

## Ethnobotanical study of Traditional medicinal plants used by tribes and rural people in the Chhatrapati Sambhajnagar Region (M.S.) India

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### Abstract

Ethno-botanical study of traditional medicinal plants was conducted during 2021-23 in the Chhatrapati Sambhajnagar Region of Maharashtra, India. The study was focused on identifying medicinal plants, ailments treated, part of the plant used, methods of preparation, route of administration etc. The data was collected using interview and questionnaires by selecting 08 healers using purposive sampling method. A total of 37 medicinal plant species were collected and identified from the study area for treating various human ailments belonging to 30 families. Majority of plants found were herbs, shrubs, trees, climbers and epiphyte, among them *Glorisa superba* found rare in the region.

**Key words :** *Glorisa*, Medicinal plants, Traditional, Chhatrapati Sambhajnagar.

The main aim of the present study is to collect information on plants used traditionally by Bhil, Bhil garsia, Koli Malhar, Koli Mahadev, Dongar Koli, Thakur, Thakar tribals and village community of District Chhatrapati Sambhajnagar. Asia is a very popular global center due to its ancient written traditional knowledge regarding the use of medicinal plant species for treating various ailments as mentioned in Ayurveda, Unani and Chinese traditional system of medicine<sup>4</sup>. Plants have been used in traditional medicine for several thousand years. India is a repository of medicinal plants. The herbal treasure of nation is rich in its floristic wealth. Study of Ethno-botany

accounts relationship between people and plants for their use as medicines, food, shelter, clothing, fuel, fodder and other household purposes<sup>1</sup>. India has rich plant diversity and is one among the mega biodiversity countries of the world. Indians have been using medicinal plants since antiquity and the Ayurvedic methods date back to 5000 B.C<sup>5</sup>. However, due to rapid industrialization and urbanization, the knowledge has now been restricted to a few elderly people in the rural areas, who largely remain delinked from those in the urban areas. In order to bridge this gap, documentation and investigation on the medicinal uses of the plants by the rural people/tribes living in

the remote areas is required. As per World Health Organization (WHO), nearly 80% of the world inhabitants, especially living in the rural areas of developing countries, rely mainly on traditional medicines for their primary healthcare (WHO, 2003). There are several areas world over where a vast knowledge on the use of plants against different illnesses exists<sup>11</sup>. Indigenous knowledge is not only responsible to identify but it also has a role in the system of management of natural resources<sup>9</sup>. Traditionally, the medicinal plant is used in pneumonia, diarrhea, dysentery, asthma, cough, dropsy, ulcers, piles, rheumatism, scabies, snake bite and other skin diseases<sup>2</sup>. Ethnobotanical research involves any dimension of people-plant relationships, but most current research focuses on several "projects." Ethnobotanists seek to understand the process of domestication and diffusion of crop plants. They study the strategies employed by traditional societies to manage plant species, and the degree to which these actions are environmentally sustainable. They investigate how species are cognitively categorized, ranked, named, and assigned meaning and they explore the impact of globalization on knowledge and use of plant resources<sup>10</sup>. Different plant species are used as a main ingredient for the preparation of modern phyto medicine, which has exploded in the last few years, and are still being collected from the nature and play an important role in drug development programmes in the pharmaceutical industry. Now a days, in increasing population people use herbal remedies which have become more popular in the treatment of minor ailments and are also much fruitful than others<sup>6</sup>. From the mid-twentieth century, it began to be understood as the study of the interrelations

between primitive people and plants, adding a cultural component to its approach because of the increasing engagement of professionals in the human sciences. However, the idea of "primitive" peoples still suggested a strong component of ethnocentrism. Currently, the definition of ethnobotany has been expanded, extending its field of research to the study of both traditional populations as urban-industrial societies, and nontraditional populations as rural societies, concerning itself with the relationship between human populations and the botanical environment. With this expansion and with the collaboration of cultural anthropology and other, there was an even greater diversification of objectives and methods. Therefore, it no longer makes sense to say that ethnobotany is interested exclusively in so-called traditional peoples—an expression that, in fact, has generated much controversy among ethnobotanists, since the concept of "traditional" can evoke different interpretations. Among these interpretations, some researchers advocate that the term "traditional" refers to an idea of immutability as if such knowledge is not altered over time. In light of this interpretation, some scientists prefer to use the term "local" as a replacement for the term traditional<sup>12</sup>. This herb is used in various treatments of diseases like asthma includes bronchial asthma, cough, chest pain, to stop vomiting, hair fall, leprosy, itching, scabies and various skin diseases. This herb is also used in cardiac diseases as well as in wound healing. *Solanum xanthocarpum* is also used in the treatment of diabetes. Solasodine is the main chemical constituent of the plant which has many therapeutic activities which include, including anti hyperglycemic activity, antipyretic, anthelmintic, carminative, stomachic, laxative, febrifuge, and aphrodisiac

properties apart from promoting conception. Roots of the plants are used in Dashmularishtha which is the Ayurvedic tonic for lactating mothers and it is mostly used in the rural areas. Root paste is used by the Mukundara tribals of Rajasthan in the treatment of Hernia. Roots of the plant are also to relieve flatulence and heal constipation. Fruits and flowers are also used in the burning sensation of the foot<sup>7</sup>.

The general objective of this study was to inventory the plants used in traditional herbal medicine to treat human ailments from Chhatrapati Sambhajnagar. The objectives were to identify Ethnomedicinal plants used in disease treatment, and to assess techniques

and modes of administration. Marathwada region comprises 08 districts, of these 01 districts viz. Chhatrapati Sambhajnagar was selected for study. Ethno- Medicinal plants survey was conducted in the forest and villages. Season wise frequent field visits were organized in different villages of the study area. The local, efficient and knowledgeable tribal mediators were identified and information was collected. The collected data was verified by different local Herbalist in different season and compared with other practitioners (bhagats/vaidus). Plant identification was done with the help of flora and manuals (Naik, 1998 and India flora online).

### Map of study area



Map 1. Forest area of Marathwada in Maharashtra

(Source-<https://mahaforest.gov.in/writereaddata/fckimagefile/Aurangabad>)

During the study of Ethnobotanical medicinal plants 37 species were found belonging to 30 families viz. Acanthaceae, Amaranthaceae, Anacardiaceae, Annonaceae, Apocynaceae, Asclepiadaceae, Asteraceae, Bombacaceae, Caricaceae, Caesalpiaceae,

Cucurbitaceae, Convolvulaceae, Cyperaceae, Euphorbiaceae, Fabaceae, Lamiaceae, Liliaceae, Lythraceae, Malvaceae, Meliaceae, Menispermaceae, Mimosaceae, Moraceae, Oleaceae, Papaveraceae, Plumbaginaceae, Poaceae, Rhamnaceae, Solanaceae and Verbenaceae.

List of Ethnobotanical medicinal plants for treatment of human ailments in Study area

Sr. no.	Scientific Name	Family	Common/ Marathi Name	Type	Plant parts and their use
1.	<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	Mudra	Shrub	Leaves are cooked and eaten in bleeding piles.
2.	<i>Achyranthes aspera</i> L.	Amaranthaceae	Aghada	Herb	Decoction of the plant is useful in curing pneumonia, cough, and kidney stones
3.	<i>Ageratum conyzoides</i> L.	Asteraceae	Osadi	Herb	Leaf juice is used on cuts and wounds and also to check bleeding.
4.	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Neem	Tree	The twigs are chewed on one end until they fray, creating a brush-like effect, anti-septic, treatment of small pox.
5.	<i>Argemone mexicana</i> Linn.	Papaveraceae	Pivladhotra	Herb	The whole plant contains a yellow juice, which is diuretic in effect and therefore, used in dropsy, jaundice and cutaneous affections.
6.	<i>Aloe vera</i> L.	Liliaceae	Korpad	Herb	Pulp is taken orally and applied externally used for skin and for bowel movement. scalp and reduce inflammation.
7.	<i>Alstonia scholaris</i> (L.) R.Br.	Apocynaceae	Saptparni	Tree	Bark as tonic, in fever, skin disease in treatment of leukoderma
8.	<i>Abrus precatorius</i> L.	Fabaceae	Gunj	Herb	Root, seeds are used in fever.
9.	<i>Bauhinia variegata</i> L.	Caesalpinaceae	Apta	Tree	Flower juice is taken to cure dysentery, diarrhea & stomachache.
10.	<i>Adhithoda vasica</i> Nees.	Acantaceae	Adulsa	Shrub	Dried powder of entire plant is used in cough, asthma, bronchitis, and tuberculosis of lungs, spasmodic diseases and ague fever
11.	<i>Bauhinia purpurea</i> L.	Caesalpinaceae	Kanchan	Tree	Astringent bark is used to control diarrhoea.
12.	<i>Bombax ceiba</i> L.	Bombacaceae	Katesawar	Tree	decoction or infusion made from the roots is consumed to help manage diarrhea
13.	<i>Calotropis procera</i>	Asclepiadaceae	Rui	Shrub	Latex is used to reduce swelling and support injured joints.

14.	<i>Carica papaya</i>	Caricaceae	Papai	Tree	Leaf extract is given to enhance WBC.
15.	<i>Cassia fistula</i> L.	Caesalpi- niaceae	Amaltas	Tree	Leaves used for treating skin diseases
16.	<i>Gloriosa superba</i> L.	Liliaceae	Kallavi	Climber	Tubers and flowers are used in Chronic ulcers and piles.
17.	<i>Mimosa pudica</i> L.	Mimosaceae	Lajalu	Herb	Paste of root and leaf is used in case of piles.
18.	<i>Nyctanthes arbor- tristis</i> L.	Oleaceae	Parijatak	Shrub	The Leaves decoction in water is taken to control malaria fever.
19.	<i>Woodfordia fruticosa</i> (L.) Kurz.	Lythraceae	Dhayti	Shrub	Dried flower for piles and Bark for gastric trouble.
20.	<i>Ficus carica</i> L.	Moraceae	Anjir	Shrub	Juice of ripen fruits is given for 5 days for fever.
21.	<i>Ricinus communis</i> L.	Euphor- biaceae	Erand	Shrub	Leaves are tied on joint, for joint pains.
22.	<i>Diplocyclos palmatus</i> Linn.	Cucurbi- taceae	Shivlingi	Climber	plant is used in headache and enlarged spleen and stomach swelling, useful in snakebite.
23.	<i>Physalis minima</i> L.	Solanaceae	Chirboti	Herb	Fruits used as tonic, diuretic, laxative and useful in inflammations.
24.	<i>Semecarpus anacardium</i> L.	Anacar- diceae	Bibba	Tree	Seeds and other parts are used to treat skin diseases, respiratory issues, and digestive problems.
25.	<i>Annona squamosa</i> L.	Annon- aceae	Sitaphal	Shrub	Leaf paste is applied externally in tumors.
26.	<i>Tinospora cordifolia</i> (Willd) Hook.	Menisper- maceae	Gulwel	Climber	Leaf dry powder or 1 teaspoon Juice is given for 3 days in fever.
27.	<i>Tectona grandis</i> L.f.	Verben- aceae	Saagvan	Tree	Flower paste is prepared and given in urine disorder.
28.	<i>Leucas aspera</i> (Willd.) Link.	Lamiaceae	Tumbi	Herb	Mixture of flowers and honey is given to treat coughs and cold
29.	<i>Solanum xanthocarpum</i> L.	Solanaceae	Kateringni	Herb	The aqueous extract of the root with a dose of 1 spoon per day is orally in fever and cough, cold
30.	<i>Cyperus rotundus</i> L.	Cyperaceae	Nagarmotha	Herb	Crush leaf is applied on cuts and wounds.
31.	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Durva	Herb	Whole plant is used to control Diabetes

32.	<i>Zizyphus mauritiana</i> L.	Rhamnaceae	Bor	Shrub	Leaf juice is given in Dysentery and Diarrhoea.
33.	<i>Datura metel</i> L.	Solanaceae	Dhotra	Herb	Leaf and bark is used in skin diseases
34.	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Chitrak	Shrub	Root powder is given to control cough and cold.
35.	<i>Barleria prionitis</i> Linn.	Acanthaceae	Vjradanti	Shrub	The juice of the leaves is applied to feet during rainy season prevents their cracking and laceration.
36.	<i>Caesulia axillaris</i> Roxb.	Asteraceae	Maka	Herb	baldness plant, bark is applied on wounds.
37.	<i>Cuscuta chinensis</i> Lam.	Convolvulaceae	Amarvel	Parasite	Plant used in itching and flatulence.

Younger generation, do not pay much attention to the traditional knowledge of plants but it needs to transfer to the next generation. Therefore, present study is important to preserve the botanical knowledge in the locals and Vaidus for treating the ailments. This study aims to document the ethnobotanical knowledge and to identify medicinally and economically important species that can be potentially used as alternative source of income of livelihoods. Documentation of traditional and conservation of the natural resources of traditional peoples, as well as preservation of natural resources of ecosystems. *Gloriosa superba* a climber found very rare in the region while studying the ethnobotanicals plant for curing human ailments; therefore, it's a need to preserve, conserve and to create awareness among local as well as Vaidus in the study area.

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