Ethnobotany of Irular tribe in Palamalai Hills, Coimbatore, Tamil Nadu

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Received 22 June 2010; Accepted 25 April 2011

The present paper highlights the use of plants for various ailments by Irular tribe living in Palamalai Hills. A total of 50 plants species belonging to 47 genera and 31 families used by them as herbal medicines to treat several common diseases such as skin diseases, dysentery, cough and cold, cuts and wounds, etc. were documented. During present study it has been observed that the ethnobotanical systems and herbal medicines as therapeutic agents are of a paramount importance in addressing health problems of traditional communities. The indigenous knowledge available with these people plays an important role in quick and proper identification of natural resources.

Keywords: Ailments Ethnobotany, Irulars, Palamalai hills, Tamil Nadu.

IPC code; Int. cl. (2011.01)—A61K 36/00

Introduction

India is rich in ethnic diversity and indigenous knowledge that has resulted in exhaustive ethnobotanical studies. There are over 537 different aboriginal groups in India with extensive knowledge of plants\(^1\). Many quantitative and qualitative field surveys have documented on detailed utility of specific plants for many aboriginal groups such as Kadors\(^2\), Kanikars\(^3\), Irulars\(^4-6\), Malasars\(^7\), Malamalasars\(^8\), Malaiyalis\(^9\), Paliyars\(^10\), Todas and Kotas\(^11\).

Irulars are small tribal community in the part of Dravidian language group which is spoken in south eastern India. They belong to the Negrito (or Negroid) race which is one of the six main ethnic groups that add to the racial mosaic of India\(^12\). The origin of the word “Irular” is not clear. Some surmise that, it is derived from the Tamil word “Irual” implying the dark complexion of the Irular, often being spotted by villagers as distinct silhouettes in the forests and supporting their local name, the Forest People\(^13\). They do not practice agriculture and therefore, fully depend on forest produces and wild animals. Other occupations of the Irulars include intermittent farm labour and the legendary profession of snake charming.

In recent years some workers\(^14-21\) have reported various medicinal plants used by Irular tribals in Anaikatty hills, Siruvani hills and Maruthamalai hills of Coimbatore district. There are no previous reports on the documentation of knowledge of utilization of medicinal plants for various ailments by Irular tribes in Palamalai hills of Coimbatore district, Tamil Nadu. Hence, an attempt was made to collect and document the ethnomedicinal knowledge from Irular tribe residing in the study area.

Materials and Methods

The present work was undertaken in the Palamalai hills located in the Coimbatore district of Tamil Nadu, South India. Palamalai is an offshoot of the Eastern Ghats geographically contiguous with the Billigirirangaa hills range as they reach out to merge with the Western Ghats at Nilgiris. It lies at an altitude of 1839 m above mean sea level and an altitude of 1400 m on the Western Ghats (Fig. 1). The ethnobotanical survey was carried out during October 2009 to March 2010 among Irular population residing in this area (Plate 1).

The data on medicinal plants was recorded through interview, discussion and field observation with knowledgeable elder people using standard methods adopted by Jain\(^1\) and Jain and Goel\(^22\) (Plate 2). Out of 19, 10 were male and 9 female respondents under the age group of 35 to 70 years. The information about plants and their local names, parts of plant used for preparation of drug and mode of administration were
documented in the field survey and it was confirmed by cross-checking with respondents and also with the already existing literature.

The collected plant species were identified with help of Flora of Presidency of Madras and confirmed by comparing authentic specimens in Madras Herbarium (MH) at Botanical Survey of India, Southern circle, Coimbatore and through recent floras and taxonomic revisions. The voucher specimens were deposited at the Department of Botany, Bharathiar University, Coimbatore, Tamil Nadu.

**Enumeration of plants**

The ethnomedicinal information of 50 plant species was collected and is enumerated below in the alphabetical order. For each species listed, correct botanical names followed by family name (in parenthesis), vernacular name (VN), habit and habitat and medicinal uses are given.
Abrus precatorius Linn. (Fabaceae); VN – Kundumani
Shrub, common in dry places. Root decoction is given internally to cure cough and cold.

Abutilon indicum (Linn.) Sweet (Malvaceae); VN – Thuthi
Annual herb, common along roadsides especially in open scrub jungles. The infusion of the root is prescribed for fevers as a cooling medicine.

Achyranthes aspera Linn. (Amaranthaceae); VN – Naayuruvi
Herb, common weed of roadsides and waste places. Crushed leaves are applied externally on dog bite.

Aegle marmelos (Linn.) Corr. (Rutaceae) ; VN – Vilyam
Tree, occasional in dry deciduous places. After grinding, leaves and pepper are taken along with milk in morning to cure dyspepsia.

Allium cepa Linn. (Liliaceae); VN – Vengayam
Bulbous herb, cultivated. Bulb paste is applied externally on boils.

Andrographis paniculata (Burm. f.) Wall. ex Nees (Acanthaceae); VN – Nilavembu
Erect herb, found in dry forests undergrowth. Bark extract is given orally to cure fever and skin diseases.

Andrographis echioides (Linn.) Nees (Acanthaceae); VN – Gopuram-thangi
Erect herb, common weed. Juice of leaves taken orally to treat fever.

Argemone mexicana Linn. (Papaveraceae); VN – Pirammathandu
Herb, common in waste lands. Powdered seed is applied externally to cure cracks at foot.

Aristolochia bracteolata Lam. (Aristolochiaceae); VN – Aaduthinnappalai
Herb, commonly found on dry soils. Decoction of the whole plant, mixed with castor oil is applied externally on the boils, skin diseases and snake bites.

Azadirachta indica A. Juss. (Meliaceae); VN – Vembu
Tree, common in dry forests and also cultivated. Decoction of the inner bark is given to children to expel stomach worms.

Bambusa arundinacea (Retz.) Roxb. (Poaceae); VN – Mungil
A large thorny species, common in isolated clumps, along roadsides. Leaves crushed and the paste is applied over cuts and wounds till cure.
**Calotropis gigantea** (Linn.) R. Br. (Asclepiadaceae); VN – Erukku
Shrub, common weed in disturbed areas around habitation. The milky latex is applied topically to treat wounds caused by spines.

**Cardiospermum halicacabum** Linn. (Sapindaceae); VN – Mudakkathan
Herb, common in waste places. The plant paste is applied externally for swellings joints and rheumatic pains.

**Carica papaya** Linn. (Caricaceae); VN – Pappali
Branchless tree, common in plains. Latex from the fruit is applied topically on bitten site of scorpion sting and snake bites.

**Cassia auriculata** Linn. (Caesalpiniaceae); VN – Avarai
Shrub, common on dry, stony soils across the plains. Leaf paste is applied topically to treat leprosy and ulcers.

**Cassia tora** Linn. (Caesalpiniaceae); VN – Tagarai
Annual shrubby herb; available on roadsides, waste places. Leaf paste is given orally to treat leprosy and ulcers.

**Cissus quadrangularis** Linn. (Vitaceae); VN – Perandai
Herbaceous trailer, common along roadsides. Stem paste is taken orally to cure stomachache and is applied topically on the body to treat swellings.

**Cleome gynandra** Linn. (Cleomaceae); VN – Veli Keerai
Herb, found on wastelands and dumping grounds. Juice extracted from fresh leaf is taken orally to cure ear-ache.

**Coccinia indica** Wight & Arn. (Cucurbitaceae); VN – Kovaikai
Climber, commonly found on hedges and bushes. Leaf powder mixed with cow’s milk is taken orally to treat diabetes.

**Datura metel** Linn. (Solanaceae); VN – Oomethai
Herb, common in disturbed areas and waste lands. Juice of leaves is taken orally for seven days to cure respiratory troubles.

**Eclipta prostrata** Linn. (Asteraceae); VN – Karasilaganni
Herb, found on open lands and wet places. Leaf powder, mixed with coconut oil, is applied on the hair regularly for healthy and black hair and also used for skin diseases and wounds.

**Emblica officinalis** Gaertn. (Euphorbiaceae); VN – Nellikkai
Tree, common in dry deciduous forests. Fruit powder is given orally along with milk for infants to cure cold and cough.

**Euphorbia hirta** Linn. (Euphorbiaceae); VN – Amman pacharisi
Herb, common along roadsides and in open places. Crushed leaves mixed with coconut water and given in empty stomach to cure dysentery.

**Evolvulus alsinoides** Linn. (Convolvulaceae); VN – Vishnukranthi
Herb, frequent across the plains. Leaf paste is mixed with coconut oil and is applied topically to burn injuries.

**Indigofera tinctoria** Linn. (Fabaceae); VN – Averi
Under shrub, widely cultivated and also run wild. Paste of root bark is used topically as an antidote to snake bites.

**Jatropha curcas** Linn. (Euphorbiaceae); VN – Kattu-amanaku
Shrub; commonly grown as a hedge plant, cultivated and naturalized. Latex is taken orally to cure stomachache and stem bark extract is taken before eating for easy digestion.

**Lablab purpureus** (Linn.) Sweet (Fabaceae); VN – Avarai
Twining shrub; cultivated and also run wild. Leaves are rubbed with some salt to extract the juice and applied on infected areas to remove ring worm.

**Leucas aspera** (Willd.) Link (Lamiaceae); VN – Unnichedi
Shrub, fairly common in disturbed areas. Leaves juice is applied externally to treat cuts and wounds.

**Leucospermum album** Lam. (Aizoaceae); VN – Tumbali
Herb, common in cultivated fields, wastelands and roadsides. Leaf juice is given internally along with honey to children as a remedy for bronchitis.

**Mangifera indica** Linn. (Anacardiaceae); VN – Maamaram
Evergreen tree, common in semi-evergreen forests. The exudate from the leaf and stem bark is used to treat heel cracks.

**Mollugo nudicaulis** Lam. (Aizoaceae); VN – Parpadakam
Herb, found in wet places and waste lands. Paste of leaves is mixed with lime juice and is applied on boils.

**Ocimum americanum** Linn. (Lamiaceae); VN – Nai-thulasi
Shrub, common in waste lands. Juice of the leaves is given for children to cure cold, cough and bronchitis.

**Pergularia daemia** (Forsk.) Chiov. (Asclepiadaceae); VN – Veliparuthi
Climber, fairly common in scrub jungles. Leaves crushed and the juice is given orally for seven days early morning to cure cold and fever.

**Phyllanthus amarus** Schum. & Thonn. (Euphorbiaceae); VN – Kila-nelli
Herb, occasional and a weed of cultivated lands. The root extract is mixed with milk and is taken internally to cure jaundice.

**Piper nigrum** Linn. (Piperaceae); VN – Kurumilagu
Climbing shrub; found on forests and also cultivated. Dried seeds are immersed in the hot milk is given orally to cure cough and throat infection.

**Pongamia pinnata** (Linn.) Pierre (Fabaceae); VN – Pungamaram
Tree, common, often planted in avenues. Leaves are crushed and the juice is taken orally to cure stomach ulcers and diabetes.

**Psidium guajava** Linn. (Myrtaceae); VN – Koiya
Tree, common, often planted in gardens. Leaf juice is given internally for children to cure dysentery.

**Pterocarpus marsupium** Roxb. (Fabaceae); VN – Vengai
Tree; commonly found in deciduous forests. Decoction of the bark is given orally to cure dysentery.

**Sida cordifolia** Linn. (Malvaceae); VN – Nilathuthi
Herb, common in roadsides and waste lands. Leaf juice is taken orally to cure ear-ache.

**Solanum nigrum** Linn. (Solanaceae); VN – Manathakkali
Herb, common along roadsides, in waste and cultivated lands. Mature leaves cooked with onion bulbs and eaten to cure mouth sores.

**Tamarindus indica** Linn. (Caesalpiniaceae); VN – Puliyamaram
Evergreen tree, frequent in dry places, along the roadsides. Fruit pulp is taken for food preparations regularly.

**Tectona grandis** Linn. f. (Verbenaceae); VN – Tekkumaram
Tree, common in forests and also cultivated. Leaf paste is taken orally to treat skin diseases and indolent ulcers.

**Toddalia asiatica** (Linn.) Lam. (Rutaceae); VN – Kindu mullu
Climbing shrub; common in waste places. Decoction of leaves is given internally to cure stomachache.

**Trichodesma indicum** (Linn.) R. Br. (Boraginaceae); VN – Kinathupoondu
Procumbent herb, common on roadsides and waste places. Leaves are crushed and applied topically on cuts and wounds.

**Wrightia arborea** (Dennst.) Mabberley (Apocynaceae); VN – Karuppalai
Tree, common in scrub jungles. Powdered stem bark is mixed with curd and is taken orally to treat urinary stones.

**Wrightia tinctoria** (Roxb.) R. Br. (Apocynaceae); VN – Veppalai
Tree, common in scrub jungles. Dried leaves are burnt and the smoke is inhaled to get relief from headache.

**Ziziphus mauritiana** Lam. (Rhamnaceae); VN – Ilanthalai
Tree, common in scrub jungles. Leaf paste is applied topically to treat wounds.

**Conclusion**
All the enumerated plant species are very commonly used for various ailments by the Irular tribes of this region. It is observed that the non-conventional food habit and diversity of their uses are also very common in this region. A few interesting observations made in the present study are: the use of **Coccinia indica** and **Pongamia pinnata** for diabetes, **Vitex negundo** for cardiac disorders, **Carica papaya** and **Indigofera tinctoria** for poisonous snake bites, **Cardiospermum halicacabum** for rheumatic pains, **Cassia auriculata** for scabies and bone fractures. Although traditional medication is still practiced in this area, it is now fast disappearing due to modern
life style. Hence, proper documentation and preservation of traditional skills and technology of medicinal plants is a vital necessity. Further investigations on pharmacological importance of these plants and their diversity may add new knowledge to the traditional medical and cultural systems.

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