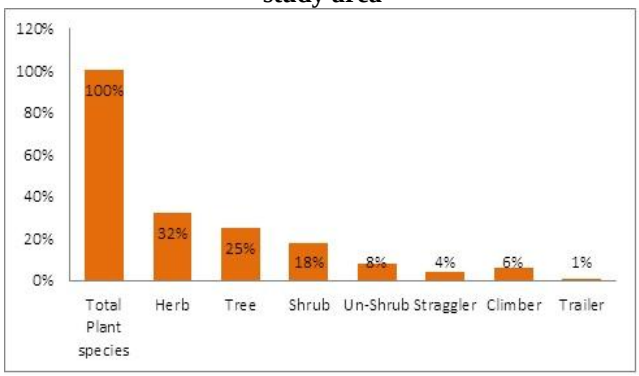


Fig. 4. Life form analysis of medicinal plants in the study area



CONCLUSION

The informations generated from the present study would provide some basic clues of medicinal properties of plants used by tribes and natives of kolli hills in Tamil Nadu, India. Herbal medicines are comparatively safer than synthetic drugs. The knowledge and experience of traditional medicinal practices are very valuable because it comes from thousands of years of trial and errors. Such ethnobotanical uses of plants have been actually drawn from their forerunners. Plant based traditional knowledge has become an organized tool in search for new sources of drugs and neutraceuticals and forms the basis of modern medicine and therapeutics. It may also provide a base to start the search of new compounds in phytochemistry, pharmacology and pharmacognosy. The ethnobotanical surveys can bring out many different clues for the development of drugs to treat various human ailments. Moreover, the over exploitation of these species in the name of medicine may lead some species ultimately to the disappearance in future. Therefore, an urgent attention should also be made on proper utilization and conservation of these medicinal plants for future generation.

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