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Studies on Ethno botanical plants used by tribal community of Nashik district, Maharashtra, India

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Abstract

An ethno botanical survey on medicinal plants and their indigenous uses was carried out in Trimbakeshwar, Peth region of Nashik district in Maharashtra. These areas are floristically rich areas where plants of various categories are growing spontaneously in their natural habitat. The rural community of these regions uses some of the plants as medicine for the treatment of human ailments. In a floristic survey 92 ethno medicinal plants species belonging to 48 families were recorded from Nashik district. These medicinal plants are listed in alphabetically order of Latin names, local names along with family & part used as medicine.

Keywords: Ethno botanical, indigenous knowledge, Nashik district, Maharashtra

Introduction

Nashik is a north-western district of state of Maharashtra. The ranges of Western Ghats extend in the district. The forests in the region vary from evergreen to dry deciduous types. It is a predominantly tribal district. Bhils, Katkaris, Kunabi-Kokana, Thakur, Warli and Mahadeo Koli constitute major segment of tribal population. They have their own socio-cultural traditions and way of life. The forests, forest products and traditional crop plants are the main source of their livelihood.

The present day traditional medicine man or Vaidu are rare and handful. Due to lack of interest among the younger generation 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.

Materials and Methods

To authenticate the information was collected from secondary sources during 2018-19, viz., research articles of medicinal plant, Google internet searching, review literature and medicinal plant books. Plants arranged alphabetically by their botanical name followed by local name, family and uses.

The present study, therefore aimed to highlight 92 ethno medicinal plant species belonging to 48 families with their local name of plant parts used as medicine in Trimbakeshwar, Peth region of Nashik district in Maharashtra.

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Table 1: Medicinal Plants used by the tribal of Nashik District.

Sr. No.	Botanical Name	Local Name	Family	Plant Part & Medicinal Use
1	<i>Abrus precatorius</i>	Gunj	Fabaceae	Leaves root and seed uses for the cure of some throat, dry cough, ardor urine, prevention of concentration, serve as blood purifier.
2	<i>Acacia catechu</i>	Khair	Mimosaceae	The bark is useful in conjunctivitis, Heartwood has high medicinal value.
3	<i>Acacia nilotica</i> Lam	Babul	Mimosaceae	The ark is used in diarrhea, dysentery and diabetes. The gum is medicinal.
4	<i>Achyranthus aspera</i> L.	Aghada	Amaranthaceae	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>Adhatoda vasica</i>	Adulsa	Acanthaceae	Leaves, root, bark, flower and fruits. An antispasmodic, treatment of chest diseases, asthma, dysentery, malaria, fever.
6	<i>Aegle marmelos</i> L.	Bel	Rutaceae	Young fruit is crushed with a piece of turmeric which is applied externally in case of pimples.
7	<i>Aerides crispum</i> Lindl.	Vinchu, Bandgul	Orchidaceae	Seed powder is applied on injuries. Plant material used is collected if it is epiphytic on <i>Mangifera indica</i> L. exclusively.
8	<i>Agave americana</i> L.	Kekti	Agavaceae	The root is diuretic and used in syphilis.
9	<i>Ageratum conyzoides</i> L.	Goat weed	Asteraceae	Leaf is used as blood coagulant and to heal the wounds, leprosy, skin diseases.
10	<i>Ailanthus excelsa</i> Roxb.	Maharukhi	Simaroubaceae	Tablets are prepared from leaf paste and given with banana fruit for a day or two, thrice a day to treat jaundice.
11	<i>Amaranthus spinosus</i> L.	Kathemath	Amaranthaceae	Root juice is used for diarrhea, dysentery. Root juice 3 teaspoons full take twice a day.
12	<i>Anacardium occidentale</i>	Kaju	Anacardaceae	Bark, Apple, Shell oil and seed. Leprosy, ringworm, ulcers, elephantiasis the seed oil is an excellent emollient and used in gastroenteritis.
13	<i>Andrographis paniculata</i> Nees	Kalmegh	Acanthaceae	Whole plant is used in dysentery bronchitis, influenza, fever and in liver diseases.
14	<i>Andrographis paniculata</i> wall	Kalmegh	Acanthaceae	Leaf is used against insect bites. Whole plant is used in hepatitis and inflammation.
15	<i>Artemisia vulgaris</i> Linn.	Indian worm weed	Asteraceae	Leaf is used as laxative. Flower is used in exelling round worm & on wounds.
16	<i>Artocarpus heterophyllus</i> Lam.	Phanas	Moraceae	The ash obtained from bar of this plant and leaves of <i>Amaranthus spinosus</i> L. is mixed coconut oil. It is applied for echzema.
17	<i>Asparagus racemosus</i> wildl	Shatawar	Liliaceae	Used in leucorrhoea, epilepsy, gastrointestinal disorders, Roots used in lactation in women and cattle's.
18	<i>Azadirachta indica</i> L.	Neem	Meliaceae	Leaves are used as insect repellent. Bark, leaf and fruit is antiseptic used in ulcers, skin diseases. Seed used for treatment of intestinal worms.
19	<i>Barleria prionitis</i> L.	Katikoranti	Acanthaceae	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.
20	<i>Blumea lacera</i> Burn	Kukurband	Asteraceae	Root used piles and cholera. Leaves used for mouth diseases
21	<i>Bombax ceiba</i> Linn syn	Sawar	Bombacaceae	Root used as injuries, Bleeding. Paste prepared in water.
22	<i>Brachiaria reptans</i> Linn.	Chopadi	Poaceae	Leaf anaemia. Juice obtained by Crushing and boiling.
23	<i>Butea monosperma</i> (Lam.) Taub.	Palash	Fabaceae	Root used to cure fever. Seed is used against roundworm and skin diseases. It is also used to cure diarrhea and dysentery
24	<i>Calotropis procera</i> W.T. Aitm	Rui	Asclepidaceae	Root is used to cure tuberculosis, cough, bronchitis, asthma, dysentery and skin diseases. Latex is used as antidote to scorpion bite.
25	<i>Cardiospermum halicacabum</i> L.	Kanphuti	Sapindaceae	Leaves used for rheumatism, piles, fever, hydrocoele and ear ache.
26	<i>Careya arborea</i> Roxb.	Kumbhi	Lecythidaceae	Stem bark Piles. Infusion or extract prepared in water.
27	<i>Carissa congesta</i>	Karwand	Apocynaceae	Latex used burning sensation during urination. Latex dropped on Urinogenital opening.
28	<i>Carvia Karvi</i> Nees.	Callosa	Acanthaceae	Sticks are used for making walls of the hut. The Karvi leaves are crushed and the juice is used to cure stomach ailments.
29	<i>Casearia graveolens</i> Dalz.	Kirmira	Caesalpiniaceae	Stem pieces used antidote for snake-bite.
30	<i>Cassia occidentalis</i> L.	Rantarota	Caesalpiniaceae	Leaves are burnt and the soot is collected on a plate applied with coconut oil. It is then applied onto eyebrows to induce sleep.
31	<i>Catunaregam spinosa</i>	Gal	Rubiaceae	Te paste of fruits along with seeds is applied onto neck of a patient suffering from tonsillitis.
32	<i>Clematis triloba</i> Heyne Ex Roth	Mogra	Ranunculaceae	Leaf paste is applied on head against headache.
33	<i>Celosia argentea</i> L.	Kurdu	Amaranthaceae	Seed are used to dissolve urinary stones. Used as a fodder for cattle.
34	<i>Chlorophytum borivilianum</i> Santpaus	Safed musli	Liliaceae	Root is used improving strength, capable of promoting the semen and sexual vigor.
35	<i>Chrysopogon fulvus</i> (Sperg)	Khandol	Poaceae	Peels of culm and bark. Cough and chest pain.
36	<i>Clerodendrum serratum</i> (L) Moon	Dhaiti	Verbenaceae	Roots are rubbed on gums in case of children for better teething.
37	<i>Coccinia grandis</i> L.	Kundru	Cucurbitaceae	Fruits are used in diabetes.
38	<i>Coix gigantean</i> koen. Ex Roxb.	Kachura	Gramineae	Extract of rootstock is mixed in bath water for person suffering form joint pains for 3-7 days
39	<i>Cordia dichotoma</i> Forst. f	Bhokar	Cordiaceae	Stem bark used excessive menstruation. Decoction prepared in boiling water.
40	<i>Crinum defixum</i> KerGawl.	Kumbh	Amaryllidaceae	Leaves used pimples and body swelling. Smoke passed over body
41	<i>Curculigo orchioides</i> Gaerth	Kalacheda	Hypoxidaceae	Root paste is applied onto injuries to expel worms and also in case of septics.
42	<i>Datura metal</i> L.	Datura	Solanaceae	Smoke of leaves and seeds used in asthma and respiratory disorders. Leaf used in various inflammation, piles, joints pain
43	<i>Dendrobium barbatulum</i> Lind l.	Zadyalosan	Orchidaceae	Extract obtained Form pseudo bulbs is administered orally to treat stomach-ache and improve digestion.
44	<i>Deospyros melanoxylon</i> Roxb.	Tendu	Ebenaceae	Bark is used diarrhea. Leaf is used in skin and blood diseases. Seed used for dysentery.
45	<i>Dichrosachys cinerea</i> (L) Wight and Arn.	Yelatur	Mimosaceae	Roots are rubbed in water. It is kept overnight. The slurry obtained is applied in case of lymph adenitis or torsion in things.
46	<i>Dillenia pentagyna</i> Roxb.	Karwal	Dilleniaceae	Stem bark for jaundice and urinary complaints. Extract in water by crushing and squeezing.
47	<i>Diplocyclos palmatus</i> (L) C. Jeffery	Shivlingi, Patnari,	Cucurbitaceae	Entire plant along with fruits is crushed and made into paste. It is applied against septics.
48	<i>Eclipta alba</i> (Linn) Hassk.)	Kalamaka	Asteraceae	Leaf for injury caused due to continuous contact with mud. Juice obtained by crushing and squeezing.
49	<i>Elytraria acaulis</i> (L.f) Lindau	Vismuli	Acanthaceae	Roots are chewed for urinal complaints.
50	<i>Emilia sonchifolia</i> L.	Dhampan	Compositae	Plants are dried, powdered and boiled in water. The decoction is taken orally for asthma.
51	<i>Ephorbia tricali</i> L.	Sehand	Euphorbiaceae	Whole plant is useful in wound healing. Milky juice is used in rheumatism, cough and asthma.
52	<i>Erythrina indica</i> Lam.	Pangara	Papilionaceae	Leaf juice of this plant are <i>Butea monosperma</i> (Lam) Taub is given for 3-4 days twice a day to treat cough.
53	<i>Euphorbia nerifolia</i> L.	Sabar	Euphorbiaceae	Peels of outer parts young stem are heated. The extract is them obtained which is dropped I ears to treat ear -ache.
54	<i>Evolvulus alsinoides</i> L.	Shankha phuli	Convolvulaceae	The plant is bitter nerving tonic antispasmodic. The leaves are used treatment of epilepsy, bleeding.
55	<i>Ficus religiosa</i> L.	Peepal	Moraceae	Latex is used as tonic, bark for gonorrhoea and scabies. Leaves as antidote to snake bite.
56	<i>Geodorum densiflorum</i> (Lam).	Haryakand	Orchidaceae	Dry rhizomes are powdered which is applied on swellings.
57	<i>Glossocardia bosvallia</i>	Mirgi-kand	Asteraceae	Root-Stalk for alcohol addicts. Decoction mixed with tea.
58	<i>Hemidesmus indicus</i> (Linn)	Anantmul	Asclepiadaceae	Root used to increase milk flow. Root extract in water taken orally.
59	<i>Heracleum grandis</i> (Dalz)	Bhaphali	Apiaceae	Entire plant or tubers are crushed in water. This extract is administered for 3-4 days to patients suffering from cholera.
60	<i>Heterophragma quadriloculare</i> (Roxb.)	Waras	Bignoniaceae	Paste of fresh bark is applied on injury caused accidentally due to axe.
61	<i>Hygrophila spinosa</i> (Tand.)	Talimkhana	Acanthaceae	Leaves and seed are used in jaundice. Seeds taken internally along with milk, which acts as aphro disiac.
62	<i>Ipomea illustris</i> prain	Gogveli	Convolvulaceae	The fumes after burning the leaves are passed over the body of a child suffering from chicken-pox.
63	<i>Ipomea pes-tigris</i> L	Borvel, Borvak;	Convolvulaceae	Stem powder is boiled in water and extract missed with sugar-candy. Tablets are prepared and given for 21 days for impotency.
64	<i>Ipomea turbinate</i> Lag.	Guggalvel	Convolvulaceae	Stem powder is boiled in water. The decoction obtained is given against cold and fever.

65	<i>Jatropha curcas</i> L.	Mogli Erand, Parsi Erand,	Euphorbiaceae	To kill germs in teeth cavities, Patients are advised to use stem pieces as tooth brush.
66	<i>Lannea coromandelica</i> (Houtt.) Merr.	Modal	Anacardiaceae	Bark paste is tied on injuries for healing.
67	<i>Mangifera indica</i> L.	Aam	Anacardiaceae	The roots and bark used in wounds, ulcers, vomiting, diarrhea, dysentery, rheumatism. Fruits used as a cooling agent
68	<i>Maytenus emarginata</i> (Willd) Dig Hou	Henkal	Celastraceae	Leaves are chewed for cough.
69	<i>Meyna laxiflora</i> Robyns	Aliv	Rubiaceae	Fresh leaves are smeared with coconut oil and then slightly heated. These are wrapped on goiter or swellings.
70	<i>Milisia tomentosa</i> (Roxb) Sinclair	Humb	Anonaceae	Unripened fruits are dried and crushed. They are burnt and the smoke is allowed to pass over the body of lad after delivery to reduce body swelling.
71	<i>Mucuna pruriens</i> L.	Kachquiri	Papilionaceae	Hairy tomentum removed from the fruits is homogenised in jaggery. It is given to children as a wormicide.
72	<i>Mukia maderaspatana</i> (L) Roem	Meka	Cucurbitaceae	The ash of the dried leaves is mixed in coconut oil. This paste is applied onto injuries locally called 'Chikhali' caused due to constant contact of mud or water.
73	<i>Nerium indicum</i> Mill	Kaner	Apocynaceae	The leaves are medicinal. Bark and Roots are poisonous.
74	<i>Ocimum sanctum</i> L.	Tulsi	Lamiaceae	The leaves are used in treatment of skin diseases. Also used in cough and cold.
75	<i>Oroxylum indicum</i> L.	Vent Tetu;	Bignoniaceae	Bark is crushed and the extract obtained is boiled. This decoction is administered to women to control leucorrhoea and menorrhoea.
76	<i>Phanera integrifolia</i> (Roxb) Benth	Chamel	Cesalpiniaceae	Bark extract is used to wash hands for 3-4 days regularly to treat jaundice.
77	<i>Ptilostigma malabaricum</i> (Roxb) Benth	Shid	Cesalpiniaceae	Rot paste is applied onto injuries caused due to weapons.
78	<i>Plumbago zeylanica</i> L.	Chitrok	Plumbaginaceae	The roots covered with clot are placed beneath the stone-grinder. They are then burnt and the smoke is allowed to pass through the hole of the grinder so as to react the anus of the patient suffering from piles.
79	<i>Pogostemon parviflora</i>	Phangula	Labiatae	Leaves of this plant and <i>vitex negundo</i> L. are crushed together. The paste prepared is kept in jaws to relieve toothache.
80	<i>Pongamia pinnata</i> (L) Pierre.	Karanji	Papilionaceae	Bark extract is applied on tongue of patients suffering from malaena.
81	<i>Pongamia pinnata</i> (Linn)	Karanj	Fabaceae	Seeds for ringworm.
82	<i>Psoralea corylifolia</i> L.	Bawchi	Papilionaceae	Seed is used in cough, diabetes fever, edema, piles and ulcer.
83	<i>Schleicheria oleosa</i> (Lour.)	Kusum	Sapindaceae	Root for Rheumatism. Extracted in Water.
84	<i>Schrebera swietenioides</i> Roxb	Moka	Oleaceae	Few drops of leaf juice are dropped in ears as a remedy against ear-ache.
85	<i>Sesamum indicum</i> L.	Til	Pedaliaceae	Seed oil in medicinal and also used as hair oil.
86	<i>Solanum virginianum</i> L.	Bhui Ringni	Solanaceae	Heated fruit are cut into pieces. They are in moth. Saliva is continuously dropped of to cure toothache.
87	<i>Syzygium cumini</i> L.	Jamun	Myrtaceae	The seeds are used in diabetes.
88	<i>Tamarindus indica</i> L.	Imli	Caesalpiniaceae	Fruits and leaves are used as carminative, digestive, laxative and astringent.
89	<i>Tectona grandis</i> L.	Sagwain	Verbenaceae	The oil is used to treat ringworm, and itches.
90	<i>Vitex negundo</i> L.	Nirgudi	Verbenaceae	Pulp of boiled leaves is applied onto joints as a remedy against rheumatic pains.
91	<i>Withania somifera</i> L.	Aswagandh	Solanaceae	Root is used in ulcer, fever, cough and leucoderma.
92	<i>Ziziphus mauritiana</i>	Ber	Rhamnaceae	The bark is used in diarrhea and in removing intestinal worms.

Results and Discussion

Altogether 92 ingenious medicinal plants belonging to 48 Families and out of these medicinal plants 7 species belongs to the family Acanthaceae, 5 Species from Asteraceae, 4 species from each family viz., Papilionaceae, Convolvulaceae, 3 species from each family viz., Mimosaceae, Fabaceae, Orchidaceae, Anacardiaceae, Cucurbitaceae, Solanaceae, Caesalpiniaceae, Verbenaceae, Amaranthaceae, 2 species from each family viz., Liliaceae, Asclepiadaceae, Sapindaceae, Euphorbiaceae, Bignoniaceae, Rubiaceae, Moraceae, Apocynaceae, Cesalpiniaceae, Poaceae, 1 species from each family viz., Rutaceae, Agavaceae, Meliaceae, Apiaceae, Celastraceae, Annonaceae, Ebenaceae, Euphorbiaceae, 1 species from Lamiaceae, Pedaliaceae, Myrtaceae, Plumbaginaceae, Oleaceae, Labiatae, Rhamnaceae, Simaroubaceae, Ranunculaceae, Gramineae, Hypoxidaceae, Compositae, Bombacaceae, Lecythidaceae, Cordiaceae, Amaryllidaceae, Dilleniaceae have been documented for their healing properties are being show in table 1. The analysis of the data reveal that the tribal people used these plants to cure various ailments. The present study revealed that majority of the species has multiple uses for building huts, making agricultural implements like *Anacardium occidentale* L. Family Acanthaceae for Leprosy, Elephantiasis the seed oil is an excellent emollient and used in gastroenteritis. *Calotropis procera* W.T. Aitm Family Asclepiadaceae for Root is used to cure tuberculosis, cough, bronchitis, asthma, dysentery and skin diseases. Latex is used as antidote to scorpion bite. *Achyranthus aspera* L. Family Amaranthaceae for Scorpion stings. *Celosia argentea* L. Family Amaranthaceae for Urinary stones. *Pongamia pinnata* (Linn), Family Fabaceae for ringworm. *Psoralea corylifolia* L. Family Papilionaceae for Seed plant part is used in cough, diabetes, fever, edema, piles and ulcer. *Casearia graveolens* Family Caesalpiniaceae for Antidote for Snake bite. Such studies may provide new materials to the workers in the field of pharmacology and photochemistry.

Therefore the current study will further help in conservation of traditional ethano medicinal knowledge as well as development of native villagers.

Conclusion

During 2018-19, information of medicinal plant was collected from secondary sources viz., research articles, Google internet searching, review literature and medicinal plant books. It is revealed that they have close association with surrounding environment and people in the vicinity of the forest have good knowledge of usefulness of plant species especially of medicinal plants.

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