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Ethnobotanical survey of Malakkurava tribals from Kollam district

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Abstract
The present study was conducted at Kulathupuzha village in Kollam district to identify the major plants which has been used malakkurava tribals for different purposes. Various plant parts were used for medicine, food, fodder, fuel and shelter are identified. Field surveys were utilized to know more about the land, people and collect plants for taxonomic identification. After the interview with tribals, the utility of plants, detailed methods of uses were documented. The information on botanical identities, family, local name, plant parts used & uses of each plant were discussed.

Keywords: ethnobotany, Malakkurava tribe, Kulathupuzha

1. Introduction
Ethnobotany is the study of relationship between plants and human society. Tribal communities depend on wild plants for food, medicine, construction materials, fuel and nearly for all their other material cultures. Dependence of humans on plants and plant products is as old as history of human race. Our survey focused the medicinal plants used by the tribals at Kulathupuzha in Kollam. The awareness that the tribal communities and there culture represent a vast body of knowledge system. The relation that such knowledge system is being depleted at a faster rate since natural ecosystem and culture are being destroyed by the encroachment of development. The primitive tribes acquired the knowledge of economic and medicinal properties of many plants by tribal and they are store house of such knowledge. This accumulated knowledge is passed on from one generation to the other by oral tradition without written document. The study was undertaken to document their valuable information about plants. The present study was initiated with an aim to identify traditional healers who are practicing herbal medicine among the Malakkurava tribes in Kulathupuzha of Kerala, India and quantitatively document their indigenous knowledge on the utilization of medicinal plants, particularly most common ethno medicinal plants. Ethno medical investigation has led to the documentation of a large number of wild plants used by tribal people for meeting their multifarious requirements. Dependence of humans on plants and plant products is as old as history of human race. Much important information about this interrelationship has come to us through the oral tradition still prevalent among many tribal communities inhabiting different parts of the world. The term ethanoecology is used to encompass all studies which describe the traditional people's interactions with the natural environment (Binu; 2009) [1]. Ethanobotanical survey and investigations on surveyed plants of tribal claims, hence have gained today remarkable significance. Ethnobotany is precisely a part of ehanoecology that deals with plants (Harshberger 1896, Power 1814, Prance 1991) [3, 4, 5].

2. Materials and Methods
2.1 Study Area
Kulathupuzha is a village in Anchal taluk in Kollam district of Kerala state, India. It belongs to South Kerala division. It is located 63Km towards east from district head quarters, Kollam 20 Km from Anchal. Kulathupuzha is surround by Punalur taluk towards east, Shencottai taluk towards east, Chadayamangalam taluk towards east. This place is in the border of Kollam district and Thiruvananthapuram district. Malayalam is the local language here. This place is located about 45 meters above the sea level. Current temperature is between 25-30 degree Celsius and the humidity is 66%. There is only one tribe in Kulathupuzha, Malakkurava. Their spoken language is the combination of Malayalam and Tamil.

2.2 Tribal Population
Malakkuravan: Population-584 Literacy 49.38%. The Malakkuravans are found in Kollam, Thiruvananthapuram, Pathanamthitta and Kottayam districts. They are engaged in hunting, collection, fortune-telling and palmistry.

2.3 Data Collection
Ethnobotanical data were collected through questionnaires and discussions among the informants in their local language (Malayalam and Tamil). The questionnaire allowed responses on the plant prescribed part of the plant used, medicinal uses for each part, mode of preparation.

2.4 Method
A field study was carried out over a period of 1-2 days in Kulathupuzha. The ethnomedical information was collected through interviews among malakkurava tribals. For interviewing we selected a guide from the malakkurava tribal. Guide help us to interview the old people of tribe. Obtained data were transferred to a field data book. It include collection number, local name, part used, uses etc. The uses of this plants were recorded. Plants are collected for scientific identification.

3. Result and Discussion

Table 1

Botanical name of the plant	Family	Local name	Part used	Description about the plant	Uses
Asparagus racemosus Wild.	Liliaceae	Sathavari	Root, leaves, tubers	An armed woody climber, distributed in Asia, Africa, Australia and introduced in India.	Tubers are collected and made paste without water. This paste applied for body pain.
Vitex negundo L.	Verbenaceae	Karinochi	Whole plant	A large shrub, distributed in India, Srilanka, Myanmar, Afghanistan, China, Malaysia. Kabul, Philippines and Indo-China.	Fresh roots cut into small pieces and grained to a paste in a little water. This paste mixed with gingelly oil and used for rheumatic pain. Juice of Karinochi leaves boiled with mustard oil is an effective medicine for ear infections.
Solanum torvum L.	Solanaceae	Chunda	Fruits	Shrub grows up to 1-5 m in height. The Young branches are covered with minute star shaped hairs.	Fruits are cut in to 2-3 pieces and are mixed with lime and make paste. It applied on the abdominal skin having stretch marks and discolouration due to the enlargement of the abdomen during pregnancy.
Anacardium occidentale L.	Anacardiaceae	Parangimavu	Tender leaves	Tree cultivated in India for nuts. It is a native of Brazil introduced to India in 16th century (Sharma &Pandey,1984)	Leaves are made into a paste along with cumin seeds. This paste equal to the size of gooseberry is mixed in glass of cow's milk and taken in empty stomach for treat dysentery.
Strychnos nux-vomica L.	Longaniaceae	Kanjiram	Seed	Tree with a short thick trunk	Used for body pain. Seeds are piercing by a thin iron rod. They are then wrapped in a piece of cotton and few drops of coconut oil taken and poured over the flame. It applied for the area of the snake bite.
Vitex altissima L.f.	Verbenaceae	Mayila	Fresh bark	A large deciduous tree upto 15 cm height	Fresh flakes of bark are boiled in water .The bark is used as fomenation in treating rheumatic swellings. It is used to treat inflammation, wounds, worm infestations.
Ziziphus oenoplia (L.) Mill	Rhamnaceae	Cherutodali	Roots	A bushy, thorny shrub with long sarmentose branches	Roots are collected fresh, cut into small pieces and made into a paste in the supernatant of rice gruel. The paste diluted with cows milk. One glass of this mixture is consumed to reduce muscular pains due to falling down from trees. A decoction of the root bark is used to promote the healing of fresh wounds.
Phyllanthus amarus Schum. & Thonn.	Euphorbiaceae	Keezharnelli	Whole plant	A herb, native of America, introduced to India and now naturalized in India, It is pantropical in distribution.	The whole plant is made into a paste and the paste is mixed either in cow's milk or honey and taken twice to a day to cure jaundice.
Biophytum sensitivum L.	Oxalidaceae	Mukkutty	Whole plant	A herb, occurring in peninsular India, Sri Lanka, Philippines, Africa and America	Ten leaves ground to a paste in water. This paste is applied on the chest and used for the treatement of cardiac pain.
Amaranthus spinosus L.	Amaranthaceae	Mullancheera	Whole plant	An armed herb, native of America but widely distributed in tropical countries.	Leaf of this plant and petiole of jack tree are taken into 3:1 and made into paste, equal volume of gooseberry, is mixed in one glass of cow's milk. The juice of the root is used to treat fevers, diarrhoea and dysentery.
Glycosmis pentaphylla Retz.	Rutaceae	Panchi	Roots and leaves	A shrub found in India China, Myanmar, Australia.	Roots are collected and cut into pieces and are boiled in about 150 ml of water, It is used for toothache.
Riccinus communis L.	Euphorbiaceae	Avanakku	Tender leaves	A large shrub native of Africa	Seven tender shoots with 2 or 3 leaves at the apices are plucked off and made paste with seven cumin seeds, rhizome of turmeric. This paste mixed with cow's milk and given morning and evening for 3 days. The oil extracted from seeds are used for ear pain.
Jatropha curcas L.	Euphorbiaceae	Velipathal	Termial leaves	A large shrub native of tropical America	Terminal shoots are ground to a paste in little of water. This paste is mixed either with cow's milk used for treatment of jaundice.
Hemidesmus indicus L.	Asclepiadaceae	Narunandi	Tuberous roots	A slender, laticiferous twiner distributed in India and Sri Lanka.	Epidermal peels removed freshly collected roots are cut into small pieces is mixed with rice powder and cooked in coconut oil in the shape of cake. It given children to the treatment of Karappan.
Tectona grandis L.f.	Verbenaceae	Teak	Bark	A deciduous tree found in India, Myanmar, Java and Malaysia planted in Kulathupuzha.	Fresh bark crushed and juice is extracted. One spoon of (about 20 ml) juice is given internally in dysentery.

The primitive tribes acquired the knowledge of economic, medicinal properties of many plants by trail and error methods and they are storehouse of such knowledge. This knowledge passes from one generation to the other by oral tradition without any written document. The study was undertaken to document their valuable information about plants. Medicinal plants play a key role in the daily life of tribes (Binu; 2011) [2]. India is having rich vegetation with a wide variety of plants, because of the extreme variations in geographical and climatic conditions prevailing in the country. Plants have been used since ancient times for the treatment of various ailments. Especially, Malakkurava tribal communities in Kulathupuzha of Kerala meet their healthcare needs by using non-timber minor forest products and preparations based on traditional knowledge. They still depend on medicinal plants and most of them have a basic knowledge of medicinal plants which are used for first aid remedies, to treat cough, cold, fever, headache etc.

The pie diagram is based on the usage of the plant part. Here the collected data is modified to a graphical form. This gives a

statistical data which gives the percentage of each part used. The percentage of useful part are Root - 6%,bark-13%,Whole plant - 27%, Roots and leaves - 13%, Fruit - 7%, Seed - 7%. Among the 15 species, the whole plant is useful in 4, only root is used in 1, root and leaves are used in 2, Bark is useful in 2 plants, Leaves in 4, fruit in 1 and seed in 1.

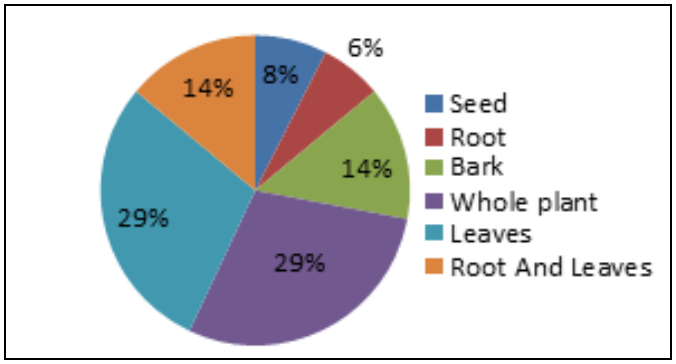

Fig 1: Percentage of plant part used by the malakkurava tribals

4. Conclusions

The present study was initiated with an aim to identify traditional healers who are practicing herbal medicine among the Malakkurava tribes in Kulathupuzha of Kerala, India and quantitatively document their indigenous knowledge on the utilization of medicinal plants, particularly most common ethno medicinal plants. During the survey fifteen common plant species used by the tribal community of that area for primary healthcare were identified. The details of the plant species such as plant name, family, local name, part used and medicinal uses. Ethno Medical investigation has led to the documentation of the large number of wild plants used by tribal people for meeting their multifarious requirements.

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