



Case studies - Part VIII: Systematic documentation of traditional knowledge related to plants used for food and medicine

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Abstract

Traditional knowledge generally refers to experiences of long standing traditions and practices of certain regional, indigenous or local communities. It is getting eroded rapidly due to changing living habits of the people. There is an urgent need to document the remaining invaluable information for the welfare of people now and protect for posterity. Kerala, the southernmost tip of the Indian sub-continent, is considered as home to the most diverse and richest traditional knowledge systems due to its unique cultural expressions, which are directly or indirectly linked with the surrounding environment, ranging from the coastal and plains to mountainous regions. This varied and diverse topography of Kerala resulted in a rich variety and variability of flora and fauna, especially the plants used for food and medicine. This paper deals with the traditional knowledge related to plants used for food and medicine from the selected gramapanchayats of Ernakulam and Thrissur districts, Kerala, India. This article could serve as a lead to researchers for further studies in this domain.

Keywords: Ethnomedicine, Healing art, Traditional food, Guruthi pooja

1. Introduction

It is worthwhile to note that almost all human civilizations over millennia in different parts of the world evolved their own culture and tradition based on the environment they lived, some of which would have imbibed, inherited and incorporated other culture and traditions and added medicines and food habits known as traditional medicines and traditional foods. The wide range of traditional medicines used for varied health disorders and unique food habits of traditional communities were developed and perfected over centuries with the locally available bio resources. Traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities, developed from experience gained over

the centuries and adapted to the local culture and environment (Praveen *et al.*, 2013). The choice of medicine and food thus utilized, suited to the climate and local environment becomes a tradition inherited over generations. India is a treasure trove of traditional medicine and food, blessed with diverse geo-agro climatic condition with associated cultural diversity, there evolved numerous traditional healing practices, mostly oral and classical traditional systems of medicine like Ayurveda, Unani, Siddha and Sowa-Rigpa. The traditional food/dietary practices in India are so diverse and widely differs from region to region, from religion to caste to tribal communities, having a plethora of cuisines with unique patterns is exquisitely rich in India.

Kerala known as ‘God’s Own Country’ is one among the states in India, which is endowed with a rich and varied cultural heritage rooted in Traditional Knowledge (TK) systems. The history of the traditional and folk practices in Kerala goes back to the history of the origin of Kerala (Devi Prasad *et al.*, 2013). Most of the houses in Kerala had maintained a ‘mini gene pool’ of plants used for food and medicine (Rajasekharan *et al.*, 2013). Apart from *Ayurveda*, there is a strong and vibrant oral health tradition existing in Kerala. People of Kerala also conserved a number of medicinal plants seen and grown in their surroundings which are still continued to be utilized as ‘home remedies’ for common ailments. Indigenous plant-based knowledge on health or as medical care have been recorded from time immemorial. Collection of information and documentation of TK plays an important role in scientific research on drug development. In this paper, the authors have highlighted few case studies related to plants used for food and medicine from the selected Gramapanchayats of Ernakulam and Thrissur districts in Kerala.

2. Materials and methods

2.1. Study area

The study area encompasses the selected gramapanchayats of Ernakulam and Thrissur districts in Kerala, having deep roots in traditional knowledge systems (Fig.1). The current study was conducted in Chottanikkara, Koovappady, Puthenvelikkara gramapanchayats of Ernakulam district and Erumapetty gramapanchayath of Thrissur district.

2.2. Methodology

The present study was conducted in a planned and systemic manner from January 2020 to March 2021. Contact and awareness programmes were conducted with the President, elected local body members and other local TK holders as part of action plan for field research. Ethnomedicinal field surveys were conducted once or twice every month for a period of ten days each, covering the gramapanchayats with traditional and cultural roots. Interviews were conducted after obtaining Prior Informed Consent (PIC) with traditional folk belonging to ethnic communities, traditional healers, *vaidyas* and other knowledgeable persons in



Fig. 1. Study area

the study area using modern technical parameters with the help of standard questionnaire-based interviews, open-ended field discussions and also by observation of their actual practices, wherever possible. Duration of the discussion varied depending on the informant’s knowledge, approach, interest and availability. In the case of medical care, recording of the information on various aspects of treatment practices such as diseases treated, method of treatment, vernacular names of plant, part used, part used, method of herbal collection and medicinal preparation, etc., were also collected and recorded. Relevant photographs and short video clippings were taken. Voucher specimens were also collected for future reference and authenticated using different standard books. Data pooling and analysis of the information were carried out with specially designed web-based software. The information was uploaded in the electronic data base for further reference and research.

3. Results and discussion

3.1. Case Study I: Healing Art of Nelluvai Dhanwanthari Temple: Nelluvai *mukkudi* - A medicated preparation made from butter milk

Sree Dhanwanthari Temple at Nelluvai (Erumapetty gramapanchayat) in Thrissur district (Fig. 2), is one of the most prominent ancient temples of Lord *Dhanwanthari* (God of Ayurveda) in India. The legend is that the idol at the temple was consecrated by *Ashwini devas* and it was the same idol worshipped by Vasudevar in the *dwaparayuga*. Hence the inference is that the origin of the temple dates back to more than 5000 years. The temple is known for its *oushadha prasada* (medicated offering) prepared based on Ayurveda concepts called ‘*Mukkudi*’.



Fig. 2. Nelluvai Sree Dhanwanthari Temple

Nelluvai *mukkudi* is an unique offering as ‘*prasada*’ given during the malayalam month of *karkidaka* (mid July - mid August). Tracing its history, the *mukkudi nivedya* was an offering made every day under the guidance of Kuttanchery Moos considering the person’s ailment. This medicated drink is given as *prasada* after the morning *pooja*. It is believed that, if this *prasada* is taken in empty stomach with full devotion, it helps in relieving all kinds of diseases, especially gastric diseases (Bindu *et al.*, 2019).

Mukkudi contains, *neela koduveli* (*Plumbago auriculata* Lam.), *jeeraka* (*Cuminum cyminum* L.), *chukku* (*Zingiber officinale* Rose.), *kurumulaku* (*Piper nigrum* L.), *thippali* (*Piper longum* L.) and *induppu* (rock salt) as ingredients administered along with buttermilk. (Table 1).

Table 1. Ingredients of Nelluvai *mukkudi*

Sl. No	Local name	Botanical name	Part used
1	<i>Neela koduveli</i>	<i>Plumbago auriculata</i> Lam.	Root
2	<i>Chukku</i>	<i>Zingiber officinale</i> Rose.	Dried Rhizome
3	<i>Kurumulaku</i>	<i>Piper nigrum</i> L.	Fruit
4	<i>Thippali</i>	<i>Piper longum</i> L.	Fruit
5	<i>Jeerakka</i>	<i>Cuminum cyminum</i> L.	Seed

3.1.1. Method of preparation

Neela koduveli roots are procured from Machanu hills, before dawn, is cleaned well and offered to the temple. Later these roots are purified to remove toxins by washing it with lime water for several times, until, the lime water remains in its natural colour even after washing the root. The next day, all the ingredients are powdered well and added to buttermilk, without fat diluted with half quantity of water. An approximate ratio of 1:60, powdered drug to buttermilk is followed in the preparation.

3.2. Case Study II: Traditional Knowledge provider Mrs. Rosy Kuriakose - Treatment for kidney stones

Mrs. Rosy Kuriakose (Plate 1.a), aged 76 is a traditional physician hailing from Malavana, Puthenvelikkara Gramapanchayat, Ernakulam district is renowned in treating kidney stones. She acquired this knowledge and practical experience from her husband, who is also good in treating kidney stones. Clinical experience with her husband along with lending her hands in medicinal preparation made her skilful in treating kidney stones.

3.2.1. Preparation of medicine

The whole plant of *Sphaeranthus africanus* L., locally known as *Velutha adaykkamaniyan* is washed well and dried in shade. The dried plants are burned into ashes. From the ashes obtained, 1kg of ash is collected in a bucket and 10litres of water is added. Next day, supernatant is collected, filtered and stored in a vessel. Again, about 10litres of water is added to the sediment. This procedure is repeated for 4-5 days. The collected water is continuously boiled until the crystals are obtained. Care should be taken to stir the solution continuously.

Person with kidney stone is advised to take 700mg of medicine twice daily for a week, before food along with warm water. As dietary regimen during the treatment, avoid incompatible diet (*Viruddhaahara*), food items which are acidic in nature, constipates and difficult to digest. During intake of medicine, boiled water using *Tribulus terrestris* L. (*Njerinjil*) fruits have to be consumed intermittently.

3.3. Case Study III: Traditional Knowledge provider Mr. M. K. Paul - Treatment for Jaundice

M K Paul (Plate 1.b) is a member of the famous *vaidya* family in Koovappady Gramapanchayath in Ernakulum district. The family is well known for the treatment in traditional methods for Jaundice. His grandfather was a famous *Vaidyan* and cured many jaundice patients. He acquired the knowledge of special preparations for jaundice from his grandfather. In his childhood, he helped his grandfather to treat more than hundred patients. There was special treatment protocol for Jaundice including diet and regimen.

Special preparations of these *oushadha yogas* include decoction, *lehya* preparation, eye drops, and special gruel for food. These are administered to the patients based on the strength, symptoms, etc., of patient. He revealed some preparations, such are described follows.

3.3.1. Preparation - 1

12 gm of each ingredient (Table 2) are crushed together and 2.2 litres (1.25 *idangazhi*) of water are added and boiled and reduced to 98ml (2 *thudam*). Then add jaggery to it as adjuvant. 48ml of the decoction is given to the patient twice daily before food. Then the patient should consume *lehya*.

3.3.2. Preparation - 2

Boil 48ml (1 *thudam*) of cow's milk in an earthen pot. Add 48ml each of (1 *thudam*) *swarasa* of *Curcuma longa* and *Zingiber officinale* using a stick. Boil it and gradually add 500mg of sugar. Make it concentrated by boiling to a semi solid form called *Lehya* (Electuary).

Table 2. Ingredients of Preparation-1 mentioned by Traditional Knowledge provider/Holder Mr. M. K. Paul for treatment of jaundice

Sl. No.	Local name	Botanical name	Part used/condition
1	<i>Nelli</i>	<i>Phyllanthus emblica</i> L.	Fruit/dried
2	<i>Manjal</i>	<i>Curcuma longa</i> L.	Rhizome/dried
3	<i>Iratti madhuram</i>	<i>Glycyrrhiza glabra</i> L.	Stem/dried
4	<i>Chuvan nulli</i>	<i>Allium cepa</i> L.	Bulb/dried
5	<i>Thulasi</i>	<i>Ocimum tenuiflorum</i> L.	Flower/fresh
6	<i>Cheru cheera</i>	<i>Amaranthus dubius</i> Mart. ex Thell.	Root/fresh
7	<i>Mylanji</i>	<i>Lawsonia inermis</i> L.	Root/dried
8	<i>Njara</i>	<i>Syzygium cumini</i> (L.) Skeels	Root bark/dried
9	<i>Marama njal</i>	<i>Coscinium fenestratum</i> (Goetgh.) Colebr.	Root bark/dried

3.3.3. Preparation - 3

4gm/1 *kazhanju* of dried stem of *Glycyrrhiza glabra* L. is powdered with 1gm of *Gairika* (Red ochre). This powder is mixed with 4gm of crushed fresh flowers of *Leucas aspera* (Willd.) Link and keep it in a small cloth piece and tied in bowl form like a *potali*. Dip it in breast milk and shake it well. Instill the drops by squeezing into both eyes.

3.3.4. Preparation - 4

Thirty gram of cumin powder (*Cuminum cyminum* L.) is mixed with of butter, ghee, gingelly oil (48ml), castor oil (48ml) and coconut oil (48ml). This mix is ground well and boiled. This oil is used to apply over the body.

3.3.5. Gruel preparation for patient

The fresh fruits of *Coccinia grandis* (L.) Voigt (12gm), whole plant of *Phyllanthus amarus* Schum. & Thonn. (12gm) and roots of *Lawsonia inermis* L.(4gm) are crushed well and boiled in 3200 ml/4 *idangazhi* of water. When the water is vaporized and reduced to half, necessary amount of broken brown rice is added to it and rice is cooked well to prepare the gruel.

According to the informant Mr. M. K. Paul, consumption of this gruel is beneficial for the jaundice patients to regulate the *jataraagni* (digestive fire) and it will function as a hepato-protective agent.

3.4. Case Study IV: Traditional foods of Goud Saraswath Brahmins (GSB)

Goud Saraswath Brahmins (GSB) is a Hindu Brahmin community. They belong to *Pancha* (five) Goud Brahmana groups. Hereditarily, they have been using unique food preparations. Over the years, some of the very special dishes have gone out of fashion from the GSB. It is not because they are not good or because they are difficult to prepare but, because of the migration of families to different areas and they are adapting to the recipes of the new area, where these are not prepared.

Semi-structured interviews were conducted with Smt. Kamalam Bhatt (Plate 1.c) and her daughter in law Smt. Deepa Balakrishna Bhatt (Plate 1.d) belonging to GSB community and recorded information about the traditional cuisines. Their native place was in Goa, and twenty years back, they migrated to Kerala. At present, they are residing at Puthenvelikkara Gramapanchayat of Ernakulam district. They cook their own traditional food even today.

3.4.1. Panchagadhahi

Panchagadhahi is a sacred food prepared in the day of *Krishna Janmashtami*. It is a grand festival celebrated all over the India to commemorate the birth of Lord *Krishna*, who is believed to be the eighth incarnation of Lord *Vishnu*. As the name suggests, *panchagadhahi* has five main ingredients such as broken wheat, green gram, *kadala* (bengal gram), jaggery and coconut (Table 3). Mostly, this is prepared by GSBs living in Kochi, Kerala. It is prepared by lightly roasting the green gram till it turns aromatic. Grate the coconut and extract the thick aromatic milk (first extract) and keep aside. Extract second time too and make it upto at least 4 cups, cook the roasted dals in second milk. Melt jaggery completely in 200ml of water by heating. Strain the liquid to remove the impurities. To the cooked dal add the liquid jaggery. Add small pieces of ripened banana (*nendra pazham*), dried ginger powder, cumin seed and cardamom. Boil and cook for some

more time until all the ingredients are blended well. Now add first extract of the coconut milk and remove from the flame before boiling. It is the most popular offering served to Lord *Krishna* on *Janmashtami*.

3.4.2. Thalappam/Pathode

Thalappam is also prepared on the *Janmashtami* day. The leaves of colocasia are used for this purpose. The leaves are taken and cleaned well. The stem is removed including thick veins. Soak the rice (*pachari*) for 5 to 6 hours. Grind the soaked rice with dried chilly, turmeric powder, tamarind, coconut and asafoetida (Table 4). Prepare a thick batter. Add some salt to taste. Place the leaves of colocasia upside down. Apply the thick batter all over the leaf. Place another leaf and again apply the batter. Likewise keep 4 to 5 leaves and apply the batter well in between the leaves. Fold the leaves from both sides. Apply the batter again and make them into rolls. Cut into small pieces. The rolls are then fried in coconut oil.

3.4.3. Kela ambat

Banana is called '*kele*' in Konkani. *Kela ambat* is a traditional Kochi GSB's ripe banana curry. The details of the ingredients used for the preparation of *kela ambat* are given in Table 5. Wash and cook the bengal gram with required water till cooked but not mushy and keep aside. Peel the skin of two ripened bananas and chop length wise and then slice horizontally into small pieces. Grate the jaggery in a small vessel. Boil the jaggery with $\frac{1}{4}$ cup of water till it dissolves in water completely. Strain it to remove the impurities and keep aside in a small bowl. Grind the grated coconut along with turmeric powder and dried chilly to a smooth paste. In a cooking vessel, add the cooked bengal gram and boil for a minute. Add the ripened banana pieces till the pieces are half cooked. Add a pinch of salt along with filtered jaggery, mix well and boil on low flame for few minutes. Heat coconut oil in a pan and splutter mustard seeds, cumin seeds and curry leaves and fry for a second. The above seasoning is added to curry in the cooking vessel and turn off the flame.

Table 3. Ingredients of *Panchagadhahi*

Sl. No.	Local name	Common name	Botanical name	Part used/condition	Quantity
1	<i>Gothambu</i>	Broken wheat	<i>Triticum aestivum</i> L.	Grain/dried	250 gm
2	<i>Cherupayarparippu</i>	Green gram	<i>Vigna radiata</i> (L.) R.Wilczek	Seed/dried	250 gm
3	<i>Kadalaparippu</i>	Bengal gram	<i>Cicer arietinum</i> L.	Seed/dried	250 gm
4	<i>Sharkkara</i>	Jaggery	<i>Saccharum officinarum</i> L.	Stem juice/processed	250 gm
5	<i>Nalikeram</i>	Coconut	<i>Cocos nucifera</i> L.	Endosperm or coconut milk/ fresh	2.5 litres

Table 4. Ingredients of *Thalappam/Pathode*

Sl. No.	Local name	Common name	Botanical name	Part used/condition	Quantity
1	<i>Chembu</i>	Colocasia	<i>Colocasia esculenta</i> (L.) Schott	Leaf/fresh	10 to 15 leaves
2	<i>Mulaku</i>	Chilly	<i>Capsicum annum</i> L.	Fruit/dry powder	5 g
3	<i>Manjal</i>	Turmeric	<i>Curcuma longa</i> L.	Rhizome/dry powder	2 g
4	<i>Puli</i>	Tamarind	<i>Tamarindus indica</i> L.	Fruit/dried	5 g
5	<i>Nalikeram</i>	Coconut	<i>Cocos nucifera</i> L.	Endosperm/fresh Endosperm oil	50 g 250 ml
6	<i>Kayam</i>	Asafoetida	<i>Ferula assa-foetida</i> L.	Resin/dried	2 g
7	<i>Pachari</i>	Raw rice	<i>Oryza sativa</i> L.	Endosperm/dried	250 ml

Table 5. Ingredients of *kela ambat*

Sl. No.	Local name	Common name	Botanical name	Part used/condition	Quantity
1	<i>Nendrapahzam</i>	Banana	<i>Musa paradisiaca</i> L.	Fruit/fresh	250 g
2	<i>Sharkkara</i>	Jaggery	<i>Saccharum officinarum</i> L.	Stem juice/ processed	100 g
3	<i>Nalikeram</i>	Coconut	<i>Cocos nucifera</i> L.	Endosperm/ fresh	100 g
4	<i>Manjal</i>	Turmeric	<i>Curcuma longa</i> L.	Rhizome/ dried powder	3 g
5	<i>Kadalaparippu</i>	Bengal gram	<i>Cicer arietinum</i> L.	Seed/dried	250 g
6	<i>Mulaku</i>	Chilly	<i>Capsicum annum</i> L.	Fruit/dried powder	5 g
7	<i>Jeerakam</i>	Cumin seed	<i>Cuminum cyminum</i> L.	Seed/dried	3 g
8	<i>Kaduku</i>	Mustard	<i>Brassica juncea</i> (L.) Czern.	Seed/dried	3 g
9	<i>Veppila</i>	Curry leaves	<i>Murraya koenigii</i> (L.) Spreng.	Seed/fresh	Q.S.

3.4.4. Ambo umman

It is a sweet Konkani ripe wild mango soupy curry dessert. The details of the ingredients used for the preparation of *ambo umman* are given in Table 6. Wash the ripened mangoes well. Pull off the mango peel and put the peeled mangoes into a pan or any other cooking vessel. Pour couple of glasses of water over the mangoes to cook. Meanwhile melt the jaggery with 50ml of water and stir till the jaggery is fully melted. Filter and mix with the cooked mango and is then allowed to boil. Prepare a paste of pepper and added.

After five minutes of cooking, season it with dried chilly, mustard and curry leaves in coconut oil.

3.4.5. Kolli thera (Tapioca Mat)

Kolli thera can also store in air tight containers for a long time. Peel off the tapioca and wash well. Prepare the paste of tapioca and cumin seeds with some salt. Make it loose by adding some water, to make it viscous. Then, spread evenly as a thin layer on pandanus mat and dry it in sunlight for one day. Peel off when it is dried from mat as *manga thera*. Then cut into small pieces of desired size and shape. These pieces are stored and can be fried in coconut oil to eat (Table 7).

Table 6. Ingredients of *ambo umman*

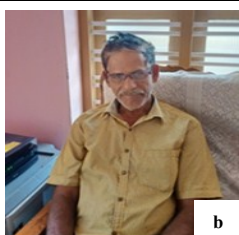
Sl. No.	Local name	Common name	Botanical name	Part used/condition	Quantity
1	<i>Mambazham</i>	Mango	<i>Mangifera indica</i> L.	Ripened fruit/fresh	250 g
2	<i>Sharkkara</i>	Jaggery	<i>Saccharum officinarum</i> L.	Stem juice/ Processed	100 g
3	<i>Nalikeram</i>	Coconut	<i>Cocos nucifera</i> L.	Endosperm/fresh	100 g
4	<i>Manjal</i>	Turmeric	<i>Curcuma longa</i> L.	Rhizome/dried powder	3 g
5	<i>Mulaku</i>	Chilly	<i>Capsicum annuum</i> L.	Fruit/dried powder	5 g
6	<i>Kadalaparippu</i>	Bengal gram	<i>Cicer arietinum</i> L.	Seed/dried	250 g
7	<i>Jeerakam</i>	Cumin seed	<i>Cuminum cyminum</i> L.	Seed/dried	3 g
8	<i>Kaduku</i>	Mustard	<i>Brassica juncea</i> (L.) Czern.	Seed/dried	2 g
9	<i>Veppila</i>	Curry leaves	<i>Murraya koenigii</i> (L.) Spreng.	Leaves/fresh	As required

Table 7. Ingredients of *Kolli thera*

Sl. No.	Local name	Common name	Botanical name	Part used/condition	Quantity
1	<i>Kolli</i>	Tapioca	<i>Manihot esculenta</i> Crantz	Root tuber/fresh	200 g
2	<i>Jeerakam</i>	Cumin	<i>Cuminum cyminum</i> L.	Seed/dried	10 g
3	<i>Velichenna</i>	Coconut	<i>Cocos nucifera</i> L.	Endosperm oil	As required
4	<i>Kaitha</i>	Pandanus	<i>Pandanus caricosus</i> Spreng.	Leaves/fresh	As required



a



b



c



d

Plate 1. a. Rosy Kuriakose; b. M K Paul; c. Kamalam Bhatt; d. Deepa Balakrishna Bhatt

3.5. Case Study V: *Guruthi pooja* at Chottanikkara temple

Chottanikkara *Sree Bhadrakali* temple (Fig.3) is located in the heart of Chottanikkara Gramapanchayat, Ernakulam district. This is a renowned temple healing centre, for the alleviation of psychological disturbances (Gayathri *et al.*, 2017). The devotees, believe that, the visit and stay at the temple can cure, these otherwise unexplained conditions. It is of vital importance in mental health management to understand the working mechanism of such temple healing traditions in curing psychiatric conditions. Chottanikkara temple has two idols, *Sree Durgadevi* in the Melkavu and *Sree Bhadrakali* in Keezhkavu.

Chottanikkara temple's historical appeal and traditional influence on generations of people is tremendous. Legend say that the presence of divinity here was worshipped by Bhogacharya. The deity which is *swayambhoo* in laterite called '*Rudrakshasila*' was worshipped by divine souls like Adisankaracharya, Vilwamangalam Swamiyar, Kakkasserri Bhattathiri and Chemmangattu Bhattathiri. It is the cynosure of thousands of devotees swarming from all over the world on all auspicious and festive occasions. The golden hued idol bedecked with flowers, garlands and jewels and bathed in myriad of light shine splendidly. It is a picturesque image bewitching everyone and embodiment of peace dispelling fears from devotees who worship *Chottanikkara devi*. This is one of the most celebrated hindu shrines in Kerala. *Sree Mookambika Saraswathi* is also believed as present in the temple in the morning. That is why Mookambika temple at Kollur, Karnataka, India opens only after the goddess *Saraswathy* returns there late in the morning.



Fig. 3. Chottanikkara Sree Bhadrakali Temple

3.5.1. Guruthi pooja

Guruthi pooja is practised at Keezhkavu., This pooja is mainly done to satisfy goddess *Bhadrakali*. The idol facing westward is believed to be installed by Villwamangalam Swamiyaar. *Guruthi pooja* starts in the night at 8:30, after the closure of Melkavu, People gather around Keezhkavu to witness the *guruthi pooja*. Patients who have been mentally affected are requested to follow routine as instructed by the temple authorities. Early in the morning patients are administered with '*panchagavya ghritha*', Later they can have fruits and '*padachoru*' given by the temple authorities. In order to satisfy goddess *Durga*, they use

a mixture of lime and turmeric powder. The mixture forms a scarlet red colour that resembles blood.

Lotus and ixora flowers along with *tulsi* leaves are used for the *guruthi pooja* (Table 8). *Pooja* is accompanied by '*melam*', rhythmic sounds produced from the instruments influence people. Instruments are played according to the puja, starting at fast pace and gradually increases the beats as the *pooja* reaches its final stage. Many dance selflessly, few vomit and few of them even hurt themselves. By the end of the *pooja*, many who are psychologically unstable faint. The

Table 8. Plants used for *Guruthi pooja*

Sl. No	Local name	Botanical name	Part used/condition
1	<i>Manjal</i>	<i>Curcuma longa</i> L.	Rhizome
2	<i>Chethi</i>	<i>Ixora coccinea</i> L.	Flower
3	<i>Thamara</i>	<i>Nelumbo nucifera</i> Gaertn.	Flower
4	<i>Thulasi</i>	<i>Ocimum sanctum</i> L.	Tender shoot

atmosphere there in filled with devotion and is highly charged. The events during and after the *pooja* varies from person to person.

Many claim to have cured their illness, after the *guruthi pooja*. In extreme case, exorcism is performed and the evil spirit is transferred to *Pala maram* (*Alstonia scholaris* (L.) R. Br.). Such practises are considered to be confidential and the temple authorities do not share more of their details and related procedures to public.

4. Conclusion

It could be concluded that, traditional knowledge is directly linked with the cultural heritage of the people and has been transferred from generation to generation. The above mentioned case studies show that the traditional knowledge related to plants used for food and medicine in Kerala is abundant, need to be protected and systematically documented for future generations.

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