

# Ethnobotanical survey in the coastal areas of Thiruvananthapuram district, Kerala

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## Abstract

Ethnobotany refers to the field of study that examines the interaction between human societies and the plant kingdom, especially how indigenous people perceive, manage and utilize the plants around them. Ethnobotanical documentation can be seen as a model to preserve the oral traditional knowledge and a way to make it available for the present and future generations, thereby providing an opportunity to reflect the conservation status of biodiversity in their ancestral domain. Knowledge of indigenous cultures about medicinal or other uses of local plants is an important input for understanding traditional utilization of biological resources, for promoting community healthcare practices and also for developing modern plant-based drugs. The importance and urgency of scientific documentation of such traditional wisdom on medicinal properties or fodder utility of plants, much of which is restricted to local cultures and transmitted only orally, has been realized through this study as it is irreversibly eroding due to negligence of traditional cultures. The present study focus on ethnobotanical aspects of Thiruvananthapuram district. The information gathered from the contact persons were recorded and decoded relevant photographs and herbarium specimens were collected for authentication.

**Keywords:** *Ethnobotany, Biodiversity, Scientific documentation*

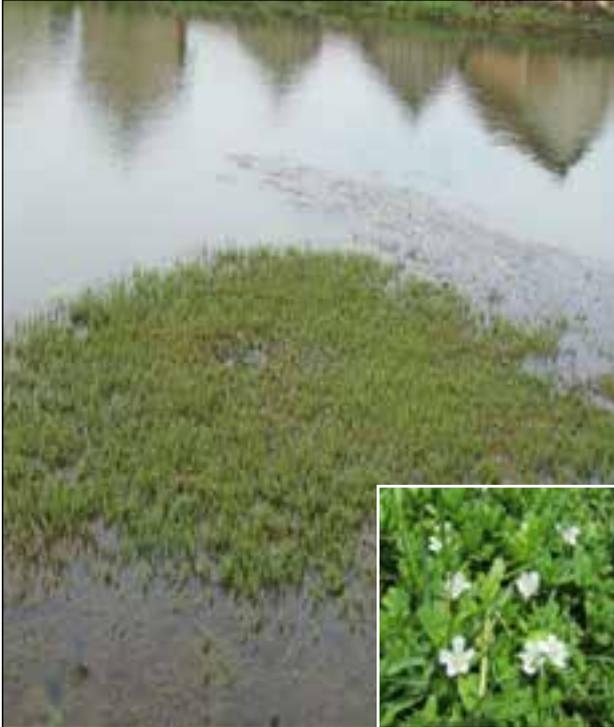
## Introduction

Ethnobotanical studies are very relevant now as it brings to light the direct relationship of plants with man. The Kerala coastal zone is famous for its natural beauty with beaches, estuaries, lagoons and backwaters which has high tourism potential. Another characteristic feature of the coastal zone is the high population density dominated by fishermen and coir workers.

Though extensive work has been conducted among the tribal communities, inhabiting in the Western Ghats of Kerala, scant or no systematic ethnobotanical studies were conducted on the coastal communities of Kerala and hence the relevance of this study. The ethnobotanical importance of coastal plants has not been systematically studied in Kerala state compared to those in the forests and plains as cited earlier. Ethnobotanical survey conducted by our team recorded new/ hither to unknown uses of



Punna - *Calophyllum inophyllum* L. Ethnobotanically important tree species which needs Conservation.



Brahmi - *Bacopa monnieri* (L.)Pennel -  
An important medicinal herb available in Coastal areas-Habitat  
needs Conservation.



(Manjanathi) Noni - *Morinda citrifolia* L.  
A much needed medicinal tree species.

a number of coastal species. Conservation of some species like *Calophyllum inophyllum*, *Bacopa monnieri* and *Morinda citrifolia* have to be taken up due to over exploitation and habitat destruction, which are essential for the very survival of coastal ecosystem. We hope the study when completed will definitely give new leads which can be utilized for conservation and utilization in various industries and awareness to the gramapanchayath administrators and local people on the importance of conservation of coastal ecosystem and its plant diversity.

The present study focuses on ethnobotanical studies of Thiruvananthapuram district, Kerala State, of which, coastal wards of Gramapanchayaths and Municipal areas have been covered.

### Materials and Methods

The work was conducted in a planned and systematic manner. The present study covers Poovar, Karumkulam, Kadinamkulam, Chirayinkeezhu, Anchuthengu, Vettoor and Edava Grama panchayaths, Varkala Municipality and 4 Corporation wards namely Vizhinjam, Kovalam, Thiruvallam and Veli of Thiruvananthapuram district.

During field trips, fisher men folk, local community and elders have been repeatedly visited in their own localities, during different seasons. After obtaining their consent, information regarding their knowledge



Interaction with Fishermen folk

of different plant species were recorded with the help of questionnaire-based interviews, open-ended field discussions and also by observation of their actual practices, wherever possible. In the case of medicinal plant, recording of information on various aspects of treatment practices such as diseases treated, method of treatment, vernacular names of plants used, method of herbal collection and medicine preparation, etc., was also collected and recorded. Relevant photographs and short video clips are taken. Voucher specimens were also collected for herbarium preparation and future reference and authenticated by using different standard flora.

## Result

About 1557 information from 174 informants were documented including plant species used for food, medicine, artefacts, fishing, fuel and fodder. This includes 14 edible species, 176 medicinal herbs and 14 fodder yielding plants species. The ethnobotanically important plant species that need urgent conservation were noted and specimens collected for herbarium preparation.



'Thaliyola' - Traditional writings related to the inherited knowledge and wisdom of ancient India, through the ages and across centuries, was kept inscribed on chemically processed palm leaves.

The important species noted are; *Abrus precatorius*, *Acanthus ilicifolius*, *Acrostichum aureum*, *Aristolochia indica*, *Avicennia officinalis*, *Bacopa monnieri*, *Barringtonia racemosa*, *Bruguiera gymnorrhiza*, *Calophyllum inophyllum*, *Cerbera odollam*, *Clerodendrum inerme*, *Derris trifoliata*, *Hibiscus tiliaceus*, *Launaea sarmentosa*, *Morinda citrifolia*, *Pandanus odorifer*, *Passiflora foetida*, *Premna serratifolia*, *Quassia indica*, *Scaevola sericea*, *Sonnertia caseolaris* and *Thespesia populnea*.

Also, different plant species have diverse ethnobotanical uses other than medicinal. The coastal people use these plants as food, fuel, fodder, animal husbandry, fishing and artefact. The table shows the number of information collected during the field work.



**Bhadraksham- *Scaevola sericea*. Vahl.**

- A new record for Thiruvananthapuram District.

## Conclusion

Ethnobotanical documentation and awareness campaign is important for making local people aware and sensitive about the threats posed by human activities and promote conservation of plant diversity in the region.



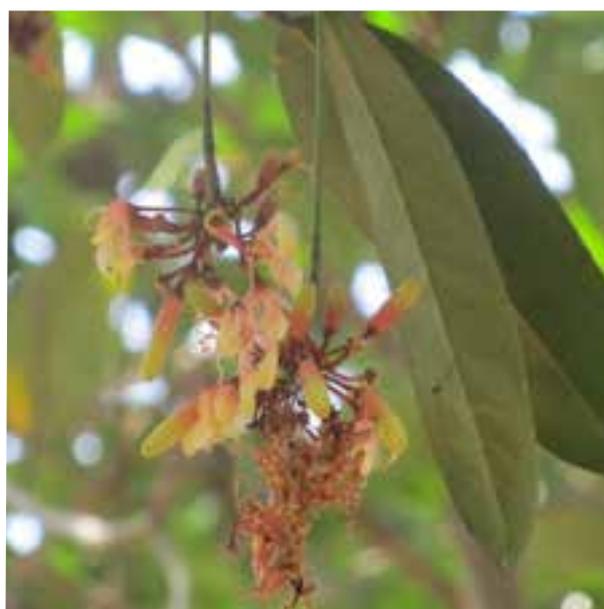
**Adambuvalli - *Ipomoea pes-caprae* (L.) R.Br.**  
Leaf and flower used for colouring fishing net



**Kadalkozhuppa – *Launaea sarmentosa* (Willd.)Sch.-Bip.ex O. Ktze.**  
Notable coastal plant of ethnomedicinal value



**Kattamaram - *Artocarpus hirsutus* Lam.**  
Traditional canoe used by the fishermen for fishing



**Karinjotta – *Quassia indica* (Gaertn.)Nooteb.**  
An ethnobotanically important species

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## Literature cited

1. Mohanan M & Henry A N (1994). Flora of Thiruvananthapuram. BSI, Calcutta
2. Gamble J.S (1915-1934). Flora of the Presidency of Madras published under the Authority of the Secretary for India in Council.
3. Nayar T.S *et al.* (2006). Flowering plants of Kerala - A hand book. TBGRI, Thiruvananthapuram
4. Thomas K J (1962). A survey of the vegetation of Veli with special reference to ecological factors. J. Ind. Bot. Soc. 41 : 104-131.