

ETHNOMEDICINAL PLANTS USED BY BHILALA TRIBALS IN BULDHANA DISTRICT (M. S.)

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ABSTRACT

An ethnobotanical survey was carried out in Buldhana district, Maharashtra during April, 2008 to November, 2011 for documentation of ethnomedicinal plants used by Bhilala tribals. The tribal communities possess rich knowledge about medicinal plants and its uses as they are far away from modern facilities. Therefore, we have done an exhaustive ethnobotanical survey in this area. The present communication reports Twenty One ethno-botanically important plants belonging to thirteen families were identified with relevant information and are documented alphabetically with their botanical name followed by family, local name, parts used, mode of preparation and uses. The traditional healers of Bhilala tribals in this area use the ethnomedicinal plants in cure of various diseases. Documenting the indigenous knowledge through ethnobotanical studies is important for the conservation and utilization of biological resources of this area.

KEY WORDS: Ethnomedicinal plants, Bhil tribals, Buldhana District (M. S.).

INTRODUCTION

In recent years, there has been a tremendous range of interest in the medicinal plants especially those used in Ayurveda and other traditional systems of medicines. Drugs obtained from plant are believed to be much safer and exhibit a remarkable efficacy in the treatment of various ailments. Allopathic drugs have brought a revolution throughout the world but the plant based medicines have its own unique status.

Today there is an increasing desire to unravel the role of ethnobotanical studies in trapping the centuries old traditional folk knowledge as well as in searching new plant resources of food, drug etc. (Jain, 1987, 1991). The indigenous traditional knowledge of medicinal plants of various ethnic communities, where it has been transmitted orally for centuries is fast disappearing from the face of the earth due to the advent of modern technology and transformation of traditional culture. Much of this wealth of knowledge is totally becoming lost as traditional culture gradually disappears (Hamilton, 1995). There is an urgent need to document the ethno biological information presently existing among the diverse communities before the traditional knowledge is completely lost (Rao, 1996). Indian traditional medicine is based on different systems such as *Ayurveda*, *Siddha* and *Unani* used by various communities (Gadgil, 1996). The local uses of plants as a cure are common particularly in those areas, which have little or no access to modern health services, such as the innumerable tribal villages and hamlets in India indicates that the dependency of traditional societies on the wild collections for subsistence needs (Campbell et. al., 1997).

Nearly 80% of the world population depends upon traditional system of health care (Anonymous, 1998). The knowledge of medicinal plants has been accumulated in the course of many centuries based on different Indian systems of medicines such as Ayurveda, Unani and Siddha. In India it is reported that traditional healers use 2500 plant species and medicine (Pei, 2001). In recent years, traditional ethno-botanical studies have received much attention due to their wide local acceptability and clues for new or less known medicinal plants (Tripathi, 2000). People living in the developing countries rely quite effectively on traditional medicine for primary health care (Sullivan and Shealy, 1997; Singh, 2002). The literature survey reveals that traditionally claimed plants are antihelminthic, antimicrobial (Poul et. al., 1999; Dama et al., 1998; Dama and Kirdak, 2002; Mali and Mehta, 2008), antifertility agents (Chondekar et al, 2010) and anti-inflammatory (Poul et al., 1999). Until now, however, there has been little effort to document the volume and impact of national or international trade in India's medicinal plants (Ganesan and Kesavana, 2003). The present paper deals with documentation of ethnomedicinal plants commonly used by the Bhilala tribals of the Buldhana district of Maharashtra state.

MATERIALS AND METHODS

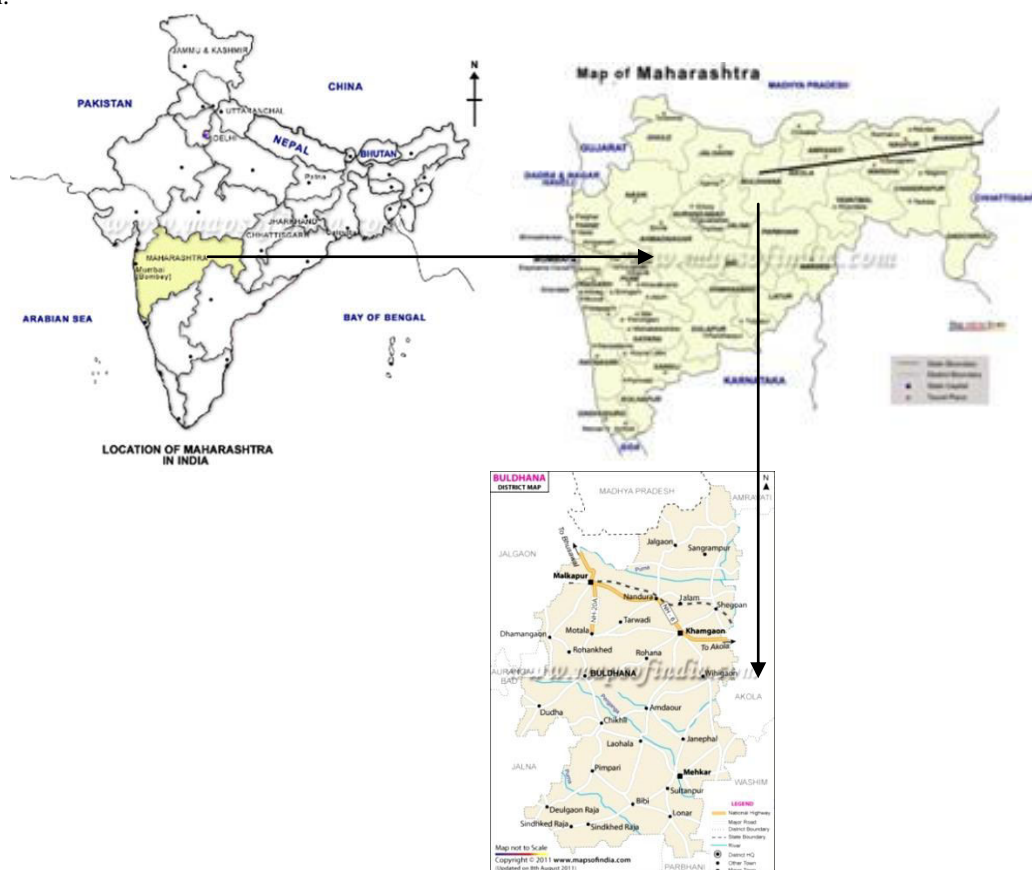
Study Area

Buldhana is the western most district of the Vidharbha, of the Maharashtra State. The name of town is derived from the corrupt form of Bhil—Thana i.e. the place of Bhils. The district is situated between 19°.51' and 21°.17' North latitudes and 75°.57' and 76°.49' East longitudes. It is bounded on the north by Nimar district of Madhya Pradesh, on east by the Akola and Amaravati districts, on the west by the Jalgaon and Aurangabad districts and on the south by the Jalna and Parbhani Districts. In Buldhana district Bhilala tribals are natural retainers of traditional knowledge which passed from generation to generation through oral folklore. This tribe is mostly inhabited in Jalgaon Jamod and Sangrampur tahsils, particularly in the remote areas of Satpuda ranges of the district. The field study was carried out from April, 2006 to November, 2008 and information on the use of medicinal plants was obtained through, field tours, interviews and informal conversations with traditional healers, knowledgeable persons or medicine men, Vaidos, experienced and

aged persons, local healers of the villages. They were consulted for recording local name; parts of plant used, methods of drug preparation and recommended doses. Personal interviews and group discussions with local inhabitants revealed some very valuable and specific information about the plants, which were further authenticated by crosschecking. The plants were collected from remote places in vegetative and blooming conditions, simultaneously, noting the vernacular names and all the relevant information disclosed by the local practitioners. The plants were brought to the laboratory and processed for herbarium specimen. Plants were identified using relevant scientific literature (Hooker 1872 – 1877; Cooke 1967 (Rpr.); Sharma *et al.* 1996; Naik 1998; Singh and Karthikeyan, 2000, Singh *et al.* 2001). Subsequent visits were planned to photograph the plants in proper blooming period. Identified specimens were deposited in the herbarium of the Botany Department, Shri Shivaji Science and Arts College, Chikhli, Dist. Buldhana (M.S.).

RESULTS AND DISCUSSION

Traditional healers use these medicinal plants for the treatment of various ailments in their remote areas where modern treatment facilities are unavailable. Documentation of such plants from the perspective of ethnobiological angle is important for understanding of indigenous knowledge systems. These resources are genetically important for future research.



Enumeration:

1. *Achyranthes aspera* L. (Amaranthaceae) LN: Agdya
EMU: The boiled leaves are consumed to relieve internal piles. Decoction of plant in the treatment of kidney stone.
2. *Adhatoda zeylanica* Medik. (Acanthaceae) LN: Adusa
EMU: Tribals gargle with the extract of the leaves with salt to cure tonsillitis. Leaf extract is taken internally to relieve cough and cure asthma.
3. *Aerva lanata* L. (Amaranthaceae) LN: Thikri.
EMU: They take decoction of fresh plant for the treatment of gonorrhoea, kidney disorders. Root paste used with other roots to cure piles.
4. *Aloe vera* (L.) Burm. (Liliaceae) LN: Korphad.
EMU: Tribals take pulp juice of leaf to cure piles, jaundice and stomachache and apply locally to recover the burnt skin and for wound healing.
5. *Andrographis paniculata* Burm. (Acanthaceae) LN: Bhui-neem.

- EMU: One teaspoon of fresh plant juice is taken twice a day for seven days to treat snake-bite and scorpion-bite.
6. ***Argemone mexicana*** L. (Papaveraceae)). LN: Pilya Dhotura.
EMU: The paste of seeds with salt and mustard oil is used as tooth-paste by those suffering from pyorrhea. The Bhils apply fresh leaves or their juice on eyes in conjunctivitis.
 7. ***Aristolochia bracteolata*** Lamk. (Aristolochiaceae) LN: Gandhyan.
EMU: Apply leaf-juice mixed with mustard-oil to cure skin diseases. Fresh root to treat snake-bite and scorpion-sting.
 8. ***Bacopa monnieri*** L. (Scrophulariaceae)). LN: Jaspala.
EMU: Plant extract is used in snake bite, scorpion sting and in asthma.
 9. ***Balanites aegyptiaca*** L. (Balanitaceae) LN: Katyaphal.
EMU: The stem bark paste is mixed with jaggery and ghee and is applied on joints and in muscular pain. The tribals use the pulp of fruits as a detergent and substitute for soap for washing the hairs and cloths.
 10. ***Baliospermum montanum*** Willd. (Euphorbiaceae) LN: Jamalgotia.
EMU: Seed paste is applied externally on swellings and seed oil applied locally in rheumatic pains. Root decoction is given in asthma and seeds are used as purgative.
 11. ***Bauhinia vahlii*** Wight & Arn. (Caesalpiniaceae) LN: Sehari.
EMU: Seed powder with milk is taken orally in sexual debility and as a health tonic.
 12. ***Blumea lacera*** (Burm. f.) DC. (Asteraceae) LN: Burandu.
EMU: Leaf extract is taken in bronchitis, bleeding piles and burning sensation. Root kept in mouth cures diseases of mouth. Leaf extract is rubbed over ribs of children to cure cramp disease.
 13. ***Boerhaavia diffusa*** L. (Nyctaginaceae)). LN: Khaparkhuti.
EMU: The tribals take the decoction of roots as an expectorant to cure asthma and jaundice.
 14. ***Boswellia serrata*** Roxb. (Burseraceae)). LN: Dinkya.
EMU: Bhil tribals use the leaf-juice to cure eye infections and bark decoction is taken orally to cure chronic cough and cold.
 15. ***Butea monosperma*** Lamk. (Fabaceae) LN: Palasha.
EMU: Seed powder with goat milk is given as an aphrodisiac. Seed powder is taken orally as contraceptive. Shoot paste is applied twice a day for one week in piles.
 16. ***Calotropis gigantea*** (Linn.) R. Br. (Asclepiadaceae) LN: Akawa.
EMU: Root decoction is given for lactation. Flowers (2-3) consumed to cure cough and asthma.
 17. ***Caralluma adscendens*** Grav. & Mayur. (Asclepiadaceae)). LN: Dagadkakdi.
EMU: Stems are eaten raw for a week to cure bleeding piles. Stem is crushed with ginger and taken internally to cure cough.
 18. ***Careya arborea*** Roxb. (Lecythidaceae)). LN: Kumbi.
EMU: Fruit decoction is prescribed orally for snake-bite. Decoction of root bark is taken in piles.
 19. ***Cassia fistula*** L. (Caesalpiniaceae) LN: Bahdya.
EMU: Fruit pulp is advised for constipation. Leaf poultices are applied externally for paralysis and rheumatism.
 20. ***Cayratia trifolia*** L. (Vitaceae) LN: Wajwel.
EMU: Tuber powder is taken orally with milk for the early recovery for fractured bone.
 21. ***Celastrus paniculatus*** Willd. (Celastraceae) LN: Malkangi.
EMU: Seed oil is applied externally in the treatment of knee-pains and paralysis and dropped in eyes for better eyesight.
 22. ***Celosia argentea*** L. (Amaranthaceae) LN: Rankurdu.
EMU: Plant powder with a cup of milk is given to the ladies twice a day for a week to cure white discharge. The root decoction is effective in the treatment of kidney stones.
 23. ***Chlorophytum borivillianum*** Sant. & Fernand. (Liliaceae) LN: Safed Musali.
EMU: Tubers are used to treat diarrhoea and dysentery and also used to promote lactation. Tuber powder is given with milk and sugar in menstrual disorder and as health tonic.
 24. ***Clerodendrum serratum*** L. (Verbenaceae)). LN: Bharungi.
EMU: Decoction of root is taken in malarial fever and ophthalmic complaints. The paste of leaves is applied externally to ripen the wounds. Decoction of root powder is prescribed as blood purifier.
 25. ***Cocculus hirsutus*** L. (Menispermaceae) LN: Vasan.
EMU: Leaf extract is taken in peptic ulcers. The leaf extract taken internally along with milk for treatment of spermatorrhoea. The extract of roots is taken internally in paralysis.
 26. ***Coix lacryma-jobi*** L. (Poaceae) LN: Kasai-bija.

- EMU: Leaf decoction is used as female oral contraceptive after menstruation. Seed powder with milk is prescribed to cure cancerous wounds.
27. ***Corallocarpus epigaeus*** Willd. (Cucurbitaceae) LN: Mirchi-vel.
EMU: The decoction of tuber is given in typhoid twice a day for a week. Paste of tuberous root applied on swellings and poisonous stings.
 28. ***Costus speciosus*** Koen. (Costaceae) LN: Jangli-adrak.
EMU: Spoonful rhizome powder with a glass of water in empty stomach is taken as aphrodisiac. Juice of rhizome is taken to cure urinary tract infections.
 29. ***Curculigo orchoides*** Gaertn. (Hypoxidaceae) LN: Kalakand.
EMU: Tuber powder is taken orally as an aphrodisiac and to cure gonorrhoea. One teaspoon powder with milk is taken orally by the tribal ladies to cure leucorrhoea.
 30. ***Dendrothoe falcata*** L. (Loranthaceae)). LN: Banda.
EMU: Leaf juice is taken orally to cure rheumatism. Leaf paste is used to treat fractured bones. Leaf juice is taken in leucoderma and other skin infections and wounds.
 31. ***Dioscorea hispida*** Dennst. Schl. (Dioscoreaceae) LN: Bhul-kand.
EMU: Boiled tubers are taken twice a day for a week to cure piles. The tuber is eaten as vegetable after keeping it overnight in water or after boiling.
 32. ***Diospyros melanoxylon*** Roxb. (Ebenaceae) LN: Temru.
EMU: Decoction of flower is effective in night-blindness and in diarrhoea. Leaf paste is applied in scabies and tumorous glands. Paste of fruit is applied in bone fracture.
 33. ***Dolichandrone falcata*** Seem. (Bignoniaceae)). LN: Mersingi.
EMU: The mixture of leaf extract 50 ml and 50 gm curd is taken twice a day for a week to cure bleeding piles. Leaf powder with water is given in diabetes.
 34. ***Echinops echinatus*** Roxb. (Asteraceae) LN: Ulati.
EMU: Paste prepared from powder of the root bark is applied on male genitals externally for sexual vigour. Root decoction is an effective remedy for hernia.
 35. ***Ensete superbum*** Roxb. (Musaceae) LN: Jangli-kela.
EMU: Seed powder is given with honey to treat kidney stones and painful urination. Seed powder with water is given in rabies.
 36. ***Gloriosa superba*** L. (Liliaceae) LN: Khadyanag.
EMU: About 10 mg tuber powder is taken orally by the tribal ladies only once to regularize menstrual disorder. Tribals crush tubers of the plant in water and apply on head to kill the lice.
 37. ***Helicteres isora*** L. (Sterculiaceae) LN: Marophali.
EMU: Fruit paste with honey internally is good remedy for diarrhoea, stomachache, chronic dysentery in children, a general practice in tribals.
 38. ***Hemidesmus indicus*** (L.) R. Br. (Asclepiadaceae) LN: Kawdi.
EMU: Root is powdered and given with honey in jaundice. Latex is applied in the form of paste for sores and wounds. Root decoction is taken once a day for blood purification.
 39. ***Leucas aspera*** Willd. (Lamiaceae) LN: Kombda.
EMU: Leaf juice (2-3 drops) dropped into nostrils to get relief from heavy cold. The leaves decoction is very useful in chronic rheumatism.
 40. ***Momordica dioica*** Roxb. (Cucurbitaceae) LN: Jangli Karla.
EMU: Roasted root is used to stop bleeding from piles. A piece of tuber is recommended internally for liquor addiction.
 41. ***Mucuna pruriens*** (L.) DC. (Fabaceae) LN: Kawas.
EMU: One spoonful seed powder with a glass of milk is given to increase sexual vigor and as a health tonic. Seeds are given for improving retention of semen and night dreams. Roots are effective in dysentery.
 42. ***Phyla nodiflora*** L. (Verbenaceae) LN: Panmundi.
EMU: Juice obtained from the plant is given against blood dysentery and pneumonia. The leaves are chewed to cure toothache.
 43. ***Phyllanthus amarus*** Schum. (Euphorbiaceae)). LN: Kadu-awla. EMU: Young leaves are good for dysentery. About 10g paste of whole plant is given thrice daily for one week for both plant in hepatitis and chronic liver problems.
 44. ***Plumbago zeylanica*** L. (Plumbaginaceae)). LN: Chitramula.
EMU: Juice of 5-10 leaves is taken orally as an antidote in snake-bite. Tribals apply the paste of roots on the piles. Root paste along with milk applied externally in leprosy and other skin diseases.
 45. ***Psoralea corylifolia*** L. (Fabaceae)). LN: Bawcha. EMU: Seed powder one spoonful with a glass of milk is prescribed twice a day for a month in the treatment of impotency, premature ejaculation and to improve vitality. Seed oil of is applied externally in psoriasis, leprosy and leucoderma.

46. *Pterocarpus marsupium* Roxb. (Fabaceae) LN: Bijasal. EMU: Water is kept overnight in a glass made out of the stem and taken in the morning to treat diabetes. Leaf decoction is taken in active stomach pain and dysentery.
47. *Pueraria tuberosa* Roxb. (Fabaceae) LN: Bhuikohla, EMU: Tubers are crushed and applied on joints to treat rheumatism. Tuber decoction is prescribed for lactation after childbirth. in painful urination.
48. *Sterculia urens* Roxb. (Sterculiaceae)). LN: Kar.
EMU: Seed powder one teaspoonful is taken orally with milk as an aphrodisiac. Bark powder is taken orally with water in tuberculosis and rheumatism.
49. *Trianthema portulacastrum* L. (Aizoaceae) LN: Jadbhaji.
EMU: The plant extract is taken orally for a week to cure jaundice, it is a good remedy to treat jaundice. Leaves infusion is prescribed for liver complaints.
50. *Triumfetta rhomboidea* Jacq. (Tiliaceae) LN: Chirchiri.
EMU: Leaf paste is applied on the affected areas of scabies and eczema. Leaf juice is taken internally in jaundice and urinary complaints. Leaf paste applied externally in bleeding piles.
51. *Viscum nepalense* Spreng. (Loranthaceae) LN: Harjor.
EMU: Paste of shade dried powder of the plant with water is applied on the chest to cure swellings and fractured bone and dislocation.
52. *Vitex negundo* L. (Verbenaceae) LN: Nirgunda.
EMU: Leaf extract is dropped in the eyes to cure conjunctivitis. Fruit powder decoction (50 ml) is taken orally in the treatment of kidney stones.
53. *Woodfordia fruticosa* L. (Lythraceae)). LN: Dhoyti.
EMU: The powder of flower is prescribed as a safe stimulant of pregnancy. Powder of flowers 10 gm. is mixed with honey is given in leucorrhoea.
54. *Ziziphus mauritiana* Lamk. (Rhamnaceae) LN: Kate Bhor. EMU: Decoction of the root bark is used in the treatment of diarrhea and dysentery. The twigs are used as tooth-brush in bleeding gums.

(EMU: Ethnomedicinal Uses; LN: Local Name).

Table-1. List of No. of Family, Genera and Species.

Sr. No.	Family	No. of Genera	No. of Species
1.	Acanthaceae	2	2
2.	Aizoaceae	1	1
3.	Amaranthaceae	3	3
4.	Aristolochiaceae	1	1
5.	Asclepiadaceae	3	3
6.	Asteraceae	2	2
7.	Balanitaceae	1	1
8.	Bignoniaceae	1	1
9.	Burseraceae	1	1
10.	Caesalpiniaceae	2	2
11.	Celastraceae	1	1
12.	Costaceae	1	1
13.	Cucurbitaceae	2	2
14.	Dioscoreaceae	1	1
15.	Ebenaceae	1	1
16.	Euphorbiaceae	2	2
17.	Fabaceae	5	5
18.	Hypoxidaceae	1	1
19.	Lamiaceae	1	1
20.	Lecythidaceae	1	1
21.	Liliaceae	3	3
22.	Loranthaceae	2	2
23.	Lythraceae	1	1
24.	Menispermaceae	1	1
25.	Musaceae	1	1
26.	Nyctaginaceae	1	1
27.	Papaveraceae	1	1
28.	Plumbaginaceae	1	1
29.	Poaceae	1	1
30.	Rhamnaceae	1	1
31.	Scrophulariaceae	1	1
32.	Sterculiaceae	2	2
33.	Tiliaceae	1	1
34.	Verbenaceae	3	3
35.	Vitaceae	1	1
	35	54	54

Photo plate of Ethnomedicinal plants





The results reveal that 54 plant species were used for medicine purposes in the surveyed area. The inventoried species comprise 35 families. The dicotyledons are represented by 48 species of 48 genera and 30 families while monocotyledons are represented by 8 species of 8 genera and 5 families (Table-1). The most important medicinal species were: *Achyranthes aspera*, *Aristolochia bracteolata*, *Butea monosperma*, *Calotropis gigantea*, *Cassia fistula*, *Chlorophytum borivilianum*, *Cocculus hirsutus*, *Costus speciosus*, *Curculigo orchoides*, *Ensete superbum*, *Gloriosa superba*, *Mucuna pruriens*, *Trianthema portulacastrum* and *Vitex negundo*. The medicinal plant parts, leaf, bark, seed, root, tuber, fruit and whole plant were used in raw or cooked forms (Enumeration). These species were used to treat different diseases. The most cited diseases were: jaundice, piles, asthma, skin diseases, fever and rheumatism. Although this is firsthand knowledge about ethno-medicine in Buldhna district, thorough pharmacological investigations are recommended since the informants claim the uses with confidence and strong belief.

CONCLUSION

The results of the present study provide evidence that medicinal plants continue to play an important role in the healthcare system of this tribal community. The results of this study demonstrated the persistence of folk medicine practices in Buldhna district, that the people are still dependent on indigenous knowledge for their health care, providing a cheaper and accessible alternative to the high cost pharmaceutical remedies. In spite of the overwhelming influence and our dependence on modern medicine and tremendous advances in synthetic drugs, many people still rely on herbal drugs the reason is that, if the herbal medicines are used properly they don't have any side effects. The possible benefit of plant-derived medications constitutes a rewarding area of research, particularly in countries such as India which have a rich biodiversity of plant resources coupled with a high prevalence and variety of infectious diseases where sustainable utilization of the biodiversity can be carried out. Therefore, documentation of these plants is the only way to preserve the traditional knowledge of the plant resources endemic to this area.

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