



Identities and ethnomedicinal plant parts sold by, vendors in north Maharashtra (India) to cure human diseases

Ahirrao YA¹, Patil DA²

¹ Department of Botany S.S.V.P. Sanstha's Arts, Commerce and Science College, Shindkheda, District Dhule, Maharashtra, India

² P.G. Department of Botany, S.S.V.P. Sanstha's L.K. P.R. Ghogrey Science College, Dhule, Maharashtra, India

Abstract

The present paper deals with botanical sold by the vendors in Dhule, Nandurbar, Jalgaon, and Nasik Districts of North Maharashtra (India) ethnobotanical survey was carried out few years and information was obtained through open discussions and interviews with tradipracticitioners. Presently, 27 plant species belonging to 27 genera and 21 families are communicated. Of these, 07 species are noted for first time from Indian region, as where 04 species although recorded so useful, but their parts are different These are administered in different forms of recipes e.g.- paste, powder, extract, ash, decoction etc. Even they are used raw or sometimes simply warmed. In many cases, they use them as a sole drug or occasionally supplemented by other botanicals or domestic substances like sugar, cow ghee, honey etc. These are used to combat about 22 human disease such as piles, skin, diarrhoea, deafness, bile, leucorrhoea, urination, respiratory track, diabetes, rheumatism, sexual vigour, enflunza, ring worms, tuberculosis, cancer, malaria, tonsillitis, hepatitis, jaundice, constipation, eczema, tetanus etc. The data include some chemical constituents of plants and accrued is assessed by cross-cultural comparisons with other Indian claims to bring out their veracity and uniqueness of the claims. The objective of investigation was to gather and document information in plants on utilization of botanicals by the tradipracticitioners in the region. These drugs, if studied further on scientific lines, may yield valuable lead molecules and serve as additional sources of medicine.

Keywords: ethnomedicine, vendors, North Maharashtra

Introduction

Medicinal plants have been crucial in sustaining the health and well-being of mankind. It is generally agreed that major section of population especially in developing and underdeveloped countries seek healthcare from sources other than conventional medicines. They also seek help of some organized systems of medicine like Ayurveda, Unani, Siddha, etc. apart from these, every community or village has a wealth of herbal folklore. Our ancestors possessed a profound understanding of healing powers of plants. They used to try and test local plants for a range of common health problems. These ancient healing practices are still in vogue in a period when different well-thought and organized systems of medicine are being practiced all over the world. Their knowledge has been passed orally generation-to-generation since long past. India is one such country having the oldest system of healing in the world. Moreover, tribal and rural societies in India still have their own choices of indigenous drug selection and application. A review of literature indicates the Herbal Vendors (Jadibutiwalas) and their traditional knowledge about plant drugs has remained untapped. They have been always ignored in our country. In India, Sinha (1998) ^[12] attempted on this line and studied Delhi and surrounding areas. The present authors investigated some districts of north-western

part of Maharashtra. viz. Dhule, Nandurbar, Nashik, Jalgaon. Information of 27 plants species employed for different human afflictions are being presented in this paper.

Methodology

Herbal vendors wandering in north Maharashtra are tapped and enquiries *w.r.t.* plant drug, recipe, administration, plant names, precautionary tips and diseases treated are noted and some chemical constituents noted from literature. Plants samples or products are purchased / collected and preserved scientifically. They are identified by using various regional, state and national floras in India. (Cooke, 1958; Hooker 1853; Naik, 1998; Sharma *et al.*, 1996 Singh *et al.*, 2000; Patil 2003, and Kshirsagar and Patil 2008) ^[4, 5, 7, 10] Repeated surveys were conducted in different villages, towns and cities of North Maharashtra. Information regarding remedies related especially to the human diseases was recorded. The data adduced is based on personal interviews, observations and experiences of vendors in the region. The data is compared with the classical literature to point out new reports from India (Anonymous 1948-1976; Ambasta 1986; Jain 1991; Watt 1889-1893; Bhattacharjee, 1998; etc.) ^[1, 6, 15, 2] Asterisk to the plant species indicate reports in classical literature. These are presented in the following Table-1.

Table 1: Enumeration of identified botanical, chemical constituents and utilities

Sr. No.	Plant Name & Family	Vernacular Name	Plant Part Used	Chemical constituents	Utility
1*	<i>Abutilon indicum</i> L. (Malvaceae)	Dabala	Leaves	Tannin, Asparagin, Calcium carbonate	1. Fresh leaves are chewed orally or leaf juice given with butter milk empty stomached in morning for four days to cures piles. 2. Extract of few fresh leaves is mixed in cow ghee in equal quantity about two spoon is administered daily for three days to regularize menstruation. 3. Decotion of leaves is consumed about half cup with honey twice a day for five days to cure diarrhoea.
2**	<i>Acorus calamus</i> L. (Araceae)	Vekhand	Leaves Fruit	Asarone, Calamenol, Eugenol, Palmitic acid,	1. Leaves of this plant and leaves of (<i>Cannabis sativa</i> L.) and seeds of (<i>Trachyspermum ammi</i> (L.) Sprangue) are taken in equal amount and are burnt and fumes are exposed on anus opening to cure piles. 2. Two teaspoons decoction of fruits is advised twice daily for seven days to relieve dry cough. 3. Fruits of this plant and (<i>Xanthium strumarium</i> L.) are boiled in water and made into decction two teaspoon of this decoction is advised twice for ten days to get relief from fever.
3	<i>Aegle marmelos</i> (L.) Corr. (Rutaceae)	Bel	Fruit Leavs Bark	Marmalodin, Limonene β -phellanderne, Fragrine, Sterols	1. Fruit pulp mixed with cow urine and oil of (<i>Sesamum orientale</i> L.) is three drops are administered in ear to reduces deafness. 2. Fresh leaves are kept in water overnight. The infusion 3-4 teaspoons is given at morning to regularise blood pressure. 3. Fruit pulp of this plant about 20 gm. thrice a day for three days is consumed to check dysentery.
4**	<i>Alpinia galanga</i> (L.) Willd. (Zingiberaceae)	Kulinjan	Leaves Fruits Rhizo-me	Cineol, Methyl cinnamate, Alpinin, Galanagin	1. Two spoon of leaves decoction is advised twice daily for four days to a person suffering from impotency and erectile disfunction. 2. Two teaspoon of leaf juice is administered to a person suffering from painful burning micturation. 3. Leaves are crushed in water and are applied on body to cure yellow patches on skin.
5**	<i>Alistonia scholaris</i> R. Br. (Apocynaceae)	Saptaparni	Stem bark, Root	Alkaloids, Ditaine, Echtenine, Triterpenes, Lupeol	1. Stem bark is burnt and smoke is passed over body and the ash is wrapped over a body of a person suffering from itching. 2. Root powder one teaspoon daily at night for one month is aphordiasic.
6	<i>Anethum graveolens</i> L. (Apiaceae)	Bansauf	Seeds	Oil are Carvone, d-llimonene, α -terpinene	1. Seeds powder about 1 gm. is mixed with equal amount of (<i>Trigonella foenicum-graceum</i> L.) and is consumed with butter milk or water twice a day for three days to cure diarrhoea. 2. Dried seed powder about 1-2 gm. is consumed with sugar (<i>Saccharum officinarum</i> L.) daily to improve breast feeding mothers.
7	<i>Blumea balsamifera</i> (L.) DC. (Asteraceae)	Bhangrud	Leaves	Oil L-borneol, d-camphor, cineol	1. The leaves are crushed four teaspoonsful of juice is obtained, one teaspoonful of cow's ghee is added. The mixture is advised once a day for four days to cure piles. 2. The leaves are crushed fine. The paste is applied on abdomen and bandaged on swollen tummy in infants.
8**	<i>Boswellia serrata</i> Roxb. (Burseraceae)	Salai	Stem bark Seeds	Tannis, Pentosans, lignin, β -sitosterol	1. Stem bark is crushed and warmed, this bark paste is placed in a cloth and is tied around the body part relieves pain. 2. Dried gum is placed on live coal, and allow the fumes to envelop the patient suffering from loss of consciousness.
9	<i>Cassia angustifolia</i> Vahl. (Caesalpinaceae)	Sonamakai	Leaves	β -diglucoside Chrysophanic acid, Flavanols, Emodin	1. Leaves are boiled in water with (<i>Camellia sinensis</i> (L.) Kuntze.) one cupful of this decoction is consumed daily at night for four days to cure abdominal pain. 2. One teaspoon of dried leaf powder is consumed with water at night for three days facilitate bowel movement.
10	<i>Chenopodium album</i> L. (Chenopodiaceae)	Chill	Leaves Seeds	Leucine, Lysine, Phenylalanine, Threonine, Polypodine	1. Leaf juice about 10 ml. and lump sugar (<i>Saccharum officinarum</i> L.) are mixed and given twice daily for two day to relieve painful micturition. 2. Seed powder is mixed with honey and is consumed for three nights to cure bile problems.
11*	<i>Cyperus rotundus</i> L. (Cyperaceae)	Nagarmotha	Root, Entire plant	Cyperene, Cyperol, Cineol, Starch	1. Root of this plant 1-2 gm., rhizome of (<i>zingiber officinale</i> L.) 2 gm are mixed in 4 gm of Jagerry (<i>Saccharum officinarum</i> L.) and is consumed twice a day for one-month cures cough and other respiratory problems. 2. Powder of entire plant and dried fruit powder of (<i>Embllica officinalis</i> Gaerth.) and (<i>Curcuma longa</i> L.) are boiled in water and made in to decoction and is used to drink regularly to cure gout.
12	<i>Erythrina variegata</i> L. (Fabaceae)	Pangara	Leaves	Alkaloid, Erythralin, Hypaphorine,	1. Leaf paste 10 gm. and few candy sugars (<i>Saccharum officinarum</i> L.) is dissolve in cup of honey. It is consumed twice daily for seven days to treat leucorrhoea.

				Saponin	2. Two to three drops of leaf juice are dropped in ear to cure ear ache. 3. Decoction of leaves is used to gargle to cure toothache.
13	<i>Foeniculum vulgare</i> Mill. (Apiaceae)	Sauf	Seeds Leaves	Fennel oil, Fenchone, Limonene, Methyl chavicol, α -pinene	1. Seeds are soaked in water overnight. In the morning it is mixed with lump sugar (<i>Saccharum officinarum</i> L.) and is consumed to cure burning sensation during urination. 2. Leaves juice about 5 ml. is mixed with 100 ml. cow's milk and is consumed regularly to improve lactation in feeding mothers.
14	<i>Hyssopus officinalis</i> L. (Lamiaceae)	Zufah	Flower Leaves	Oil pinocamphone, b-pinenes, a-terpinene	1. Decoction of flowers 10-30 ml. is consumed daily at night and early morning for one month relieves swelling of respiratory tract. 2. Fresh leaves juice about 10 ml. is consumed with honey for seven days helps to kill round worms in the intestine.
15	<i>Lawsonia inermis</i> L. (Lythraceae)	Mehandi	Leaves	Lawsonic, Arachidic, Stearic, Palmitic, Oleic	1. Leaves 200 gm. are crushed, and made into small tablets 2-5 tablets are advised twice daily for seven days to reduce uterine problems. It also controls excessive bleeding during menstruation. 2. Leaves juice one teaspoon is advised with glassful of water daily at night cures diabetes and also helpful against painful micturition.
16	<i>Moringa oleifera</i> Lam. (Moringaceae)	Shevaga	Flower Leaves	Carotene, Nicotinic, ascorbic acid, arginine, leucine,	1. Flowers are boiled in sesamum oil (<i>Sesamum orientale</i> L.) cooled. The oil 3-4 drops are dropped in ear for twice for three days against ear ache and also cures infection of ear. 2. Extract of leaves about spoonful is given orally daily morning for a week or two against diabetes.
17	<i>Myristica fragrans</i> Hoult. (Myretaceae)	Jayfal	Fruit	Myristicin, Linalool, Safrole, Linalyl acetate	1. Fruits are rubbed on rough stone with water and the slurry obtained is applied on forehead to relieve headache. This slurry is also applied on joints to relieve rheumatism. 2. One teaspoon of fruit powder, with glassful of milk once time for one month helps to increase sexual vigour.
18	<i>Nyctanthes arbor-tristis</i> L. (Oleaceae)	Parijaat	Leaves Flower	Tannic acid, Methyl salicylate, Glucoside, Mannitol, d-mannitol, Glycerides, Linoleic, Oleic acids	1. One tea spoon leaf juice and one tea spoon of sugar (<i>Saccharum officinarum</i> L.) are mixed thoroughly. One tea spoon of this mixture is given twice a day for eight days to a patient suffering from enflunza. 2. Leaf juice is applied on affected parts of skin in skin diseases like itching and ring worms.
19	<i>Origanum vulgare</i> L. (Lamiaceae)	Sabja	Leaves Root	Tannins, Resin, Sterols, Flavonoids, thymol	1. Root juice about two teaspoon is advised twice daily for one month against Tuberculosis till cure. 2. Dried leaf powder and seed powder are consumed one teaspoon daily at night for seven days to cure stomachache.
20	<i>Pandanus odoratissimus</i> L. (Pandanaceae)	Kevada	Leaves Root	Oil is Phenylethyl alcohol, dipentene, Citral, Fatty acids	1. Leaves smoke is inhaled through mouth to treat throat cancer. 2. The root powder is administered for three days at night to relieve from urinary problems.
21	<i>Plumeria rubra</i> L. (Apocynaceae)	Lal Champa	Latex, Stem bark	Plumierides, Fulvoplumierin	1. Latex 10 ml. and 10 gm. leaf pulp of (<i>Aloe vera</i> L.) mixed together and paste is prepared with coconut oil (<i>cocos neusifera</i> L.). This paste is applied on skin to treat itching till cure. 2. One teaspoon dried stem bark powder twice a day for three to five days is to treat malaria. 3. Stem bark powder is given orally in morning and evening for seven days to get relief from tonsillitis.
22	<i>Ricinus communis</i> L. (Euphorbiaceae)	Erandi	Root, Leaves Seeds	Beta-amyrin, Carotene, Tannins, cistosterol, Chlorogenic acid, Quinic acid, Glycoproteins, Saponins	1. Roots of this plant and roots of (<i>Embllica officinalis</i> L.) is made in to decoction and is applied at night against tumors for seven days till it cure. 2. Extract of young leaves prepared in cow milk, about a cup is given 3-4 days to treat hepatitis. 3. Leaves are rubbed in cow's milk one cup of it for three days at morning is given to patient suffering from jaundice. 4. Root extract is mixed in honey. A cup of it is administered per day to patient suffering from urinary stone. It is followed for a week.
23	<i>Tabernaemontana divaricata</i> (L.) Br. ex. Roem. & Schult. (Apocynaceae)	Ananta	Flower Root	Coronaridine, Voacristine, Dregamine, Coronarine	1. Flowers and buds of the plant are crushed and is applied around the eyes reduces burning sensation of the eyes, redness and itching. 2. Dried root powder is used as tooth powder and is useful against, gum bleeding.
24	<i>Tectona grandis</i> L. f. (Verbenaceae)	Sag	Seeds	Calcum, Silica, Ammonium, Magnesium phosphate, Resin, Fatty oil	1. Seeds powder half teaspoon is advised orally with water twice a day for fifteen days against painful micturition. 2. Four seeds are soaked in water for ten minutes then rubbed on stone and paste obtained is applied around the navel part once only to get relief against painful urination and in spurts.
25*	<i>Valeriana jatamansi</i> Jones. (Valerianaceae)	Tagar	Leaves	Actinidine, Carotene, Valeranone, Jatamansinol, Oroselol	1. Fresh leaves are crushed and paste is applied around the eyes to cure redness, itching and pain in eyes. 2. Decoction of leaves about 30-40 ml is consumed daily at night for seven days it is helpful to regulate menstruation cycle.

26	<i>Viola odorata</i> L. (Violaceae)	Banfshah	Flower Stem	Voiline, Ionone, Glucoside, Methol salicylic, Saponins	1. Dried flower powder 2-4 gm. is consumed with warm water in the morning for a week cures constipation. 2. Stem decoction is mixed with wheat (<i>Triticum aestivum</i> L.) flour and is applied on affected part to cure swelling.
27	<i>Vitex negundo</i> L. (Verbenaceae)	Nirgudi	Leaves Root	Alkaloid, Nishindine, Hydrocotylene	1. Leaf paste is applied on affected skin part to cure eczema. 2. Root powder is mixed with jaggery (<i>Sesamum orientale</i> L.) and made into pellets one pill daily for seven days cures leucorrhoea. 3. Leaves juice is mixed with honey and one teaspoon given orally for 2-3 time a day for three days to cure tetanus. 4. Leaf juice mixed with one teaspoon of cows ghee is given orally advised twice for seven days to cure intestinal worms.

Result and Discussion

The present authors noted some botanicals employed by the vendors to cures various human diseases in north Maharashtra. Presently, botanicals belonging to 27 plants species, belonging to 27 genera and 21 families are communicated. All are angiospermic and six plants are exotic such as *Alpinia galanga*, *Alistonia scholaris*, *Anethum graveolens*, *Blumea balsamifera*, *Origanum vulgare*, *Plumeria rubra*. Comparison of ethnomedicinal claims showed that 7 species form additional reports for India. These are administered in the form of decoction, infusion, paste, oil, ash, juice, extract, etc. They are also used raw or sometimes simply warmed. In majority of cases, they administer them as a sole drug or occasionally supplemented by other botanicals or domestic substances like sugar, honey, oil, cow ghee, milk, cow urine etc. They advise these to combat diseases such as piles, skin, diarrhoea, deafness, bile, leucorrhoea, urination, respiratory track, diabetes, rheumatism, sexual vigour, enflunza, ring worms, tuberculosis, cancer, malaria, tonsillitis, hepatitis, jaundice, constipation, eczema, tetanus etc.

Acknowledgements

Author Y.A.A. is thankful to the authorities of S.S.V.P. Sanstha's Dhule for library and laboratory facilities.

References

- Ambasta SP. The Useful Plants of India Publication and Information Directorate, CSIR, New Delhi India, 1986.
- Bhattacharjee SK. Hand book of medicinal plants. Pointer Publishers, Jaipur (Raj.) India, 1998.
- Chopra RN, Nayar SL, Chopra IC. Glossary of Indian medicinal plants. National Institute of Science Communication New Delhi India, 1956.
- Cooke T. The Flora of Presidency of Bombay. Vol. 1-III, B.S.I. Calcutta (Repr. Ed.) India, 1958.
- Hooker JD. Flora of British India Vols. I-VII, Reeves & Co., London, 1872-1897.
- Jain SK. Dictionary of Indian Folk Medicine and Ethnobotany. Deep Publication, New Delhi, India, 1991.
- Kshirsagar SR, Patil DA. Forest flora of Jalgaon (Maharashtra). Bishen Singh, Mahendrapal Singh, Dehradun, India, 2008.
- Lakshmi Narasimhan P, Sharma BD. Flora of Nasik District. Bot. Surv. India Calcutta, India, 1991.
- Naik VN. Flora of Marathwada Vol. 1-2. Amrut Prakashan, Aurangabad (M.S.), India, 1998.
- Patil DA. Flora of Dhule and Nandurbra districts (Maharashtra) Bishen Singh, Mahendrapal Singh, Dehradun, India, 2003.

- Prajapati ND, Purohit SS, Sharma AK, Kumar T. A Handbook of Medicinal Plants, Agrobios (India), Jodhpur, 2003.
- Sinha Raju K, Shweta Sinha. Ethnobiology, Surabhi Publication, Jaipur, 2001.
- Sharama BD, Karthikeyan S, Singh NP. Flora of Maharashtra State: Monocotyledons. BSI, Calcutta, India, 1996.
- Singh NP, Karthikeyan S. Flora of Maharashtra State: Dicotyledons. Vol. II. Bot. Surv. India, Calcutta, India, 2000.
- Watt George. A Dictionary of Economic Products of India Vol. 1-6 Periodical Expert, Shahadara, New Delhi, India, 1889-1893.