

Ethnomedicinal plants used by tribals of East Nimar region, Madhya Pradesh

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Several ethnobotanical surveys were carried out in different region of East Nimar during 2004-2007. The paper deals with the 63 species of medicinal plants belonging to 55 genera and 43 families commonly used by the tribal people of East Nimar Region. These potential medicinal plants are used in 28 types of different diseases. The scientific, vernacular and family names of these plants, along with the parts used and the mode of administration are enumerated.

Keywords: Ethnomedicine, *Korku* tribe, *Bhils* tribe, *Gond* tribe, *Bhilalas* tribe, *Naik* tribe, *Mankar* tribe, *Nihal* tribe, Madhya Pradesh

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India is the home to a great variety of ethnomedicinally important plant species and ranked seventh among 17 mega diversity countries of the world¹. Over 17,000 species of higher plants are reported to occur in India, of which 7,500 are reported to be used for healthcare by various ethnic communities². Only about 2,500 plant species of medicinal value have been well documented in Indian Systems of Medicine and ethnobotany³. Tribals use locally available medicinal plants to meet their daily healthcare need. The knowledge of valuable heritage is orally handed over from one generation to generation years after year. East Nimar situated on Southern part of Madhya Pradesh lies approximately between the parallel of latitude 21° 05' to 22° 25' N and meridians of longitudes 75° 57' to 77° 13' E. East Nimar is bounded by on the East by Betul and Hoshangabad districts of Madhya Pradesh and Amravati of Maharashtra. On the South by the districts of Jalgaon and Amravati of Maharashtra, on the West by Khargone and Dewas district of Madhya Pradesh. The Satpura in the region is bifurcated into two parallel ridges on either side of Tapti Valley. Kalibith hill ranges and Asirgarh hill ranges are the main forest areas where rich population of tribals is found. Dominant tribals inhabiting the areas are

Korku, *Gond*, *Bhils*, *Bhilalas*, *Naik*, *Mankar*, and *Nihal*; 78% of tribal population in East Nimar are *Korkus*. Small populations of 17% of the total population are *Gonds*. *Nihal* and *Bhils* rank third in numerical (3%) strength.

Methodology

Several ethnobotanical surveys were carried out during 2004-2007. The data regarding medicinal uses were collected by filling questionnaire⁴, personal observation and interviews with heads of tribal groups, old and experience persons and local informants (Fig.1). Standard guideline was followed for ethnobotanical informations among different ethnic groups^{5,6}. Herbarium of the dried and pressed plants were prepared following conventional methods⁷. Different floras and monographs were consulted for identification of plants⁸⁻¹³. Voucher specimens were finally confirmed and deposited in the Botanical Survey of India, Central circle (BSA) Allahabad. Different literature and publications have been consulted for verification of medicinal utility. Interpreters were employed for translating the tribal language¹⁴⁻¹⁸.

Results and discussion

Information on 63 ethnomedicinal plant species belonging to 41 families is enumerated along with families, vernacular name and uses:

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Abelmoschus moschatus Medic., Malvaceae, *Jangli Bhindi*

Uses: Root paste mixed with half a cup of water is given with wine to cure undesirable discharge of semen (locally called, *dhat*).

Abelmoschus ficulneus (L.) W.& A. ex Wt., Malvaceae, *Jangli Bhindi / Ram Bhindi*

Uses: Root juice is given to diabetic patients.

Argemone mexicana L., Papaveraceae, *Kateli*

Uses: Paste of roots and leaves with jaggery, ajwain (*Trachyspermum ammi*) and garlic is applied externally on chest of children suffering from double pneumonia (locally called, *pasli ka dard*).

Abutilon indicum L. Sweet, Malvaceae, *Kanghi*

Uses: Root extract mixed with water is given to ladies to cure leucorrhoea.

Acacia nilotica L. Del., Mimosaceae, *Babul*

Uses: Sun dried pods powder is given for the treatment of piles.

Achyranthes aspera L., Amaranthaceae, *Latjeera / Hathijhara*

Uses: It is used in the recovery of wounds caused by *babool* (*Acacia nilotica*) spines. Plant decoction is used in rheumatism.

Aegle marmelos L. Corr., Rutaceae, *Bel*

Uses: Fruit pulp is eaten during dysentery.

Argyrea nervosa (Burn.f.) Boj, Convolvulaceae, *Samundra Soka*

Uses: Root and seed paste is applied externally on eczema, ringworm and other skin diseases and wounds.

Abrus precatorius L., Fabaceae, *Jarum*

Uses: Roots are used for cough.

Anogeissus pendula Edgw., Combretaceae, *Kala Dhawda*

Uses: Bark decoction is used in cough. Bark paste is also used externally in wounds and skin diseases. Fruits are eaten in diarrhoea and dysentery.

Amorphophallus paeonifolius Nicol., Araceae, *Jangli Suran*

Uses: Plant decoction is useful in throat inflammation and respiratory troubles.

Aristolochia indica L., Aristolochiaceae, *Ishwarmul / Ishwari*

Uses: Root paste is applied externally to cure stomachache and as an antidote to snakebite.

Barleria montana Nees, Acanthaceae, *Haldibel*

Uses: Root paste is used externally in rheumatism and joints pain.

Bacopa monnieri (L.) Wetts., Scrophulariaceae, *Jalnavari / Jalneem*

Uses: Leaf extract is given to increase memories and also used for relieving cough.

Balanites aegyptiaca (L.) Dell., Balanitaceae, *Hingola*

Uses: Seed powders mixed with *haldi* (*Curcuma longa*) in warm water is taken for the treatment of asthma.

Biophytum sensitivum (L.) DC., Oxalidaceae, *Rajal / Lajalu*

Uses: Plant juice is given to cure diarrhoea. Roots are also used for the recovery in jaundice. Plant ash mixed with lemon juice is given in stomachache.

Boerhavia diffusa (L.), Nyctaginaceae, *Gadahpurana*

Uses: Root decoction is taken in kidney trouble.

Butea parviflora Roxb., Fabaceae, *Palasbel*

Uses: Flowers are eaten in diabetes.

Canscora diffusa (vahl.) R.Br.ex Roem & Schult, Gentianaceae, *Shakhaphuli*

Uses: Plant decoction is taken in nervous debility. Leaf paste is used externally in inflammation.

Cocculus hirsutus (L.) Diels., Menispermaceae, *Jabamini / Vevdi*

Uses: Stem extract is given to cure leucorrhoea. Root paste is used externally in poisonous insects bite.

Convolvulus arvensis L., Convolvulaceae, *Shankhpushpi*

Uses: Flower paste in honey is given to increase memory; also controls blood pressure.

Costus speciosus (Koen.) Smith, Zingiberaceae, *Keokand / Jangli Adrak*

Uses: Rhizome extract is taken in rheumatism and pain in bones. Crushed leaves are inhaled in bronchial asthma.

Crateva magna (Lour.) DC., Capparaceae, *Barna*

Uses: Bark decoction is given in urinary organ disorders.

Capparis zeylanica L., Capparaceae, *Hurhur*

Uses: Root paste is applied on boils, swelling and arthritis.

Clerodendrum multiflorum (Burm.f.) O. Kuntz, Verbenaceae, *Arni*

Uses: Root decoction is useful in fever. Flowers juice is given to patients suffering from nervous disorder.

Carissa congesta Wights., Apocynaceae, *Karandas*

Uses: Root decoction is given orally in stomach disorder.

Cuscuta reflexa Roxb., Cuscutaceae, *Amarbel*

Uses: Garlands of stem are tied around neck for recovery from jaundice. Plant decoction is used as a contraceptive for female.

Curcuma augustifolia Roxb., Zingiberaceae, *Tikhur*

Uses: Dried rhizome powder mixed with goat milk and sugar is administered for the treatment of dysentery and fever.

Cryptostegia grandiflora R. Br., Periplocaceae, *Dudhi Bel/Kala Rela/Bhulbhulaya Bel*

Uses: Root paste is applied externally on chest to cure asthma.

Curculigo orchioides Gaertn., Hypoxidaceae, *Kali Musli*

Uses: Rhizome powder is sprinkled on cuts to stop bleeding and the recovery of wounds.

Datura metel L., Solanaceae, *Dhatura*

Uses: Fresh leaves soaked in coconut oil are used externally in burnt skin.

Diospyros melanoxylon Roxb., Ebenaceae, *Temru*

Uses: Juice from small pieces of roots mixed with black pepper (*Piper nigrum*) is given orally to patients as an antidote in snakebite.

Dioscorea bulbifera L., Dioscoreaceae, *Morus bel*

Uses: Root paste mixed with cow milk is taken orally for the treatment of cough and asthma.

Delonix regia (L.) Gamble, Caesalpinaceae, *Vekrend*

Uses: Leaves are used as poultice on bruises and wounds; leaf paste in milk is applied on piles.

Echinops echninatus Roxb., Asteraceae, *Omkata*

Uses: Root extract is useful in cough and cold; also taken orally for easy delivery of child.

Evolvulus alsinoides (L.) Wall., Convolvulaceae, *Shankpushpi*

Uses: Leaf extract is given orally in cough and cold.

Euphorbia nerifolia L., Euphorbiaceae, *Thuar / Thor*

Uses: Latex is used externally in snakebite and recovery of wounds.

Enicostema axillare (Lam.) A. Raynal, Gentianaceae, *Nai*

Uses: Leaf juice is given orally in the treatment of fever. Crushed plant is applied externally as an antidote in snakebite.

Grewia pilosa Lamk., Tiliaceae, *Goldhaman / Ghordhaman*

Uses: Root paste is given orally for the treatment of excess discharge of semen with urine.

Gymnema sylvestre R. Br., Asclepiadaceae, *Gurmar*

Uses: Leaf juice is taken orally in diabetes, piles and asthma. Leaf paste is applied externally on cuts and wounds.

Helicteres isora L., Sterculiaceae, *Marorphali*

Uses: Sun dried fruit powder mixed with milk is given orally to newborn child to increase the sucking of milk.

Hedychium coronarium J. Koenig, Zingiberaceae, *Banhaldi* (Fig.2)

Uses: Rhizome paste is applied externally in snakebite; rhizome decoction is given in liver troubles.

Holarrhena Pubescens (Buch. Ham) Wallich ex G. Don, Apocynaceae, *Kurchi*

Uses: Bark decoction is given in dysentery.

Leea aspera Edgew., Leeaceae, *Kumala* (Fig. 3)

Uses: Root paste is applied externally in skin diseases and ring worm.

Leucus cephalotes (Koth.) Spreng., Lamiaceae, *Goma*

Uses: Plant decoction is given orally against intestinal worms.

Mucuna pruriens (L.) DC., Fabaceae, *Kivach / Kavach*

Uses: Dried pod powder is given to remove intestinal worms.

Oxalis corniculata L., Oxalidaceae, *Khatti Booti*

Uses: Root paste is taken orally in stomach disorder.

Plumbago zeylanica L., Plumbaginaceae, *Chitrak*

Uses: Root powder mixed with milk is given orally in piles and stomach disorder.

Psoralea corylifolia L., Fabaceae, *Bavchi*

Uses: Leaf paste is applied externally on boils; seed powder is applied externally for the treatment of psoriasis and leucoderma.



Fig.1—Korku medicine man (Baji Baba)



Fig.2—*Hedychium coronarium*



Fig.3—*Leea aspera*

Sarcostemma acidum (Roxb.) Voigt, Asclepiadaceae, *Samarbel*

Uses: Stem juice mixed with water is given in rheumatism, arthritis and joints pain. Dry powder with mustard oil is applied externally for treating earache.

Solanum nigrum L., Solanaceae, *Makai*

Uses: Decoction of plant is used to regulate blood pressure. Leaf paste is used externally in skin diseases.

Solanum virginianum L., Solanaceae, *Nilikateli*

Uses: Seed powder is rubbed on the teeth gum during toothache.

Tephrosia purpurea (L.) Pers., Fabaceae, *Sarapunkhah*

Uses: Decoction of plant is given against intestinal worms.

Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms, Menispermaceae, *Gulbel / Giloy*

Uses: Stem juice is given orally in malarial fever.

Tribulus terrestris L., Zygophyllaceae, *Chotagokhru*

Uses: Leaf decoction is given to control enlarged spleen.

Terminalia tomentosa Wt. & Arn., Combretaceae, *Sadad*

Uses: Bark is used against burnt skin.

Tridax procumbens L., Asteraceae, *Baramasi / Patharchatta*

Uses: Plant juice mixed with *mishri* (sugar candy) in half a cup of water is given to relieve from urinary disease in male.

Trichosanthes cucumerima L., Cucurbitaceae, *Gavlan*

Uses: Seed powder mixed with jaggery and alcohol (*dobar*) is given for the treatment of asthma.

Urginea indica Kunth, Liliaceae, *Jungli Piaz*

Uses: Bulb paste is externally applied in paralysis.

Vitex negundo L., Verbenaceae, *Nirgundi*

Uses: Flowers and bark juice is taken in diarrhoea. Roasted leaves are tied on knee joints to relieve from joints pain.

Vetiveria zizanioides (L.) Nash, Poaceae, *Khus*

Uses: Root paste is applied externally in rheumatism.

Woodfordia fruticosa (L.) Kuntze, Lythraceae, *Ban Mahendi*

Uses: Flower paste is applied externally in leprosy and skin diseases.

Withania somnifera (L.) Dunal, Solanaceae, *Aswagandha/Asgandh*

Uses: Stem juice mixed with warm water is given for treating joints pain.

The study reports 63 ethnomedicinal plants, commonly used by tribals in the East Nimar region for their healthcare. Uses, preparation and mode of application varied from region to region. Same plant is used for different purpose by different tribes. These plants are believed to cure various diseases, viz stomach disorder, toothache, inflammation, headache, fever, joints pain, diabetes, wounds, jaundice, cold & cough, skin disease, bronchitis and asthma. Most of the plants are used in the form of decoction, while others are used as paste, powder, juice and latex. Further, root (of 19 species), leaf (10), whole plant, stem bulb or rhizome (9), fruits, bark, flower or inflorescence (4), seed (3), and latex of 1 species are used for the treatment of different diseases. Ethnomedicinal plants used by tribals of East Nimar have been compared with *Bhil* tribe of Bibdod, Madhya Pradesh¹⁹. Comparison shows that *Bhils* of the regions commonly use *Acacia nilotica* for piles and *Enecostemma axillare* for fever. Some potential medicinal plants like *Sarcostemma acidum*, *Trichosanthes cucumerima*, *Chlorophytum tuberosum*, *Enecostemma axillare*, *Gymnema sylvestre*, *Hedychium coronarium*, and *Vitex negundo* are collected by local people on large scale to fulfill the needs of local traders, industrial unit preparing *Ayurvedic* and herbal medicine in the country. These plants are recommended for cultivation which may improve and uplift the economy of tribals of East Nimar region.

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