



Folklore medicine of primitive tribals in Dumbriguda Mandal, Visakhapatnam District, Andhra Pradesh, India

Satyavathi K¹ and Padal SB²

¹Research Scholar, Department of Botany, Andhra University, Visakhapatnam-530003, A.P.

²Professor, Department of Botany, Andhra University, Visakhapatnam-530003, A.P.

Corresponding author Email: sbpadal08@gmail.com. Mobile No. 9491907646

Manuscript details:

Received : 11.02.2018
Accepted : 13.04.2018
Published : 26.04.2018

Editor: Dr. Arvind Chavhan

Cite this article as:

Satyavathi K and Padal SB (2018)
Folklore medicine of primitive tribals in Dumbriguda Mandal, Visakhapatnam District, Andhra Pradesh, India, *Int. J. of Life Sciences*, Volume 6(2): 523-528.

Copyright: © Author, This is an open access article under the terms of the Creative Commons Attribution-Non-Commercial - No Derives License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

Available online on
<http://www.ijlsci.in>
ISSN: 2320-964X (Online)
ISSN: 2320-7817 (Print)

ABSTRACT

Folklore medicine survey was conducted among the primitive tribal community residing in Dumbriguda Mandal, Visakhapatnam district, Andhra Pradesh. The prime objective of the study is to document the traditional medicinal plants used by tribal people inhabiting the interior pockets. The ethnobotanical studies carried out during 2016-17. The information was collected through interviews, discussions and observations. A total of 45 plants were used by the tribal healers in their medicinal formulations. These plant species were distributed into 31 families. Fabaceae has the highest number of species (6 species) followed by Rutaceae (3 species), Mimosaceae, Amaranthaceae, Acanthaceae, Anacardiaceae, Dioscoriaceae, Asteraceae, Loganiaceae and Rhamnaceae each one contributed (2) species and rest of the 21 families contain single species each. With regard to the frequency of plant parts used in preparations, stem bark was most often used followed by roots, leaves, whole plant, roots, seeds and tubers etc. These 45 Ethnomedicinal plants are used for different disease like, Dysentery, Asthma, Fever, Headache, Piles and Rheumatic pain etc.

Key Words: Folklore medicine, primitive tribes, dumbriguda mandal, Visakhapatnam district.

INTRODUCTION

The tribals depend predominantly on plants for food, clothing, housing, medicine, oil, agricultural implements, art & crafts and a host of other requirements. They also have some superstitious beliefs on some plants which were found to be tied on the body parts to cure various ailments. Plants are still the main source of medicines to majority of people.

In recent years, much work has been carried out on Ethno-botany in Andhra Pradesh. Enumerated the indigenous plants by the Adivasis like Chenchu,

Reddi, Valmiki, Gond and Savara of Andhra Pradesh and Orissa States for food and medicine (Jain et al. (1977). Enumerated the ethnomedicinal uses of plants in the nearby villages of Tirupati (Reddy et al. (1979). Studied and reported 16 genera of hydrophytic medicinal plants in and around Rajahmundry (Aruneer Kumar et al. (1979).

Reported medicinal plants used by tribals and villagers along the Eastern Ghats belt and its coastal region (Hamadri (1987). Enlisted the medicinal plants of the newly formed Vizianagaram district along with their Sanskrit and vernacular names by (Hamadri and Venugopal Acharya 1988). During their study met various tribals such as Jatapu, Savara, Gadaba, Kondadora and Samantha and collected 100 herbal claims from them. Medicinal uses of plants of Tirumala Hills of Andhra Pradesh (Thammanna and Narayana Rao 1990). Preliminary survey of medicinal plant wealth of Krishna district by (Venkanna (1990), studied ethno-botany of Adilabad and Karimnagar districts of Andhra Pradesh by (Ravi Shankar 1990). Studied medicinal plants used by tribals for curing kidney diseases in Rayalaseema (Vedavathy and Rao 1990). Described medicinal plants of Kakinada and surrounding areas of East Godavari district by (Aruneer Kumar et al. 1990). Documented the data on 'Ethnobotany of Eastern Ghats in Andhra Pradesh by (Ramarao 1988). Rao and Prasad (1995) enlisted the ethnomedicine from Andhra Pradesh. Reddy et al. (1996) documented the tribal medicine from Rutaceae. Rajendran et al. (1996, 1997) provided the information on hepatic stimulant plants of Andhra Pradesh. Jeevan and Raju (2001) described certain potential crude drugs used by tribes of Nallamalai for skin diseases. Shortlisted the plants used as ethnomedicine from Maredumilli region of East Godavari District and studied the ethnomedicine for rheumatic diseases from Eastern Ghats by (Reddy and Subbaraju 2005).

Study area

Generally the Dumbriguda Mandalam of Visakhapatnam district is with full of primitive tribal population. The primitive tribal communities live in forests, hilly tracts and naturally isolated areas from the civilized urban society. The area has rich natural forests consisting of mango, tamarind, jack, custard (*Annona squamosa*), lemon, cleaning nut or induga (*Strychnos potatorum*), karaka, kanuga, gum karaya (*Sterculia urens*), adda leaves for plate making, rosewood (*Dalbergia latifolia*) and bamboo. Tamarind is collected by men and women.

MATERIALS AND METHODS

Medicinal plants were collected during 2016 - 2017 through field survey in different remote villages of Dumbriguda Mandalam, Visakhapatnam District, Andhra Pradesh. During the period of study, door to door visits were made to identify local people with specialized knowledge on use of medicinal plants. The plant species were identified with the help of regional and local floras (Hooker, 1897; Gamble, 1967; Narayana Rao *et al.*, 1981, Rangacharyulu, 1991; Thammanna *et al.*, 1994 and Matthew, 1983). The method of collection of voucher specimens, their preservation herbaria and technique for the collection of ethnomedicobotanical information follows (Jain and Rao 1997).

The plant voucher specimens were pressed and deposited in the Herbarium of Botany Department, Andhra University, Visakhapatnam, and Andhra Pradesh, India. The sorted information on ethno botanical knowledge of tribal inhabitants is tabulated alphabetically by botanical names of plants, name of the family, vernacular names, habit, parts used and uses that includes medicinal or any other purpose (Table 1).

RESULT AND DISCUSSION

Although the ethno medicinal uses of plants have been reported since long, most of these plants do not certify the efficacy (Tarafdar, 1986). The plants reported used for various ailments need to be pharmacologically screened, chemically analysed and tested for various bioactive compound (Chandler et al, 1979 and Fairbairn 1980). Rao and Sreeramulu (1985) documented 52 ethnomedicinal plants used by Savaras, Jatapus and Gadabas from Srikakulam District. Reddy et al. (1991) collected information on 45 plant taxa in traditional system of medicine used by tribals of Kadapa District. The present study provides information of 45 plants belonging to 31 families were recorded (Table 1). Fabaceae has the highest number of species (6 species) followed by Rutaceae (3 species), Mimosaceae, Amaranthaceae, Acanthaceae, Anacardiaceae, Dioscoriaceae, Asteraceae, Loganiaceae and Rhamnaceae each one contributed (2) species and rest of the 21 families contain single species each. Among the total plant species, Trees are highest in number (18) followed by Herbs (13), Shrubs (9) and Climbers (5). With regard to the frequency of plant parts used in preparations, stem bark was most often used followed by roots, leaves, whole plant, roots, seeds and tubers etc.

Table 1. Folklore medicinal plants used by primitive tribals in Dumbriguda Mandal, Visakhapatnam District, A.P, India.

S.No	Botanical name	Habit	Local name	Mode of Preparation and uses.
1	<i>Abrus precatorius</i> (Linn.) (Fabaceae) Syst.	Climber	Guruvinda	Seeds are poisonous. Used by the locals to avoid pregnancy.
2	<i>Acacia chundra</i> (Roxb.ex.Rottl.) (Mimosaceae) Wild.	Shrub	Sikai	The decoction of powdered bark is mixed with cumin and pepper and is given to weak cattle.
3	<i>Acacia torta</i> (Roxb.) (Mimosaceae)	Shrub	Korintha.	The bark decoction is used as a mice killer, stem juice is used for whooping cough.
4	<i>Achyranthes asprea</i> : (Linn.) (Amaranthaceae)	Herb	Uttareni	Plant extract used for piles, boils, skin eruptions, sometimes even for snake bites.
5	<i>Aerva lanata</i> (Linn) (Amaranthaceae) Juss.	Herb	Kondapindi.	Plant extract is used for anthelmintic and dysenteric and root is for headache.
6	<i>Aegle marmelos</i> (Linn): (Rutaceae)	Tree	Neredu	Fruit pulp is used in diarrhoea and dysentery by the Konda reddy.
7	<i>Albizia lebeck</i> (Linn.) (Mimosaceae) Wild.	Tree	Dirisana	Leaf-extract is used for night-blindness.
8	<i>Alangium salvifolium</i> (Linn.F) (Alanginaceae)	Tree	Uduga	Root decoction is used for fever and leaf extract for skin diseases.
9	<i>Andrographis paniculata</i> (Burm.f.) (Acanthaceae)	Herb	Nelavemu	Plant extract is useful in dysentery, dyspepsia and is recently considered for filarial also.
10	<i>Aristolochia bracteolata</i> Lamk: (Aristolochiaceae)	Herb	Gadidagada pa	Leafy juice mixed with castor oil is applied to eczema on children legs.
11	<i>Argemone mexicana</i> (Linn): (Papaveraceae)	Herb	Balurakkisa.	Seeds used for scabies and psoriasis by the Bagata.
12	<i>Atalantia monophylla</i> (Roxb.) DC (Rutaceae) Prodr	Shrub	Karunimma	Oil from berries is used extremely in chronic Rheumatism and paralysis.
13	<i>Bambusa arundinacea</i> (Retz.) (Poaceae) Roxb.	Tree	Veduru.	Leaf extract used for Leucorrhoea
14	<i>Barleria prionitis</i> (Linn.) (Acanthaceae)	Shrub	Gobbi	The Leaves are chewed to relieve tooth-ache.
15	<i>Boerhaavia diffusa</i> Linn: (Nyctaginaceae)	Herb	Punarnava,	Roots are considered to be medicinal.
16	<i>Buchanania axillaries</i> (Desr.) (Anacardiaceae)	Tree	Sarappu	Stem bark powdered with stem bark of <i>Syzygium cumini</i> and this powder is administered for diarrhoea in children.
17	<i>Bauhinia racemosa</i> (Lamk.) (Fabaceae)	Tree	Arichettu	The seeds and bark are used as a fish poison and as an Insecticide.
18	<i>Butea monosperma</i> (Lamk.) (Fabaceae)	Tree	Moduga	Seed paste is administered to cattle to kill intestinal worms.
19	<i>Calotropis gigantea</i> (Linn): (Asclepiadaceae)	Herb	Jilledu	Root bark paste is applied for Elephantiasis.
20	<i>Caryota urens</i> Linn: (Arecaceae)	Tree	Jeeluga	Its sugary sap which is fermented and used as an intoxicating drink by Tribals.
21	<i>Cassia alata</i> (Linn.) (Caesalpinaceae)	Tree	Rella	leaf paste used in skin diseases
22	<i>Chloroxylon swietenia</i> (DC) (Rutaceae) Prodr.	Tree	Billakarrach ettu	Stem bark paste applied for Scorpion- sting.

Table 1. Continued...

S.No	Botanical name	Habit	Local name	Mode of Preparation and uses.
23	Cissampelos pareira (Linn) (Menispermaceae)	Climber	Adavibanka teega	The r The root extract is administered for fever by the Mali tribes. Dosage: Twice a day for 3 days.
24	Cissus quadrangularis (Linn.) (Vitaceae)	Climber	Nalleru.	Stem paste is applied on forehead for headache by the Khondus.
25	Coldenia procumbens (Linn): (Boraginaceae)	Herb	Chepputhatt aku.	Fresh leaves are used for rheumatic swelling and dried plant for boils.
26	Crotalaria retusa (Linn.) (Fabaceae)	Shrub	Nagagiligich a	Roots ground with neem leaves and the paste applied on body for chicken – pox.
27	Curculigo orchioides (Gaerten) (Hypoxidaceae)	Herb	Nela tadi.	The elongated rhizome in used as an indigenous nervine tonic.
28	Dioscorea bulbifera (Linn): (Discoreacea)	Climber	Adavidumpa .	Tubers and bulbils are edible eaten by tribals.
29	Dioscorea oppositifolia (Linn.) (Dioscoraceae)	Climber	Tegadumpa	Tuber are cooked and eaten as starchy food.
30	Diospyros sylvatica (Roxb.) (Ebenaceae)	Tree	Nallagatha	Stem bark pound into the powder and administered orally for snake bite by the Kotias.
31	Elephantopus scaber (Linn) (Asteraceae)	Herb	Eddunaluka aaku	Tribals use the root extract of the species for cough and vomiting.
32	Oroxylum indicum (Linn.) (Bignoniaceae)	Tree	Pampini	Stem barks decoction administered for Jaundice and epilepsy by Nuka dora.
33	Pavetta indica (Linn) (Rubiaceae)	Shrub	Papidi:	Warm leaf paste applied over blisters and ulcers by Khondu, fruits edible.
34	Phyllanthus emblica (Linn.): (Euphorbiaceae)	Tree	Pedda Usiri Chettu.	The fruit is highly medical, being one of the fruits of triphala of ayurveda.
35	Pterocarpus marsupium (Roxb): (Fabaceae)	Tree	Yegisa.	Wood is used as an astringent and toothache the flowers are said to be used in fever.
36	Pterospermum xylocarpum (Gaertn.) (Sterculiaceae)	Tree	Nuli tada	Fruit decoction is administered for stomach disorders by the Nuka dora.
37	Semecarpus anacardium (Linn.) (Anacardiaceae)	Tree	Nalla Jeedi.	The secretion from the pericarp is applied over cuts, heel cracks and sprains.
38	Sida cordata (Burn.f) (Malvaceae)	Herb	Gayapu aaku	Leaf juice mixed with goats milk administered for paralysis.
39	Solanum anguivi (Lamk.,) (Solanaceae)	Shrub	Vankudu	Leaves are applied locally to relieve pains; the juice of berries is used in sore-throat.
40	Sphaeranthus indicus (Linn.) (Asteraceae)	Herb	Bodataram	The root and inflorescence powder with goats milk administered for impotency.
41	Strychnos nux-vomica (Linn): (Loganiaceae)	Tree	Mushini	The seeds are used in rat-bites, venomous reptile bite by the valmiki tribe.
42	Strychnos potatorum (Linn) (Loganiaceae)	Tree	Induba	Stem crushed with black pepper and the decoction administered for asthma.
43	Zizyphus mauritiana (Lamk) (Rhamnaceae)	Shrub	Reguchettu.	The roots are used in fever and to cure wounds and ulcer
44	Zizyphus oenoplia (Linn.) (Rhamnaceae)	Shrub	Parimi	A decoction of the bark is said to promote healing of the wounds.
45	Zornia gibbosa Span. (Fabaceae)	Herb	Dummakolo th	The whole plant ground into a paste, administered orally for dysentery.

These 45 Ethnomedicinal plants are used for different disease like, Dysentery, Asthma, Fever, Headache, Piles and Rheumatic pain etc, (Table.1). The information was collected from 14 respondents both men and women. It was observed that traditional knowledge is related to the age and sex of an individual. Generally old age people have much information about medicinal plants due to their personal experience and interaction with the plants.

The survey indicated that, the study area was rich in medicinal plants useful to treat a wide spectrum of human ailments. The tribal people are treasures of traditional knowledge of plants from utilitarian point of view. They have successful art of curing diseases in several localities of the district. Despite their high medicinal importance, the use of traditional medicinal plants is declining day by day which may be because of the availability of the fast relieving medicines in the market. There are many plant species which were used by the natives in earlier times but are not in use today.

CONCLUSIONS

The popular use of herbal remedies among the primitive tribal people in Dumbriguda Mandal, Visakhapatnam district reflects the revival of interest in traditional medicine. The scientific validation of these remedies may help in discovering new drugs from the plant species. The information on therapeutic uses of plants may provide a great potential for discovering of new drugs and promoting awareness among the people to use them as remedy in health care system. Many medicinal plants occurring have yet to be subjected to rigorous chemical screening and pharmacological investigation.

Acknowledgement

The authors are thankful to the notified and denotified adivasis groups, their vairs, ojhais, bhopas etc. and forest officials who provided valuable information on this subject.

Conflicts of interest: The authors stated that no conflicts of interest.

REFERENCES

- Aruneekumar K Satyanarayana G and Nitewar K (1990) Medicinal plants of Kakinada, East Godavari district, Andhra Pradesh. *Indian Medicine*, 2: 2-4.
- Chandler RF, Freeman L. Hopper SN (1979) Herbal remedies of maritime Indians. *J. Ethnopharmacol*, 1:49 -54.
- Fairbairn JW (1980) Presepective in research on active principles of traditional herbal medicieb, A botanical approach: Identification and supply of herbs, *J. Ethnopharmacol*, 2: 99 -106.
- Gamble J.S. and Fischer, C.E.S (1967) Flora of the Presidency of Madras, Vol. 1-3, *Calcutta*.
- Gamble JS (1915-36) Flora of Presidency of Madras. Adlard and Son Lrs Lonswn 1 55.
- Hemadri, K (1987) Andhra Pradesh Vanamulikal. Chemiloids Vijayawada.
- Hemadri, K(1987b) Medicinal plant wealth of Cuddapah district, *Ind. Med* 36(1): 8- 11
- Hooker, J.D (1897) The flora of British India, Vol. 1-7, Reeve, L. Co. Ltd. *Ashford, Kant, London*.
- Jain SK and RR Rao (1977) Field and Herbarium Methods. (Today and Tomorrow Publishers, New Delhi).
- Jain, S.K. and Rao, R.R (1977) Field and Herbarium methods. *Today and Tomorrow publishers, New Delhi*.
- Jeevan R, Raju RRV (2001) Certain potential crude drugs used by tribals of Nallamalais, Andhra Pradesh for skin diseases. *Ethnobotany*; 13: 110-115.
- Narayana Rao, K. Thammanna, P. and Das, K.S.K (1981) Plant Wealth of Tirumala T.T.D. Press, Tirupathi.
- Matthew, K.M (1983) The flora of Tamil Nadu Karnatic. Vol. 1-3. *The Rapinat Herbarium St. Joseph's College, Tiruchurapalli, India*.
- Rao KP, Sreeramulu SH (1985) Ethnobotany of selected medicinal plants of Srikakulam District, Andhra Pradesh. *Ancient Science of Life*; 4(4): 238-244.
- Ramarao N (1988) The Ethnobotany of Eastern Ghats in Andhra Pradesh, India, Ph.D. thesis, Bharathiar University, Coimbatore; 1988.
- Rangacharyulu D (1991) Floristic Studies of Chittoor district, Ph.D. Thesis, S. V. University, and Tirupathi.
- Ravisankhar T (1990) Ethnobotanical studies in Adilabad and Karimnagar districts of Andhra Pradesh, India. Ph.D.Thesis, Bharathiar University, Coimbatore.
- Rao MKV, Prasad OSVD (1995) Ethnomedicines of tribes of Andhra Pradesh. *Journal of Non-Timber Forest Products*; 2: 105-114.
- Rajendran A, Ramarao N, Henry AN (1966) Hepatic stimulant plants of Andhra Pradesh, India. *Journal of Economic and Taxonomic Botany (Addl. Ser.)*; 12: 221-223.
- Reddy YY, Rao KN and Thammanna P (1979) Use of Plants as medicine in the nearby villages of Tirupati. T.T.D. Publications, Tirupati. Chittor and Ananthapur districts of Andhra Pradesh, India. *Ethnobotanical leaflets* (International Web Journal).
- Reddy MB, Reddy KR, Reddy MN (1991) Ethnobotany of Cuddapah District, Andhra Pradesh, India. *Pharmaceutical Biology*; 29(4): 273-280.
- Reddy MH, Reddy RV, Raju RRV (1996) Perspective in tribal medicines with special reference to Rutaceae in Andhra Pradesh. *Journal of Economic and Taxonomic Botany*; 20:

- Reddy KN, Subbaraju GV (2005) Ethnomedicine from Maredumilli region of East Godavari district, Andhra Pradesh. *Journal of Economic and Taxonomic Botany*; 29(2): 476-481.
- Reddy KN, Subbaraju GV (2005) Ethnobotanical medicine for rheumatic diseases from Eastern Ghats of Andhra Pradesh. *Recent Trends in Plant Sciences*; 2005; pp.128-138.
- Thammanna and Rao, K. N. (1990) Medicinal Plants of Tirumala. T. T. D. Tirupati, (A.P).
- Tarafadar CR (1986) Ethnobotany of Chotnagpur, less known and unknown 38 medicinal plants used by the tribals. *Folklore*, 27:119 – 22.
- Thammanna P, Narayana Rao K and Madhavachetty K (1994) Angiospermic wealth of Tirupathi, *T.T.D. Press, Tirupathi*.
- Vedavathy S and Rao KN (1990) Nephroprotectors – folk medicine of Rayalaseema, A.P. *Anci. Sci. Life*, 9: 164- 167.
- Venkanna P (1990) Medicinal plant wealth of Krishna District (Andhra Pradesh) – A preliminary survey. *Anci. Sci. Life*, 102: 137 – 140.
- Venkaiah M (1998) Ethnobotany of some plants from Vizianagaram district, Andhra Pradesh. *Flora and Fauna*, 4: 90 – 92.