

Folklore treatment of skin diseases by the tribes of G. Madugula Mandalam, Visakhapatnam District, Andhra Pradesh, India

Padal, S. B., ^{1*} B. Sandhya sri^{2*} P. Chandrasekhar^{3*} & Y. Vijayakumar⁴.

^{*1}. Department of Botany, Mrs. A.V. N. College, Visakhapatnam-530001, Andhra Pradesh, India

^{*2}. Department of Botany, Mrs. A.V. N. College, Visakhapatnam-530001, Andhra Pradesh, India

^{*3}. Department of Botany, Govt. Degree College, Yelamanchi, Visakhapatnam, Andhra Pradesh, India

^{*4}. Department of Botany, Dr. V. S. Govt. Degree Krishna College, Visakhapatnam-530017, Andhra Pradesh, India.

Abstract: Plant species used in the treatment of skin diseases among the indigenous communities of G. Madugula Mandalam, Visakhapatnam District was conducted between 2012-2013. Thirty three plant species belonging to 23 families were found to be used specifically in the treatment of various skin diseases.

Keywords: Folklore treatment, Skin diseases, Tribal people, G. Madugula Mandalam, 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 20th 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.

Plants are of immense value to human health and roughly 80% of world's population relies on them for cure of various ailments. (Chauhan, 1999). The world health organization estimates that about 80% of the population of most developing countries relies on herbal medicines for their primary healthcare needs (De Silva, 1997). Indigenous knowledge on natural resources, utilization of medicinal plants not exceeding the resilience of the surrounding environment is regarded as an important measure of sustainable plants biodiversity conservation. (Kala, 2005). Without proper documentation of such knowledge, the cultural heritage is loosing and also the exploitation, by the patent rights, communities and the countries who invented the material and the process have been facing short fall in this regard. The age-old tribal knowledge of plants is an important aspect of Ethnobotanical research. Tribal people are important for their treasured and unique knowledge of plant. Wealth and for continuous research of new source of herbal drugs and other aspects of plants.

The plants were used either separately or in combination with other plants. These ethnomedicinal data may provide a base to start the search the new compounds related to phytochemistry, pharmacology and pharmacognosy. Attention should also be made on proper exploitation and utilization of these medicinal plants.

II. Study Area

The present studies revealed that totally 30 modes of treatment were followed by the rural people of G. Madugula Mandalam, Visakhapatnam district to cure skin disease. Visakhapatnam district is one of the North Eastern Coastal district of Andhra Pradesh and it lies between 17° – 15¹ and 18° - 32¹ Northern latitude and 18° - 54¹ and 83° - 30¹ 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.

Gangaraju Madugula with an area of 544 sq. km. (4.8% of the area of the district) is one of the mandals of the Visakhapatnam district of Andhra Pradesh. It lies between 18°01¹ N latitude and 82°30¹E longitude. According to 2001 census the total population in the mandal is 50685. Of these 47625 are scheduled tribes (% of ST is 93.96). From centuries the forests of G. Madugula mandal have been inhabited by a number of tribes who have been maintaining distinct ways of life, beliefs, traditions cultures, customs and myths.

In this Mandal the major tribal groups are Bagatha, Valmiki, Kammara, Konda dora, Kotia, Kulia, Malis, Manne dora Muka dora and Gouds where as the primitive tribal group (PTG) comprise Khonds, Gadaba and Porja (Porangi porja). Most of the tribes except Bagatha 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.

III. Material and Methods

Several Ethnobotanical surveys were conducted during the period of 2012-2013 in tribal areas of Paderu Division, Visakhapatnam District, and Andhra Pradesh. An extensive data sheet was prepared regarding the utility of plants in food and medicine, their application, doses and duration. The Ethnobotanical data were obtained from tribal people, Vaidyas, Ojhas, Village Pradhan and many other experienced informants having knowledge of herbal drugs used by different tribal people. The plants were collected with the help of floristic literature (Oomanchanl and Shrivastava 1996), and their herbarium was prepared as per standard protocol as described by Varghese, (1996); Dwivedi and Pandey, (1992). The collected plants thus pressed, mounted and Properly numbered, were identified with the help of local floras and other useful works in Hooker, (1872-1897); Haines, (1921-1924).

Table. 1. Ethnomedicinal plants used by tribal people of G. Madugula Mandalam.

S. No	Village Name	Tribe Name	Mode of administration(Scientific name, Family, vernacular name of the plant)	Type of disease
1	Kommulama midi	Bagatha	*Deer horn is ground with the fresh juice of <i>Curcuma longa</i> L. (Family: Zingiberaceae, Pasupu) along with water and the paste is applied.	Leucoderma
2	Kokkirapalli	Valmiki	*Dried leaves of <i>Calotropis gigantean</i> (Linn.) R.Br. (Family: Asclepiadaceae, Jilledu) are burnt and the ash is mixed with ghee and is applied.	Eczema
3	Karakapalli	Konda Dora	*Fruit of <i>Terminalia chebula</i> Retz. (Family: Combretaceae, Karaka) and <i>Melia dubia</i> Cav. (Family: Meliaceae, Munnurukarakayya) root of <i>Pedilanthus tithymaloides</i> (Linn.) Poir. (Family: Euphorbiaceae, Nallachithramulam) <i>Pergularia daemia</i> (Forssk.) Choiv. (Family: Asclepiadaceae, Dushtaputega) are ground and the paste is applied.	Psoriasis
4	Palamamidi	Kondhu	*Fruits of <i>Melia dubia</i> Cav. (Family: Meliaceae, Munnurukarakayya) are ground and the paste is mixed with lemon juice and applied.	Leucoderma
5	Bandhaveedi	Porja	*Seeds of <i>Pongamia pinnata</i> (Linn.) Pierre. (Family: Fabaceae, Ganuga) are ground and the paste is applied.	Allergy
6	Sadeku	Bagatha	*Leaves of <i>Azadirachta indica</i> A.Juss. (Family: Meliaceae, Vepa) with turmeric in equal parts with a pinch of salt are ground and the paste is applied over the parts.	Allergy
7	Baram	Bagatha	* Whole plant of <i>Andrographis paniculata</i> (Burm.) Wall. (Family: Acanthaceae, Neelavemu) is given internally.	Blisters
8	Nittaputtu	Valmiki	*Leaves of <i>Ageratum conyzoides</i> Linn. (Family: Asteraceae, Tellagandamurugam) <i>Azadirachta indica</i> A. Juss. (Family: Meliaceae, Vepa) with garlic and turmeric are ground and the paste is applied.	Ringworm
9	Rachapalli	Konda dora	*Whole plant powder of <i>Coldenia procumbens</i> Linn. (Family: Boraginaceae, Hamsapadi) is mixed with coconut oil and is applied.	
10	Kandikilanka	Konda dora	*Warm leaf paste of <i>Combretum roxburgii</i> Spreng. (Family: Combretaceae, Suritithivva) or <i>Siegesbeckia orientalis</i> Linn. (Family: Asteraceae, Kampumokka) is applied to cure blisters.	Blisters
11	Vanjari	Bagatha	*Stem bark of <i>Bombax ceiba</i> Linn. (Family: Bombacaceae, Buruga) is ground with urine of an infant and the paste is mildly heated and applied on blisters.	Blisters
12	Gemmela	Valmiki	*The leaf juice of <i>Zizyphus xylopyrus</i> (Retz.) Willd. (Family: Rhamnaceae, Parimi) is used to cure itching of the soles during rainy season.	Itching
13	Kilthari	Bagatha	*The root paste of <i>Mimosa pudica</i> Linn. (Family: Mimosaceae, Attipatti) mixed with coconut oil is used to cure skin diseases.	Eczema
14	Kulupadu	Mali	*Rhizome paste of <i>Gloriosa superba</i> Linn. (Family: Liliaceae, Nabhi) is applied over the affected parts to cure all types of skin allergies	Allerge
15	Madhulabanda	Kotia	*Leaves of <i>Aristolochia indica</i> Linn. (Family: Aristolochiaceae, Telleswari) with turmeric are ground into fine paste and applied	Itching

			for skin diseases.	
16	Nurmathi	Konda dora	*Juice of the whole plant of <i>Evolvulus alsinoides</i> (Linn.) Linn. (Family: Convolvulaceae, Vishnukrantam) is used to cure various types of skin patches.	Skin patches
17	Palakonda	Valmiki	* <i>Cassia tora</i> Linn. (Family: Caesalpiniaceae, Tellatantem) leaves are heated and made into a bundle with a thin cloth and is used for fomentation of legs and hands with fungal infection to stop itching and to promote healing.	Itching
18	Aragadapalli	Nukadora	*Handful leaves of <i>Azadirachta indica</i> A.Juss. (Family: Meliaceae, Vepa) and <i>Lawsonia inermis</i> Linn. (Family: Lythraceae, Gorinta) 25 grams of fresh rhizome of <i>Curcuma longa</i> are ground finely and the paste is applied.	Scabies
19	Luvvasingi	Valmiki	*Bark or seeds of <i>Madhuca longifolia</i> (Koen.) MacBride. (Family: Sapotaceae, Ippa) is ground finely and the paste is applied.	Psoriasis
20	Vatalamami di	Khondu	*Whole plant of <i>Phyllanthus amarus</i> K. Chum. & Thonn. (Family: Euphorbiaceae, Nelausiri) is ground with buttermilk and is applied.	scabies
21	Boddagondi	Konda dora	*Tender leaves of <i>Holoptelea integrifolia</i> (Roxb.) Planch. (Family: Ulmaceae, Nermalinara) are ground with water and applied on the affected part to cure ringworm.	Ringworm
22	Kothuru	Porja	*Whole plant of <i>Andrographis paniculata</i> (Burm.) Wall. (Family: Acanthaceae, Neelavemu) roots of <i>Clerodendrum serratum</i> (Linn.) Moon. (Family: Verbenaceae, Bommalamarri) and <i>Alstonia scholaris</i> R.Br. (Family: Apocynaceae, Eedakulapala) are ground and is made into pills and taken internally to cure.	Scabies
23	Gurrai	Konda dora	*Leaves of <i>Centella asiatica</i> (Linn.) Urbn. (Family: Apiaceae, Saraswataaku) and <i>Ageratum conyzoides</i> Linn. (Family: Asteraceae, Tellagandamurugam) are ground finely and are applied.	Scabies
24	Kantavaram	Konda dora	*Young leaves of <i>Holoptelea integrifolia</i> (Roxb.) Planch. (Family: Ulmaceae, Nermalinara) are ground into paste and is applied.	Scabies
25	Solabham	Bagatha	*Leaves of <i>Lawsonia inermis</i> Linn. (Family: Lythraceae, Gorinta) and <i>Indigofera cassioides</i> DC. (Family: Fabaceae, Chillimokka) are ground with water and the paste is applied.	Itches
26	Gaduthuru	Valmiki	* Handful of young leaves of <i>Cassia fistula</i> Linn. (Family: Caesalpiniaceae, Rela) is ground with curd, left for a night for fermentation and is applied day time on the body to cure.	Scabies & Itches
27	Mahadevapuram	Bagatha	* Burnt dried leaf powder of <i>Calotropis gigantean</i> (Linn.) R.Br. (Family: Asclepiadaceae, Jilledu) is mixed with ghee or oil and is applied to cure.	Scabies
28	Maddigaruvu	Gadaba	*Infusion of the bark of <i>Securinega virosa</i> (Willd.) Bail. (Family: Euphorbiaceae, Ballichettu) and leaves of <i>Coccinia grandis</i> (Linn.) Voigt. (Family: Cucurbitaceae, Kakidonda) is used internally.	Eruption
29	Bongaram	Bagatha	*Fruits and leaves of <i>Thespesia populnea</i> (Linn.) Soland.ex Correa. (Family: Malvaceae, Gangaravi) are applied externally.	Psoriasis
30	Killamkota	Kotia	*Leaf juice of <i>Aristolochia bracteolata</i> Lamk. (Family: Aristolochiaceae, Gadidagadapa) with castor oil is applied to cure.	Eczema

IV. Results and Discussion

Our study provides information based on 33 plant species of 23 families, commonly used for skin cure by the tribal people of G. Madugula Mandalam, Visakhapatnam District, and Andhra Pradesh. The detailed information of plant species with their parts used as traditional medicine for skin problems has also been presented in above enumeration part. A number of medicinal plants are used traditionally by the tribal people to

cure skin disorders. Most of the people in G. Madugula Mandalam dominated villages were almost free from serious skin problems. This could be due to their life style as they mostly remain exposed to environment. This may have developed resistance against skin disease pathogens due to use of traditional medicines followed by sanitation awareness measures which was lacking in the past (Bisht, 2006). This is a great change observed because old literatures indicated that these tribes used to leave such serious problems upon divine power (Singh and Maheshwari, 1994).

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 skin diseases which may also be a potential source of modern drug industries.

Acknowledgements

The authors are thankful to Herbarium Keeper, Department of Botany, Mrs. A.V.N.Collage, for his help in identifying the plant sample. The authors also wish to acknowledge the help received from the local and tribal people of G. Madugula Mandalam, Visakhapatnam district, Andhra Pradesh, India.

Reference:

- [1]. Anonymous. Medicinal plants in skin care, In: Central Institute of Medicinal and Aromatic plants, (CIMAP, Luck now, India), 1994, 425-430.
- [2]. Bisht BS. Tribes of Uttarakhand: A study of education, health, hygiene and nutrition. Delhi: Kalpas Publication, 2006, pp. 236-267.
- [3]. Chauhan N.S., Medicinal and Aromatic plants of Himachal Pradesh, 1999. Indus Publ. Co.NewDelhi.
- [4]. De Silva T. Industrial utilization of medicinal plants in developing countries, In: Medicinal plants for forest conservation and healthcare, 1997. Edited by B. Odekar G., Bhat, KKS, B. Uraly J. Vantomme P. (Non wood forest products), No. 11, FAO, Rome, Italy: 38-48.
- [5]. Dwivedi S.N. and Pandey A. Ethnobotanical studies on wild and indigenous species of Vindhyan Plateau, 1999, 1. Herbaceous flora, J. Econ Taxon Bot.:143-150.
- [6]. Dwivedi S.N. Ethnobotanical studies and conservational strategies of wild and Natural Resources of Rewa district, Madhya Pradesh, 2003. JECONTax Bot., (1): 233-244. **10**
- [7]. Haines H.H. The Botany of Bihar and Orissa 6 parts, 1921-1924. London, Reprinted 1961, Botanical Survey of India, Calcutta, 1-3.
- [8]. Hooker J.D., (Hook F.) (Ed.). The flora of British India, 1872-1897. Reeve and Co. London. Reprinted 1973. Bishan Singh Mahindra Pal Singh, Dehradun and Periodical experts, Delhi: 1-72.
- [9]. Kala C.R., Indigenous uses, population density and conservation of threatened medicinal plants in protected areas of the Indian Himalayas, 2005. Conserv Biol., (2): 368-378.
- [10]. Kapur S.K. Review on ethno-medico plants for skin affections, 1991. India Drugs, (5): 210-223.
- [11]. Oomanchanl, M. and Shrivastava J.L. Flora of Jabalpur, 1969. Scientific Publishers, Jodhpur.
- [12]. Samwatsar, S and Diwanji V.B. Plants used for skin diseases, cuts, wounds and bruises by the tribal of Western M.P, 1996. J.Econ Tax Bot, Add Series, :122-131.
- [13]. Sharma L., Agarwal G. and Kumar A. Medicinal Plants for skin and hair care, 2003. Indian J. Traditional knowledge, (1): 62-68.
- [14]. Singh K.K. and Prakash A. Traditional medicinal Plant therapy used for skin care by the tribals of Uttar Pradesh, 1996. India. J. Non Timber Forest Prod, (1&2): 51-55.
- [15]. Singh, KK, Maheshwari JK. Traditional Phytotherapy of some Medicinal Plants Used by Tharus of the Nainital District, Uttar Pradesh, India, 1994. Int. J. Pharmacogn., 32(1): 51-58.
- [16]. Varghese E. Applied Ethnobotany, A case study among the Khairas of Central India, 1996. Deep Publication, New Delhi.
- [17]. Murthy EN, Pattanaik C, Reddy CS, & Raju VS, Traditional Knowledge of Ethnic tribes in Pranahita wildlife sanctuary, Andhra Pradesh. *Biodiversity and Sustainable Livelihood*. (Vedams Publications), 2010. 35-44.
- [18]. Gamble JS & Fischer CEC, *Flora of the Presidency of Madras*, 1935. (London. rep. ed. 1957: BSI, Calcutta).
- [19]. Hemadri K, Sarma CR & Sasibusan RS, Medicinal plant wealth of Andhra Pradesh, PartI. *Anci. Sci. Life* 6, 1987. 167-186.
- [20]. Hemadri K, Contribution to the medicinal flora of Karimnagar and Warangal districts, Andhra Pradesh. *Indian Med*, 2, 1990. 16-28.