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Research Article

ETHNOMEDICINAL PLANTS USED BY TRIBAL COMMUNITIES FOR THE TREATMENT OF VARIOUS DISEASES IN BHADRACHALAM AND CHARLA AREA OF KHAMMAM DISTRICT, TELANGANA STATE

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ABSTRACT

Ethnobotanical field work is different from the routine field collection, which are done usually by taxonomists or flora writers. While taxonomist give emphasis on plants and their habitat, the ethnobotanists, in addition to these aspect, record the relationship of these plants with the local inhabitants. Therefore, the first step in ethnobotanical field work is to identify the local inhabitants or primitive societies and their regional jurisdiction. Field study in a tribal area gives first hand information. Here the ethanobotanist apart from collection of plant, also discuses and records the uses of plants with the help of informants. Great patience and perseverance are required in ethnobotanical study. Traditionally used medicinal plants have been a source of relief in controlling various types of diseases throughout the globe. Tribal people have traditional knowledge of plant species use for different purposes such as food, colors, gums, medicine etc. Present study deals with ethnobotanical study to explore about ethnomedicinal plants using for curing various diseases. We have conducted an ethnobotanical survey to collect the information about the traditional medicinal plants for various diseases by the tribes of Bhadrachalam and Charla area of Khammam district. In our investigation we have recognized 25 taxa, belonging to 23 genera of 17 families of magnoliphyta are used for different diseases. These collected plants were planted in our research field for further studies. Different explants of these plants have been used for plant tissue culture studies like micropropagation and conservation of germplasm. The herbal plants, fruits, seeds are preserved and documented in the form of herbarium and specimens.

KEYWORDS: Ethnomedicinal plants, ethnic tribes, Koyas, Kondareddy, Sugali, Guttikaya, Bhadrachalam, Charla.

INTRODUCTION

Khammam district lies between $16^{0}45'$cm and $18^{0}36'$ cm north latitudes and between $79^{0}47'$ cm $81^{0}47'$ cm east latitudes. It covers an area of 16,029 Sq. Km and is bounded by Chhattisgarh and Orissa on the North, Krishna district on the South, West Godavari and East Godavari districts on the east and Nalgonda and Warangal districts on the west district is adjoined with neighboring states. In Khammam district there are 29 tribal mandals, 4.51 lakh tribal people live there in which 2.3 lakh koyas, 1.9 lakh lambadies, 12 thousand yerukalas, 10 thousand kondareddys and remaining 8 thousand are other people.

The above data states that majority of the people belongs to koya and they resides in forest and on mountains and understand telugu language [1], but they communicate by using their mother tongue (i.e, Koya language). They mainly depend on forest for their shelter, food and medicine. These people celebrate festivals in which the usage of various plants has been observed. These plants are being used for various medicinal purposes. Kondareddys reside on bank of Godavari River, forest and mountains. These people depend on zoom cultivation and they make baskets, mats and other articles from bamboo. They obtain honey and gum from forest. These people are experienced on obtaining the medicinal plants from the forest, which are efficiently useful in gynecological problems.

Lambadis (Sugalis) reside collectively and their locality is named as Thanda. These people have wide range of knowledge of medicinal plants and their application for various diseases and then do not know telugu language, they do not trust others and they do not reveal any information about their treatment procedure and medicinal plants.

Study area

The study area in the part of Khammam district (Bhadrachalam and Charla) of Telangana State is in between 800021' – 81009' East longitudes and 17036' – 18038' North latitudes and falls in the Survey of India toposheet No. 55 G/2, 5. It is on left bank of river Godavari and included.

MATERIAL METHODS

Ethnobotanical surveywas carried out in Bhadrachalam forest area in the year 2012[2]. For the field work the method adopted by Schults (1962)[3] Jain SK (1981) [4] and Koppula Hemadri (1980)[5]. We followed the Gottikoya, Koyas, Koyadoras who were residing in and around Charla area were interviewed with a prepared questionnaire. Enquiries were made on the food habits, for medicinal uses occupation, beliefs, ceremonies, traditions and customs along with ethnobotanical information.

The data was recorded in the field note book, later it was analyzed carefully with the help of R D Reddy flora [6], Ellis JL. flora of Nallamalais[7], forestation. The wild enthnobotanical plant species were collected from various Mandals, (Localities) viz, Bhadrachalam, Mondikunta, Thummala cheruvu, Erukalagudem, Ashwaraopet and surrounding villages within the radius of about 50-60 km of Khammam districts. Specimens were identified with the help of the flora of Andhra Pradesh[8], (Gamble-1935)[9] and prepared herbarium and museum deposited in the ethnobotany research laboratory, Department of Botany, Kakatiya University, Warangal. The local enthnobotanical uses of collected ethnomedicinal plants have been analyzed with the help of "A Hand Book of herbarium methods today and tomorrow" by SK Jain [10] and Central Institute of Medicinal and Aromatic Plants (CIAMP).

RESULTS AND DISCUSSION

The result of our ethnobotanical is quite interesting, because phytosources available show great potential for generating in study for tribal communities. All the family members including children women and old people are involved in the collection of the plant products from the forest for their lively hood. We are specially concentrating on ethnomedicinal plants of this region used by tribal communities for the treatment of various diseases. We could collect the data of 25 taxa belonging to 23 genera and 17 families (Table 1 & 2). Some of the collected plants were planted in our research for conservation and further studies. Different explants of the plants are utilized in tissue culture studies, particularly for micropropagation. It envisages us to develop and cultivate, such plants for the extraction various useful compounds.

For each species the following ethnobotanical information was provided botanical name, vernacular name, family, plant parts used and their use in treatment of disease. The families of ethnobotanical importance are Asclepiadaceae (3), Fabaceae (2), Amaranthaceae (2), Liliaceae (2), Combretaceae (2), Solanaceae (1), Acanthaceae (1), Anacardiaceae (1),Loganiaceae (1), Moraceae(1), Rutaceae (2), Menispermaceae (1), Ebenaceae (1), Mimosaceae (1), Annonaceae (1), Phyllanthaceae(1).

The medicinal plants based on their use in dissolve kidney stones, snakebite, skin diseases etc. The 25 medicinal plants were reported to be used in curing 19 diseases of which 3 species of each for used in treating dissolves kidney stones, 2 species treating in snake bite, one species is used in treating Cough and Asthma, 3 species treating in wound healing, one species used for antidote, 2 species used in treating breast cancer, one species is used for body pain, one species is used in treating Diarrhoea, one species is used for treating arthritis, one species is used for treating jaundice, one species is treating in galacto. One species is used for inflammation neck and two species for used in treating indigestion etc.

We have gathered all the information on plant species regarding botanical name,

local name, family name and medicinal uses are presented. A significant investing action of this study is that most of the plants collected in Bhadrachalam forest area of Khammam District and some plants are collected Charla area. These plants parts used for the preparation of medicine and the leaves and roots were the most important and frequently used.

Table 1: List of ethnomedicinal plants and their medicinal uses

S. No.	Botanical name	Vernacular name	Family	Plant part	Medicinal Uses
1	*Cassia absus L.*	Adaviulva	Fabaceae	Root, Seeds	Dissolves kidney stones
2	*Crinum asiaticum* L.	Adaviulli	Liliaceae	Tuber	Snake bite
3	*Maytenus emarginata* Willd.	Danti	Celastraceae	Leaves	Cough and asthma
4	*Datura metal* L.	Nalla ummetha	Solanaceae	Roots	Dissolves kidney stones
5	*Wattakaka volubilis* L.f.	Bandi gurija	Asclepiadaceae	Leaves, Bark	Wound healing
6	*Achyranthes aspera* L.	Uttareni	Amaranthaceae	Leaves, Roots	Antidote, toothache, scorpion bite
7	*Terminalia chebula* Retz.	Karaka	Combretaceae	Dried fruits	Breast cancer, indigestive
8	*Terminalea bellirica* Roxb.	Thani	Combretaceae	Bark, Seeds	Indigestion
9	*Semecarpus anacardium* L.f.	Nallajeedi chettue	Anacardiaceae	Seeds	Body pains and skin diseases
10	*Andrographis paniculata* Burm.f.	Nelavemu	Acanthaceae	Leaves	Skin diseases, diabetic
11	*Aerva lanata* L.	Kondapindi	Amaranthaceae	Leaves	Dissolves kidney stones
12	*Streblus asper* Lour.	Barenka	Moraceae	Stem latex	Toothache
13	*Strychnous nux-vomica* L.	Vishamushti	Loganiaceae	Bark	Snake bite
14	*Strynous potatorum* L.f.	Chillagingalu	Loganiacae	Seeds	Indigestion
15	*Cassia fistula* L.	Rela	Fabaceae	Bark, Leaves	Jaundice
16	*Tinospora cordifolia* Willd.	Thippa teega	Menispermaceae	Leaves, Root	Diarrhoea
17	*Chloroxylon swietenia* DC.	Billudu	Rutaceae	Bark	Scorpion bite
18	*Cleistanthus collinus* Roxb	Kodisa	Phyllanthaceae	Bark	Arthritis
19	*Diospyros melanoxylon* L.	Tuniki	Ebenaceae	Leaves	Diarrhoea
20	*Gloriosa superba* L.	Nabhi	Liliaceae	Tuber	Breast cancer

Table 2: List of plants used by Lambadi people in Veternary treatment

S. No	Botanical name	Vernacular name	Family	Plant part	Medicinal uses
1	*Acacia nilotica* L.	Nalla tumma	Mimosaceae	Flowers	Jaundice
2	*Annona squamosa,*Linn.	Sithaphalam	Annonaceae	Leaves	Healing of wounds
3	*Aegle marmelous* L.	Maredu	Rutaceae	Fruit	Cure burn of effected body part
4	*Cassia auriculata* L.	Thangedu	Caesalpinaceae	Leaves	Healing of wounds
5	*Holostemma annularis* Roxb.	Pala-gurji	Asclepiadaceae	Bark and leaves	Inflammation of neck

CONCLUSION

This investigation has enlightened the ethanomedicinal knowledge of some plants of tribals of Bhadarachalm and Charla area of Khammam district. And the medicinally important (collected) are documented in the department for future studies like extraction of the crude drugs for pharmaceutical analysis and tissue culture studies.

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Fig: 1. Images of Medicinal plant parts used by Lambadi, Adivasi people for various diseases in Khammam district (Bhadrachalam and Charla) of Telangana State

Fig.2. Images showing study area of Bhadrachalam and Charla areas of Khammam District

A. Tribal Medical Practitioner to treatment for primary health care.
B. Tribe come back to his Gudem.
C. Tribe goes to forest for collection of their needs.
D. Tribes digging for edible tubers.
E. Research scholar interacts with local NGO about ethnic tribe's information.