

## Traditional use of Monocotyledon Plants of Arakuvalley Mandalam, Visakhapatnam District, Andhra Pradesh, India.

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**Abstract:** An ethno-medico botanical survey of plants used in the treatment of different type of diseases of Arakuvalley Mandalam, Visakhapatnam district, Andhra Pradesh was conducted. The information was collected on the basis of personal interviews with traditional healers, tribal doctors and old women of the society. The investigation revealed that 34 Monocotyledon plant species belonging to 10 families and 28 genera are commonly used in the treatment of various ailments.

**Key Words:** Ethno medico botanical, monocotyledons plants, tribal people, ailments, arakuvalley, Visakhapatnam district.

### I. Introduction

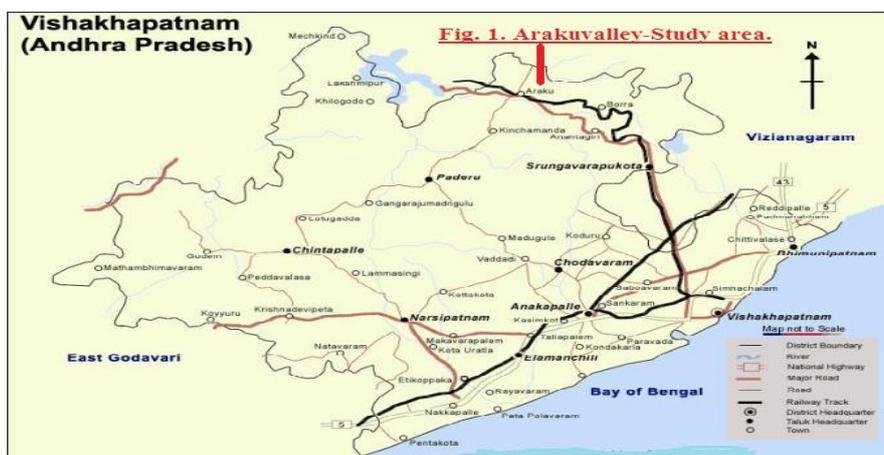
The use of plants by man is as old as the human civilization it self. The term Ethnobotany refers to the interrelation ship between the primitive people and plants growing around them. The primitive people were devoid of any written language but retain their tradition by verbal means. The consistent curiosity of early man had leaded him to a systematic observation of plants which had influenced not only his life but mode of his living as well.

Beginning in the 20<sup>th</sup> century, the field of Ethnobotany experienced a shift from the raw compilation of data to a greater methodological and conceptual re-orientation. This is also the beginning of academic Ethnobotany. The founding father of this discipline is Richard Evans Schulte's.

There are Ethnobotanical works either based on an ethnic tribe or on phytotherapy of a disease. Anonymous (1966) provided the information on Koyas of Andhra Pradesh. Hemadri (1981) reported the tribal medicine for rheumatism and Hemadri & Rao (1983, 1984) enlisted the plant species for leucorrhoea, menorrhagia and jaundice. Ramarao *et al.* (1984) presented the note on Ethnobotanical studies in Andhra Pradesh while Ramarao (1988) did his Ph.D. work on the Ethnobotany of Eastern Ghats in Andhra Pradesh.

### II. Study area

Araku Valley is a hill station and a Mandal in Visakhapatnam district in the state of Andhra Pradesh in India. It has got an amazing nature with thick forests surrounded all over. Araku is popular for its world famous coffee plantations. For every traveler it gives a wonderful and a unique experience. Araku is located at 18<sup>1</sup>.3333<sup>0</sup> N latitude and 82.8667<sup>0</sup> E longitudes. It has an average elevation of 911 meters (2992 feet). It is located 116 km from Visakhapatnam, close to the Orissa state border. This place lures people with pleasant weather, hills and valleys. The natural beauty of this valley comes alive with its rich landscape. The area of the valley is roughly 36 km, and the altitude is between 600 and 900 meters above sea level (Fig.1).



### III. Material and Methods

Folk remedies consisting of simple methods of treatment developed by trial and error over a long period hold an important place in almost all societies. Ethnobotanical data were collected on different ailments from all categories of tribes by interviewing the medicine men, headmen, elderly persons, women and persons having thorough knowledge of plants. Field visits were made along with medicine men to identify species in the field and to know the local names. All the specimens were taxonomically identified and deposited in the herbarium of the department of Botany, Andhra University, Visakhapatnam. New practices were marked with an asterisk (Jan 1991, Kirtikar and Basu 2003).

**Table.1. Ethnomedicinal Monocotyledons plants used by the Arakuvalley tribes.**

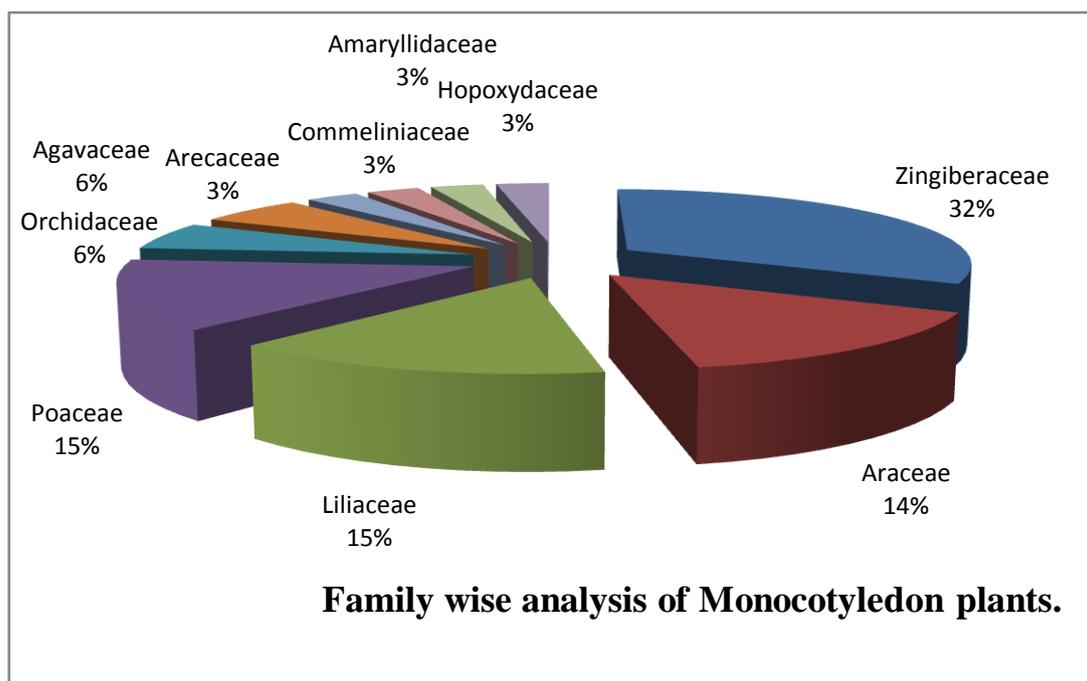
S. N	Name of the plant	Family	Vernacular name	Mode of administration
1.	<i>Acampe carinata</i> (Griff.) Panig.	Orchidaceae	Kano-Kato	The root paste is applied externally on scorpion and snake bites.
2.	<i>Acampe praemorsa</i> (Roxb.) Blatt. & McCann	Orchidaceae	Kano-Kato	The leaf paste along with one piece of garlic is taken once a day for seven days to get relief from chest pain and stomach disorder caused by hyper acidity.
3.	<i>Acorus calamus</i> Linn.	Araceae	Vasa	Fresh rhizome juice is administered daily to cure malaria fever.
4.	<i>Agave cantula</i> Roxb.	Agavaceae	Kithanara	Crushed leaf juice is applied on affected areas. Do not take non-vegetarian food during the course of treatment to cure herpes, eczema, itching and Leucoderma.
5.	<i>Allium sativum</i> Linn.	Liliaceae	Tella gadda	Two to three cloves are made into paste and mixed with one spoon of gingelly oil is taken orally daily once to cure facial paralysis.
6.	<i>Aloe vera</i> (Linn.) Burm. f.	Liliaceae	Kalabandha	Leaf pulp mixed with crystal salt is plastered on the bitten part to depose and reduce pain for dog bite.
7.	<i>Alpinia galanga</i> (Linn.) Willd.	Zingiberaceae	Dumparashtamu	One or three g of tuber powder or half tea glass of tuber decoction mixed with honey is administered once a day to cure rheumatic pain.
8.	<i>Arisaema tortuosum</i> (Wall.) Schott.	Araceae	Gandana	Tuberous root is ground into paste and one spoon of it is administered orally and a portion of it applied on the bitten area For snake bite
9.	<i>Aristida funiculata</i> Trin. & Rupr.	Poaceae	Puthika gaddi	Roots ground with <i>Pongamia pinnata</i> oil is used for massage on the foot for relief from burnig sensation and pain.
10.	<i>Asparagus racemosus</i> Willd.	Liliaceae	Bheemudu chettu	Tuberous root burnt or boiled and administered daily women disease and leucorrhoea.
11.	<i>Caladium bicolor</i> Vent.	Araceae	Rudra chama	Quarter cup of tuber juice is given and a portion of it is applied on the bitten area immediately after bite for snake bite.
12.	<i>Caryota urens</i> Linn.	Arecaceae	Bhudenda	Two spoons of tuberous root paste mixed in a glass of goat milk is administered daily twice for 3 days for use Galactogauge
13.	<i>Commelina erecta</i> Linn.	Commelinaceae	Savathravathi	Juice of the whole plant mixed with milk is applied on the face for cleaning for skin glow.
14.	<i>Costus speciosus</i> (Koen.) Sm.	Zingiberaceae	Bokacchika	Two to three drops of warm stem juice is instilled into the affected ear to cure ear pain.
15.	<i>Crinum asiaticum</i> Linn.	Amaryllidaceae	Pedda chalava dumpa	Tuberous root is ground with that of <i>Rubia cordifolia</i> and <i>Asparagus racemosus</i> and whole plant of <i>Evolvulus alsinoides</i> in equal quantities and one spoon of paste is administered daily twice to cure jaundice.
16.	<i>Curculigo</i>	Hypoxycidaceae	Nela tadi	Tuber powder is mixed with sugar candy powder

	<i>orchioides</i> Gaertn	ae		in equal quantities. Ten g of it is administered daily for asthma and piles.
17.	<i>Curcuma aromatic</i> Sal.	Zingiberaceae	Kasthuri dumpa	One spoon of rhizome paste is administered with water and a portion of it is applied on the body for chicken pox.
18.	<i>Curcuma angustifolia</i> Roxb.	Zingiberaceae	Batripala	Rhizome powder mixed with <i>Eleusine coracana</i> ( <i>ragi</i> ) powder and made into <i>chapattis</i> and given as food after deliver for galactagogue.
19.	<i>Curcuma caesia</i> Roxb.	Zingiberaceae	Nalla pasupu	Leaf paste and lemon juice (3:1) is applied on the affected areas before going to bed till cure for common skin diseases.
20.	<i>Curcuma longa</i> Linn.	Zingiberaceae	Pasupu	Ten g of rhizome paste mixed with half cup of cow curd is administered in the morning on empty stomach to cure jaundice.
21.	<i>Cymbopogon flexuosus</i> (Linn.) Rendle.	Poaceae	Nimma gaddi	Leaf juice is sprayed around the surroundings of the house for mosquito repellent. Grass is used in the preparation of oils.
22.	<i>Dendrocalamus strictus</i> (Roxb.)	Poaceae	Sadanapu veduru	Tender leaves crushed along with seeds of <i>Hibiscus cannabinus</i> 5 spoonful of this extract is given orally twice a day for 5 days for Abortion.
23.	<i>Globba marantina</i> Linn.	Zingiberaceae	Konda pasupu	Tuber paste is applied on the scalp to reduce high temperatures for refrigerant and fever.
24.	<i>Gloriosa superba</i> Linn.	Liliaceae	Vanka vajram	One spoon of leaves ground into paste is mixed with butter milk and administered orally to cure jaundice.
25.	<i>Hedychium coccineum</i> Koen.	Zingiberaceae	Deva kasturi	One spoon of tuber paste mixed with half glass of water is taken orally daily once and a portion of it is applied on the scalp to cure fever.
26.	<i>Kaempferia rotunda</i> Linn.	Zingiberaceae	Sakunthal a	Stem bark paste is massaged on the scalp and forehead for migraine.
27.	<i>Rhaphidophora decursiva</i> (Roxb.) Scott.	Araceae	Athukuchettu	Whole plant and stem bark of <i>Polyalthia longifolia</i> are pounded with goat milk. The paste is plastered on the affected bones to rejoin for bone fracture.
28.	<i>Sansevieria roxburghiana</i> Schult. & Schult.f.	Agavaceae	Nela kithalu	Leaves or tuberous roots are crushed and the paste is applied over oedematic swellings.
29.	<i>Scindapsus officinalis</i> Schott.	Araceae	Atukusaru	Root is ground into paste and bandaged with stem bark of <i>Ceiba pentandra</i> to rejoin the bones.
30.	<i>Thysanolaena maxima</i> (Roxb.) Kuntze.	Poaceae	Konda chipuru gaddi	Root paste is applied on the affected areas daily once for 3 days to cure wounds.
31.	<i>Urginea indica</i> (Roxb.)Kunth.	Liliaceae	Adavi ulli	A quarter cup of decoction made up of bulbs ground with tubers of <i>Nymphaea pubescens</i> (red variety) and <i>Musa paradisiaca</i> . is taken daily once to cure menstrual disorders.
32.	<i>Vetiveria zizanioides</i> (Linn.) Nash.	Poaceae	Vatti veru	One spoon of root powder mixed with half glass of water is administered daily once to cure heart pain.
33.	<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Allam	Equal quantities of rhizome and old jaggery are ground into paste and one spoon of it is administered early in the morning on empty stomach for seven days to cure jaundice.
34.	<i>Zingiber zerumbet</i> (Linn.) Smith.	Zingiberaceae	Samida dumpa	Root tuber is ground into paste and administered orally along with water thrice a day to cure dysentery.

#### IV. Result and discussion

During the present Ethnobotanical study 34 Monocotyledon plant species were reported by the informants for the 10 families, Of the 10 Monocotyledon plant families, Zingiberaceae represent 11 species, Araceae represent 6 species, Liliaceae and Poaceae represent 5 species. While the Orchidaceae and Agavaceae each 2 species, and Arecaceae, Commeliniaceae, Amaryllidaceae and Hypoxydaceae each one single species. Zingiberaceae is the dominant family with 11 species. These 34 plant species were used to cure 30 ailments, i.e., abortifacient, body pains, bone fracture, cough, dysentery, dyspepsia, fever, scorpion sting, skin diseases, snake bite rheumatism, stomach-ache, tooth- ache, diarrhea and asthma etc.,

Most remedies were taken orally; accounting for 70% of medicinal use, followed by external applies. Various plant parts or products viz. stem, leaf, root, tuber, rhizome, cloves, and whole plant were found to be employed to make different formulations. Root and tubers used extensively followed by stem bark, leaves, and rhizomes.



#### 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. There are plants that are traditionally employed for specific symptoms or conditions that often accompany itching, allergy and other skin disorders. 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 various diseases which may also be a potential source of modern drug industries.

#### Acknowledgement

The authors are thankful to the notified and denotified adivasis groups, their vairs, ojhass, 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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