

# Ethnobotanical Documentation of Some of the Indigenous Medicinal Plants used to Treat Menstrual Disorders by Kani Tribes of Palode Forest Area of Thiruvananthapuram, Kerala

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**Abstract:** Kerala is well known for its ethnic diversity and has a long history in traditional health practices and home remedies. The present work enumerates the traditional uses of 35 medicinal plants belonging to 25 host families that are used to treat menstrual disorders by the Kani tribes of Palode forest area of Thiruvananthapuram district of Kerala. Ethnobotanical documentation is very important for biodiversity conservation. Hence, there is an urgent need for documentation of this information before it gets vanished. This information will surely help in the development of many novel drugs for female reproductive problems.

**Index Terms – Ethnobotanical documentation, Kani, Menstrual disorders, Traditional herbal remedies, Tribes**

## INTRODUCTION

Medicinal plants have been used from time immemorial, and numerous cultures rely on plants for their primary health care needs. Nowadays there has been a tremendous increase in the use of plant based health products in developing as well as developed countries. India has a long history in traditional health practices in local health tradition as well as home remedies. These are especially aimed in improving the health condition of women and children. Local health traditions are well known for mother and child care treatments. In Kerala, this diversified system of traditional practices prevails among the rural communities since centuries. Ethnomedicine is usually plant based and ingredients are from locally available flora and fauna. They are less expensive and have no side effects. Traditional medicine is the main source of tribal as well as rural communities of Kerala. The Kanis also known as “The Kanikkar” are the most significant tribal community in Kerala. They are mostly seen in Thiruvananthapuram, Kollam and Pathanamthitta region of Kerala State. These tribals have developed their own traditional ways of diagnosis and treatment of diseases and fulfill their basic requirements in this regard from the nearby forest. They have a very good knowledge of the plant resources, based on generations old experience. A wide range of herbal traditional medicines are used to treat female reproductive disorders like irregular menstrual cycle, enhance fertility and delivery problems.

Irregular menstruation is nowadays a serious problem. It can be explained as the irregularity of length of monthly cycles in a woman usually accompanied with bleeding in between cycles. The cycles may vary from 8 to 21 days. The variations of 21 days or more is considered highly irregular and abnormal. If the frequency is of less than 8 days we call it as Polymenorrhea and if it is more than 36 days, it is termed as Oligomenorrhea.

The cause of irregularity in menstrual cycles is basically hormone imbalance. It leads to missed periods, bleeding in between periods, blood clots, cramps during periods, Painful menstruation, Excessive bleeding lasting for a longer period than normal or very less bleeding, abnormal duration of bleeding. The herbs for irregular menses help improve the functioning of reproductive structures in a natural way. The herbs for Polymenorrhea or Oligomenorrhea help produce proper hormones for the complete functioning of ovaries and therefore to naturally start the menstrual cycle again. This way the imbalance in the body is aided in a natural herbal way.

Although the tribal people traditionally use many ethno-medicinal plants to cure many gynaecological disorders, yet not so much documentation has been done earlier. Phytochemical data on several of these plants is highly lacking. Hence keeping in view of this aspect, the present study was initiated among the Kani tribals of Palode forest area of Thiruvananthapuram of Kerala state.

## REVIEW OF LITERATURE

In the early days of Ethnobotanical documentation, researchers concentrated their works on large geographical areas such as entire state or whole district. Later the studies were limited to particular tribal group or village study. This continued up to

1990. Later, research work was concentrated towards Pharmacognosy of particular species or group. The field of Ethno botany began to take its shape in India when the British botanists came and surveyed indigenous plants for their botanical studies. Roxburgh (1832) described the use, vernacular names and botanical identity of many plants. In 1873, Sir George Watt studied the economic plants of Manipur and Burma. Further during 1889-1896, he published his monumental work, 'Dictionary of the economic products of India' with an index of 3000 vernacular names and uses from different parts of the country. Ethno botany was uplifted to the status of genuine academic and research field in the second half of 20<sup>th</sup> century. Dr.S.K. Jain (1986) made pioneer investigations in the field of Ethnobotany. He was known as father of Indian Ethno botany. In recent years an impressive number of research centers have been established to study the taxonomy, distribution, ethnobotany, cultivation, genetic improvement and the chemical as well as pharmacological aspects of plants used in traditional medicine.

Prasad and Abraham (1984) gave an inventory of medicinal plants of the Nayadis of north Kerala. Sivarajan and Balachandran (1986,1987 a & b) studied the identity of some controversial Ayurvedic medicines and new medicinal sources. Ramachandran and Nair(1981) and Thomas and Britto(1999) studied the ethnobotanical details of plants of Cannanore while Pushpangadan and Atal (1986) that of Western Ghats, Augustine, Nadanakunjidam (2002a & b) attappadi hills, Thomas and Britto (2003),Udayan *et al* (2008) and Silja *et al.*(2008) Wayanad, Nair and Jayakumar (1999) and Sajeev and Sasidharan(1997) Chinnar, Kumar *et al.*(1999) high ranges,Udayan *et al.*(2007)Achenkovil and Sivadasan (2004) and Augustine *et al.*(2010) Periyar tiger reserve.

## MATERIALS AND METHODS

The forest areas of Palode forest range of Thiruvananthapuram district of Kerala state was selected as the study area. This area was inhabited by the most significant tribal group of Kerala known as Kanis. Informations were collected personally from rural women. Interviews and discussion were conducted. Mothers, grandmothers, traditional practitioners were included. Identity and local names of plants were noted. Herbal formulas were noted. Vernacular name mentioned by the local people was clarified with the help of ayurvedic practitioners. Questionnaires were used for data collection which includes local name, botanical name, specificity in collecting useful part, direction, etc. The plants were identified with the help of regional flora and experts were also consulted.

## OBSERVATIONS

Table I-Indigenous medicinal plants used by Kani tribes of Palode Forest Area of Thiruvananthapuram district of Kerala in treating Menstrual disorders

S.No.	Binomial Name	Common Name	Family	Part	Preparation/Administration
1.	<i>Achryanthes aspera</i> L	Kadaladi	Amaranthaceae	Leaf, Root	fresh leaf or root extract given orally twice a day for menstrual pain
2.	<i>Aegle marmelos</i> (L) Corr.	Kuvalum	Rutaceae	Root, Leaves	Root/ leaf decoction for menstrual pain
3.	<i>Allium sativum</i> L.	Cheriyulli	Liliaceae	Bulbs	Decoction is taken in menstrual pain.
4.	<i>Aloe vera</i> (L.)Burm. f.	Katarvazha	Liliaceae	Fleshy leaf	Leaf Juice early in the morning
5.	<i>Aristolochia indica</i> L	Garudakodi	Aristolochiaceae	Root	Root powder mixed with warm water
6.	<i>Azadirachta indica</i> A.Juss	Arya vepp	Meliaceae	Leaf	Decoction is taken in menstrual pain
7.	<i>Asparagus racemosus</i> Willd.	Satavari	Liliaceae	Root	Juice is taken in menstrual pain.
8.	<i>Bauhinia variegata</i> L.	Mantharam	Caesalpiniaceae	Stem bark	Stem bark decoction is taken in menstrual pain.
9.	<i>Bombax ceiba</i> L.	Elavu	Malvaceae	Fleshy roots	Root paste mixed with fresh cow milk is taken in menstrual pain.

10.	<i>Butea monosperma</i> (Lam.)Taub.	Plash	Fabaceae	Leaf	Decoction is taken in menstrual pain.
11.	<i>Calotropis gigantea</i> R.Br.	Erukku	Asclepiadaceae	Leaf, Root, latex	Leaf/ Root Decoction/ Latex is taken in menstrual pain and irregular periods
12.	<i>Cardiospermum helicacabum</i> L.	Uzhinja	Sapindaceae	Leaf	Decoction is taken in menstrual pain and irregular periods
13.	<i>Cassia fistula</i> Linn. (T)	Kanikonna	Caesalpiniaceae	Stem	Juice with black pepper for irregular periods
14.	<i>Centella asiatica</i> (L.)	Kudangal	Apiaceae	Leaf	Leaf juice for irregular menstruation.
15.	<i>Cynodon dactylon</i> (L) Pers	Dhurba	Poaceae	Whole plant	Paste form for irregular periods.
16.	<i>Curcilaigo orchioides</i> Gaertn.	Nilappana	Hypoxidaceae	Rhizome	Juice from the rhizome
17.	<i>Datura metel</i> L.	Ummam	Solanaceae	Leaf	Leaf decoction for irregular periods.
18.	<i>Embllica officinalis</i> Gaert.	Amla, Nelli	Euphorbiaceae	Fruit	Fruit juice for irregular periods.
19.	<i>Ferula asafoetida</i> L.	Kayam	Apiaceae	Latex	Latex mixed with fresh cow milk for menstrual pain and irregular periods
20.	<i>Garcinia gummi-gutta</i> L.	Kudampuli	Clusiaceae	Fruit	Fruit juice for menstrual pain and irregular periods
21.	<i>Hemidesmus indicus</i> L. R.Br.	Naruneendi	Apocynaceae	Root	Root paste early in the morning for irregular periods
22.	<i>Hibiscus rosa-sinensis</i> L.	Chemparuthi	Malvaceae	Flower	Paste of flower bud with fresh cow milk
23.	<i>Leucas aspera</i> (Willd.) Link	Thumba	Lamiaceae	Leaf	Leaf Juice for excessive bleeding
24.	<i>Mangifera indica</i> L.	Mavu	Anacardiaceae	Fruit, Stem bark	Decoction for irregular periods
25.	<i>Mimosa pudica</i> L	Thottavadi	Fabaceae	Root	Root paste for menstrual pain.
26.	<i>Murraya koenigii</i> (L.) Sprengel	Karivepp	Rutaceae	Leaf	Leaf decoction mixed with honey for menstrual pain.
27.	<i>Moringa oleifera</i> Lam. (T)	Muringa	Moringaceae	Leaf, Root, Bark	Juice form given for excessive bleeding
28.	<i>Nyctanthes arbor-tristis</i> . L.	Pavizhamalli	Oleaceae	Leaf	Leaf Juice for irregular menstruation.
29.	<i>Punica granatum</i> L.	Mathalam	Punicaceae	Fruit, Flower	Juice form given for excessive bleeding
30.	<i>Saraca asoca</i> (Roxb.) Dewilld. (T)	Asoka thetti	Caesalpiniaceae	Bark	Bark paste given early in the morning for irregular menstruation.
31.	<i>Sesamum indicum</i> L.	Ellu	Pedaliaceae	Seeds	Grounded seeds mixed with milk for irregular menstruation.
32.	<i>Strychnos nux-vomica</i> L.	Kanjiram	Loganiaceae	Seed	Seed powder mixed with water given for irregular menstruation.
33.	<i>Tamarindus indica</i> L.	Puli	Fabaceae	Fruit	Fruit paste mixed with honey for

					menstrual pain.
34.	<i>Withania somnifera</i> (L) Dunal	Amukkuram	Solanaceae	Stem, bark	Powdered stem/bark mixed with water given for irregular menstruation.
35.	<i>Zingiber officinale</i> Rosc.	Inji	Zingiberaceae	Rhizome	Juice form for menstrual pain.

Fig.1: Family- wise representation of the Indigenous medicinal plants used by Kani tribes of Palode Forest Area of Thiruvananthapuram district of Kerala in treating Menstrual disorders

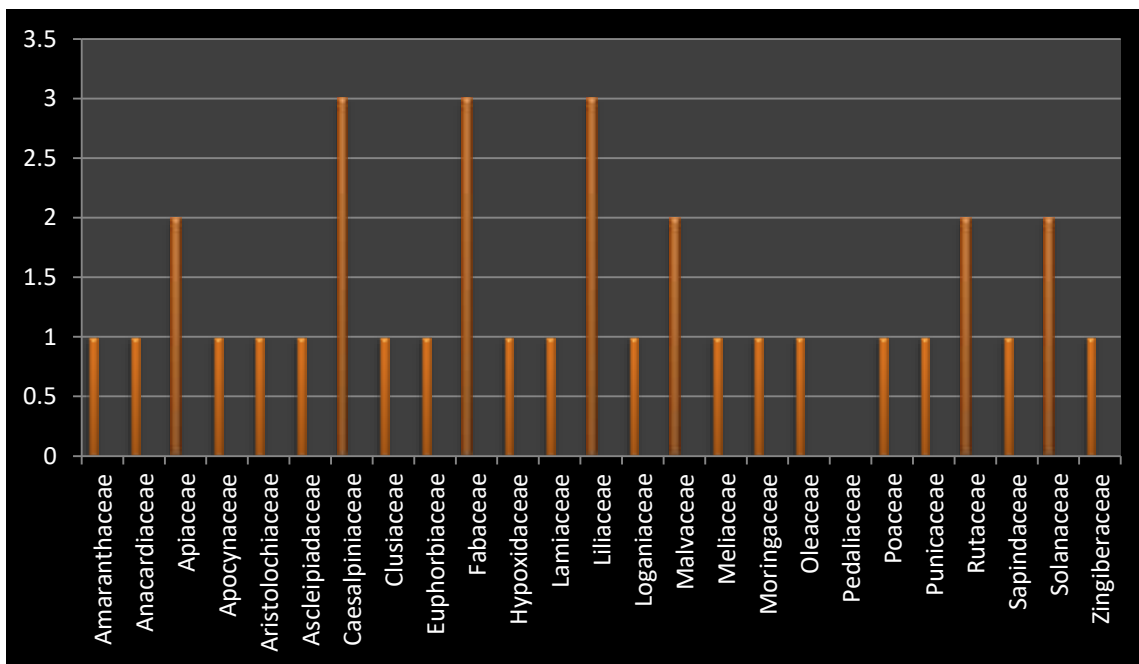
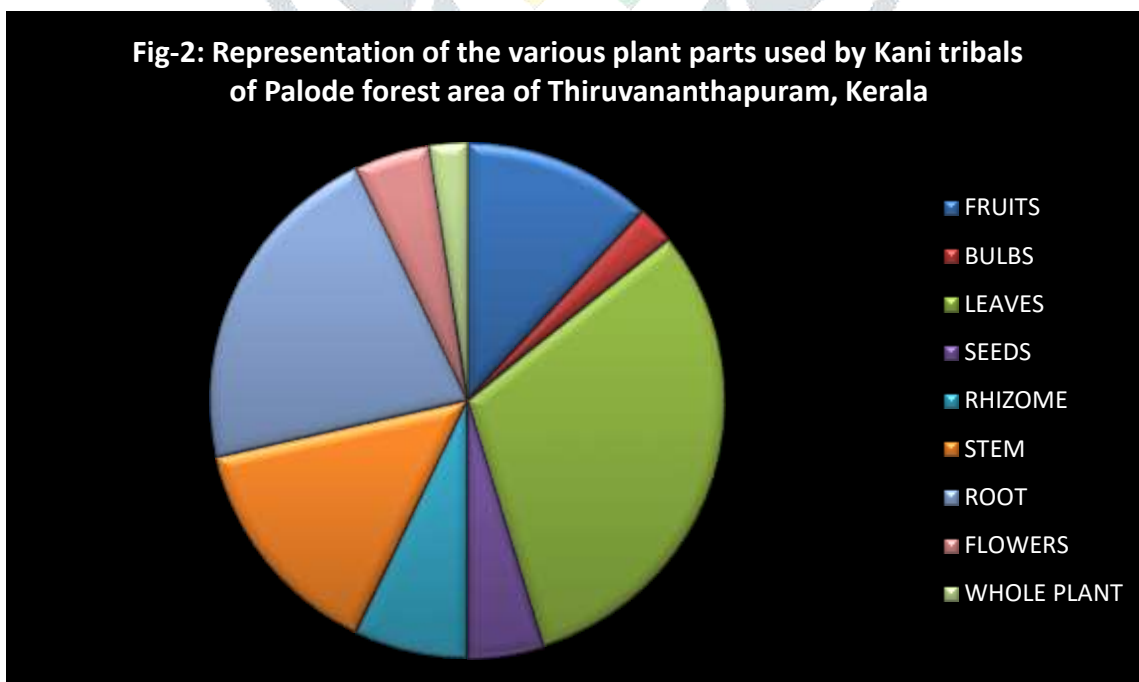


Fig-2: Representation of the various plant parts used by Kani tribals of Palode forest area of Thiruvananthapuram, Kerala



## RESULT AND DISCUSSION

In Kerala the diversified system of traditional practices prevails among the rural communities since time immemorial. In the present study a total of 35 medicinal plants belonging to 25 families were obtained. Amaranthaceae-1, Rutaceae-2, Liliaceae-3, Aristolochiaceae-1, Meliaceae-1, Caesalpiniaceae-3, Malvaceae-2, Fabaceae-3, Asclepiadaceae-1, Sapindaceae-1, Apiaceae-2, Poaceae-1, Hypoxidaceae-1, Solanaceae-2, Euphorbiaceae-1, Clusiaceae-1, Apocynaceae-1, Lamiaceae-1, Anacardiaceae-1, Moringaceae-1, Oleaceae-1, Punicaceae -1, Pedaliaceae-1, Loganiaceae-1, Zingiberaceae-1 (Fig-1) (Table-I). Several parts of the plants such as root, stem, bark, leaves, flowers, fruits, tuber & rhizome and whole plant are used for various preparations. According to the usage of the plant parts, the highest position is occupied by leaves - 31%, followed by root -21%, stem-14%, fruits-12%, rhizome-7%, flowers-5%, seeds-5%, bulbs-2% and finally whole plant-2% (Fig.-2).

The herbal formulations were given as decoctions, juice extracts, pulp etc. Medicines were taken orally, either directly or mixed with water, milk, honey, black pepper etc. It was observed during study that most of the medicines are administered in empty stomach early in the morning. Dosages varied with patient's age, physical health conditions and other factors. They obtained all the medicinal plants from the Palode Forest.

## SUMMARY AND CONCLUSION

The present study reveals that the Kani tribals of Palode Forest area of Thiruvananthapuram district of Kerala inherit rich traditional knowledge. They still depend on the plants for various medicinal purposes. They are very much concerned about the degradation of the plants in the wild habitat. In the absence of modern health facility and the high cost of treatment, people in this area depend on the plants for medicinal purposes.

It is evident that the traditional knowledge has been orally transferred from one generation to other and in between each level a bit is lost. The various Ethnobotanical studies already expressed real concern on rapid and profound loss of transmission of traditional knowledge and skill to their next generations within their communities. Hence, there is an urgent need for documenting the Ethnobotanical data regarding the traditional herbal remedies. On the basis of this study, pharmacological screening can be done to find out the potentiality of the information as provided by the tribals. The documentation of these plants will surely lead to biodiversity conservation and several novel drugs will come into light.

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## REFERENCES

- Gamble, J.S. (1915-1935). Flora of the Presidency of Madras, Vol. I-III Adlard & Sons.Ltd., London.
- Hooker, J. D. (1875 – 2006). Flora of British India. Vols. I – VI. L. Reeve and Company Ltd, The East HouseBook , Ashford, Kent, UK.
- Jain S.K., (1989). Methods and Approches in Ethnobotany, Society of Ethnobotany, Lucknow, India.
- Jain S.K, (1991) Dictionary of Indian folk medicine and Ethnobotany, Deep publication New Delhi.
- Rajith, N.P, Navas M, Muhammad Thaha A , Manju M.J., Anish N, Rajasekharan S and George V, (2010) A study on traditional mother care plants of rural communities of South Kerala. Indian J. of Traditional Knowledge. 9 (1):203-208.
- Udayan P.S., Sathesh George, Thushar K.V. and Indira Balachandran (2005). Ethnomedicinal Plants used by the Oorali Tribes of Idukki dist. Kerala state, India. J.Econ. Taxon.Bot. 29(1): 217-223.