

Traditional medicinal plant wealth of Pachalur and Periyur hamlets Dindigul district, Tamil Nadu

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Traditional medicinal practices by the tribal communities living in various hamlets of Pachalur and Periyur were documented by Participatory Rural Appraisal (PRA) exercise and interview schedules. A collection of 82 medicinal plant species belonging to 44 families, used to treat 44 human ailments are described. The communities inhabiting the study area include *Paliyans*, *Pulayans Doobies*, *Parayars*, *Asariars*, *Mannadiars*, *Sakiliyars* and *Chettiars*.

Keywords: Ethnomedicine, Medicinal plants, Traditional knowledge, Tamil Nadu, *Paliyans*, *Pulayans Doobies*, *Parayars*, *Asariars*, *Mannadiars*, *Sakiliyars*, *Chettiars*

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Plants have traditionally served as man's novel weapons against different ailments¹. Besides the modern medical practices existing today, about 65% of the Indian population depends on the traditional medical systems for their primary healthcare. Regions with rich biodiversity, with its traditional ethnic people, are the biggest source for the plant resources and its hidden knowledge². The traditional knowledge of medicinal plants has been recorded in numerous literature^{3,4}. In Tamil Nadu, a lot work has been done on the ethnomedicinal plants used for various ailments by different ethnic communities⁵. However, not much work has been done in the hamlets of Pachalur and Periyur. The study is an attempt to document the traditional medicinal practices and plant wealth extensively used by the tribal communities of Pachalur & Periyur.

Pachalur and Periyur are located 34 km away from Oddanchatram at an elevation of 1,500 m from the sea level (Fig. 1). Lower Palani Hills of Western Ghats, Tamil Nadu is situated between 10°22'N latitude and 77°59' longitudes. Palani Hills is a spur of Western Ghats, which is one of the internationally recognized Hot Spots known for its richness and uniqueness of

plant wealth⁶. The study areas, Pachalur and Periyur cover many individual hamlets belonging to various communities, such as *Paliyans*, *Pulayans*, *Doobies*, *Parayars*, *Asariars*, *Mannadiars*, *Sakiliyars* and *Chettiars*, which include tribal communities and the life of tribal people is woven around forest ecology and forest resources. There are seven hamlets in Pachalur, named as Boodhamalai, Sudalaiparai, Neelanparai, Karadiparai, Nadanakalvai, Kadaisikadu and Kuranginiparai. The other areas covered in the analysis of the investigation include Karuvelampatti, Pattiyakadu, Koodudurai, Sembarankulam, Pethuparai, Sulonia, Vadakavungi, Perumpalam, Aalangoodai, Kallakinaru, Pulayankalvai, Nallurkadu valavu, Paraipatti, Kombuvalavu, Kothinooroodai, Mandravayal, Malligaiparai, Oothupatti, Poosaripatty, Kavuchi Kombuvalavu, Pallathukalvai and Thalayuthu. The communities residing in various villages of Pachalur & Periyur including the tribal communities have been documented (Table 1).

Methodology

The traditional knowledge of plant based remedies remains with the local healers and they maintain it as a closely guarded secret within the family. The written document of the information does not exist

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Table 1—Communities residing in the villages of Pachalur & Periyur

Communities	Name of village(s)
<i>Paliyans</i>	Kadaisikadu, Boothmalai, Kuranganiparai, Neelamparai, Nadanakalvai
<i>Pulayans</i>	Kallakinaru, Karadiparai, Sudalaiparai, Nallurkadu valavu, Pulayankalvai, Paraipatti, Kombuvalavu, Vadakavungi, Kothinoorodai
<i>Paliyans & Pulayans</i>	Pethuparai, Sulonia, Perumpallam, Aalangiodai, Mandravayal
<i>Sakiliyars</i>	Malligaiparai, Periyurkalani, Kuranguparai, Thideer Nagar
<i>Aasariyars</i>	Aasaripatti, Mandrakalvai, Oothupatti
<i>Mannadiyars</i>	Nallurkadu, Poosaripatti
<i>Dhobies</i>	Mangalamparai
<i>Pulayans & Aasariyars</i>	Oothupatti, Nadupatti
<i>Mannadiyars & Pulayans</i>	Kavuchikoombu valavu
<i>Parayars & Dhobies</i>	Thalaiyuthu
<i>Chettiyar</i>	Pallathukalvai

Table 2—Medicinal plants used by the tribal communities

Plant name/Local name	Family	Uses
<i>Acorus calamus</i> L. <i>Vasambu</i>	Araceae	Cold and diarrhoea in children is treated by oral consumption of powdered rhizome mixed with honey half teaspoon during night 3 times a day for 1 week.
<i>Achyranthes aspera</i> L. <i>Nayuruvi</i>	Amaranthaceae	During dog bite, root decoction mixed with small amount of salt is applied on the wound during night thrice daily.
<i>Aerva lanata</i> (L.) Juss. ex Schultes <i>Kuraipoo</i>	Amaranthaceae	Inflorescence extract is given in the morning and night in case of piles.
<i>Allium cepa</i> L. <i>Vengayam</i>	Alliaceae	During throat pain and cooling effect, peeled bulb is chewed.
<i>Allium sativum</i> L. <i>Vellaipoondu</i>	Alliaceae	During high blood pressure, boiled bulbs are taken during night.
<i>Aloe vera</i> (L.) Burm.f. <i>Sottru kattralai</i>	Liliaceae	For the treatment for infertility and baldness, leaf pulp is taken and externally applied on bald head during night.
<i>Andrographis paniculata</i> (Burm.f) Wall. Nees <i>Sirianagai</i>	Acanthaceae	Oral intake of leaf paste mixed with hot water during night is recommended during stomach problems.
<i>Anisochilus carnosus</i> (L.f.) wall. ex Benth. <i>Karpuravalli</i>	Labiatae	For curing eczema, leaf paste is applied in the morning, once in 2 days.
<i>Annona muricata</i> L. <i>Seetha</i>	Annonaceae	In skin disease, leaf paste mixed with urine of female is applied to male members and vice versa, during for 1 month.
<i>Asparagus racemosus</i> Willd. <i>Thaneer vittan kizhangu</i>	Liliaceae	During urinary problem healing of wound, tuber paste is applied on the skin during night for 1 month.
<i>Azadirachta indica</i> A. Juss <i>Vembu</i>	Meliaceae	Oral intake of leaf as such during night, once in 2 days for 1 month is recommended during stomach disorders.
<i>Balanophora fungosa</i> J.R. & G.Forst. <i>Vaeruchedi</i>	Balanophoraceae	For treating eczema, plant paste is applied on the the affected area for 1 month.
<i>Begonia malabarica</i> Lam. <i>Senthandu</i>	Begoniaceae	Stem paste is applied on the face during night, for curing pimples.
<i>Blepharis maderaspatensis</i> (L.) Heyne ex Roth <i>Thonimalai marundu</i>	Acanthaceae	During bone fracture, leaf paste with white of egg, black gram and onion is applied on the fractured area in humans and stock during night for 1 month.
<i>Caesalpinia decapetala</i> (Roth) Alston <i>Sivapooindu</i>	Caesalpinaceae	For treating fever, leaf paste is applied externally 3 times once in 2 days.

Table 2—Medicinal plants used by the tribal communities—*Contd*

Plant name/Local name	Family	Uses
<i>Calotropis gigantea</i> (L.) R.Br. <i>Erukku</i>	Asclepiadaceae	During inflammation, latex is applied on the affected area during night for 1 month.
<i>Canthium dicoccum</i> (Gaertn) Teijsm. & Binn. <i>Viprithi</i>	Rubiaceae	During inflammation, boiled leaf extract is taken during night for 2 months.
<i>Cardiospermum halicacabum</i> L. <i>Mudakkathan</i>	Sapindaceae	For delivery pain and venereal disease, leaf juice with hot rice <i>kanji</i> is taken in the morning once in 2 days for 1 month.
<i>Cassia occidentalis</i> L. <i>Thakkarai</i>	Caesalpiniaceae	For treating ulcer, leaf and seed paste is taken during night for 15 days.
<i>Centella asiatica</i> (L.) Urban <i>Vatta vallarai</i>	Umelliferae	For memory problems, leaf paste with raw goat milk is taken in the morning for 3 months.
<i>Chenopodium album</i> L. <i>Paruppukeerai</i>	Chenopodiaceae	Cooked leaves are taken during night for 2 months for treating asthma.
<i>Chenopodium ambrosioides</i> L. <i>Nathathalai</i>	Chenopodiaceae	During joints pain, soothing cooked leaves is taken for 1 month.
<i>Chromolaena odorata</i> (L.) King & Robinson <i>Vitukaya</i> <i>poondu</i>	Compositae	Leaf paste is applied on cuts, in the morning once in 3 days.
<i>Cinnamomum verum</i> Presl, Prir. <i>Lavangam</i>	Lauraceae	During chest pain and vomit, bark decoction is taken during night, once in 2 days for 1-3 months.
<i>Cipadessa baccifera</i> (Roth) Miq. <i>Semmati</i>	Meliaceae	For treatment for stomach disorders, leaf paste is taken in the morning, once in 3 days for 1 month.
<i>Clematis gouriana</i> Roxb. ex DC. <i>Silakodi</i>	Ranunculaceae	For cardiac problems, raw leaves with boiled water are taken during night for 1-2 months.
<i>Clitoria ternatea</i> L. <i>Omavalli</i>	Papilionaceae	During stomach upset and ulcer, leaf decoction is taken orally after cooling in the morning, once in 3 days for 1 month.
<i>Commelina bengalensis</i> L. <i>Kattukannan</i>	Labiatae	During cholera, leaf juice with onion juice is taken during night for 1 month.
<i>Colocasia esculenta</i> (L.) Schott <i>Chaemu</i>	Araceae	For kidney stones, boiled rhizome is taken in the morning, once in 3 days for 1 month.
<i>Curculigo orchioides</i> Gaertn. <i>Nilappanai</i>	Hypoxidaceae	Strengthening children, root stock pasties applied at night, once in 2 days for 3 months.
<i>Cyanodon dactylon</i> (L.) Pers. <i>Arugampul</i>	Poaceae	During nasal bleeding and gastro intestinal problems, leaf juice is taken during night, once in 3 days for 1 month.
<i>Desmodium</i> sp <i>Kurumbapattai</i>	Papilionaceae	For stomach problem, decoctions of leaf and tuber are taken in the morning for 1 month.
<i>Diplocyclos palmatus</i> (L.) Jeffrey <i>Ayviral kodi</i>	Cucurbitaceae	Leaf paste is applied externally on joints during joints pain in the morning, once in 3 days for 1 month.
<i>Dodonaea viscosa</i> (L.) Jacq. <i>Virali</i>	Sapindaceae	During headache, leaves along with eucalyptus leaves are boiled in water; vapour is inhaled during night, once in 2 days.
<i>Drymaria cordata</i> (L.) Willd. ex Roem. & Schulters <i>Kodicharra</i>	Caryophyllaceae	For wounds, leaf paste is applied externally on joints in the morning, once in 3 days for 1 month.
<i>Eclipta prostrata</i> L. <i>Karisalai</i> <i>kariippan</i>	Compositae	During jaundice, juice from leaves and flowers are taken during night for 1 month.
<i>Elettaria cardamomum</i> (L.) <i>Maton</i>	Zingiberaceae	During stomach complaints, powdered dried fruit with boiled water is taken during night, once in 2 days for 1 month.

Contd—

Table 2—Medicinal plants used by the tribal communities—Contd

Plant name/Local name	Family	Uses
<i>Euphorbia hirta</i> L. Amman pacharisi	Euphorbiaceae	For constipation and venereal diseases, leaf juice with goat milk is taken during night.
<i>Gendarussa vulgaris</i> Nees. Nilavembu	Acanthaceae	During cough & Cold, leaf paste is applied externally during night, for 1 month.
<i>Hippeastrum leopoldii</i> Dombraim. Sivappu visha moongil	Amaryllidaceae	For eczema, paste made from leaves/bulb is applied externally in the morning, once in 2 days for 1 month.
<i>Hydrocotyl javanica</i> Thunb. Kodivallarai	Umbelliferae	For memory problems, leaf extract mixed with onion juice is taken during night, weekly 2 days for 1 month.
<i>Impatiens chinensis</i> L. Velichai	Balsaminaceae	For skin diseases, leaf extract mixed with onion juice is taken in the morning, once in 2 days for 1 month.
<i>Jatropha curcas</i> L. Kattamanakku	Euphorbiaceae	For treating mouth ulcer, milky latex is applied on the ulcerated area for 1 month.
<i>Lobelia heyneana</i> Schultes Upparicheddi	Lobeliaceae	For treating eczema, leaf and flower paste is applied on the affected area during night, once in 3 days for 1 month.
<i>Lantana camara</i> L. Munimul	Verbinaceae	For treating dandruff, leaves are soaked overnight in oil, boiled for half an hour and applied on scalp in the morning for 1 month.
<i>Leucas martinicensis</i> (Jacq.) R.Br. Perunthumbai	Labiatae	During headache and fever, leaf extract mixed with water/milk is taken during night, once in 2 days for 1 month.
<i>Mimosa pudica</i> L. Thottachinungi	Mimosaceae	For stomach disorders and blood related problems, leaf extract mixed with <i>ommam</i> , ginger and <i>zeeraham</i> is taken for 1 month.
<i>Musa paradisiaca</i> L. Vaazhai	Musaceae	During ear pain, boiled bark extract is applied externally in the morning 1 month.
<i>Mukia leiosperma</i> Wight Arn. Musumusukkai	Cucurbitaceae	During stomach upset, leaf decoction with ginger is taken for 1 month.
<i>Nephrolepis cordifolia</i> (L.) Presl Peranaikilangu	Nephrolepidaceae	During stomach upset and urinary problems, Bulb/tuber extract is taken during night, once in 2 days for 8 times.
<i>Parmelia</i> sp Paasam	Parmeliaceae	For cough & infections, plant decoction is taken in the morning once in 3 days.
<i>Passiflora edulis</i> Sims. Thatpoot	Passifloraceae	For cold & indigestion, leaf decoction is taken during night, once in 2 days.
<i>Passiflora leschenaultia</i> DC. Malakovai	Passifloraceae	During stomach upset, leaf juice is taken in the morning, once in 2 days for 1 month.
<i>Phyllanthus amarus</i> Schum. & Thonn. Kizhanelli	Euphorbiaceae	For treating menstrual problem, leaf extract with milk and onion is given during night, 3 times once in 3 days.
<i>Plectranthus coleoides</i> Benth. Mudupattani	Labiatae	During burns and skin diseases, leaf paste is applied on affected area during night, once in 2 days for 1 month.
<i>Plumbago zeylanica</i> L. Chitramoolam	Plumbaginaceae	For stomach disorders, powdered root mixed with milk is taken during night, once in 2 days 5 times.
<i>Pterolobium hexapetalum</i> (Roth.) Sant. & Wagh Karuindu	Caesalpiniaceae	During delivery pain, leaf decoction with asafoetida is taken in the morning, 4 times once in 2 days.
<i>Rhinacanthus nasutus</i> (L.) Kurz Nagamulli	Acanthaceae	For curing skin disease and worms trouble, leaf paste is applied and leaf juice is taken in the morning, 8 times once in 3 days.

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Table 2—Medicinal plants used by the tribal communities—*Contd*

Plant name/Local name	Family	Uses
<i>Rubia cordifolia</i> L. <i>Kalutharuppankodi</i>	Rubiaceae	For ring worm and boils, root paste is applied in the morning, once in 2 days for 1 month.
<i>Ruta chalepensis</i> L. Mant. <i>Punianthalai</i>	Rutaceae	For stomach ache, raw leaves are taken during night, once in 2 days for 15 days.
<i>Santalum album</i> L. <i>Sandanam</i>	Santalaceae	For heat boils and heat problems, stem paste is applied over body during night for 1 month.
<i>Sida acuta</i> Burm.f. <i>Kurunthotti</i>	Malvaceae	For weight loss, leaves with onion are taken during night, once in 3 days for 3 months.
<i>Smilax zeylanica</i> L. <i>Karuvilanji</i>	Smilacaceae	For treating eczema, leaf paste is applied on affected area in the morning.
<i>Solanum anguivi</i> Lam. <i>Mullichundai</i>	Solanaceae	During worm trouble, fruit extract/juice is taken during night, 10 times once in 2 days.
<i>Solanum erianthum</i> D.Don, <i>Prodr.Malachundai</i>	Solanaceae	For treating cold and cough in children, fruit extract is taken during night. once in 2 days.
<i>Solanum melongena</i> L. <i>Mullukathirikai</i>	Solanaceae	During cough and cold, fruit paste is taken in the morning, once in 2 days.
<i>Sonchus oleraceus</i> L. <i>Nilakodu villi vaer</i>	Compositae	For skin infections, latex is applied externally on the affected area in the morning.
<i>Spermacoce hispida</i> L. <i>Uthirichedic</i>	Rubiaceae	During cough and cold, leaf decoction is taken in the morning, 8 times once in 2 days.
<i>Sphaeranthus indicus</i> L. <i>Kattukarandi</i>	Compositae	For worm trouble, leaf decoction is taken during night, 8 times once in 2 days.
<i>Spilanthes calva</i> DC. <i>Manjal karisalai</i>	Compositae	During anemia, chewing of crushed inflorescence head 8 times during night once in 2 days is considered effective.
<i>Stenosiphonium russellianum</i> Nees. <i>Kurinji</i>	Acanthaceae	For wound healing, leaf paste is applied in the morning for 2 days.
<i>Terminalia chebula</i> Retz. <i>Kadukkai</i>	Combretaceae	For treating asthma, bronchitis and other respiratory ailments, dried fruits powdered with amla is taken with honey, both morning & night, once in 2 days for 1- 3 month.
<i>Thunbergia fragrans</i> Roxb. <i>Vellaichedi</i>	Acanthaceae	For treating wounds, leaf paste is applied in the morning, once in 2 days.
<i>Toddalia asiatica</i> (L.)Lam. <i>Mulagaranai</i>	Rutaceae	During inflammation, tuber/ leaf paste is applied during night, once in 2 days.
<i>Trachyspermum ammi</i> (L.) Sprague <i>Ommam</i>	Umbelliferae	During stomach ache, seed extract with milk is given in the morning, once in 2 days.
<i>Trichosanthes tricuspidata</i> Lour. <i>Palpudal</i>	Cucurbitaceae	For giddiness and blood related problems, flowers are taken during night, once in 2 days for 1 month.
<i>Tridax procumbens</i> L. <i>Thathachedi</i>	Compositae	For treating inflammation and improper blood circulation, leaf paste is applied with honey during night, once in 2 days.
<i>Trigonella feonum-graceum</i> L. <i>Venthayam</i>	Papilionaceae	For over heat and stomach pain, powdered seeds are given during night, once in 3 days.
<i>Vernonia elaeagnifolia</i> DC. <i>Aduthinum pachilai</i>	Compositae	For sprain, leaf paste with goat milk is given in the morning, once in 3 days.

Contd—

Table 2—Medicinal plants used by the tribal communities—Contd

Plant name/Local name	Family	Uses
<i>Wattakaka volubilis</i> (L.f.) Stapf <i>Palakodi</i>	Asclepiadaceae	Leaf paste is applied on the affected eczema area in the morning, once in 2 days.
<i>Zingiber officinale</i> Roscoe <i>Inji</i>	Zingiberaceae	For treating dysentery and stomach disorders, rhizome juice with molasses is given in the morning, once in 2 days.
<i>Ziziphus glabrata</i> Heyne ex Roth <i>Mullukottan</i>	Rhamnaceae	During menstrual problem, young leaf decoction is taken 3 times in the morning, once in 2 days.

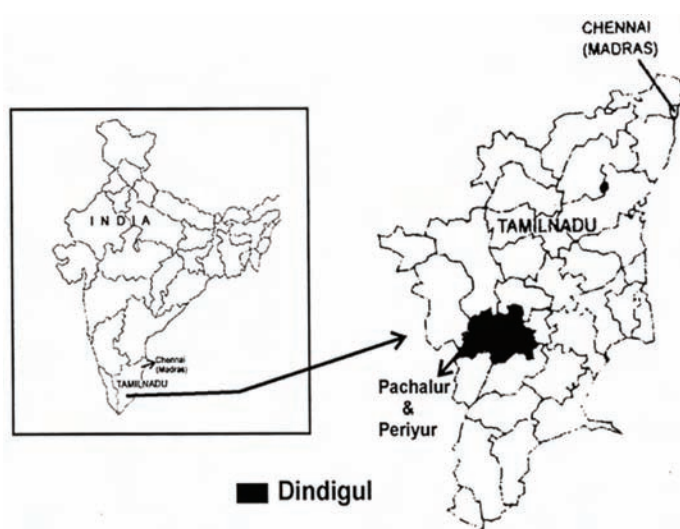


Fig.1 Location map of study area

Fig.2 *Canthium dicoccum*Fig.3 *Cipadessa baccifera*Fig.4 *Rubia cordifolia*Fig.5 *Ruta chalepensis*

while it is passed on to the next generation through practice and discussion. Before the field work, a rapport was established with the support of the Christian missionaries and field sites were visited with the help of a local medical practitioner. The occupational status, lifestyle and the medicinal practices, which include the usage of medicinal plants of the tribal communities, were recorded. Frequent field surveys were carried out in Pachalur, Periyur and nearby hills, during various seasons of the year. The data (local name, mode of administration, medicinal use) were recorded through personal interactions

with local healers and the elderly people. Medicinal plants were collected, photographed, identified taxonomically and herbarium specimens were deposited⁷⁻⁹.

Results and Discussion

The survey of the Pachalur and Periyur regions revealed the presence of communities such as *Paliyans*, *Pulayans* (tribal communities) *Doobies*, *Parayars*, *Asariars*, *Mannadiars*, *Sakiliyars* and *Chettiars*. The tribal communities are geographically and socially isolated and involved in the different

works such as rearing sheep's, collection of lichens, rearing honeybee and collection of honey, collection of resins from the forest trees, collection of medicinal plants, cultivation of vegetable crops, working as daily wage and earning in the coffee plantations. The tribal people are mostly illiterate and their children are sent to primary school. Though there are few bore wells, water scarcity is the prevalent problem in the area. The members of the tribal communities are not healthy due to malnutrition and improper sanitation. The living areas, the huts and the surroundings are not clean. Since, they dwell in small huts, they do not have proper ventilation, light and enough moving space.

Medicinal plants used by the tribal groups residing in 29 villages in and around Pachalur & Periyur were identified (Table 2). A total of 82 medicinal plant species were recorded after discussion with the local tribal people. Most of the tribal people of the study area use medicinal plants for various ailments and for primary healthcare. Tribal people interacted were illiterate and were keen to provide the information and transferring the indigenous knowledge of medicinal plants to the study group, after several interactions and visits. It was found out that the younger generation had less information on traditional medicinal practices and were not sensitive to conserve the knowledge and biodiversity of the area. The study reveals that the tribal people still depend on the large number of medicinal plants for the daily medicinal requirements. Among the 82 medicinal plants identified, most of them are found in their village surroundings and in the deep forest areas including some rare medicinal plants used by the communities (Figs. 2-5). The tribal communities of Pachalur & Periyur are highly under privileged and are

marginalized socially and geographically. Poverty, health & hygiene are the issues to be addressed. Cultivation of medicinal plants would be a help for their income generation.

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