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# Study of medicinal plants in North Maharashtra University campus of Jalgaon city in Khandesh area of Maharashtra, India

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**ABSTRACT**

In the present study we have carried out a survey on medicinal plants in North Maharashtra University Campus of Jalgaon city. The plants, were used by local people nearby village were surveyed, collected and identified. In all the cases of medicinal used parts were ascertained. The North Maharashtra University Campus area is near about 750 acres attaching to the social forestry, Government of India. All together 26 species belonging to the 22 families enumerated we have observed *Phyllanthus amarus k. schum and thonn* were very rare species in this study area which was investigated shows the impact on stomach ulcer and hepatitis B.

**Keywords:** Medicinal plants, North Maharashtra University campus, Jalgaon city.

## INTRODUCTION

During the last two decades, the development of drug resistance as well as the appearance undesirable side effects of certain antibiotics has lead to the search of new antimicrobial agents mainly among plants extract with the goal to discovered new chemical structure which overcome the above disadvantages.

Medicinal plants are very commonly available in abundance especially in the tropics and in temperate region. Recent years many of these natural sources have been destroyed by overexploitation and deforestation in Indian sub-continent. A part from the used in the treatment of illness through self-medication. These medicine plants are valuable for modern medicine in other ways. The success of any health care system depends on availability of suitable drug on a sustainable basis. With the increasing cost of modern medicine it become more difficult for the poor people to afford allopathic medicine. Here medicinal plants play an key role in the health care of the poor people.

The North Maharashtra University campus area is the sacred place. The campus is situated in such a place, which is outside of human habitations and usually have some protected devices. Some medicinal plants occur, *i.e. Azadiracta indica, Artocarpus heterophyllus, Annona squamosa, Bombax ceiba, Dalbergia sissoo, Erythrina variegata, Ficus benghalensis, Mangifera indica, Tamarindus indica, Phyllanthus amarus k. schum and thonn* etc. The medicinal plants are planted or naturally grown, *i.e. Phyllanthus amarus k. schum and thonn, Alstonia scholaris, Azadirachta indica, Andrographis paniculata, Asparagus racemosus, Terminalia arjuna, Terminalia chebula* etc. in the study area.

In the present investigation various kinds of medicinal plant grow naturally in North Maharashtra University campus in rainy season. All Categories of peoples literates or illiterates, rich and poor of near by villages use these kind of medicinal plants in order to cure various disease. Most of the poor people from villages is unable to take modern medicare due to economic incapability that's why they used medicinal plant to cure most of the

disease (Rahman 1999, Rao 1991, Khan and Huq 1975, Lawerence 1951, Naderuzzaman and Tarcque 1993) have investigated more of the medicinal plant which is commonly used in remote areas of the Country.

## MATARIAL AND METHODS

The survey of medicinal plant in the area of North Maharashtra University campus was carried out. The study area was selected 750 acres on land connecting Village Bhambhori, Takarkheda, Paldhi well connected with most popular river Girna. The measurement of the area about 750 acres before establishing university it was total grassland and terrestrial ecosystem its situated on the bank of river Girna. This area had been surveyed in 180 days interval for collection plant species. Collection were made throughout rainy and winter season in 2007 and particularly care was taken, not to miss the flowering stages of the fruits the following data was recorded from the herbarium specimen *i.e.* date of collection, number, local name, scientific name, family, habitat, medicinal uses and distribution. Herbarium sheets were prepared in multiple sets and flowers were preserve in 70% alcohol for the future study. Identifications were made with the help of Hooker (1872-1888), Khan (1975), Cronquist (1968), Heywood (1979), Lawrence (1951), Naderuzzaman and Prain (1993,1903). Medicinal uses were made with the help of Alam (1996), Bhattachariya (1989), Biswas (1973), Ghani (1998), Guha (1994), Hassan (1988), Kirtikar (1987).

The data were cross-checked by interviewing were than three vaidyas on the uses of specific plant species and preparation of herbal formulations. A participant's observation method was employed to understand the methods and techniques adopted by vaidyas in preparation of various herbal formulations.

In order to verify the identity of local names of medicinal plant species field visits were undertaken with vaidyas. Specimens of each species identified were brought to the School of Environmental and Earth Sciences, North Maharashtra University, herbarium for scientific identification where they were subsequently deposited.

## RESULTS AND DISCUSSION

Results are shown in Table 1 among 26 No. of plant species and their relative activities. A total of 26 species belong to 22 families were collected and identified. As a results these medicinal plant are used by a common people for curing following diseases especially for Abscess, Asthama, Abortion, Burning sensation, Blood pressure, Cough, Cold, Chicken pox, Constipation, Dysentery, Diarrhea, Diabetes, Eczema, Fever, Fracture of bone, Headache, Heart diseases, Jaundice, Menstrual diseases, Paralysis, Piles, Skin diseases, Snake bite, Sex problem, Toothache, Vomiting, Wound, Worm, Stomach pain, Ulcer and Hepatitis B which is not having any remedial measurement in medical practices and other. Different plants of different species are used as medicine for treating various diseases; bark, leaf, fruit, root, wood, lately, seed, stem and mucilage and whole plant of three species were also used as medicine. The well analysis and listed information about plant material collected from the study area is describe in Table 1 and these uses for remedial measures.

### Traditional treatments and diseases

In general, the traditional Vaidyas have categorized all ailments into two broad types:

- Those visible in any part of the body or organs.
- Those invisible or functional that are in the state of infliction.

They assume that the cause of disease is either proximate or remote. In the proximate condition, the symptoms are visible on the organ or structure whereas in the remote condition the symptoms are difficult to find out. Diseases are primarily treated with home-made herbal formulations accompanied by advise for balanced diets. Vaidyas alter the constitution of each herbal formulation based upon the requirements of the patient. Hence, they increase or decrease the potency of formulations based upon the needs of the patient and the duration of the treatment. In general, for treating diseases traditional Vaidyas prescribe three important things:

**table 1: Mentioning local name, scientific name, family, part use and process of use for each species**

| S. No. | Local name | Scientific Name | Part Use | Process of Use |
|---|---|---|---|---|
| 1 | Palas | Butea monosperma (lam) Kuntze Family: leguminoceae | Flower, bark, root, seeds | Juice made from whole plant with honey willkept away from illness |
| 2. | Bhuai Amala | Phyllanthus amarus K. schum & Thonn Family: Euphorbiaceous | Whole plant | Juice made from whole plant in utilized for hepatitis B and Jaundice, Ulcer, stomach pain, lever enlargement. |
| 3. | Basak | Adhatoda vasica Family:Acanthaceae | Leaf , Bark | Juices made from young leaves are used in cough and asthma. Bark Juice made from bark and leaves are used in vomiting and worm. |
| 4 | Chatim | Alstonia scholaris Family:Apocynaceae | Bark, latex | Juice made from bark is used in fever, rheumatism and dysentery. Latex is used in relive earache. |
| 5 | Katai chaulai | Amaranthus spinosus Family:Amaranthaceae | Whole plant | Juice made from whole plants are used in asthma and cold fever. |
| 6 | Gwar patta | Aloi vera Family:Acanthaccae | Leaf, whole plants | Paste made from leaves are used in wound, ring worm and itches. Juice made from whole plants are used in fever, dysentery, diarrhoea and tonic. |
| 7 | Kadam | Anthocephalus chinensis Family:Rubiaceae | Bark, leaf | Juice of barks are used in tonic and paste made from leaves are used in wound. The decoction made from its leaves are used in mouth ulcer. |
| 8. | Babool | Acacia nilotica Family:Moraceae | Leaf, bark | Juice made from young leaves are used in wound, asthma and itches. Juice made from bark mixed with turmeric used in menstrual disease. |
| 9 | Satawari | *Asparagus racemosus* Family:Liliaceae | Root , Bark | Juice made from the tuberous roots are used in tonic, blood dysentery, diabetes, jaundice, diarrhoea and promotes lactation in mother. Paste of barks are used in wound and itches. |
| 10 | Neem | *Azadirachta indica* Family: Meliaceae | Leaf , Fruit | Juice made from young leaves mixed with excess water of boil rice used in worm. Paste of leaves are used in eczema, ringworm and itches. Fruit juice mixed with coconut oil used as lice killer. |
| 11 | Semal | *Bombax ceiba* Family:Bombacaceae | Bark, Root | Paste made from barks are used in wound and itches. Juice made from barks are used in dysentery, diarrhoea and excessive menstrual discharge. Juice made from immature plant roots |

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| | | | | are used in diabetes. |
| 12 | Arhar | *Cajanus cajan*<br>Family: Fabaceae | Root, leaf | Juice made from young leaves are used in jaundice and juice made from roots are used in diabetes. |
| 13 | Chakotra | *Citrus grandis*<br>Family:Rutaceae | Bark, Fruit | Juice of bark mixed with mustard oil is used in cough and juice made from ripe fruit is used in influenza. |
| 14 | Dhatura | Datura stramonium<br>Family: Solanaccae | Leaf | Paste made from leaves are used in wound and juice of leaves are used in earache. |
| 15 | Shisum | *Dalbergia sissoo*<br>Family: Fabaccae | Leaf, wood | Juice made from leaves are used in gonorrhoea and paste made from wood is used in wound, itches, abscess and vomiting. |
| 16 | Maduwa | *Elusine caracana*<br>Family: Asteraccae | Whole plant, leaf | Paste made from leaves are used in wound, itches and skin disease. Juice made from whole plants are used in promoted growth and improves colour of hair, jaundice, asthma and gall bladder stone. |
| 17 | Bod | *Ficus benghalensis*<br>Family:Moraceae | Bud, latex | Juice made from young bud is used in diarrhoea and dysentery. Latex is used in externally applied in rheumatism and toothache. |
| 18 | Bhimal | *Grevia optiva*<br>Family: Rutaccae | Fruit. leaf | Juice of ripe fruit is used in dysentery and juice of leaves are used in fever, cough, jaundice and rheumatism. Paste of leaves are used in eczema and skin disease. |
| 19 | Pudina | *Mentha longifoli*<br>Family: Anacardiaccae | Leaf, Bark, seed | Its gum used in itches and decoction of young leaves are used in burning sensation during micturation, fever and toothache. Juice made from stem bark is used in dysentery and dust of dry seeds are used in diabetes. |
| **20** | Tulshi | *Ocimum sanctum*<br>Family: Lamiaceae | Leaf, root | Juice made from the leaves mixed with honey used in cold and cough. Juice of leaves are used in itches, ring worm, earache and wound. Juice of roots are used in fever. |
| **21** | Ram Tulshi | *Orlganum vulgare*<br>Family: Oxalidaccae | Leaf | Vegetables made from leaves are used in cough and paste of leaves are used in scabies and itches. Juice made from the leaves are used in dysentery, anemia, piles, dyspepsia and fever. |
| **22** | Jamun | *Syzygium cumini*<br>Family: Myrtaceae | Bark, seed, fruit | Paste made from the bark is used in dysentery and wound. Dry seeds dust mixed with normal water used in diabetes. |

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| **23** | Badam | *Terminalia Catappa* Family: | Leaf, fruit | Ripe fruit pulps are used in burning sensation, dyspepsia, increasing appetite and Caesalpiniaccae digestive. Juice of leaves are used in cold, dysentery and tonic. |
| **24** | Haida | *Terminalia chebula* Family: Combretaceae | fruit | Paste made from immature fruits are used in wound and unripe fruits are used in worm, rheumatism, vomiting, urinary disease, dysentery and blood dysentery |
| **25** | Arjun | *Terminalia arjuna* Family: Combretaceae | Leaf, shoot | Paste made from dry shoot bark mixed with water used in water used in heart disease and leaf soaked in water over night in burning sensation and dyspepsia. |
| **26** | Boroi | *Zizyphus mouritiana* Family: Rhamnaceae | Leaf, stem | Juice made from the stem bark is used in blood dysentery and paste made from the young leaves are used in wound and headache. |

- Herbal formulations.
- Balanced diets.
- Proper lifestyle regiments including good moral conduct.

This approach and practice is very similar as described in Ayurvedic texts (Dash 1982, Khory 2004). Vaidyas believe that any disorder is a result of imbalance in 'Vata' (air), 'Pitta' (phlegm) and 'Kaph' (cough). Traditional Vaidyas prescribe the use of til (*Sesamum orientale*) oil as the best medicine for treating the disorders related to 'Vata', Cow's ghee for 'Pitta', and Honey for 'Kaph'. For proper digestion, they prescribe ginger, long pepper and black pepper as useful medicines for regulation of the activity of enzymes. Besides plant made formulations, traditional Vaidyas frequently use various milk products (milk, butter, refined butter, curd) and honey for treating diseases.

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