

A Comprehensive Technical Study on Traditional Plant-Based Remedies for Tuberculosis, Leprosy, Herpes, Diabetes, and Ulcers in Murbad Tahasil.

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ABSTRACT

Murbad tahasil is rich in floristic as well as ethnic diversity. Murbad is mountainous and tribal populated Tahasil of Thane District lying approximately at $19^{\circ} 31^1$ N and $73^{\circ} 35^1$ E (Collectorate of Thane District, 2014). It includes about 906.36 sq. km area, 207 villages and 159 'padas'. 'Ethnobotanical exploration of Murbad Tahasil, Dist.Thane was done. Various medicinal plants employed by tribes of Murbad Tahasil in curing of human diseases such as Tuberculosis, leprosy, Herpes, Diabetes and ulcers were recorded.

Key words: Ethno botany, medicinal plants, human diseases.

INTRODUCTION

There are many sub-disciplines of Ethnobotany. These are viz. ethno agriculture, ethno ecology, ethno medico botany, ethno pharmacology, ethnopteridlogy, ethnobryology, ethno-phytotaxonomy and ethno-veterinary (Jain 2001). Early origin of traditional medicine viz. Ayurveda, Unani and Siddha must have had their foundation in Ethno botanical folklore. The people in tribal areas and remote villages mostly depend upon the folk medicines and household remedies. The practice of herbal medicines to cure different ailments has descended down ancestrally. Medicine men do not easily disclose their knowledge to others. Therefore, the valuable information may be vanished with them. The tahasil Murbad of Thane district comprises three major tribes viz. Thakur, Mahadev Koli, Katkari and several ethnic groups that

have been engaged in conservation practices. The medicine men generally are experts in one or other diseases and inhabit in remote areas. Their knowledge needs to be assembled and recorded. In many cases like scorpion sting, snakebite and rabid dog bites the practitioner administers drugs accompanied with 'jantras' and 'mantras'. They believe that both of these things act supplementary and complementary to each other. Many times, this practice causes death of the person.

REVIEW OF LITERATURE

Ethnobotanical knowledge is helpful in treatment and prevention of diseases and provide a wide scope and opportunities for bioprospecting in drugs/chemicals and gene prospecting. For example, medicines viz. NICOSANTM (HEMOXINTM) and 'Ajawaron HF' used in treating sickle cell anaemia were developed through ethnobotanical investigations in Nigeria (Idu, 2009).

Scientific approach must be followed in Ethnobotanical studies. It must provide proper information, statistical analysis to support the data and field observations. Related socio-economic aspects, effects on environment and conservation of biodiversity must be taken into consideration. Ethics demand protecting the knowledge base. Benefits should be shared resulting from commercial use of the tribal knowledge (Idu, 2009).

Local people of Deogarh (Orissa) use plant species for treating skin diseases. These are: Argemone Mexicana L., Azadirachta indica A. Juts. and Helicetres isora L. to treat 'Scabies'; Hemidesmus indicus (L.) R.Br., Streblus asper Lour. to cure 'Eczema'; Boerhaavia diffusa L., Combretum decandrum Roxb., Tinospora cordifolia (Willd.) Miers. ex Hook. F. and This. to treat 'Acne and Pimples' (Sahu et al., 2009).

Many ethnomedicinal plants are critically endangered / threatened or near threatened categories as per IUCN categorization norms. Chenchu tribe of Nallamalai (Andhra Pradesh) use species viz. Christella dentata (Forssk.) Brownsey & Jermy., Careya arborea Roxb. for curing cough and cold; Piper attenuatum Buch.Ham. ex Miq., Piper nigrum L. for curing skin diseases; Ipomoea mauritiana Jacq., Curculigo orchioides Gaertn. to treat male impotency; Glycosmis cochinchinensis Pierre., Entada pursaetha DC. as contraceptives and Trichosanthes cucumerina L. for cardiac problems. (Yasodamma et al., 2009).

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People of Hmar tribe of Cachar (Assam) use plant species against various diseases of animals. Juice of Onion bulb, paste of *Annona muricata* L., *Blechnum orientale* Lill., *Butea monosperma* (Lamk.) Taub. and bulb extract of *Crinum amoenum* Roxb. to cure tongue infections, to remove off lice, to keep insects off hens, as wound healer and to cure inflated stomach respectively (Nath and Choudhary, 2009).

Mishing community of Gohpur (Assam) has developed an anti-rheumatic plaster by mixing plants viz. *Tinospora cordifolia* (Willd.) Miers. ex Hook. f. and Thom., *Amphineuron extensus* (Blume.) Moore., *Hibiscus rosa-sinensis* L., *Gossypium arboretum* L., *Litsea salicifolia* Roxb., *Machilus bombycina* King., *Moringa oleifera* Lam. in appropriate quantities and the fresh earth mound of white ants with a little salt thoroughly. Plaster is applied and then covered by leaf of *Musa sapientum* L. (Borah et al., 2009).

Tribals and rurals in East Godavari district (Andhra Pradesh) traditionally use plant species for the treating bites and scorpion stings. Mantra and tantra are used to invoke the Gods and mesmerize the patient. They use *Cassia auriculata* L., *Abrus precatorius* L., *Tiliacora acuminata* (Lam.) Miers., *Plumeria alba* L., *Cymbopogon flexuosus* (Nees ex Steud.) Wats. for snake bite; root paste or leaf juice of *Acalypha indica* L., *Allium cepa* L., *Vigna trilobata* (L.) Verdc. *Selaginella repanda* (Desv. ex Polr.) Spr. *Ruellia tuberosa* L., *Ocimum basilicum* L. *Diplocyclos palmatus* (L.) Jeffrey. for the Scorpion stings and *Crotolaria laburnifolia* L., *Colocasia esculenta* (L.) Schott & Endl., *Cleome monophylla* L. in insect bites (Suneetha et al., 2009).

Tribal and rural folklore of Mayurbhanj (Orissa) treat asthma with *Terminalia arjuna* (Roxb. ex DC.) W. & A., *Syzygium cumini* (L.) Skeels.; bark decoction of *Anogeissus latifolia* (Roxb. ex DC.) Wall. ex Bad. is used to regularize menstrual cycle and bark of *Gastonia scholaris* L. is used in malaria (Rout et al., 2009).

Bhil tribe of Ratlam (Madhya Pradesh) use leaves of plant species for the treatment of different ailments. To suppress boils and swellings, leaves of *Barleria prionitis* L., *Butea monosperma* (Lamk.) Taub., *Citrus limon* (L.) Burm. f., *Datura stramonium* L., *Euphorbia neriifolia* L., *Ipomoea carnea* Jacq. Subsp. *Fistulosa* (Mart. ex Choisy.) Austin. *Jasminum sambac* (L.) Ait., *Jatropha curcas* L., *Kalanchoe pinnata* (Lam.) Pers., *Papaver somniferum* L., *Physalis minima* L.,

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Quisqualis indica L. are used ; to get relief in toothache leaves of Calatropis procera (Ait.) R.Br., Mangifera indica L., Psidium guajava L. Tridax procumbens L. are used (Jadhav, 2009).

Tangkhal-Naga tribe of Ukhrul (Manipur) use Ageratum conyzoides L., Allium hookerii Thw., and Auricularia delicate (Fr.) Henn. in stomach disorders; Emilia sonchifolia (L.) DC., Eupatorium adenophorum Spreng., Lantana camara L., and Musa paradisiaca L. in diarrhea and dysentery; Ocimum americanum L., Tinospora cordifolia (Willd.) Miers. ex Hook. f. and Thoms in diabetes treatment (Salam et al., 2011).

In Bihar exotic species Vernonia amygdalina Del. is used against diabetes, cough, fever, malaria and as a blood purifier (Kumar and Varma, 2011).

Andrographis paniculata (Burm.f.) Wall. ex Nees., Celastrus paniculata Willd., Flacourtia indica (Burm. f.) Merr. Mucuna puriens (L.) DC., Pongamia pinnata (L.) Pierre. and Xanthium strumarium L. are the promising plant species of Adilabad district (Andhra Pradesh) used for curing leucorrhoea (Swamy and Reddi, 2011). Bombax ceiba D.C. has anti-HIV, anti-inflammatory, hepatoprotective, anticancerous, anti-helicobacter, analgesic and antioxidant, hypotensive, hypoglycemic and antimicrobial properties (Verma, 2011).

People of Salem district of Tamilnadu use plants in treatment of diseases. Andrographis alata Nees., Gymnema sylvestre R.Br. and Cyanodon dactylon Pers. to cure diabetes; Abutilon indicum (L.) Sweet., Aristolochia indica L., Argemone mexicana L., Asparagus racemosus Willd. and Azadirachta indica A. Juss. to cure leprosy; jaundice is treated with Argemone Mexicana L., Eclipta prostrata L., Phyllanthus amarus L., Boerhavia diffusa L. and Cleome viscosa L. (Alagesabopathi, 2011).

METHODOLOGY

Extensive field work was done in the forest area with the help of local tribe people. The information about uses of plants in dying and tanning was confirmed from the discussion with the tribal. The ethnobotanical methodology of previous workers was followed (Jain, S. K. and Mugdal, V. 1999; Malhotra *et al* 2001.). The data of plants was entered in a field notebook

RESULTS AND DISCUSSION

We consulted many medicine men in Murbad tahasil. Different tribes of Murbad Tahasil use medicinal plants in curing of human diseases such as Tuberculosis, leprosy, Herpes, Diabetes and ulcers. These are given below.

Plant species used in the treatment of major diseases viz. TB, diabetes, Harpies, Leprosy and Ulcer by tribes of Murbad Tahasil, Thane district (India)

Tuberculosis:

Thakur and Katkari people prepare decoctions/powder of roots 'Vilayati' (*Argemone Mexicana* L. Hook, f. and Thoms., family: Papaveraceae); 'Tetar' [*Oroxylum indicum* (L.) Vent) Family: Bignoniaceae] and 'Kuda' (*Wrightia tinctoria* R. Br.; Apocynaceae) and give orally to the patients. They and other tribe people also use roots and flowers of 'Bhuiringani' (*Solanum virginianum* L.) family Solanaceae.

Diabetes:

Thakurs and Katkari people use powder of wood of 'Bibla' (*Pterocarpous marsupium* Roxb. Family Fabaceae); they and other tribes use leaves of 'Adulsa' [(*Justicia adhatoda* L.) Family Acanthaceae]; 'Bedki' [*Gymnema sylvestre* (Retz.). R. Br., family Asclepiadaceae]; 'Medshingi' [*Dolichandrone falcate* (Wall. ex. DC.) Seem. family Bignoniaceae] while Tangkhul-Naga tribe of Ukhrul (Manipur) use *Ocimum americanum* L., *Tinospora cordifolia* (Willd.) Miers. ex Hook. f. and Thoms in diabetes treatment

All tribes employ pods of 'Bahawa' [*Cassia fistula* L. family Caesalpiniaceae]; stem branches of 'Gulvel' [*Tinospora cordifolia* (Willd.) Miers. Family Menispermaceae]; seeds of 'Jambhul' [*Syzigium cumini* (L.) Skeels family Myrtaceae] and rhizomes of 'Koshta' [*Costus speciosus* (Koen.) J. E. Smith] family Zingiberaceae] in treating diabetes.

Herpes:

Medicine men of Thakur and Koli tribes employ 'Bandhala' (*Viscum angulatum* Heyne ex DC. family Viscaceae). Extracts or powder are applied externally.

Leprosy :

Thakur, Katkari and medicine men of other tribes use pods of Bahawa *Cassia fistula* L. Caesalpiniaceae and bark of 'Gulvel' [*Tinospora cordifolia* (Willd.) Miers. Family

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Menispermaceae].while tribal people of Salem district of Tamilnadu Abutilon indicum (L.) Sweet., Aristolochia indica L., Argemone mexicana L., Asparagus racemosus Willd. and Azadirachta indica A. Juss. to cure leprosy

Ulcer

Thakurs give orally bark powder of 'Athrun' [Flacourtia indica (Burm. F.) Merrill.family Flacourtiaceae] in the treatment of ulcers.

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