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Full Length Research Paper

Floristic Diversity and Uses of Medicinal Plants Sold by Vendors in Temple towns of Eastern Ghats of Kurnool District, Andhra Pradesh, India

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The sale of botanicals, either as concoctions or single plant specimens, has become common in the shopping centers of temple towns of Nallamalais and Yerramalais of Eastern Ghats of Kurnool district. A study was carried out form June 2011 to December 2011. The indigenous knowledge of the road side herbal vendors and the plants used for medicinal purpose were collected through questioners and personal interviews during field trips in pilgrimage towns of Srisailam.Mahanadi and Ahobilam. First hand information on ethnomedicinal uses of medicinal plants was gathered from the herbal vendors.The survey showed that the road side vendors used 32 species of plants distributed in 21 genera belonging to 25 families to treat various disease and health conditions. The documented botanicals were mostly used to cure skin diseases, wounds, antidotes and for rheumatism. In this study the mostly dominant families are Fabaceae(3), Asclepiadaceae, Caesalpinaceae and Rubiaceae, each with 2 species and stems were mostly frequently used for the treatment of disease accounting for 31% of the medicines sold. The study showed that many people in temple towns still continue to depend on medicinal plants for primary heath care. The study has brought to light some interesting data on medicinal plants which form a potential source of information for new biodynamic compounds of therapeutic value in photochemical researchers.

Keywords: Botanicals, Floristic Diversity, Eastern ghats, Nallamalais,Yerramalais.

INTRODUCTION

In India, the use of different parts of several medicinal plants to cure specific ailments has been practiced since ancient times. The art of herbal treatment has very deep roots in Indian culture. Even today in most of the rural areas people are depending on herbal drug systems for primary health care. The plant-based traditional medical systems continue to provide the primary health care to more than three-quarters of the world's population. Natural herbs have been used for medicinal purposes for many countries, and continue to be a medicament for various ailments even with the revolution in antibiotics and other synthetic medicine in modern scientific world. The World Health Organization has estimated that over 80% of the global populations rely chiefly on traditional medicine for their primary heath care needs. (Pullaih et al., 2003).

It is a fact that despite of many discoveries, the usable knowledge accumulated for the benefit and longevity of poor is very little in modern science (Kirtikar and Basu.1775). Tribal and rural societies in India still have their choices of indigenous drug selection and application. A review of literature indicates the 'Herbal Vendors' (Jadibutiwalas) and their traditional knowledge about plant drugs has remained untapped. They have been always ignored in our country. The present paper is an attempt to tap their knowledge and experiences. Temples are visited by thousands of devotes daily. The devotes are attracted by the local vendors by showing and explaining the different uses of botanicals. The present study is, therefore, the first attempt to make an inventory and analysis of botanicals of Eastern ghats based on copious observations, interviews, with a view to contribute to the overall knowledge of vendors about medicinal flora these hill ranges. In India Sinha (1998) has attempted on this line, studied Delhi, and surrounding areas.

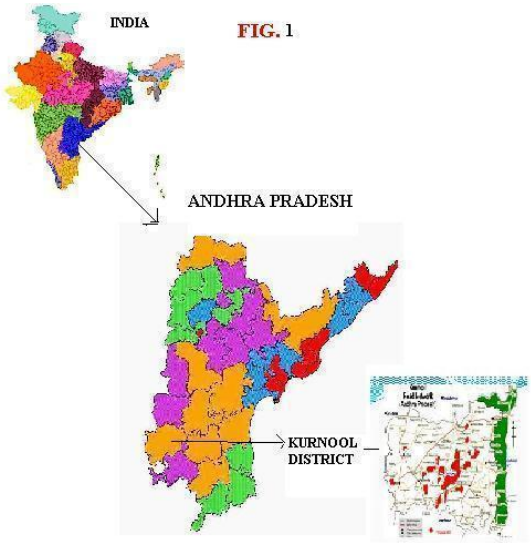

Figure 1. Kurnool district

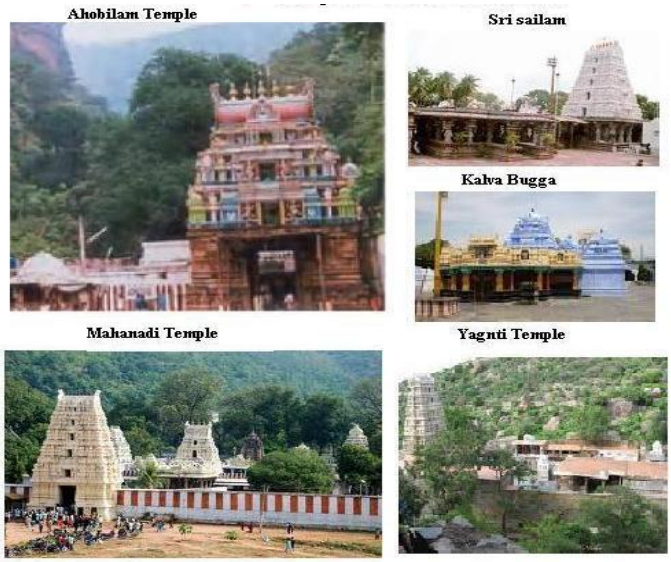

Figure 2. Temple town of Kurnool district

MATERIALS AND METHODS

Study area

Kurnool district (Figure.1) is present in Andhra Pradesh, situated between eastern longitudes of the eastern longitudes of 76º 58' to 78º 56' N and northern latitudes of 14º 54' to 16º 14'. Kurnool district has two hill ranges of Eastern ghats namely Nallamalais and Yerramalsia. This forest have most congenial environment for the luxuriant growth of medicinal plants. Temple towns like Sri Sailam,Mahanandi, Ahobilam are famous temples of Nallamalais, Yagnati,Maddeletti ,Kalva Bugga(Figure. 2) are famous temples of Yerramalais forest.

Figure 3. Local vendors of Nallamalis and Yerramalais

A: *Citrullus colocynthis*(Fruits),B: *Terminalia pallid*(Fruits),,C: *Decalepis hamiltonii*,(Roots),D: *Somida febrifuga*(Stem) E: *Dioscorea hispida*(Tuber),F:*Calotropis procera*,(Roots).G:Leafy Botanicals,H: *Strychnonos nuxvomica*(Bark),I: *Aristolochia indica*(Roots) J: *Centella asiatica*(Leaves),K: *Entada pursaetha* (seeds)L: *Strychnos potatorum*(Stem),M: *Ficus microcarpa*(Fruits)..N: *Corallocarpus epigaeen.*(Tuber)O. *Hygonia mystax.*(Roots)

Figure 4. Photograph of some herbal medicine

Data Collection

The main method of gathering data was through interviewing and observations. Six interviews comprising seven males and two females were conducted. Each interview lasted at least one hour and many lasted several hours as it was found useful to sit with the vendor and observe as he/she helped customers. The interviews were semi-structured to allow the conversation to flow naturally. Each stall was surveyed by recording all of the plants that were sold. The information is compared with the classical literature (Anonymous, 1948-1976; Ambasta, 1986; Jain, 1991; Watt, 1889-1893; Prajapati, 2006 etc.,) Local names, uses; preparation and any relevant botanical information were also recorded. In cases where vendors were sel-ling too many plants, a focus was on only those that were the most popular.

Species identification

Species were identified, initially, by the local names given by vendors and identified with the help of the floras (Raju and Pullaiah, 1995) and finally confirmed with the herbarium of S.K University, Anantapur and voucher specimens deposited department herbarium of Osmania College, Kurnool.

RESULTS

The results of the survey are presented in Table 1. The plants are arranged alphabetically by family, then by genera and finally by species. There are 32 species belonging to 31 general in 25 families of the flowering plants. Species botanical name, family, local name, part used, Traditional uses are listed for each species. The vendors (Figure.3,4) sell herbal medicine used to cure

Table 1. Medicinal plants sold by street vendors in Temple towns of Kurnool district

S.No	Species name	Family name	Local name	P U	Medicinal uses
1	*Abrus precatorius* Linn.	Fabaceae	Guruvinda	S	Seed powder is used antidote to snake bite. seed paste with goat's milk is used for menstrual disorders Seeds-Paste applied locally in sciatica, stiffness of Shoulder joints and paralysis.
2	*Achyranthes aspera* L.	Amarathceae	Uttareni.	L	Leaves as antifilariatic
3	*Aegle marmelos* (L.) Correa	Rutaceae	Maredu	F	Fruit pulp and stem bark decoction is taken internally with
					cuminseeds to treat stomach disorders.
4	*Anisomeles indica*(L.)O. Kuntze	Lamiaceae	Ada-beera.	WP	The plant is astringent and stimulant
5	*Asparagus adscendens* Willd.	Liliaceae	Satavari	R	Antipyretic; Demulscent; Nutrit ive Tonic
6	*Aristolochia indica* L.	Aristolochiaceae	Nalleshwari	RB	Snake bite: Root bark (4 - 5 inches) crushed with 4 - 5 pepper and garlic cloves and the extract administered 3 - 4 times in a day
7	*Buchanania lanzan* Spreng	Anacardiaceae	Sarapappu	F	Fruit pulp is taken orally for body pains
8	*Calotropis procera* (ait.) R.Br.	Asclepiadaceae	Erra jilledu	R	Dried roots are used for wounds
9	*Centella asiatica* (L.)	Umbellifera	Brahmi	WP	Antipyretic; Blood purifier
10	*Cassia fistula* L.	Caesalpiniaceae	Rela.	F	it is also applied for rhematism
11	*Chloroxylon swietinia* DC	Flindersiaceae	Billudu	SB	Bark paste is used for wounds and scorpion sting
12	*Citrulus colysithus*	Cucubitaceae	Veri puchha	F	Used for rheumatism and anti deabtic
13	*Cissus quadragularis* L	Vitaceae	Nalleru	WP	whole plant is given for-Heliminithiasis and bone fracture.
14	*Corallocarpus epigaeen* (Rottl.)	Cucurbitaceae	Nagadonda	RT	Cleanses the wounds, obesity, skin disease, tumours, cough, bronchitis
15	*Bauhinea variegata* L.	Caesalpiniaceae	Devakanchan	SB	Stem bark used for throat disorders, tender leaf used as vegetable
16	*Decalepis hamiltonii* Wight	Asclepiadaceae	Nannari	R	Root extract is taken orally to rejuvenate the body and is taken in to reduce heat of the body
17	*Entada pursaetha* DC	Mimosaceae	Adavi chinta	S	seeds paste is applied locally to relieve inflammatory and glandular swellings
18	*Ficus microcarpa* L.f.	Moraceae	Medi	F	Liver disease and toothache.
19	*Dioscorea hispidaa* L.	Dioscoreaceae	Nookala gadd	R	Consumption of Sliced boiled tuber Increases sexual vigour
20	*Hugonia mystax* L	Linaceae		R	Arthritis and inflammationsof joints
21	*Mitragyna parviflora* (Roxb)	Rubiaceae	Ruddraksha	SB	Rheumatism
22	*Morinda pubescens* J.E. Smith	Rubiaceae	Thogari	S	Rheumatic diseases: Stem bark decoction (10 - 15 ml) administered daily once for fortnight. Fresh crushed stem bark infusion is given for jaundice
23	*Physalis minima* L.	Solanaceae	Adavi mirapa	F	Fruit used in liver diseases
24	*Pterocarpu santalinus*	Fabaceae	Erra chand	S	heart wood is used for diabetes
25	*Santalum albunm*	Santalacea	Chandanam	S	heartwood oil is used for vereneal diseases
26	*Soymida febrifuga(Roxb.)*	Meliaceae	Somi	SB	Used for diarrohoea.vaginal infections
27	*Strychnos nux-vomica L.*	Loganiacea	Mushti	R	used for eczema and epilipsy
28	*Strychnon potatorum L.f*	Loganiacea	chilla musti	Se	reduce diabeties,diarrohea cardiac diseaces
29	*Tephrosia pupuria*	Fabaceae	Yempali	WP	Used for speenic disorders ulcers and liver disorders
30	*Terminalia chebula Retz.*	Combretac	Karakkaya	F	laxative ,diabetes,piles and jaudice
31	*Vanda tessellata (Roxb)*	Orchidacea	Badanika	WP	for bone fracture
32	*Vernonia cinera (L.)*	Asteraceae	Saha devi	R	boold disoders,anthelmintic

PU-Plant part used,S-stem,L-Leaf, F-Fruit,R-roo, SB Stem bark,Se-seed
WP-whole plant, RB-root-bark RT-root-tuber

various disease including antidotes, liver disorders wounds, antipyretic, dysentery, diabetes, stomach be the most used plants followed by herbs (10 species) and shrubs (8 species) .The most dominant families were Fabaceae(3species), Asclepiadaceae, Caesalpinaceae and Rubiaceae, each with(2 species). Other families pains, aphrodisiac, menstrual problems, rheumatism and skin diseases etc. Trees with (14 species) were found towith low number are listed below Asteraceae Cucurbitaceae, Lamiaceae , Anacardiaceae, Aristolochaceae,Flindersiaceae, Dioscoreaceae, Amaranthaceae, Loganiaceae, Liliaceae, Rutaceae, Meliaceae, Solanaceae, Umbelliferae, Vitaceae, Moraceae, Santalaceae,Combretaceae, Orcidaceae,Mimosoidae (1species). A Photo sample of herbal medicine are shown in Figure 2, 3 Different parts of medicinal plants were used as medicine. Among the different plant parts, stem (31%) roots (24%), fruits (20%), leaf and whole plant (10%). Most of the medicine was used as internal consumption and some as oral applications.

DISCUSSION

The present authors came across some botanicals used by vendors to treat various human diseases in Temple towns of Eastern ghats of Kurnool district. Presently, botanicals belonging to 30 plant species, of 29 genera belonging to 24 families are communicated. A literature resume suggests the 'Herbal Vendors' (Jadibutiwalas) and their traditional knowledge about plant drugs has remained unexplored. Their practices have been overlooked in India. These vendors had lot of experience which was transmitted orally by their ancestor over centuries. A literature resume suggests that 'Herbal Vendors' (Jadibutiwalas) and their traditional knowledge about plant drugs has to be explored scientifically. The claims emanating from the present survey need to be subjected to pharmacochemical studies in order to discover their true potential, as it is very difficult to judge the effectiveness of herbal medicine. The main purpose is not to prescribe any remedies for any of the diseases but to document the uses and draw the attention of pharmacognosist, botanist, phytochemist and pharmacologist for further scientific research in this area.

CONCLUSION

Medicinal plants play a vital role in the life by serving good health and well being of mankind. Present study reveals unique utilization of medicinal plants by the pilgrimage people who visits temple towns of Nallamalais and Yerramalais forest of Kurnool district of Andhra Pradesh. Traditional knowledge of medicinal plants and their use by indigenous healers,vendors and drug development in the present are not only useful for conservation of cultural tradition and biodiversity but also for community health care and drug development in the local people.

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