

# PALM-LEAF MANUSCRIPTS - A SOURCE OF TRADITIONAL HERBAL KNOWLEDGE FROM GINGEE HILLS OF TAMIL NADU, INDIA

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**Abstract:** The current studies documented the information of ethnomedicinal plants on ancient palm leaf manuscripts from Gingee hills, Villupuram district, Tamil Nadu. The survey has been carried out from January to July 2016 and the ethnomedicinal knowledge has been documented through direct observation and general interview methods. The ancient palm leaves have vital ethnomedicinal information which support life in treating various ailments of the people in Villupuram district. The manuscripts found belonged to the 17<sup>th</sup> century which contain the detailed information of 11 ethnomedicinal plants which are used as medicine for humans and cattle.

**Key words:** Palm leaf medicine, ancient manuscript, Sethavarai, ethnobotany, Gingee hills.

## INTRODUCTION

India possesses one of the oldest, richest and most assorted cultural traditions linked with the use of medicinal plants. The uses of herbs as medicine and food supplements can be dated back to the very ancient period of known human history. The knowledge of plants shared by the people of different societies engaged with the work has delivered it through different forms of literature like ancient literature, ethnographies, commentaries and travelogue. Traditional knowledge in India, by and large, comes in the category of implicit knowledge. This knowledge also reflects in the kind of traditional work whether it is an art, craft, healing practice, food practices to use to managing disease treatment.

The Sethupathi kings of Ramanathapuram district used the palm leaf manuscripts to send information during the 19<sup>th</sup> century. These have been kept in the archaeological museum which has been functioning in the Ramalinga vilasam Palace. Even as late as 1947, Sir Chetpat Pattabhiraman Ramaswami Iyer sent an invitation for the marriage of his granddaughter, Sakunthala, in the form of palm leaf manuscript to the Sethupathi royal family. This invitation has been preserved and exhibited in the Ramalinga vilasam Palace museum in Ramanathapuram.

In ancient times, early man used rock drawings and paintings (art) to express his thoughts and views regarding the objects which he experienced. Hence early man communicated with others through rock paintings. Such ancient rock paintings have been found in Sethavarai, India (Rajan, 1997 and Kant, 2002), reported that in most of the south-east Asian countries including India, great voluminous information can be derived from folklores, epic poems, medicinal treatises, and old scriptures, palm leaves, copper plates etc. One of the largest collection in the world is available in India at an estimate of five million manuscripts. The subject cover includes a variety of themes, textures and aesthetics, scripts, languages, calligraphies, illuminations and illustrations. Together, they constitute the 'memory' of India's history, heritage and thought (Tripathi, 2005).

The most widely used leaves are *Borassus flabellifer* L. (the palmyra palm), *Corypha umbraculifera* L. (talipot, fan palm) and *Corypha taliera* Roxb. Among them the leaves of *Corypha umbraculifera* L. are frequently used in early manuscripts (Prakash, 1984). The palm leaves (*Borassus flabellifer* L.) were locally available, cheap and easy to write: hence they were used more widely than the other forms of traditional documents. The preserved palm leaves were used for writing various useful informations by our ancestors (Plate: 1).

The oldest surviving palm leaf Indian manuscripts have been found in colder, drier climates such as in parts of Nepal, Tibet and central Asia. Hindu temples often served as centres where ancient manuscripts were routinely used for learning and where the texts were copied when they wore out (John Guy and Jorrit Britschgi, 2011). These cover a variety of themes, textures and aesthetics, scripts, languages, calligraphies, illuminations and illustrations (Tripathi, 2005). In south India, temples and associated mutts served custodial functions, and a large number of manuscripts on Hindu philosophy, poetry, grammar and other subjects were written, multiplied and preserved inside the temples. The largest share of the palm leaf manuscript collection of south India, especially Tamil Nadu, is on traditional the Siddha medical system, next only to personal astrology and *mantras* (Rajkumar, 2012). A very good example of the usage of palm leaf manuscripts to store history is a Tamil grammar book named *Tolkappiyam* which was written around the 3<sup>rd</sup> century BCE (Zvebil Kamil 1973). A global digitalization project led by the Tamil

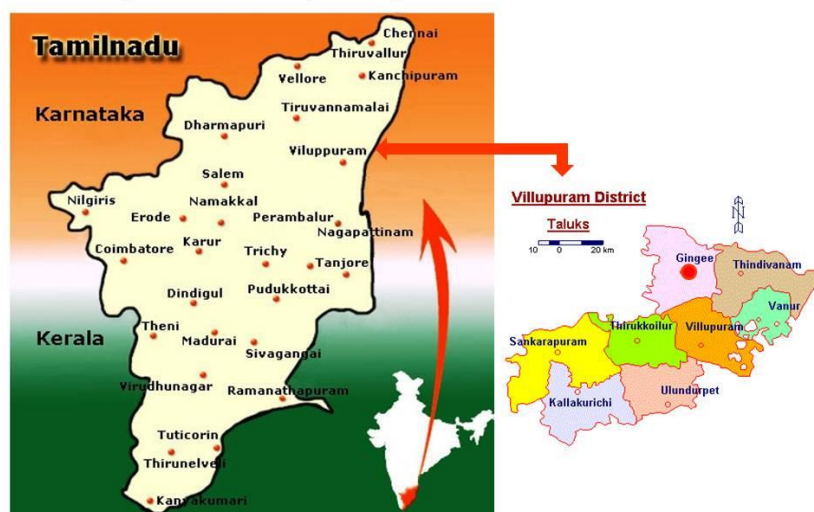
Heritage Foundation collects, preserves, digitizes and makes ancient palm-leaf manuscript documents available to users via the internet (digitalizing heritage for the coming generation, 2012).

The ancient Tamil saints had written voluminous medicinal information through Tamil literature such as *Yaaladhi*, *Thirukadugam* and *Sirupanjamoolam* (Text book 9<sup>th</sup>). In earlier times, the information on surgery, treatment to wounds and other vital information were written on palm leaves. In Tamil Nadu, important and valuable medicinal information contributed by the Siddhar 'Thirumoolar' are available in palm leaf manuscripts. Mainly information with regard to the treatment of physical and mental stress and its prevention methods were available in palm leaf manuscripts. He had a sound knowledge of various diseases like cancer, breast cancer and uterus problems and also gave remedial measures for those diseases. However, there is a continuous erosion of the traditional knowledge of many valuable plants being used for medicine. With the realization of the fact, special attention has been paid to extract and gather knowledge by compiling information from the palm leaf manuscripts which are gathered from the study area.

## STUDY AREA

Villupuram district is situated in the northern part of Tamil Nadu and it lies between 11° 57' N latitude and 79° 32' E longitude which is in the far southeast part of India (Fig. 1). Villupuram district share its border with Pondicherry and Cuddalore district to the east, Kanchipuram district to the north, Salem district to the west and Tiruvannamalai district to the west. It shares a border with Pondicherry State to the east and its elevation ranges from 94 meters to 138 meters. This district belongs to southern India. The present collection of palm leaf manuscripts was found in Sethavarai village from the traditional herbalist. Sethavarai (Cithra-varai), village is a historically noteworthy place and has very old paintings on the rocks of the Ayyanarhills which are more than 3500 years old.

Fig. 01: Location of Gingee, Villupuram district, Tamil Nadu Southern India



## MATERIALS AND METHODS

The present study has been conducted to explore the traditional knowledge from palm leaves from Villupuram district and covered 17 villages viz., Sethavarai (Cithra-varai), Naraayanapuram, Nallanpillaipteral, Rathaapuram, Pakkam, Jaganadhapuram, Podhupalyam, Sokuppam, Dhavadhanampatai, Kanakkankupam, Gangavaram, Udhoo-kuttai, Malaiyarankupam, Pazhavalam, Pothuvaai, Ramarajanpatai, and Thadagam. Several field visits were conducted to the study area from January to July 2016 and data collected on ethnomedicinal plants from traditional dry palm leaves. The information about all the plants observed in palm leaves was collected from the herbalist along with fresh plants. The palm leaves collected from the herbalist were photographed in the explored villages itself.

## RESULT AND DISCUSSION

Out of 17 villages we have investigated, the palm leaf manuscripts related to ethnobotanical exploration was found in the village of Sethavarai (Cithra-varai). The palm leaf manuscripts are of the length of 23.4 cm and 3.1 cm width. It is estimated that this manuscript may belong to the 17<sup>th</sup> or 18<sup>th</sup> centuries as opined by epigraphic specialists. They have information on spiritual, hypnotism and mainly on medicinal plants. The herbalist (herbal practitioners) still follow and practice the methods found in the palm leaf manuscripts to treat various diseases such as child birth, fever, infertility etc., A sum of 11 plants were reported which belong to 10 families viz., Apocynaceae(1), Aristolochiaceae(1), Burseraceae(1), Compositae(1), Cucurbitaceae(1), Lamiaceae(1), Leguminosae(2), Menispermaceae(1), Solanaceae(1) and Vitaceae(1). Virtually all the plants found in palm leaf manuscripts have potential medicinal properties. Among the 11 plants, 10 plants are used for humans and 1 for animals. The plant *Commiphora caudata* belonging to the family Burseraceae is still used during wedding ceremonies. These tree barks are being used as an antidote by traditional healers from the study area.

The following are the ethnomedicinal data collected from the palm leaf manuscripts:

S.no	Plant name	Family	Parts used	Vernacular name	Therapeutic uses
1.	<i>Solanum trilobatum</i> L.	Solanaceae	Roots	Thoodhualai	Child birth
2.	<i>Leucas aspera</i> (Willd.) Link	Lamiaceae	Whole plant	Thumbai	Fever
3.	<i>Senna auriculata</i> (L.) Roxb.	Fabaceae	Leaves	Avari	Infertility
4.	<i>Commiphora caudata</i> (Wight & Arn.)	Burseraceae	Leaves	Kiluvai	Menstruation problem
5.	<i>Corallocarpus epigaeus</i> (Rottl.) Cl.	Cucurbitaceae	Tuber	Garudankilangu	Poisonous bites
6.	<i>Aristolochia indica</i>	Aristolochiaceae	Root	Perumarndhu	Poisonous bites
7.	<i>Dolichostrilobus</i> L.	Fabaceae	Tuber	Kattu-avarai	Poisonous bites
8.	<i>Glossocariaboswallia</i> (L.f.) DC.	Asteraceae	Whole plant	Kattuseeragam	Poisonous bites
9.	<i>Dregea volubilis</i> (L.f.) Benth. exHook.f.	Apocynaceae	Whole Plant	Perukurinjaan	Poisonous bites
10.	<i>Tinosporasinensis</i> (Lour.) Merr.	Menispermaceae	Leaves	Seendilkodi	Poisonous bites
11.	<i>Cissus quadrangularis</i> L.	Vitaceae	Stem	Pirandai	Enhance health and immunity (For cattle)

## METHOD OF PREPARATION

### Child birth - *Solanum trilobatum* L. (Thoodhualai)

Roots are rubbed on the foot of pregnant women during delivery to reduce labour pain and for smooth delivery.

### Fever - *Leucas aspera*(Willd.) Link (Thumbai)

As a mark of cultural ritual, during Sundays, the plant is brought and immersed in drinking water. This is given orally to cure fever.

### Infertility - *Senna auriculata* (L.) Roxb. (Avari)

Leaf paste is mixed with curd and taken early in the morning to boost fertility.

### Menstruation problem - *Commiphora caudata* (Wight & Arn.) Engl. (Kiluvai)

The leaf paste is given to women at the time of menstruation period for three days to regulate the cycle and to check over-bleeding.

### For poisonous bites

- *Corallocarpus epigaeus*(Rottl.) Cl. –Tuber (Garudankilangu),
- *Aristolochia indica*L.-Root (Perumarndhu),
- *Dolichostrilobus*L.-Tuber (Kattu-avarai),
- *Glossocariaboswallia*(L.f.) DC.-Whole plant (Kattuseeragam),
- *Dregea volubilis*(L.f.) Benth. exHook.f. – Root (Perukurinjaan),
- *Tinosporasinensis*(Lour.) Merr. Leaves (Seendilkodi)

The above plants are dried in the shade and powdered. These powdered forms are taken orally to cure poisonous bites.

**For cattle**➤ ***Cissus quadrangularis* L.- Stem (Pirandai)**

The nodal portion is removed and mixed with salt, turmeric, garlic, *Karunjeeragam* and *Kasthurimangal*. This mixture is powdered and is stored in a pot and buried in wet soil for 7 days. Then it is taken out and given to cattle for 3 weeks, once in a week during Sundays to enhance the health and immunity of the cattle.

The study represents a contribution to the existing knowledge of palm leaf manuscripts medicinal remedies that are in current practice for the treatment various diseases, which happen to be the most common ailments amongst the rural population because of their unhygienic living conditions. The 11 medicinal plants identified in the palm leaf manuscripts were easily available in the villages and many of the people are cultivating these plants in their home gardens.

Santhosh Kumar and Navaratnam (2013) revealed the palm leaf manuscripts and mentioned the therapeutic uses of *neem* and explained that the *neem* flower is used to prevent and treat bile disorders; *neem* leaf is used to prevent and treat ulcers and *neem* bark is used to prevent and treat CNS disorders, paralysis and psychiatric disorders. The palm leaf manuscripts are about 350 years old (Santhosh Kumar & Navaratnam, 2013). In south India, especially in the region of Tamil Nadu, the leaves of '*Thaalipanai*' and '*Kundhalpanai*' (*Corypha umbraculifera*, *Borassus flabellifer*) were used to write leaf manuscripts. The ancient Tamil saints had written some medicinal information through Tamil literature such as **Yaaladhi, Thirukadugam** and **Sirupanjamoolam** (9<sup>th</sup> std text book). In earlier times, the information on surgery, treatment of wounds and other vital information were written on the palm leaves. In Tamil Nadu, important and valuable medicinal information contributed by the Siddhar '**Thirumoolar**' are available in palm leaves manuscript. Mainly information with regard to treat physical and mental stress and its prevention methods are available in palm leaf manuscripts. He was having a sound knowledge on various diseases like cancer, breast cancer and uterus problems and also gave remedial measures for those diseases. It was scientifically proven that his methods of treatment to treat diseases like skin disease, women related diseases and ailments of children are without any side effects. The author Pandithar Manimaran had written a book entitled '**Ennum Eluthum**' in which he has described the method to read and understand the information from the palm leaves manuscripts.

**CONCLUSION**

The ways by which knowledge is stored and disseminated have changed dramatically over the years, and the art of writing on palm leaves has almost disappeared. The recent work is only a modest attempt to be taken to digitize the palm manuscripts collected so far by various organizations. Though a few researchers have explored many important places and collected a number of palm leaf manuscripts, still there are many villages and several families of physicians and scholars possessing many manuscripts which are uncovered. The present survey clearly shows the traditional medicinal knowledge of the Tamil people, especially in the study area (Villupuram). Much traditional and valuable information is available in the leaf manuscripts on various subjects. By examining and analyzing the information available in these scripts, the herbalists can be expected to treat many diseases without any side effects. However, the damage to the palm manuscripts have occurred due to improper maintenance as many owned it by default as a family property with little interest in traditional medicine and also due to inadequate knowledge either in conserving or digitization the same. The wealth of formulations may open up new opportunities for the arrival of various drug developments in pharmacognosy and phytochemical researches.

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**PLATE .1**



**A**



**B**

**Bundle of Palm Leaf Manuscript**



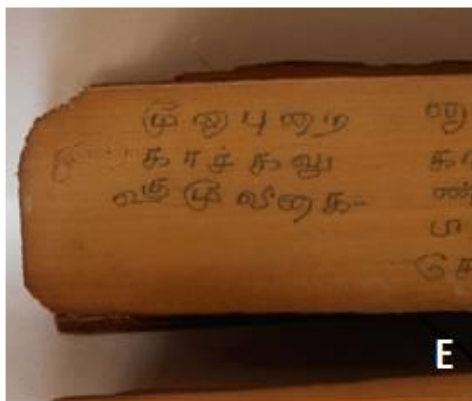
**C**

**Secret Symbols**



**D**

**Herbal medicine information**



**E**

**Herbal Details for Fever**



**F**

***Commiphora caudata* (Wight & Arn.)**

## REFERENCES

- [1] Agrawal Om Prakesh, 1984. *Conservation of Manuscripts and Paintings of South-east Asia*, London: Butterworths & Co Ltd., (page-25-27).
- [2] Interview: 2012. Digitalizing heritage for the coming generation. Bhasha India. Microsoft.
- [3] John Guy and Jorrit Britschgi (2011), *Wonder of the Age: Master Painters of India, 1100-1900*, The Metropolitan Museum of Art, ISBN 978-1588394309, page 19.
- [4] K. Rajan, 1997. *Archaeological Gazetteer of Tamil Nadu*, India.
- [5] Kant, Shashi. (2002). *Medicinal plants of Jammu and Kashmir retrospective and prospective*. In Ashok K. Pandit (Ed.), *Natural resources of Western Himalaya* (pp. 377-394). Srinagar: Valley Book House.
- [6] *Mission for Manuscripts*; .p.19.
- [7] Rajkumar, S. 2012, *Survey of Tamil Siddha manuscripts in possession of Traditional Healers in Northern Tamil Nadu* International Journal of Pharmacology and Clinical Sciences, Vol.1 Issue 3 68-73
- [8] Text book 9th std Tamil book
- [9] Tripathi DS, 2005. Editor. *Guidelines for digitization of archival material*. India: National
- [10] Venugopalan Santhosh Kumar<sup>1</sup> and Visweswaran Navaratnam, 2013. *Neem (Azadirachta indica): Prehistory to contemporary medicinal uses to humankind*, Asian Pac J Trop Biomed; 3(7): 505-514.
- [11] Zvebil, Kamil, 1973. *The Smile of Murugan: On Tamil Literature of South India*. Publisher Brill. ISBN- 9004035915, 9789004035911.

