

Indigenous knowledge on some medicinal plants in Kanjamalai Hills, Eastern Ghats, Salem district, Tamil Nadu, India

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<https://doi.org/10.56343/STET.116.010.002.010>
<http://stetjournals.com>

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Abstract

The present work was to identify and enumerate some of the plant species used for medicinal purposes by the indigenous people of Kanjamalai Hills, Salem district, Tamil Nadu, India. The study was conducted from January 2015 – September 2015. To collect the information, the informants were selected based on their knowledge of medicinal plants. A total of 33 plant species distributed in 30 genera belonged to 15 families, utilized to cure various ailments by indigenous people, were identified. Traditional healers were using these plants to cure beetle bite, snake bite, chest pain, dental ache, bone fracture, eczema, dysuria, wound healing, kidney stone, asthma and gynecological disorders. The present investigation revealed that medicinal plants still play a vital role in the primary health care of the people. This study offers a model for studying the relationship between plants and people and traditional remedies of great therapeutic importance and the value of using ethno botanical information to initiate drug discovery efforts.

Keywords: Medicinal plants, Indigenous knowledge, Kanjamalai

INTRODUCTION

Ethnobotany is a multidisciplinary science and is defined as the interaction between plants and people. Important information of medicinal plants is also given in Rig- Veda. The World Health Organization (WHO) reported 80% of the world populations rely chiefly on indigenous medicine and that the majority of traditional therapies involve the use of plant extracts and their active constituents. The people of rural India are dependent on traditional medicines for their healthcare and treatment of diseases. They are developed through experience, preparation of fragments in Ayurvedic knowledge, Yunani and tribal systems of medicine, which are assimilated and transferred from generation to generation. The indigenous knowledge of plants among the local people is essential for the identification and documentation of plants (Kadavul and Dixit, 2009). India with its great topography and climatic diversity has a very rich and diverse flora and fauna (Sinhbabu and Banerjee, 2013). Traditional folk medicine, which is mostly non-documented, has been handed down orally from one generation to another. The Indian population still relied on traditional herbal medicine (Dubey *et al.*, 2004). Traditional folk medicine use the information, expertise and observation based on assumptions, convictions and practices and also holds the legacy of community, acceptance and is exclusively based on the skill gained by local herbalist over a

period of time (Manishayadav, 2012). Most of the indigenous people have a great knowledge of medicinal plants that are used for first aid remedies to treat cough, cold, fever, headache, poisonous bite and some other ailments. Early reports on ethnomedicinal uses of plants in the forests of Kanjamalai and its adjoining areas are available (Alagesaboopathi, 2011). The present article deals with identification and documentation of some of the plant species used for medicinal purposes by the indigenous peoples of Kanjamalai hills, Salem district, Tamil Nadu, India.

MATERIALS AND METHODS

Study Area

Kanjamalai, the Lord Siddheswara Swamy, is situated in the North Western foothill is located 16 kilometers away from the city of Salem and nearer to Salem Steel Plant. It is located at 11°37' 24" North latitude and 78°4' 5" East longitude of Eastern Ghats. The climatic data of this hill range are as follows – annual mean rainfall : 70 mm; temperature varies between 20 °C to 37 °C and relative humidity 76 to 90 per cent with an elevation range of 350-986 m. The forests are mostly of a mixed deciduous and irregular type of varying density.

Data collection


















During the course of the investigation, several periodical field trips were conducted from January 2015 – September 2015 and indigenous peoples in Kanjamalai Hill were interviewed. Ethno medicinal data were collected from traditional healers and practitioners. (Male and Female were identified based on the knowledge of medicinal plants). The interviews

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Table 1. List of medicinal plants used by Indigenous peoples in Kanjamalai Hills, Salem district, Tamil Nadu, India

S. no.	Botanical Name / Vernacular Name / Family	Ailments	Parts Used	Methods of preparation
1	<i>Anisomeles malabarica</i> , R.Br Peyameratti / Lamiaceae,	Kidney Stone	Whole Plant parts, Leaves and Flower	The parts are made into powder and mixed with hot water and given orally
2	<i>Coccinia indica</i> , W & A Kovay / Cucurbitaceae,			
3	<i>Moringa oleifera</i> , Lamk Murugai / Moringaceae,			
4	<i>Musa paradisiaca</i> , Linn Vazhai / Musaceae			
5	<i>Tribulus terrestris</i> L. Nerunjil / Zygophyllaceae			
6	<i>Ipomaea obscura</i> , Ker-Gawl Sundan kodi / Convolvulaceae	Normal delivery	Leaves	Leaves juices with hot water.
7	<i>Momordica charantia</i> L. Paagal / Cucurbitaceae.	Diabetic	Leaves	The leaf is boiled in water and made into tea.
8	<i>Asclepias curassarica</i> , L Mookkuthipoodu / Asclepiadaceae	Skin disease	Leaves	Fresh Leaves are added to the Boiling water for taking bath.
9	<i>Erythroxylum monogynum</i> , Roxb Sembulichaan / Erthroxylaceae			
10	<i>Biophytum sensitivum</i> , DC Melsurungi / Geraniaceae	Eczema	Whole plant	Whole plant parts are made into powder and mixed with salt and applied externally.
11	<i>Tragia involucrate</i> , L. Ganjamkorai / Euphorbiaceae	Asthma	Root	Root paste is given orally.
12	<i>Argemone mexicana</i> , L. Bhrahmadandu / Papaveraceae	Beetle bite	Stem	Stem paste is applied externally
13	<i>Cassia occidentalis</i> , L. Utharam / Caesalpiniaceae		Leave	Leaves are powdered and mixed with coconut oil and applied externally.
14	<i>Aristolochia elegans</i> Mast Calio flower / Aristolochiaceae	Snake bite	Leaves	Leaves paste is mixed with hot water and given orally.
15	<i>Thunbergia fragrans</i> , Roxb Vellipoosedi / Acanthaceae		Root	Root powder is mixed with hot water and given orally.
16	<i>Rhinacanthus nasutus</i> (Linn.) Nagamalli / Acanthaceae.			
17	<i>Enicostemma littorale</i> , Blume Vellaragu / Gentianaceae,	Chest pain	whole plant	Different plant parts are made into powder and mixed with hot water and given orally.
18	<i>Hemidesmus indicus</i> , R.Br Nannari / Asclepidaceae	Blood purifier. and Tonic	Root	200g of root tubers are cut and powdered. 1-2 spoon of powder is taken into 200 ml of water and prepared decoction. 20 ml of the decoction is mixed with 100-150 ml of milk and given orally twice a day for 40-50 days to give strength and act as tonic and blood purifier.
19	<i>Achyranthes aspera</i> L. Naiyuruvi / Amaranthaceae	Dental ache	Roots	Root is dipped in the castor oil and placed on the painful teeth.
20	<i>Plumbago zeylanica</i> , L Kuttanarainje / Plumbaginaceae			

21	<i>Amaranthus spinosus</i> L. Mullukkeerai / Amaranthaceae .	Dysentery	Leaves	Leaf juice is used to cure dysentery
22	<i>Mimosa pudica</i> L. <i>Thottal sinungi</i> / Mimosaceae			
23	<i>Alangu salvifolium</i> Wang. Alangil / Alangiaceae	Stomach disorders.	Stem Bark	Stem bark is cut and boiled with water and the filtrate is taken orally to cure stomach pain.
24	<i>Boerhaavia diffusa</i> L. Mukkurai / Nyctaginaceae		Root	100g of roots are mixed with 250 ml of water and boiled to prepare decoction. 10-15 ml of decoction is given orally twice a day to cure stomach disorders.
25	<i>Andrographis paniculata</i> (Burm. f.) Wall. Nilavembu / Acanthaceae	Fever	Leaf	A spoonful of dry leaf powder is mixed in half glass of hot water and is administered twice a day for 3 days.
26	<i>Carissa carandas</i> L Kalaakai / Apocynaceae		Root	A spoonful of root powder is mixed with half spoon of honey and is administered twice a day for 2 days.
27	<i>Cleome gynandra</i> L. Taivellai / Cleomaceae		Root	A spoonful of root juice is mixed with half glass of hot water and is administered twice a day for 2 days.
28	<i>Phyllanthus amarus</i> Schum.&Thonn Kizhanelli / Euphorbiaceae	Jaundice	Whole plant	The whole plant parts are ground and mixed with cow milk and given orally twice a day to cure Jaundice.
29	<i>Aloe barbadensis</i> , Mill Kattalai / Liliaceae	Swellings	Fleshy leaf	Fleshy leaves are treated with fire and used to tie over the swollen area.
30	<i>Catharanthus roseus</i> , Don Katcharali / Apocynaceae		Leaves	Leaves are made into paste and applied over the painful part externally.
31	<i>Vitex negundo</i> L. Nottchi / Verbinaceae		Root and Leaves	Root and leaves are taken in equal quantities (100g each) and cut into small pieces, and mixed with <i>Seasum</i> oil. It is applied to cure joint swellings.
32	<i>Tridax procumbens</i> L. Kinatrati poondu / Asteraceae.	Wound healing	Leaves	Leaf paste is used to cure wounds.
33	<i>Wedelia chinensis</i> (Os.) Merr. Manjal karisalai / Asteraceae.			

			
<i>Coccinia indica</i> , W &A	<i>Carissa carandas</i> L	<i>Tribulus terrestris</i> L	<i>Ipomaea obscura</i> , Ker-Gawl
			
<i>Aristolochia elegans</i> Mast	<i>Rhinacanthus nasutus</i> (Linn.)	<i>Enicostemma littorale</i> , Blume	<i>Hemidesmus indicus</i> , R.Br
			
<i>Plumbago zeylanica</i> , L	<i>Mimosa pudica</i> L.	<i>Alangu salvifolium</i> Wang.	<i>Boerhaavia diffusa</i> L.
			
<i>Andrographis paniculata</i> (Burm, F.) Wall	<i>Cleome gynandra</i> L.	<i>Aloe barbadensis</i> Mill	<i>Phyllanthus amarus</i> Schum &Thonn
			
<i>Catharanthus roseus</i> L.	<i>Vitex negundo</i> L.	<i>Spermocoe hispida</i> (L)	<i>Strychnos nux-vomica</i> L



were conducted to collect ethno medicinal information along with local name of the particular plant, parts utilized, medicinal uses and methods of preparation (i.e., decoction, paste, powder and juice) and mixtures of other plants used as ingredients. The collected ethno medicinal information was recorded in the field note books and plants were identified using the Flora of the Presidency of Madras (Gamble and Fischer, 1935) and Flora of Tamil Nadu- Carnatic (Matthew, 1983). Plant species to be identified and documented herbarium maintained at the Department of Botany, Periyar University, Salem.

RESULTS AND DISCUSSION

The study revealed that the indigenous people of the study area used 33 plants species belonged to 15 families and 30 genera to treat various ailments such as beetle bite, snake bite, chest pain, dental ache, normal delivers, bone fracture, diabetic, eczema, dysuria, wound healing, piles, kidney stone and asthma. For each species botanical names, family, local name (Tamil), parts used, method of preparation, administration and ailments treated are provided. The medicinal uses of plants gathered in the study were compared with the previously published information from Eastern Ghats of Tamil Nadu (Alagesaboopathi 2011; Dhatchanamoorthy *et al.*, 2013; Vaidyanathan *et al.*, 2013, 2014; Salai Senthilkumar *et al.*, 2014).

CONCLUSION

This study documents the knowledge and usage of herbal medicine for the treatment of various ailments in the Kanjamalai. In this survey 33 plant species have

been documented, and forms the basic information to promote the usage in the pharmaceutical industries and to make a potential drug from these plants.

ACKNOWLEDGMENTS

Authors express thanks to Traditional health practitioners and rural people involved in the interviews for providing information about the medicinal applications of the plants in Kanjamalai hills.

REFERENCES

- Alagesaboopathi, C. 2011. Ethnobotanical Studies on useful Plants of Kanjamalai Hills of Salem district of Tamil Nadu, Southern India. *Archives of Applied Science Research*, 3 (5) : 532-539
- Dhatchanamoorthy, N., Ashok Kumar, N. and Karthik, K. 2013. Ethnomedicinal plants used by Irular tribes in Javadhu hills of Southern Eastern Ghats, Tamil Nadu, India. *International Journal of Current Research and Development*, 2 (1): 31-37.
- Dubey, N.K., Kumar, R. and Tripathi, P. 2004. Global promotion of herbal medicine: India opportunity. *Curr. Sci.*, 86 (1) : 37-41.
- Gamble, J.S. and Fischer, C.E.C. 1935. *Flora of Presidency of Madras*, London (Issued in II part: 1-7 By Gamble, 8-11 by Fischer), Calcutta: Vol. 1-3.
- Kadavul, K. and Dixit, A.K. 2009. Ethnomedicinal studies of the woody species of Kalayaran and Shervarayan hills, Eastern Ghats, Tamil Nadu. *Indian Journal of Traditional Knowledge*, 8 (4): 592-597.

- Mathew, K. 1983. *Flora of Tamil Nadu Carnatic*, the Rapinat Herbarium, Tiruchirapalli, India: 3vol.
- Manishayadav, K., Khan, K. and Bag, M.Z. 2012. Ethnobotanical plants used for curing skin diseases by tribal's of Rewa Districts (Madhya Pradesh) *Indian J. Sci.*, 2(1):123-126.
- Salai Senthilkumar, M. S., Vaidyanathan, D., Sivakumar, D. and Ghouse Basha, M. 2014. Diversity of ethnomedicinal plants used by Malayali tribals in Yelagiri hills of Eastern ghats, Tamil Nadu, India. *Asian Journal of Plant Sciences and Research*, 4 (1): 69-80.
- Sinhababu, A. and Banerjee, A. 2013. Ethno botanical study of medicinal plants used by tribal's of Bankura Districts, West Bengal. *India journal of medicinal plant studies*, 98-104.
- Vaidyanathan, D., Salai Senthilkumar, M. S. and Ghouse Basha, M. 2013. Studies on ethno medicinal plants used by Malayali tribals in Kolli hills of Eastern Ghats, Tamil Nadu, India. *Asian Journal of Plant Sciences and Research*, 3 (6): 29- 45.
- Vaidyanathan, D., Salai Senthilkumar, M. S., Sisubalan, N. and Ghouse Basha, M. 2014. Studies on ethnomedicinal plants used by Malayali Gounder Tribes in Pachamalai of Eastern ghats, Tamil Nadu, India. *Advances in Applied Sciences Research*, 5 (1): 244-253.



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