

Ethno value of the medicinal plants

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ABSTRACT

The medicinal plants associated with ethnic knowledge can be used for conservation and ecological use of medicines in the area and for effective treatment of various diseases. Siddha system believes that all objects in the universe including human body are composed of five basic primordial elements, namely earth, water, fire, air and space. Ethno pharmacological studies are necessary to prove and establish parameters for the safety, quality and efficacy of traditional medicines. Many states of India comprise with its vast forest, rich flora and a large number of indigenous medicinal plants species. Due to close association of forest, the tribes possess a very silent knowledge about traditional uses of medicinal plants of surroundings from many generations. The traditional system need to prove its pharmacological value due to modernization, in this article I have emphasis only on those promising plants, which are mostly found as well as used by the tribal of the states in their daily life. Some species of plants may be utilized in formulation new drugs after confirmation of their therapeutic efficacy.

Keywords: Ethno pharmacology, Medicinal plants, Tribal.

1. INTRODUCTION

Human beings always have been largely depending for their food, shelter, medicine and other needs of plants resources. Earlier they largely dependent on plants, but with advancement of science and technology this dependence on plants as a direct source has been slightly reduced. All the same, they remain fully dependent on plants for survival. Ethnobotany is the study of interaction between plants and people, with a particular emphasis on traditional tribal cultures. Ethnomedicine has attracted scientist's world over, received and renewed attention in India in recent past because of its local acceptability. Plant extracts used in ethno medical treatments is enjoying great popularity, however, lacks scientific validation. Documenting indigenous knowledge through ethnobotanical studies is important for the conservation of biological resources and their sustainable utilization Plants have been used in traditional medicine for thousands of years and herbal medicines are much in demand throughout the world. The knowledge of medicinal plants has been accumulated in the course of many centuries

based on different medicinal system such as Siddha and Ayurvedha [1]. India is well known for significant geographical diversity which has favoured the formation of different habitats and vegetation types, India is enriched with 15% (3000-3500) out of 20,000 medicinal plants all over the world, About 90% of these are found growing wild in different climate regions of the country [2]. India is also home to many language, culture and beliefs which have in turn contributed to the high diversity of traditional knowledge. Large populations in India still rely on traditional herbal medicine [3]. Ethnomedicine of the tribes is now influenced by a number of forces external to the community, which are the capable of bringing out the changes. Modern medicine is the most important agent of change influencing the ethno medicinal system.

2. MATERIALS AND METHODS

Ethno pharmacological studies in India were given a boost with publication of Glimpses of Indian ethno botany. This was the first book that gave a comprehensive view of current ethnobotanical studies in India. A Dictionary of Indian raw material and industrial products published by

council of scientific and industrial research (CSRI) has become a reference source of ethnobotanical data [4].

There are four major interrelated endeavors in Ethnobotany,

1. Basic documentation of traditional botanical knowledge.
2. Quantitative evaluation of the uses and management of botanical resources.
3. Experimental assessment of the benefits derived from plants, both for subsistence commercial ends
4. Applied projects that seek to maximize the value that local people attain from their ecological knowledge and resources [4]

The field approach plays vital role because of direct contact that can be established with aboriginals/tribals living in harmony with surrounding vegetation which can easily bring out the authentic information on the uses of plants both wild and cultivate. A number of medicines are used by the tribals may be potentially effective in the treatment of various diseases. The information was gathered and confirmed by different groups of tribes in different places of the area of investigation. Many studies were conducted around the tribes of south India. Here I expound the ethnomedicinal value of three aboriginal hills in the Tamilnadu.

a). Ethnomedicinal Survey of Alagarkoil Hills (Tamil nadu)

The ethnomedicinal uses of 111 plant species belonging to 100 genera and 49 families, employed by an ethnic group, the Valaiyans of Alagarkoil Hills of Madurai district, TamilNadu, India, in their traditional modes of treatment of diseases, such as skin diseases, colds and coughs, ulcers, stomach related problems, fevers, piles, jaundice, diabetes. Valaiyans are good herbalists. Plants are used in different forms such as juice extracts, decoctions, pastes, infusions, etc. A juice extract is prepared by grinding the cleaned plants or plant parts with water; the extract is used after having been filtered. A decoction is obtained by boiling the plants or plant parts in water. A paste is made by crushing small parts of a plant with water and making this into a soft mass. An infusion is prepared by soaking the cleaned plant or plant parts in water for a few hours or days; afterwards it is filtered and used [5].

A list of medicinal plants with their binomial, family, vernacular name, useful parts and medicinal uses is provided below

1. *Abutilon indicum* (L.) Sweet (Malvaceae) "*Thuththi*". A leaf paste is taken orally to cure piles. The leaves also relieve leg pains.
2. *Acalypha indica* L. (Euphorbiaceae) "*Kuppaimeni*". A leaf paste, mixed with common salt, is used to cure eczema and chest pain
3. *Achyranthesaspera* L. (Amaranthaceae) "*Nayuruvi*". The boiled leaves are consumed to relieve internal piles and the roots are used as a brush to relieve pain and clean the teeth.
4. *Aervalanata* (L.) Juss. (Amaranthaceae) "*Kannupeelai*". The decoction or juice of the whole plant is taken for urinary problems.
5. *Alangium salvifolium* (L.f.) Wangerin. (Alangiaceae) "*Alingil*". The stem is used for brushing the teeth; one or two drops of the fruit juice are poured into the eyes to cure eye diseases in summer
6. *Albiziaamara* (Roxb.) Boivin (Mimosaceae) "*Usilai*". A shade dried powder, mixed with water, is used as a shampoo for cleaning the hair and for the reduction of body heat.
7. *Albizialebbeck* (L.) Benth. (Mimosaceae) "*Vagai*". A leaf paste is applied to cure eczema.
8. *Aloe vera* (L.) Burm.f. (Liliaceae) "*Chotthukatthalai*". A leaf paste is applied over the body before taking a bath in order to reduce body heat.
9. *Alpinicalcarata* Roscoe (Zingiberaceae) "*Chitharathi*". A powder of the dried rhizome, mixed with water, is used to relieve cough and cold and to improve digestion.

b). Ethnobotanical study of medicinal plants used by villagers in kolli hills (Tamil nadu)

In this present study, field visits were organized frequently from March 2009 to May 2010 to different locations in Kolli Hills of Namakkal district. The presented information was gathered through questionnaire, personal interviews and discussions among the village elder peoples, the herbal medicine practitioners and other traditional healers in their local language (Tamil). The questionnaire allowed descriptive responses on the plant prescribed, such as documented as to vernacular name (Local name), parts used and medicinal uses.

The use of plants in medicine is booming up, now in the developed countries also peoples are returning to plant medicines. Due to increasing demand of ethnomedicinal plants and more profit, local villagers have been motivated for conservation and cultivation of these plant species. The medicinal uses are described with details such as the part(s) used singly,

combination with other ingredients or mixed with other plants. The following is the list of medicinal plants studied [6].

1. *Abutilon indicum* L. (Malvaceae). Vernacular name: *Thuthi*. Roots and leaves decoction is given for diuretic and purgative. The leaf paste is used for the treatment of toothache.

2. *Acacia leucophloea* Willd. (Mimosaceae). Vernacular name: *Velam*. Leaf juice is given to treat fever and stomachache. Leaf juice mixed with milk used to treat bleeding piles.

3. *Acalypha indica* L. (Euphorbiaceae). Vernacular name: *Kuppaimeni*. The whole plant powder is used to treat toothache. The leaf paste is applied on bedsore.

4. *Achyranthes aspera* L. (Amaranthaceae). Vernacular name: *Nayuruvi*. Leaves decoction taken orally with water/milk for stomach problems, diuretic, piles and skin diseases.

5. *Adathodavasica* Nees (Acanthaceae). Vernacular name: *Adathoda*. The decoction of the leaves and root are given to treat asthma, dysentery and diarrhoea.

6. *Aeglemarmelos* L. (Rutaceae). Vernacular name: *Vilvam*. Juice of the fruits is used as dysentery and dyspepsia. Juice of the stem and root powder used to cure fever.

7. *Allium cepa* L. (Alliaceae). Vernacular name: *Vengayam*. Bulb juice used for treatment of headache.

8. *Allium sativum* L. (Alliaceae). Vernacular name: *Vellaipoondu*. Bulb paste used for the treatment of gastric problems.

9. *Aloe vera* L. Burm.f. (Liliaceae). Vernacular name: *Sotthukathalai*. Leaf paste and juice used to maintain body cooling.

10. *Andrographis paniculata* Nees. (Acanthaceae). Vernacular name: *Nilavembu*. Decoction of the leaves is taken to treat dyspepsia and stomach ache.

11. *Asparagus racemosus*. (Liliaceae). Vernacular name: *Thanner Vittan Kizhangu*. Dried root powder is mixed with freshwater as tonic to cure liver disorders, jaundice, dysentery, chronic fevers and enhance lactation.

12. *Azadirachta indica* A.Juss. (Meliaceae). Vernacular name: *Vembu*. Decoction of the bark is useful in liver diseases. Paste of leaves is applied on skin diseases.

13. *Basella alba* L. (Basellaceae). Vernacular name: *Pasalaikeerai*. Leaf juice used as drops for eye infections.

14. *Boerhaaviadiffusa* L. (Nyctaginaceae). Vernacular name: *Mookarattai*. Decoction of the whole plant used to treat cough, fever and jaundice.

15. *Bougainvillea spectabilis* Willd. (Nyctaginaceae). Vernacular name: *Kaaghithapoo*. Leaves juice is given for treatment of jaundice, dysentery and diarrhoea. Roots are used to treat cough and fever.

6). Ethnomedicinal plants used by tribals in Yelagiri hills of Eastern ghats, (Tamilnadu)

An ethnobotanical survey was carried out among the Malayali tribals in various villages of Yelagiri hills, Vellore District, Tamilnadu, India during August 2012 to July 2013. The purpose of this study is to collect data about medicinal plants available in yelagiri hills in order to preserve its rich bio resources through documentation since there is scarce information about the existence of medicinal plants in this region. Yelagiri is one of the plant biodiversity rich hub in the part of eastern ghats, Vellore district, Tamilnadu. Study area Yelagiri is in Vellore district of Tamil Nadu state, India situated at a height of 1050 meters (3500 feet) above Mean Sea Level and the temperature there ranges from 31 °C max to 11 °C minimum in summer; 28 °C maximum to 11 °C minimum in winter [7].

The most commonly represented families were Euphorbiaceae with 13 species, Caesalpiniaceae with 11 species, Fabaceae with 10 species, Acanthaceae with 10 species, Apocynaceae with 9 species and Rubiaceae with 8 species.

They were using these plants to cure diseases like fever, cough, ophthalmic obligation, intestinal worms, inflammations, indigestion, wounds, bone fracture, heal wounds, muscle cramp, anti-inflammatory, diuretic, lithontriptic, tonic, piles and other diseases. [7]

1. *Annonasquamosa* L. Annonaceae *Seetha* Tree Fruits, leaves Intestinal worms, Inflammations Leaf paste mixed with turmeric powder is applied externally for inflammations.

2. *Polyalthialongifolia* (Sonn.), Annonaceae *Nettilingam* Tree Stem, bark Indigestion Juice extracted from the fresh stem bark is taken orally to treat Indigestion.

3. *Tinospora cordifolia* Miers. Menispermaceae *Seendil* Climbing shrub Leaf Wounds. Leaf paste is applied topically to treat wounds.

4. *Argemonemexicana*, L. Papaveraceae *Naikadugu* Herb Seed Rheumatism Seed oil is used for lighting and the same in combination with powders of medicinal plants for rheumatism.

5. *Cadabafruticosa*, (L.) Druce. Capparaceae *Vizhuthi* Shrub Leaves Bone fracture Leaf paste mixed with coconut oil is used for sores and leaf paste mixed with egg applied externally

6. *Cappariszeylanica*, L. Capparaceae *Kathotti* Climbing shrub Root, bark Indigestion Root, bark is ground with water, boiled and taken orally to treat indigestion

7. *Cleome gynandra*, L. Capparaceae *Naivelai* Herb Leaves Could Leaves of the species could be more nutritious than most exotic leafy vegetables.

8. *Cleome viscosa*, L. Capparaceae *Naikadugu* Herb Leaf Heal wounds. Leaf paste is applied topically to heal wounds.

9. *Cratevaadansonii*, DC. Capparaceae *Mavilangam* Tree Leaves, root, stem, bark Muscle cramp, Anti-inflammatory, diuretic, lithontriptic, tonic. Rub with fresh sugarcane, apply to the affected areas

10. *Hybanthusenneaspermus* F. Muell. Violaceae *Orithalthamarai* Herb Whole plant Cough Paste of whole plant is applied topically to treat cough

11. *Abutilon indicum* G. Don. Malvaceae *Thuthi* Shrub Root Piles Roots taken orally along with onion

12. *Bombaxscopulorum*, Dunn. Malvaceae *ellavu* Smell tree Leaf Sweet, cooling, stimulant, tonic demulcent and dysentery The plant is useful Sweet, cooling, stimulant, tonic demulcent and dysentery.

13. *Ceibapentandra* (Linn.) Malvaceae *Gratean* Java cotton Tree Root Scorpion bite Paste of roots for external application

14. *Hibiscus cannabinus*, L. Malvaceae *Kaccakkirai* Shrub Leaf Guinea worms, anemia, fatigue, lassitude The powdered leaves are applied to Guinea worms, The peelings from the stems have been used in the treatment of anaemia, fatigue, lassitude

15. *Hibiscus rosa-sinensis*, L. Malvaceae *Semparathai* Under Shrub Flower Nervous disorders The soaked petal along with coconut oil is externally applied for nervous disorders.

3. DISCUSSION

Ethnomedicinal uses of the plants described from the different parts of India. However, the ecological studies of medicinal plants in the many mountain regions are lacking. In the recent survey, the informants suggested that medicinal plants are an important source for daily healthcare and the associated knowledge is traditionally transmitted, which is also reported in earlier studies and suggested that these species help maintain the ecological balance of the area by decreasing soil erosion and increasing moisture in

the soil, thus improving conditions for human and livestock needs.

4. CONCLUSION

Most studies to be conducted to understand the medical system of the tribals all over India. Information on some very useful medicines known to the tribal or ethnic communities through the experiences of ages is usually passed on from generation to generation. As the tribal population is gradually adapting modern ways life, their heritage of traditional knowledge of plants will soon be lost forever. This suggests that the awareness about medicinal plants and their conservation strategy for the sustainability of our ecosystems has to be stimulated. People of today making a greater use of modern medicine facilities, they are also well aware of the importance traditional medicine and prefer to traditional medicine for certain categories of illness.

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