Short Communication _____ *Chapter –24*

ETHNOMEDICINAL SURVEY OF PLANTS USED BY KURICHIYA TRIBE IN TIRUNELLI, WAYANAD, KERALA

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Abstract

Cost-effective and accessible traditional healthcare systems are followed by the tribal people and many people trust their system. So this study has focused to identify the folklore medicinal plants and their preparation through a survey of the Kurichiya tribe in Thirunelli village of Wayanad district, Kerala, India. The survey gave a clear insight into the different families of plants, their ethnomedicinal properties, and the preparation pattern. This study has paved a way for future investigations on these tribal medicines and can imply phytochemical screening for novel molecules in disease treatment. Even though the study encourages the use of these medicinal preparations further pharmacological tests are to be carried out to confirm their usage in modern medicine.

Keywords: *Tribes, Kerichiya, Ethnomedicinal, plant preparation, Family*

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Introduction

The human tribes who are the primitive and social group have their unique accomplishments and attributes. Especially the tribal people who are the forest dwellers have a very historical background (Bharathi et al. 2014). The tribes of Kerala live in the forest regions in and around the Western ghats, bordering the states of Karnataka and Tamil Nadu, and have a tuneful relationship with nature and its products. Their ways are mostly associated with the preservation, protection, and existence in the forest without harming the natural resources. They use the traditional knowledge of using the plants in the forest for various medicinal uses and utilize plant parts as well as whole plants for medicinal preparations (Diksha and Amala, 2011). The ethnomedicinal studies on various plants give an insight into how indigenous people use these plants in traditional diagnosis and treatment practices.

These rural societies have given huge importance to plants in their religious ceremonies and social practices (Latheef et al. 2014). In terms of Kurichiya tribes, they use at least 20 varieties of plants for ceremonial uses. The ceremonies are categorized into 4 types: agricultural, magical healing, divine, and related to lifecycle. These tribal people also follow supernatural practices and for that, they use these plants. The Kurichiyas are the pioneer tribes who colonized in Wayanad district. They have immense knowledge of medicinal plants and their traditional healing practices can be traced back to their ancestors (Rajith and Ramachandran, 2010.). The hills of Wayanad are blessed with a variety of medicinal plants and the Kurichiyas follow the natural methods to drive medicines from these plants. the seasonal plants are collected from their natural habitats and the products are prepared using individual plants or by combination.

The need of understanding the ethnomedicinal practices by documenting the indigenous people is very important as it can indirectly conserve biological resources and lead to sustainable utilization (Shyma. and Deviprasad, 2012). The data obtained from this study will help conserve the threatened and endemic plant species. The present study has been done to learn the diversity of plants in the Thirunelli forest area. And the main objective is to assess the diversity in the ethnomedicinal plant usage by the Kurichiya tribe and to document their medicinal practices.

Materials and Methods

a) Study Area

The study area is located deep inside the western ghat forest range and the village around Thirunelly of Wayanad district. As per the census data of 2011the location code of Thirunelly village is 627293 and it belongs to the Manathavady taluk of Kerala, India. It is about 57 km away from Kalpetta, which is the district headquarters. This area also comes under the gram panchayath. The village is around 14861 hectares in area with a total population of 12,878 people of which 6306 are male and 6572 are female. The literacy rate is 66% and there are about 2989 houses in the area. The location map is shown in figure 1.

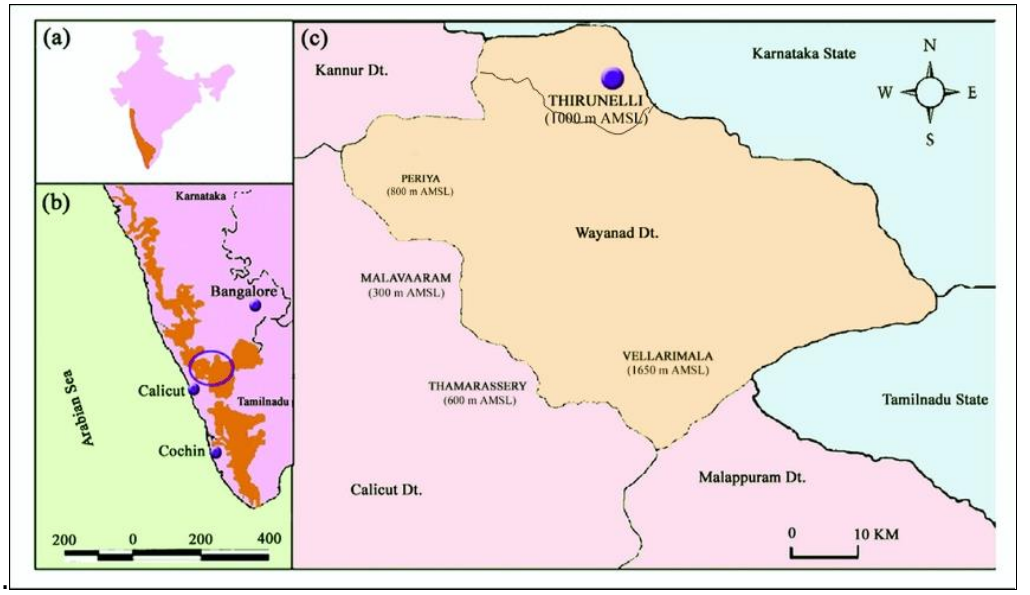

Figure 1. Location Map of the Study Area

b) Kurichiya Tribe

The Kurichiya tribe is otherwise called the Malai or Hill Brahmins and are most the inhabitants of Kozhikode, Kannur, and Wayanad districts and are the scheduled tribe of Kerala. The four segmented divisions of Kurichiyas are, Kurichiyans of Kannavam forest, Kurichiyans of Wayanad, Anchilla Kurichiyans, and Pathiri Kurichiyans. They utilize the forest products like honey, herbs, gum, resins, etc for spiritual and commercial purposes. They are also the second largest tribe in Kerala with the highest social status among the tribes. Their historical importance also travels back to British rule in 1805, were these tribes displayed excellent bowmen during the armed rebellions under the leadership of King Pazhassy Raja. The name Kurichiya is derived from the term "Kuri" meaning sandalwood paste which is applied on the foreheads as part of their custom. The tribe follows a rigid system of matriliny and speaks a corrupted form of the Malayalam dialect.

c) Plant Collection

Field investigations were conducted in the Thirunelli forest of Wayanad district. The standard protocols were followed to preserve the medicinal plants collected from the study area and the herbarium was prepared. Specimens collected from the forest were tagged and taken to the lab. Flora of the Presidency of Madras (Gamble, 1936) was used for the identification and authentication of the collected plants. Herbarium collections have been vouchering numbered and deposited in the Herbarium at Sree Narayana Guru College Chelannur.

Table 1. Inventory of Ethno medicines In Thirunelli Village, Wayanad, Kerala

	BINOMIAL	FAMILY	ENGLISH NAME	MALAYALAM NAME	USEFUL PARTS
1	*Acorus calamus*	Aracaceae	Sweet flag	Vayambu	Rhizome
2	*Artemisia nilagirica*	Asteraceae	Nilgiri mugwort	Ananta -pacca	Leaves
3	*Asparagus racemosus Wild*	Liliaceae	Asparagus wild	Shathavari	Root
4	*Bambusa bambos*	Poaceae	Bamboo	Mula	Leaves
5	*Biophytum sensitivum*	Oxalidaceae	Little tree plant	Mukkootti	Leaves
6	*Boerhavia diffusa*	Nyctaginaceae	Hog weed	Punarnava	Roots
7	*Careya arborea*	Lecythidaceae	Wild guava	Pezhu	Bark and leaves
8	*Catharanthus roseus*	Apocynaceae	Periwinkle	Shavam Naari	Whole part
9	*Cenratherum anthelmenticum*	Asteraceae	Black cumin	Kattujirakam	Seeds
10	*Chromolaena odorata*	Asteraceae	Eupatorium	Communist Pacha	Leaves
11	*Cinnamom zeylanicum*	Lauraceae	Ceylon cinnamon	Elavangam	Bark
12	*Cissus discolor*	Vitaceae	Rex begonia vine	Aaronpuli	Leaves
13	*Clematis gouriana*	Rananculaceae	Indian Traveller's Joy	Nikidakodi	Leaves
14	*Curcuma longa*	Zingiberaceae	Turmeric	Manjal	Rhizome
15	*Cynodon dactylon*	Graminaceae	Bermuda Grass	Karukapullu	Whole parts
16	*Eclipta prostrata*	Asteraceae	False daisy	Kayyonni	Whole parts
17	*Embelia ribes*	Primulaceae	False black pepper	Vayivalannam	Fruits
18	*Emblica officinalis*	Euphorbiaceae	Indian gooseberry	Nellimaram	Whole part
19	Eryngium foetidum	Apiaceae	Mexican coriander	Kattumalli	Leaves
20	*Hemidesmus indicus*	Apocynaceae	Indian sarsaparilla	Nannari	Roots
21	*Holigrana arnottiana*	Anacardiaceae	Black Varnish Tree	Cheru	
22	*Indigofera tinctoria*	Fabaceae	True Indigo	Neelayamari	Leaves
23	*Justicia adathoda*	Acanthaceae	Malabar nut	Adalodakam	Whole part
24	*Justicia gendarussa*	Acanthaceae	Willow leaved justicia	Karinochi	Leaves
25	*Kaemferia galanga*	Zingiberaceae	Aromatic ginger	Karpporam	
26	*Leucas aspera*	Lamiaceae		Thumba	Leaves
27	*Michelia champaca*	Mangoliacae	Champak	Chembakam	Flowers and stem
28	*Mimosa pudica*	Fabaceae	Touch-me-not	Thottavadi	Root
29	*Mussaenda frondosa*	Rubiacae	Dhobi tree	Vellila	Leaves
30	*Piper longum*	Piperaceae	Black pepper	Kurumulaku	Fruit and root
31	*Plectranthus ambonicus*	Lamiaceae	Indian borage	Panikkorkka	Leaves
32	*Rauvolfia serpentina*	Apocynaceae	Indian snakeroot	Sarpagandhi	Root
33	*Santalam album*	Santalaceae	East Indian Sandal wood	Chandhanam	Stem
34	*Schumannianthus virgatus*	Marantaceae		Malamoova	Rhizome

35	*Selaginella*	Selaginellales	Spike moss	Sanjeevani	Whole part
36	Sida acuta	Malavaceae	Wire weed	Kurunthotti	Root
37	Solanum torvum	Solanaceae	Turkey berry	Chunda	Fruits
38	Tinospora cordifolia	Menispermaceae	Gurjo	Chittamrith	Stem
39	Tragia involucrata	Euphorbiaceae	Stinging nettle	Kodithoova	Leaves
40	Vetiveria zizaniodes	Poaceae	Vetiver	Ramacham	Roots
41	Zingiber officinale	Zingeberaceae	Ginger	Inchi	Rhizome

d) Ethnomedicinal survey

Throughout the study period, the daily activities of the tribal people were closely monitored and interpersonal relationship was maintained while participating in their functions. There were 5 informants in the age group of 35-65. Among them, two were tribal practitioners. The ethnobotanical data were collected using interviews, questionnaires, and discussions in their local dialect.

Result and Discussion

The present study has been carried out to document the indigenous traditional knowledge of medicinal plants in Thirunelli tribal village, Wayanad, Kerala which revealed the ethnomedicinal information of 41 plant species belonging to 29 families as shown in Table 1 and of the total 41 species documented, 31 species belong to Dicotyledons, 9 species belong to Monocotyledons and 1 was identified to be Pteridophyte (Figure 1)

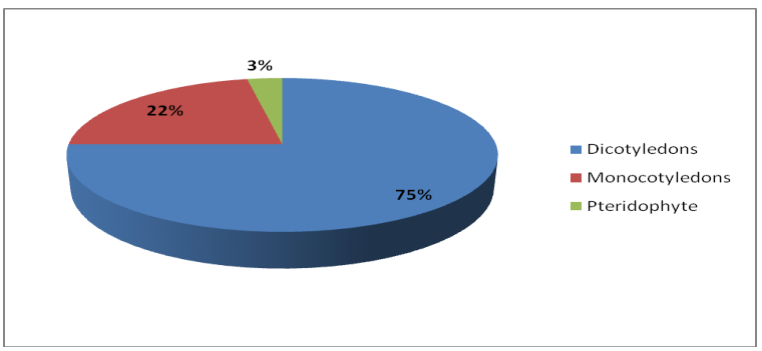

Figure 2. Categories of Ethinomedicinal Plants

The most medicinally important plant species were observed in Asteraceae followed by Zingiberaceae. Similar results were also reported by Loganathan *et al.* (2018) in Vathalmalai Hills, Eastern Ghats, Dharmapuri District, Tamil Nadu. Analysis of habit diversity of medicinal plants revealed that herbs are dominated with, 41%, followed by shrubs (27%), trees (12%), climbers (17%), and creepers (3%) as shown in figure 2. Similar results were reported by Marjana *et al.* (2018) in the Wayanad District of Kerala, India.

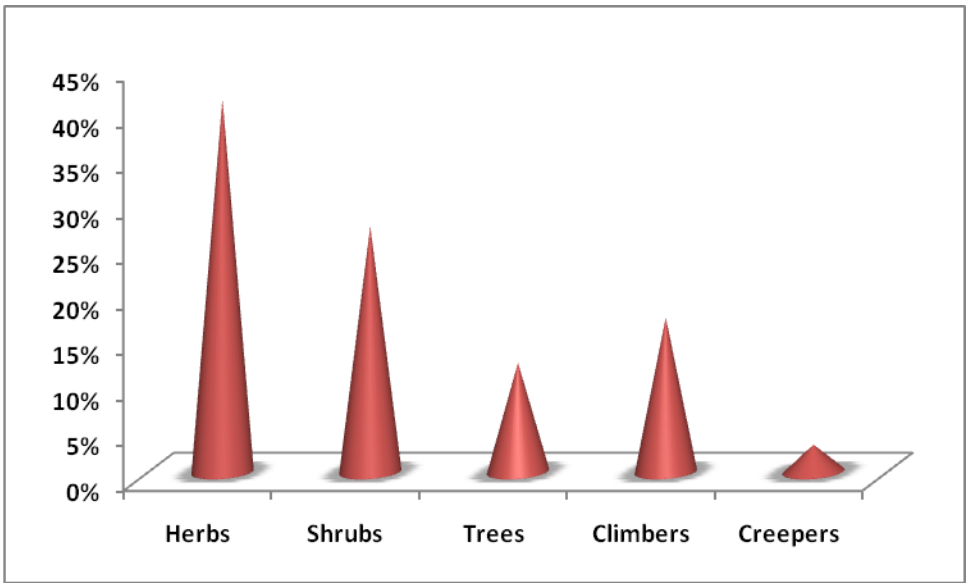

Figure 3. Habit vie Distribution of Ethinomedicines

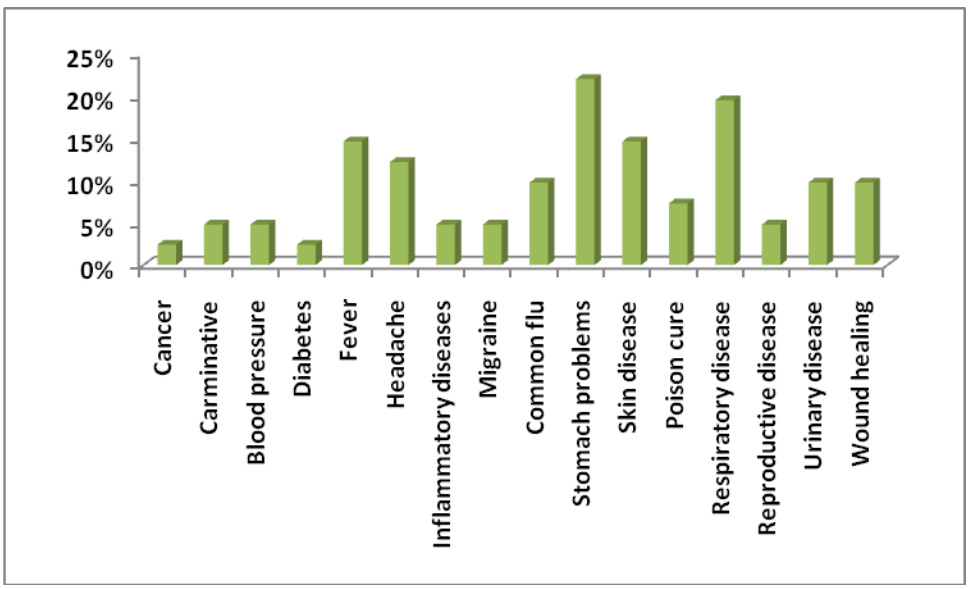

Figure 4. Plant Parts Used for the Preparation of Ethnomedicines

Most of the recorded medicinal plants in the study are used to treat Stomach related problems, respiratory diseases, fever, headache, urinary infections, and wound healing practices as shown in figure 3. Similar results were observed in the earlier medicinal plant studies by the Indian Traditional System of Medicine like Siddha and

Ayurveda (Kirtikar and Basu, 2001). The herbal formulations were mostly made by using whole plants and leaves, and their usage is also supported by previous publications (Marjana *et al*., 2018). Also, the Kurichiyas prepare medicines accompanied by rituals. One of the most important aspects of Kurichiya medicine is they use fresh plant material for preparation and on rare occasions use dried plant materials.

Conclusion

From this study, it is evident that the Kurichiya tribe has a gifted ability to discern plants to meet their health needs. The study concludes by stating the in-depth knowledge of ethnomedicinal plants and their utilization in disease treatment. This promising knowledge is of great interest and will pave the way for the development of new medicines by confirming their therapeutic aspects using modern parameters.

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