

Diversity of Ethnomedicinal Plants and Their Therapeutic Uses in Western Ghats Region of Kodagu District, Karnataka, India

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Abstract Kodagu district situated in Central Western Ghats embraces a rich biodiversity and is the treasure house of ethnobotanical wealth. The district has one of the highest densities of community managed sacred groves in the world with rich floral and faunal diversity. The tribal people of this region possess a plethora of traditional plant knowledge and health care practices. An ethnobotanical survey was made in the forests of Kodagu district in which a total of 205 ethnomedicinal plant species belonging to 72 families have been documented. Information about medicinal plants and their therapeutic uses was gathered by interaction with traditional medicinal practitioners. Of the total species documented herbs were predominately used (70 species) followed by shrubs (57 species), trees (51 species) and climbers (21 species). They are used to treat a wide range of diseases such as diabetes, jaundice, skin diseases, snake bite, dysentery, hyperacidity, abortifacient, anthelmintic, antiseptic, stomachic, piles, fever, cough and so on. The medicine's formulation and mode of administration of these plants were recorded. The declining tribal population, impact of modernisation and pollution have threatened the indigenous knowledge even before the scientific validation of many therapeutic uses of these plants. This has necessitated protecting and conserving the medicinal plant diversity as well as traditional medicinal knowledge.

Keywords: *Ethnomedicine, Kodagu, medicinal plants, therapeutic uses*

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1. Introduction

Traditional medicine has been bonded to people since time immemorial. It is a well-established fact that medicinal plants play a vital role in the rural folk of India [1]. It is recorded that, about 90% of the people in rural India take the help of local health practitioners for the treatment of various diseases [2]. A good number of ethnomedicinal plants and their products have been exploited by ethnic people to treat various diseases and ailments. Indigenous medicines provide considerable economic benefits to these people [3]. It is estimated that a total of 80% of the population in developing countries and 60% of the world population depend on the traditional medicines mostly plant drugs for their primary health care needs [4]. Also, in India it is estimated that traditional healers use around 2500 plant species in the preparation of traditional medicine [5]. According to WHO, over 21,000 plant species are being used for their medicinal properties [6]. The tribal and indigenous communities of India were found to be using more than 10,000 species of wild plants for various purposes which include about 8,000 species for medicinal uses [6]. Medicinal plant

knowledge has been used throughout the world especially in the developing countries like India as a practice of using traditional herbal drugs available in the form of local plant species [7]. The widespread use of traditional medicine could be attributed to the cultural acceptability, economic viability and efficacy against certain ailments/diseases compared to modern allopathic drugs [8]. Documentation of ethnobotanical species for further scientific validation and subsequent processing for commercialization in India are also getting importance in recent decades. Western Ghats, the biodiversity hotspot [9] which is a medicinal plants emporium of India, harbours about 3500 plant species of therapeutic importance and many of them are being used till today [10]. In Karnataka several reports on ethnomedicinal plants have been recorded from Shivamogga, North Canara, Chikamagalur, Hassan and Mysore districts. Very few literatures were available on herbal folk medicines of Kodagu district [11,12,13,14,15]. Most of these studies have reported only ethnomedicinal practices specific to selected areas. However, updated information on their occurrence and therapeutic uses are lacking. To fill this lacuna the present investigations were undertaken in the Western Ghats region of Kodagu district and the findings are documented in the paper.

2. Study Area

Kodagu, also known by its anglicized name of Coorg is a small district of Karnataka State in southern India and it occupies about 4,100 Km² of land on the eastern slopes of the Western Ghats. The district lies between North latitude 11°56' to 12°56' and east longitude 75°22' to 76°11'. Thadiyandamol is the highest peak that reaches 1,750 meters above sea level and the lowest elevation is at 900 meters above sea level [16]. Kodagu has temperate climate with an average temperature of 15°C. The temperature varies from 11°C in December to about 28°C in the month of April and May. The average rainfall for the district is 2,692 mm per annum and on an average, there are about 111 rainy days in a year. Kodagu district embraces evergreen forest to scrub forest [17]. It is a habitat for more than ten different types of ethnic indigenous tribal groups commonly called 'Girijanas' (Yarvas, Jenukuruba, Bettakuruba, Maratha, Kaadukuruba etc...) [16].

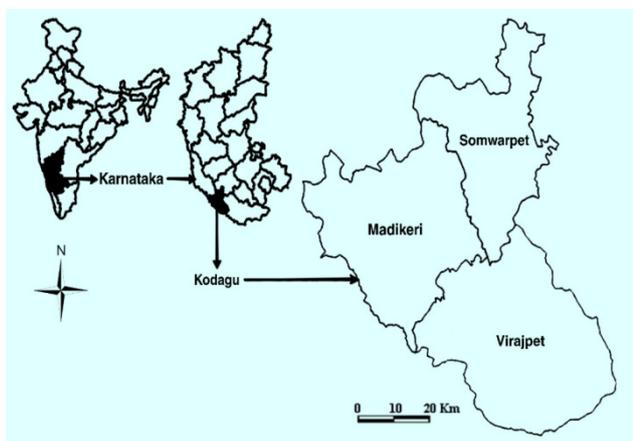


Figure 1. Map showing the study area

3. Materials and Methods

Periodic field exploration was undertaken in different bioregions of Virajpet, Somwarpet and Madikeri taluqs of Kodagu district. The survey was focused on identification, distribution and collection of medicinal plants in the

Western Ghats region of Kodagu. The plant specimens were collected and identified using local flora, available field keys, authentic literatures and with the help of taxonomists at University of Mysore. Information on the ethnomedicinal plants was gathered by interaction and interviews with ethnic groups of tribal hamlets and local healers in the region. A standard questionnaire was prepared to collect the information pertinent to the therapeutic uses and pharmacological formulations by the tribes, local vaidyas, and traditional medicinal healers. Data on the plant species, vernacular/local names, parts used, therapeutic uses and mode of administration are compiled and detailed in Table 1.

4. Result and Discussion

The findings of the study area have shown the occurrence of 205 ethnomedicinal plant species distributed among 72 families. The dominant families of ethnomedicinal plants recorded include Fabaceae with 21 species, Lamiaceae with 11 plant species, Apocyanaceae and Asteraceae with 9 species each, and Acanthaceae with 8 species. Data on each species provides information about botanical name, vernacular name, habit, parts used, therapeutic uses and mode of administration [Table 1]. Of the total species documented, herbs were predominately used (70 species) followed by shrubs/undershrubs (57 species), trees (51 species), climbers (21 species), trailer (1), twiner (1), liana (2), grass (1), and straggler (1) [Figure 2]. In general, richness of herbaceous species than any other life forms are higher in any natural community which may lead to more use of herbs for medicinal purposes than the species of other habits [6]. Leaves were the most frequently used plant part (86), followed by roots (42), bark (31), fruits (26), seeds (16), rhizome and sap (6), bulbs (3), and stem (2). For 26 species, whole plants were used for treating various ailments [Figure 3]. It was recorded that most of the practitioners administer oral mode of medicines. About 90 species were found to be given internally. External application of the plant extracts (64 species) on the affected parts is being followed in the treatment of wounds/cuts, skin diseases, inflammations and pains. About 51 species were used both internally and externally for treating ailments.

Table 1. Ethnomedicinal plants documented in Kodagu district and their therapeutic uses

SI No.	Botanical Name	Vernacular Name	Family	Habit	Parts used	Therapeutic Uses / Mode of administration
1	<i>Abrus precatorius</i> L.	Gulaganji	Fabaceae (Papilionaceae)	Climber	Seeds	Paralysis: Seed paste is applied externally on the affected portion till its cured. Antiseptic: Seed paste mixed with salt and charcoal is applied externally on the wound to stop bleeding and pus formation.
2	<i>Abutilon hirtum</i> (Lamk.) G. Don.	Gondekaai	Malvaceae	Shrub	Leaf	Leucorrhoea: The leaves are infused and taken orally.
3	<i>Abutilon indicum</i> Sweet	Bhramamudre	Malvaceae	Shrub	Root	Fever: Root decoction mixed with a pinch of turmeric is given orally twice a day for two days.
4	<i>Acacia concinna</i> DC.	Siegeballi	Fabaceae (Mimosaceae)	Climbing shrub	Leaves, fruits	Chest pain: Paste of young leaves is applied externally on the chest. Fish poison: Fruit powder is used as a remedy for fish poisoning.
5	<i>Acacia farnesiana</i> (L.) Willd.	Bannimara	Fabaceae (Mimosaceae)	Shrub	Bark	Stomach-ache: The bark is infused with a solvent and taken orally.
6	<i>Acacia leucophloea</i> (Roxb.) Willd.	Naibelle	Fabaceae (Mimosaceae)	Tree	Bark	Snake bite: The bark is infused with a solvent and taken orally.

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7	<i>Acacia torta</i> (Roxb.) Craib.	Puttaseegemele	Fabaceae (Mimosaceae)	Liana	Bark	Python bite: The bark is infused with a solvent and taken orally.
8	<i>Acalypha indica</i> L.	Kuppigida	Euphorbiaceae	Herb	Leaves	Dermatitis: Leaf paste mixed with a pinch of lime is applied externally to cure skin complaints like scabies and ring worms.
9	<i>Acorus calamus</i> L.	Baje	Acoraceae	Herb	Rhizome	Stomachic: A pinch of rhizome powder mixed with rice flour is cooked in cow's milk and given to 6-10 months aged baby to improve digestion and appetite.
10	<i>Achyranthes aspera</i> L.	Uttaranigida	Amaranthaceae	Herb	Leaf	Cattle wounds: Aqueous extract of the leaf is prepared and the paste is applied on the wound till it heals.
11	<i>Adenia hondala de Wilde</i>	Kadu gumbala	Passifloraceae	Climber	Root, timber, leaves	Antiseptic: Paste of root tuber is applied externally on wounds to prevent infection. Larvicidal: Root and leaf paste mixed with salt and charcoal is applied externally on the wounds to wipe out or kill maggots of insects in cattle.
12	<i>Aerva lanata</i> Juss	Bilihindisoppu	Amaranthaceae	Undershrub	Leaves, flower	Diabetes: 4-8 leaves are eaten raw in empty stomach in the morning. Herpes: Paste of the whole plant is applied externally on herpes for 9 days. Fever: Decoction of leaves and flowers is given orally thrice a day, till its cured.
13	<i>Agave americana</i> L.	Butale	Agavaceae	Shrub	Leaves	Dysentery: Infusion of leaf pulp is administered orally, twice a day. Fish poison: Leaves are crushed with ash and used as a remedy for fish poisoning.
14	<i>Ageratum conyzoides</i> L.	Ooralgida	Asteraceae	Herb	Leaf	Haemostat: The juice is squeezed out of the leaves and applied externally to stop bleeding.
15	<i>Albizia odoratissima</i> (L. f.) Bth.	Bilwara	Fabaceae (Mimosaceae)	Tree	Bark	Stomach-ache, dysentery: The bark is ground and infused in water and taken orally.
16	<i>Allium cepa</i> L.	Eerulli	Liliaceae	Herb	Bulb, leaves	Cough: A medium sized bulb is kept in hot ash for 10-20 min and eaten with a teaspoonful of honey. Diabetes: Two teaspoonful of leaf juice is taken orally in empty stomach in the morning, for two months.
17	<i>Allium sativum</i> L.	Belluli	Amaryllidaceae	Herb	Bulbs	Hyperacidity: Leaf bulb is eaten raw in empty stomach, early in the morning for 15 days. Respiratory disorders: Fumes from epidermal peel of bulbs is inhaled for asthma and cough. Migraine: Along with <i>S. varium</i> , these bulbs are used in migraine treatment. Cramps: Bulbs along with tobacco leaves are boiled /warmed in coconut oil, filtered and applied on affected body part to heal cramps.
18	<i>Allophylus cobbe</i> (L.) Raeusch.		Sapindaceae	Tree	Leaves	Ulcer: Leaf juice is taken orally to treat ulcer.
19	<i>Aloe vera</i> (L.) Burm. f.	Lolisara	Asphodelaceae	Herb	Leaves, Inner leaf gel	Diabetes: Leaf pulp is boiled in water and taken orally for a month. Dysentery: Leaf pulp is crushed in butter milk and given orally till recovery. Piles: Leaf pulp mixed with castor oil is applied externally on fistula, twice a day for about 10 days. Skin disorders: Leaf pulp crushed in Neem seed oil is applied externally on ring worms, scabies, boils and other skin diseases Hair growth: Inner leaf gel is used for good hair growth. Tension release: Inner leaf gel is boiled with coconut oil and applied on scalp to release tension. Expelling thorn: Leaf pulp applied locally to expel thorns from foot. Repelling mosquitoes: Whole plant is kept in huts, in order to repel mosquitoes.

Sl No.	Botanical Name	Vernacular Name	Family	Habit	Parts used	Therapeutic Uses / Mode of administration
20	<i>Alstonia scholaris</i> R. Br.	Maddale	Apocynaceae	Tree	Stem bark, leaves	Cholera: Bark is crushed in water, mixed with cow's urine and given orally twice a day for 10 days. Asthma: Fumes from the dried leaves is inhaled twice a day for 10 days. Diarrhoea: Seeds crushed in hot water is taken orally till its cured.
21	<i>Amaranthus spinosus</i> L.	Mulluharivesoppu	Amaranthaceae	Herb	Whole plant	Diabetes: Decoction of the whole plant mixed with salt and pepper powder is administered orally for about 20 days. Diuretic: Leaf infusion is given orally to promote flow of urine. Fever: Leaf juice mixed with ginger paste is taken orally.
22	<i>Anacardium occidentale</i> L.	Geru mara	Anacardiaceae	Tree	Seeds, tender leaves	Dyspnoea: Two-three drops of seed oil mixed with 20 ml of milk and taken for dyspnoea. One teaspoonful of mixture is taken 3-4 times a day till recovery. Blood-in-stool: Tender leaves along with cumin seeds, garlic is ground and mixed with curd and administered orally.
23	<i>Anagallis arvensis</i> L.	Suryakanthisoppu	Primulaceae	Herb	Whole plant	Cattle stomach gases: The leaves are infused in water and given orally.
24	<i>Andrographis alata</i> (Vahl.) Nees.	Uppalige	Acanthaceae	Herb	Leaf	Wound: Paste is prepared by aqueous extraction of leaves and applied externally.
25	<i>Andrographis paniculata</i> Nees.	Nela bevu	Acanthaceae	Herb	Whole plant	Diabetes: Leaf decoction is given orally for a period of one month. Vermifuge: Leaf juice is mixed with salt, few drops of lemon and given orally. Fever: Root, stem, leaves & flowers in equal quantity are crushed, mixed with cow's milk and taken orally thrice a day for 2 days. Diarrhoea: Root paste is mixed with tea decoction and administered orally.
26	<i>Andrographis serpyllifolia</i> W.	Kaasinasara	Acanthaceae	Herb	Whole plant	Cough: Plant paste is mixed with 2-3 drops of honey and given orally. Fever: Leaf infusion is administered orally twice a day for three days.
27	<i>Annona reticulata</i> L.	Seeta pala	Annonacea	Tree	Leaves, seeds	Diabetes: 2-4 tender leaves are eaten raw in empty stomach. Abortifacient: The seed powder is mixed with honey and given orally to induce abortion for birth control.
28	<i>Ardisea solanacea</i> Roxb.		Myrsinaceae	Large Shrub	Tender leaves	Gastritis: Juice of this plant's tender leaves along with juice of Guava leaves cures gastritis.
29	<i>Argyrea cuneata</i> Ker-Gawl.	Acche gida, Kallanegida	Convolvulaceae	Shrub	Root, Leaf	Anthelmintic: Root paste is mixed with lemon juice and taken orally to remove intestinal worms. Diabetes: Sap of leaves is mixed with a cup of water and given orally for 2-3 weeks. Skin cuts: Paste is prepared by aqueous extraction of leaves and applied externally.
30	<i>Argyrea elliptica</i> (Roth) Choisy.	Kongepattaballi	Convolvulaceae	Climber	Root	Toothache: Root juice is applied locally on the aching tooth. Stomach-ache: The leaves are infused and given orally.
31	<i>Arisaema leschenaultii</i> Bl.	Havina jola	Araceae	Herb	Root tubers, Fruits	Antiseptic: Paste of root tubers is applied externally on wounds till its cured. Snake bite: Fruit/leaf and root paste is applied on the spot of snake bite, thrice a day for about eight days.
32	<i>Aristolochia indica</i> L.	Eshwariberu	Aristolochiaceae	Climber	Roots	Abortifacient: Root paste is given orally to induce abortion for birth control. Antiseptic: Paste is prepared by aqueous extraction of root and applied externally.
33	<i>Artemisia vulgaris</i> L.	Davana	Asteraceae	Herb	Whole plant	Anthelmintic: Root decoction is taken orally to kill intestinal worms in empty stomach. Respiratory disorders: Fumes from the plant is inhaled to relieve asthma and bronchitis. Fever: Plant infusion is administered orally, twice a day till its cured.
34	<i>Argemone mexicana</i>	Datturi	Papaveraceae	Herb	Seeds	Eczema: Seed powder is mixed with

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	<i>L.</i>					groundnut oil and applied externally for a week. Snake bite: Seed paste is mixed with salt and 2-4 drops of lemon juice and applied externally as antidote on the spot of snake bite and scorpion sting.
35	<i>Artocarpus heterophyllus Lam.</i>	Halasu	Moraceae	Tree	Leaves	Body pain: Half dried leaves are warmed with oil, and kept on body parts to reduce body pain.
36	<i>Asclepias curassavica L.</i>	Haalu gida	Asclepiadaceae	Herb	Latex, leaves	Skin diseases: Milky latex is applied externally on ring worms, scabies and other skin diseases. Anthelmintic: Plant infusion in butter milk is given twice to remove out pinworms and round worms.
37	<i>Asparagus racemosus Willd.</i>	Talegunjari, Saralballe	Liliaceae	Climber	Root tubers	Stomach ache & Diarrhoea: Root tubers are crushed in butter milk and taken orally. Lactagogue: Root tubers are crushed in cow's milk and given orally to promote/increase flow of milk in nursing mother. Toothache: Tubers are heated and kept on the aching tooth. Rickets: Stem paste is rubbed on the body to cure rickets. Skin decaying: Tuber paste is prepared and applied on the skin.
38	<i>Asteracantha longifolia Nees.</i>	Kolike mullu	Acanthaceae	Herb	Tender leaves	Anaemia: Decoction of its young shoots and leaves of <i>Solanum nigrum</i> (Solanaceae) is given orally to the lactating mother, twice a day. Jaundice: Young leaves are crushed in butter milk and given orally before sunrise.
39	<i>Azadirachta indica A. Juss.</i>	Bevu	Meliaceae	Tree	Leaves, flowers, Seeds	Anthelmintic & Diabetes: 2-4 tender leaves are eaten raw in empty stomach. Chicken pox: The leaves, flowers of this plant and leaves of <i>Coleus amboinicus</i> (Lamiaceae) and 2-4 garlic bulbs is ground to paste and applied externally twice a day for a week. Bone fracture: A mixture of Neem seed oil, egg albumen and charcoal are applied externally on the affected portion in cattle. Herpes: Leaves are ground with cloves, cumin seeds and <i>P. amboinicus</i> leaves, and taken orally. Elephant-skin cut: Seed oil is applied externally on the cuts. Skin cuts: Paste of the leaves is applied externally.
40	<i>Bacopa monnieri Pennell.</i>	Nirubrahmi	Scrophulariaceae	Herb	Leaves	Epilepsy: A teaspoonful of leaf juice is given orally twice a day, for 2 days to treat epilepsy in children. Jaundice: Leaves are crushed with butter milk and taken orally for a week.
41	<i>Bambusa arundinacea Willd.</i>	Hebbiduru	Poaceae	Shrub	Young shoot	Anaemia: Tender shoots are used as vegetables. Body strength: Seeds are cooked and used as rice to improve body strength. Vet Expelling placenta: Leaves are fed to cows after delivery to expel the placenta.
42	<i>Barleria prionitis L.</i>	Gorastige	Acanthaceae	Shrub	Leaves	Antiseptic: Leaf paste mixed with lime juice is applied externally on wounds to stop bleeding and promote early healing.
43	<i>Bauhinia malabarica Roxb.</i>	Basavana pada	Fabaceae (Caesalpinaceae)	Tree	Stem bark	Diarrhoea: The stem bark is pounded in water, strained, mixed with freshly mulched cow's milk, honey, a pinch of turmeric powder, salt and is taken orally in empty stomach.
44	<i>Bidens biternata Sheriff.</i>	Ubbalu mullu	Asteraceae	Herb	Leaves	Antiseptic: Leaf paste is applied externally on wounds to stop bleeding and for early healing.
45	<i>Biophytum sensitivum DC.</i>	Nayinalage	Oxalidaceae	Herb	Root, leaves	Epilepsy: Root paste is mixed with honey and given orally once a day for 3 days. Diabetes: Leaf decoction is taken orally twice a day.

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46	<i>Blainvillea acmella</i> (L.) Philipson.	Kad-tumbe	Asteraceae	Herb	Leaf, seed	Skin cuts: Leaf paste is applied externally. Post-natal complaints: Infusion of seeds is taken orally.
47	<i>Blepharis asperrima</i> Nees.	Haridarehattu	Acanthaceae	Herb	Whole plant	Bone fracture: The whole plant is crushed, slightly warmed, mixed with egg albumen and applied externally on wounds for early healing of fractured bones.
48	<i>Boerhaavia diffusa</i> L.	Punarnava	Nyctaginaceae	Herb	Leaves	Diabetes: 2-4 leaves are eaten raw once a day. Jaundice: Leaf and flower paste is mixed in butter milk and given orally for a week.
49	<i>Bombax ceiba</i> L.	Burga	Bombacaceae	Tree	Bark	Dizziness: Bark paste is applied on the forehead during an attack of dizziness. Cattle wounds: Paste of the bark is applied externally.
50	<i>Bombax malabaricum</i> DC.	Booruga	Bombacaceae	Tree	Stem bark	Diarrhoea: The bark is pounded with salt, soaked in water for a while and strained. A teaspoonful of filtrate mixed with butter milk is given orally thrice a day.
51	<i>Bridelia retusa</i> (L.) Spr.	Gaje	Euphorbiaceae	Tree	Bark	Dysentery: Bark shreds are infused in water and taken orally.
52	<i>Bryophyllum pinnatum</i> Kurz.	Kaadu basale	Crassulaceae	Herb	Leaves	Diabetes & Anthelmintic: Leaf decoction is taken orally in empty stomach. Piles: The seed powder is mixed with leaf paste and applied externally on fistula, twice a day for a week.
53	<i>Butea monosperma</i> (Lam.) Taub.	Mutthuga	Fabaceae (Papilionaceae)	Tree	Leaves, stem bark, seeds	Diabetes: Leaf infusion is administered orally once a day. Jaundice: Stem bark is soaked in a glass of water overnight, filtered, mixed with freshly mulched cow's milk and given orally on alternate 3 days. Vermifuge: The crushed seeds are taken orally to get rid of worms from intestine. Dysentery: Bark extract is used to treat dysentery.
54	<i>Caesalpinia bonducella</i> Flem.	Gajjuga	Fabaceae (Caesalpinaceae)	Shrub	Seeds	Anti-rabies: Seed paste is mixed with sandal paste, lemon juice and applied on the mad dog bitten spot, twice a day for seven days. Sexual debility: A pinch of seed powder is mixed in cow's milk and taken orally once a to increase sexual appetite. Skin diseases: Leaf paste is mixed with sandal wood paste, turmeric and applied externally on affected portion in the treatment of herpes, scabies, eczema, and ring worms.
55	<i>Calotropis gigantea</i> R. Br	Yekka	Asclepiadaceae	Shrub	Latex	Scabies: Latex is mixed with mustard oil and applied externally twice a day for 3 days.
56	<i>Calycopteris floribunda</i> Lam.	Yengiri	Combretaceae	Shrub	Fruit	Ringworm infestation: The fruits are made into a paste and applied externally on the infested area.
57	<i>Canna indica</i> L.	Sobane hu gida	Cannaceae	Shrub	Rhizome	Dyspepsia: The cooked rhizome is used as a vegetable in the treatment of indigestion or stomach upset.
58	<i>Capsicum frutescens</i> L.	Gaandhari menasu	Solanaceae	Herb	Fruits	Common cold: The fruits are ground with garlic, ginger, black pepper, salt and is used as chutney. Vermicide: The fruits are ground with salt, charcoal and is applied externally to wipe out maggots from the wounds of cattle.
59	<i>Careya arborea</i> Roxb.	Gabbal, Gobbalu	Lecythidaceae	Tree	Stem bark	Toothache: Stem bark along with the bark of <i>Phyllanthus emblica</i> in 1:1 proportion is boiled in water and the steam is inhaled by mouth as a cure for toothache. Skin diseases: Bark powder is boiled in water and the extract is taken orally to cure skin problems.
60	<i>Carica papaya</i> L.	Pappayi	Caricaceae	Tree	Fruits, leaves	Anthelmintic: The unripe fruits are eaten raw to eradicate intestinal worms mainly pinworms and round worms. Abortifacient: The young fruits are eaten raw to induce abortion for birth control. Diabetes: The leaf decoction is given orally.

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61	<i>Cassia alata</i> L.	Anechakka	Fabaceae (Caesalpinacea)	Shrub	Bark	Cattle alopecia: Bark shreds are made into a paste and applied externally on the infested area.
62	<i>Cassia auriculata</i> L.	Avarike	Fabaceae (Caesalpinaceae)	Shrub	Leaves, seeds	Anthelmintic & Diabetes: The leaf/seed powder decoction is given orally once a day.
63	<i>Cassia fistula</i> L.	Kakke	Fabaceae (Caesalpinaceae)	Tree	Bark, fruit	Dysentery: The stem bark is crushed in water and taken orally. Piles: Fruit pulp is squashed in water and given orally twice a day for 10-15 days.
64	<i>Catharanthus roseus</i> G. Don.	Nithya pushpa	Apocynaceae	Shrub	Leaves, root	Diabetes: 2-4 leaves and flowers are eaten raw in empty stomach once a day. Snake bite: Root paste is mixed with pepper, lime and applied externally on the snake bitten spot thrice a day.
65	<i>Catunaregam spinosa</i> (Thunb.) Tiruv.	Karekaai	Rubiaceae	Tree	Roots	Headache: Roots paste is applied on the forehead. Thirst: 2-3 teaspoonful of root paste is taken orally to quench or to avoid more thirst in jungle. Boils: Roots are made into a paste and applied externally on the boils.
66	<i>Centella asiatica</i> (L.) Urb.	Ondelaga	Apiaceae	Herb	Leaves	Hypertension: 4-8 leaves are eaten raw daily in the morning in empty stomach. Jaundice: Leaves are crushed in butter milk and administered orally in empty stomach before sunrise for 5 days. Gastritis: Leaves are ground with cumin and milk and orally administered.
67	<i>Centratherum anthelminticum</i> O. Kze.	Kaadu jirige	Asteraceae	Herb	Leaves, seeds	Anthelmintic & Diabetes: The leaf decoction is taken orally. Fever: The seed decoction is administered orally twice a day for two days
68	<i>Chenopodium ambrosioides</i> L.	Sonkina gida, Galisoppu	Chenopodiaceae	Herb	Whole plant	Anthelmintic: Leaf juice is mixed with honey and given orally in empty stomach. Skin allergy: The whole plant is crushed with leaves of <i>Coleus amboinicus</i> and <i>Vitex negundo</i> and the juice is applied externally. Skin swellings: Leaf paste is applied on the swollen area. Dysmenorrhoea: Infusion of leaves is taken orally.
69	<i>Cinnamomum iners</i> W.	Yalaga chakke	Lauraceae	Tree	Stem bark	Jaundice: The pounded bark is soaked in water overnight and filtered through a thin white cloth. Fried rice powder is added to the boiling filtrate and kept out in open air for a night and taken orally as food, thrice a day till its cured.
70	<i>Cinnamomum malabattrum</i> (Burm.f.) Bl.	Dalchinni	Lauraceae	Tree	Bark	Dysentery: Bark extract is taken orally.
71	<i>Cinnamomum spp</i>	Kadu sambarugida	Lauraceae	Tree	Leaves, bark	Herpes: Leaves and bark are grounded with white rice washed water and applied on the body where the Herpes boils are found.
72	<i>Cippadessa baccifera</i> (Roth) Miq.	Mandalmarigida	Meliaceae	Largeshrub/ small tree	Leaf, root	Snake-bite: Infusion of leaves and root is prepared and fed orally for few days. Wound healing: Root extract is applied on wounds.
73	<i>Citrus aurantium</i> L.	Hiraligida	Rutaceae	Tree	Fruit rind	Diabetes: The shade dried powdered fruit rind along with a bit of ginger is boiled in water and taken orally in empty stomach once a day.
74	<i>Citrus medica</i> L.	Limbu	Rutaceae	Tree	Fruit	Nail side infection: Infected finger is inserted inside the fruit for half an hour and this is repeated.
75	<i>Clematis gouriana</i> Roxb.	Talejadari	Ranunculaceae	Climber	Leaves	Veneral diseases: Leaf paste is mixed with cow's urine and given orally for the treatment of gonorrhoea and syphilis. Skin burns: Leaf paste is applied externally on the burnt area until it heals.
76	<i>Clerodendron inerme</i> Gaertn.	Vishaparihari	Verbenaceae	Shrub	Leaves, root	Anthelmintic & Diabetes: The shade dried coarse powdered leaf decoction is administered orally. Snake bite: Root paste is mixed with lime and applied on the snake bitten spot, daily twice for a week.
77	<i>Clitoria ternatea</i> L.	Gokarnahambu	Fabaceae	Slender vine	Stem	Cattle neck swelling: Stem is tied around the neck until swelling reduces.

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78	<i>Coccinia grandis</i> (L.) Voight.	Tondekaai	Cucurbitaceae	Climber	Leaf	Cattle indigestion: Infusion of leaf is fed orally two times a day.
79	<i>Coleus amboinicus</i> Lour.	Doddapatre	Lamiaceae	Shrub	Leaves	Skin allergy: The leaf crushed in water is applied externally on the affected portion. Epilepsy: A teaspoonful of plant juice is given orally once a day for three days.
80	<i>Costus speciosus</i> Sm.	Hulikabbu	Costaceae	Herb	Rhizome	Diarrhoea: The rhizome is ground to paste, mixed with butter milk and taken orally.
81	<i>Crossandra infundibuliformis</i> L. Nees.		Acanthaceae	Shrub	Leaves	Expelling thorns: Leaf juice is applied locally to surface thorns from foot.
82	<i>Cryptolepis buchanani</i> R. & S.	Isubu balli	Asclepiadaceae	Shrub	Latex	Eczema & scabies: A piece of cloth is dipped in milky latex of this plant, burnt ash, mixed with coconut oil and applied externally on the affected portion once a day for 5 days.
83	<i>Cucumis prophetarum</i> L.	Kahisowthekai	Cucurbitaceae	Trailer	Fruit	Emetic: The fruit is squashed in cow's urine and given orally to induce vomiting and to remove out poison.
84	<i>Cuminum cyminum</i> L.	Jeerige	Apiaceae	Herb	Fruits	Hyperacidity: The seed decoction is taken orally twice a day for 10-15 days.
85	<i>Curculigo orchioides</i> Gaertn.	Nela tengu	Amaryllidaceae	Herb	Roots	Antidote: Tuberous root is ground with lemon juice and salt is applied externally on the bitten spot for snake bite and spider bite (nelaguruva - a poisonous spider), twice a day for 8 days.
86	<i>Curcuma aromatica</i> Sal.	Kadu arishina	Zingiberaceae	Herb	Rhizome	Antiseptic: The rhizome juice is applied externally on wounds for early healing.
87	<i>Curcuma longa</i> L.	Arishina	Zingiberaceae	Herb	Tuber	Spider bite: Tuber is used to cure spider bite along with <i>Occimum sanctum</i> . Pimples: Tuber is ground with tender leaves of Guava and <i>Occimum sanctum</i> leaves and the paste is applied on pimples.
88	<i>Cuscuta reflexa</i> Roxb.	Swarnalatha	Convolvulaceae	Climber	Whole plant	Epilepsy: Paste of the whole plant is mixed with a teaspoonful of honey and given orally once a day for 3 days.
89	<i>Cyathula prostrata</i> Bl.	Kaduhonagane soppu	Amaranthaceae	Herb	Whole plant	Diarrhoea: The plant decoction is given orally till its cured. Scabies: The root paste is mixed with mustard oil and applied externally on affected portion till it is cured.
90	<i>Cyclea peltata</i> Hk. & Th.	Kongepatte habbu	Menispermaceae	Climber	Whole plant	Diabetes: The plant decoction is orally taken. Leucorrhoea: The leaf paste is mixed with rice washed water and taken orally 2-3 times a day for three days. Sprains: The whole plant is crushed in water and applied on the injured ligament to relieve pain and inflammation.
91	<i>Cynodon dactylon</i> (L.) Pers.	Garike hullu	Poaceae	Grass	Whole plant	Diabetes: Whole plant is ground with cumin seeds, mixed with salt and honey and taken orally for diabetic treatment.
92	<i>Cynoglossum zeylanicum</i> (Hornem.)	Utrane	Boraginaceae	Herb	Root	Snake-bite: Infusion of root is prepared and fed orally for few days.
93	<i>Datura metel</i> L.	Daturigida	Solanaceae	Shrub	Fruit	Cattle wounds: Fruit is made into paste and applied externally on the wounds till it heal.
94	<i>Datura stramonium</i> L.	Ummatti	Solanaceae	Shrub	Leaves, fruits	Herpes: The leaf and fruit paste are applied externally on affected portion to cure viral infections such as herpes and measles once a day for 7 days.
95	<i>Dendrophthoe falcata</i> (L.f.) Eit.	Banjarike	Loranthaceae	Parasitic subshrub	Leaves	Migraine: Leaf paste is applied externally on the forehead to treat partial headache.
96	<i>Desmodium pulchellum</i> Benth.	Kadugida	Fabaceae (Papilionaceae)	Shrub	Leaves	Menorrhagia: Leaf decoction is mixed with paste of hibiscus flower and given orally twice a day for 3 days to control profuse or prolonged menstruation.
97	<i>Dioscorea bulbifera</i> L.	Heggenasu	Dioscoreaceae	Climber	Bulbils	Piles: Bulbils are used as vegetables for a week to treat bleeding piles.
98	<i>Diospyros montana</i> Roxb	Jagalaganti mara	Ebenaceae	Tree	Stem bark, leaves	Jaundice: The crushed stem bark is soaked in water overnight, filtered and the filtrate is mixed with sugar cane juice/cow's milk and taken orally, once a day for 3-5 days. Fish poisoning: The smashed stem bark is used as a remedy for fish poisoning. Wound healing: Leaves are ground with lime and applied on the wounds.

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99	<i>Eclipta prostrata</i> L.	Garagasada soppu	Asteraceae	Herb	Whole plant	Diabetes: Decoction of whole plant is administered orally in empty stomach once a day for a month. Antiseptic: Leaf paste is applied on the wounds to stop bleeding and infection.
100	<i>Elephantopus scaber</i> L.	Nayinalage	Asteraceae	Herb	Whole plant	Antiseptic: Dried powdered plant is applied on the wounds to prevent microbial infections, till it is cured.
101	<i>Emblica officinalis</i> Gaertn.	Nullikai	Euphorbiaceae	Tree	Fruit	Menorrhagia: Aqueous extract of fruit is orally fed for three days.
102	<i>Ervatamia heyneana</i> Cooke.	Kadunandibattalu	Apocynaceae	Tree	Latex, leaves, root	Eczema: A piece of cloth dipped in the latex is burnt to ash, mixed with coconut oil and applied on affected portion, daily twice for a week. Diabetes: The decoction of dried leaf powder is taken orally. Snake bite: Root paste is mixed with lemon juice and applied on the snake bitten spot.
103	<i>Eryngium foetidum</i> L.	Kaadu sambara	Apiaceae	Herb	Whole plant	Diarrhoea, stomachic: Leaf paste is mixed with black pepper, salt and is taken orally 2-4 times a day for 7 days. Antiseptic: Paste of whole plant along with lime is applied on wounds.
104	<i>Erythrina suberosa</i> Roxb.	Pangaremara	Fabaceae	Tree	Root	Cattle wounds: Paste of the root is made and applied externally on the wounds until it heals.
105	<i>Erythrina variegata</i> L.	Panuvula, Pangarpatti	Fabaceae (Papilionaceae)	Tree	Seeds, bark, leaf, flower	Eczema: Seed powder is mixed with castor oil and few drops of lime and applied externally on the affected portion twice a day for 5 days. Giddiness: Bark is pounded with 2 cloves of garlic and little water; paste is rubbed over the body to remove giddiness. Itching of skin: Bark and leaf is ground into a paste and applied externally. Aching of mammary glands: The flower is cooked as a vegetable and eaten.
106	<i>Euphorbia laeta</i> Heyne ex Roth.	Halugida, Haluni	Euphorbiaceae	Herb	Whole plant, latex	Skin diseases: Paste of whole plant is mixed with lemon juice and applied on the affected portion to cure skin infections such as eczema, scabies, and ring worms. Boils: Freshly removed latex is applied externally on the boils.
107	<i>Exacum bicolor</i> Roxb.	Bettadaneeliu	Gentianaceae	Herb	Whole plant	Asthma: Decoction of whole plant along with honey is taken orally 4-5 times a day for 10 days.
108	<i>Ficus religiosa</i> L.	Aralimara	Moraceae	Tree	Bark	Menorrhagia: Bark infusion is prepared and taken orally for three days.
109	<i>Garcinia gummigutta</i> Roxb.	Hampuli mara	Cluciaceae	Herb	Fruits	Eczema: The juice extracted from the fruits is applied externally. Anti-cholesterolemic: Consumption of fruits prevents cholesterol deposition and obesity.
110	<i>Gloriosa superba</i> L.	Gowri huvu	Liliaceae	Climber	Root tuber	Snake bite: Root is crushed with salt and applied on the snake bitten spot. Labour pain: Root paste is mixed with coconut oil and massaged on the belly of pregnant women at the time of delivery to induce easy childbirth. Larvicide: Root paste is mixed with charcoal and applied on the wounds to wipe out maggots in cattle.
111	<i>Grewia damine</i> Gaertn.	Gharkegida	Tiliaceae	Shrub	Root	Boils: Root paste is applied externally.
112	<i>Grewia tiliifolia</i> Vahl.	Thadasalu	Tiliaceae	Tree	Root, bark	Expelling placenta: Root infusion is fed orally. White hair prevention: Bark extract is used in the prevention of white hair.
113	<i>Guizotia abyssinica</i> (L. f.) Cass.	Ram-til	Asteraceae	Herb	Root	Cattle neck inflammation: Root paste is applied externally until the inflammation reduces.
114	<i>Gymnema sylvestre</i> R. Br.	Madhu nashini	Asclepiadaceae	Climber	Leaves	Diabetes: 2-3 leaves are eaten raw once a day. Antiseptic: Leaf paste is applied on the wounds for early healing. Cattle neck wounds: Leaf paste is applied externally until it heals.

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115	<i>Hackelochloa grannularis</i> (L.) O. Ktze.	Hulluri	Poaceae	Herb	Whole plant	Bruise: Whole plant is ground into a paste and applied externally on the affected area.
116	<i>Hedychium coronarium</i> Koen.	Kage suli	Zingiberaceae	Herb	Rhizome	Sexual debility: In combination with honey, the rhizome paste is taken orally. Antiseptic: Rhizome and leaf paste is applied on the wounds to prevent microbial infections.
117	<i>Helicteres isora</i> L.	Balamuri	Malvaceae	Large Shrub	Roots	Dysentery: Roots are used to cure dysentery in children. Cough: Leaf juice is used to cure cough.
118	<i>Heliotropium indicum</i> L.	Chelu kondi	Boraginaceae	Herb	Leaves, flowers	Skin disorders: The plant is crushed with sandal wood and lemon juice and is applied on pimples, ring worms and scabies.
119	<i>Hemidesmus indicus</i> R. Br.	Sogade	Asclepiadaceae	Slender twiner	Leaves, roots	Diuretics: Leaf decoction is given orally twice a day for a week. Stomachic: Root decoction with a pinch of common salt is taken orally. Fever: Leaf decoction is taken orally twice a day for two days.
120	<i>Heracleum rigens</i> Wall	Gaali beejja	Apiaceae	Herb	Roots, fruits	Diuretics: The decoction of root is used to promote flow of urine. Asthma: The fumes from the fruits is inhaled once a day for a week. Antiseptic: Root paste is mixed with lemon juice and applied on the wounds.
121	<i>Hibiscus rosa-sinensis</i> L.	Dasavala	Malvaceae	Shrub	Flowers	Leucorrhoea: The flower paste is mixed with cow's milk and taken orally.
122	<i>Holerrhena pubescens</i> Wall. Ex. G. Don		Apocynaceae	Tree	Root	Skin disorders: Root part is used in the treatment of skin disorders.
123	<i>Hydrocotyle javanica</i> Thunb.	Uraganasoppu	Apiaceae	Herb	Whole plant	Dysentery: The whole plant is crushed in butter milk and taken orally till its cured. Menorrhagia: The leaves of this plant and leaves of Adiantum (a fern) is crushed in butter milk and taken orally. Fish poisoning: The whole plant is pounded with ash and used as a remedy for fish poisoning.
124	<i>Hyptis suaveolens</i> Poit.	Nayi tulasi	Lamiaceae	Shrub	Leaves	Fever & Rheumatic pain: The leaf decoction is taken orally twice a day for 3 days.
125	<i>Indigofera cassioides</i> Rottl.	Gogge	Fabaceae	Shrub	Flowers	Stomach-ache: Flower infusion is taken orally twice a day.
126	<i>Ixora coccinea</i> L.	Kapala hoo	Rubiaceae	Shrub	Flowers	Conception: Flower infusion is taken orally.
127	<i>Jasminum malabaricum</i> W.	Kadu mallige	Oleaceae	Shrub	Stem sap	Cataract: Stem Juice is used for the treatment of cataract. Conjunctivitis: Stem sap mixed with breast milk is poured into the eyes 4-5 times a day for 3-4 days as a remedy against conjunctivitis. Eye complaints: Stem sap is poured into the eyes for removing foreign particles.
128	<i>Jatropha curcas</i> L.	Kacchi	Euphorbiaceae	Shrub	Latex, leaves stem, seeds	Antiseptic: The watery latex is applied on wounds to stop bleeding. Abortifacient: The seeds are crushed in water and taken orally to induce abortion. Hyperacidity: Two drops of watery latex is diluted in a cup of water and taken orally in empty stomach for three days. Fish poisoning: The whole plant is pounded with ash and used as a remedy for fish poisoning.
129	<i>Justicia wynaadensis</i> Heyne.	Madubana soppu	Acanthaceae	Herb/ Subshrub	Leaves, stem	Asthma: 500 g of whole plant is pounded and boiled in 2 L of water, reduced to half litre, to which equal amount of honey is added. Small amount of this is taken 4-5 times a day for a week. Immunity: 1 kg of whole plant is boiled in 5 L of water, reduced to 3 L and the decoction is used to cook rice called madhubanna. In combination with honey and ghee, it is consumed as a special food.
130	<i>Kalanchoe pinnata</i> (Lam.) Pers.	Soppufuti	Crassulaceae	Herb	Leaves	Mumps: Leaf juice mixed with lime and the mixture is applied locally on mumps. Boils: Paste of leaves is applied externally.

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131	<i>Lagenaria siceraria</i> Standl.	Sorekayi	Cucurbitaceae	Climber	Leaves	Anthelmintic & Anti diabetic: The leaf juice is taken orally in empty stomach.
132	<i>Lantana camara</i> L.	Unni gida	Verbenaceae	Shrub	Leaves, fruits	Anticoagulant: Leaf juice is applied on wounds to stop bleeding. Piles: The fruits are crushed in cow's milk and given orally twice a day till its cured.
133	<i>Lagerstroemia microcarpa</i> Wt.	Nandimara	Lythraceae	Tree	Bark	Skin burns: Bark paste is applied externally until the burn heals.
134	<i>Leonurus sibiricus</i> L.	Kempu tumbe	Lamiaceae	Herb	Whole plant	Leucorrhoea: Leaf paste is mixed with cow's milk and taken orally twice a day. Labour pain: Paste of whole plant is mixed with castor oil and massaged on the belly, at the time of childbirth to promote easy labour.
135	<i>Leucas aspera</i> Spr.	Tumbe	Lamiaceae	Herb	Whole plant, leaves	Cough & Fever: Dried leaf powder is mixed with honey and licked to relieve cough and fever in children. Antidote: Root paste is mixed with black pepper and applied on the spot of snake bite/scorpion sting.
136	<i>Leucas linifolia</i> Spr.	Kadu tumbe	Lamiaceae	Herb	Leaves, flowers	Arthritis: Equal amount of leaves and flowers of <i>Leucas linifolia</i> and <i>Solanum surattense</i> are ground together, warmed and applied on the swellings of joints for quick remedy.
137	<i>Leucas zeylanica</i> (L) R.Br.	Thumbe	Lamiaceae	Herb	Whole plant	Scorpion bite: Leaves are ground and the extract is applied on scorpion bite. Hair growth: Whole plant's extract is used for good hair growth.
138	<i>Lippia nodiflora</i> Mich.	Nela hippali	Verbenaceae	Herb	Whole plant	Diabetes: The decoction of whole plant is taken orally. Antiseptic: Plant paste is mixed with asafoetida and applied on wounds.
139	<i>Litsea floribunda</i> Gamb.	Kaduchakke mara	Lauraceae	Tree	Bark	Malaria: Stem decoction is taken orally twice a day for 4-5 days.
140	<i>Lobelia nicotianaefolia</i> Heyne.	Kadu hogesoppu	Companulaceae	Tree	Latex	Snake bite: Latex is applied on snake bitten spot. Skin infections: Leaf paste is applied externally on the affected portion to treat skin diseases like eczema, scabies and sores. Insecticide: Leaves are fumigated as mosquito repellent.
141	<i>Ludwigia adscendens</i> (L.) Hara.	Kesarannu	Onagraceae	Floating Herb	Leaf, fruit, flower	Cattle wounds: Leaf, fruit and flower is ground into a paste and applied externally on the wound.
142	<i>Madhuca indica</i> Gmel.	Hippe	Sapotaceae	Tree	Leaves, flowers, seeds	Anthelmintic & Diabetes: Decoction of dry leaves and flowers is taken orally. Piles: 25 g of seed powder is boiled with 4 cups of water, reduced to one cup, strained and taken orally in the morning and evening.
143	<i>Mangifera indica</i> L.	Mavu	Anacardiaceae	Tree	Stem bark	Dysentery: The stem is crushed in water, strained, mixed with freshly mulched cow's milk and taken orally.
144	<i>Memecylon umbellatum</i> Burm. F.	Uddale	Melastomataceae	Tree	Leaf	Snake-bite: Leaf infusion is taken orally twice a day for five days.
145	<i>Mentha arvensis</i> L.	Pudina	Lamiaceae	Herb	Leaves	Stomachic: Leaf juice is mixed with honey and taken orally. Hyperacidity: 2-4 raw leaves are chewed in empty stomach once a day for a week.
146	<i>Mimosa pudica</i> L.	Nachike mullu	Fabaceae (Mimosaceae)	Herb	Root, leaves	Diarrhoea: Root paste is mixed with a pinch of salt and 2-4 drops of lemon juice and given orally. Wound healing: Leaves and flowers are ground with coconut oil and applied on wounds. Hair complaints: Leaf powder is mixed with coconut oil and applied on hair for early greying of hair. Body resistance: A teacup of whole plant decoction it is taken early in the morning for 8 days to increase resistance power. Goitre: Leaf paste is applied on goitre for two days. Blood in breast milk and dysmenorrhoea: Infusion of leaf is fed orally.

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147	<i>Mitragyna parvifolia</i> (Roxb.) Korth.	Neerkadamba	Rubiaceae	Tree	Bark	Snake-bite: Bark infusion is taken orally.
148	<i>Momordica charantia</i> L.	Kahi hagala kayi	Cucurbitaceae	Climber	Leaves, fruits	Diabetes & piles: Fruit and leaf juice is taken orally once a day for a month. Post-natal complaints: Leaf infusion is taken orally for a week.
149	<i>Momordica dioica</i> Willd.	Madi hagala kayi	Cucurbitaceae	Climber	Leaves, root tuber	Piles: Leaf juice is taken orally once a day for 15-20 days. Snake bite: Root tuber is pounded with lime and applied externally on snake bitten spot thrice a day for 7 days. Cancer: Root tuber is used to treat cancer.
150	<i>Mucuna prurita</i> Hook.	Nasugunni	Fabaceae (Papilionaceae)	Small tree/shrub	Pod hairs, seeds	Anthelmintic: The pod hairs are ground to paste in water and given orally to kill intestinal worms. Leucoderma: Seed powder is mixed with sandal powder and water and the paste is applied externally on affected portion of skin twice a day for 20 days.
151	<i>Murraya koenigii</i> (L.) Spreng.	Kariberu	Rutaceae	Small tree/shrub	Leaves	Conception: Aqueous extract of leaves is taken orally for few days. Food poison: Leaves are ground in water and the extract is taken orally a remedy for food poison.
152	<i>Murraya paniculata</i> Jack.	Kadu karibevu	Rutaceae	Shrub	Leaves	Diabetes: Leaf decoction is taken orally once a day for 15 days. Mouth ulcers: Leaves are chewed with clove to be relieved of mouth ulcers.
153	<i>Musa paradisiacal</i> L.	Baale	Musaceae	Herb	Leaf bases, inflorescence	Urino-genital diseases: The central tender sheathing leaf bases of pseudo-stem are cut into small pieces, semi-cooked and used as vegetables in the treatment of Leucorrhoea, Dysmenorrhoea and renal stones. Ulcers: Inflorescence is used in treatment of ulcers.
154	<i>Naravelia zeylanica</i> DC.	Bellullibeelu	Ranunculaceae	Climbing shrub	Leaves	Scabies & eczema: The leaf paste is mixed with lemon juice and coconut oil and applied externally on the affected portion for a week.
155	<i>Oroxylum indicum</i> Vent.	Patha gani	Bignoniaceae	Tree	Root	Epilepsy: Decoction of the root bark is given orally once a day for a week. Chicken pox: The stem bark of <i>Oroxylum indicum</i> , <i>Santalum album</i> and <i>Vitex negundo</i> is pounded with water and applied externally twice a day for 5 days.
156	<i>Ocimum basilicum</i> L.	Kamakasturi	Lamiaceae	Herb	Leaves, lowers	Fever: The decoction of leaves and flowers is taken orally. Skin allergy: Leaf paste is diluted in cow's urine and applied externally.
157	<i>Ocimum sanctum</i> L.	Karee tulsi	Lamiaceae	Herb	Leaves	Early greying of hairs: Leaf juice is applied on early greying of hairs. Spider bite: (White thulasi) Leaves along with turmeric tuber is ground with water and applied on spider bite. Wasp bit: (Black thulasi) Leaves are ground and the paste is applied on wasp bite. Eczema: (White thulasi) Leaf juice is used to cure eczema. Measles: Leaves are ground along with curcuma tuber, <i>R.graveolens</i> leaves and <i>P.amboinicus</i> leaves and one tea spoon of it is taken orally and the remaining extract is applied on body to cure measles.
158	<i>Oxalis corniculata</i> L.	Majjige huli soppu	Oxalidaceae	Herb	Leaves, fruits	Stomachic: The leaves and fruits are eaten raw for easy digestion. Dysentery: Plant paste is mixed with cow's milk and taken orally till its cured.
159	<i>Passiflora subpeltata</i> Ortega.	Kamaleballi	Passifloraceae	Climber	Leaves, fruits	Jaundice: Leaf/fruit paste is mixed with butter milk/sugar cane juice and taken orally twice a day for 5 days.
160	<i>Pergularia daemia</i> (Forsk.) Chiov.	Kontagesoppu	Asclepiadaceae	Climber	Leaf	Alopecia: Leaf paste is applied externally.
161	<i>Phyllanthus niruri</i> L.	Nelanalli	Euphorbiaceae	Herb	Whole plant	Jaundice: The paste of whole plant is mixed with freshly mulched cow's milk and administered orally thrice a day for 10 days.

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162	<i>Pimpinella heyneana</i> Wall.	Kadu sabsige soppu	Apiaceae	Herb	Root	Diarrhoea: The root paste is mixed with jaggery and salt and taken orally till its cured. Antiseptic: The root paste is mixed with lime and applied on the wounds for early healing.
163	<i>Piper nigrum</i> L.	Kari menasu	Piperaceae	Climber	Leaves, fruits, seeds	Common cold & cough: The pounded seeds are mixed with ginger and honey and taken orally for 3-5 days. Diabetes: Decoction of leaves and seeds is administered orally. Food poison: Pepper powder is mixed with honey and taken orally to treat food poison.
164	<i>Platanthera susannae</i> Lindl.	Nela site huvu	Orchidaceae	Herb	Root tubers	Snake bite: In combination with lime and salt, the paste of root tubers is applied on the snake bitten area.
165	<i>Plectranthus amboinicus</i> (Lour.) Spreng.	Doddapathre	Lamiaceae	Herb	Leaves	Measles: Leaves are ground along with curcuma tuber, <i>R. graveolens</i> leaves and <i>O. sanctum</i> leaves. One tea spoon of the extract is taken orally and remaining applied on body to cure measles.
166	<i>Plumbago zeylanica</i> L.	Chitra mula	Plumbaginaceae	Shrub	Roots	Abortifacient: Leaf paste is mixed with sesame oil and given orally to induce abortion. Sexual debility: Root and leaf paste is mixed with butter and honey and given to men to make them sexually potent.
167	<i>Plumeria rubra</i> L.	Deva kanigile	Apocynaceae	Tree	Latex, bark	Eczema: A piece of white cloth is soaked in the latex and burnt to ash. The ash is mixed with cow's butter and applied externally on the affected parts for a week. Wound healing: Bark paste is applied on wounds.
168	<i>Polyalthia longifolia</i> (Sonner.)	Kanthri	Annonaceae	Tree	Bark	Menorrhagia: Infusion of bark is taken orally for three days.
169	<i>Pongamia pinnata</i> (L) Pierre.	Hongemara	Fabaceae	Tree	Bark, seed oil	Giddiness: Extract of its bark pounded with garlic is rubbed on the body to check giddiness. Body ache: Mixture of bark juice with kerosene in 1:1 proportion is rubbed on the body to cure body ache. Cooling effect: Seed oil is applied on the head for having cooling effects. Mosquito repellent: Seed oil is mixed with kerosene in 1:1 proportion and used in lamp for repelling mosquitoes.
170	<i>Pothos scandens</i> L.	Sokina maddu	Araceae	Climber	Stem	Skin allergy: The stem juice is diluted in water and applied externally. Herpes: The stem juice is applied externally on herpes once a day till its cured.
171	<i>Psidium guajava</i> L.	Seebe	Myrtaceae	Tree	Leaves	Dysentery: Tender leaves are chewed with a small piece of black jaggery and salt to control blood mixed dysentery. Blood-in-stool, diarrhoea, fatigue: Tender leaves with cumin seeds and garlic are ground and mixed with curd and administered orally. Tender leaves are ground with curcuma tuber and <i>O. sanctum</i> leaves and the paste is applied on pimples.
172	<i>Psychotria flavida</i> Talb.	Gardapatala	Rubiaceae	Shrub	Root	Snake-bite: Root infusion is taken orally for five days.
173	<i>Punica granatum</i> L.	Dalimbe mara	Lythraceae	Large Shrub	Tender leaves	Blood-in-stool: Tender leaves with cumin seeds and garlic are ground and mixed with curd and orally administered.
174	<i>Radermachera xylocarpa</i> (Roxb.) K.Schum.	Konankombu	Bignoniaceae	Tree	Bark	Skin burns: Bark shreds are ground into a paste and applied externally for three days.
175	<i>Randia dumetorum</i> L.	Kare	Rubiaceae	Shrub	Root, fruits	Snake bite: The root of this plant and leaves of <i>Acacia suma</i> (Mimosaceae) are pounded with salt and applied externally for snake bite and scorpion sting. Fish poisoning: The fruits are used as a remedy for fish poisoning.

Sl No.	Botanical Name	Vernacular Name	Family	Habit	Parts used	Therapeutic Uses / Mode of administration
176	<i>Rauwolfia serpentina</i> Benth.	Sarpagandha	Apocynaceae	Herb	Root	Hypertension: Root paste is given orally to reduce blood pressure. Easy labour: Root paste is mixed with cow's milk and given orally to the pregnant woman before childbirth to promote easy labour.
177	<i>Ricinus communis</i> L.	Koyanna, castor oil plant	Euphorbiaceae	Shrub	Seed, tender leaves	Skin cuts: Seed oil is applied externally until cuts heal. Jaundice: Along with cumin seeds, tender leaves of this plant are used in the treatment.
178	<i>Rothea serrata</i> Steane & Mabb.	Gantu barangi	Verbenaceae	Shrub	Leaves, fruits	Diabetes: The dried leaf powder is boiled in water and administered orally. Epilepsy: The decoction of fruits is given orally twice a day for 7 days.
179	<i>Rubia cordifolia</i> L.	Yojanaballi	Rubiaceae	Climber	Stem, leaves	Skin diseases: The aerial shoot is pounded with lemon juice and applied on scabies, ring worm and pimples, thrice a day for 3 days. Giddiness: Roots are crushed with cumin and water in smaller quantities and given for giddiness and also rubbed all over the body. Abortion: Stem infusion is taken orally.
180	<i>Ruta graveolens</i> L.	Nagadali	Rutaceae	Herb	Leaves	Measles: Leaves are ground along with curcuma tuber, <i>P.amboinicus</i> leaves and <i>O.sanctum</i> leaves. One tea spoon of extract is taken orally and remaining is applied on the body to cure measles.
181	<i>Saraca asoca</i> (Roxb.) Willd.	Ashoka	Fabaceae (Caesalpinaceae)	Tree	Bark	Wound healing: Bark is ground with water and the paste is applied on the wound.
182	<i>Scoparia dulcis</i> L.	Mruganmhi gida	Scrophulariaceae	Herb	Whole plant	Diabetes: Leaf decoction is taken orally. Jaundice: Leaf paste is mixed with freshly mulched cow's milk and given orally. Antiseptic: The root is pounded with a pinch of lime and applied externally on wounds to stop bleeding and early healing.
183	<i>Solanum anguivi</i> Lam.	Kaisunde	Solanaceae	Shrub	Fruits, root	Headache: Ripe fruits are pressed on the forehead in order to stick the seeds locally for curing headache. Excess of heat: One teacup of root extract is taken orally for excess of heat twice a day. Leucorrhoea: Root infusion is taken orally. Skin cuts: Fruit is ground into a paste and applied externally. Stomach-ache: Fruit infusion is taken orally.
184	<i>Solanum ferox</i> L.	Gulkaai	Solanaceae	Shrub	Root, fruit	Itching of skin: Root paste is applied externally for two days. Nail side infection: The finger is inserted inside the fruit.
185	<i>Solanum nigrum</i> L.	Ganike soppu	Solanaceae	Shrub	Whole plant, leaves	Diabetes: Decoction of leaves and unripe fruits is taken orally in empty stomach in the morning for 15 days. Lactagogue: Decoction of leaves and unripe fruits are mixed with salt and pepper powder and given orally to promote/increase flow of milk in nursing mother. Pain relief: Leaves are ground with cumin seeds, black pepper and garlic and the extract is taken orally to reduce pain during menstrual cycle. Leaf juice is used as energy drink. Post-natal complaints: Leaf infusion is taken orally for a week.
186	<i>Solanum viarum</i> Dunal	Sunde gida	Solanaceae	Herb	Leaves	Migraine: Leaves are ground with garlic and the extract is massaged on forehead to treat migraine.
187	<i>Spilanthes calva</i> DC.	Vanthi gida	Asteraceae	Herb	Flowers	Mouth ulcers: The flowers (heads) are crushed and made into diluted paste and gargled twice daily to cure mouth infections.
188	<i>Strychnos nux-vomica</i> L.	Ettimara	Strychnaceae	Tree	Root	Post-natal complaints: Infusion of root is taken orally.
189	<i>Syzygium cumini</i> Skeels.	Nerale	Myrtaceae	Tree	Seeds, stem bark, leaves	Diabetes: Seed powder is infused in hot water and taken orally once in a day for a month. Amoebic dysentery: Decoction of bark of <i>Syzygium cumini</i> and <i>Mangifera indica</i> is given orally twice. Fish poisoning: Crushed bark is used as a remedy for fish poisoning. Dysentery: Bark extract is taken orally to treat dysentery.

Sl No.	Botanical Name	Vernacular Name	Family	Habit	Parts used	Therapeutic Uses / Mode of administration
						Tender leaves are used to treat worms in children.
190	<i>Tabernaemontana coronaria</i> R. Br.	Nandibattaluhuvu	Apocynaceae	Shrub	Root	Snake bite: The crushed root is mixed with salt and turmeric and applied on the snake bitten spot.
192	<i>Tabernaemontana divaricata</i> R.Br. ex Roem. & Schult.	Nadibattalu	Apocynaceae	Shrub	Leaves	Ulcers: Leaves are ground with white rice and applied around the ulcer.
193	<i>Tabernaemontana heyneanum</i> Wall.	Kokke kai mara	Apocynaceae	Tree	Root	Snake bite: Root is ground in lemon juice and applied around the snake bite (semi-venomous snake bite).
194	<i>Tectona grandis</i> L. f.	Thegina mara	Verbenaceae	Tree	Tender shoot	Skin burns: Tender shoot is made into a paste and applied externally till the burn heals.
195	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Taremara	Combretaceae	Tree	Bark	Skin burns: Bark paste is applied externally on the burnt region.
196	<i>Terminalia crenulata</i> (Roxb) Roth.	Mattimara	Combretaceae	Tree	Bark	Dysentery: Bark extract is given to check dysentery. Tonic: Sap from trunk is taken orally as a tonic.
197	<i>Thottea siliquosa</i> (Lam.) Ding Ho	Chakranegida	Aristolochiaceae	Shrub	Root, fruit	Indigestion: Root and fruit infusion is taken orally twice.
198	<i>Tinospora cordifolia</i> (Willd.) Miers.	Agniballi	Menispermaceae	Climber	Leaf	Anti-inflammation: Leaves are ground into paste and applied externally on the affected area.
199	<i>Toddalia asiatica</i> (L.) Lam. Var.	Macchimullu	Rutaceae	Straggler	Root	Snake-bite: Root infusion is taken orally. Mumps: Root paste is mixed with lemon juice and applied locally on mumps.
200	<i>Triumfetta rhomboidea</i> N. Jacq.	Vattesoppu	Tiliaceae	Shrub	Leaf	Cracks of foot sole: Paste of leaves is applied externally into the cracks until it heals.
201	<i>Tylophora indica</i> (Burm. f.) Merr.	Naaihaale	Asclepiadaceae	Climbing shrub	Leaf	Lactation: Leaf infusion is taken orally for a week.
202	<i>Viscum angulatum</i> Heyna	Naral	Loranthaceae	Shrub	Whole plant	Skin cuts: Whole plant is ground into a paste and applied externally until it heals.
203	<i>Vitex negundo</i> L.	Lakkigida	Lamiaceae	Largeshrub/ small tree	Leaves, roots	Asthma: Fumes from the leaves is inhaled twice a day. Antidote: Root paste is mixed with leaf paste of <i>Ruta graveolens</i> and applied over the snake bitten spot/scorpion sting for a week. Insecticide: Leaves are fumigated as mosquito repellent. Tension release: Smoke of leaves release tension.
204	<i>Wendlandia thyrsoides</i> (R. and S.) Steud.	Harake	Rubiaceae	Tree	Root	Skin diseases: Root paste is applied externally on the affected area.
205	<i>Zingiber cernuum</i> Dalz.	Kadginger	Zingiberaceae	Herb	Rhizome	Stomach-ache: Rhizome infusion is taken orally twice a day.

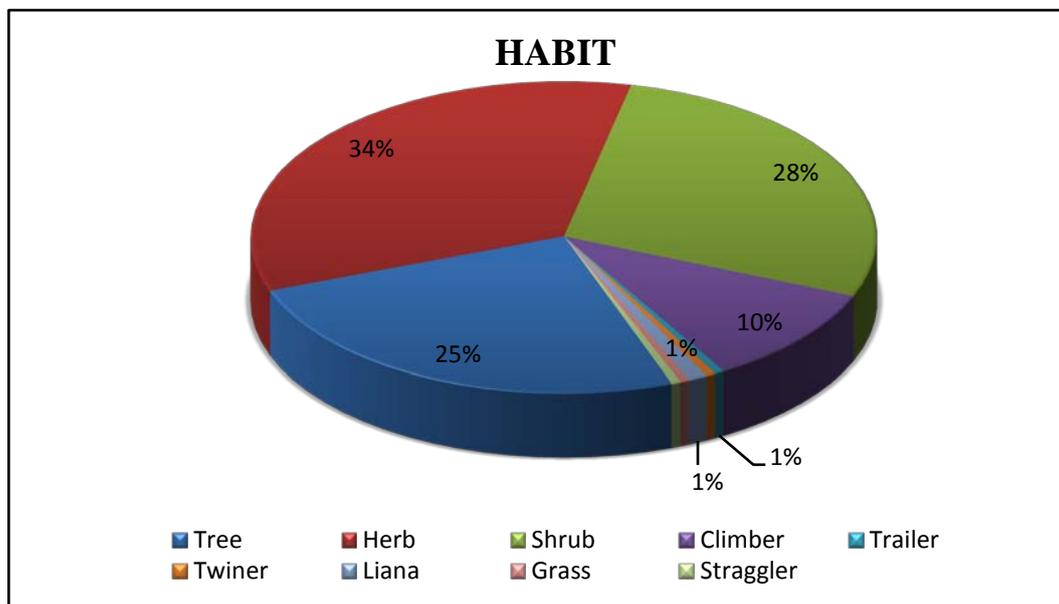


Figure 2. Ethnomedicinal plant habits (in percentage)

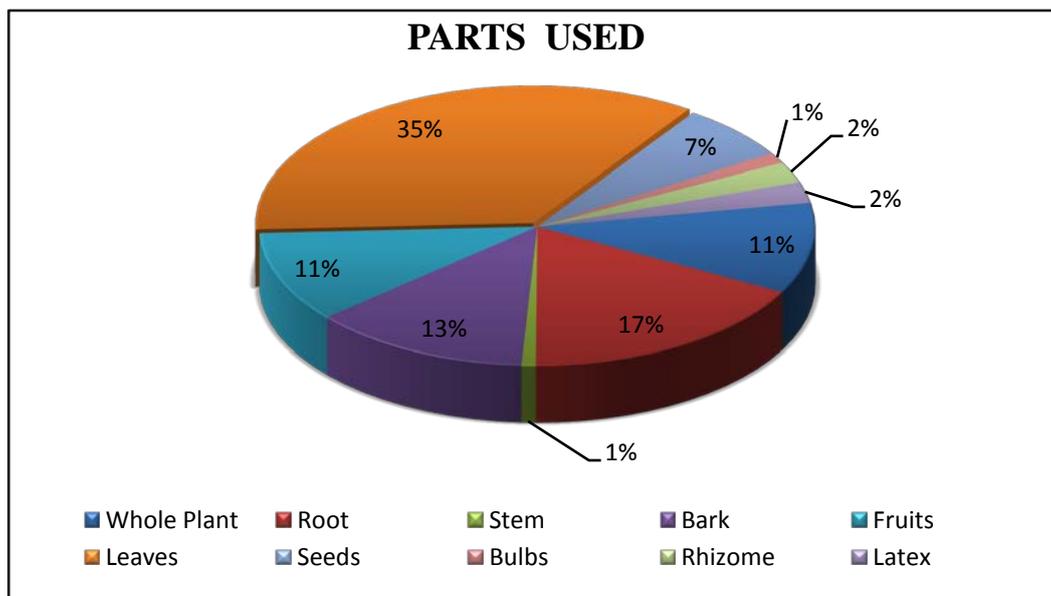


Figure 3. Percentage of various plant parts used in therapeutic applications

5. Conclusion

Present ethnomedicinal knowledge is nearly endangering because of changes in the lifestyle of ethnomedicinal practitioners. The younger generation are ignoring the importance of such ethnomedicinal plants and practices. Anthropogenic activities such as deforestation, commercial crop plantations, modernisation of lifestyle and unsustainable developmental activities have become the major culprits for threatening the traditional knowledge of the tribes. Additionally, climate change is also budding to alter the floristics of the area. The present paper details about 205 ethnomedicinal plants and their uses. The findings of the investigation add to the database of potential medicinal plants for their future bio-prospection.

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Conflict of Interests

There is no conflict of interest with respect to this research article.

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