



## THE STUDY OF TRIBAL ETHNOMEDICINAL PLANTS OF GADCHIROLI DISTRICT OF MAHARASHTRA STATE (INDIA)

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Communicated : 18.12.19

Revision : 05.01.2020  
Accepted : 25.01.2020

Published: 30.01.2020

### ABSTRACT:

The present study focuses on the ethno-medicinal plants used by different tribes of the Gadchiroli district of Maharashtra state. The study enumerates 50 plant species belonging to 33 families used by the tribal herbal healers, called Vaidu, of the Gadchiroli district. The information on plants was collected by interviewing the traditional herbal healers. These plant species are helpful in the treatment of different health problems like Skin diseases, Stomachache, wound, Cough, Asthma, Diarrhea, Jaundice, Cold, Fever, Headache, Diabetic, Arthritis, Rheumatism, Anemia, Eye diseases, Paralysis, Piles etc. The collection and documentation of the traditional use of plants is very crucial for conservation of the age-old traditional knowledge, traditions and culture. More attempts should be made to authenticate and evaluate the efficacy of these herbs and products used by the tribal communities of Gadchiroli district.

**Key words:** - *Ethnomedicinal plants, Gadchiroli district, Vaidu, Conservation, Tribal Communities*

### INTRODUCTION:

Since time immemorial human society has developed a close relationship with the plant in their vicinity. The basic needs of human beings are fulfilled to a large extent by plants and plant products. Most importantly plants have been used as a source of medicine for along. Plants and their products have been used in various traditional systems of medicine throughout the world. Ethnomedicine or traditional medicines are more popular because of their low cost and benefits without side effects as compared to modern medicines. There has been a huge growth in the demand for herbal medicines globally. Medicinal plants form the raw materials for both traditional and conventional medical preparations since most of people choose herbal medicines than conventional medicines (World Health Organisation). Herbal remedies form an integral part of healing and are considered to be the oldest forms of health care known to mankind on earth.

Indian system of medicine uses around 2,500 plant species belonging to more than 1000 genera (Arora, 1977). In India, more than 43% of the total flowering plants are reported to be of medicinal importance (Pushpangadan, 1995). About 90% of these grow wild in different regions of the country (Singh, 1997).

India has rich diversity of ethnic societies with many flourishing indigenous cultures. Tribal are a distinct ethnic group who live in harmony with nature and maintain a close connection with their surrounding environment. The tribal and rural populations of India are dependent on medicinal plants to a large extent not only for meeting their healthcare needs but also for their livestock.

These tribes have vast traditional knowledge concerning medicinal use of the local flora. The tribal people of India mostly live in the forests, hills, plateaus and naturally isolated regions, and are differently termed as 'Adivasi'.

As per the 2011 census, there are about 550 tribes in India. The number of scheduled tribes in India is 10, 42, 81,034. It is 8.6% of the total population of India. About 90 % of total tribal reside in rural areas. The Gadchiroli district is with a rich tradition of tribal medicinal treatment, which is rooted in this region and these traditions are still practiced by different tribes of the region. Nearly 38 % of population of the district is of Scheduled tribes including Gond, Madiya, Halba, Kawar etc.

Traditional medicinal knowledge of the tribal is mostly undocumented, passed on by verbal sayings from one generation to the next as part of their cultural heritage. The study was undertaken for the documentation of ethnomedicinal flora of Gadchiroli district. Since medicinal flora provides raw materials for modern herbal drugs, it is very much essential for the documentation, preservation, and conservation of tribal medical practices.

## MATERIAL & METHODS

### 1.1. Study area

Gadchiroli district is situated in the southeastern corner of Maharashtra, and is bounded by Chandrapur district to the west, Gondia district to the north, [Chhattisgarh](#) state to the east, and [Telangana](#) state to the south and southwest. Gadchiroli district lies between 19<sup>o</sup> to 21<sup>o</sup> North Latitude and 80<sup>o</sup> to 81<sup>o</sup> East longitudes. The district is categorized as Tribal and undeveloped district and most of the land is covered with forest and hills. Forests cover more than 75.96 % of the geographical area of the district. This district is famous for Bamboo and Tendu leaves. Gadchiroli district's climate is changing seasonally. In the summer, there is definitely a hot summer in the district, but there is very cold in the winter. The average humidity in the district is 62%. The major rivers flowing through the district are Wainganga, Godavari,

Pranhita, Dina. The total area of the district is 14412 Sq. Kms. which is about 4.68% of the total area of Maharashtra State.

### 1.2 Methods

An extensive ethnomedicinal survey was carried out to collect information about the medicinal plants during the period June 2018 to May 2019. The interviews were planned with tribal herbal healers for gathering ethnobotanical information. These healers include men and women belonging to different tribal communities. The area under study was visited in different seasons. The data were collected through repeated field visits and the careful interaction with the village tribes. The collected specimens were identified taxonomically with the help of available Monographs, taxonomic revisions and floras and by using field keys.

## RESULT AND DISCUSSION

Table no.1 provides the botanical name, family, vernacular name, plant parts used and disease or illness treated along with the mode of application for **50** species (arranged in alphabetical order) used by the tribal communities of the Gadchiroli district of Maharashtra. These plant species belong to 33 families. The dominant family exploited by the tribals is Fabaceae (6 spp.), followed by Euphorbiaceae (4 spp.) Acanthaceae (3 spp.), Rutaceae (3 spp.) Apocynaceae (2 spp.), Combretaceae (2 spp.), Cucurbitaceous (2 spp.), Malvaceae (2 spp.) and Moraceae (2 spp.). While other 24 families are with single species each.

## CONCLUSION

The rural as well as urban people living in Gadchiroli district rely enormously on the traditional medicine, although modern medicine facilities are reachable. The cost of this treatment is almost negligible as compared to modern medicine. Vaidu (Herbal Healers) provides treatment for all kinds of illness and their treatment is more or less social service to the

society in this region. Furthermore, herbal medicines and healers are available locally. However, it is observed that the age-old knowledge of the tribal is restricted to healers and some elderly peoples of their community. The new generation seems less interested in this kind of ethnomedicinal practices. Therefore, traditional healers are decreasing sharply, posing serious threat to the loss of this precious knowledge.

The remote geographical position and Naxal threats have, to a large extent, caused the extreme isolation of the tribes of this district. Because of that the district is botanically underexplored. It is very necessary for botanists to look seriously at issue of conservation of ethnomedicinal flora of Gadchiroli district and at the vanishing cultural heritage of the tribes.

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**Table No. 1. List of the Ethnomedicinal plants used by the tribes of Gadchiroli district**

Sr. No.	Name of the Plant	Family	Local name	Mode of Preparation and Dose
1	<i>Adhatodazeylanica</i> Medic.	Acanthaceae	Adulasa	Leaf decoction mixed with honey to cure Cough
2	<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	Bel	Decoction of the leave taken in Abdominal pain and worm. Ripe fruit juice taken in Dysentery and Constipation.
3	<i>Andrographis paniculata</i> (Burm. f.) Wall. ex Nees	Acanthaceae	Bhuinimb	Decoction of the Whole plant taken in Malaria. Leaf paste mixed with linseed oil applied externally on sores
4	<i>Asparagus racemosus</i> Willd.	Asparagaceae	Shatavari	Root used to enhance appetite
5	<i>Balanites roxburghii</i> Planch.	Zygophyllaceae	Hingan	Seed given to eat to treat worms
6	<i>Boerhaviadiffusa</i> L.	Nyctaginaceae	Khaparkhuti	Tender shoots are chewed to purify blood
7	<i>Bombax ceiba</i> L.	Malvaceae	Katesawari	Roots chewed for 7 days as tonic
8	<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae	Palas	Dried flower powder soaked in water for half hour and mixed with cumin powder and sugar. This syrup given to cure Urinary diseases, Sunstroke, Gastritis
9	<i>Calotropis gigantea</i> (L.) Ait.	Asclepiadaceae	Rui	Tender shoot of the plant and old jaggery mixed and made into small pills and given with hot water internally for 7 days to cure severe Stomach pain
10	<i>Cassia fistula</i> L.	Fabaceae	Bahava	Seed powder mixed with jaggery and made into pills. These pills given for 7 days in Abdominal pain
11	<i>Cassia tora</i> L.	Fabaceae	Tarota	Tender shoot of the plant used to cure Arthritis, rheumatism. Seed powder tea with jaggery cures cold
12	<i>Citrullus colocynthis</i> (L.) Schrad.	Cucurbitaceae	Indravan	Bulbs paste mixed with child urine and applied externally in Tumours in Throat and any Ear troubles
13	<i>Citrus aurantifolia</i> (Christm.) Sw.	Rutaceae	Nimbu	Fruit ash given with honey in vomiting
14	<i>Cochlospermum religiosum</i> (L.) Alston.	Cochlospermaceae	Gongal	Bark ash mixed in coconut oil to make ointment and use externally to cure Wounds and injuries

15	<i>Coriandrum sativum</i> L.	Apiaceae	Sambar	Water boiled with seeds given internally for Stomach ache
16	<i>Dioscoreabelophylla</i> Haines	Dioscoreaceae	Kadukanda	Tuber paste mixed with milk and given for 7 days in the treatment tumors
17	<i>Diplocyclospalmatus</i> (L.) C.Jeffrey	Cucurbitaceae	Shivlingi	Seeds crushed and mixed with water to enhance Fertility in Women
18	<i>Ehretialaevis</i> Roxb.	Ehretiaceae	Khanduchakka	Bark paste applied externally on bone fracture for immediate bone joining. Paste of leaf applied on Wounds and Injuries. Castor oil spread on leaf and leaf applied for arthritis and rheumatism
19	<i>Embeliaribes</i> Burm.f.	Primulaceae	Wavding	Seed boiled water given for Stomach troubles. Root powder given with warm water internally in Arthritis and Rheumatism
20	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Dudhkandi	Plant chewed or Plant juice given to mothers for three days to enhance lactation after delivery. Also used to increase fertility in females
21	<i>Feronia acidissima</i> L.	Rutaceae	Kawath	Leaf juice given internally in Cholera. Leaf juice mixed with onion juice and camphor powder taken internally to cure Diarrhoea
22	<i>Ficus benghalensis</i> L.	Moraceae	Wad	Latex mixed with sugar and taken to increase fertility in men and women. Latex externally applied on body tumors
23	<i>Ficus religiosa</i> L.	Moraceae	Pimpal	Decoction of the leaves used to cure old fever, to gain appetite and to lower blood pressure
24	<i>Gardenia gummifera</i> L.f.	Rubiaceae	Dikamali	Leaf powder mixed in linseed oil used externally on wounds and injuries. Also used in worms
25	<i>Gloriosa superba</i> L.	Liliaceae	Shenduri	Roots cooked in water and applied externally to cure Swellings on body
26	<i>Helecteresisora</i> L.	Sterculiaceae	Aatmuddi	Pod paste given with water in Abdominal pain
27	<i>Hemidesmus indicus</i> (L.) R.Br.	Apocynaceae	Anantmul	Root decoction given to Pregnant woman to facilitate easy delivery
28	<i>Holarrhenapubescens</i> (Buch-Ham) Wall ex G. Don	Apocyanaceae	Kuda	Seed powder taken internally with water in Worms
29	<i>Kirganelia reticulata</i> (Poir.) Etudes	Euphorbiaceae	Pitondi	Root extract given for Piles

30	<i>Lepidagathiscristata</i> Willd.	Acanthaceae	Kumbha	Leaf dipped in oil is applied externally on head to cure Insanity
31	<i>Madhuca longifolia</i> (Koen.) Mac	Sapotaceae	Mova	Seed oil used externally in Arthritis and Rheumatism. Seed remains after extracting the oil is insert in the anus of children to facilitate blocked defecation
32	<i>Mangifera indica</i> L.	Anacardiaceae	Amba	Seed of ripe fruit is powdered and given internally with honey for 7 days to cure Piles
33	<i>Ocimum tenuiflorum</i> L.	Lamiaceae	Tulsi	Leaf juice taken internally to facilitate easy delivery
34	<i>Phyllanthus asparulatus</i> Hutch.	Euphorbiaceae	Bhuiawla	Whole plant cooked in milk given for 6 days to cure Jaundice. Tender shoot chewed to cure anaemia. Root paste used to cure bleeding gum and to make teeth strong
35	<i>Piper longum</i> L.	Piperaceae	Lendi	Root powder given internally with water to cure impotency and Spermatorrhoea
36	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Chitrak	Root paste applied on wounds and severe injuries. Root eaten in Piles
37	<i>Psoralea carylifolia</i> L.	Fabaceae	Bavachi	Platn oil used to cure Ringworm
38	<i>Pterocarpus marsupium</i> Roxb.	Fabaceae	Bija	Stem bark extract given internally in Diabetes, Wood is used to make bowl. Water kept in this bowl used to lower sugar level
39	<i>Ricinus communis</i> L.	Euphorbiaceae	Erand	Leaf juice given to cure Jaundice. Fruit powder taken internally to cure irregular menstrual cycle in women
40	<i>Sida acuta</i> Burm. f.	Malvaceae	Chikna	Tender shoots given to eat in dysentery, diarrhea or stomach troubles. Leaf paste applied on wound, injuries
41	<i>Soymida febrifuga</i> (Roxb.) Juss.	Meliaceae	Raktrohan	Bark decoction given for 7 days to increase blood in Sickle cell Anaemia
42	<i>Tamarindus indica</i> L.	Caesalpiniaceae	Chinch	Leaves cooked in goat urine applied externally to cure Enlarge testes in Hydrocele. Leaf decoction bathe taken in body swelling
43	<i>Tephrosia hamiltonii</i> Drumm.	Fabaceae	Diwali	Seed powder mixed with honey taken to cure itching
44	<i>Terminalia arjuna</i> (Roxb.) Wt. & Arn.	Combrataceae	Ajan	Stem bark powder taken orally to cure Cardiac diseases
45	<i>Terminalia chebula</i> (Gaertn.) Retz.	Combrataceae	Hirda	Roasted fruit chewed in Cough

46	<i>Tinosporacardifolia</i> (Thunb.) Miers	Menispermaceae	Gulvel	Gulvel stem mixed with Neem bark and <i>Cyperusrotundus</i> cooked in water and given to cure Malaria. Stem powder given internally to cure body ache
47	<i>Vanda tessellata</i> (Roxb.) Hook.	Orchidaceae	Rashna/Vanda	Mixture of the leaf paste mixed with leaf of Betel leaf and given internally (chewed) for three days to regularize the Menstrual cycle in women.
48	<i>Vitex negundo</i> L.	Verbenaceae	Nirgudi	Leaf of plant, roots of Castor and roots of <i>Calotropis</i> mixed and extracted to 250 ml in water. Decoction is mixed with sesame oil and boiled. After evaporation of water lemon juice is mixed to the oil. This oil is used externally to cure Arthritis and Rheumatism.
49	<i>Withaniasomnifera</i> (L.) Dunal in DC.	Solanaceae	Ashwagandha	Leaf paste applied externally on Wounds and injuries. Leaf heated in hot water and applied externally on throat to cure throat troubles
50	<i>Zinziberofficinale</i> Rosc. in Trans. L.	Zinziberaceae	Sunth/Aale	Dried rhizome roasted and kept in mouth for Throat sores. Decoction of Dried rhizome and Lendi mixed with jaggery and Cardamom is used internally to cure Arthritis and Paralysis