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BIODIVERSITY OF ETHNOMEDICINALPLANTS IN NORTH MAHARASHTRA (INDIA) USEFUL FOR HUMAN HEALTH

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ABSTRACT:
Ethno-botanical Surveys were carried out since June 2009 and information was gained through open discussions and interviews with tradipractitioners. The present paper deals with the botanicals sold by the vendors in Dhule, Jalgaon, Nandurbar, Nasik districts of North Maharashtra (India). The objectives of the investigation were to gather and document information on application of plants by the tradipractitioners in the region. Presently, 23 plant species belonging 23 genera and 19 families are being informed. Of these, 08 species are noted for the first time from Indian region. These are administered in the form of decoction, infusion, paste, oil, juice, powder, extract, etc. In many applications, they use a sole drug or occasionally supplemented by other botanicals or substances like sugar, honey, oil, cow-ghee, milk, etc. These are administered to combat common diseases such as Tuberculosis, scabies, piles, leprosy, fever, acidity, sperm count, ulcers, asthma, antidote, diabetes, tooth ache, urinary stone, tumor, intestinal worms**,** rheumatism., nocturnal emission, menstruation, kidney stone, cough, throat, Gonorrhoea, diarrhoea etc. The data accrued is evaluated by cross-cultural comparisons with other Indian claims to bring out veracity and uniqueness of the claims. Although these are traditionally reported useful for human health they must be testified on scientific lines involving chemical, biological and clinical screening.

Keywords: Ethno medicine in North Maharashtra for human health.

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) 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 23 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. 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; Nk, 1998; Sharma *et al.,* 1996 Singh *et al,* 2000; Patil 2003, and Kshirsagar and Patil 2008) 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.) Asterisk to the plant species indicate reports in classical literature. These are presented in the following Table-I.

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 23 plants species, belonging to 23 genera and 19 families are communicated. All are angiospermic except one, which is gymnospermic. Comparison of ethnomedicinal claims showed that 8 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 domestics substances like sugar, honey, oil, cow ghee, milk, cow urine etc. They advise these to combat diseases such as Tuberculosis, scabies, piles, leprosy, fever, acidity, sperm count, ulcers, asthma, antidote, dibeties, tooth ache, urinary stone, tumor, **intestinal worms**, rheumatism., nocturnal emission, menstruation, kidney stone, cough, throat, Gonorrhoea, diarrhoeea etc.

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Table – I : Enumaration of identified botanical and utilities

Sr. No.	Plant Name & Family	Vernacular Name	Plant Part Used	Utility
1*	*Abutilon indicum* L. (Malvaceae)	Dabala	Leaves Roots	Fresh leaves are chewed orally or leaf juice is given with butter milk.it is consumed with empty stomached in morning for four days to cures piles.
2**	*Abelmoschus Moschatus* (L.) Medic. (Malvaceae)	Ranbhendi	Seeds, Roots	1. Dried seed powder is made in to paste by adding water and this paste is applied on scabies for about ten days twice daily till it cure. 2. Root Juice , two spoonful with a cup of curd i consumed twice a day for a week to cure piles.
3	*Acacia catechu* (L.*f*) Willd. (Mimosaceae)	Khair	Stem bark	Stem bark powder of this plant and seeds of (Emblicaofficinalis) Gaertn. (Euphorbiaceae) are homogenized and the plant ash are mixed together, and given in water twice daily for seven days cures leprosy.
4**	*Acalypha indica* L. (Euphorbiacae)	Khokali	Leaves	Dried leaves powder of this plant and four bulblets of (Allium sativum L.) are mixed togather and one teaspoon is consumed for ten nights to cure intestinal worms.
5**	*Albizia chinensis* (Osb) Merr. (Mimosaceae)	Udali	seeds	Shade dried seeds are powdered and one teaspoon powder with milk for one month is useful as energy drink and also helps to increase sperm count.
6	*Anthocephalus Cadamba* (Roxb.) Miq. (Rubiaceae)	Kadamb	Leaves, Fruit	1. Decotion of leaves is used to gargle to releave oral ulcers. 2. Fruit pulp is consumed one teaspoon daily at night for seven days helps of increase sperm count.
7	*Bauhinia recemosa* Lamk. (Caesalpiniaceae)	Aapta	Leaves	Leaf powder is mixed in to honey one spoonful of it is consumed at morning for one month to cure asthama and tuberculosis.
8**	*Balanites aegyptiaca* (L.) Del. (Balanitaceae)	Hingankai	Stem bark, Fruits	1. Stem bark powder is soaked in water and this decoction is givenorally glassful twice daily for fifteen days as a remedy against jaundice. 2. Fruits are boiled in water and consumed against scorpion sting or snake bite as antidote.
9	*Butea Monosperma* (Lamk.) Taub. (Fabaceae)	Palas	Flower, Latex	1. Decoction of flower is prepared and mixed with sugar (*Saccharum officinarum* L.) this mixtureis given

				two tea spoon twice daily for one month is helpful against diabetes. 2. Latex is applied daily on teeth releaves tooth ache and four breath.
10	*Canna indica* L. (Cannaceae)	Kardal	Leaves	Leaves are boiled in four cups of water. It is boiled till decoction is reduced to one cup one spoonful of it is administered twice a day for eight days against urinary stone.
11	*Capparis zelyanica* L. (Capparidaceae)	Fulyawel	Bark, Leaves	1. Half cup decoction of bark is advised for seven nights against Rheumatisim. 2. Leaves of this plants and leaves of (*Justica adathoda* L.) are boiled this decoction is tied on tumor till it cure.
12*	*Cardiospermum helicacabum* L. (Sapindaceae)	Kapalfodi	Root	Root powder is made in to paste and this paste is applied on penis at night to cure erectile disfunction.
13	*Clerodendrumm ultiflorum (Burm.) O.Ktze. Arna.* (Verbenaceae)	Tankhalan	Leaves, Root	1. Leaves juice about spoonful is administered once a day for four to five days to children suffering from intestinal worms. 2. Decoction of roots about two spoonful is given at night for fifteen days to treat rheumatism.
14**	*Cocculus Hirsutus* (L.) Diels. (Menispermiaceae)	Vasanwel	Leaves	1. Half cup leaves juice aregiven orally morning and evening for seven days to a person suffering from night blindness and nocturnal emission. 2. Fresh leaves juice, about two spoons mixed in equal quantity of cow ghee then it is taken for five days to Regularize menstruation.
15	*Discorea bulbifera* L. (Discoriaceae)	Jatashankar	Seeds	One teaspoon of seed powder is consumed with milk at night for one month to releave rheumatism.
16	*Ensete Superbum* (Roxb.) cheesm. (Musaceae)	JangliKela	Seeds	Seed powder of this plant is chewed with leaf of (piper betel L.) twice dally for four daysgives relief from kidney stone complaints.
17	*Glycyrrhiza glabra* L. (Fabaceae)	Mulethi	Stem bark, Seeds	1. Two teaspoon decoction of stem bark is advised twice daily against cough. 2. Seeds are chewed raw twice daily against throat complaints. 3. Root or stem bark powderone spoon along with half cup of milk is given thrice a day for a month to cures ulcers.
18	*Hemidesmus indicus* R. Br. (Asclepidaceae)	Anantmul	Roots	1. Dried root powder one teaspoon with water is given twice daily for one month to controls diabetes. It is also helpful against cough. 2. One fistful of roots is washed, crushed and put in cup of water for fifteen minutes and then strained one cup of infusion is taken in the morning and evening for seven days to cure Gonorrhoea.

19	*Jatropha curcas* L. (Euphorbiaceae)	Jamal -gota	Leaves, Stem bark	1. 100gm of leaves are crushed or made in to paste and bandaged on joints at night for fifteen days to relives rheumatism. 2. Stem bark is used as brush against complaints like tooth cavity and toothache.
20	*Kalanchoe Pinnata* (Lamk.) Pers. (Crassulaceae)	Parnafuti	Leaves	1. Leaves juice half a cup twice daily for ten days is advised as a remedy for kidney stone. 2. Leaves juice half a cup once daily for three days regulates menstrual cycle.
21	*Kedrostis rostrata* (Rottl) cogn. (Cucurbitacea)	Mirachi Kand	Tuber	1. Tuber extract is mixed into cow-urine. It is applied daily on wounds and piles till itcure. 2. Dried tuber powder one teaspoon is advised with one teaspoon of honey twice daily for seven days to reduce body heat.
22	*Madhuca longifolia* (Koen) Macbr. Var. latifolia (Sapotaceae)	Mahu	Leaves, Stem bark	1. Jaggery is applied on three tender leaves at night one leaf is licked (chewed) in morning, one at noon, one in the evening it helps two cure mouth sores. 2. Stem bark powder is soaked in water for ten minutes, half a glass of this infusion is administered thrice a day for three days controls diarrhoea.
23*	*Martynia annua* L. (Martyniaceae)	Wagh nakhi	Seeds	Seed Powder (100gm) mixed with on teaspoon of honey and curd is consumed twice daily for one month advised to a person suffering from Tuberculosis.