

A Technical Analysis of Plant Species Employed by Murbad Tahasil Tribes for Stomachache and Disorders.

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ABSTRACT

Present work is the result of intensive, systematic, Ethnobotanical exploration of Murbad Tahasil, Dist.Thane. Genera and species of medicinal plants used by tribes of Murbad Tahasil in treatment of human ailments were recorded. Out of total medicinal plants Thakur and Katkari tribes employ 20 genera and species in the treatment of stomachache and 17 genera in gastric disorders. Various plant parts viz. Leaves, flowers, fruits, seeds and barks of medicinal plants are used for curing ailments like stomach ache and gastric disorder.

Key words: Ethno botany, human ailments, stomachache, stomach disorders, plant resources.

INTRODUCTION:

Ethnic's knowledge related to plant resources is documented in 'Ethno botany'. Hershberger (1895) coined the term 'Ethno botany' for the study of plant species used by aboriginal people. It is a promising field of research. It has created enthusiasm among the researchers how to save the traditional knowledge of tribes. Early origin of Ayurveda must have had its foundation in Ethno botanical folklore. The tribes living in remote areas and villages mostly depend upon the folk medicines and household remedies. The practice of folk medicines to cure human ailments descends down ancestrally. 'Medicine men' do not easily disclose their knowledge to others. The valuable information of medicinal remedies may get vanished with 'medicine man'. Tribes in Thane district are: viz. Thakur, Warali, Katkari, Koli (Jagtap and Singh, 2002).. The present Ethnobotanical work in Murbad tahasil was undertaken.

The plants are keenly associated with the social customs and rituals of tribes. The tribes have been protecting the natural vegetation in the form of sacred groves. Conservation of plant

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resources is one of the national needs. Traditional knowledge of tribes and their participation has importance in conservation of biological resources.

Location of Murbad Tahasil: It is mountainous and tribal Tahasil of Thane District which lies approximately at $19^{\circ} 31^1$ N and $73^{\circ} 35^1$ E (Collectorate of Thane District, 2014). The climate of Murbad comprises the south-west monsoon, post-monsoon season, cold and summer seasons. The average relative humidity is 77%. Summer has day temperature (33°C to 41°C). The rainy season starts from June first week and continues till September. The average annual rainfall in the district is 2,293mm. July is the rainiest month of the year. The forests are of tropical mixed deciduous and semi-evergreen types dominated by *Madhuca-Terminalia* community. The area under forest cover is categorized under reserved, protected and unclassed forests of aggregate area 36256.122 ha (362.56 sq kms). Some of the dominant plant species are viz. *Terminalia alata*, *Madhuca longifolia* var. *latifolia* and *Anogeissus latifolia*. Teak occurs along with dominant *Bridelia retusa*, *Lannea coromandelica*, *Mallotus philippensis*, *Mangifera indica*, *Mitragyna parviflora*, *Pongamia pinnata*. Thakurs form the major part of tribal population followed by Mahadeo koli and then Katkari/Kathodi tribe. 'Medicine men' of Thakur and Katkari tribes possess good knowledge of medicinal plants. The tribals spend maximum time in the forests in collecting different materials viz. flowers, fruits, nuts, bark, shoots, tubers, roots, leafy vegetables, gum, honey and leaves of Gunj and Bel trees. Drinking liquor prepared from flowers of *Madhuca longifolia* var. *latifolia*. (Moha) is a part of their lifestyle. Katkari (Kathodi) is a nomadic tribal group. They are socially as well as economically backward.

REVIEW OF LITERATURE

Once the forests had luxuriant vegetation but with passage of time deforestation took place. Forest remnants may be called the sacred groves. (Gadgil and Vartak (1975).

Deities in the sacred grove of area of 'Panshet' dam, Maharashtra state, (India) are ferocious in nature and cause serious illness or death to offenders. People are allowed to use dead wood and leaf litter. There are 233 sacred groves (Devrais) of the districts of Maharashtra State (India). These grooves in forests have been playing a vital role in preservation of plant species diversity (Gadgil and Vartak (1981).

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People in Thailand use *Blumea balsamifera* in cold and skin itching while Chinese use it as carminative and indigestion problems (Huyin et al., 2000).

Tribes of Coorg of Karnataka (India) use *Aegle marmelos* (L.) Corr., *Bridelia scandens* (Roxb) Willd., *Cyclea peltata* (Lam.) HK.f.&Th., *Coriandrum sativum* L, *Sida rhombifolia* L. subsp. *retusa*, *Terminalia chebula* (Gaertn.) Retz. as pain relivers. Jenukurba tribe of Mysore (India) *Basella rubra* (L.) to cure mouth ulcer; *Boehaervia diffusa* (L.) in diabetes; *Cocculus hirsutus* (L.) in sprain; *Meyna laxiflora* in mumps; *Pavetta indica* (L.) in toothache and *Sida spinosa* (L.) to stop early graying of hairs (Kshirsagar and Singh, 2000).

Gujjar tribe of Uttar Pradesh use *Dalbergia sissoo* Roxb. *Abutilon indicum* L. to cure leucorrhoea; *Ficus racemosa* L. and leaf extract of *Achyranthus aspera* L. with seeds of *Piper nigrum* to cure piles; decoction of flowers of *Butea monopserma* (Lam.) Taub. to remove blockage during urination; *Celastrus paniculatus* Willd., (Khanna and Kumar, 2000).

Cleome viscosa L. is antihelmintic and also given in diarrhoea. Smoke of its leaves repel mosquitoes. Its leaf extract has larvicidal effect on *Anopheles stephensi*, a vector of malaria (Saxena et al., 2000).

Gaddi tribes (migratory shepherds) use veterinary medicinal plants like *Alnus nepalensis* (D. Don.) to cure sprains, *Mentha longifolia* (L.) as wound healer, *Vanda tessellate* (Roxb.) for general weakness and *Zingiber roseum* (Rosc.) in the treatment of cough in cattle (Singh and Kaushal Kumar, 2000).

Tribal and non-tribal communities of West Bengal use roots of *Aegle marmelos* (L.) Corr. *Aristolochia indica* L., *Euphorbia neriifolia* L., and *Ocimum sanctum* L. for their anti-venom properties (Maiti and Mishra, 2000). Tribal people of Nalgonda (Andhra Pradesh), India use crude veterinary plant drugs obtained from *Adhatoda vasika* Nees., *Cissus quadrangularis* L., *Whithania somnifera* (L.) Dunal., *Wrightia tinctoria* R.Br. and *Dolichandrone falcata* (DC.) Seem. in treating Anthrax disease; *Cassia italica* (Mill) Andr. , *Calotropis gigantea* (L.) R. Br., *Ipomoea turbinate* Lag. *Terminalia chebula* Retz. in constipation (Reddy and Vatsavaya, 2000).

People of Almora (Uttaranchal) use Pteridophytic plant species viz. *Adiantum edgeworthii* (Hook.) Bedd. to cure mouth blisters; *Asplenium dalhousiae* (Hook.) C. Chr. in typhoid;

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Lygodium flexuosum (L.) Sw. in skin diseases and *Tectaria polymorpha* (Wall. ex Hook.) Copel. to cure fever (Pande et al., 2000).

Herbal practitioners of Assam use *Kyllinga brevifolia* Rottb. to treat yellow type of jaundice and *Hydrocotyle rotundifolia* Roxb., *Musa sapientum* to treat red type jaundice (Das and Saikia, 2001). Tribals of Dadra, Nagar Haveli and Daman consume plant species regularly in their everyday diet. Some of them have medicinal values. These are: *Aegle marmelos* (L.) Corr. in treating dysentery, *Citrus medica* L. in sunstroke, leaf extract of *Spinacia oleracea* L. is given for cooling purpose, 'Kavalu' (*Smithia conferta* J.E. Sm.) as pain reliever and *Syzygium cumini* (L.) Skeels. in digestive disorders (Sharma and Singh, 2001). The tribes of Melghat forest (Amaravati) *Abrus precatorius* L. in cough, cold and throat infections; *Clitoria ternatea* L. in chronic cough; *Chlorophytum borivilianum* Sant. & Fern. as health tonic and *Plumbago zeylanica* L. in rheumatism and swelling (Chaudhari and Hutke, 2002). Ethnobotanical knowledge and practices continuously undergo some modification, improvement or change. It is dynamic. For example, *Ageratum conyzoides* L., *Amaranthus spinosus* L., *Asclepias curassvica* L. *Cleome gynandra* L. are some exotic plants introduced and naturalized in India. The local folk people have discovered some uses in them (Jain, 2005).

Curcuma longa L. is a valuable resource for spice, food, medicine as well as for its symbolic, ceremonial, ritualistic and religious purposes from ancient times in India. In order to overturn the patent given to USA in August 1997, researchers in India carried out a huge survey of literature dealing with the ancient uses of turmeric. This case is an example of how careful ethnobotanical research can help safeguard intellectual property rights (Merlin and Kinsela, 2005).

Ethnomedicinal study offers scope and opportunities for the development of new drugs (Mehrotra and Mehrotra, 2005).

Lichen *Cladonia rangiferina* (L.) Wigg. of alpine regions of West Kameng (Eastern Himalaya) is useful for removing of kidney stones (Rout et al., 2005).

Tribes of Maharashtra use *Canscora decussata* (Roxb.) Roem. & Schult. in treatment of fever, skin diseases and diabetes (Khanna et al., 2005).

Tree worship has been the most simple and convincing method of nature conservation.. There are several trees that are worshiped by Hindus according to 27 natal constellations. For example,

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Krutika, Chitra, and Sravan constellations are associated with *Ficus recemosa* L., *Aegle marmelos* (L.) Cor., *Calotropis gigantea* (L.) Ait. respectively. There are 28 Buddhas that are worshiped in the form of trees known as 'Wisdom trees'. For example, Buddhas viz. Medhankara, Paduma and Gautama are associated with *Butea monosperma* (Lam) Taub., *Oroxylum indicum* (L.) Vent., *Ficus religiosa* L. respectively (Sane and Ghate, 2006).

People of Bundi (Rajasthan) use household remedies against animal and insect bites. *Datura metel* L. mixed with cows urine are very effective against dog bite (Shekhawat and Batra, 2006).

People of rural area of Uttarkashi (Uttaranchal) India, use plant species in ethnoveterinary medicines. Some useful plants which increase lactation are: *Amaranthus caudatus* L., *Echinochloa crusgalli* (L.) P. Beauv. *Ficus palmata* Forssk., *Glycine max* (L.) Merr., *Grewia optiva* J.R. Dumm. ex Burrett., *Quercus floribunda* Rehder. (Tiwari and Pande, 2006).

Traditional healers of Wayanad (Kerala state) India, use plant species to cure skin diseases viz. ring worm is treated with *Vernonia cinerea* (L.) Less., *Thespesia populnea* (L.) Sol. ex Correa., *Sida rhombifolia* L., *Ocimum basilicum* L., *Jatropha curcus* L., *Jasminum angustifolium* Vahl. and *Elephantopus scaber* L.; leprosy with *Acacia catechu* Willd., *Cassia fistula* L. and *Tinospora cordifolia* (Willd.) Miers. ex Hook. f. and Thoms. Athletes foot disease is treated with *Anacardium occidentale* L., *Camellia sinensis* (L.) Kuntze., *Colocasia esculenta* (L.) Schott., and *Solanum anguivi* Lam. (Nisha and Sivadasan, 2007).

While treating jaundice, tribes from Nagarjunasagar (Andhra Pradesh) use *Phyllanthus amarus* Schum & Thonn., *Andrographis paniculata* (Burm. f.) Wall. ex Nees., *Argemone Mexicana* L., *Leucas aspera* (Willd.) Link. in different formulations. (Rao et al., 2007).

Bhil tribes of Madhya Pradesh use *Bombax ceiba* L. to cure different diseases. Decoction of root is taken to promote conception and to prevent miscarriages as well as to cure menorrhoea; the extract of its stem bark and flowers is taken in diarrhoea and dysentery, menorrhoea and leucorrhoea and stomach pain during menses. The paste is tied over anus to cure piles. Extract of inner bark is taken to increase sexual potentiality (Jadhav, 2007).

METHODOLOGY

During field work, the local tribe people were requested to accompany into forest. The information about medicinal uses of plants was confirmed by different groups. The methodology of previous workers was adopted (Jain, S. K. and Mugdal, V. 1999; Malhotra et al 2001.) The data was entered in a field notebook

RESULTS AND DISCUSSION

Present work is the result of intensive, systematic, Ethnobotanical exploration of Murbad Tahasil, Dist.Thane. Genera and species of medicinal plants used by tribes of Murbad Tahasil in treatment of human ailments are recorded. Out of total medicinal plants tribe use about 20 genera and species in stomachache and 17 genera in gastric disorder. Leaves, flowers, fruits, seeds and bark of following plants are employed in curing these two ailments.

(A): Ethnobotanical plant species used in the treatment of stomach ache by tribes of Murbad Tahasil, Thane district (India):

(A1): Thakurs and Katkari people of Murbad Tahasil use roots (powder/decoction) orally in case of stomachache. These plants are:

1. Kurdu : *Celosia argentea* L. (Fam. Amaranthaceae)
2. Kuda : *Wrightia tinctoria* R. Br. (Fam. Apocynaceae)
3. Hadang: *Eriolaena candollei* Wall. (Fam. Sterculiaceae).
4. Hastipada: *Elephantopus scaber* L. (Fam. Asteraceae) Katkari
5. Wagoti: *Capparis zeylanica* L. (Fam. Capparaceae) Katkari
6. Ran-ghewda: *Paracalyx scariosus* (Roxb.) Ali. (Fam. Fabaceae)
7. Vasanvel: *Cocculus hirsutus* (L.) Theob. (Fam. Menispermaceae)

A2) Thakurs and Katkari people of Murbad Tahasil use flowers orally in case of stomachache: These are:

1. Owa: *Trachyspermum ammi* (L.) Sprague (Fam. Apiaceae)
2. Dhayti: *Woodfordia fruticosa* (Linn.) Kurz. (Fam. Lythraceae)

A3) Thakurs of Murbad Tahasil use fruits orally in case of stomachache: These are:

1. Bahawa: *Cassia fistula* L. (Fam. Caesalpiniaceae)

2. Bartondi: *Morinda pubescens* J. E. Sm. (fam. Rubiaceae)

3. Murudsheng: *Helictres isora* L. (Fam. Sterculiaceae)

A4) Thakurs of Murbad Tahasil use seeds orally in case of stomachache: These are:

1. Kuda : *Holarrhena pubescens* (Buch.-Ham) Wall. Ex G. Don. (Fam. Apocynaceae)

2. Sagargota: *Caesalpinia bonduc* (L.) Roxb. (Fam. Caesalpiniaceae)

3. Dhawada: *Anogeissus latifolia* (Roxb. ex Dc.) Guill. & Perr. (Fam. Combretaceae)

A5) Thakurs of Murbad Tahasil use bark orally in case of stomachache: These are:

1. Rohan: *Soymida febrifuga* (Roxb.) Juss. (Fam. Meliaceae)

2. Hedu: *Haldina cordifolia* (Roxb.) Ridsd. (Fam. Rubiaceae)

A6) Thakurs of Murbad Tahasil use leaves orally in case of stomachache: These are:

1. Pandhar: *Murayya paniculata* (L.) Jack. (Fam. Rutaceae)

2. Harbhara: *Cicer arietinum* L. (Fam. Fabaceae)

3. Chirmut- fanglu: *Hyptis suaveolens* (L.) Poit. (Fam. Lamiaceae)

(B) Ethnobotanical plant species used in the treatment of gastric disorder by tribes of Murbad

Tahasil. Thane district (India).

B1) Thakurs of Murbad Tahasil use leaves orally in case of gastric disorder: These are:

1. Ramphal: *Annona reticulata* L. (fam. Annonaceae)

2. Medshingi: *Dolichandrone falcata* (Wall. ex. DC.) Seem. (Fam. Bignoniaceae)

3. Harbhara: *Cicer arietinum* L. (Fam. Fabaceae)

B2) Thakurs of Murbad Tahasil use fruits orally in case of gastric disorder: These are:

1. Dhane: *Coriandrum sativum* L. (Fam. Apiaceae)

2. Jire *Cuminum cyminum* L. (Fam. Apiaceae)

3. Owa *Trachyspermum ammi* (L.) Sprague (fam. Apiaceae) Thakur and katkari

4. Tambada Bhopala: *Cucurbita maxima* Duch. ex Lam. (Fam. Cucurbitaceae)

5. Limbu: *Citrus aurantifolia* (Christm and Panz.) Swing. (Fam. Rutaceae)

6. Ghotvel: *Smilax zeylanica* L. (Fam. Smilacaceae)

B3) Thakurs of Murbad Tahasil use flowers orally in case of Gastric disorder: These are:

1. Bahawa: *Cassia fistula* L. (Fam. Caesalpiniaceae)

2.Palas: *Butea monosperma* (Lam.) Taub(Fam.Fabaceae)

3.Palashi *Butea superba* Roxb. ex Willd.(Fam. Fabaceae)

4.Dhayti: *Woodfordia fruticosa* (Linn.) Kurz.(Fam Lythraceae)

B4) Thakurs of Murbad Tahasil use seeds orally in case of Gastric disorder: These are:

1.Dhawada: *Anogeissus latifolia* (Roxb. ex Dc.) Guill. & Perr.(Fam.Combretaceae)

Katkari also use it.

2.Bhovari: *Ipomoea nil* (L.) Roth.(Fam.Convulvulaceae)

3.Erand *Ricinus communis* L.(Fam.Euphorbiaceae)seed-oil

1.Kharmat *Ficus hispida* L.(fam.Moraceae)Thakurs use roots in gastric disorder.

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