

ETHNOMEDICINAL PLANTS SURVEY AND DOCUMENTATION RELATED TO PALIYAR COMMUNITY

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ABSTRACT

The present study is mainly focused on the ethnomedicinal botany of the tribe Paliyars a dominant ethnic group inhabiting the Western Ghats (Off Shoots) of Sirumalai Hills, Dindigul district. Tamil Nadu. In the present study the focus is on survey, documentation and enumeration of the medicinal plants practiced by the tribal Paliyars, As an outcome of the present investigations 30 plants have been identified and documented. The life style of the paliyar was also studied.

INTRODUCTION

The science of ethnobotany is concerned with the relationships between man and vegetation involving man's dependence upon vegetation as well as the tremendous influence man has had on vegetation (King, 1974).

Plant medicines were regarded as highly important in the lives of our ancestors since they did not have any alternative therapy. Their dependence on the plants in their surroundings made them acquire the knowledge about the medicinal properties of many plants by trial and error. They were also aware of the commercial value of these plants. (John Kennedy, 2003).

The use of plants for medicinal purposes dates back to vedic period. However, up to few decades back the herbal medicines were replaced by synthetic medicines due to their quick effect. Interestingly global trend is now going back, natural way of living and the necessity of green medicines is now being realized elsewhere, due to side effects of allopathic medicines.

According to a recent estimate by CSIR the total herbal drug production in India is expected to reach Rs. 4,000 crores. The promotive, preventive, corrective and curative approach in health care and the medicinal plants possessing such properties are indeed the strength of the Indian Systems of medicine (Arinathan *et al.*, 2006).

During the last few years there has been an increasing interest in the study of plants used by various aboriginal tribes in different parts of the country. Among the Eighteen hot spots known for rich flora in the world, two are located in India. They are the Eastern Himalayas and the Western Ghats (Khoshoo, 1996). The hill chain of Western ghats recognized as a region of high level of biodiversity is under threat of rapid loss of genetic resources (Gadgil, 1996). The Paliyars are the dominant tribal group inhabiting this locality. The present study focuses on the dependence of the Paliyars on herbal medicines and attempt to analyse the therapeutic values of such medicinal plants.

MATERIALS AND METHODS

Collection of the Plants

Frequent field trips were carried out to the Sirumalai hill range (off-shoots) of Western Ghats and situated about

28 kilometers on the south of Dindigul District, Tamil Nadu. Information regarding the medicinal plants usage by Paliyars were gathered after developing a good rapport with the community and winning their confidence. It is interesting to note that the Paliyar community is opening up gradually after the interventions made by scientists & non-governmental organizations.

Most of the information included in this study was gathered from the elderly and experienced medicine men who have a long acquaintance with the use of medicinal plants. The field notebook delineates all the usage procedures adapted by the tribals. After eliciting detailed information regarding the wild medicinal Plants (Table-1), they were carefully brought to the laboratory for identification.

The collected plants were identified by referring to the following compilations:

1. Fisher, C.E.C. in Gamble, J.S. 1957. (Rep. Ed.). The Flora of the Presidency of Madras III: 1347-2017.
2. Gamble, J.S. 1957 (Rep. Ed.). The Flora of the Presidency of Madras 1: 1-577. 3. Gamble, J.S. 1957 (Rep. Ed.). The Flora of the Presidency of Madras II: 578-1346. 4. Henry, A.N., Chithra, V. and Balakrishnan, N.P. 1989. Flora of Tamil Nadu, India, Series 1: Analysis III: 1-171.

PALIYARS - TRIBAL COMMUNITY

The period of investigation was only 10 months, the present ethnomedicinal studies with reference to the paliyars settled in the forest area of Sirumalai hill range is a part of (off-shoots) Western Ghats, Dindigul district, Tamilnadu. The area of investigation lies between $77^{\circ} 33' - 78^{\circ} 15' E$ and $10^{\circ} 0' - 10^{\circ} 30' N$ latitude. The ghats are characterized by numerous folds and extensions engulfing small narrow valleys and deep narrow valleys which are difficult to reach even. The highest peak is Agasthiyarpuram hills, peak with attitude of 1350 feet.

The areas of their inhabitation are:

1. Pudur
2. Palaiyur
3. Uradi
4. Uhakkilipatti

About The Paliyar Tribe

The tribal people of India mostly live in the forests, hills, plateau and naturally isolated regions are differently termed as *Adivasi* (Original settlers). Paliyans / Paliyars are typical hill tribals inhabiting all over the hill tracts of South India, in small pockets of isolated groups.). The socio economic conditions of Paliyars of Madras province were studied by Chatterjee and kumar in 1957. Similar informations of Paliyars of Madras state in general and Madurai and Tirunelveli Districts in particular were also given by Thurshon and Rengachari (1909). Subbarayan (1948), Gopala Krishnan (1963), Rajaraj (1964) and Sakthivel (1973).

The Paliyars are short, dark complexioned, curly haired with thick protruding lips and blunt nose with wide nostrils. They live in huts thatched with the fronds of *Cymbopogon polyneuros*, *Cymbopogon citrates*, or the leaves of *cocos nucifera*. The paliyars as a tribe do not possess much cohesiveness. Each settlement has its Headman whose authority is never challenged. They collect honey from the branches of towering tall trees and rock caves skillfully.

Table 1. List of Ethnomedicinal plants.

1.	<i>Cassia tora</i> L.	Caesalpiniaceae	Thakarai	Leaf
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2.	<i>Ceiba pentandra</i> (L.) Gaertn.	Bombaceae	Ilavam	Stem bark
3.	<i>Cymbopogon Citratus</i> (Dc.) Stapf.	Poaceae	Senganapul	Rhizome
4.	<i>Colocasia esculanta</i> (L.) Schott	Arecaceae	Sembakilangu	Rhizome
5.	<i>Caralluma lasiantha</i> (Wight)N.E.Br	Asclepiadaceae	Siruman keera	Stem
6.	<i>Centella asiatica</i> (L.) Don	Apiaceae	Vallarai	Leaf
7.	<i>Coccinia indica</i> wt & Arn	Cucurbitaceae	Kovai	Leaf
8.	<i>Cocculus hirsutus</i> (L.) Diels	Menispermaceae	Kattukodi	Leaf
9.	<i>Coleus aromaticus</i> Benth	Lamiaceae	Omavalli	Leaf
10.	<i>Commiphora caudata</i> (Wight & Arn) Engler.	Burseraceae	Mangiluvai	Seeds
11.	<i>Cissampelos peraira</i> L.	Menispermaceae	Malai Thangivaer	Root
12.	<i>Cissus quadrangularis</i> L.	Vitaceae	Perantai	Young tops
13.	<i>Clerodenran inerme</i> (L.) Gaertn	Verbenaceae	Chankuppi	Leaf
14.	<i>Cleome viscosa</i> L.	Cleomaceae	Thaivelai	Leaf
15.	<i>Curculigo orchioides</i> Geartn.	Hypoxidaceae	Nilapanai	Tuber
16.	<i>Curcuma longa</i> L.	Zingiberaceae	Manjal	Rhizome
17.	<i>Datura metal</i> L.	Solanaceae	Omathai	Leaf/Fruits
18.	<i>Dioscorea tomentosa</i> Koen. ex Spreng.	Discoreaceae	Noolvalli	Tuber
19.	<i>Dioscorea bulbifera</i> L.	Discoreaceae	Vethalaivalli	Tuber
20.	<i>Dioscorea pentaphylla</i> L.	Dioscoreaceae	Mulvalli	Tuber
21.	<i>Dodanaea angustifolia</i> L.	Sapindaceae	Virali	Leaf
22..	<i>Evolvulus alsinoides</i> (L.)	Convolvulaceae	Vishnukiranthai	Leaf and Root
23.	<i>Ervatamia coronaria</i> Staf.	Apocyanaceae	Nanthiavattai	Flower
24.	<i>Eclipta prastrata</i> (L.) L.	Asteraceae	Karisalai	Leaf
25.	<i>Enicostemma littorale</i> . Blume	Gentianaceae	Vellarugu	Whole plant
26.	<i>Euphorbia hirta</i> Linn.	Euphorbiaceae	Ammanpatchai	Whole plant
27.	<i>Gardenia rensinifera</i> Roth	Rubiaceae	Kattu koiya	Fruit and resin
28.	<i>Gmelina asiatica</i> L.	Verbenaceae	Kumil	Leaf
29.	<i>Gnetum ula</i> Brongn.	Gnetaceae	Anapendu	Stem

30.	<i>Gloriosa superba</i> Roxb.	Liliaceae	Kalaipai kilanku	Tuber
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RESULTS AND DISCUSSION

The study focuses the extensive usage of as many as 108 medicinal plants by the Paliyars tribe inhabiting the study area (South off shoots) Western Ghats, Dindigul district, Tamil Nadu. The present investigation was done by 30 plants. A maximum of 7 ethnomedicinal plants belong to Asclepiadaceae. It is followed by Solanaceae, Euphorbiaceae, Lamiaceae and Rubiaceae. The enumerated ethnomedicinal plants belong to dicotyledons and monocotyledon plants. As far as the plant part used in concerned, it is noted that Paliyars employ almost all parts in ethnomedicine. In terms, of percentage of plant parts used, the percentage are as follows. Leaf 59%, whole plant 11%, fruit 9% root tuber 9%, stem 4%, root 4% and flower 5%.

***Cassia tora* L. (Caesalpinaceae) “Thagarai”**

Leaves are mixed with *Allium sativum* after grinding and are used as remedy for skin diseases.

***Caralluma lasiantha* (wight) N.E. Br. (Asclepiadaceae) “Sirumankeerai”**

Ten grams of fresh root less plant is taken as such twice a day for a period of three days to reduce the body heat.

***Cassia obtusa* (Roxb.) Wight & Arn. (Caesalpinaceae)**

Dried leaves and pods are used as laxative.

***Catharanthus roseus* (G) Bom. (Apocyanaceae) Nithyakalyani**

Ten to twenty grams of fresh roots are ground and the extract is taken orally once a day for three days to get relief from skin diseases.

***Ceiba pentandra* (L.) Gaertn. (Bombacaceae) “Ilavam”**

The powder 1 gram prepared from the shade dried stem bark is taken orally along with water 2 times a day for a period of 1 week to get relief from gastric problems.

***Centella asiatica* (L.) Don (Apiaceae) “Vallarai”**

Fresh leaf juice 2 gms is taken once daily in morning upto three days to cure dysentery. Leaves are used for fever and stomach troubles.

***Coccinia indica* Wt & Arn (Cucurbitaceae) “Malaikovai”**

Two to three grams of leaf mixed with coconut milk and copper sulphate is applied on sores scabies and skin diseases. Fruits are used to treat diabetes.

***Cocculus hirsutus* (L.) Diels (Menispermaceae) “Kattu kodi”**

One teaspoonful of the leaf powder is taken with hundred ml of milk as a refrigerant twice a day a period of one week. Leaves stimulate saliva secretion.

***Commiphora caudata* (Wight & Arn) Engler. (Burseraceae) “Mankiluvai”**

The endosperm obtained from four or five fresh or dried seeds is taken two times a day for two to three days to relieve stomach ache.

***Coleus aromaticus Benth* (Lamiaceae) “Omavalli”**

One teaspoonful of juice is recommended for treating asthma, cough, bronchitis and abdominal pain. The leaf paste is applied on the forehead to relieve head ache.

***Colocasia esculenta* (L.) Schott (Araceae) “Sempakilangu”**

Juice of leaves and rhizome along with roots of *Totalia asiatica Lam.* and root bark of *Crataeva adansonii* is mixed with gingili oil to prepare syrup and this is applied externally for 21 days to cure skin diseases.

***Cissampelos peraira* L. (Menispermaceae) “Malaithankivaer”**

One teaspoonful of fresh root juice is consumed three times a day for 3-5 days for any jaundice and fever.

***Cissus quadrangularis* L. (Vitaceae) “Perandai”**

Young tops cooked and eaten to remove worms in the stomach. Leaf paste applied to relieve joint pain.

***Clerodendrum inerme* (L) Gaertn (Verbenaceae) “Chankuppi”**

The leaf paste is externally applied once a day for a week to treat soriasis, scabies and the ring worm infection. The leaf paste is also applied on the side of insect bite.

***Cleome viscosa* L. (Cleomaceae) “Thaivaelai”**

Five to ten grams of fresh leaf is made into paste and the paste is applied on the fore head just once to get relief from head ache.

***Curculigo orchioides* Gaertn. (Hypoxidaceae) “Nilapanai”**

One to three gram of powder obtained from the shade dried root tuber is taken in empty stomach with hundred ml of cow's milk once in a day in the morning for two to three months to increase the sexual vigour in males.

***Curcuma longa* L. (Zingiberaceae) “Manjal”**

Fifty to hundred grams of rhizomes are boiled in water and powder. The powder in the form of paste is applied locally in cuts and wounds.

***Cymbopogon citratus* (Dc.) Stapf. (Poaceae) “Senkanapillu”**

A fresh piece of rhizome or roasted is smelled at the time of giddiness to get relief.

***Datura metal* L. (Solanaceae) “Omathai”**

The plant is useful to treat fits. Leaf juice mixed with gingil oil, boiled and cooled is used to treat discharges from the ear and to check boils. Tender fruits are made into paste with saliva and applied on the infected part on the head to stimulate fresh hair growth.

***Dioscorea bulbifera* L. (Dioscoreaceae) “Vethalai valli”**

Fifty to hundred grams of fresh or boiled tuber is taken orally two times a day for a period of two or three days to cure dysentery.

***Dioscorea pentaphylla* L. (Dioscoreaceae) “Mulvalli”**

One hundred grams of tuber are boiled in water. The boiled tuber is made into curry after removing the skin or roasted and taken two times a day for two weeks to treat piles.

***Dioscorea tomentosa* Koen. Ex Spreng (Dioscoreaceae) “Nool valli”**

Fifty grams of the boiled skin peeled tuber is given to children once a day for three day to get relief from bowel complaints.

***Dodanaea angustifolia* L. (Sapindaceae) “Virali”**

Fifty to hundred grams of fresh leaves are along with the leaves of Eucalyptus sps are boiled in water and the vapour is inhaled to relieve head ache.

***Eclipta prostrata* (L.) L (Asteraceae) “Karisalai”**

The leaves are boiled in coconut oil for three months and the oil is applied on hair once a day for 3 months to get black thick and healthy hair and to prevent premature graying of hair.

***Enicostemma littorale* Blume. (Gentianaceae) “Vellarugu”**

The Juice prepared from 10 to 15 gram of whole plant along with 200 ml of Goat’s milk is taken orally 3 times a day for a period of 3 days to reduce the body heat, lumbago and leucorrhoea.

***Ervatamia coronaria* Staf (Apocyanaceae) “Nanthiya vattai”**

The flowers are used to treat eye infections.

***Euphorbia hirta* L. (Euphorbiaceae) “Amman patchai”**

Five grams of leaves and five to ten grams of flowers mixed with milk is given to lactating mothers to increase the secretion of milk. Latex is applied on vitilago, pimbles, corn and warts. It is a vermifuge.

***Evolvulus alsinoides* L. (Convolvulaceae) “Vishnukiranthai”**

Ten to twenty grams of fresh leaves is boiled in water along with equal quantity of fresh leaves of *Ocimum sanctum* L. to get if decoction. The decoction is taken orally twice a day for two to three days to control fever.

***Gardenia resenifera* Roth. (Rubiaceae) “Katukoiya”** One teaspoonful of the powder made from the shade dried immature seeds is added to hundred ml of cow’s milk and taken in empty stomach for a period of four days to relieve dry cough.

***Gmelina asiatica* L. (Verbenaceae) “Kumil”**

Five to Ten gram of leaves is soaked in two hundred ml of cool water for two to three hours. The leaves are removed and the water is taken orally twice a day for a period of four to five days to reduce the body heat.

***Gnetum ula*. Brongn (Gnetaceae) “Anapeudu”**

The decoction of the stem is given to children for jaundice.

***Gloriosa superba* Roxb. (Liliaceae) “Kalapai kilanku”**

The tuber is made in to a decoction for gout, seed paste gently rubbed on abdomen of pregnant woman for quick delivery.

***Gymnema sylvestre* R. Br. ex Schultes. (Asclepiadaceae) “Sarkarai kolli”**

One teaspoonful of the powder made from the shade dried leaves is taken along with water two to three times a day for a period of one week to reduce diabetes.

***Helicteros isora* L. (Sterculiaceae) “Valampuri”**

Fifty to hundred gram of fruit is ground in hot water, filtered through cloth and the filtrate allow to settle. Drops of filtrate is powered in the ear twice daily in ear ache.

***Hemidesmus indicus* (L.) R. Br. (Periplocaceae) “Nannari”**

Two to five of powder of root is given orally early in the morning on empty stomach for seven days in stomach and dysentery.