

Ethnobotanical Studies of Wild Edible Plants Used By Tribal of Jawhar Taluka, Palghar (M.S.)

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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 Jawhar taluka of Palghar District in the year 2019-21. Jawhar is a mainly tribal region and different tribes like Thakur, Kokana, Mahadev Koli, Dhor Koli, Katkaris and Varli live in this region. During the study 58 medicinal & edible plants from 32 different families were identified from study location which is used by tribal peoples as home remedies to cure various ailments. 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: Ethno-botany, Jawhar, wild edible plants', tribals

I. INTRODUCTION

India is always known for its natural heritage and rich biodiversity. This rich biodiversity is the result of the variations in the climate and topography (Oak et al, 2015). In India, More than 43% of the total flowering plants are known for medicinal purpose (Sharma et. al., 2012). Recently, World Health Organization (WHO) estimated that 80% of people worldwide rely on herbal medicines for some part of their primary health care. Ethnobotanical study deals with the direct traditional and natural relationship between human and plant. India is also very rich in an ethnobotanical knowledge which is inherited from generation to generation among tribal people living in hilly and diversity rich areas of the country (Khan et al, 2016). Throughout these years, tribal people used various wild plants having ethnobotanical value for meeting their food requirements with Vitamin and mineral necessities. The tribes such as Kokana, Katkari, K-Takur, M-Thakur, Mahadev-koli, Dhorkoli, Varli have been using these plants from time immemorial. These Tribal Peoples are completely amalgamated with the nature. The knowledge and experience about the medicinal plants has been handed down by the elderly folks among aboriginal peoples to their descendents. These aboriginal people use the plants according

to their knowledge either gained by experience or taught by their ancestors and belief healing properties of various ailments, role in their religious and social ceremonies which are manifested in their folk behaviour. In each village, they're supposed to be exist a local Medicine Man or Vaidu (Bhagat) or Mukhiya (Mhorkya), who is expertise in ethnobotanical information, but now a days, these medicine men are becoming rare and traditional ethnobotanical knowledge also depleting day by day (Sonawane et. al. 2012). The present study will be useful to find out the medicinal and nutritional characteristics of wild edible as well as medicinal plants. Hence this is the right time to, conserve the ethnobotanical information, compile the data and create awareness among tribes residing in tribal areas which will definitely conserve the medicinal plants and their over exploitation from natural habitats before they become extinct.

The scientific research work on the ethnobotany is also taking place on larger scale but similar reports from tribal areas of Palghar district are scarce and need more research to be done. Ethnobotanical studies are carried out from Tal- Mokhada by Sonawane et al (2012). Similar studies on edible plants used by tribal women of thane district are conducted by Oak et al (2015). Work has been also done on some herbal remedies used by tribals of Nashik district (Patil et al, 2006) and medicinal plants used by Konkani tribals of Nashik district to cure cuts and wounds. Recently Khan and Ahmed (2013) conducted an ethnobotanical survey of Palghar and Thane district. But the survey is done on larger scale with least specifications. Hence, there is a need to collect and analyze the ethnobotanical wealth of wild edible plants from the tribal inhabited forest of Jawhar of Palghar district of Maharashtra.

II. METHODS AND MATERIAL

Jawhar belongs to Palghar District (formerly Thane District), which is located in western part of Maharashtra state. The range of Western Ghats extends in the district and is a predominantly tribal district. The ethnobotanical studies are carried out from Jawhar; it is geographically located 19°54'20.82"N latitude and 73°13'49.15"E longitude. The Jawhar Taluka is rich reservoir of medicinal plants and associated ethnobotanical practices. The tribal hamlets and forest of the Jawhar taluka is visited frequently. The information of wild edible plants having ethnobotanical importance collected from local tribal peoples or aged men, women. The local medicine men, Vaidyas (Males) and Daiyas (Females), traditional practitioner were interviewed during field study. The information verified through questionnaires, discussion and personal experience. The specimens of medicinal flowering plants collected and identified referring standard literature (flora and keys). The voucher specimens will be deposited at Herbarium of Department of Botany, Arts, commerce and Science College, Jawhar, Dist – Palghar. Information regarding Botanical name, family name, vernacular name, parts used and medicinal uses for each plant were also collected and documented.

III. RESULT AND DISCUSSION

The study revealed use of 58 edible as well as medicinal plants from 32 families as a home remedies to cure various ailments and also as a part of diet (Table 1). The analysis of data reveals that the tribal people use these plants to cure about 38 major & minor ailments. The most of ailments are common but painful, associated with the gastrointestinal diseases like diarrhoea, dysentery, stomach-ache, acidity and other stomach related disorders. The prevalence of such diseases may be due to the lack of clean drinking water, hygienic conditions, and poor food quality. Most of wild edible plant species are also used to treat skin diseases, 9 species for fever, 8

species for cough and cold, 9 species to control fever, 6 for asthma and jaundice and others for snakebite, piles, scabies and diabetes.

TABLE 1: LIST OF WILD EDIBLE PLANTS USED BY TRIBALS OF JAWHAR TALUKA AND THEIR MEDICINAL USES

No.	Plant Family	Botanical Name	Local Name	Part used	Medicinal Uses
1	Acanthaceae	<i>Adhatoda vasica</i> L.	Adulsa	Leaves	Leaf extract is given orally in cough, asthma and bronchitis
2		<i>Amaranthus spinosus</i> L.	Kate Math	Roots	The juice of root is used for diarrhea and dysentery
3		<i>Carvia Callosa</i> Nees.	Karvi	Leaves	Leaf juice is used to cure stomach ailments
4	Amaranthaceae	<i>Achyranthes aspera</i> L.	Aghada	All parts	Root powder is used in Dysentery Leaf juice (nostrils) for Cough Dried plant material in boiling water is given in Fever
5		<i>Celosia argentea</i> L.	Kurdu	Seeds	Seeds are used to treat urinary stones
6	Anacardiaceae	<i>Mangifera indica</i> L.	Aamba	Fruits, leaves	Skin diseases, urinary tract infections, anaemia and bleeding
7		<i>Semecarpus anacardium</i> L.	Bibba/ Bhilawa	Fruits and seeds	Fruits are eaten to relieve indigestion, cough and cold. Seed oil is used for scabies
8	Apocynaceae	<i>Carissa congesta</i> Wt. Icon	Karvand	Fruit	Intestinal worms, Scabies
9		<i>Holorrhena antidysentrica</i> (L.) Wall.	Kuda	Leaves, Bark	Leaf juice is taken orally during stomachache and dysentery
10		<i>Rauwolfia serpentine</i> Benth.	Sarpa-gandha	Roots	Roots are used to treat blood pressure, intestinal disorders, snakebite and facial paralysis
11		<i>Wrightia tinctoria</i> R. Br.	Kala Kuda	Fruit, Bark, seeds	Fruits are used in Fever Bark for Urinary stones and Seeds for Jaundice
12	Araceae	<i>Amorphophallus commutatus</i> (Schott) Engl.	Shevla	Rhizome and tubers	In piles, Bacterial infections can be treated with rhizome
13		<i>Colocasia esculenta</i> (L.)Schott	Aalu	Leaves	Leaves are used as vegetable to clear bowel habit
14	Areaceae	<i>Acorus calamus</i> L.	Vekhand	Root	Root and stem reduce infection,

				and stem	improve brain power and increase appetite
15	Asclepiadaceae	<i>Calatropis gigantean</i> L.	Safed Rui	Flowers	Dried flowers are given in bronchial asthma with honey
16		<i>Hemidesmus indicus</i> (L.) Schultes	Anant Mul	Roots	Root powder is taken internally for urinary troubles and snakebite.
17	Bombaceae	<i>Bombax ceiba</i> L.	Katery Saver	Bark and flowers	Bark is useful to treat wounds, skin diseases, and haemorrhoids. Flowers with sugar is good tonic
18	Caesalpinaceae	<i>Cassia fistula</i> L.	Bahava	Root, seeds, leaves	Root powder is useful in infant fever. Leaves and flowers in skin diseases and ringworm. Root extract is used for common fever
19		<i>Bauhinia racemosa</i> Lam. Encycl.	Aapta	Bark	Bark extract is given in indigestion, skin diseases
20		<i>Cassia tora</i> L.	Tarota	Whole plant	Seeds are laxative, anthelmintics Whole plant extract is used to cure psoriasis
21	Combretaceae	<i>Terminalia arjuna</i> (DC) Weight and Arn	Arjun	Bark	Bark is used as febrifuge, coolant and cardiac stimulant. It is used with cow milk in chest pain
22		<i>Terminalia bellerica</i> Roxb.	Beheda	Fruits	Fruits are used in preparation of 'Triphala churna', in throat infection, leprosy, cough, cold, piles, indigestion and fever
23		<i>Terminalia chebula</i> Retz.	Hirda	Fruits	Purgative astringent fruit
24	Crassulaceae	<i>Kalanchoe laciniata</i> (L.) DC	Panphuti	Leaves	Daily chewing of leaf at morning cure urinary stone
25	Cyperaceae	<i>Cyperus rotundus</i> L.	Nagermotha	Stem & seed	Stem and seed decoction is used to treat fever rheumatism
26	Discoraceae	<i>Dioscorea bulbifera</i> L.	Kadu-kanda		Anticancer, Weight gain
27	Euphorbiaceae	<i>Emblica officinalis</i> Gaertn.	Aawla	Bark, fruits	Stomach troubles, vomiting, boosts memory power, strengthens nervous system, aphrodisiac, improves reproductive system
28		<i>Jatropha Curcas</i> L.	Ran errand	Root and leaves	Root powder is taken internally in dysentery and flatulence. Seed oil is useful in muscular pain and body inflammation

29		<i>Ricinus communis</i> L.	Airand	Leaves	Leaf extract is used to treat jaundice and leaves to treat fever in children
30	Fabaceae	<i>Abrus precatorius</i> L.	Gunj	Whole plant	Ash made from whole plant is applied on wounds. Seed extract can be used as blood purifier
31		<i>Tamarindus indica</i> L.	Chinch	Fruits	Improves digestion and rehydration
32	Lamiaceae	<i>Ocimum sanctum</i> L.	Tulsi	Leaf	Leaf juice is used in kidney stone, cough and cold
33	Liliaceae	<i>Allium sativum</i> L.	Lasun	Bulb	Bulbs are helpful for indigestion and recover fractured bones
34		<i>Aloe vera</i> L.	Korphad	Leaves	Leaf cake is taken internally to purify blood and to impart glow to skin, leaf pulp is useful in skin diseases, fever
35		<i>Gloriosa superba</i> L.	Kal-lavi	Roots, bulb, leaves	Root paste for periodic fever, Leaf paste for asthma in children, bulbs are used to treat jaundice, in release of placenta
36	Lythraceae	<i>Lagerstroemia parviflora</i> Roxb.	Bondara	Bark	Stem bark is used on scabies and skin diseases
37		<i>Lawsonia inermis</i> L.	Mehendi	Leaves	Leaves are helpful in treatment of jaundice and anemia
38	Malvaceae	<i>Hibiscus aculeatus</i> Roxb.	Ambadi	Fruits	Fruits are used in scurvy and inflammation during urination. It is also used to treat acidity
39	Menispermaceae	<i>Tinospora cordifolia</i> (Wild) Miers	Gulvel	Root and stem	Stem extract is best remedy for diabetes, acidity, jaundice and liver diseases
40	Moraceae	<i>Ficus exasperate</i> Vahl.	Bhui umber	Bark	Filtrate made up of bark is used promote fertility
41		<i>Ficus racemosa</i> L.	Umber	Bark	Bark extractis used to cure jaundice and increase appetite Stem latex is used to treat piles and diarrhea. Fruits are edible, astringent and carminative and useful in relieving stomachache
42		<i>Ficus religiosa</i> L.	Pimpal	Whole plant	Plant extract is taken orally for proper digestion. Fruits used in diarrhoea, gastric problems, skin diseases, tonic

43	Moringaceae	<i>Moringa oleifera</i> Lam.	Shevga	Leaves, Pods	Wormicidal and anticancer
44	Myrtaceae	<i>Syzygium cumini</i> (L.) Skeels	Jambhul	Fruits	Wormicidal and useful in diabetes
45	Papilionaceae	<i>Butea monosperma</i> (Lam.)Taub.	Palash	Flower, bark and seeds	Flowers are used to remove body toxins, inflammation, Swelling. Seeds are anthelmintic, laxative Stem Bark is used to treat Asthma, cough and cold
46		<i>Pongamia pinnata</i> (L) Pierre	Karanj	Twigs, Seeds	Skin diseases, Piles, worm infection
47	Poaceae	<i>Eleusine coracana</i> (L.)Gaertn.	Nagli	Roots	Root infusion for abdominal distension
48	Rhamnaceae	<i>Zizyphus jujube</i> Mill.	Bor	Fruit, bark	Improves digestion, cough and mouth cleanser
49	Rubiaceae	<i>Gardenia gummifera</i> L.f.	Dikamali	Gum seed	Dikamali gum powder with honey used in teething troubles in children
50		<i>Meyna laxiflora</i> Robyns	Aaliv	Fruits	For the treatment of inflammation and gastrointestinal disorders
51	Sapotaceae	<i>Madhuca indica</i> 'J.F. Gmel	Moh	Fruits	Skin diseases, urinary tract infections, menstrual irregularities
52	Solanaceae	<i>Withania somnifera</i> (L.)Dunal	Ashwagandha	Root & leaves	Root powder increases immunity and useful in asthma.
53	Sterculiaceae	<i>Helicteres isora</i> L.	Murad sheng	Bark and roots	Root extract is given internally for diabetes. Bark powder helps in snakebite
54	Verbanaceae	<i>Lantana camera</i> L.	Ghaneri	Leaves	Leaves are used in chicken pox, and asthma
55		<i>Tectona grandis</i> L.	Sag	Bark, leaves	Bark powder is used in snakebite, Dysentery, anaemia, swellings, liver related troubles
56		<i>Vitex negundo</i> L.	Nirgudi	Leaves	In irregular menstruation, leaf juice with cow's urine is given to women and fresh leaf juice with sugar is helpful in fever
57	Zingiberaceae	<i>Curcuma aromatic</i> (Salish.)	Ranhalad	Roots, stem	Rhizome has antibiotic properties and helps in digestion
58		<i>Zingiber officinale</i> Roscoe	Ale	Rhizome	Rhizome either fresh or dried is used in cough and cold and as antiseptic

In India, several researchers have already documented the use of wild edible plants in the diet by tribal people of various parts. (Rekha & Kumar, 2014; Rasinga, 2012; Jadhav, Mahadkar and Valvi, 2011). Most of them stressed the need for revival of traditional knowledge and need to conserve it.

IV. CONCLUSION

There is need of further study for the documentation of wild edible plants used by the tribal community and conservation of them before it is lost. As many of these plants used by tribals have great potential to be developed as standard preparation for various diseases. There are some unexplored or underexplored regions which need further attention and documentation. Efforts should be taken by the government and other organizations for the conservation of the traditional and precious knowledge of wild edible plants and to create awareness among the tribals and also common peoples. Local market for these medicinal plants and competitions like wild vegetable recipes can be arranged for this purpose. Such studies may provide new materials to workers in the field of phytochemistry and Pharmacognosy. Therefore, the present data will be helpful in conservation and exploration of traditional ethnobotanical knowledge of wild edible & medicinal plants.

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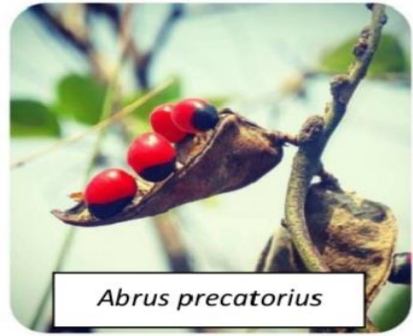
Photo-Frame 1 - SOME WILD EDIBLE PLANTS OF ETHNOBOTANICAL IMPORTANCE FROM JAWHAR



Gloriosa superba



Amorphophalus commutatus



Abrus precatorius



Holorrhena antidysentrica



Meyna laxiflora



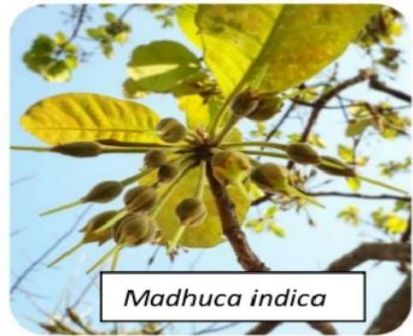
Carrisa congesta



Cassia fistula



Helicteres isora



Madhuca indica



Butea monosperma



Vitex negundo



Kovali Bhaji Festival by tribals