

## Ethnomedicines of *Kurichyas*, Kannur district, Western Ghats, Kerala

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The *Kurichyas* are one of the tribal communities of Kerala who have their settlements in Kannavam, Kannur district. Extensive field studies were undertaken in order to study the utilization of wild medicinal plants which has resulted in the collection of 50 species belonging to 31 families. The plant name, family, vernacular name and ethno-botanical uses have been enumerated in this communication.

**Keywords:** Ethnomedicines, *Kurichyas* tribe, Kannur district, Kerala, Medicinal plants, Western Ghats.

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### Introduction

India, a land of amazing biodiversity, has a vast store house of natural resources that can be sustainably used as food, nutritional supplements and medicine. The Western Ghats region of Kerala is a great emporium and treasure house of ethno-botanical wealth. Tribal medicines offer a vast scope for medical research. With the rapid intrusion of modern civilization the ancient tribal tradition and culture is on the verge of extinction. Based on the ethno-botanical studies, many alkaloids and other important chemicals are being isolated from plants by using better techniques of chemical analysis and isolation methods; however, much work has still to be done. New medicinal uses of plants are being reported continuously by several workers from different localities<sup>1-4</sup>. In the present study, an attempt has been made to investigate and document some of the medicinal plants used by people of *Kurichyas* tribe of Kannur district to cure their ailments.

### Study Area

The study area is Kannavam, a village with an area of 400 hectares, located at the southern part of Kannur district. This district is the second Northern most district of Kerala and lies between 11°40' and 12°08' N latitude and 75°11' and 76°08' E longitude and is bounded on the North by Kasargode district of Kerala state, on the South by Calicut and Wayanad, on East

by Karnataka state and on West by Arabian sea. Kannavam is 40 km away from Kannur town and is well connected by road<sup>5</sup>. Major population is *Kurichyas* tribe. The Govt. of Kerala has built 110 houses for them and has also provided 4 hectares of land per family. Their inhabitations are surrounded by Kannavam forest. A medicinal plantation garden was established by the Kerala state forest department during 1988. It is located at Vengalam, an adjoining village within the range of Kannavam forest. It holds a variety of medicinal plants including common and some endangered ones.

### Tribe

*Kurichyas* are found in the forest areas of Thalassery and North Kannur. They are aristocrats among the hill tribes like *Paniya*, *Adiya* and *Kurumba* and occupy the highest position among them. The *Kurichyas* were skilled bow-men and played an important role in the Pazahasi Raja's rebellion at the beginning of 19<sup>th</sup> century. Most of the aged *Kurichyas* are a treasure house of indigenous knowledge. They still use medicinal plants obtained from the adjoining forests. The knowledge of medicinal plants has descended from ancestors and most of them are not willing to reveal their knowledge to the outsiders.

### Methodology

The survey was conducted between August 2004 and March 2005 during different flowering periods. The information was gathered from the elderly

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*Kurichyas* tribal medicine men, who knew well about the surrounding cultivated and wild plants in forests, their local names, parts used, preparation of herbal medicine, mode of administration, dose and uses in different ailments and diseases (Plate 1). Plants were identified with the help of relevant published flora<sup>6</sup> and voucher specimens have been deposited in the Herbarium, Department of Botany, Kongunadu Arts and Science College (Autonomous), Coimbatore for further reference.

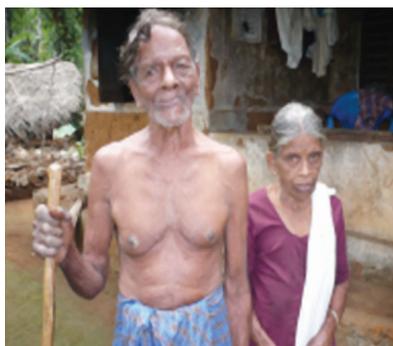
### Results and Discussion

In the present investigation, a total of 50 species of medicinal plants, belonging to 31 families were identified, which are in common use among the *Kurichyas* of Kannavam forests. The collected plants are arranged in alphabetic order by providing the correct plant name followed by the family, local names, parts used along with their ethno-medicinal uses (Table 1). Out of 50 plant species enumerated, 45 species belong to dicotyledons and 5 are monocotyledons. Based on the life-forms, there are 15 herbs, 15 shrubs, 09 twiners/climbers and 11 trees. The dominant families were analyzed and found that Asteraceae was the dominant family with

four species followed by Apiaceae, Aristolochiaceae, Euphorbiaceae, Rutaceae and Solanaceae with three species each. The study deals with various types of human ailments.

The herbal specialists of *Kurichiya*, collect medicinal plants from their natural habitat at different seasons and prepare the plant products; the preparations ranges from decoctions, paste, powder with the mixture of roots, tubers, leaves, stems, twigs and administer the respective medicine in appropriate doses to the patients. The plant species are used either individually or in combination with other plant parts.

In the present study, there are 17 plants (asterisk marked in Table 1) that are newly reported for their medicinal use. It is interesting to note that some of the species enumerated have a great trade potential in the medicinal plant market. *Acorus calamus*, *Biophytum sensitivum*, *Centella asiatica*, *Cyclea peltata*, *Eclipta prostrata*, *Embllica officinalis*, *Ensete superbum*, *Hemidesmus indicus*, *Indigofera tinctoria*, *Rauwolfia serpentina*, *Oroxylum indicum* and *Solanum anguivi*, to name a few are some of the high value species which can be cultivated on a large scale.



An old Kurichyas couple



A sacred place at the study area



*Thottea siliquosa* fruits



*Scleropyrum pentandrum*



*Rauwolfia serpentina*



*Aristolochia tagala*

Plate 1—Kurichyas and various plants used by them

Table 1—Medicinal plants used by *Kurichayas* tribe of Kannur district

Plant name/Accession No.	Family	Vernacular Name	Uses
<i>Achyranthes aspera</i> Linn. N.P.Rajith 12/6103	Amaranthaceae	<i>Valiya kadaladi</i>	Fresh roots are grounded and applied externally on the affected portion against snake bite and scorpion sting.
<i>Acorus calamus</i> Linn. N.P.Rajith 24/6108	Araceae	<i>Vayambu</i>	Fresh rhizome is grounded and mixed with hot water taken three times daily for 3 days early morning in the empty stomach for curing dysentery.
<i>Aegle marmelos</i> Correa ex Roxb. N.P.Rajith 33/6125	Rutaceae	<i>Kuvvalam</i>	Fresh fruits are used as raw, cooked or pickled. Fresh roots are grounded and made as paste and taken for curing dysentery and vomiting.
<i>Aristolochia indica</i> Linn. N.P.Rajith 13/6115	Aristolochiaceae	<i>Cheriya eswaramulla</i>	Fresh root is grounded along with the roots of <i>Rauvolfia serpentina</i> and mixed in water and taken twice daily for 3 days against snake bite.
<i>Aristolochia tagala</i> Cham. N.P.Rajith 17/6130	Aristolochiaceae	<i>Valiya eswaramulla</i>	Fresh leaves are grounded and taken as such for stomachache. Fresh root is grounded and applied externally against poisonous bites.
<i>Asparagus racemosus</i> Willd. N.P.Rajith 22/6087	Liliaceae	<i>Sathavari</i>	Dried rhizome is pounded and one tea spoon is mixed in one glass of cow's milk and taken twice daily against urinary disorders.
<i>Baliospermum montanum</i> (Willd.) Muell.- Arg. N.P.Rajith 27/6109	Euphorbiaceae	<i>Nagadanthi</i>	Dried seeds are pounded and taken for stomachache.
* <i>Biophytum sensitivum</i> (Linn.) DC. N.P.Rajith 29/6122	Oxalidaceae	<i>Mukkutti</i>	A fresh whole plant is grounded and applied externally on the affected area against poisonous bite.
<i>Boerhavia diffusa</i> Linn. N.P.Rajith 41/6131	Nyctaginaceae	<i>Thazhuthama</i>	Fresh whole plant is sliced and boiled in water and taken as such against urinary calculi.
* <i>Bridelia stipularis</i> (Linn.) Blume N.P.Rajith 47/6136	Euphorbiaceae	<i>Cherupanachil</i>	Fresh fruits are chewed and taken as such against mouth ulcer.
<i>Cardiospermum halicacabum</i> Linn. N.P.Rajith 50/6120	Sapindaceae	<i>Uzhinja</i>	Crushed roots are applied on legs to cure swellings.
* <i>Centella asiatica</i> (Linn.) Urban N.P.Rajith 42/6117	Apiaceae	<i>Kudakan</i>	Leaves are grounded along with fresh turmeric and applied against skin diseases.
<i>Centrantherum anthelmenticum</i> (Linn.) O. Kuntze N.P.Rajith 11/6124	Asteraceae	<i>Katujeerakam</i>	Chewed as such against stomachache.
<i>Cinnamomum zeylanicum</i> Blume N.P.Rajith 10/6129	Lauraceae	<i>Karuppa</i>	Used as a carminative.
* <i>Commelina benghalensis</i> Linn. N.P.Rajith 28/6134	Commelinaceae	<i>Veliapadathi</i>	Crushed juice of herb is given twice a day for the treatment of jaundice.
* <i>Cyathula prostrata</i> (Linn.) Blume N.P.Rajith 30/6088	Amaranthaceae	<i>Cheriya kadaladi</i>	One tea spoon dried root powder is boiled in water and taken thrice daily against fever.
<i>Cyclea peltata</i> (Lam.) Hook. f. & Thoms. N.P.Rajith 37/6090	Menispermaceae	<i>Padathali</i>	Crushed roots are given for stomach pain; leaves are used in the treatment of bronchitis and cough.

(Contd)

Table 1—Medicinal plants used by *Kurichayas* tribe of Kannur district —*Contd*

Plant name/Accession No.	Family	Vernacular Name	Uses
* <i>Cynoglossum zeylanicum</i> (Vahl. ex. Hornem.) Thunb. ex. Lehm. N.P.Rajith 40/6089	Boraginaceae	<i>Tumbakoduveli</i>	Fresh roots are grounded and mixed in hot water and taken thrice daily for 3 days against diarrhoea.
<i>Desmodium triflorum</i> (Linn.) DC. N.P.Rajith 43/6091	Fabaceae	<i>Ataka chokki</i>	Whole plant is used for curing stomachache and piles.
<i>Eclipta prostrata</i> (Linn.) Linn. N.P.Rajith 01/6101	Asteraceae	<i>Kayyoonni</i>	Used in hair oil preparation and promotes hair growth.
<i>Elephantopus scaber</i> Linn. N.P.Rajith 18/6104	Asteraceae	<i>Anachuvadi</i>	Whole plant is used for curing diarrhoea, bronchitis and other skin ailments.
<i>Emblica officinalis</i> Gaertn. (syn. <i>Phyllanthus emblica</i> Linn.) N.P.Rajith 04/2711	Euphorbiaceae	<i>Nelli</i>	For cooling the body and as a blood purifier.
* <i>Emilia sonchifolia</i> (Linn.) DC. N.P.Rajith 15/6102	Asteraceae	<i>Muyalchevi</i>	Crushed leaves cure the worm infection.
<i>Ensete superbum</i> (Roxb.) Cheesman N.P.Rajith 16/6105	Musaceae	<i>Kalluvazha</i>	Powdered seeds are mixed with milk and given twice a day for urinary disorder and kidney stone.
* <i>Eryngium foetidum</i> Linn. N.P.Rajith 02/6106	Apiaceae	<i>Kattumalli</i>	Bathing with the leaf decoction is claimed to be effective against muscular pain.
<i>Glycosmis pentaphylla</i> (Retz.) DC. N.P.Rajith 49/6108	Rutaceae	<i>Kuttiapanal</i>	Leaves used as antidote for snake bite.
<i>Hemidesmus indicus</i> (Linn.) R.Br. N.P.Rajith 44/6107	Asclepiadaceae	<i>Nannari</i>	The roots are grounded with Black pepper ( <i>Piper nigrum</i> Linn.) and taken orally for treating stomach ulcers and used along with the mixture of long pepper ( <i>P. longum</i> ) for curing bronchitis and cough.
* <i>Hydnocarpus pentandrus</i> (Buch-Ham.) Oken N.P.Rajith 03/6110	Flacourtiaceae	<i>Thaali</i>	Crushed leaf extract applied on the head for better hair growth and cooling effect.
* <i>Ichnocarpus frutescens</i> (Linn.) R.Br. N.P.Rajith 19/6112	Apocynaceae	<i>Palvalli</i>	Root extract used for vomiting; leaf extract for stomach pain.
<i>Indigofera tinctoria</i> Linn. N.P.Rajith 32/61	Fabaceae	<i>Neelayamari</i>	Crushed plant is applied on the poisonous bite and used as an antidote.
<i>Leea indica</i> (Burm. f.) Merrill N.P.Rajith 09/2716	Leeaceae	<i>Nallu</i>	Crushed roots and leaves are useful in stomach related problems like diarrhoea, dysentery and ulcer.
<i>Mimosa pudica</i> Linn. N.P.Rajith 48/2736	Mimosaceae	<i>Thottavadi</i>	Crushed young leaves used for healing wounds.
* <i>Naringi crenulata</i> (Roxb.) Nicolson N.P.Rajith 06/2721	Rutaceae	<i>Kattunarakam</i>	Root extract given for curing vomiting and dysentery.
<i>Oroxylum indicum</i> (Linn.) Vent. N.P.Rajith 45/2740	Bignoniaceae	<i>Palakapayyani</i>	Crushed roots used for curing diarrhoea; stem bark applied for reducing muscular pain.
* <i>Pimpinella monoica</i> Dalzell N.P. Rajith 46/2739	Apiaceae	<i>Kadajeerakam</i>	Seeds are directly taken for curing stomachache.
<i>Piper longum</i> Linn. N.P.Rajith 36/2733	Piperaceae	<i>Tippali</i>	Mixture of roots and dried spikes along with roots of <i>Solanum anguivi</i> Lam. and leaves of <i>Desmodium triflorum</i> are given for curing cough, bronchitis and fever.

(Contd)

Table 1—Medicinal plants used by *Kurichayas* tribe of Kannur district—*Contd*

Plant name/Accession No.	Family	Vernacular Name	Uses
<i>Plumbago zeylanica</i> Linn. N.P.Rajith 20/2719	Plumbaginaceae	<i>Koduveli</i>	Crushed roots applied for curing skin diseases.
<i>Rauvolfia serpentina</i> (Linn.) Benth. ex Kurz N.P.Rajith 14/2735	Apocynaceae	<i>Amalpori</i>	Fresh crushed roots are used for treatment of dysentery and in snake bite, the decoction of powdered rhizome and leaves is given.
<i>Santalum album</i> Linn. N.P.Rajith 08/2717	Santalaceae	<i>Sandanam</i>	Paste of heartwood is applied on the forehead for reducing headache and for skin ailments.
* <i>Schumannianthus virgatus</i> (Roxb.) Rolfe N.P.Rajith 07/2737	Marantaceae	<i>Kuvva</i>	Boiled rhizome is given for curing dysentery and vomiting.
* <i>Scleropyrum pentandrum</i> (Dennst.) Mabberley N.P.Rajith 23/2728	Santalaceae	<i>Malayammachi</i>	Crushed roots given for curing stomach ailments.
<i>Scoparia dulcis</i> Linn. N.P.Rajith 34/2709	Scrophulariaceae	<i>Kalluruki</i>	Crushed root extract is given for stomach pain, urinary disorders and kidney stone.
<i>Solanum anguivi</i> Lam. N.P.Rajith 39/2732	Solanaceae	<i>Puttarichunda</i>	Crushed roots used for curing diarrhoea and for skin ailments.
<i>Solanum nigrum</i> Linn. N.P.Rajith 25/2713	Solanaceae	<i>Manithakkali</i>	Fresh and dried fruits used in the treatment of ulcer in mouth.
* <i>Solanum torvum</i> Swartz N.P.Rajith 05/2747	Solanaceae	<i>Anachunda</i>	Root extracts applied on cracked foot. Fried fruits are taken for curing cough.
* <i>Thottea siliquosa</i> (Lamkey) Ding Hou N.P.Rajith 38/2725	Aristolochiaceae	<i>Cheirya chootarambu</i>	Fruits boiled with coconut oil are applied on the forehead for curing headache.
<i>Tinospora cordifolia</i> (Willd.) Miers ex Hook. f. & Thoms. N.P.Rajith 31/2741	Menispermaceae	<i>Chittamruthu</i>	Fresh juice of stem is mixed with black pepper and given thrice a day for 3 days for curing fever.
* <i>Vitex negundo</i> Linn. N.P.Rajith 26/2714	Verbenaceae	<i>Korinochi</i>	Crushed leaf paste is applied on forehead to cure headache.
<i>Ziziphus oenoplia</i> (Linn.) Mill. N.P.Rajith 21/2710	Rhamnaceae	<i>Cheriyalanta</i>	Crushed root bark taken for the treatment of ulcers and healing of wounds.

\* New use reported.

## Conclusion

From the present study, it is evident that the *Kurichyas* depend upon the wild plant resources for their personal medical care; in order to supplement their requirements, it is suggested that the potential medicinal plants could be cultivated in their backyards/kitchen gardens. It is hoped that the information gathered from the indigenous community will provide further lead in developing new herbal formulation.

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