


AN ETHNOBOTANICAL STUDY OF MEDICINAL PLANTS USED BY KOYA TRIBES IN AND AROUND MALLURU HILL REGION, WARANGAL DISTRICT, TELANGANA, INDIA.Mediseti Narendar*¹ and Mustafa. Md²¹Department of Botany, Government Degree College, Mulugu, Warangal -506343 (Telangana) India²Department of Botany, Kakatiya University, Warangal-506009 (Telangana) India

ABSTRACT: Ethnobotanical survey conducted from July-2013 to June-2015 with various villages of the Mangapet mandal (Around the malluru hill region) Warangal District. Information on 103 angiosperms belonging to 54 families was gathered with regard to their ethnomedicinal plants used by Koya tribes in alleviating diseases. The medicinal plants used by the Koya tribes are arranged alphabetically followed by botanical name, common name in telugu, family name, habit, parts used, preparation and medicinal uses. This paper reports for the uses of plant parts by the Koya tribes in the form of crushing, powdering, decoction, chewing.

Key words: Ethnomedicine, Mangapeta mandal, Warangal District, Koya tribes.

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INTRODUCTION

Human civilization has evolved as a result of overall interaction with the environment, including plants and animals. This trend has been continued to the present time where people derive much of their needs, particularly the food and medicine from biological resources. Plant derived medicines are used in all cultures. The plant based traditional medical systems continue to provide the primary health care to more than three-quarter of the world's population. The World Health Organization (WHO) has estimated that over 80% of the global population rely chiefly on traditional medicine (Akerle, 1992). Indigenous herbal treatment is a part of the culture and dominant mode of therapy in most of the developing countries. These traditional phytoremedies, with considerable extent of effectiveness, are socially accepted, economically valuable and mostly are the only available means. Still, one-third of the modern pharmaceutical preparations have botany origin. It was officially recognized that 2500 plant species have value, while over 6000 plants are estimated to be explored in traditional, folk and herbal medicine (Huxley, 1984). There are many ways by which the medicinal plants are used in the realm of pharmacology (Hansel, 1982) Tribal people have traditional knowledge of plant species used for different purposes such as food, beverages, colours, resins, gums and medicine. This knowledge was even passed through generation to generation and play an important role in conservation and sustainable use of biodiversity. Unfortunately, such knowledge of tribal's has only oral traditions without any written documents. Due to the changing life style of tribals and fast urbanisation the ethnobotanical knowledge on useful plants acquired and accumulated through generations is gradually getting lost. The existing literature clearly indicates that much ethnobotanical work has been done in India. The hill region of Malluru and around villages of Mangapeta mandal, Warangal district has not been studied sufficiently on ethnomedicinal plants. In view of this, The Malluru hill and around villages, which are with dense vegetation and rich biodiversity and Koya tribal residing were selected for the research work.

MATERIALS AND METHODS

Study Area

The Present study was under taken in the Malluru hill region and around villages of the Mangapet mandal of the Warangal district of the Telangana state (fig-1). The Warangal district is a part of northern Telangana. It lies between 17°19' and 18°36' N latitude and 78°49' and 80°43'E longitude. The forest cover occupies on area of 3, 71,314 hectares which bear 28.89% of the total geographical area of the district. The Mangapet mandal is bounded by the Eturnagaram mandal and the Vankatapur mandal towards the north, the Tadvai mandal towards west, the Pinpaka mandal towards the east, the Mangapet mandal consists of 59 villages and 18 gramapanchats. Malluru hill (Gutta) has a height of 528 m above the sea level and situated west to east direction, about 15 km from the village of Malluru to the village of Laxminarsapur. Phytogeographically the region is enriching with a diverse flora with large degree of endemism and harbours of medicinal plants. The study area is inhabited by a large number Koya tribal people who possess good knowledge of home remedies. The Godavari River passes through the north side of the villages.

Ethnobotanical Survey

Field trips were conducted from July-2013 to June-2015 in 17 villages of the Mangapet mandal of Warangal district, Telangana, India. . Field trips made in these areas in different seasons to collect ethnomedicinal plants of special interest for a proper understanding of local customs, beliefs, habits and uses of plants by interviewing the people like family heads, healers, shepherds and old experienced medicine man were interviewed. The present study (fig- 1D) was carried out by extensive field surveys. Nearly 15 field visits, each for duration of three to four days spread over 24 months (2013-2015) were undertaken. Each medicinal plant is described with its binominal systems, local names. The therapeutic effect of each plant is described with the parts used, mode of preparation of the drug, method of consumption and the diseases which could be cured were recorded. Laboratory work mainly consisted of processing, study of morphology, identification, matching, mounting, labelling and preservation of the Specimens. At the conclusion of each field trip, the collection was brought to Department of Botany Kakatiya University, Warangal and all the above processes were completed in the laboratory. Herbarium of all the ethnomedicinally important plants were Prepared as per standard practices (Jain and Rao, 1977), identified with the help of Gamble flora and preserved in the Department of Botany (Herbarium and Museum) Kakatiya University, Warangal. The collected ethnomedicinal data were entered into Excel spreadsheet 2007 and Summarized. Descriptive statistical methods such as frequency, percentage were employed and graphs and tables showing the results generated.

RESULTS AND DISCUSSION

The information was gathered from thirty male (83.3%) and six female (16.6%) informants for the study purpose. Out of thirty six informants, ten (27.7%) of the informants are found between the age 19-39, fourteen (38.8%) informants were between the ages 40-59, eight (22.2%) informants were between the ages 60-79 and the remaining 04 (11.1%) of the informants were between the ages 80-100. Much knowledge of traditional medicine obtained from elder informants. Young people have no interest to use traditional medicine and unable to mention large number of medicinal plants compared with the elders. This was evidence that informants between the ages 19-39 mentioned only 11% medicinal plants out of the total medicinal plants species, mentioned in the study. This is clearly indicates that the traditional knowledge of ethnic medicinal plants getting lost due to modernization. This might be related to the disinterest of young generation on traditional medicine. Medicinal plant knowledge has been affected by modernization like access of modern education and health care services.

One hundred and three plant species were collected and identified. Of these, 103 species were used by Koya people of the study area to treat human ailments. Medicinal plants were distributed across 99 genera and 54 families. The families Euphorbiaceae, Fabaceae, Malvaceae were represented by each 05 species (4.85%), Acanthaceae, Asclepiadaceae, Asteraceae, Combretaceae, Moraceae by each 04 species (3.88%), Amaranthaceae, Anacardiaceae, Caesalpinaceae, Lamiaceae, Sapindaceae, Solanaceae by each 03 species (2.91%) and other 40 families consist of 1-2 representative species.

Herbs constitute the highest species representative by 39 species (37.86%), trees 38 species (36.89%), shrubs 14 species (13.59%), climbers 7 species (6.79%), twiners 03 species (2.91%) and epiphytes 2 species (1.94%) (Fig.3). Koya tribal people of the study area harvest different plant parts for preparation of traditional drugs (e.g. leaves, roots, seeds, stems, flowers, latex, tubers and fruits). In the study area, the highest number from 27 species of plants (26.21%), leaves were harvested followed by stem from 22 species (21.35%), roots from 22 species (21.35%), whole plants from 10 species (9.70%), seeds and fruits from 7 species (6.79%) each, tuber from 5 species (4.85%), latex from 2 species (1.94%) and flower from 1 species (0.97%).(fig . 4) used for the preparation of medicines. People of study area mostly administered medicine orally. Its account (62.13 %) is followed by dermal (35.92%) and others like nasal, anal, ear accounts.

Koya tribal people of the study area prepare their remedy for ailments while medicinal plants are in fresh form, dried or fresh and dried. Large numbers of medicinal plants were reported to be used in fresh form (61.16%). About 15.33% of medicinal plants were used in dry form and medicinal plants were reported to be used either in dry or in fresh form (23.30%). Most of the surveyed medicinal preparations involved the use of single plant species or a single plant part (87.37%) and different plants (12.62%) were rarely used in study area. People of study area used various measurement of remedy. Such as finger length, cup, pinch, handful. There were also reported medicinal plants that had no side effects in limited dose (taken according to personal preference). About 32 (88%) of informants reported that traditional medicine are effective for treatment of human ailments. In the study area, popular method of preparation of traditional medicine is crushing. It accounts for 38.83% followed by powdering 20.38%, and decoction, chewing, and others for 08.73%, 1.94%, and 30.09% respectively. (Table .5). 103 collected Ethnomedicinal plants were curing 47 ailments of the total plants, the highest number of plant species (08) are used for wounds followed by snake bite, rheumatism and diarrhoea (07 species), Cough (06 species), Jaundice, ulcers, bone fracture and dysentery (5 species), etc.

Koya tribes in the study area, prepare remedy for human ailments either from single plant or plant parts or mixing one another. Most of the medicinal plants encountered in the study area prepared from a single plant or plants parts. Among 91 plants, each plant curing single ailments, 12 plants, and each plant used to treat two ailments. 09 plants species are used in combination with other plants, out of these 06 species used in single combination, followed by 02 species in double and 01 species are triple combination. They use different additives like honey, sugar, milk, butter milk, salt in order to increase flavour and acceptability of certain oral remedies.

Koya tribals keep secret about medicinal plants. There is strong belief that herbal medicines loss their healing capacity if non-healer know them. There is also a belief on medicinal plants collection time, storage, and time of administration for instance, which collected early in morning before working anything, have high efficacy. Concerning dosage, it was reported that lack of precise dosage is one drawback of traditional medicinal plants. The result of study is in line with it since lack of consistency was observed among the informants. The most serious proximate threats generally are habitat loss, habitat degradation and over-harvesting. In much of medicinal plants in the study area were collected for their leaves and this practice help to reduce the rate of threat on plant species compared with the utilization of roots. Informants highly cited that deforestation became the most threatened factor on medicinal plants. In this respect, plant species with multipurpose uses are highly affected. For instance , Koya tribal people of the study area for various uses like *Acacia chundra*, *Alangium salvifolium*, *Pterocarpus marsupium* for construction, timber production, charcoal and this medicinal plants getting to be eliminated. Knowledge of traditional medicine is also getting lost due to the mistrust of the young generation and secrecy. The young generation refused to know or use traditional medicine and a lot of invaluable information could be lost whenever traditional medicinal practitioners die without sharing their knowledge to others, Modernization has its own role on the decline of traditional medicinal knowledge. Health officers also discourage people not to use traditional medicine and local healers reported that health officers tell to people as local healers are cheating local people and have no medical knowledge.



1-a



1-b



1-c



1-d

Fig- 1(a-c): Map showing the Mangapet Mandal of the Warangal district in the Telangana State Fig- 1(d): Grama panchayathies of the Mangapet Mandal 1) Komatipally, 2) Kamalapuraam, 3) Mangapeta, 4) Bucchampeta, 5) Cherupally, 6) Borunarsapur, 7) Balannagudem, 8) Thimmampeta, 9) Malluru, 10) Narsimhasagar, 11) Chunchupally, 12) Wadagudem, 13) Ramachandruripeta, 14) Ramanakkapeta, 15) Rajupeta, 16) Dome da, 17) Kathigudem, 18) Akinapally Mallaram

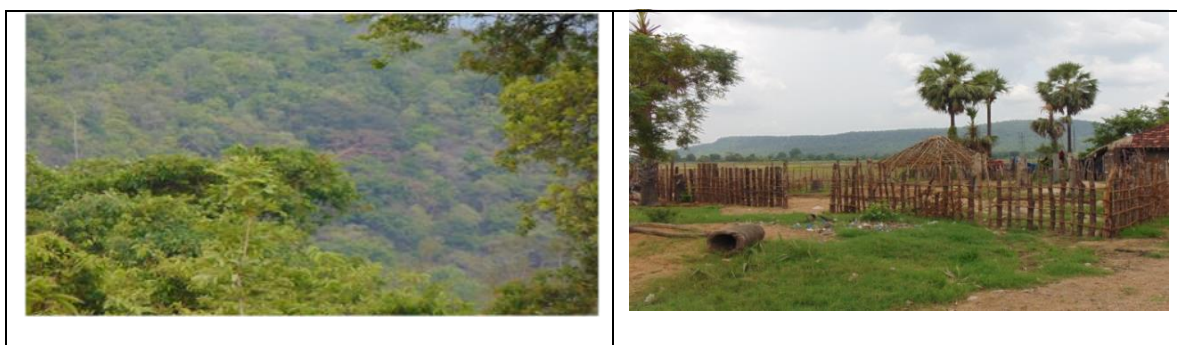


Figure.2. View of the Malluru hill clothed by green vegetation.

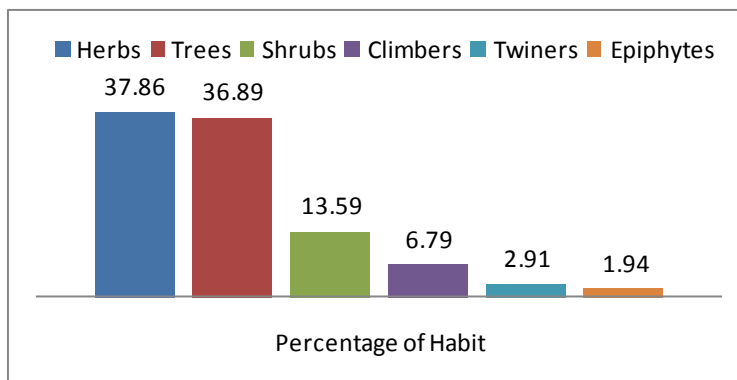


Figure-3: Habit of Medicinal in the study area.

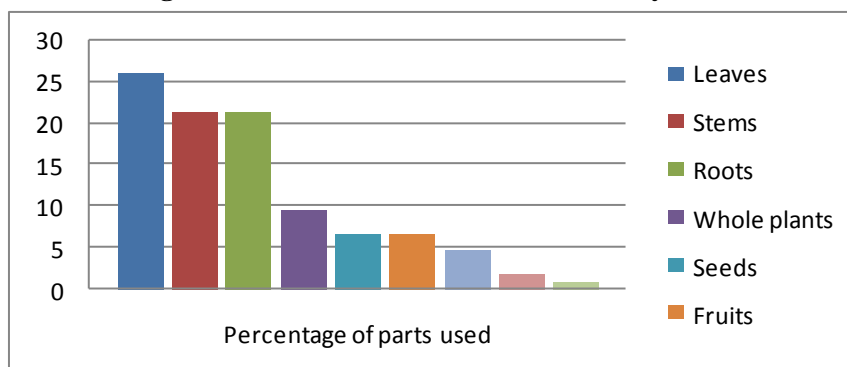


Figure-4: Plant parts used for the treatment of Human ailments

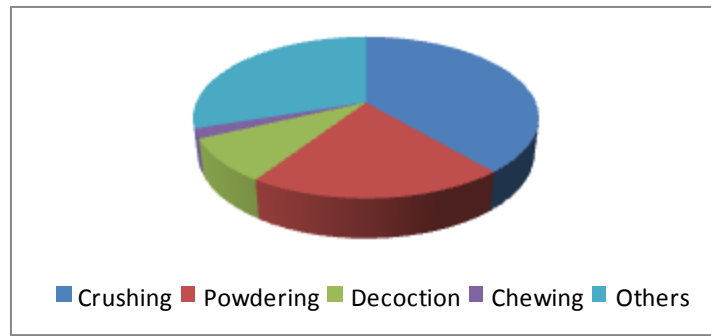


Figure-5: Methods of preparations

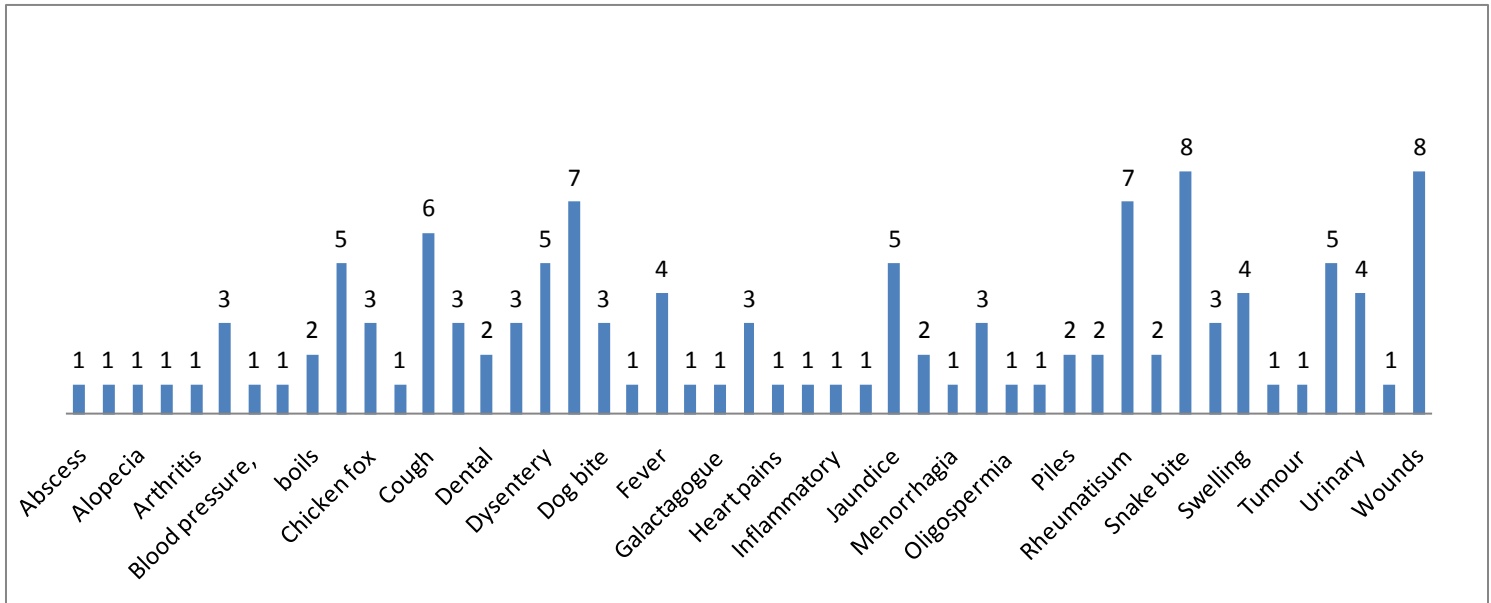


Figure-6. Number of species used for various diseases



Plate-1: Investigator gathering information on ethnomedicinal plants from the Koya tribes

Table-1: Particulars of the informants

Name	Age (Years)	Sex	Occupation	Village
Koram Laxmipathi	38	M	Agriculture	Thondyala laxmipuram
Nali Narsaiah	60	M	Ag. Labour	Thondyala laxmipuram
Vattam Pullaiah	55	M	Agriculture	Bommaigudem
Chilla Venkateswarlu	45	M	Agriculture	Chunchupally
Payam Abbaiah	55	M	Ag. Labour	Chunchupally
Edurugatla Gopal	39	M	Agriculture	Chunchupally
Kudumula Baiyamma	70	F	Ag. Labour	Motlagudem
Edurugtla Muthamma	70	F	Agriculture	Motlagudem
Kallem Ellaiah	58	M	Cattle man	Abbaigudem
K. Chandraiah	49	M	Agriculture	Abbaigudem
Lallem Sammaiah	45	M	Agriculture	Abbaigudem
Arka Narsingarao	34	M	Agriculture	Shanagakunta
Bode Narsaiah	47	M	Cattle man	ST. colony (Wadagudem)
Bangaru Krishnamurthy	65	M	Agriculture	ST. colony (Wadagudem)
Vasam Swaroopa	50	F	Agriculture	ST. colony (Wadagudem)
Badisha Ramakrishna	65	M	Local healer	Laxminarsapur
Soyam Seethaiah	35	M	Agriculture	Vagoddugudem
Solam Krishnamurthy	50	M	Business	Vagoddugudem
Sunkari Narsaiah	85	M	Agriculture	Bramhmanapally
Sunnam Nageswar Rao	56	M	Agriculture	Bramhmanapally
Badisha Vishnumurthy	37	M	business	Bramhmanapally
Payyam Suraiah	66	M	Agriculture	Thimmampeta
Rega Sulochana	38	F	Agriculture	Thimmampeta
Jabba Narsaiah	45	M	Local healer	Thimmampeta
Tholem Muthaiah	39	M	Agriculture	Nimmagudem
Suthari Paparao	55	M	Agriculture	Nimmagudem
Jajjera Venkanna	50	M	Ag. Labour	Kotha Chipurudubba
Payam Somaiah	38	M	Cattle man	Kotha Chipurudubba
Made Janamma	43	F	Agriculture	Kotha Chipurudubba
Vasam Ramarao	36	M	Ag. Labour	Kothapeta
Boddu Ramulu	65	M	Agriculture	Kothapeta
Tollem Sammaiah	75	M	Agriculture	Balannagudem
Vasam Sathyam	35	M	Agriculture	Balannagudem
Petram Mallamma	82	F	House wife	Thimmampeta
Malleboina Pothuraju	85	M	Ag. Labour	Mamidigudem
Gaddam Sailu	85	M	Agriculture	Mamidigudem

Table-2: List of medicinal plants used for various human ailments in the study area.

S.No	Botanical Name	Common name	Family	Habit	P, U	Preparation & Application	diseases Treated	R.A	Co
1	<i>Abrus precatorius</i> L.	Guruwinda	Fabaceae	Cl	L, S	Leaves chewed, /Seed powder	Mouth sores, / Anti-dote to snake	O	F/D
2	<i>Abutilon indicum</i> (L.) Sweet.	Tuttura benda	Malvaceae	H	R, S	Root paste applied externally, /Seed paste used as ointment	Boils, /Piles	D	F/D
3	<i>Acacia chundra</i> (Roxb. ex Roth.) Willd.	Chandra	Mimosaceae	T	St	Katha	Ulcers	O	D
4	<i>Acalypha indica</i> L.	Muripinda	Euphorbiaceae	H	L, WP	Paste of leaves with lime juice, / Decoction of whole plant	Ringworm infection, / Asthma	D, O	F
5	<i>Achyranthes aspera</i> L.	Uttareni	Amaranthaceae	H	R, L	Roots ground with black pepper take orally, Leaf paste rubbed over the bitten area	Scorpion sting	O, / D	F
6	<i>Aegle marmelos</i> (L.) Corr.	Maredu	Rutaceae	T	Fr, L	Unripe fruit is taken orally, / Leaves chewed and swallowed	Diarrhoea, / Stomach Ulcer	O	F
7	<i>Aerva lanata</i> (L.) Juss	Pindikura	Amaranthaceae	H	WP	Plant extract is orally consumed	Breaking the kidney stones	O	F
8	<i>Ailanthus excelsa</i> Roxb	Peddamaanu	Simaroubaceae	T	St	Stem bark crushed with <i>Azadirachta indica</i> mixed in cup of water	Chicken-fox	O	F
9	<i>Alangium salviifolium</i> (L.f.) Wang	Oodugu	Alangiaceae	T	R, St	Grounded root bark fusion about 20 ml is mixed with ghee administered orally, / Warmed stem paste is used externally.	Snake bite, / Dog bite	O/D	F
10	<i>Andrographis paniculata</i>	Nelavemu	Acanthaceae	H	WP	Shade dried powdered taken with honey	Fever	O	D
11	<i>Annona squamosa</i> L.	Sithapalum	Annonaceae	T	L, S	Paste of leaves is externally used,	Wounds	D	F
12	<i>Argemone Mexicana</i> L.	Yeri Kusuma	Papaveraceae	H	La	Latex mixed with coconut oil applied on skin	Scabies	D	F
13	<i>Aristolochia indica</i> L.	Nallaeshwari	Aristolochiaceae	H	R	Root is made in to paste along with few pepper.	snake bite,	O	F
14	<i>Asparagus racemosus</i> Willd.	Shatavari	Liliaceae	H	R (tuber)	Eating 4-5 tuberous roots increase breast milk, / dried roots are soaked in water taken orally	Increase breast milk, / control excess bleeding during menstrual	O	F / D
15	<i>Azadirachta indica</i> A.Juss	Vepa	Meliaceae	T	L	Leaves used as bed	Chicken-fox	D	F
16	<i>Barleria prionitis</i> linn.	Mullagorinta	Acanthaceae	H	L	Leaf juice with coconut oil	Pimples	D	F
17	<i>Bauhinia racemosa</i> Lamk.	Aare	Caesalpinaceae	T	L, St	Decoction of leaf is mixed decoction of <i>Tinospora cordifolia</i> , / Decoction of stem bark is administered orally	Malaria fever, / Sticky motions	O	F
18	<i>Boerhavia diffusa</i> L.	Aticamamidi	Nyctaginaceae	H	WP	Oral administered of plant paste about 20 gms for one day for week.	leucorrhoea	O	F
19	<i>Bombax ceiba</i> L.	Adiviburuga	Bombacaceae	T	R, St	Root decoction, / Decoction of flowers	Urinary troubles, / Dysentery	O, / O	F
20	<i>Boswellia serrata</i> Roxb.	Andugu	Burseraceae	T	St	Bark juice	Rheumatism	O	F
21	<i>Buchanania lanzan</i> Spreng	Chinnamoral	Anacardiaceae	T	G, St	Gum mixed with water administered orally,	Bone fracture	O	F/D
22	<i>Butea monosperma</i> (Lam.) Taub.	Moduga	Fabaceae	T	S, Fl	Seed paste along with cow milk, / Juice of flower	Asthma, / Burning urinary tract	O	D/F
23	<i>Calotropis gigantea</i> (L.) R.Br.	Tellajilledu	Asclepiadaceae	Sh	L, La	Leaves warmed with mustered oil applied on inflammatory parts, / Latex is applied locally	Inflammatory, / Scabies	D	F
24	<i>Capparis zeylanica</i> L.	Adonda	Capparaceae	Cl	R	Pinch of root powder	Mouth ulcers	O	D
25	<i>Cardiospermum halicacabum</i> L.	Buddateega	Sapindaceae	H	R	Decoction of root	Arthritis	O	F
26	<i>Cassia fistula</i> L.	Rela	Caesalpinaceae	T	R, Ah	Root juice, / powdered stem bark with cold water	Whooping cough, / Diarrhoea	O	F/d
27	<i>Celosia argentea</i> L.	Gunugu	Amaranthaceae	H	S, L	Seeds given orally, / Leaf paste applied	Diarrhoea, / Poisonous insect sting	O/D	D/F
28	<i>Chloroxylon swietenia</i> DC.	Billudu	Flindersiaceae	T	St	Fresh stem bark extract	Rheumatic pains	O	F
29	<i>Cissus quadrangularis</i> L.	Nalleru	Vitaceae	Cl	St	Stem ground with stem bark of <i>Palyathiyalongifolia</i> is plastered on the broken parts.	Bone fracture	D	F
30	<i>Cleome viscosa</i> L.	Vaminta	Capparaceae	H	L	Leaf juice dropped into ear	Ear ache	E	F

31	<i>Cocculus hirsutus</i> (L.) Diels.	Dusseruteega	Menispermaceae	Cl	R, L	Root extract in water/Juice of leaves when mixed water form a jelly.	Dysentery , / Body coolent	O	F
32	<i>Cochlospermum religiosum</i> (L.)	Kondagogu	Cochlospermaceae	T	R	Root bark crushed with water and the extract is administered	Snake bite	O	F/D
33	<i>Coldenia procumbens</i> L.	Cheppu-tattaku	Boraginaceae	H	L	Leafjuice used as lotion	Boils	D	F
34	<i>Cordia dichotoma</i> G.Forst	Nakkirkki	Boraginaceae	T	Fr	Fruit paste applied externally	Headache	D	F
35	<i>Crinum asiaticum</i> L.	Penjarugadda	Amaryllidaceae	H	Tu	Tuber decoction administered orally	Snake bite	O	F
36	<i>Curculigo orchoides</i> Gaertn.	Nelatadi	Hypoxidaceae	H	Tu	Tuberous root paste with glass of milk	Jaundice	O	F
37	<i>Cuscuta reflexa</i> Roxb.	Sitamma nulupogulu	Cuscutaceae	H	Wp	whole plant paste applied externally	Body swelling	D	F
38	<i>Cyperus rotundus</i> L.	Tunga	Cyperaceae	H	Tu	In rheumatoid arthritis, its tubers and crush them with the rhizomes of <i>Panicum repens</i> and make it pills of 3 gms each, which are taken orally on empty stomach.	Rheumatism	O	D
39	<i>Datura metel</i> L.	Nallaummetha	Solanaceae	H	L	Fresh leaves are soaked in boild sesame oil kept externally on unripe abscess	Abscess	D	F
40	<i>Dendrophthoe falcata</i> (L.f.) Enttingsh.	Badanika	Loranthaceae	H	St	Stem bare powder	Menstrual troubles	O	F/D
41	<i>Dichrostachys cinerea</i> (L.)	Velturu	Mimosaceae	T	R	Roots crushed with the tender shoots of <i>Cassiaauriculata</i> and <i>Cocculushirsutus</i> and extract administered	leucorrhoea	O	F
42	<i>Dillenia pentagyna</i> Roxb.	Revadi	Dilleniaceae	T	St	Stem bark crushed with a pinch of common salt and the extract administered	Rheumatism	O	F
43	<i>Diplopenta odorata</i> Alef.	Adavibenda	Malvaceae	H	L	Leaves are rubbed over body in rheumatism	Rheumatism	D	F
44	<i>Dodonaea viscosa</i> (L.) Jacq.	Pulivavili	Sapindaceae	Sh	L	decoction of leaves	Vermifuge	O	F
45	<i>Dregea volubilis</i> (L.f.) Benth. ex Hook.f.	Bandigurija	Asclepiadaceae	Tw	L	Leaves crushed with pepper and the extract used as nasal cum eye drops	Snake bite	N	F/D
46	<i>Eclipta prostrata</i> L.	Guntagalagaraku	Asteraceae	H	Wp	Whole plant crushed and juice extracted and boild with coconut oil applied on the scalp.	Hair growth	D	F/D
47	<i>Euphorbia hirta</i> L.	Reddy vari nanubalu	Euphorbiaceae	H	Wp	Entire plant grind, squeezed and get sap is administered orally.	Anti-dysenteric	O	F
48	<i>Evolvulus alsinoides</i> L.	Vishnukrantha	Convolvulaceae	H	Wp	Shade dried and powderd taken with honey	Cold & Cough	O	D
49	<i>Ficus benghalensis</i> L.	Marri	Moraceae	T	R	Warm paste of the aerial root together egg paste applied bone fracture	Bone fracture	D	F
50	<i>Ficus hispida</i> L.f.	Bommedi	Moraceae	T	R	Latex applied externally , / Roots crushed with the fruits of <i>Datura metal</i> applied externally	Tonsils/Dog bite	D	F
51	<i>Ficus religiosa</i> L.	Raavi	Moraceae	T	St	Stem bark extract mixed with butter milk	Paralysis	O	D
52	<i>Gardenia resinifera</i> Roth.	Karinga	Rubiaceae	Sh	R	Root paste is smeared on fore head	Headache	O	F
53	<i>Getonia floribunda</i> Roxb.	Bontateega	Combretaceae	Sh	L	A paste of its leaves and roots of <i>Grewiapilosa</i> with honey is applied on ulcerous wounds.	Wounds	D	F/D
54	<i>Gloriosa superba</i> L.	Nageti gadda	Liliaceae	Cl	Tu	Tubers made into paste and applied on abdomen to reduce labour pain	Delivery	D	F
55	<i>Grewia hirsuta</i> Vahl.	Jubilica	Tiliaceae	Sh	R	Root decoction is administered orally	Loose motions	O	F/D

56	<i>Helicteres isora</i> L.	Nulitada	Sterculiaceae	Sh	R	Root paste mixed with water and administered orally	Diarrhoea , Dysentery	O	F
57	<i>Hemidesmus indicus</i> (L.) R. Br.ex.Schult.	Sugandapala	Asclepiadaceae	Cl	R	Decoction of the root	Blood purification, Refrigerant the body	O	F/D
58	<i>Holarrhena pubescens</i> Wall. ex G. Don	Palakodisha	Apocyanaceae	T	St	Stem bark mixed with whole plant of <i>Andrographis paniculata</i> made in to tablets	Jaundice	O	F/D
59	<i>Holoptelea integrifolia</i> (Roxb.) Planch.	Nemalinara	Ulmaceae	T	St, L	During the body swelling stem fiber is used as a bandage thread over affected area. / Infusion of bark and leaves applied to cure rheumatism.	Body swelling, / Rheumatism	D	F
60	<i>Hybanthus enneaspermus</i> (L.)	Ratnapurusha	Violaceae	H	Wp	Whole plant powder administered with honey	Increase potency	O	D
61	<i>Hygrophila auriculata</i> (Schum.) Heine.	Neerugobbi	Acanthaceae	H	S	seed powder with honey and ghee	Asthma	O	D
62	<i>Hyptis suaveolens</i> (L.)Poi.	Maabeera	Lamiaceae	Sh	L	Leafjuice used as lotion	Cuts by iron tools, wounds	D	F
63	<i>Ipomoea carnea</i> ssp. fistulosa	Rabbaruchettu	Convolvulaceae	Sh	L	The leaves of the plant are warmed and tied over the affected area on tumour and swellings.	Tumour	D	F
64	<i>Lannea coromandelica</i> (Hout.) Herrill.	Dumpidi	Anacardiaceae	T	St	Bark paste	Wound healing	D	F/D
65	<i>Lepidagathis cristata</i> Wild.	Nakkapeetirigadda	Acanthaceae	H	L	Leafjuice used as lotion	Wound healing	D	F
66	<i>Leucas aspera</i> L.	Tummi	Lamiaceae	H	Fl	Flowers with fruits of <i>Coriandrum sativum</i> are boild with a glass of water and extract given orally	Cough, Sore throat	O	F
67	<i>Madhuca indica</i> J. F. Gmel.	Ippa	Sapotaceae	T	ST	stem bark decoction	Dog bite	O	F/D
68	<i>Mallotus philippensis</i> (Lam.)	Kunkuma	Euphorbiaceae	T	S	Seeds decoction	Constipation	O	D
69	<i>Mamillaria hexandra</i> (Roxb.) Dub.	Paala	Sapotaceae	T	La	Latex	Toothache	D	F
70	<i>Martynia annua</i> L.	Telukondichettu	Pedaliaceae	Sh	L	Leaf paste applied externally	Scorpion sting	D	F
71	<i>Mucuna pruriens</i> (L.) DC.	Duradagondi	Fabaceae	Tw	S	Seed paste is applied swollen body	Oedema	D	D
72	<i>Ocimum tenuiflorum</i> L.	Tulasi	Lamiaceae	H	L	Leaf decoction with ginger juice	Cough & Fever	O	F
73	<i>Pergularia daemia</i> (Forsk.) Chiov.	Juttupaku	Asclepiadaceae	Cl	L	Leafjuice	Diarrhea	O	F
74	<i>Phyllanthus amarus</i> Schumach&Thonn.	Nelausiri	Euphorbiaceae	H	Wp	Whole plant is made into paste is converted into small pills	Jaundice	O	F
75	<i>Phyllanthus reticulatus</i> Poir.	Puliseru	Euphorbiaceae	Sh	L	Leaves crushed with the goat milk, egg albumin and pinch of calcium and applied over bone fracture area.	Bone fracture	D	F
76	<i>Physalis minima</i> L.	Kasi buddal achettu	Solanaceae	H	L	Leaf extract with pinch of pepper and garlic administered orally	Malaria fever	O	F
77	<i>Plumbago zeylanica</i> L.	Chitramulum	Plumbaginaceae	Sh	R	Root paste of plant with honey/ Root powder mixed with ghee administered orally	Quick Delivery/ Piles	O	F/D
78	<i>Pterocarpus marsupium</i> Roxb.	Pedayeygi	Fabaceae	T	St	Pinch of stem bark powder administered with a cup of hot water	Blood pressure, Heart pains	O	F/D
79	<i>Schleichera oleosa</i> (Lour.)	Pusugu	sapindaceae	T	St	Stem bark along with <i>Mangiferaindica</i> , <i>Tamarindusindica</i> and seeds of horse grams are crushed and make decoction administered orally.	Rheumatic pains, Swelling of legs	O	F/D
80	<i>Semecarpus anacardium</i> L.f.	Nallgidi	Anacardiaceae	T	Fr	Latex obtained from nuts	Footinfection	D	D
81	<i>Senna occidentalis</i> (L) Link.	Adavichennagi	Caesalpinaceae	Sh	R	root paste with water	Stomach-ache	O	F/D
82	<i>Sida acuta</i> Burm. f.	Polikatta	Malvaceae	H	Wp	Whole plant paste applied externally	Wounds, Ulcers	D	F/D
83	<i>Solanum surattense</i> Burm. f.	Nelamulaka	Solanaceae	H	Fr	Dry fruits powder about 10gms daily for one month is administered orally	Renal calca, Urinary dis order	O	D
84	<i>Soymida febrifuga</i> (Roxb.) A. Juss.	Soymidi	Meliaceae	T	St	Stem bark crushed with <i>Terminaliaaolata</i> , <i>Dichrostachyscinera</i> and <i>Solanumsurattense</i> and extract administered orally	Stomach troubles	O	F
85	<i>Sphaeranthus indicus</i> L.	Bodasarum	Asteraceae	H	Fr	Garland 86made from fruits and worn by p87atient for control the ch88icken-fox.	Chicken-fox	D	F
86	<i>Sterculia urens</i> Roxb.	Tapsi	Sterculiaceae	T	St	Stem bark is 89soaked in water is administered wi90th empty stomach	Oligo spermia (to increase sperm count)	O	F

87	<i>Sireblus asper</i> Lour.	Barrenka	Moraceae	T	St	Tender stem used for tooth-ache	Tooth Problems	O	F
88	<i>Strychnos potatorum</i> L.F.	Chilla	Loganiaceae	T	S	seed powder administered daily once for a weak days	Helminthiasis(Eradicate tape worms)	O	D
89	<i>Syzygium cumini</i> (L.) Skeels.	Neredu	Myrtaceae	T	St	Stem bark ground by adding of water obtain by squeezing and mixed with equal quantity of goat milk is administered orally	Diarrhea	O	F
90	<i>Tephrosia purpurea</i> (L.) Pers	Vempalli	Fabaceae	H	R	Root decoction administered	Post partum treatment	O	F/D
91	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight&Arn.	Erumaddi	Combretaceae	T	St	Crushed stem bark kept in cup of water and then strained. One cup of infusion administered daily twice	Abdominal pain	O	F
92	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Tani	Combretaceae	T	Fr	Root powder with honey	Cough	O	D
93	<i>Terminalia chebula</i> Retz.	Karaka	Combretaceae	T	Fr	The fruit paste is mixed with breast milk and administered to infant cough	Cough	O	D
94	<i>Thespesia populnea</i> (L.) Correa.	Gangaravi	Malvaceae	T	L	Leaves extract ground with an equal quantity of cow milk is taken on empty stomach early morning	Jaundice	O	F
95	<i>Tinospora cordifolia</i> (Willd.) Miers.	Tippateega	Menispermaceae	Cl	St	Stem crushed with a pinch of common salt,pepper powder and extract given daily	Fever	O	F
96	<i>Tribulus terrestris</i> L.	Palleru	Zygophyllaceae	H	L	Leaf paste	Jaundice	O	F
97	<i>Tridax procumbens</i> L.	Gaddichamanthi	Asteraceae	H	L	leaf paste topically applied applied on cuts and wounds	Cuts ,/Wounds	D	F
98	<i>Tumfetta rhombocidea</i> Jacq.	Chirusitrica	Tiliaceae	H	R	A hot infusion of its roots is given to facilitate the child birth	Delivery	O	F/D
99	<i>Urena lobata</i> L.	Peddabenda	Malvaceae	H	L	Pounded leaves boiled in coconut oil are applied to treat wounds	Wounds	D	F
100	<i>Vanda tessellata</i> (Roxb.)	Badanica	Orchidaceae	H (Epi)	R	The areal root and leaves are ground and plastered for bone fracture	Bone fracture	D	F
101	<i>Vitex negundo</i> L. var. <i>negundo</i>	Vavili	Verbenaceae	Sh	L	Tender leaves build in water bathed for relief from body pains	Body pains	D	F
102	<i>Xanthium strumarium</i> L.	Marulamathangi	Asteraceae	H	S	Seed paste is applied on fore head	Headache	D	D/F
103	<i>Ziziphus xylopyrus</i> (Retz) Wild	Gotti	Rhamnaceae	T	St	Stem bark paste	Snake bite	O	F

Key: Habit (H=Herb; Sh=Shrub; T=Tree; Cl=Climber; Li= lianas; Tw= Twiners)

PU= Parts used (R=Root; B=Bark; Fr=fruits; La= Latex; Tu=Tuber; Bu= bulb; Wp= whole plant)

RA= Root of application (O=Oral; N=Nasal; D=Dermal; E=Ear)

CO= Condition (F= fresh, D= dried, F/D= Fresh and dried)

CONCLUSIONS

The study area Euphorbiaceae, Fabaceae, Malvaceae were leading families and herbs stood first by which koya tribal people of the study area derive their remedy. People of study area mostly prepare the remedy from leaves and utilization of more leaves than other plants parts do not put medicinal plant under pressure compared with using of root or whole plants. Large numbers of medicinal plants are collected from wild areas. These shows, as there is lack of conserving medicinal plants in home gardens Knowledge of medicinal plants in the study area varies among age much of knowledge of medicinal plants are handled by elders. Many wild species of medicinal plants are under pressure from various human induced factors. In addition disinterest of the young generation on traditional medicine. Since younger generation show lack of interest to use or to know medicinal plants from elders, the knowledge of traditional might be eliminated in the future unless proper documentation is made.

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