



## Ethnobotanical studies on plants used by tribal of Vasai Taluka from Palghar District, Maharashtra

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### Abstract

Ethnobotany is the study of relationship between people and plants. It is a new discipline studying the knowledge and traditional practice of the indigenous and ethnic societies in conservation and use of biodiversity for human health and nutrition. Ethnic peoples are using this approach of including food of medicinal and nutritional value in their diet since ages. Keeping this view in mind, the present study has been carried out in tribal dominated Vasai taluka of Palghar District. The common & painful diseases like, jaundice, anemia, piles, diarrhea, skin diseases, intestinal worms, menstrual irregularities, snakebite, diabetes, dysentery, typhoid fever, urinary stones, scabies, cough, cold & bacterial infections etc. are cured by using the traditional medicines.

**Keywords:** Ethnobotany, vasai, palghar, tribal, maharashtra

### Introduction

Man's dependence on plants for his existence dates back to the beginning of the human race. In the early days he had only limited needs like food, shelter and clothing. But, with an advancement of civilization his requirements also grew. The present day man banks heavily on a very large number of plant and animal products to meet his daily needs. Man has learnt healing, by intense experimentation with plants. The observation and experimentations have gone through series of changes. Early man probably put most of the plants into his mouth in order to quench his hunger. Many plants nursed him, some innocuous, a number of them made him or even killed.

Ethnomedicine is here taken to mean knowledge and practices that have survived through only folklore on certain human societies, particularly, among the primitive and rural societies. The subject ethnobotany dates back to the origin of human race, but the usage of this term is less than a century old. Its data exist in scriptures, epics, travelogues, floras, archaeological remains, herbaria and museums. Expanding the knowledge of people about the indigenous plants in food, medicine and other uses including the conservation of plant resources has now received much attention because of the shift from conventional to non-conventional method of medicinal practices.

Vasai taluka is blessed with good number of residing tribal communities like Warli, Malharkoli, Mahadev koli, and Katkari. Tribal communities living in interior portion of the taluka rely on plant for curing their ailments and make use of plants in their day to day activity hence such Traditional knowledge needs to be documented as it is passed orally from generation to generation. They mainly depend upon forest and the minor forest produce for their sustenance. A large variety of plants are used for food, fodder, fiber, fruits, fuel, medicare, dye, tannins, woodcraft, witchcraft and religious ceremonies.

### Material and Methods

Data regarding the uses of plants was gathered from the tribal people during ethnobotanical field surveys conducted

in various tribal localities of Vasai taluka in Palghar district during 2023 to 2025. A questionnaire was created using the framework provided by Jain and Mudgal in order to gather data regarding the uses of plants. Throughout the field study, plant samples were collected from different villages and their uses were noted. Plant specimens and digital photos of the plants were gathered for accurate verification and the production of herbarium sheets. The plant specimens were identified using the respective floras. The Blatter Herbarium at St. Xavier's College (Autonomous), Mumbai, Maharashtra, was used to compare the plant specimens with previously collected herbaria in order to confirm their authenticity. The GPS coordinates of the collected samples were also noted for further reference.

### Observations

**Botanical name:** *Acacia catechu* (L.f.) Willd

**Family:** Mimosaceae

**Vernacular name:** Khair

**Plant part used:** Bark, Wood

**Uses:** The bark powder is mixed in any oil and applied on white spots on skin. The wood is used to make Katha. The wood is used to make agricultural implements.

**Botanical name:** *Achyranthes aspera* L.

**Family:** Amaranthaceae

**Vernacular name:** Aghada

**Plant part used:** Root, Seed

**Uses:** Seeds are slightly warmed and crush to powder and given for indigestion. Root paste is externally applied on the abdomen of pregnant women for easy delivery.

**Botanical name:** *Aegle marmelos* (L) Correa

**Family:** Rutaceae

**Vernacular name:** Bel

**Plant part used:** Fruits, Leaves

**Uses:** Raw fruit is burnt on fire and then pulp is powdered. Two teaspoonful powder is given thrice a day in blood dysentery. Four spoonful of fruit juice is administered daily thrice for 3 days to cure diarrhea.

**Botanical name:** *Ailanthus excelsa* Roxb.

**Family:** Simaroubaceae

**Vernacular name:** Maharukh

**Plant part used**

**Uses:** Bark decoction is given in cough, cold and asthma. Dried bark powder with sugar is given for 3 days to cure Jaundice. Bark decoction is used to cure dysentery.

**Botanical name:** *Azadirachta indica* A. Juss

**Family:** Meliaceae

**Vernacular name:** Neem

**Plants part used:** bark, twig, leaves, seeds, roots

**Uses:** Paste of leaves & bark is applied externally on boils as an antiseptic. Aqueous extract of leaves is given thrice a day for three days to cure dysentery. Young leaves are eaten for various skin diseases and also the paste of leaves is applied on skin to cure acne and pimples.

**Botanical name:** *Aloe barbadensis* (L) Burm

**Family:** Liliaceae

**Vernacular name:** Korhad

**Plants part used:** thick fleshy leaves

**Uses:** The leaf itself is used for skin diseases and as cosmetic to remove wrinkles and remedy burns. The juice of the roasted leaf is given for cold, cough and fever.

**Botanical name:** *Abrus precatorius* Linn

**Family:** Papilionaceae

**Vernacular name:** Gunj

**Plant part used:** Seeds

**Uses:** Seed paste is applied on swellings to heal. Seeds are crushed and paste is applied on hairs to stop hair fall.

**Botanical name:** *Abutilon indicum* (L.) Sweet

**Family:** Malvaceae

**Vernacular name:** Khopati

**Plant part used:** Flower, Bark, Leaves

**Uses:** Flower paste is applied externally for headache. Decoction of bark is used gargling to cure mouth ulcers. Leaf paste is applied on joints for joint pain.

**Botanical name:** *Argemone mexicana* L.

**Family:** Papaveraceae

**Vernacular name:** Pivli dhotri

**Plant part used:** Latex

**Uses:** Latex is dropped in eye to cure eye infections. Root extract is dropped in ear to cure ear ache.

**Botanical name:** *Bacopa monnieri* (L.) Wettst

**Family:** Scrophulariaceae

**Vernacular name:** Bam

**Plant part used:** Leaves

**Uses:** Leaf extract is given to cure fever. The leaves are warmed and paste is applied on the abdomen to cure stomachache and to get relief from swelling. The leaf extract is used to reduce inflammation due to scorpion sting. Entire plant is used as vegetable.

**Botanical name:** *Bombax ceiba* L.

**Family:** Bombacaceae

**Vernacular name:** Sawar

**Plant part used:** Bark, Root, Flower

**Uses:** Paste of bark is applied for skin eruptions. Root powder is given as stimulant. Root is chewed directly to stop loose motion once a day for two days. Bark extract is given for burning during urination. Fruit are crushed and paste is applied on wounds. Flowers are used as vegetable by the tribal.

**Botanical name:** *Boswellia serrata* Roxb. ex Colebr.

**Family:** Burseraceae

**Vernacular name:** Salai

**Plant part used:** Gum, Leaves, Root, Bark

**Uses:** Rheumatism is treated with gum derived from the plant. For fever and giddiness, gum is burned on the floor and smoke is administered. The scorpion sting is treated with a paste made from leaves and roots. Cough and cold are treated with a bark decoction. To treat scorpion stings, the roots are crushed and a paste is administered.

**Botanical name:** *Barleria prionitis* Linn

**Family:** Acanthaceae

**Vernacular name:** Katekoranti

**Plant part used:** Leaves

**Uses:** The leaves are chewed to cure mouth ulcers. The leaf juice is gargled and split out to cure mouth sores.

**Botanical name:** *Blumea eriantha* DC.

**Family:** Asteraceae

**Vernacular name:** Boradi

**Plant part used:** Leaves

**Uses:** Leaves are crushed by hand and juice is dropped on wounds. Leaf decoction is used to cure stomach ache. Entire plant is crushed and extract is given to cure fever.

**Botanical name:** *Capparis zeylanica* L.

**Family:** Capparaceae

**Vernacular name:** Waghai

**Plant part used:** Leaves, Fruit

**Uses:** Leaf decoction is administered orally to cure stomachache. Fruits are soaked overnight in water, boiled and used as a vegetable. Fruits are eaten raw by the tribal.

**Botanical name:** *Careya arborea* Roxb

**Family:** Myrtaceae

**Vernacular name:** Kumbhi

**Plant part used:** Bark, Fruit, Wood

**Uses:** For stomach problems and piles, the bark is crushed and the extract is taken twice a day. In females, bark extract is used to reduce white discharge. Asthma is treated by eating fruit pulp. Tribal people consume fruits. Wood is used as a source of fuel.

**Botanical name:** *Cheilocostus speciosus* (J. Konig) C. Specht

**Family:** Costaceae

**Vernacular name:** Pewda

**Plant part used:** Tuber

**Uses:** Paste of tuber is applied on joints to reduce joint pains and on boils. Dry tuber powder is orally given to cure rheumatism. Tubers are eaten as a vegetable by tribal.

**Botanical name:** *Cleome viscosa* L.

**Family:** Cleomaceae

**Vernacular name:** Piwali

**Plant part used:** Leaves, Seed

**Uses:** Leaves are crushed by hand into a paste and applied on wounds. To relieve headaches, earaches and toothaches, a drop of leaf juice is placed in each nostril. Internally, seeds are used to treat bleeding piles. Fever is treated with a seed decoction. To treat inflammation, the entire plant is crushed and applied.

**Botanical name:** *Cocculus hirsutus* (L.) W. Theob

**Family:** Menispermaceae

**Vernacular name:** Vasanvel

**Plant part used:** Leaves

**Uses:** Leaves are crushed and paste is applied on palms and toes in case of sun stroke. Leaf paste is applied on joints for joint pain. Leaf juice is applied of eczema and sores. Juice from leaves is applied on clean cotton cloth and tied on eyes for curing sore eyes. Paste of entire plant is used for Jaundice. Leaf extract is administered orally to cure burring piles.

**Botanical name:** *Cymbopogon citratus* (DC.) Stapf

**Family:** L. Poaceae

**Vernacular name:** Gavati chai

**Plant part used:** Leaves

**Uses:** Lemongrass leaves extract is used to eliminate blackheads and cleansing of pores.

**Botanical name:** *Curcuma pseudomontana* Graham

**Family:** Zingiberaceae

**Vernacular name:** Jungli Halad

**Plant part used:** Leaves, Flower

**Uses:** Leaves and flowers are crushed together and paste is applied on wounds. Rhizome is used as vegetable.

**Botanical name:** *Dolichandrone falcata* (Wall. ex DC.) Seem

**Family:** Bignoniaceae

**Vernacular name:** Medshing

**Plant part used:** Bark, Pods, Stem

**Uses:** Bark is crushed in water and the extract is given twice a day for 8-10 days for Asthma. Bark is soaked and crushed in water for half an hour and extract is given twice a day to animals for swelling of stomach. Leaves are boiled in water and filtered. Filtrate is used to gargle for toothache. Powder of the pods is given twice for 3 days for Stomach ache. The stem is boiled in water and crush to paste. This paste is applied on fractured bone and sprain.

**Botanical name:** *Eranthemum roseum* (Vahl) R. Br.

**Family:** Acanthaceae

**Vernacular name:** Moraya

**Plant part used:** Leaves, Root

**Uses:** Leaves are crushed and paste is applied on skin inflammation. Root extract is used to cure stomach ache and dysentery.

**Botanical name:** *Helicteres isora* L.

**Family:** Sterculiaceae

**Vernacular name:** Murud-sheng

**Plant part used:** Fruit, Root

**Uses:** Dried fruits are crushed to make paste and given to small children to stop dysentery. Decoction of root is administered orally as antidote for snake bite.

**Botanical name:** *Holoptelea intergrifolia* Planch.

**Family:** Ulmaceae

**Vernacular name:** Papadi

**Plant part used:** Leaves, Bark

**Uses:** Juice extracted from leaves is used for wound healing. Bark is wrapped around neck to reduce fever. Bark is crushed applied to reduce body heat. Leaves are chewed and paste is kept on tooth to relieve tooth ache.

**Botanical name:** *Ipomoea pes-tigridis* L.

**Family:** Convolvulaceae

**Vernacular name:** Waghari

**Plant part used:** Leaves, Flower, Root

**Uses:** The leaves are dried, crushed to make powder and smoked by tribal to reduce cough. Flower and root is crushed together and exact is given to females to stop excess white discharge during menstruation.

**Botanical name:** *Mitragyna parvifolia* (Roxb.) Korth

**Family:** Rubiaceae

**Vernacular name:** Kalamb

**Plant part used:** Bark, Wood

**Uses:** Decoction of bark is used for stomach ache. Wood is used for construction of huts and houses.

**Moringa concanensis:** Nimmo ex Dalz. & Gibs.

**Family:** Moringaceae

**Vernacular name:** Ran-shevga

**Plant part used:** Bark, Fruit

**Uses:** Bark paste is applied for stiff neck. Paste of bark is heated and bandage is tied on parlayed part of the body. Bark is kept in water overnight and crushed in morning and extract is used for swelling of stomach and indigestion. On the scorpion sting site, gum is applied. Tender leaves are crushed and the extract is given to cure night blindness. Fruits are bitter and eaten as a vegetable by the tribal.

**Botanical name:** *Moringa oleifera* Lam.

**Family:** Moringaceae

**Vernacular name:** Shevga

**Plant part used:** Leaves, Fruit

**Uses:** Decoction of leaves is used to cure toothache. Gum is applied on wounds. Bark is crushed and paste is applied on stiff neck. The boiled leaves and flowers are eaten to increase fertility in men. Leaves are crushed and juice is consumed to cure night blindness. Flowers are crushed and used to massage on joints to reduce joint pain. Fruits are used as vegetable and sold in the local market.

**Botanical name:** *Portulaca oleracea* L.

**Family:** Portulacaceae

**Vernacular name:** Bam

**Plant part used:** Leaves

**Uses:** Entire plant is crushed to make paste and applied on forehead for headache. Leaves are crushed and extracted juice is given twice a day for seven days for treatment of jaundice. Leaves are boiled with water and tied with a cloth to reduce muscular pain. Plant is crushed and paste is used for boils. Entire plant is used as a vegetable.

**Botanical name:** *Ricinus communis* L.

**Family:** Euphorbiaceae

**Vernacular name:** Erand

**Plant part used:** Leaves, Seed

**Uses:** Leaves are warmed and tied on chest and legs to reduce pain. Seed oil is used for gargling to reduce toothache. Castor oil is applied on leaves, warmed and tied on joints to reduce pain.

**Botanical name:** *Semecarpus anacardium* L. f.

**Family:** Anacardiaceae

**Vernacular name:** Bibwa

**Plant part used:** Nut

**Uses:** Nut shell juice is used to treat joint pain and piles. A nut is rubbed on a thorny injury. The nuts are employed in tribal magic and religion, and they are kept with them to protect them from evil doers.

**Botanical name:** *Solanum virginianum* L.

**Family:** Solanaceae

**Vernacular name:** Ringini

**Plant part used:** Fruit, Root

**Uses:** Fruits are boiled in earthen pot and the vapors are inhaled for the treatment of mouth blisters. Seeds are warmed on iron vessel and the smoke is taken twice a day for treating toothache. Root is crushed and extract is given for cough and treating boils. Seeds are burnt and smoke is given for tooth ache. Roots are given in Amulet (Tabij) after chanting mantra to small children to protect them from evils. The roots are used in treating toothache.

**Botanical name:** *Ventilago denticulata* Willd.

**Family:** Rhamnaceae

**Vernacular name:** Ardhshishi

**Plant part used:** Bark

**Uses:** To treat a headache, bark paste is applied on forehead. Wounds are treated with bark powder. To relieve half headache, the tribal tie twig to their arm using black thread. To relieve headaches, the stem portion is wrapped around the ear and on the finger.

**Botanical name:** *Withania somnifera* (L.) Dunal

**Family:** Solanaceae

**Vernacular name:** Ashwagandha

**Plant part used:** Leaves, Root

**Uses:** Decoction of leaves and root is massaged on forehead to cure headache. Dried root powder is given to treat insomnia. Leaf is crushed in water and extract is given to cure fever. Fresh root extract is used for treating impotency.

### Discussion

The present study provides ethnobotanical information on species of plants occurring in Vasai taluka of Palghar district. General Information on position of the district, vegetation types, geological Information, climatic condition and characteristics of forests are provided in addition to defining the terms used as in the case of tribe. A review of ethnobotanical literature is provided. Brief accounts of important ethnobotanical studies that are relevant to methods used in the present study are cited along with the details of the method used in gathering and recording the information. The paper in general focuses on factors responsible for similarities and differences in practices followed by different tribes and suggest both utility and limitations of comparing ethnobotanical information with information available in pharmacognosy, pharmacology and material of different systems of medicine in India.

### Result and Conclusion

The future ethnobotanical studies may benefit from and adopt information on plant distribution and also whether a plant is useful in a limited way or it being used for a variety of needs. Ethnobotanical studies would also benefit by reference to literature in pharmacognosy and pharmacology, only from the point of view plans sources being used as medicines. However, it must be emphasized that the tribal use such plant in a holistic way (whole plant extract). Without isolating and purifying the active principles i.e., any integral part of the modern medicine nor do the tribes indulge in combination of several drug plants, which is the methodology followed by Ayurveda, Unani and Siddha systems of medicine.

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