International Journal of Ethnobiology & Ethnomedicine

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Research Article

ETHNOMEDICINAL PLANTS USED FOR ANTHELMINTIC/ HELMINTHIASIS IN VISAKHAPATNAM DISTRICT, ANDHRA PRADESH, INDIA

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Received 20 November 2014; Accepted 10 December 2014; Published 30 December 2014

ABSTRACTS

Plant species used in the treatment of Anthelmintic / Helminthiasis diseases among the indigenous communities of Visakhapatnam District was conducted between 2013 -2014. Thirty two plant species belonging to 21 families were found to be used specifically in the treatment of Anthelmintic / Helminthiasis diseases.

KEYWORDS: Folklore Treatment, Anthelmintic/Helminthiasis, Tribal People, Visakhapatnam District

INTRODUCTION

India is considered as one of the 12 mega-biodiversity countries of the world having rich vegetation of about 45,000 vascular plants, with concentrated hotspots in the regions of Eastern Himalayas, Western Ghats and Andaman & Nicobar Islands. Of these, the folk medicine system of India use about 5,000 plant species with about 25,000 formulations for treating a variety of ailments, whereas the tribal medicine involves the use of over 8,000 wild plants with about 1,75,000 specific preparations/applications. The classical indigenous systems of Indian medicine prescribe 10,000 designated formulations.

Ethnobotany deals with the direct relationship of plants with man. Early origins of traditional medicine must have had their roots in ethnobotanical folklore, but today, traditional medicine incorporates several well-organized, distinct systems of diagnosis and cure. In India alone, three traditional systems of medicine, namely Ayurveda, Siddha and Unani are distinguished. The use of plants in '*Ayurveda*' (2500-900 B.C.) the foundation of medicinal science in human culture has been observed as dealing with plants possessing special properties of drugs in various aspects of healing (Bhandari 1984-86). Further, ethnobotany includes study of foods, fibers, dyes, and tannin, other useful and harmful plants, taboos, avoidances and even magico-religious beliefs about plants (Jain 1967 a; Ford, 1978). Ethnomedicinal studies for endemic diseaseas by the tribe of Munchengiputtu Mandalam, Visakhapatnam District (Padal, Ramakrishna & Devender 2012). Ethnomedicinal Investigation of Medicinal Plants Used By the Tribes of Pedabayalu Mandalam, Visakhapatnam District (Padal, Chandrasekhar & Satyavathi 2013).

STUDY AREA

Visakhapatnam district is one of the North Eastern Coastal district of Andhra Pradesh and it lies between 17^{o} – 15^{1} and 18^{o} - 32^{1} Northern latitude and 18^{o} - 54^{1} and 83^{o} - 30^{1} in Eastern longitudes. It is bounded on the North partly by the Orissa State and partly by Vizianagaram District, on the South by East Godavari District, on the West by Orissa State and on the East by Bay of Bengal.

In this area the major tribal groups are Bagata, Valmiki, Kammara, Konda Dora, Kotia, Kulia, Malis, Manne Dora, Muka Dora and Gouds whereas the primitive tribal group (PTG) comprise Khonds, Gadaba and Porja (Porangi porja). Most of the tribes except Bagata and Valmiki are habitual podu cultivators. These tribes depend on local health practioners or Vaidyas called the gurus for their health care. The gurus rely on indigenous system of medicine using the locally available medicinal plants.

METHODOLOGY

The various methods used for the study of ethnobotany of Visakhapatnam District, Andhra Pradesh, India, were essentially the same as described by Jain (1981, 1987, and 1989); Chadwick and Mars (1994) and Martin (1995).

It is the outcome of intensive field trips were made in to the interior tribal pockets of the forest areas of the Visakhapatnam district. Village wise information was gathered about the plants, which have medicinal values from the Tribal / Viadyas / Villagers who secured from their hereditary and ancestral line. Collecting information from them is not an easy task as they treat it will be an outmost secret, which was not even shared among their community members.

While carrying out the fieldwork, help was taken from the traditional healers in the ethnobotanical information, as they are familiar with the plants around them. Enquiries were made on type of plants they use and their usage in their daily life. All the specimens were taxonomically identified and deposited in the herbarium of the department of Botany, Andhra University, Visakhapatnam.

RESULTS AND DISCUSSION

The investigation revealed the medicinal properties of 32 species belonging to 31 genera under 21 families. Out of the 32 Species Dicots are 30, and Monocots are 2 Families. Asteraceae is the dominant family (4spp.) followed by Fabaceae and Euphorbiaceae (3spp).The other families contributed two or one species each. Among all the species, herbs are found to be more (12) followed by trees (10) shrubs (8) climbers (2). The remedies were taken orally, accounting for 78% of medicinal use, followed by external application. To improve the acceptability of certain oral remedies, additives are frequently used. Most of the reported preparations in the area are drawn from a single plant parts in the preparation of remedies in the study area are the leaves (10), stem bark (06), Roots (06), Seed (4), Fruit (3), Root bark (1) and tubers(1). The mode of administration of Plants like *Acalypha indica* Linn. Half spoon of leaf juice mixed with equal amount of *Carum copticum* seed juice is administered only once. *Aerva lanata* (Linn.) Juss. Leaves ground into paste along with garlic are taken with water. *Mucuna pruriens* (Linn.) DC Half spoon of seed paste or powder is administered with water. *Mallotus philippensis* (Lam.) Muell.-Arg. half spoon of fruit powder mixed with equal quantity of jaggery is administered once on empty stomach. *Moringa oleifera* Lam. Fifty ml of stem bark decoction is mixed with one spoon of honey and one spoon of *Embelia ribes* plant powder and administered twice a day.

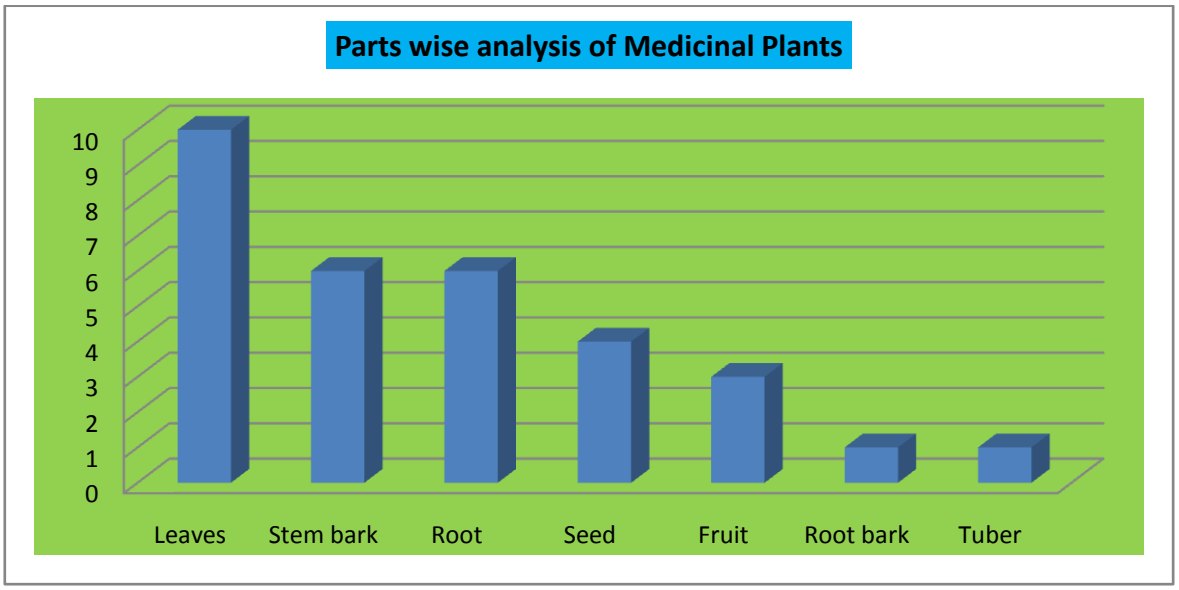

Table 1: *Ethnomedicinal Plants Used For Anthelmintic/Helminthiasis in Visakhapatnam District*

S.N	Scientific Name	Family	Common Name	Habit	Parts
1.	*Acalypha indica* Linn.	Euphorbiaceae	Muripinda	Herb	Leaf
2.	*Aerva lanata* (Linn.) Juss.	Amaranthaceae	Pindikura	Herb	Leaf
3.	*Ailanthus excelsa* Roxb.	Simaroubaceae	Peddamanu	Tree	Stem bark
4.	*Andrographis paniculata* (Burm. *f.*) Wall. Ex. Nees	Acanthaceae	Nelavemu	Herb	Leaf
5.	*Anisomeles indica* (Linn.) Kuntze.	Asteraceae	Adabeera	Shrub	Leaf
6.	*Aristolochia bracteolata* Lam.	Aristolochiaceae	Gadidagadapa	Climber	Leaf
7.	*Bridelia montana* (Roxb.) Willd.	Euphorbiaceae	Pantagi	Tree	Root Bark
8.	*Callicarpa arborea* Linn.	Verbenaceae	Bodigachettu	Tree	Stem Bark
9.	*Cannabis sativa* Linn.	Cannabinaceae	Ganjai	Shrub	Leaf
10.	*Cassia hirsuta* Linn.	Caesalpiniaceae	Kondakasitha	Shrub	Root
11.	*Chromolaena odorata* (Linn.) King & Robinson	Asteraceae	Kampu rodda	Shrub	Seed
12.	*Citrus medica* Linn.	Rutaceae	Madiphalam	Tree	Stem Bark
13.	*Clerodendrum serratum* (Linn.) Moon	Verbanaceae	Gantubarangi	Shrub	Leaf
14.	*Costus speciosus* (Koen.) Sm.	Zingiberaceae	Bogachi	Herb	Tuber
15.	*Curcuma longa* Linn.	Zingiberaceae	Pasupu	Herb	Rhizome
16.	*Cyclea peltata* (Lam.) Hook. *f.* & Thoms.	Menispermaceae	Chanti maal	Herb	Root
17.	*Erythrina variegata* Linn.	Fabaceae	Baditha	Tree	Leaf
18.	*Helianthus annuus* Linn.	Atseraceae	Podhutirugudu	Herb	Seed
19.	*Helicteres isora* Linn.	Sterculiaceae	Shrub	Tree	Root
20.	*Mallotus philippensis* (Lam.) Muell. -Arg.	Euphorbiaceae	Sindhura	Tree	Fruit
21.	*Moringa oleifera* Lam.	Moringaceae	Munaga	Tree	Stem Bark
22.	*Mucuna pruriens* (Linn.) DC.	Fabaceae	Climber	Climber	Seed
23.	*Nyctanthes arbor–tristis* Linn.	Nyctanthaceae	Tree	Tree	Leaf
24.	*Ocimum tenuiflorum* Linn.	Lamiaceae	Thulasi	Herb	Leaf
25.	*Punica granatum* Linn.	Punicaceae	Danimma	Shrub	Stem bark
26.	*Saraca asoca* (Roxb.) De Willd .	Caesalpiniaceae	Asoka	Tree	Stem bark
27.	*Scoparia dulcis* Linn.	Schropulariaceae	Vishnumadukam	Shrub	Root
28.	*Solanum torvum* Sw.	Solanaceae	Ramamulaga	Herb	Fruit
29.	*Solanum erianthum* Don	Solanaceae	Mullavankaya	Shrub	Fruit
30.	*Tephrosia purpurea (*Linn.)	Fabaceae	Vempali	Herb	Root

	Pers.				
31.	*Trachyspermum ammi (*Linn.) Turrill.	Apiaceae	Vamu	Herb	Seed
32.	*Vernonia anthelmintica* (Linn.) Willd.	Asteraceae	Garitakamma	Herb	Root

1. *Andrographis paniculata* (Burm. *f.*) Wall. Ex. Nees
2. *Costus speciosus* (Koen.) Sm.
3. *Erythrina variegata* Linn.
4. *Nyctanthes arbor–tristis* Linn.
5. *Saraca asoca* (Roxb.) De Willd.
6. *Solanum torvum* Sw.

CONCLUSION

The medico-botanical survey of the area revealed that the people of the area possessing good knowledge of herbal drugs but as the people are in progressive exposure to modernization, their knowledge traditional uses of plants may be lost in due course. So it is important to study and record the uses of plants by different tribes and sub-tribes for futures study. Such studies may also provide some information to biochemists and pharmacologists in screening of individual species and in rapid assessing of phyto-constituents for the treatment of various diseases.

ACKNOWLEDGEMENTS

The authors are very much thankful to the Tribal people of Visakhapatnam district for sharing their valuable knowledge and help during field work.

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