

# Some less known ethnomedicinal uses from Mysore and Coorg districts, Karnataka state, India

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## Abstract

Present communication deals with 76 ethnomedicinal plants being used traditionally in Karnataka, India. These plants are reported to have 78 less known ethnomedicinal uses for curing various skin diseases, cuts, stomach disorders, gynaecological complaints and snakebites. © 2001 Elsevier Science Ireland Ltd. All rights reserved.

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## 1. Introduction

Ethnobotany must have been the first knowledge acquired by man to satisfy his hunger, healing his wounds and curing various ailments. Ethnobotany is defined as the investigation and evaluation of the knowledge of all phases of life amongst the primitive societies and plant environment with respect to life, customs, beliefs and history of the tribal people (Robbins et al., 1916). Hence, in brief, ethnobotany is the study of interrelationships between primitive societies of man and his plant environment.

Ethnobotany is not new to India because of its rich ethnic diversity. The area of present ethnobotanical studies comprises Karnataka's two southernmost districts viz. Mysore and Coorg, which comes to about 16 049 km<sup>2</sup>. It lies in between 11°22'–12°15'N latitude and 75°22'–77°45'E longitude. Of late, Mysore district has been split into two districts viz. Mysore and Chamrajnagar. However, for the present work, only two former districts (Mysore and Coorg) are considered because of lack of authorised detailed information (Fig. 1).

Karnataka state as a whole, and Mysore and Coorg districts in particular are rich in both floristic and ethnic diversities. In spite of being one of the largest states of south India, ethnobotany of the Karnataka as a whole has not been critically studied except for a few papers. Therefore, it was felt worthwhile to record the native uses of plants from the area before the information is lost. The vegetation of the state is diverse ranging from the tropical wet evergreen forests to scrub jungles. These two districts alone have 5385.97 km<sup>2</sup> area covered by different forest types viz. sholas and grassland, evergreen and semi-evergreen, moist deciduous, dry deciduous, scrub jungles and sand dune vegetation.

## 2. Tribes

There are 14 forest dwelling tribes viz., Jenukuruba, Bettakuruba, Soliga, Yerava, Panjariyerava, Malekudia, Thammadi, Medha, Hakki-pikki, Paniyerava, Gowda-kuruba, Kadu-kuruba, Kaniyan and Girijana. Most of the tribal hamlets are situated far away from civilised area, in remote and inaccessible terrain of the hilly country devoid of modern amenities. The tribes still maintain their ancient life style, culture and traditions, which is evinced through following examples. Even though the State Government has provided pucca

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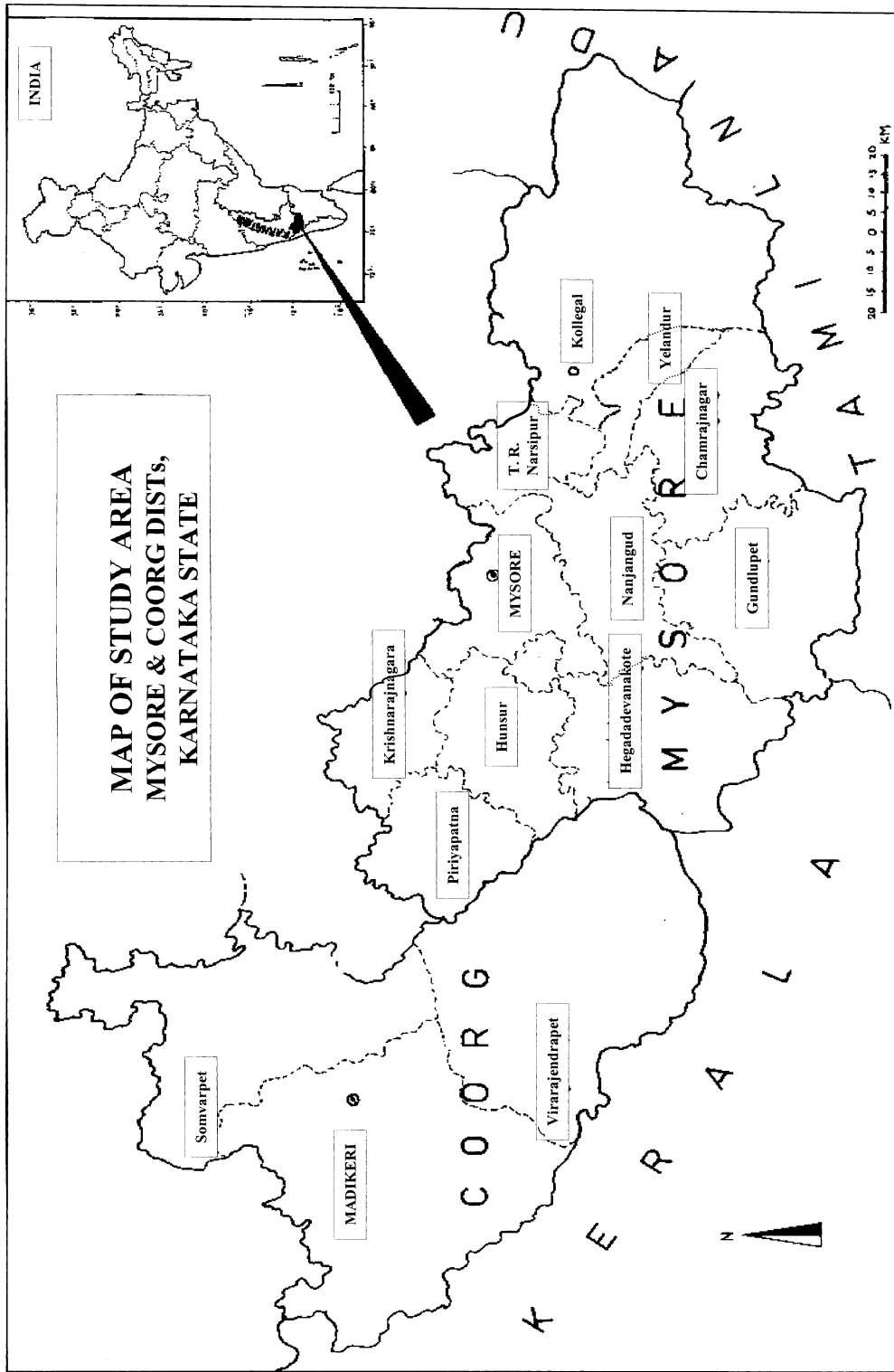


Fig. 1.

houses, tribals prefer to stay in thatched huts built aside the house and lodge their cattle inside the pucca houses. The huts are generally made up of leaves of *Tectona grandis*, culms of *Cymbopogon flexuosus*, *Apluda mutica* var. *aristata*, leaves of *Typha angustata*, Bamboo stems and *Agave americana* fibres. This shows that instead of accepting modern facilities, they prefer to stay as per their traditions and beliefs. As the food grains produced in their cultivable land is hardly sufficient for a few months of the year, the tribes have to largely depend upon the forests to satisfy their hunger by collecting the tubers, fruits, etc., which is generally observed in primitive societies.

Cultural study have revealed that average tribes observe 'Yajmana' system i.e. headman of a hamlet is a leader who is respected with reverence and solves all disputes of a village. They worship forest deities as per their traditions, which results in the formation of sacred grooves. According to their belief nobody should cut the plants and hunt the wild animals of that declared few square kilometers area of the forests, otherwise, the concerned person violating the law will be punished by forest deities. Most of the tribals maintain faith in 'Guddas' i.e. a local tribal doctor who prescribes medicine for tribals. He generally considers both physical and spiritual symptoms for diagnosis. Almost all the medicines given by him have plant origin. This knowledge was developed many centuries ago with consistent updating by trial and error method, which has been descending from generations to generations.

There are exclusively intra-tribe marriages. The bridegroom has to pay the price to a bride, which varies from tribe to tribe. The fire is always kept burning either inside the hut or in the courtyard. On an average, tribals are thin, nimble, dark complexioned, thick lipped with curly long hairs on the head. Tribes generally speak 'Kannada', some times mixed with 'Tamil' as a local dialect. However, Malekudia is the only tribe of Coorg district speaking 'Tulu' language. Literacy in these areas is very low.

Most of the documented ethnomedicines from the study area show some resemblances with the ancient literatures like Unani and Siddha. The Unani system originated in Greece in about 400 BC and came to India through Arab physicians who accompanied Moghul invaders. Its popularity declined with the fall of Moghul dynasty, however, it had already been partly amalgamated with the Indian System and came to be known as Yunani-Tibb. The Siddha system have history dating back about 2000 BC, which is reported to have originated from Lord Shiva and passed on through his wife Parvati to a number of disciples. Its use became more common in Dravidian civilisation of Southern India. Incidentally, the study area is a part of the same civilisation.

### 3. Methodology

The present study is based on the doctoral research work of the first author while working in Botanical Survey of India (BSI), western circle, Pune. BSI comes under the Department of Environment, Ministry of Environment and Forests, Government of India. The premier organisation is engaged in inventorisation of the flora, discovery of new taxa, germplasm and conservation of species and so also ecosystem studies. It has nine regional circles located in all phytogeographical regions of India for thorough studies.

A total of nine field tours were conducted in the period of January 1995 to March 1998 for covering all tribal villages. Each exploration tour was of 25–30 days duration, in which every effort was made to cover all the area of both the districts visiting all the tribes. The data presented here are based on personal observations and interviews with informants like medicinemen, local healers, village headmen and old, experienced, knowledgeable men and women.

First of all, the headman of the hamlet is contacted and requested for giving the information regarding their culture, traditions and the local deity, which they happily imparted with. Older people of the society were of great importance so far as the ethnomedicinal uses were concerned.

Initially, they were convinced that their knowledge will be safe and the authors will write a book incorporating their ethnobotanical information. Tribals do not divulge the uses of the plants in presence of other fellow tribals because that knowledge yields them some sort of status in their tribe. Therefore, one or two of them were taken to the forest to collect first hand information and three to four voucher specimens as well. The collected data are believed to be valid when at least three persons belonging to different tribes from far and wide area tell the same use.

Various Non Government Organisations (NGO) like Bharatiya Agro-Industries Foundation (BAIF), Fedina Vikasa, Vivekananda Girijana Kalyana Kendra (VGKK), Coorg Organisation for Rural Development (CORD), etc. are working in the area. They have good rapport with the tribes because they are working for upliftment of the tribals. No stone was left unturned to build up a good rapport with these NGO personnel and through them with the tribals. Some of the tribals also collect minor forest produce like fruits of *Acacia simuata*, *Sapindus laurifolius* var. *emarginatus*, *Terminalia bellerica*, *Terminalia chebula*, exudates of *Acacia nilotica* ssp. *indica*, honey, etc. and sell them to different societies set up by the NGOs.

The information was recorded on a questionnaire published by Jain (1991) and in the field notebooks. Plants were identified with the help of local floras like Flora of Mysore district by Rao and Razi (1981) and

similarly, Flora of Coorg by Keshava Murthy and Yoganarasimhan (1990) and by consulting the BSI, western circle herbarium as well. All voucher specimens are deposited in the same herbarium under the first author's name RDK. To determine the less known ethnomedicinal uses, the main literature sources referred to were, Kirtikar and Basu (1935), Anonymous (1948), Chopra et al. (1956, 1958, 1969), Dastur (1964), Jain (1991), Jain and De Filippis (1991), Asolkar et al. (1992), besides many ethnobotany books and papers published in different journals like *Journal of Economic and Taxonomic Botany*, *Ethnobotany*, etc.

In the present enumeration, the plants with correct botanical name are arranged alphabetically with field number and vernacular name in the first column, which is followed by family in second column, plant part used in third column, less known ethnomedicinal uses in fourth and formulation and mode of treatment in the last column.

#### 4. Results and discussion

The authenticity of the tribal medicine claims can be corroborated by phytochemical analysis of those plants. Contents of the various plants are given in the floras of respective districts of the study area, which reveals that most of the ethnomedicines have some scientific base. In addition to this Keshava Murthy and Yoganarasimhan (1990), have also given the list of plants used in Unani and Siddha system for curing various ailments. This was used to cross check the documented ethnomedicinal information.

Tribals are maintaining ancient style of living i.e. forest dwelling, and hence are more prone to get skin cuts and skin allergies because of spiny and thorny plants and so also due to the different pollen grains or stinging hairs of some plants. For the purpose, many plants are employed. As is shown in case of leaves of *Ageratum conyzoids*, which is used for its haemostatic property even in case of leech bites also, where bleeding

never stops for hours together. First author has experienced this during the study.

A total of 43 less known uses belonging to 41 plants are reported for skin related disorders, in which 11 uses are employed for skin diseases, 13 for veterinary skin disorders, 10 for skin cuts due to antiseptic properties of plants and five uses are regarding skin burns. Skin burns are also frequent because fire is always kept live inside the hut or in the courtyard as a protection from wild animals like elephants, tigers, etc. Almost all applications are external and in the form of paste.

The second important disorder observed is of stomach complaints viz. diarrhoea, dysentery, stomach pain, etc. This may be because of poor hygiene and sometimes contaminated water. However, they have got powerful remedies for the same. Cattle are also not free from these disorders hence it is also the responsibility of their owners to cure them. A total of 13 plants are employed for various stomach complaints. Of the total uses, six are of stomachache, four of diarrhoea, dysentery and indigestion, three are for cattle in curing indigestion, gases, etc. All the herbal medicines are given orally.

Tribal ladies are not free from gynaecological complaints like leucorrhoea, dysmenorrhoea, menorrhagia, post-natal complaints, etc. A total of 19 uses belonging to 18 plants are being employed. Of the total uses, four are of menorrhagia and post natal complaints each, two uses are of leucorrhoea, dysmenorrhoea and conceptions each and one use of abortion, lactation, expelling placenta, blood in breast milk, aching of mammary glands each. All medicines are given orally.

Due to round the year exposure to thick forests, many cases of snakebites are also reported. Hence, there is always search for powerful remedies by trial and error method, which has resulted in the development of reliable ethnomedicine for treating snakebites. A total of eight plants are employed for snakebite. One of them is used for pythonbite. All the plant part infusions are given orally.

#### 5. Enumeration

Botanical name of plant with field number and Vernacular name in 'Kannada' language	Family	Plant part used	Medical use	Formulation and mode of treatment
<i>Abutilon hirtum</i> (Lamk.) G. Don (RDK 176175) 'Gondekaai'	Malvaceae	Leaf	Leucorrhoea	Infusion/oral
<i>Acacia farnesiana</i> (L.) Willd. (RDK 176187) 'Bannimara'	Mimosaceae	Bark	Stomachache	Infusion/oral
<i>Acacia leucophloea</i> (Roxb.) Willd. (RDK 173445) 'Naibelle'	Mimosaceae	Bark	Snake-bite	Infusion/oral
<i>Acacia torta</i> (Roxb.) Craib (RDK 176188) 'Puttasegemele'	Mimosaceae	Bark	Python bite	Infusion/oral

<i>Achyranthes aspera</i> L. (RDK 173498) 'Utranegida'	Amaranthaceae	Leaf	Cattle wounds	Paste/external
<i>Ageratum conyzoides</i> L. (RDK 174348) 'Ooralgida'	Asteraceae	Leaf	Haemostat	Juice/external
<i>Albizia odoratissima</i> (L. f.) Bth. (RDK 175745) 'Bilwara'	Mimosaceae	Bark	Stomachache, dysentery	Infusion/oral
<i>Aloe vera</i> (L.) Burm. f. (RDK 167197) 'Lolisaru'	Liliaceae	Leaf	Cattle indigestion	Infusion/oral
<i>Anagallis arvensis</i> L. (RDK 175710) 'Suryakantheesoppu'	Primulaceae	Whole plant	Cattle stomach gases	Infusion/oral
<i>Andrographis alata</i> (Vahl.) Nees (RDK 176154) 'Uppalige'	Acanthaceae	Leaf	Wound	Paste/external
<i>Argyrea cuneata</i> (Willd.) Ker.-Gawl. (RDK 173486) 'Kallanegida'	Convolvulaceae	Leaf	Skin cuts	Paste/external
<i>Argyrea elliptica</i> (Roth) Choisy (RDK 173434) 'Kongepataballi'	Convolvulaceae	Root	Stomachache	Infusion/oral
<i>Aristolochia indica</i> L. (RDK 176107) 'Ishwarihambu'	Aristolochiaceae	Root	Antiseptic	Paste/external
<i>Asparagus racemosus</i> Willd. (RDK 173442) 'Saralballe'	Liliaceae	Tubers	Skin decaying	Paste/external
<i>Azadirachta indica</i> A. Juss. (RDK 173494) 'Bevinmara'	Meliaceae	Seed	Elephant-skin cuts	Seed oil/external
<i>Blainvillea acmella</i> (L.) Philipson (RDK 175797) 'Kad-tumbe'	Asteraceae	Leaf	Skin cuts	Paste/external
		Seed	Post-natal complaints	Infusion/oral
<i>Bombax ceiba</i> L. (RDK 175727) 'Burga'	Bombacaceae	Bark	Cattle wounds	Paste/external
<i>Bridelia retusa</i> (L.) Spr. (RDK 174325) 'Gaje'	Euphorbiaceae	Bark	Dysentery	Infusion/oral
<i>Calycopteris floribunda</i> Lam. (RDK 175754) 'Yengiri'	Combretaceae	Fruit	Ringworm infestation	Paste/external
<i>Careya arborea</i> Roxb. (RDK 173438) 'Gabbal'	Lecythidaceae	Bark	Menorrhagia	Infusion/oral
<i>Cassia alata</i> L. (RDK 176159) 'Anechakka'	Caesalpinaceae	Bark	Cattle alopecia	Paste/external
<i>Catunaregam spinosa</i> (Thunb.) Tiruv. (RDK 174384) 'Karekaai'	Rubiaceae	Root	Boils	Paste/external
<i>Chenopodium ambrosioides</i> L. (RDK 174388) 'Galisoppu'	Chenopodiaceae	Leaf	Skin swellings,	Paste/external
<i>Cipadessa baccifera</i> (Roth) Miq. (RDK 174392) 'Mandalmarigida'	Meliaceae	Leaf and root	Dysmenorrhoea	Infusion/oral
<i>Citrus medica</i> L. (RDK 167175) 'Limbu'	Rutaceae	Fruit	Snake-bite	Infusion/oral
<i>Clematis gouriana</i> Roxb. ex DC. (RDK 175744) 'Thalejadari'	Ranunculaceae	Leaf	Nail side infection	Inserting finger inside fruit
<i>Clitoria ternatea</i> L. (RDK 176144) 'Gokarnahambu'	Fabaceae	Stem	Skin burns	Paste/external
<i>Coccinia grandis</i> (L.) Voight. (RDK 173418) 'Tondekaai'	Cucurbitaceae	Leaf	Cattle neck swelling	Tying around neck
<i>Cynoglossum zeylanicum</i> (Hornem.) Thunb. ex Lehm (RDK 176116) 'Utrane'	Boraginaceae	Root	Cattle indigestion	Infusion/oral
<i>Datura metal</i> L. (RDK 176117) 'Daturigida'	Solanaceae	Fruit	Snake-bite	Infusion/oral
<i>Diospyros montana</i> Roxb. (RDK 173404) 'Jagalgantigida'	Ebenaceae	Bark	Cattle wounds	Paste/external
		Leaf	Deep wounds	Paste/external
			Wounds	Paste/external

<i>Emblica officinalis</i> Gaertn. (RDK 173416) 'Nullikai'	Euphorbiaceae	Fruit	Menorrhagia	Infusion/oral
<i>Erythrina suberosa</i> Roxb. (RDK 175719) 'Pangaremara'	Fabaceae	Root	Cattle wounds	Paste/external
<i>Erythrina variegata</i> L. (RDK 175749) 'Pangarpatti'	Fabaceae	Bark and leaf	Itching of skin	Paste/external
		Flower	Aching of mammary glands	Cooked as vegetables/oral
<i>Euphorbia laeta</i> Heyne ex Roth (RDK 174341) 'Haluni'	Euphorbiaceae	Latex	Boils	Fresh/external
<i>Ficus religiosa</i> L. (RDK 167193) 'Aralimara'	Moraceae	Bark	Menorrhagia	Infusion/oral
<i>Grewia damine</i> Gaertn. (RDK 173483) 'Gharkegida'	Tiliaceae	Root	Boils	Paste/external
<i>Grewia tiliifolia</i> Vahl (RDK 173431) 'Thadasalu'	Tiliaceae	Root	Expelling placenta	Infusion/oral
<i>Guizotia abyssinica</i> (L. f.) Cass. (RDK 167187) 'Ram-til'	Asteraceae	Root	Cattle Neck inflammation	Paste/external
<i>Gymnema sylvestre</i> (Retz) R. Br. ex R. and S. (RDK 174365) 'Madhunasha'	Asclepiadaceae	Leaf	Cattle neck wound	Paste/external
<i>Hackelochloa grannularis</i> (L.) O. Ktze. (RDK 176176) 'Hulluri'	Poaceae	Whole plant	Bruise	Paste/external
<i>Indigofera cassioides</i> Rottl. ex DC. (RDK 175711) 'Gogge'	Fabaceae	Flower	Stomachache	Infusion/oral
<i>Ixora coccinea</i> L. (RDK 174382) 'Kapala hoo'	Rubiaceae	Flower	Conception	Infusion/oral
<i>Kalanchoe pinnata</i> (Lam.) Pers. (RDK 167184) 'Soppufuti'	Crassulaceae	Leaf	Boils	Paste/external
<i>Lagerstroemia microcarpa</i> Wt. (RDK 174336) 'Nandimara'	Lythraceae	Bark	Skin burns	Paste/external
<i>Leucas aspera</i> (Willd.) Link. (RDK 173482) 'Tumbegida'	Lamiaceae	Leaf	Cattle wounds	Paste/external
<i>Ludwigia adscendens</i> (L.) Hara (RDK 174312) 'Kesarannu'	Onagraceae	Leaf, fruit, flower	Cattle wounds	Paste/external
<i>Memecylon umbellatum</i> Burm. f. (RDK 167156) 'Uddale'	Melastomataceae	Leaf	Snake-bite	Infusion/oral
<i>Mimosa pudica</i> L. (RDK 174314) 'Mukmodi'	Mimosaceae	Leaf	Blood in breast milk and dysmenorrhoea	Infusion/oral
<i>Mitragyna parvifolia</i> (Roxb.) Korth. (RDK 175750) 'Neerkadamba'	Rubiaceae	Bark	Snake-bite	Infusion/oral
<i>Momordica charantia</i> L. (RDK 174315) 'Hagalkaai'	Cucurbitaceae	Leaf	Post-natal complaints	Infusion/oral
<i>Murraya koenigii</i> (L.) Spreng. (RDK 173499) 'Kariberu'	Rutaceae	Leaf	Conceptions	Infusion/oral
<i>Pergularia daemia</i> (Forsk.) Chiov. (RDK 176101) 'Kontagesoppu'	Asclepiadaceae	Leaf	Alopecia	Paste/external
<i>Polyalthia longifolia</i> (Sonner.) Thw. (RDK 175720) 'Kanthri'	Annonaceae	Bark	Menorrhagia	Infusion/oral

<i>Pongamia pinnata</i> (L.) Pierre (RDK 175733) 'Hongemara'	Fabaceae	Seed oil	Elephant-scratches	External
<i>Psychotria flavida</i> Talb. (RDK 176119) 'Gardapatala'	Rubiaceae	Root	Snake-bite	Infusion/oral
<i>Radermachera xylocarpa</i> (Roxb.) K. Schum (RDK 175706) 'Konankombu'	Bignoniaceae	Bark	Skin burns	Paste/external
<i>Ricinus communis</i> L. (RDK 175760) 'Koyanna'	Euphorbiaceae	Seed	Elephant-tear flow and skin cuts	Castor oil/ external
<i>Rubia cordifolia</i> L. (RDK 173500) 'Yojanaballi'	Rubiaceae	Stem	Abortion	Infusion/oral
<i>Solanum anguivi</i> Lam. (RDK 173412) 'Kaisunde'	Solanaceae	Root	Leucorrhoea	Infusion/oral
<i>Solanum anguivi</i> Lam. (RDK 175785) 'Kaisunde'	Solanaceae	Fruit	Skin cuts	Paste/external
<i>Solanum ferox</i> L. (RDK 173412) 'Gulkaai'	Solanaceae	Root	Stomachache Itching of skin,	Infusion/oral Paste/external
		Fruit	Nailside infection	Inserting finger in fruit
<i>Solanum nigrum</i> L. (RDK 173466) 'Ganakesoppu'	Solanaceae	Leaf	Post natal complaints	Infusion/oral
<i>Strychnos nux-vomica</i> L. (RDK 175712) 'Ettimara'	Strychnaceae	Root	Post natal complaints	Infusion/oral
<i>Tectona grandis</i> L. f. (RDK 173420) 'Thegina mara'	Verbenaceae	Tender shoot	Skin burns	Paste/external
<i>Terminalia bellirica</i> (Gaertn.) Roxb. (RDK 175729) 'Taremara'	Combretaceae	Bark	Skin burns	Paste/external
<i>Terminalia crenulata</i> (Roxb.) Roth (RDK 173464) 'Mattimara'	Combretaceae	Bark	Dysentery	Infusion/oral
<i>Thottea siliquosa</i> (Lam.) Ding Hou (RDK 176136) 'Chakranegida'	Aristolochiaceae	Root and fruit	Indigestion	Infusion/oral
<i>Tinospora cordifolia</i> (Willd.) Miers ex Hook. f. and Thoms. (RDK 167789) 'Agniballi'	Menispermaceae	Leaf	Anti-inflammation	Paste/external
<i>Toddalia asiatica</i> (L.) Lam. Var. floribunda Gamble (RDK 175789) 'Macchimullu'	Rutaceae	Root	Snake-bite	Infusion/oral
<i>Triumfetta rhomboidea</i> N. Jacq. (RDK 176189) 'Vattesoppu'	Tiliaceae	Leaf	Cracks of foot sole	Paste/external
<i>Tylophora indica</i> (Burm. f.) Merr. (RDK 175782) 'Naaihaale'	Asclepiadaceae	Leaf	Lactation	Infusion/oral
<i>Viscum angulatum</i> Heyna ex DC. (RDK 175722) 'Naral'	Loranthaceae	Whole plant	Skin cuts	Paste/external
<i>Wendlandia thyrsoides</i> (R. and S.) Steud. (RDK 175704) 'Harake'	Rubiaceae	Root	Skin disease	Paste/external
<i>Zingiber cernuum</i> Dalz. (RDK 176155) 'Kadginger'	Zingiberaceae	Rhizome	Stomachache	Infusion/oral

## 6. Conclusion

Present indigenous knowledge is the tip of iceberg, which is melting due to new era of modernisation and encroachments on the tribal land to meet the demands of ever increasing population. This traditional knowledge is wealth of the mankind and has great value in the context of today's trade and patents scenario. The present paper gives 78 less known ethnomedicinal uses belonging to 76 plants. This may prove to be the base for potential drugs to provide health for all in new millennium.

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