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Ethnobotanical studies on Kallanai Thanjavur district

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ABSTRACT

Ethnobotany is a study of plants which are used for various ailments and as edibles of the wild. The river cauvery has its own basin with a notable plant and animal biodiversity. In our study it was found that almost 20 plants are frequently used for human diseases. It was also noted that leaves, fruits, seeds, roots, barks and latex are used for the cure of various ailments. Though our study it was concluded that a huge range of medicinal plants were found in cauvery river delta and it can be used for various human ailments.

Key words: Ethnobotany, cauvery delta, medicinal plants.

INTRODUCTION

Ethnobotany offers a very effective approach to tropical forest conservation, since it may provide a wealth of data on non timber products, which can often be collected in a non destructive manner. People usually collect the edible wild plants from their natural habitats and sell in local markets. In most cases, 100% profit is made out of selling the wild plants. Indigenous knowledge is essential for the use, identification and cataloguing of the tropical biota, when tribal groups disappear, their knowledge vanishes with them [1]. According to [2] more than 50000 species are used for medicinal purposes worldwide, of which almost 13% are flowering plants. Over 8000 plant species are used in traditional and modern medicine in India [3], and 90-95% collection of medicinal plants is from the wild, of which more than 70% collection involves destructive and unscientific extraction.

The World Health Organisation (WHO) estimated that 80% of the populations rely on traditional medicines, mostly plant drugs, for their primary health care needs in developing countries. The Indian region is very rich in ethnobotanical heritage [4] due to its rich cultural diversity Over 16,000 species of higher plants occur in India, of which approximately 9,000 are known to be economically useful. The richness and diversity of the medicinal flora of this region are largely due to the varied topography, tropical climate and heavy rainfall [5 & 6].

The aim of Ethnobotany is to study how and why people use and conceptualize plants in their local environments. The two questions mostly asked are (1) how and in what ways people use nature and (2) how and in what ways people view nature. Ethnobotanists gather data mainly from living peoples in hopes of gathering a view of their past existence as well as an understanding of present uses of plants for food, medicine, construction materials, and tools. Ethnobotanical research can be a door into cultural realities as well as a way to understand the future of human relationships.

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MATERIALS AND METHODS

STUDY AREA

The Cauvery River with its northern channel called the Kollidam forms island of Srirangam, which enclose between Mukkombu and Kallanai. them the delta of Thanjavur (Tanjore) is called the rice bowl of Tamil Nadu. This present research was done in and around the Kallanai (Grand Anicut) which is the only oldest dam in the world which is still now in use the dam was originally constructed by the Chola king Karikala around the 2nd Century AD.

The medicinal plants were collected in the bank side of the river Cauvery and its northern channel Kollidam identified with the help of standard floras. The knowledge about their medicinal properties was collected by oral interviews with the local people living near by the rivers banks of both Cauvery and Kollidam. Mainly two methods were adapted in collecting Ethnobotanical information from local people. The first step in Ethnobotanical work is to identify plants with the help of the local inhabitants and the details of population, area of distribution of the People. The second step is that the plants near the hamlets were collected and brought to the physician's house. Every plant was shown to him one after another and recorded utility of plants.

During the field trips photographs of the tribal hut, tribal people and some of the plants and their products were taken with the help of "PENTAX A-3000 Camera" for future reference.

RESULTS AND DISCUSSION

In the present study, it was found that 20 plants species belonging to 18 genera distributed in 15 families were frequently used for various ailments and human diseases. Various parts of the medicinal plants such as Leaf, Whole plant, Root, Gum, Prop roots, Fruits, Bark and etc., were used for the ailments such as Stomach pain, wounds

Scabies, itch, ring worm, kidney stone, eye diseases, stomach ulcer, jaundice, Joint pain, malaria. antidote against poison, diabetes, foot cracks, wound healing, fever, asthma, and etc. the medicinal plants used by Local people are listed with Latin name, family, Local name, habit of the plant, parts used and mode use is given in the Table 1. The life forms are analysed and found that out of 20 plants there are 8 herbs, 3 shrubs, 2 Climbers, and 7 trees.

The parts of the plant used for medicinal purposes are leaves, root, stem, fruits, the complete aerial parts, the whole plant, barks (root and stem) and flowers. However, leaves were found most frequently used part. The data collected shows that majority of the remedies are taken orally. Herbal medicines prescribed by tribal people are either preparation based on single plant or a combination of several plant parts. Most of the reported preparations are drawn from a single plant; mixtures are used rarely. The fresh plant parts are used for the preparation of medicine. When fresh plant parts are unavailable, dried parts are also used. Generally, the people of the study area still have a strong belief in the efficacy and success of herbal medicine. The results of the present study provide evidence that medicinal plants continue to play an important role in the healthcare system of this local people.

| S.No | Botanical Name | Family Name | Vernacular Name | Part Used | Disease | Made of Administration |
|------|---|---------------|----------------------|--------------------------|--------------------------|--|
| 1. | Abutilon indicum (L.)sweet. | Malvaceae | Thuthi | Leaf | Stomach pain wounds | Leaves crushed with jaggary and tablets of approximately of 1 gm are made and taken 3 tablets once crushed leaves are applied. |
| 2. | Acalypha indica L. | Euphorbiaceae | Kupaimeni | Whole plant & Leaf | Scabies, itch, ring worm | Acalypa indica and Momordica charantia whole plants taken in 1:1 ratio & extract is given for 10 days doses of 5 and 3 table spoon for adult and children respectively. |
| 3. | Aerva lanata (L.)Juss.ex schult | Amaranthaceae | Kulapoo | Whole plant & Leaf | Kidney stone | Plant extract with cuminum cyminum Fruits and sugar is given for 10- 15 days curry of plant leaves can also be eaten. |
| 4. | Alternanthera sessilis (L.)R. Br.ex DC. | Amaranthaceae | Ponnakanni Keerai | Leaf | Eye sight improvement | Leaf decoction given 2 times a day for 14-30 days to cure nervous disorders. The leaf juice is mixed with boiled cowmilk and given in morning on empty stomach to improve the eye sight. |
| 5. | Amaranthus spinosus Linn. | Amaranthaceae | Mullukeerai | Leaf and | Stomach ulcer | Leaf paste along with lemon juice is taken with food to cure stomach ulcer. |

Table 1: Ethanobotany Study Survey in Medicinal Plants

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| | | | | Root | | |
|------------|--------------------------------|------------------|--------------|-----------------------------------|--|---|
| 6. | Boerhaavia diffusa Linn. | Nyctaginaceae | Mukiraatai | Root | Dyspepsia jaundice | The tea forms of the root decoction. |
| 7. | Cardiospermum halicacabum | Spindaceae | Mudakathan | Leaf | Joint pain | Paste of leaves with onion and coconut oil is taken orally for join pain. |
| 8. | Carica papaya L. | caricaceae | Рарауа | Leaf | Malaria | Juice of leaves is taken orally. |
| 9. | Carrisa carandas Linn. | Apocynaceae | Kila | Leaf | Antidote against poison | Leaf extract is mixed with coconut milk and taken orally. |
| 10. | Cassia auriculata L. | Fabaceae | Avarai | Gum & Leaf | Diabetes reduce body heat | Gum and dried leaves and flowers are given one teaspoon. Leaf decoction once a day |
| 11. | Cassia tora (L.) | Caesalpinioideae | Thagarai | Leaf & Root | Itch ring worm | Leaf juice applied. Root paste with lemon juice controls ringworm. |
| 12. | Ficus benghalensis | Moraceae | Alamarum | Latex & Prop roots | Stomach pain. tonic for children foot cracks | Latex mixed with tumeric powder and tablets prepared. Khajur (phoenix dactylifera dried fruit), seeds are taken out and plant latex is filled kept over night and taken 2 fruits daily for about 15 days to promote permatogenesis and reduce terility. Same is also considered as a tonic. Tender prop roots are usual as tonic for children. Latex is useful to cure foot cracks. |
| 13. | Lantana camera Linn. | Verbanaceae | Unichedi | Leaf | Wound healing | Leaf paste is applied topically to treat wounds. |
| 14. | Pithocolobium dulce Benth | Fabaceae | Kodukapuli | Fruits | Fever | The edible fruits of this species reduces fever. |
| 15. | Punica granatnum L. | Punicaceae | Madulai | Bark & Root | Cooling | Sharbat prepared by bark and root. |
| 16. | Solanum trilobatum L. | Solanaceae | Thoodhuvalai | Leaf | Asthma | Juice of leaves is taken orally for seven days. |
| 17. | Solanum nigrum L. | Solanaceae | Manathakkali | Fruits & Leaf | Liver infection,night blindness,pain killer,joint pain. | Fruits directly taken, curry made of leaves, Leaf paste applied. |
| 18. | Syzygium cumini (L.) skeels | Myrtaceae | Navel | Fruits, stem bark & Leaf | Kidney stone,stomach pain,teeth ache,bleeding gums. | Fruits directly eaten, stem bark (3-4 inches) crushed with a pinch of common salt and taken orally, Leaf juice is used for gargling. |
| <u>19.</u> | Tribulus Terrestris L. | Zygophyllaceae | Nerungil | Fruits & whole plant | Kidney stone, arthritis, rheumatism | 5 gm of dry fruit powder boiled with milk taken regularly for two weeks. 5gm of whole plant with 1 to 2 gm of ginger crushed in water and 20-30 ml taken twice a day for 15 days. |
| 20 | Zizyphus mauritiana Linn. | Rhamnaceae | llandai | Leaf | paralyze | Paste of leaf along with the leaves of Ailanthes excels Roxb. is taken internally as well as topically to treat paralyze. |

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