

Ethnobotanical Survey of Medicinal plants along with Godavari Basin region Districts from Nirmal to Mancherial, Telangana, India

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ABSTRACT

The present paper exclusively deals with the study of medicinal plants along with Godavari basin from Nirmal to Mancherial districts of Telangana state India. Folk medicinal plants which are used for treating various ailments and diseases in their day today life. They practices folk medicines to take care of their health and related problems primarily from the plant resources available within and the vicinity of their environment. They are settled agriculturist and have a very rich knowledge on plant based resources utilization for their survival since time immemorial. During the investigation it has recorded 35 species belonging to 27 families and which are widely used as medicines by this ethnic community's. Therefore, it is suggested that the high diversity of bio-resources needs to be conserved for livelihood sustenance of the future generation.

Keywords : Ailments, Diseases, Asteraceae, Euphorbiaceae, Blood Pressure, Headache, Stomache

I. INTRODUCTION

The use of herbal medicines by tribal communities is inclined by distinct socio-cultural practices, religious, beliefs, support of traditional ability and services of traditional medicine men. These people have close relationship with their ambient environment and ecology and basically depend on it for primary health care system, because of they live in remote areas as compared to modern facilities. India is rich in its tribal population from the immemorial time with their traditional knowledge system which deals with the many significant aspects and the health issues of tribal communities. The tribal people get their cure with the help of their traditional knowledge & understanding of nature and local practitioners and own herbal homework. The records of traditional knowledge on medicinal plants have been considered to support the discoveries of new drugs for the advantage of mankind. Medicinal plants are the base of many societies, for their primary health care system. Tribal people are the environment people who live in close harmony with the nature and sustained by the tribal and other forest dwellers throughout the World. In primary health care, about 80% of traditional medicines are used which derived from plant. The use of these herbal remedies is not only cost

effective, easily available in environment or surrounding, but also safe and almost free from serious side effects as compared to modern medicine. Historically plants have played a vital role in medicine system. Throughout observation and experimentation, and understanding of nature, human beings have learnt that plants encourage health and wellbeing. India has a long ritual of wise conservation strategies and management that are useful to people and society. Biodiversity is the most valuable part of nature and society but least appreciated resource, and it can be a key to the protection of the world. The village elders and headmen, local people, farmers and tribal have fantastic traditional knowledge about for health reasons happening thousands of years ago and is still part of medical practices by folks of various states of Indian sub-continent as well as many other countries including China middle East, Africa Egypt, South America and other developing countries of world.

II. Study Area

Godavari enters into Telangana in Nizamabad district at Kandakurthy where Manjira, Haridra Rivers joins Godavari and forms Triveni Sangamam. The river flows along the border between Nirmal and Mancherial districts in the north and Nizamabad, Jagityal,

Peddapalli Ramagundam districts to its south. About 12 km (7.5 mi) after entering Telangana it merges with the back waters of the Sriram Sagar Dam. The river after emerging through the dam gates, enjoys a wide river bed, often splitting to encase sandy islands. The river receives a minor but significant tributary Kadam river. It then emerges at its eastern side to act as state border with Maharashtra only to later enter into Bhadradi Kothagudem district. In this district the river flows through an important Hindu pilgrimage town – Bhadrachalam. The river further swells after receiving a minor tributary Kinnerasani River and exits into Andhra Pradesh



Figure 3. Godavari river map shown in old Adilabad district map

III. METHODS AND MATERIAL

The information was gathered during the study period from 2016 June -2017 June through interviewed conducted to the village elders and practitioners from the Godavari basin from Nirmal to Mancherial districts of Telangana state India. The details were recorded in the information on note books. The field survey was conducted in the respective localities and the plant materials are collected by following the areas of Godavari basin region they are Basar, Son, Pedda ballala, Kalmagru, Chinthaguda, Lingapur, Mancherial, Narsapur, Indaram and Asanand. All the informations presented in the paper are the actual version of the people interviewed during the study period. The specimens were identified with the help of adjacent floras, the Flora of Madras, Flora of Adilabad (Pullaiah).



Figure 1. Godavari river map shown in India map

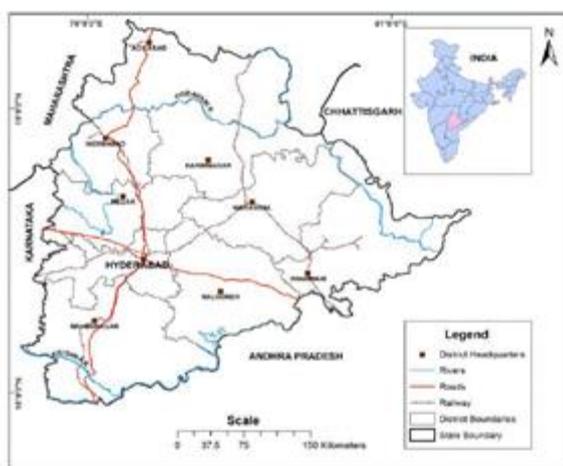


Figure 2. Godavari river map shown in Telangana map

Medicinal Plants used by Godavari Basin region people

1. *Melia azaderach* Linn.

Vernacular name: vepa chettu

Family: Meliaceae

Part used: Barks

Treatment: Blood pressure, Acidity and Ringworm infection.

2. *Chenopodium alba* Linn.

Vernacular name: pindikura

Family: Chenopodiaceae

Part used: Leaves

Treatment: Headache, fever and blood pressure.

3. Cannabis sativa Linn.

Vernacular name: gongura

Family: Cannabaceae

Part used: Leaves

Treatment: Bone fracture, Sprain and Muscle pain

4. Ricinus communis Linn.

Vernacular name: amudam

Family: Euphorbiaceae

Part used: Leaves

Treatment: Sprain and Muscle pain

5. Dichrocephala integrifolia (Linn.f.) Kuntze

Vernacular name: pankaja chettu

Family: Asteraceae

Part used: Leaves

Treatment: Fungal infection

6. Acorus calamus Linn.

Vernacular name: vasa chettu

Family: Araceae

Part used: Root

Treatment: Stomache, Fresh roots extracts are taken for stomache.

7. Cucurma longa Salisb.

Vernacular name: pasupu

Family: Zingiberaceae

Part used: Rhizome

Treatment: skin infections

8. Centella asiatica Linn.

Vernacular name: saraswathaku

Family: Umbelliflorae

Part used: Whole plant

Treatment: Gastritis, Ulcer and Blood pressure. The whole plant is taken raw or boiled with water and taken for gastritis/acidity, ulcer pain and blood pressure.

9. Erythrina variegata Linn.

Vernacular name: Badine chettu

Family: Fabaceae

Part used: Bark

Treatment: Poison, a handful of the fresh peelings of the bark, the endodermis layer is crush with water and the decoction is use as an antidote.

10. Artemisia vulgaris Buch. Linn.

Vernacular name: Machi patram

Family: Asteraceae

Part used: Leaves

Treatment: Dandruff, Cuts and Wounds. The paste of the leaves is pasted on the wounds and cuts. The leaves crush is also use as shampoo for dandruff.

11. Eupatorium adenophorum Spreng

Vernacular name: rati puvvu

Family: Asteraceae

Part used: Leaves

Treatment: Acidity, Cuts and Wounds. A handful of fresh leaves are crush with a few drops of water or saliva and the juice is squeezed and applies on the affected part.

12. Bombax ceiba Linn.

Vernacular name: buruga

Family: Malvaceae (Bombacaceae)

Part use: Bark

Treatment: Snake bites. The fresh peeling of the bark is crush in the form a paste and stuck on the affected portion of the snake bites to prevent swellings and quick healing. It is also use on the cattle for the same purposes.

13. Oroxyton indicum (Linn.) Benth. ex Kurz.

Vernacular name: pampena

Family: Bignonaceae

Part used: Bark and Root

Treatment: Cancer, Diarrhoea, Diabetes and Hypertension. Decoction of the freshly peelings of the bark and outer covering of the root is taken for treating cancer, diabetes and hypertension.

14. Achyranthes aspera Hook. F.

Vernacular name: uthareni

Family: Amaranthaceae

Part used: Leaves and Roots

Treatment: Malarial fever, abdominal pain, Indigestion and Urine disorder. Decoction of fresh leaves, seeds and fruits is taken for acidity, abdominal pain, indigestion, appetizers and preventing reoccurring of malarial fever and promote urine flow.

15. Zingiber officinale Rosc.

Vernacular name: allam

Family: Zingiberaceae

Part use: Rhizome

Treatment: Cough, Cold and fever, Throat and Witch spelled. The decoction is used for clearing the throat so as to produce a clear voice for singing. Also the rhizome is used for protection against the spell of evils by the witch or from the evil spirit.

16. Momordica charantia Linn.

Vernacular name: kakarakaya

Family: Cucurbitaceae

Part used: Leaves

Treatment: Fever, Headache, Blood pressure and Cold.

17. Passiflora edulis Lindl.

Vernacular name: passion fruit

Family: Passifloraceae

Part used: Fruit and leaves

Treatment: Dysentery and Diarrhoea. A handful or two bunches of fresh leaves are boiled with water and the decoction as well as the leaves is taken for treating dysentery, diarrhea and stomach upset. The fruit is also taken alone or in the form of chutney for the same treatment.

18. Colocassia esculenta (Linn.)

Schott Vernacular name: Chama gadda

Family: Araceae

Part used: Rhizome/Tuber

Treatment: Labour pain. The rhizome/tubers are cooked in significant amount and given to the pregnant mother during labour pain for easy and quick delivery.

19. Musa paradisiaca Linn.

Vernacular name: Arati chettu

Family: Musaceae

Part used: Fruit

Treatment: Diarrhoea. One to three ripe bananas is taken at a time to subdued or stopped loose motion/ diarrhea.

Unripe banana is roasted and taken for serious condition for the same ailment.

20. Psidium guajava (Linn.) Kuntze

Vernacular name: jama chettu

Family: Myrtaceae

Part used: Fruit and young tender Leaves

Treatment: Dysentery and Diarrhoea. One or two handful bunches of young tender leaves are boiled and the decoction is taken for treating diarrhea and serious dysentery.

21. Glochidion oblatum J. D. Hooker

Vernacular name: pala

Family: Euphorbiaceae

Part used: Stem and Root

Treatment: Dysentery. Fresh stem and roots extracts are taken for dysentery.

22. Embilica officinalis Gaertn.

Vernacular name: usiri chettu

Family: Euphorbiaceae

Part used: Fruit

Treatment: Cold and Cough. 3-5 numbers of fruits are eaten after every meal along with warm water for treating cold and cough.

23. Mentha arvensis Linn.

Vernacular name: menthikura

Family: Lamiaceae

Part used: Young shoot and Leaves

Treatment: Stomache, Stomach upset and Constipation.

A bunch of young shoots and the leaves are either taken raw or boiled with water and the whole content is consumed for stomache, stomach upset and constipation.

24. Chrysanthemum morifolium (L) Desmond

Vernacular name: chamanthi

Family: Asteraceae

Part used: Leaves

Treatment: Cough, diarrhea and dysentery. Five to ten young leaves are raw chewed and taken for cough, diarrhea and dysentery.

25. Abrus precatorius Linn.

Family: Fabaceae

Vernacular name: gurivinda

Part used: Leaf, seed and root decoction.

Treatment: Ratti Fever, asthma, chest pain, tuberculosis.

26. Aconitum atrox (Buehl) Mukherjee

Family: Ranunculaceae

Vernacular name: chaya

Part used: Rhizome

Treatment: Rheumatism, neuralgia, paralysis, puerperal fever

Rhizome paste fried in Ghee is externally used.

27. Aegle marmelos Correa

Family: Rutaceae

Vernacular name: maredu

Part used: leaves and fruits

Treatment: Diarrhoea Leaf paste and fruit decoction.

28. Berberis chitria Lindl.

Family: Berberidaceae

Vernacular name: Kasthuri pushpa

Part used: Fruit, bark and root.

Treatment: Jaundice, eye disorders

29. Bergenia ciliata (Haw.) Sternb.

Family: Saxifragaceae

Vernacular name: Konda pindi

Part used: roots and leaves

Treatment: Kidney stone, Sores, Swellings Root decoction, Leaf juice.

30. Evolvulus alsinoides L.

Family: Convolvulaceae

Vernacular name: vishnukantha

Part used: Plant and flower extracts

Treatment: Cough, cold, asthma, bronchitis..

31. Rauvolfia serpentina Benth.

Family: Apocynaceae

Vernacular name: Sarpgandha

Part used: Roots.

Treatment: Fever, anxiety, epilepsy, intestinal & nervous disorders.

32. *Syzygium cumini* (L.) Skeels

Family: Myrtaceae

Vernacular name: Neredu

Part used: Fruit and bark.

Treatment: Diabetes.

33. *Terminalia bellirica* Roxb.

Family: Combretaceae

Vernacular name : Tani kaya

Part used : Fruit extract.

Treatment: Stomach problem.

34. *Withania somnifera* Dunal

Family: Solanaceae

Vernacular name: Ashwagandha

Part used: Leaf juice Root powder.

Treatment: Urinary disorders, fever, Insomnia.

35. *Zanthoxylum armatum* DC.

Family: Rutaceae

Vernacular name: Tejasvini chettu

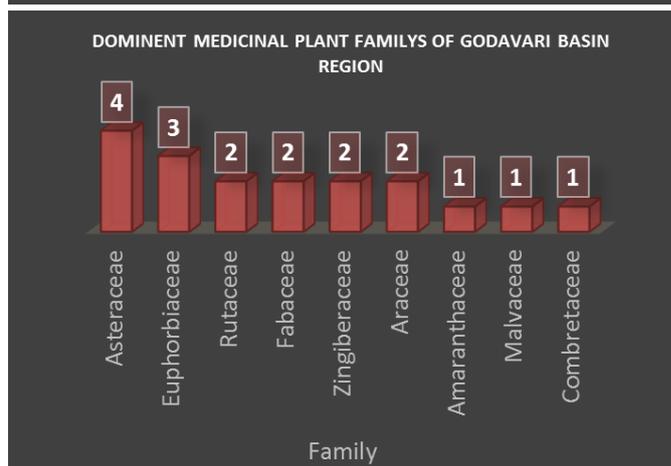
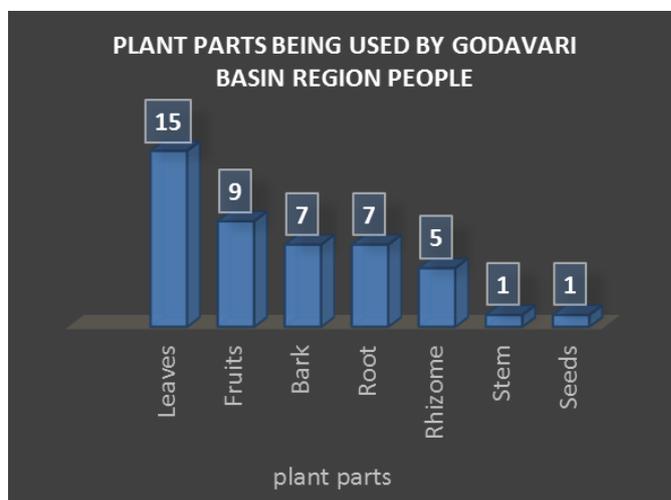
Part used: Fruit-powder, Stem bark.

Treatment: Toothache, Tooth decay.

IV. RESULTS AND DISCUSSION

The present study is the first of its kind with reference to Folk medicinal plants of the Godavari basin from Nirmal to Mancherial districts of Telangana state, India, which has reveals the use of diverse plants consisting of 27 families and 35 species for treating various ailments and diseases in a traditional method. It is observed that many of the plant species that are used by them have a broad spectrum for treating for various diseases with the same plant. The thirty common diseases that are prevailing amongst the community are treated with 35 species which are available in their surroundings. The whole plant, stem, bark, seeds and fruits are moderately used by the Godavari basin region people as medicinal purposes. The most common plant used for fever and headache is the leaves of *Mormodica charantia*. The indigenous people considered this plant as a panacea and heavily depended on the plant for all purposes for treating the sick persons. The fruit of *Aegle marmelos* is considered a potent for treating diarrhoea, dysentery and

stomach related problems and the dry fruit is preserved and kept throughout the year in every home. The fruit and the seeds of *Solanum* are dried and preserved and kept at home throughout the year for any eventuality among the family for treating several diseases such as cold, fever, headache, stomachache and blood pressure. These are some of the important medicinal plants for the indigenous people as a home remedy since time immemorial. The most dominant family of the present study is Asteraceae with 4 species. The second most important family with a record of 3 species as medicinal plants during the present survey is Euphorbiaceae. Therefore there is a dearth need for conservation of these precious medicinal plants for further scientific study to harvest its constituents to cater the needs of vibrant healthcare products in future.



V. CONCLUSION

The Godavari basin region people from Nirmal to Mancherial districts are settled agriculturalist and heavily depended upon the cultivated and wild

plants for their survival as they live at the proximity of the forest. Thorough scientific study is required so as to tap the plant rich resources with special reference to the Godavari basin folk medicinal plants, which, there is a probability of discovering new compounds for developing into a modern medicine. They practiced organic farming since time immemorial and consumed the products which are free from hazardous elements that keep them healthy. Therefore there is an urgent need for conservation and management of these precious medicinal plants for sustainable use and scientific study.

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