

## International Journal of Ethnobiology & Ethnomedicine

### *Research Article*

# Ethnomedicinal Plants Used By Primitive Tribal of Pedabayalu Mandalam, Visakhapatnam District, A.P, India

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Received 23 September 2014; Accepted 20 October 2014; Published 30 October 2014

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### **Abstract**

An ethnomedicinal survey was conducted among the primitive tribal community residing in Pedabayalu Mandalam, Visakhapatnam district, Andhra Pradesh. Although the tribe is fast losing their traditional customs, their traditional medicinal practitioners still exist although the traditional medicinal wisdom of the primitive tribes has not been previously documented. In the present ethnomedicinal survey, it was observed that primitive tribal traditional medicinal practitioners use medicinal plant parts for treatment of ailments. A total of 30 plants were used by the tribal healers in their medicinal formulations. These plant species were distributed into 23 families. Of the 30 plants the ailments treated with medicinal plants by the tribal healers were quite limited. A review of the available scientific literature suggests that many of the medicinal plants used by the tribals can be validated scientifically in their traditional uses based on reported pharmacological activities present in those plants.

**Keywords:** Ethnomedicinal investigation, medicinal plants, tribal people of Pedabayalu Mandalam, Visakhapatnam district.

### **Introduction**

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, tanins, other useful and harmful plants, taboos, avoidances and even magico-religious beliefs about plants (Jain 1967 a; Ford, 1978).

India is a treasure of ethnobotanical knowledge due to presence of multi-ethnic groups of ancient lineage and very diverse vegetation. About 7.5% of India's total population follows a distinct life style identified as tribal culture. The traditional knowledge base of Indian ethnic and local communities is perhaps the richest in the world. India's tribal community has for long been the custodian of her biodiversity, having perfected the art of sustainable exploitation as well. Knowledge of medicinal use of plants in India is amassed over millennia by tribals. Ethnomedicinal Investigation of Pedabayalu Mandalam tribal people and Traditional use of Monocotyledon Plants of Arakuvalley Mandalam, Ethnomedicinal studies for endemic diseases by the tribe of Munchengiputtu Mandalam, Visakhapatnam District (S. B. Padal *et al.*, 2012 & 2013).

### Study area

Generally the Pedabayalu Mandalam of Visakhapatnam district is with full of tribal population. The primitive tribal communities live in forests, hilly tracts and naturally isolated areas from the civilized urban society. That's why in nature they developed their cultures of their own. They depend up on the nature for their food, shelter, and livelihood, thus the vegetation has

much influence on the tribal life. The tribal population of Andhra Pradesh is 41.99 lakhs which is 6.3% of the total population. 13 tribal groups who inhabit this Mandalam are, Bagata, Gadaba, Kammara, Konda Doras, Khondu, Kotia, Kulia, Malis, Manne Dora, Mukha Dora, Porja, Reddi Doras, Nooka Dora and Valmiki. In Pedabayalu Mandalam the tribals Konda Dora, Kotias, Kondus are lived in group of houses called huts. Generally, the houses are constructed with Bamboo (*Bambusa arundinacea*), Palmyra culms and other timber yielding plants. Palmyra culms are used for thatching the roofs of the houses. The walls are constructed with mud mixed with ash of burn grass and are smeared with cow dung.

### Methodology

Medicinal plants were collected during 2013 - 2014 through field survey in different remote villages of Pedabayalu Mandalam. During the period of study, door to door visits were made to identify local people with specialized knowledge on use of medicinal plants. Plants were collected with noting their local names, parts used and ethno medicinal uses. The samples of recorded herbs, shrubs, and trees were identified with the help of previous literature and regional floras. The plants specimens were processed using the standard herbarium techniques and are preserved at Andhra University, herbarium, Visakhapatnam.

**Table 1. Ethnomedicinal plants used by the tribals of Pedabayalu Mandalam.**

S.No	Scientific name of plant	Common name	Habit	Ethnomedicinal Use
1.	<i>Acacia caesia</i> (L.) Wild. (Mimosaceae)	Korintha	Shrub	Flowers are used in irregular menses.
2.	<i>Acacia nilotica</i> (L.) Willd. (Mimosaceae)	Nalla thumma	Tree	Decoction of pods used in urinary diseases.
3.	<i>Adhatoda zeylanica</i> Medic. (Acanthaceae)	Adda saramu	shrub	The leaf extract is taken orally to cure diarrhea and dysentery.

4.	<i>Adiantum lunulatum</i> Burm. (Adiantaceae)	Gatumandu	Herb	The rhizome paste is applied for scorpion sting and centipede bite.
5.	<i>Aegle marmelos</i> (L.) Correa. (Rutaceae)	Maredu	Tree	Leaf juice is given with pepper seeds twice a day for about two month's controls diabetes.
6.	<i>Ailanthus excelsa</i> Roxb. (Simaroubaceae)	Pedda manu	Tree	Stem bark powder mixed with rice water is given thrice a day for two days to check dysentery.
7.	<i>Bixa orellana</i> L. (Bixaceae)	Jabaru kaya	Tree	Stem bark extract of one or two spoonfuls twice a day for six days cures intermittent fever.
8.	<i>Blumea mollis</i> (D.Don) Merr. (Asteraceae)	Kukkapogaku	Herb	Plant extract in two spoonfuls twice a day for about week day's controls jaundice.
9.	<i>Cardiospermum halicacabum</i> L. (Sapindaceae)	Budda kakara	Climber	Leaf paste with castor oil is applied on burns
10.	<i>Careya arborea</i> Roxb. (Barringtoniaceae)	Kumbhi	Tree	Flowers and juice of fresh bark are used for cough and cold.
11.	<i>Caryota urens</i> L. (Arecaceae)	Jeeluga	Tree	Nut powder made into paste applied to the head and bath is taken after one hour for dandruff.
12.	<i>Casearia elliptica</i> Willd. (Flacourtiaceae)	Giridi	Tree	Stem bark powder is applied on wounds and ulcers of cattle.
13.	<i>Cassia auriculata</i> L. (Caesalpiniaceae)	Tangedu	Shrub	Leaf juice poured into eyes for ophthalmic infections.
14.	<i>Cassia fistula</i> L. (Caesalpiniaceae)	Rela	Tree	Tender leaves ground with turmeric and the paste applied for skin disease.
15.	<i>Cassia tora</i> L. (Caesalpiniaceae)	Tantepu	Herb	Leaves are fried in castor oil and applied to ulcers.
16.	<i>Cochlospermum religiosum</i> (L.) Alston. (Cochlospermaceae)	Konda gogu	Tree	Stem bark is ground into paste and it is plastered over for bone fractures.
17.	<i>Dillenia indica</i> L. (Dilleniaceae)	Revadachettu	Tree	Leaf juice in doses of two spoonfuls twice a day for two days to treat abdominal pain.

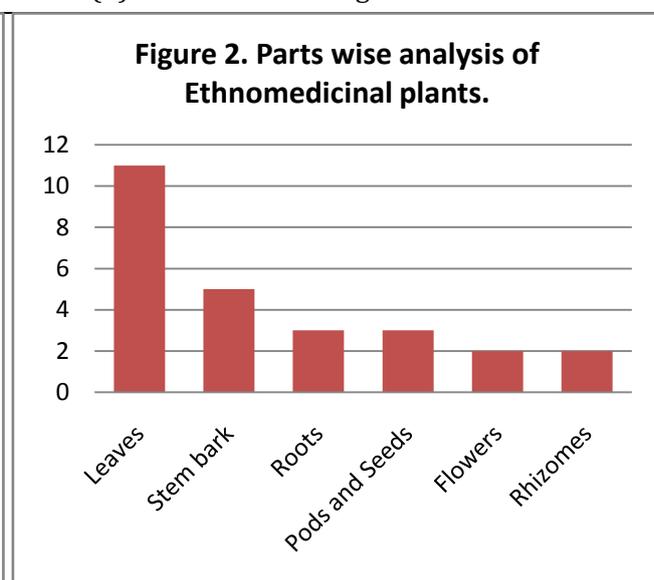
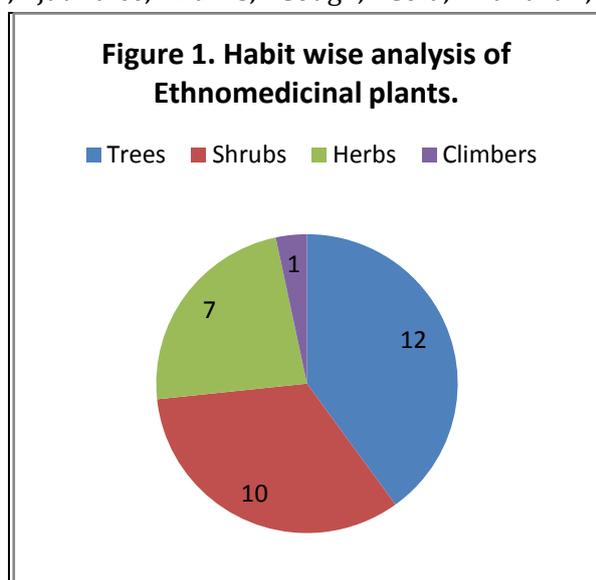
18.	<i>Diospyros chloroxylon</i> Roxb. (Ebanaceae)	Ellinda	Tree	The juice of the leaves in two spoonfuls for three days to cure diarrhoea.
19.	<i>Emilia sonchifolia</i> (L.) DC. (Asteraceae)	Kunka	Herb	Leaf paste in doses of one spoonful once a day at bed time for about 2-3 months to treat night blindness.
20.	<i>Euphorbia hirta</i> L. (Euphorbiaceae)	Patchabotlu	Herb	Leaf extract mixed with sugar is taken 2-3 spoonfuls thrice a day for dysentery.
21.	<i>Gmelina asiatica</i> L. (Verbenaceae)	Chiru gumma	Shrub	Root ground to paste with cloves and the paste is applied for toothache.
22.	<i>Homonoia riparia</i> Lour. (Euphorbiaceae)	Adavi ganneru	Shrub	Root extracts in doses of two spoonfuls twice a day for 2 weeks to treat piles.
23.	<i>Justicia betonica</i> L. (Acanthaceae)	Theallarantu	Shrub	The root paste is administered in 2 spoonfuls twice a day for 5 days to treat muscular pains.
24.	<i>Strychnos potatorum</i> L. (Loganiaceae)	Induga	Tree	Seed paste mixed with fruit paste of Terminalia chebula and this paste is given for cough.
25.	<i>Urena lobata</i> L. (Malvaceae)	Nalla Benda	Shrub	Plant boiled with sesamum oil and applied externally for rheumatic pains.
26.	<i>Vitex negundo</i> L. (Verbenaceae)	Vavili	Shrub	Leaf paste made into pills and administered orally for body swellings.
27.	<i>Waltheria indica</i> L. (Sterculiaceae)	Nallabenda	Herb	Plant powder is applied externally for drying on healing of wounds and ulcers.
28.	<i>Woodfordia fruticosa</i> (L.) Kurz. (Lythraceae)	Jeguru	Shrub	Leaves crushed and mildly heated and gently massaged for rheumatic pains.
29.	<i>Zingiber montanum</i> (Koen.) Link ex. (Zingiberaceae)	Kar pasupu	Herb	Rhizome of this plant boiled in castor oil and is used for massage till cure for arthritis.
30.	<i>Zizyphus rugosa</i> Lam. (Rhamnaceae)	Gotti tige	Shrub	Stem bark decoction is administered for dysentery in doses of 5 spoonfuls thrice a day for three days.

## Result and Discussion

During the present Ethnobotanical study 30 plants were used to cure varies ailments, reported by the informants for the 23 families, out of the 23 families, 27 are dicots, 2 are monocots and one is Pteridiphytes family (Adiantaceae). Out of the 23 families Caesalpiniaceae have (3) plants, Acanthaceae, Asteraceae, Mimosaceae, Euphorbiaceae, Verbenaceae have (2), and remaining families each one have single species. These 30 plants were used to cure varies ailments, i.e., Irregular menses, Urinary problems, Diarrhoea, Dysentery, Scorpion stung, Centipede bite, Diabetes, Fever, Jaundice, Burns, Cough, Cold, Dandruff,

Wounds, Ophthalmic, Ulcers, Bone fracture, Abdominal pain, Night blindness, Toothache, Piles, Muscular pain, Rheumatic pain, Body swellings and arthritis.

Most remedies were taken orally; accounting for 70% of medicinal use, followed by external applies. Various plant parts or products viz. stem and Bark (5), leaf (11), root (3), flower and fruit (3), seed, latex and gum (3), rhizome (2), Whole plant (2), were found to be employed to make different formulations are as shown in the figure1. Among the 30 plants that are recorded Herbs include (7), followed by Trees (12), Shrubs (10) and climbers (1) as shown in the figure 2.



## V. Conclusion

However, we feel that the indigenous knowledge and practices of the tribes on utilization of plant resources as medicine should be reported and preserved before they get lost due to increasing integration. In the information obtained, there were many details about the appropriate indication of each plant. This vast array of rare medicinal plants can be used for further research only if we ensure proper conservation of these endangered species. Thus researchers should observe ethno medical information before deciding which kind of screening should be used in the search of drugs for varies diseases which may also be a potential source of modern drug industries.

The new generation is not very much interested in the indigenous methods of treating diseases. They are even not very concern about the importance of these herbal plants and its medicinal value. The growing disinterest in the use of the folk medicinal plants and its significance among the younger generation of the primitive tribals will lead to the disappearance of this practice. Educated younger generation of the primitive tribals should be encouraged by the Government to protect and cultivate these valuable herbal plants before they get lost due to the impact of modernization and urbanization and also due to deforestation.

## VI. Acknowledgement

The authors are thankful to the notified and denotified adivasis groups, their vairs, ojas, bhopas etc. and forest officials who provided valuable information on this subject. We are also thankful to the authorities of various herbaria and museums for their help and co-operation extended in several ways.

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