

## Ethnomedicine of *Malapandaram* tribes of Achenkovil forest of Kollam district, Kerala

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The paper enumerates the traditional uses of 27 plants used by *Malapandaram* tribes of Achenkovil forest of Kollam district, Kerala. Information on the medicinal uses gathered from the tribals together with their botanical identity is presented.

**Keywords:** Ethnomedicine, *Malapandaram* tribes, Achenkovil forest, Kerala

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Kerala, the southern most state of India, is known for its biodiversity reserve, high cultural heterogeneity and high rate of literacy. There are about 35 ethnic communities scattered in Kerala mostly in or along the western Ghats forests, such as Adiyar, Kaadar, Muduvan, Paniyar, Malapandaram, Chola Naikkar, Kattu Naikkar, Kaani, Kurumba, etc. Among them, Malapandaram forms about 5%, i.e. 3,147 of the total population<sup>1</sup>. Their literacy rate in second language is 37%, i.e. 44% males and 31% females<sup>2</sup>. The major livelihood of Malapandaram tribes is nomadic gathering. Hunting in the forest provides the basis of their economy, which is supplemented by trading forest products with the farming villagers in the plains. They strongly believe in the equality of the sexes, individual autonomy, the absence of social groupings above the family level and the lack of territoriality. Their non-violence and timidity are the result, of the bullying and harassment they get from the farming people in the plains<sup>3</sup>. They frequently display their lack of aggressiveness by separating and fleeing from conflicts. They do not have formal means of resolving disputes, though individuals do act as mediators informally. Women are treated equally to men. Malapandaram women gather vegetable foods, haul water, find firewood,

and do the cooking, while men are normally engaged in hunting and harvesting of wild honey. However, we can also find men helping to gather firewood and assist in cooking meat and women help to hunt small animals. The simplicity of their gathering and hunting economy fosters individual self-sufficiency and economic independence<sup>4</sup>.

Marriage for *Malapandaram* is an extremely loose monogamous convention. They do not emphasize long term, binding relationships. When they are 5-6 yrs old, they have been socialized into patterns of individual autonomy, lost their emotional ties with their parents (though they may continue to show some affection), and often live with adults other than their own parents<sup>5</sup>. The *Malapandaram* are very timid, nonviolent, and retiring in their relationships with outsiders. The *Malapandaram* live together in small bands consisting of 1-6 families. Individuals from different families may cooperate in the daily foraging for food and trade goods, or they may forage alone. Meat, tobacco, and honey gathered from collective expeditions are shared generally, but otherwise people eat or trade what they gather. Some *Malapandaram* live fairly near the plains people and are able to interact well, but others, who live entirely in the forests, try to avoid all contacts with outsiders. The ones that do interact with their Tamil or Malayalam neighboring communities

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completely change their manners, hair, and dress before venturing into the outside world<sup>6,7</sup>.

The study area is located near Punalur of Kollam district in Kerala situated at 09°05' N latitude and 77°07' E longitude with an altitude ranging from 150-600 m above msl (Fig. 1). The temperature goes down up to 18°C during the winter and rises up to 34°C during the summer. The annual rainfall ranges from 300-1,000 mm. The forest types are mixed deciduous, semi-evergreen and evergreen<sup>8</sup>. The Achenkovil tribal settlement is in Aryancavu Grama Panchayath, which falls under the jurisdiction of Anchal Block Panchayath in Kollam district. It is situated 121 km North of the Thiruvananthapuram and 80 km East of Kollam, adjacent to Kottavasal of Tirunelveli district of Tamil Nadu. Ninety five families are living in the Achenkovil settlement. In order to explore the medicinal wealth, an ethnobotanical exploration was carried out in the Achenkovil area. During the survey, a local guide and a *nattuvaidya* belonging to *Malapandaram* community accompanied for helping in locating the medicinal plants and documenting their uses. The paper enumerates documentation of ethnomedicinal uses on 27 plant species (Table 1).

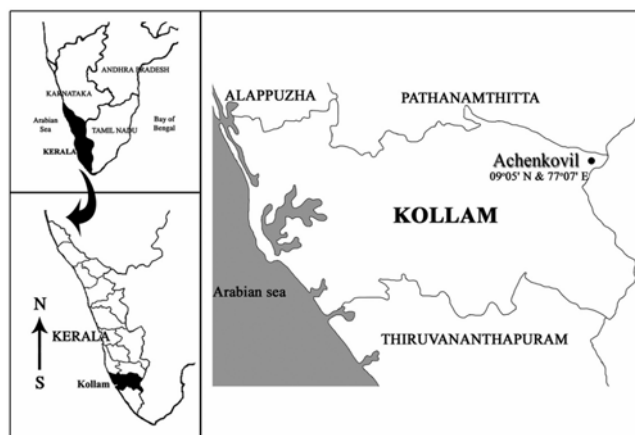


Fig. 1 —Location map of the study area

### Methodology

The information including medicinal uses and local names for every plant collected was gathered from Lakshmanan, a 55 yrs old man of the *Malapandaram* community residing in Achankovil tribal colony. The plants were identified and herbarium sheets prepared for all the species were authenticated and deposited in the CMPR herbarium.

### Results and discussion

During the survey, 27 common plant species used by the tribal community of that area for primary healthcare were identified (Figs. 2-10). The species are arranged in alphabetical order with details such as plant name, family, local name, parts used and medicinal uses. Ethnomedicinal investigation has led to the documentation of a large number of wild plants used by tribal people for meeting their multifarious requirements. In India, over 9,500 wild species are being used by various tribal groups for meeting their varied requirements. Out of 7,500 wild plant species used by these groups for medicinal purposes, about 950 plant species have not been previously recorded and are worthy of scientific scrutiny. About 3,900 wild plant species are being used for edible purposes by tribal groups. About 800 have provided new information on phytochemicals and at least 250 of them are worthy of attention because of their potential to be developed as alternative food sources to meet future world needs<sup>9</sup>. Due to lack of proper documentation, the traditional knowledge is getting lost. Hence, proper documentation and preservation of the tribal knowledge on medicinal plants have to be carried out. Some of the medicinal practices of *Malapandaram* tribes such as the use of *Pterocarpus marsupium* against diabetes have already been validated scientifically<sup>10</sup>. This shows the authenticity of the practices being made by the tribes. The application of most of the plants recorded is either lesser known or hitherto unknown to the outside world. On the basis of this survey, pharmacological screening can be done to all the taxa represented here to find out the potentiality of the information as provided by the tribals.

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Table 1— Plants used by *Malapandaram* tribes of Achenkovil

Plant name	Family	Local name	Uses
<i>Anamirta cocculus</i> (L.) Wight & Arn.	Menispermaceae	<i>Karantakam</i>	Dried fruit powder is used as fish poison.
<i>Anaphyllum wightii</i> Schott	Araceae	<i>Keerikizhangu</i>	Fresh tuber paste is applied externally against snakebite
<i>Androgrphis paniculata</i> Burm.f.) Wall. ex Nees	Acanthaceae	<i>Palampayi</i>	Leaf decoction is taken internally against fever and cold.
<i>Aristolochia indica</i> L.	Aristolochiaceae	<i>Kudukkamooli</i>	Root paste mixed with goat milk is taken internally in empty stomach for three days against worms.
<i>Asparagus racemosus</i> Willd.	Asparagaceae	<i>Satavari</i>	Thoroughly washed tuber after mixing with milk or starch water is taken internally as a cooling agent.
<i>Calotropis gigantea</i> (L.) R. Br.	Asclepiadaceae	<i>Puzhukkolli</i>	Milky latex is applied externally over wounds especially for animals.
<i>Cassia fistula</i> L.	Caesalpiniaceae	<i>Konna</i>	Tender leaf decoction is taken against constipation.
<i>Centella asiatica</i> (L.) Urban	Apiaceae	<i>Muthil</i>	Whole plant paste mixed with turmeric powder is applied on cheek and exposed to sunlight for 30 min to cure toothache.
<i>Cycas circinalis</i> L.	Cycadaceae	<i>Kalanja, Inthu</i>	Cut fruits soaked for 2-3 days in water are edible.
<i>Dioscorea hispida</i> Dennst.	Dioscoreaceae	<i>Kavala</i>	Cooked tuber is used as food.
<i>Elaeagnus kologa</i> Schult.	Elaeagnaceae	<i>Ponittum puli</i>	Fruits are edible.
<i>Helicteres isora</i> L.	Sterculiaceae	<i>Edampiri valampiri</i>	Tender leaf paste, charcoal and salt is applied externally against itching of foot.
<i>Lannea coromandelica</i> (Houtt.) Merr.	Anacardiaceae	<i>Udhimaram</i>	Stem bark decoction is applied against body pain. Plant dye is applied externally against bone fracture.
<i>Lantana camara</i> L.	Verbenaceae	<i>Poochedi</i>	Leaf decoction is given internally against fever especially for children.
<i>Mimosa pudica</i> L.	Mimosaceae	<i>Thottavadi</i>	Whole plant paste is applied externally over wounds to arrest bleeding.
<i>Persea macrantha</i> (Nees) Kosterm.	Lauraceae	<i>Kulamav</i>	Stem bark paste is applied externally over joints against dislocation till the juice gets evaporated.
<i>Piper longum</i> L.	Piperaceae	<i>Tippali</i>	Spike is chewed against toothache.
<i>Pittosporum</i> tetraspermum Wight & Arn.	Pittosporaceae	<i>Analivenga</i>	Bark juice is taken internally twice a day for two days against snakebite and bark paste is applied over the wounds for relief from snakebite.
<i>Plectranthus amboinicus</i> (Lour.) Spreng.	Lamiaceae	<i>Panikurkka</i>	Whole plant decoction is taken internally thrice a day for two days against fever.
<i>Pongamia pinnata</i> (L.) Pierre	Fabaceae	<i>Pundu</i>	Bark and heart wood after boiling in water is used for bathing against rheumatism
<i>Pterocarpus marsupium</i> Roxb.	Fabaceae	<i>Venga</i>	Dried heart wood decoction is taken internally thrice a day for two weeks against diabetes.
<i>Rotula aquatica</i> Lour	Boraginaceae	<i>Kallurukki</i>	Ground root boiled in milk is taken internally in empty stomach for one week against body heating and prickles.
<i>Scoparia dulcis</i> L.	Scrophulariaceae	<i>Kallurukki</i>	Whole plant paste mixed with one cup of boiled milk is taken internally for one month against swellings and kidney stone problems.
<i>Stereospermum</i> <i>suaveolens</i> (G.Don.) DC.	Bignoniaceae	<i>Karingezha</i>	Tender leaf paste is applied externally over wounds.
<i>Thottea siliquosa</i> (Lam.) Ding Hou	Aristolochiaceae	<i>Alpam</i>	Root is paste applied externally against snakebite.
<i>Tragia involucrata</i> L.	Euphorbiaceae	<i>Kodithoova</i>	Tender leaf paste mixed with jaggery is taken internally once a day for one week against whooping cough.
<i>Trichopus zeylanicus</i> Gaertn. ssp. <i>travancoricus</i> (Bedd.) Burkill ex Narayanan	Trichopodaceae	<i>Arogya pacha</i>	Fresh leaves and fruits are taken internally to improve body vigour.





Fig.2 *Anaphyllum wightii*



Fig.3 *Cycas circinalis*



Fig.4 *Elacagnus kologa*



Fig.5 *Persea macrantha*



Fig.6 *Pittosporum tetraspermum*



Fig.7 *Rotula aquatica*



Fig.8 *Stereospermum colais*



Fig.9 *Thottea siliquosa*



Fig.10 *Trichopus zeylanicus*

**References**

- 1 Anonymous, *Village Survey Monographs: Tribal Areas*, Vol VII, part VI, G (Census of India, Govt. of India, New Delhi), 1981.
- 2 Anonymous, *Final Population Tools*, (Registrar General and Census Commissioner of India, New Delhi), 1991.
- 3 Morris B, *Forest Traders: A Socio-Economic Study of the Hill Pandaram*, (Athlone, London), 1982 a.
- 4 Morris B, The Family, Group Structuring and Trade among South Indian Hunter-Gatherers, In: *Politics and History in Band Societies*, by Eleanor Leacock and Richard Lee, (Cambridge: Cambridge University Press, New York), 1982 b, 171-187.
- 5 Morris B, Hill Pandaram, In: *Encyclopedia of World Cultures, South Asia*, Vol 3, by Paul Hockings, (G K Hall, Boston), 1992, 98-101.
- 6 Morris B, Tappers, Trappers and the Hill Pandaram (South India), *Anthropos*, 72 (1977) 225-241.
- 7 Morris B, The Hill Pandaram of Kerala, In: *The Cambridge Encyclopedia of Hunters and Gatherers*, by Richard B Lee & Richard Daly, (Cambridge University Press, New York), 1999, 265-268.
- 8 Champion HG & Seth SK, *A Revised Survey of the Forest Types of India*, (Manager of Publications, Forest Research Institute, Delhi), 1968.
- 9 Pushpangadan P, *Ethnobiology in India-A status Report*, All India Coordinated Research Project, (Ministry of Environment and Forests, Government of India, New Delhi), 1995.
- 10 Dhanabal SP, Kokate CK, Ramanathan M, Kumar EP & Suresh B, Hypoglycaemic activity of *Pterocarpus marsupium* Roxb. *Phytother Res*, 20 (1) (2006) 4-8.