

Wild edible plants used by the tribals in Pathanamthitta district, Kerala

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The paper is based on the wild edible plants used by the tribals of Pathanamthitta district. There are about six tribal communities inhabiting this area. They have a very good knowledge of wild edible plants in their surrounding forest. Plants parts are mostly consumed as direct food. A total of 41 species of wild edible plants were enumerated during the survey.

Keywords: Wild edible plants, *Malappandaram*, *Urali*, *Mala-arayan*, *Ulladan*, *Malavedan*, *Malakurava*, Kerala
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The primitive tribals acquired the knowledge of economic and medicinal properties of many plants by trial and error methods; they became the store house of knowledge of their surrounding plants. This knowledge was accumulated and passed on from one generation to the other orally. Now, this knowledge is fast changing due to the developmental activities monitored by the state Government and non-Government agencies. In this background the study was undertaken to document their valuable information about the plants. Wild edible plants have a key role in the daily life of the tribal people and local communities in the district of Pathanamthitta, Kerala. It was observed that these wild edible plants are valued as supplement diet and also help to overcome the deficiency of nutritional components in the tribal communities and build up high immunity power and for remaining strong and healthy. Pathanamthitta district occupying an area of 2,697.15 sq km lies between 9°5'N latitude and 76°38' and 77°16'E longitude (Fig.1). The district is divided into 5 taluks, Ranni, Kozhencherry, Adoor, Tiruvalla and Mallappally. Topography is highly undulating with hills and valleys. Altitude ranges from 5-1,200m, and the lowest is represented by Tiruvalla (5-10m) and highest by Kakki hills (1,000-1,200m). Temperature varies between 24-36°C in the plains and between 15-32°C in the hills. The Southwest monsoon (June-September) and Northeast monsoon (October-November) provide an average of 714 and 450 mm rain, respectively. The district experiences a tropical humid climate and relative humidity varies between 64-98%. Forests occupy 64% (1,720 sq km) of the

total area of the district. Tropical evergreen, tropical semi-evergreen, tropical moist deciduous and *sholas* and grasslands are the main forest¹. Though India has 8.2% tribal population, Kerala has only 1.14% of tribal population². In Pathanamthitta district, there are 6 tribal communities, *Malappandaram*, *Urali*, *Mala-arayan*, *Ulladan*, *Malavedan* and *Malakurava*, constituting only 0.6% of the total population in the district². They belong to Proto-Austroloid and Negrito group and speak a corrupt form of *Malayalam* with an admixture of Tamil³⁻⁶. During lean period in the months of monsoon, they rely on roots, tubers and leafy vegetables. In the past they lived on hunted food, tubers, roots and wild fruits but now they use rice as their staple food. They collect non-wood forest produce and barter them in local market for rice and other complimentary parts.

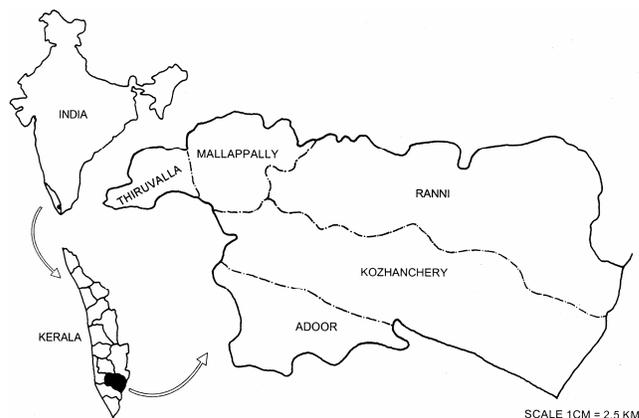


Fig. 1—Location map of study area

Methodology

Field work was conducted once in every two months during 1991-1996. Initial study trips were utilized to know more about the land and people and collect plants for taxonomic identification. After establishing good acquaintance with the tribals, the utility of plants, detailed methods of uses were documented. Stay in tribal settlements and independent tribal huts helped to witness their pattern of plant utilizations. Data collected were cross checked with the data obtained from same as well as on different settlement on different occasions for authenticity. Plant parts other than herbarium which were of ethnobotanical use, like fruits, seeds, barks, etc. were kept in the museum of Tropical Botanic Garden and Research Institute with field data after proper identification.

Enumeration

Fruits

There are a good number of wild edible fruits in Pathanamthitta that are consumed by the tribals in the area. The edible portions are fleshy pericarp, arils or mucilaginous substance associated with seeds.

Aglaia perviridis Hiern (Meliaceae); *Athakka*

Rind of the ripe fruit is split open and mucilaginous pulp inside the rind is consumed which tastes sweet.

Alangium salviifolium (L.f) var. *hexapetalum* (Lam.) Wang. (Alangiaceae); *Amkolam*

The ripe fruit pulp tastes sweet.

Antidesma menasu (Tul.) Muell.-Arg. (Euphorbiaceae); *Kattupulichhi*

Fleshy pericarps are separated from seeds and consumed; tastes sour.

Aporosa lindleyana (Wight) Baill. (Euphorbiaceae); *etti*

Seeds with fleshy arils are separated from mature fruits and consumed. Arils are sweet and sour in taste.

Aporosa acuminata Thw. (Euphorbiaceae); *Vetti*

Capsules are split open and seeds with fleshy arils are separated and eaten; taste like the aril of *Aporosa lindleyana*, sweet and sour.

Baccaurea courtallensis (Wight) Muell.-Arg. (Euphorbiaceae); *Moottilpuli*

Capsules are split open and the arillate seeds are taken out; arils are eaten and seeds are spitted off; tastes sour.

Coccinia grandis (L.) Voigt. (Cucurbitaceae); *Komakka*

Unripe fruits are taken as such or cooked and consumed as vegetable.

Elaeocarpus serratus L. (Elaeocarpaceae); *Karakka*
Semifleshy pericarp is eaten; tastes sweet.

Flacourtia Montana Grah. (Flacourtiaceae); *Loveloly*

Fleshy fruit portion is consumed either with or without seeds; tastes sour.

Glycosmis pentaphylla (Retz.) DC. (Rutaceae); *Panchi*
Pulpy and juicy pericarp is consumed. It is slightly sweet in taste.

Hibiscus sabdarifa L. (Malvaceae); *Mathippuli*

Mature epicalices and calices are eaten as such; or juice extracted is used while preparing fish curries or as a substitute for tamarind.

Madhuca longifolia (Koen.) Macbr. (Sapotaceae); *Illuppa*

Somewhat soft pericarp of the ripened fruit is separated from seeds and pieces are consumed. It tastes very sweet.

Merremia vitifolia (Burm.f.) Hall.f. (Convolvulaceae); *Cheruvayara*

The immature, unripe fruits are chewed.

Momordica charantia L. (Cucurbitaceae); *Kokathodu*; *Kattupaval*

Unripe fruits are cooked, used as vegetable or used in making dishes.

Passiflora foetida L. (Passifloraceae); *Poochappazham*

Rind of the fruit is split open and the pulpy and juicy substance containing aril and placenta is swallowed. It tastes sweet.

Phoenix loureirii Kunth (Arecaceae); *Kattuthengu*

Fleshy pericarp of the ripe fruits is chewed and seeds are spitted off. It tastes sweet.

Physalis minima L. (Solanaceae); *Vedijotta*

Ripe berries are separated from inflated calices and eaten as such. It is slightly sweet and sour in taste.

Rubus glomeratus Bl. (Rosaceae); *Kattumunthiri*

Fruits are eaten as such; taste sour.

Salacia fruticosa Heyne ex Lawson (Hippocrateaceae); *Korandi*

Rind of the fruits is consumed; tastes sweet.

Schleichera oleosa (Lour.) Oken (Sapindaceae); *Puvathu*

Rind of the fruit is broken open and pulp inside the rind is consumed. It is slightly sweet in taste.

Solanum torvum Sw. (Solanaceae); *Chunda*

Unripe fruits are plucked and eaten as such.

Syzygium cumini (L) Skeels (Myrtaceae); *Njaval*

Ripe fruits are eaten as such; tastes sweet.

Syzygium mundagam (Bourd.) Chithra (Myrtaceae); *Jampa*

Sponge like pericarp is eaten; tastes slightly sweet.

Ziziphus oenoplia (L.) Mill. (Rhamnaceae); *Chruthodali*
Fleshy pericarp of the fruits is consumed; tastes sweet.

Leafy vegetables

Plants used as leafy vegetables by the tribals in Pathanamthitta are cooked. Leaves of *Amaranthus viridis* L. (Amaranthaceae), *Vellacheera*; *Amaranthus spinosus* L. (Amaranthaceae), *Mullencheera*; *Alternanthera sessilis* (L.) R.Br.ex DC. (Amaranthaceae), *Chuvannacheera*; *Allmania nodiflora* (L.) R. Br.ex Wight (Amaranthaceae), *Blancheera*; and *Boerhaavia diffusa* L. (Nyctaginaceae), *Thazhuthamaare* are sliced into small pieces and boiled in water. Water is decanted and leaves are seasoned in coconut oil with mustard and grated coconut adding salt and chilly. This is taken along with cooked rice.

Plants as substitute for salt

Begonia malabarica Lamk. (Begoniaceae), *Parappuly* and *Cissus discolor* BI. (Vitaceae), *Pulivally* are used as substitute for salt in curries and dishes by the tribals in Pathanamthitta. Leaves of these plants are crushed juice is added to the dish.

Tubers and rhizomes

Tubers and rhizomes are dug out from the forests by the tribals for edible purpose. These are prepared by removing outer skin, tubers and rhizomes; cut into small pieces and boiled in water. Water is decanted and cooked tubers/ rhizomes are used as food. *Asparagus racemosus* Willd. (Liliaceae), *Shatavari*; *Dioscorea oppositifolia* L. (Dioscoreaceae), *Vellamanthal*; *Dioscorea pentaphylla* L. (Dioscoreaceae), *Nooran*; *Dioscorea anguina* Roxb. (Dioscoreaceae), *Peramuruthen* *Maranta arundinacea* L. (Marantaceae), *kattukuva* yield edible tubers and rhizomes.

Seeds

Seeds of *Artocarpus hirsutus* Lam. (Moraceae), *Ayani*; *Cycas circinalis* L. (Cycadaceae), *Kana*; *Dolicos falcatus* Klein/ (*Dolicos trilobus* L.) (Fabaceae), *Kattupayer* *Entada pursaetha* DC. (Mimosaceae), *Makkinkokka*; and *Sterculia guttata* Roxb. (Sterculiaceae), *Thondi* are used as edibles by the tribals. Seeds are normally fried and seed coats are removed. Endosperms are then taken out and consumed. *Cycas circinalis* L. (Cycadaceae), *Kana* endosperms are separated from seeds, dried and powdered. The powder is like the rice flour. It is used

to make steam cakes locally known as *puttu*. *Puttu* is prepared as follows: the flour is gently fried and slightly sprinkled with salt water. It is then filled in bamboo internodes, putting coconut gratings at intervals. The bamboo inter node is opened at one end and other end is blocked by a small piece of perforated coconut shell that rests on the broken septum. This is kept on the mouth of an earthen pot having boiling water. Steams passing through the bamboo inter node cooks the flour and it became the steam cake. Cooked cakes are pushed out from the bamboo inter node introducing a stick. Instead of frying *Entada pursaetha* DC. (Mimosaceae), *Makkinkokka* seed, the thick seed coat is first broken open and endocarps are taken out. They are soaked in water for about 12 hours. After this, endocarps are boiled in water and water is decanted. This is repeated for about 7 times to remove the bitter taste of endocarp. They are then eaten as such. Tribals prefer to consume this only during famine. When endocarps are consumed more, it induces nausea.

Discussion

Tribals in Pathanamthitta collect wild edibles and use them in two ways. Fruits of *Salacia fruticosa* and *Alangium salviifolium* that occur less in number are consumed on the spot itself and fruit like that of *Baccurea courtallensis* and *Flacourtia montana* which occur in plenty during the fruiting season are collected and brought back to their huts or settlement areas and either distributed among their neighbors or are sold in local markets. A critical evaluation of literature reveals that in South Africa, roasted pods of *Entada pursaetha* are used as a substitute for coffee⁷ and it is also used as a fish poison⁸. The fruits of *Aporosa accuminata* are also used by the Mannan tribes in Periyar Tiger Reserve, Kerala, India⁹. The fruits of *Syzygium cumini* is also used by the local people in Gujarat and Brazil^{10,11}. These critical evaluation of the literature reveals that the use of the following species are new to ethnobotany, *Aglaia perviridis*, *Merremia vitifolia*, *Begonia malabarica*, *Cissus discolor*, *Dioscorea anguina*, *Dolicos falcatus*, and *streculia guttata*.

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