

DOCUMENTATION OF TRADITIONAL KNOWLEDGES FROM IRULAR TRIBE OF T.PALUR BLOCK AT ARIYALUR DISTRICT IN TAMIL NADU

Panneer Selvam K¹, R.Ezhumalai², D.RajasugunaSekar³, S.Vennila⁴, A.Vijayaragavan⁵ & P. Samyurai⁶

^{1,3,5}Institute of Forest Genetics and Tree Breeding, R.S. Puram, Coimbatore, Tamil Nadu, India

²Forest Research Institute Kaulagarh Road Dehradun, Uttarakhand, India

^{4,6}Department of Botany, Bharathiar University, Coimbatore, Tamil Nadu, India

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ABSTRACT

The survey of ethnobotanical was carried out among the ethnic groups (Irular) at T.palur Block in Ariyalur District, South India. The communities of tribal have Irular nurture rich knowledge about medicinal plants and its traditional uses. Therefore, we have done an exhaustive ethnobotanical survey in this area. In this present investigation, it is observed that the tribes being used 45 wild valuable plant species belonging to 19 families were identified with relevant information and documented in this paper with regard to their botanical name, family, vernacular name, parts used and utilization by the local tribal people for different human ailments. The herbal practitioner treated the common diseases were asthma, appetizer, aphrodisiacs, corn, dandruff, diabetes, indigestion, infertility, piles, skin diseases, sting of scorpion and wasp, ulcer etc.

KEYWORDS: Medicinal Plants, Traditional Knowledge, Herbal Healing Practices and Aphrodisiac

INTRODUCTION

The medicinal plants knowledge has been accumulated in the course of many centuries based on different medicinal systems such as Ayurveda, Siddha and Unani. In India, it is reported that traditional healers used 2500 plant species and 100 species of plants serve as regular sources of medicine (Pei, 2001). The Indian subcontinent is being inhabited by over 53.8m tribal people in 5,000 forest dominated villages of tribal community and comprising 15% of the total geographical area of Indian landmasses, representing one of the greatest emporia of ethnobotanical wealth (Chowdhuri, 2000). They have a deep belief in their nativefolklore medicine for remedies and they rely exclusively on their own herbal cure (Sajem and Gosai, 2006).

The treasure of knowledge has been passed on orally from generation to generation without any written documentation traditionally (Perumalsamy and Ignacimuthu, 2000) and is still retained by various indigenous groups around the World. The plants for medicinal purposes utilization in India has been documented long back in ancient literature because they are essential to human survival (Tulsidas, 1631 and Sastri *et al.*, 1996). The indigenous knowledge documenting through ethnobotanical studies is important for the conservation and utilization of biological resources. Ethnobotanical survey has been found to be one of the reliable approaches to drug discovery (Fabricant and Farnsworth, 2001). These traditional medicinal systems are generally based on the uses of natural and local products which are

commonly related to the people's perspective on the world and life (Toledo *et al.*, 2009). On the basis of ethnobotanical information several active compounds have been discovered from plants and used directly as patented drugs (Carney *et al.*, 1999).

To identify the medicinal plants is our responsibility and use them in the proper way. For every disease of man, medicine is available in the form of plants in our surroundings. The ethnobotany of science has recently received much attention. On the other hand, knowledge of the people associated with the traditional folk practices using wild plants are now fast disappearing due to modernization and gradual migration to mainstream medicines. Therefore, there is an urgent need to study and document this precious Indigenous and traditional knowledge for our posterity (Panimalar, 2005). Traditional uses medicinal plants cure many diseases like cold, fever, dysentery, wounds, hysteria, diabetes, spleen animal and insect bite, birth control, stomach complaints (Krishnamoorthi *et al.*, 2015). This plenty knowledge should be highly regarded as a cultural and ethnobotanical heritage from the indigenous people (Maleki and Akhane 2018).

MATERIALS AND METHODS

Study Area

This designed study was to analyse and document the indigenous and traditional knowledge of the Irular tribal community of the T.Palur Block at Ariyalur district in Tamil Nadu. The survey was conducted in five different places of T.Palur Block viz, T.Palur, Udayanatham, Ulliyakkudi, Veppangkuzhi and Venmankondan. About hundred respondents were interviewed for their knowledge and mode of use of medicinal plants. This information was recorded by using a questionnaire.

Irular Tribes

Around 150,000 peoples are Irular tribes are categorized as "backward caste," or "B.C." for short. They are the lowest of the low and the poorest of the poor in Indian society, with little means at their disposal of enforcing their rights, despite the fact that they live in the world's largest functioning democracy. The northern districts of Tamil Nadu are Irular inhabits, a state in south-eastern India. Located not far from the city of Madras, they live in a tropical area subject to monsoon rains. Their language, Irular, is related to Tamil and Kannada and, in the Tamil language, the name *Irula* means "people of darkness." This could refer to their dark-coloured skin or to the fact that all important events traditionally took place in the darkness of night.

The houses of Irula are built together in small settlements or villages called *mottas*. These *mottas* are usually situated on the edges of steep hills and are surrounded by a few dry fields, gardens, and forests or plantations. Typically the house consists of only one room with an earthen floor, thatched roof, and a front porch. Less traditional houses have tile roofs and stone walls. The people sleep on mats, which they roll up and store in a corner during the day. Before going inside the house, they always wash their feet, where usually only family members and relatives are allowed.

ITK Documentation of Medicinal Plants

The method of exploration was conducted with representatives drawn from various age groups and discussed about opinion to document their traditional and indigenous knowledge for conservation, proper documentation and utilization of their own valuable information. The information was collected by following the questionnaire in an informal way during interactions to avoid nervousness among the respondent. The analysis takes place after collection of data with the help of relevant existing literature.

Table 1: The Different Age Groups Showed of Irular Tribe's Questionnaire by Use of Medicinal Plants

S. No	Name of Village	More than 50 years		30-50 years		Less than 30 years	
		Surveyed Person	Relatively Answered	Surveyed Person	Relatively Answered	Surveyed Person	Relatively Answered
1.	T.Palur	30	13	40	7	30	5
2.	Udayanatham	30	12	40	7	30	4
3.	Uliyakkudi	30	15	40	10	30	7
4.	Veppangkuzhi	30	11	40	7	30	3
5.	Venmankondan	30	10	40	4	30	2

RESULTS AND DISCUSSIONS

Among these five different places and three different age groups at T.Palur people answered relatively with higher traditional knowledge information compared to other places. The different age group more than 50 year old persons gave highest information compared to middle and young age group (Table. 1). The uses and advantages of medicinal plants revealed by the respondents are followed. The herbs are remarkable plants, with a rich and fascinating history that dates back thousands of years.

The study of this result has revealed 45 plant species belonging to 19 families that are used for various purposes by herbalists, traditional healers and tribal people of T.Palur Block. All these medicinal plant species collected by local communities from the surrounding areas, forests and alpine meadows and used them as remedies for various ailments. The using methods of plants vary according to the nature of diseases and knowledge of individuals. The methods of preparation categorized into six categories. The plant parts applied as a paste, boiled, decoction, juice extracted from the fresh plantparts, powder made from dried plant parts, others. Paste is the main methods of preparation, either for oral for external administration. The inhabitants in the villages of Sendurai Block use a number of medicinal plants for the treatment of various diseases. The indigenous knowledge about medicinal plants and therapies was composed verbally and passed orally from generation to generation. They fear that their recognition in the society which they have earned due to their knowledge will be lost and hence they want to keep it secret. The secrecy of traditional medical practice is also a common phenomenon found in other part of Haryana (Sharma *et al.*, 1992), India (Upadhyay *et al.*, 2007) and worldwide (Giday *et al.*, 2009 and Ayyanar *et al.*, 2005). Similarly the threat to traditional knowledge also observed in other parts of India due to less interest of the younger generation (Muthu *et al.*, 2006). The medicinal plants such as *Adhatoda vasica*, *Aerva lanata*, *Aloe vera*, *Ipomoea reniformis*, *Asparagus racemosus*, *Catharanthus roseus*, *Decalepis hamiltonii* etc. were high demand and essential for primary healthcare of tribes in Nilgiris (Panneer Selvam 2017).

Currently the herbal medicine is a recognized system of medicine throughout the World. Plants with medicinal properties about centuries have been utilized successfully in the treatment of ailments of varying degrees of severity (Bartram, 1995). The leaves are most frequently used for the treatment of diseases. Internal consumption and external applications are involved in the treatment of wounds, snake bite; headache and skin diseases (Nithyadevi and Shivaanath, 2015). Largest numbers of remedies are digestive problems followed by respiratory disorders, skin diseases, wound healing, genital disorders, snake bite and diabetes (Kausik Mondal *et al.*, 2015). This rich knowledge should be highly regarded as a cultural and ethnobotanical heritage from the indigenous people (Maleki and Akhani 2018). The similar study showed that many people in the studied area still continue to depend on medicinal plants at least for the treatment of primary healthcare (Priyadharshana *et al.*, 2019).

CONCLUSIONS

They have been using these medicinal plants for the treatment of various diseases like stomach problem, cold, cough, arthritis diabetic, hair problem, skin diseases, jaundice, diuretic, paralyzes, piles, body odour, bad breath and genital disorders. Therefore it can be concluded from the study, these forms a good basis of results for selection of potential plant species for bioprospecting investigation leads to provide traditional herbal products to the society.

Table 2: The List of Medicinal Plants Showing their Use, Mode of Consumption by the Irular Tribes of Ariyalur District, Tamil Nadu

S. No	Botanical Name	Family	Local Name	Parts Used	Method of Preparation and Uses
1	<i>Achyranthes aspera</i> L.	Amaranthaceae	Nayuruvi	Leaf	The paste of leaf with onion is applied externally on the bitten site of dog and to cure skin diseases, the stem good for tooth which used as a tooth fresh.
2	<i>Abutilon indicum</i> L.	Malvaceae	Thuthi	Leaf	The paste of leaf is given orally for piles and prepare pillow by using leaves and using as a sitting seat.
3	<i>Acypha indica</i> L.	Euphorbiaceae	Kuppaimeni	leaves	The paste of Fresh leaves is applied externally for skin problem and fresh leaf juice mixed with 5% salt given orally for cold.
4	<i>Adhatoda vasica</i> Nees.	Acanthaceae	Adathodai	Shrub	The leaf decoction or leaf powder or one leaf with one block pepper is taken internally to cure cold and cough and also taken in the form of rasam.
5	<i>Andrographis paniculata</i> Nees.	Acanthaceae	Seriya nangai or nilavembu	Leaf	Leaf paste, powder and decoction is taken orally for snake bite, diabetic, cold, skin diseases and fever
6	<i>Allium sativum</i> L.	Alliaceae	Poondu	Bulb	Bulb paste taken in thuvaiyal, kozhambu, soup form for gastric stimulant and mother milk secretion.
7	<i>Aristolochia bracteata</i> L.	Aristolochiaceae	Aduthinam palai	Leaf	Fresh leaf paste is given for snake bite, powder given orally for cold, cough and to increase sperm count.
8	<i>Azima tetragantha</i> Lamk.	Salvadoraceae	Mullusangam	Leaf and Root	Decoction prepared from root, taken orally to treat cold and cough. External application of leaf paste for skin tumor, oral administration of long time to relieve from arthritis. Young leaves used for chutney preparation.
9	<i>Aegle marmelos</i> L. Correa	Rutaceae	Villvam	Leaf and fruit pulp	Leaf powder or decoction taken orally for nausea and fruit pulp act as a stomach cleans, body coolant and extra body weight reduction.
10	<i>Boerhaavia diffusa</i> L.	Nyctaginaceae	Mukkuratai	Leaf and root	The powder of leaf is taken orally for kidney stone, sugar and body pain.
11	<i>Calotropis gigantea</i> L.	Aclepiadeaceae	Vella erukku	Leaf Latex	The leaf paste is boiled and applied externally for tumors. The 3- 5 drops of latex applied for stint of scorpion.
12	<i>Cardiospermum halicacabum</i> L.	Sapindaceae	Mukakkathan	Leaf	The paste of leaf is taken as kozhambu and Dosa form for body pain, joint pain and gastric problem. Leaves powder taken with honey also for same one.
13	<i>Cassia auriculata</i> L.	Caesalpiniaceae	Avarai	Flower	The flower is powdered and taken orally for Diabetes, skin brightness and flower decoction taken orally for jaundice. Young leaves are made into a paste and used as shampoo to make cleaning and cooling effect. This flower is used to reduce body odor. When it is consumed for once in 15 days.
14	<i>Cissus quadrangularis</i> L.	Vitaceae	Pirandai	Stem	It Fried along with tamarind, salt, onion, garlic etc grind in to chutney. It acts as an appetizer, cleans the stomach and is a good source of calcium and iron for strengthen the born.
15	<i>Citrullus colocynthis</i> L. Schrad.	Cucurbitaceae	Cumutti kai	Fruit leaves	It added to the food in the form of koottu for ulcer, wound healing and worm removal.

16	<i>Clerodendron phlomides</i> Lina.	Verbenaceae	Thazhuthalai	Leaf	Decoction leaves is taken for gastric problem. Leaves boiled in hot water bath for body pain.
17	<i>Coccinia grandis</i> L.voigt	Cucurbitaceae	Kovai	Leaves	The leaves added to the food in the form of koottu for ulcer and wound healing and diuretic.
18	<i>Corallocarpus epigaeus</i> Benth.	Cucurbitaceae	Akasakarudan kizhangu	Tuber	Root tuber powder used for bite of snake, beetle, dog rate, cat etc and plant act as a chasing of the air born disease,.
19	<i>Curculigo orchioides</i> Gaetrn.	Hypoxidaceae	Nilappanai	Whole plant	The tuber paste, leaf and powder taken internally to increase sperm count.
20	<i>Cynodon dactylon</i> L.	Poaceae	Arugumpull	Leaf	Leaf juice is taken orally for digestion, body weight reduction and blood purification.
21	<i>Datura metel</i> L.	Solanaceae	Karuoomathai	Leaf and fruit	Leaf paste is taken orally for asthma.
22	<i>Dioscorea pentaphlla</i> L.	Dioscoreaceae	Valli kizhangu	Tubers	Boiled tubers taken as a breakfast or dinner makes them, energetic and diuretic.
23	<i>Erythrina indica</i> L.	Fabaceae	Kalyanamurungai	Leaf	Leaf powder is given orally for few days – uterus problem and sperm count and wound
24	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Ammann pachrasi	Leaf, fruit and latex	Leaf and fruit powder is mixed with cow's milk and taken orally to treat ulcer, body cool and latex used for corn.
25	<i>Ficus religiosa</i> L.	Moraceae	Arasan	Leaf and fruit	Green leaf is taken orally for to increase sperm count and uterus problem, dry leaves have wound healing activity.
26	<i>Hemidesmus indicus</i> R.Br.	Apocynaceae	Nannari	Root	Roots are used in the preparation of kozhambu which reduces the body pain. Its root powder will cure ulcer when it is consumed with sugar besides acting as a coolant to the body
27	<i>Hybanthus enneaspermus</i> Jacq.	Violaceae	Orithazhthamarai	Leaf	Leaf powder or paste used for the sperm count and lucavea.
28	<i>Lawsonia inermis</i> L.	Lythraceae	Mauthani	Flowers and Young leaves	Leaves acts as a cooling agent and inhaling the fragrance of flowers will induce deep sleep. Application of its leaf paste in hand and foot palms acts as a coolant to the body.
29	<i>Lippia nudiflora</i> L. Greene	Verbenaceae	poduthalai	Whole plant	The paste is applied for dandruff hair.
30	<i>Mimosa pudica</i> L.	Mimosaceae	Thotta sinungi	Leaf	Leaf and root infusion is applied for wound healing and boiled leaves.
31	<i>Moringa oleifera</i> Lam.	Moringaceae	Murungai	Leaf, flower and fruit	Fresh leaf taken as food for to increase Aphrodisiac and iron.
32	<i>Mukia maderaspatans</i> L.	Cucurbitaceae	Musumusukai	Leaf	The treatment of cold is cured by leaf taken orally.
33	<i>Ocimum sandum</i> L.	Lamiaceae	Thulasi	Leaf	Powder of leaf used for the cold and breathing problem.
34	<i>Phyllanthus amarus</i> L.	Euphorbiaceae	Keela nelli	Leaf and fruit	Fruits and roots are crushed and mixed with goat's milk. To cure jaundice and liver problems the mixture is taken orally.
35	<i>Physalis minima</i> L.	Solanaceae	Soddukku thakaali	Fruits	For kidney problem boiled fruits are taken.
36	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Kodiveli	Root	For skin disease and body pain the roots are used.
37	<i>Solanum nigrum</i> L.	Solanaceae	Manathakkali	Leaves and fruits	Fruits and boiled leaves taken as food for mouth, body coolant and stomach ulcer,
38	<i>Solanum torvum</i> Sw.	Solanaceae	Kattu sundaikkai	Fruits	Dried fruit taken as food in the form of kozhambu, soup, fried for cold cough, stomach warms and diabetic.
39	<i>Solanum xanthocarpum</i> L.	Solanaceae	Kandankathiri	Leaf and fruit	To treat cold and cough leaf and fruit powder mixed with honey or decoction taken internally.
40	<i>Syzygium cumini</i> L.	Myrtaceae	Naval	Seed and bark	To treat diabetes seed powder mixed with either hot water or cow's milk is taken orally in empty stomach. Bark essence with curd taken for dysentery.
41	<i>Thepesia populnea</i> L.Sol ex. correa	Malvaceae	Poovarasn	Leaf and fruit	For external application, leaf and root powder is given long time for skin diseases.

42	<i>Tridax procumbens</i> L.	Asteraceae	Vettukaya poondu	Leaf	To treat wounds young leaf paste is used.
43	<i>Tridax procumbens</i> L.	Asteraceae	Vettukaya poondu	Leaves	It is used for healing wounds, when it is taken in either paste or juice form and It is called as biological tincture iodine.
44	<i>Tephrosia purpurea</i> L.Pers.	Fabaceae	Kolingi	Root	The paste of root used as leprosy, ulcers, asthma, diarrhea, rheumatism and stop bleeding.
45	<i>Withania somnifera</i> L. Dunal.	Solanaceae	Nattu Amukara	Root	The form of soup, powder or paste root can be taken. In day to day life this herbal soup is used to cure back pain. The herbal paste cures boils, arthritis and reduces swellings. The consumption of 5g of root powder regularly cures nervous disorder, infertility, diabetes besides reducing obesity. It is useful in improving the general immunity and greatly serves as an aphrodisiac.

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