



ETHNOBOTANICAL STUDIES OF MOKHADA, DISTRICT THANE

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ABSTRACT

Ethnobotany 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. Keeping this view in mind an ethno-medico- botanical survey of some important Angiosperms of Tal-Mokhada, Dist-Thane has been carried out from October 2007 to October 2008. Mokhada is a tribal region and different tribes like Thakur, Mahadev Koli, Varli, Katkaris and Kokana live in this region. These tribal people use different plants as home remedies, for building and thatching huts, making musical instruments etc. During the study, altogether **fifty-seven** plant species belonging to 20 families were collected. Amongst the plants located in the study area *Wrightia tinctoria*, *Hygrophila spinosa*, *Gloriosa superba*, *Curculigo orchioides* and *Costus speciosus* have medicinal properties and used by local tribes.

Keywords: Ethnobotanical, indigenous, home-remedies, febrifuge.

INTRODUCTION

Indigenous knowledge is as old as human civilization. Man for the past thousands of years has used plant for curing various ailments. In India, out of 15,000 species of flowering plants about 17% are considered to be of medicinal value (Jain 1968). The Mokhada region is a rich reservoir of medicinal plants and associated ethnobotanical practices. The tribes such as katkari, varli, kokana, have been using these plants from time immemorial. The knowledge about these plants has been handed over from generation to generation. The present day traditional medicine man or vaidu are rare and handful. Due to lack of interest among the younger generations as well as their tendency to migrate to cities for lucrative jobs there is a possibility of losing this wealth of knowledge in near future. It is appropriate time to acquire and preserve this traditional system of medicine and by proper documentation and identification of specimens. This will help to their

conservation through cultivation and will reduce the pressure to over exploitation from natural habitats.

MATERIAL AND METHODS

The present investigations were carried out from Mokhada, the tribal taluka of Thane district. Mokhada is a census town in Jawhar subdivision of Thane district in Maharashtra. The geographical location of Jawhar is 19.92° N 73. 23° E .The medicinal plants were collected from different localities of Mokhada. The information about uses of plants was collected from the tribals. Questionnaires were prepared for collecting information. The interviews of 8 medicine man or vaidu and 10 villagers were taken and questionnaire was filled. The information about indigenous medicinal plants growing in natural habitats of Mokhada was collected. At the same time plant species were collected and herbarium sheets were prepared by

traditional method. Plant species were identified with the help of floras and Keys. Information regarding Botanical name, family name, vernacular name and

medicinal uses for each plant was collected. The plant families under study were arranged alphabetically.

Table. 1 *The list of indigenous medicinal plants of Mokhada.*

Botanical name, local name, family and medicinal uses	
I	Acanthaceae
1.	<i>Barleria prionitis</i> L. Katikoranti Leaf juice with honey is used as anthelmintic. Leaf ash with butter is used on Leucoderma. Crushed fresh leaves are used for toothache and gum ailments.
2.	<i>Carvia callosa</i> Nees. Karvi Sticks are used for making walls of the hut. The Karvi leaves are crushed and the juice is used to cure stomach ailments.
3.	<i>Hygrophila spinosa</i> (Tand). Talimkhana Leaves and seeds are used in Jaundice. Seeds taken internally along with milk, which acts as aphrodisiac.
II	Amaranthaceae
4.	<i>Achyranthes aspera</i> L. Aghada The root powder is used three times daily in dysentery. The root decoction is also used in scorpion stings. The root ash is given to children in cough. Leaf juice drops are put in nostrils to cure headache. Dried plant material boiled in water is given to reduce fever.
5.	<i>Amaranthus spinosus</i> L. katemath Root juice is used for diarrhea, dysentery. Root juice 3 teaspoons full take twice a day.
6.	<i>Celosia argentea</i> L. Kurdu Seeds are used to dissolve urinary stones. Used as a fodder for cattle.
III	Anacardiaceae
7.	<i>Semecarpus anacardium</i> L. Bhilawa/ Bibba The fruits are eaten to relieve indigestion. They are also used in the treatment of cough, piles and boils. Seed oil is used in treatment of scabies and is anthelmintic.
IV	Apocynaceae
8.	<i>Carissa congesta</i> Wt. Icon. Karvand Decoction of roots is given to women to relieve from delivery pain after childbirth. Latex is applied on lips to protect them in winter.
9.	<i>Rauwolfia serpentina</i> Benth. Sarpagandha Root with petiole of betel leaf made into paste is given to cure facial paralysis. It is also used in epilepsy, intestinal disorders.
10	<i>Wrightia tinctoria</i> R. Br. Kalakuda Bark and curd mixed together and given to dissolve stones in gall bladder. Bark and seeds are used in jaundice.
V	Asclepidaceae
11.	<i>Calotropis procera</i> R. Br. Rui Latex is diluted with cold water and the mixture is applied on forehead in headache. Decoction of root bark is given with black pepper in malaria.
12.	<i>Calotropis gigantea</i> L. White rui Dried flower powder thoroughly mixed with honey used for bronchial asthma.
13.	<i>Cryptolepis buchanani</i> R. & S. Latex is applied on goiter. Root paste is applied over bone

	Medvad	fracture.
	14. <i>Hemidesmus indicus</i> (L.) Schultes. Anantmul	Roots are crushed and powder is taken internally for urinary troubles. Root paste is taken internally on snakebite.
VI	Bombacaceae 15. <i>Bombax ceiba</i> L. Katery savar	Flower and sugar cubes with water is very good tonic. The fruit floss of this tree is used for the stuffing of pillows, cushions and mattresses, etc. The wood is used for the making light furniture.
VII	Caesalpinaceae 16. <i>Bauhinia racemosa</i> Lam. Encycl. Apta	Bark extract is given in indigestion. Konkana and Varli tribes apply warm paste of bark over stomach.
	17. <i>Cassia fistula</i> L. Bahawa	Seed powders are given on fever of infants. The fresh leaves and flowers of this tree are used in the treatment of ringworm and some skin diseases. An aqueous root extract is given to cure common fever.
	18. <i>Cassia tora</i> L. Tarota	The leaves and stems are used as vegetables. A whole plant extract is used to cure psoriasis.
	19. <i>Tamarindus indica</i> L. Chinch	Leaves boiled in water. After cooling that water is used for bathing. It relieves body ache.
VIII	Combretaceae 20. <i>Anogeissus latifolia</i> (Roxb.) Wall Dhamoda	Used in economic gum production. Used in construction of beams of houses.
	21. <i>Terminalia arjuna</i> (DC) Weight and Arn. Arjun	The astringent bark of this species is used as a febrifuge and as a coolant and cardiac stimulant. Bark decoction given with cows' milk in chest pain and heart palpitation. The wood of this tree is used in the manufacture of furniture.
	22. <i>Terminalia bellarica</i> Roxb. Baheda	The dried fruit of this tree is used in the treatment of cough, fever, indigestion, dropsy, leprosy, piles, etc. The fruit used in the Ayurvedic preparation called "Triphala Churna," which also contains the fruit of <i>T. chebula</i> and <i>E. officinalis</i> .
	23. <i>Terminalia tomentosa</i> L. Ain /Sadada	The wood is used to make furniture and agricultural instrument. Leaf juice is used on the fresh cuts to stop bleeding and to cure wound.
IX	Euphorbiaceae 24. <i>Euphorbia hirta</i> L.	Sap applied on cuts and wounds.
	25. <i>Euphorbia neriifolia</i> L. Saver	Latex is tapped from the stem and homogenized in mother's milk it is given orally to a baby at night for stomachache.
	26. <i>Embilca officinalis</i> Gaertn. Amla	The bark and fruit decoction mixed with the fruits of <i>Terminalia chebula</i> (Hirda) are used on vomiting. The fruit powder and bark juice is used in stomach trouble. Konkana, Mahadev Koli and other tribes consume ripe fruits as a blood purifier.

	27. <i>Jatropha curcas</i> L Ran erand / Jamal gota	The young twigs are used as toothbrush in gum disease. The seed oil is used in muscular pain and body swellings. Fresh root powder mixed with black pepper and small amount of asafetida powder is taken internally for flatulence and dysentery.
X	Fabaceae	
	28. <i>Abrus precatorius</i> L. Syrt. Gunj	Concentrated seed extract taken as blood purifier. Whole plant is dried, roasted and ash is applied on wounds.
	29. <i>Butea monosperma</i> (Lam.) Taub. Palas	The gum is applied for cracks on the foot while sleeping at night. Decoction of stem bark is taken for asthma cough and cold.
	30. <i>Dalbergia sissoo</i> Roxb. Shisham	The powdered bark is used in the treatment of gonorrhoea. The hard wood is used for the making furniture.
	31. <i>Indigofera glandulosa</i> Wendl.	Fruit powder taken to relieve stomachache.
	32. <i>Macrotyloma uniflorum</i> (Lam.) Verde. Kulith	Decoction of kulith is used to release placenta in case of women after childbirth. Seeds are used as anthelmintic.
	33. <i>Pongamia pinnata</i> (L) Pierre. Karanj	Bark powder is pasted on the wounds of animals for healing. Oil extracted from seeds is used for skin disease.
	34. <i>Psoralea corylifolia</i> L. Bavachi	The seeds are used as diuretic, anthelmintic and laxative in the form of powder. Seed powder or paste is used in leprosy, psoriasis and inflammatory diseases of skin.
XI	Hypoxidaceae	
	35. <i>Curculigo orchioides</i> Gaertn. Kali musali	Dried tubers are used for the treatment of sexual impotency. It is used in urinary and venereal diseases. And as a general health tonic.
XII	Liliaceae:	
	36. <i>Allium sativum</i> Linn. Lasun	Cloves are fried in sesame oil and that oil is used in earache. Cloves are useful in asthma. It is also used in arthritis and rheumatism.
	37. <i>Aloe vera</i> (L.) Burm. Korphad	The juice of the roasted leaf is given for cold, cough and fever. The leaf itself is used for skin diseases. Aloe jell is used in cosmetics to remove wrinkles. And is remedy for burns. Leaf juice mixed with ginger juice is used to cure acute indigestion and jaundice.
	38. <i>Gloriosa superba</i> L. Kal lavi	Root paste with mustard oil is used for curing periodic fever. Leaf paste applied on the forehead and neck for curing asthma of children. Leaf extract is given internally to cattle to kill ring worms. Leaf extract is used to kill lice. Bulb juice is applied on legs and hands that help in release of placenta. Garland of fresh tubers is put around the neck of jaundice patients.
	Lythraceae	
XIII	39. <i>Lagerstroemia parviflora</i> Roxb. Bondara	Stem bark is used on scabies and skin disease.

	40 <i>Lawsonia inermis</i> L. Mehendi	Fresh leaves with black peppers taken with cow milk in anemia. Fresh leaves to cure oedema and jaundice.
	41. <i>Woodfordia fruticosa</i> (L), Kurz. Dhaiti	Tribals extract colors from flowers and use it for dyeing cloths.
	Malvaceae	
XIV	42. <i>Hibiscus aculeatus</i> Roxb Ambadi	Fruits used in scurvy and inflammation during urination. Fruits well for levering acidity.
	43. <i>Sida carpinifolia</i> Linn. Chikna	Leaf extract and sesame oil warmed and applied on boils to release pus. Root powder taken internally on constipation.
XV	Menispermaceae	
	44. <i>Tinospora cordifolia</i> (willd) Miers. Gulvel	Concentrated root extract is used to cure fever. To treat diabetes.
	Mimosaceae	
XVI	45. <i>Acacia chundra</i> (Roxb. ex Rottl.) Willd. Khair	The wood is used for the making agricultural tools. It is a household fuel. The leaves of this tree are used as fodder for goats.
	46. <i>Acacia nilotica</i> (L.) Willd. Babhul	Powder of stem bark mixed with some common salt is applied on teeth and Gum to stop offensive smell of mouth as well as a tooth powder. Young twigs are used for cleaning teeth's.
	47. <i>Acacia torta</i> (Roxb.) Craib Chilar	Bark powder is used as fish poison by Konkana tribes while fishing.
	Moraceae	
XVII	48. <i>Ficus exasperata</i> Vahl. Buiumbar	Bark is boiled in water; the filtrate is given to promote fertility in woman .The filtrate given daily till conception.
	49. <i>Ficus recemosa</i> L. Umber	The astringent leaves of this species are used as a mouth wash for spongy gums. The stem latex is useful in the treatment of piles and diarrhea. Fruits are edible, astringent and carminative. They are useful in relieving stomachache.
	50. <i>Ficus religiosa</i> L. Pipal	Leaf juice applied on bleeding from nose.
	Sterculiaceae	
XVIII	51. <i>Helicteres isora</i> L. Murad sang	Bark powder is given in snakebites. Smooth paste is prepared by rubbing fruits and given internally for flatulence and colic in children. Decoction of roots is taken internally for diabetes.
	Verbenaceae	
XIX	52. <i>Tectona grandis</i> L. Sagwan	Bark powdered used on snakebite. The wood is used in construction and furniture making. Leaves of this plant used in preparation of Irle or Ghongadi.
	53. <i>Vitex negundo</i> L. Nirgudi	The fresh leaf juice is mixed with water and added with small amount of sugar. A spoon of a mixture is given orally twice a day to get relief from fever. Mixture of leaf juice and urine of cow is taken internally by women in irregular menstruation.
	54. <i>Lantana camara</i> L. Gultura, Ghaneri	Sticks are used for thatching roofs of huts.

Zingiberaceae		
XX	55. <i>Costus speciosus</i> (Koenig) J.E. Sm. Peav	If this plant is planted around fields of the crop plants will not suffer from any disease.
	56. <i>Curcuma aromatica</i> (Salish). Ranhalad	Roots and stem are use as torrid and help in digestion. Used for blood purification.
	57. <i>Zingiber officinale</i> . Ale	Fresh or dried rhizome is boiled in water and used in common cough and cold.

RESULTS AND DISCUSSION

Altogether 57 indigenous medicinal plants belonging to 20 families have been documented for their healing properties are being shown in table.1. The analyses of the data reveal that the tribal people used these plants to cure 27 ailments. Out of which maximum plant species used to treat skin diseases, 11 species are used for diarrhea, dysentery, indigestion, flatulence and other stomach related disorders, 7 species for fever and malarial fever, 6 species for cough, cold and asthma, 5 species for jaundice, 5 species as anthelmintic, 2 species for headache, 3 species for safe delivery, 1 species for epilepsy, 3 species for snakebite, 2 species for sexual impotency, 2 species for diabetes, 4 species for blood purification, 4 species as tonics, 2 species for bone fracture, 2 species for cuts and wounds, 1 for facial paralysis. It was observed that most of the preparations include single plant species and in rare

case two or more species. It was also observed that different parts of a single species are used to cure different disease. The present study revealed that majority of the species has multiple uses, out of 57 plant species 45 plant species are utilized as medicinal plants, 12 plant species are utilized for miscellaneous purposes like thatching roofs, building huts, making agricultural implements, fuel, fodder etc. Amongst the plants located in study area *Hygrophila spinosa* for jaundice, *Wrightia tinctoria* dissolve stone in gall bladder *Curculigo orchoides* for impotency, *Gloriosa superba* for multiple use, *Tinospora cordifolia* for diabetes and few others have the potential for further investigations. Such studies may provide new materials to the workers in the field of pharmacology and phytochemistry. Therefore the current study will further help in conservation of traditional ethnomedicinal knowledge as well as development of native villagers.

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