

Traditional Healing Potential of Paliyars in Southern India

M. Ayyanar¹, K. Sankarasivaraman² and S. Ignacimuthu^{1*}

¹Division of Biodiversity and Biotechnology, Entomology Research Institute, Loyola College, Chennai – 600034, Tamil Nadu

²Centre for Research & Post Graduate Studies in Botany, Ayya Nadar Janaki Ammal College, Sivakasi – 626 124, Tamil Nadu

*Corresponding author Dr. S. Ignacimuthu (Email: eri_lc@hotmail.com)

Issued 25 May 2008

Abstract

India is one of the twelve mega-biodiversity countries of the world having rich vegetation with a wide variety of medicinal plants and a tradition of plant-based knowledge distributed amongst a vast number of ethnic groups. The present study focuses mainly on the traditional knowledge of the Paliyar tribals for primary healthcare needs as reported by their informants/traditional healers. The study shows a high degree of ethnobotanical novelty and the use of plants among the Paliyars reflects the revival of interest in traditional folk culture and ethnomedicine.

Introduction

India is one of the twelve mega-biodiversity countries of the World having rich vegetation with a wide variety of plants with medicinal value. The tribal population of the country, as per the 2001 census, is 8.43 crore, constituting 8.2% of the total population and has the second largest tribal population in the world after Africa (Jagtap et al., 2006). With enormously diversified living ethnic groups and rich biological resources, India represents one of the great emporia of ethnobotanical wealth (Pal, 2000). During the last few decades there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of India. Primarily, Janaki Ammal (1956) conceptualized the importance of ethnobotanical studies in India and initiated such studies. After that from the year 1963, Jain extended these studies to the forefront through his pioneering research and publications.

It is estimated that tribal people of Tamil Nadu occupy 1.05% of the total state population and 0.77% of the total tribal population of the country. Ministry of Tribal affairs presented a list of tribal communities in India for each state and Tamil Nadu contains 36 types of tribal communities and they are distributed in different districts in the forests and adjoining areas. The present communication undertaken to ascertain the detailed information on the traditional healing potential of Paliyar tribals inhabit the forest areas in southern districts of Tamil Nadu, India.

Study area and Ethnology

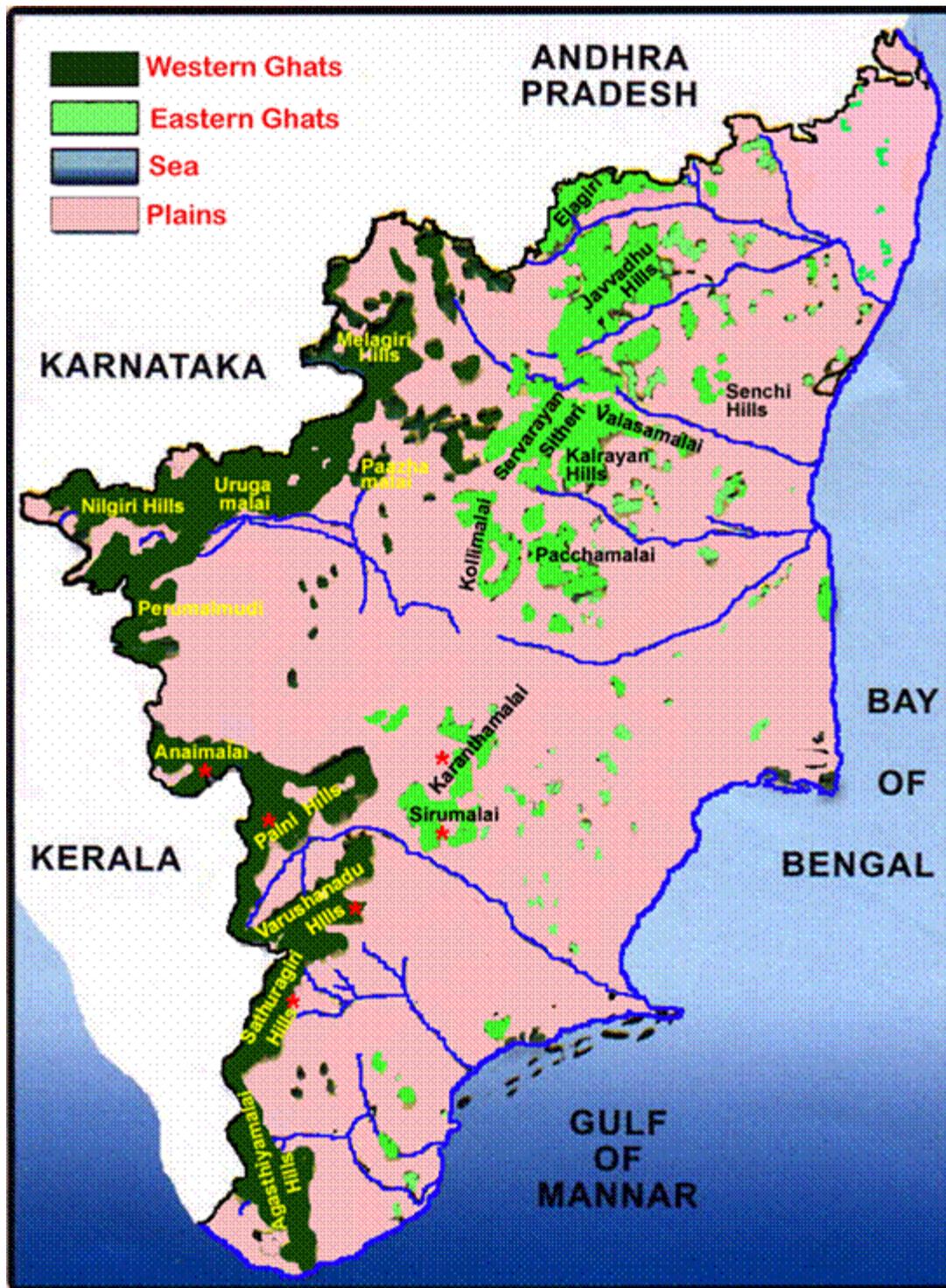


Figure 1: Western and Eastern Ghats of Tamil Nadu

* Paliyar inhabited hills in southern western and Eastern Ghats of Tamil Nadu

The Paliyar tribals inhabit a narrow strip of Western Ghats in the hilly regions of Madurai, Dindigul, Theni, Tirunelveli and Virudhunagar districts of Tamil Nadu (figure 1) and Idukki district of Kerala (Ignacimuthu et al., 2006). Paliyars, when compared to various tribal communities in Tamil Nadu constitute relatively a small group. Physically they are similar to the *Semong* of Malaya and other Indian tribal communities (Dahmon, 1908). Gardner (1972) described that Paliyar's physical characteristics fall within the range of south and south east Asian – Australoid types, formerly referred to as Negrito, Malid,

Veddid and Proto-Australoid.

Paliyar tribals are grouped into three categories based on their life styles namely, nomadic, semi nomadic and settled (Ignacimuthu et al., 2006). Nomadic *Paliyars* don't build houses and move over larger territories. They move as individual families in search of food and non-timber forest produce such as honey. They live temporarily in rock caves called pudai. Semi nomadic *Paliyars* build semi permanent houses and confine themselves to small territories. They collect food and non-timber forest produces from nearby forest areas and spends their day time in the forests and return back to their settlement during the evening. Their small huts are unique with the walls made up of mud or with wiry interwoven stems of *Lantana camara*. Thatched roofs are made by using grasses or with the leaves of palm tree. Most of their huts are dark with no window or any other opening to admit air. Settled Paliyars are more or less urbanized and live as agricultural laborers. These people live around the villages in the plains at lower elevations. They dwell in the houses provided by the government or the estate owners.

In general they do not cultivate, but in recent years, some members of *Paliyars* belonging to settled group cultivate rice, cardamom and pulses. In the beginning they were not domesticating any animal, except dog (Thurston and Rangachari, 1909). Now, in most of the settlements they have started keeping hens, cattle and beehives. In addition, they keep cattle owned by outsiders for foraging in the forest and they mark symbols on cattle by using heated iron rods to differentiate herds belonging to different owners.

Until recently the *Paliyars* were very shy people and afraid to meet or face the outsiders. Their custom, habits and manners have undergone changes due to outside contacts. *Paliyars* do not have any definite pattern of dress. Men wear dhoti and women wear saree and blouse which are rarely washed and often-in rags. They are also engaged in seasonal collection of minor forest products such as honey and bee wax. They cultivate edible plants such as tapioca, banana, millets and cash crops such as pepper, coconut, rubber, areca nut and cashew nut. The traditional structure of the community is a highly co-ordinated unit under the control of a tribal chief called as *Nattamai* or *Thalaivar*. Traditionally *thalaivar* combined the roles of lawgiver, protector, dispenser of justice, physician and priest. Their day-to-day activities and system of governance today is linked to that of the non-tribals who live in and around the areas they live in.

Methodology

The fieldwork was carried out in various forest areas which are inhabited by the Paliyars in southern Tamil Nadu. The Paliyar settlements were located through a number of field surveys in this region. The people in the settlements were approached through mediators who had good relationships with the tribals such as forest officials, tribal chief and grocers. Resource persons (informants or tribal practitioners or traditional healers) with the knowledge of medicinal preparations were selected to gather the information. The information was collected through questionnaire, interviews and discussions among the tribal practitioners in their local language (Tamil).

Results and Discussion

More than 350 species of ethnomedicinal plants were recorded in our study (Sankarasivaraman, 2002) and focused mainly on the traditional knowledge of Paliyar tribals for primary healthcare needs as reported by the informants/ traditional healers. There are two types of tribal healers in the study area

namely herbalists and ritualists. Herbalists treat patients only by using plant resources. They diagnose diseases based on the symptoms told by the patients as well as based on their personal experience in treating human ailments. Ritualists believe that specific spirits cause ailments. Invariably, the ritualist is a woman supported by a few men and the whole healing ceremony takes about one day to complete. Among the different plant parts used for the preparation of medicine, the leaves were found to be the most frequently used plant parts in the preparation of remedies. The reason why leaves are used mostly is that they are easily accessible and are active in photosynthesis and production of metabolites (Ghorbani, 2005). The methods of preparation fall into four categories, viz.: plant parts applied as a paste, juice extracted from the various fresh parts of the plant, plant parts used to prepare decoction in the combination of water and powder made from fresh or dried material. It was also observed that some ailments were used in more than one method of preparation.

The knowledge of use of medicinal plants and their properties was acquired by means of trial and error and transmitted from generation to generation. The knowledge about medicinal plants is rather specialized and is limited to a few members in the community who are recognized as 'Vaidhyar' (also known as medicine men, informant and traditional healer). In general the medicine men treat all kinds of diseases but some of them are specialized in specific diseases. They use mostly herbs to cure different kind of disorders starting from childbirth. The remedies of common ailments like cuts, headache, pain, fever, cough, cold, etc., are known to most of members of these tribal communities. The Paliyar tribals are usually not willing to disclose their knowledge about the uses of the plants except their medicinal properties.

Majority of the remedies are taken orally. For topical use, the most important methods used are direct application of the paste or ointment (with oil) and mostly deals with ailments like skin diseases, wounds, heel cracks, poison bites, rheumatism, body pain and headache. Some of the ailments are treated by internal consumption as well as topical application such as poison bite, rheumatic and body pain. In some of the ailments such as cold, cough, fever and headache inhalation is also involved. Before starting the treatment, the condition of the patient is observed deeply and then the prepared medicines are given to treat diseases. Tribal practitioners are using specific plant parts and specific dosages for the treatment of diseases. The dose given to the patient depends on age, physical status and health conditions.

The mostly used plants for the preparation of medicine among the Paliyars are *Azadirachta indica*, *Cassia auriculata*, *Cynodon dactylon*, *Gymnema sylvestre*, *Hibiscus rosa-sinensis*, *Ocimum tenuiflorum*, *Phyllanthus amarus*, *Santalum album* *Tribulus terrestris* and the important plants grown in their nearby houses and in front of their houses are some *Ocimum* sp., *Hibiscus rosa-sinensis*, *Adhatoda vasica*, some *croton* sp., *Murraya koneigii*, *Carica papaya*, *Cocos nucifera*, *Mangifera indica*, *Citrus aurantifolia*, *Lycopersicon esculentum*, *Psidium guajava*, *Solanum melongena* etc.

Some papers have been published and some unpublished reports are also available with ethnomedicinal claims among Paliyar tribals in Tamil Nadu. Paliyars inhabiting the Anaimalai hills use 55 species of plants for the treatment of various ailments, food, cultural, traditional and religious ceremonies (Sivakumar *et al.*, 2003). Arinathan *et al.* (2003b) carried out an ethnobotanical survey of plants utilized by the Paliyar tribals in Thanipparai, Shenbagathoppu, Ayyanarkoil, Athikoil and Saduragiri of Srivilliputhur Grizzled Giant Squirrel Wildlife Sanctuary, Virudhunagar district. The study

reported the use of 30 medicinal plants from 20 families and 29 genera to treat different types of diseases. Muthukumarasamy *et al.* (2003a) reported that Paliyar tribals use 21 medicinal plants to get relief from gastro-intestinal disorders and the information was collected from the elderly and experienced persons practicing indigenous medicines. They also did one more survey (2003b) among these tribals on the herbal remedies used by them for the treatment of poisonous bites. Rajendran *et al.* (2003b) surveyed the Ayyanarkoil hill range of Virudhunagar forest division, inhabited by the Paliyar tribals, to collect the information on ethnomedicinal plants used by them for their primary healthcare and the survey enumerated 43 species of plants with multiple ethnomedicinal properties.

Ignacimuthu *et al.* (2006) carried out an ethnobotanical survey to collect information on the use of medicinal plants by Paliyar tribes using an integrated approach in Madurai district. A total of 60 ethnomedicinal plant species distributed in 32 families were documented and were mostly used to cure skin diseases, poison bites, stomachache and nervous disorders. Ganesan *et al.* (2005) carried out an ethnobotanical survey among Pulayan tribes of lower Palni Hills in both northern and southern slopes and the survey enumerated traditional uses of 45 species of plants. The previous literatures among the Paliyar tribals are also declared that they are associated with medicinal plants for their primary healthcare needs and they are aware of the herbal remedies for common ailments like headache, fever, cough, asthma, chicken pox, stomachache, scabies, paralysis and rheumatism.

Paliyars possess some knowledge on veterinary medicines. In the present study, there are seven species of plants used for ethnoveterinary purposes. They are *Alstonia scholaris*, *Azadirachta indica*, *Bischofia javanica*, *Blepharis maderaspatensis*, *Cryptolepis buchananii*, *Euphorbia hirta* and *Mangifera indica*. These plants are used to treat the disorders such as boils, bone fracture, diarrhea and lactation. Among the listed plants *Azadirachta indica* was also used by the tribal people of Moradabad district, Uttar Pradesh, India as refrigerant for cattles (Ali, 1999) and Kollimalayalis of Tamil Nadu used to treat ulcer (Geetha et al., 1996). For most of the tribal communities there is no published data on the ethnoveterinary plants used by them except a few; despite the fact that ethnoveterinary medicine has been very crucial for the animal healthcares of most developing countries, it has not yet been well documented and much effort is needed in research and integration activities (Yineger et al., 2007).

Conclusion

The study shows a high degree of ethnobotanical novelty. The use of herbal remedies is important among the Paliyars and it reflects the revival of interest in traditional folk culture and ethnomedicine. Accurate knowledge of the plants and their medicinal properties are held by only a few individuals in this community. Some of them have a strong tendency of keeping their knowledge secret. The wealth of tribal knowledge of medicinal and other useful plants points to a great potential for research and the discovery of new drugs to fight diseases, obtaining new foods and other new uses.

References

1. Ali, Z.A., 1999. Folk veterinary medicine in Moradabad District_Uttar Pradesh, India. *Fitoterapia* 70, 340 – 347.
2. Arinathan, V., Mohan, V.R., John De Britto, A., 2003. Ethnomedicinal survey among Palliyar tribals of Srivilliputhur Grizzled Giant Squirrel Wildlife Sanctuary, Tamil Nadu. *Journal of Economic and Taxonomic Botany* 27, 707 – 710.

3. Dahmon: The Paliyars: Hill-Tribe of Palni hills (South India). *Anthropos* 1908, 3:19-31.
4. Ganesan, S., Suresh, N., Kesavan, L., 2005. Ethnomedicinal survey of lower Palni Hills of Tamil Nadu. *Indian Journal of Traditional Knowledge* 3, 299-304.
5. Gardner, P.M., 1972. The Paliyars. In: *Hunters and Gatherers Today* (Eds. Marco G. Bicchieri), New York, 404 – 417.
6. Geetha, S., Lakshmi, G., Ranjithakani, P., 1996. Ethnoveterinary medicinal plants of Kolli hills, Tamil Nadu. *Journal of Economic and Taxonomic Botany - Additional Series* 12, 289 – 291.
7. Ghorbani, A. 2005. Studies on pharmaceutical ethnobotany in the region of Turkmen Sahra, north of Iran (Part 1): general results. *Journal of Ethnopharmacology* 102, 58-68.
8. Ignacimuthu, S., Ayyanar, M., Sankarasivaraman, K., 2006. Ethnobotanical investigations among tribes in Madurai district of Tamil Nadu, India. *Journal of Ethnobiology and Ethnomedicine* 2:25, <http://www.ethnobiomed.com/content/2/25>.
9. Jagtap, S.D., Deokule, S.S., Bhosle, S.V., 2006. Some unique ethnomedicinal uses of plants used by the Korku tribe of Amravati district of Maharashtra, India. *Journal of Ethnopharmacology* 107, 463 - 469.
10. Janaki Ammal, E.K., 1956. Introduction to the subsistence economy of India. In: *Man's role in changing face of the earth* (Ed. William LT Jr) University of Chicago Press, Chicago, 324 – 335.
11. Muthukumarasamy, S., Mohan, V.R., Kumaresan, S., Chelladurai, V., 2003a. Herbal medicinal plants used by Paliyars to obtain relief from gastro-intestinal complaints. *Journal of Economic and Taxonomic Botany* 27, 711 - 714.
12. Muthukumarasamy, S., Mohan, V.R., Kumaresan, S., Chelladurai, V., 2003b. Herbal remedies of Paliyar tribe of Grizzled Giant Squirrel Wildlife Sanctuary, Western Ghats, Srivilliputhur, Tamil Nadu for poisonous bites. *Journal of Economic and Taxonomic Botany* 27, 761 - 764.
13. Pal, D.C., 2000. Ethnobotany in India. In: *Flora of India*. Introductory volume - part II, (Eds. Singh, N.P., Singh, D.K., Hajra, P.K. and Sharma, B.D). Botanical Survey of India, Calcutta, India. pp. 303 – 320.
14. Rajendran.S.M., Agarwal, S.C., Sundaresan, V., 2003. Lesser Known Ethnomedicinal Plants of the Ayyakarkoil Forest Province of Southwestern Ghats, Tamil Nadu, India– Part I. *Journal of Herbs, Spices and Medicinal Plants*, 10, 103 – 112.
15. Rajendran.S.M., Agarwal, S.C., Sundaresan, V., 2003. Lesser Known Ethnomedicinal Plants of the Ayyakarkoil Forest Province of Southwestern Ghats, Tamil Nadu, India– Part I. *Journal of Herbs, Spices and Medicinal Plants*, 10, 103 – 112.
16. Sankarasivaraman, K., 2002. Ethnobotanical wealth of Paliyar tribe in Tamil Nadu, Ph.D. Thesis. Xt. Xaviers College, Palayamkottai, Tamil Nadu, India.
17. Yineger, H., Kelbessa, E., Bekele, T., Lulekal, E., 2007. Ethnoveterinary medicinal plants at Bale Mountains National Park, Ethiopia. *Journal of Ethnopharmacology* 112, 55 – 70.