

## Ethnomedicinal plant resources of Mayurbhanj district, Orissa

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Seventy seven plant species belonging to 73 genera and 41 families are employed ethnomedicinally by the rural people in 11 villages of district Mayurbhanj. Ethnomedicinal uses of 8 plant species have been recorded for the first time from the region. Documentation of traditional knowledge on the ethnomedicinal uses of these plants is essential for conservation efforts for the plant resources and new drug development.

**Keywords:** Ethnomedicine, Orissa, Traditional home remedies

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India's health culture flows through two distinct but symbiotic and mutually sustaining streams- the folk and the codified. The tradition rely on around 8,000 plants species and empirical evidence reveals that these generates over 50,000 products, processes and practices for maintaining health security of human, livestock and plants. India has over one million traditional village level healers and several millions of knowledgeable households, who are well versed in traditional home remedies<sup>1</sup>. Herbal remedies have attained much more popularity in the treatment of minor ailments due to increasing awareness of personal health maintenance through natural products. Orissa is endowed with quite rich plant resources in general and medicinal plants in particular. Although quite good numbers of medicinal plants have been identified, many more of species have not yet been identified. The paper enlists the medicinal plants used by several *Vaidyas*, *Kaviraj*, knowledgeable person and locally available unrecorded information from common people.

### Methodology

Similipal Biosphere Reserve is situated in the district of Mayurbhanj. The vast patch of forests forms one of the mega biodiversity zones of the country with rich population of flora and fauna. The Mayurbhanj district is abode of various tribes. The

main tribal communities of the district are *Santhal*, *Kolha*, *Bathudi*, *Kharias*, *Mankidias*, *Gond* and *Ho*<sup>2-4</sup>. The tribal people depend on the biodiversity resources of Similipal for their day to day livelihood. The agroclimatic conditions of the district are ideal for growing medicinal plants<sup>5</sup>. The study was carried out in 11 different villages of Mayurbhanj districts during summer 2006. Several attempts were made for collection/study the raw drug consumption by the villagers. The data were collected from the *Vaidyas*, *Kavirajs* and knowledgeable persons of villages. They were interviewed to record different plants used for various remedies. Village elders are the major key players in the traditional healthcare systems<sup>6</sup>. Separate format was used for recording data in respect of each respondent. A first level list of all the plants and raw drugs used by the respondent for healthcare purposes was also prepared. The respondents were asked to select the most commonly/frequently used 10 medicinal plants of larger quantity and their used. The plant species were collected for raw drug preparation and identification. The collected plant species were identified<sup>7,8</sup>. To ascertain the uses of these medicinal plants, literature sources were referred<sup>9-12</sup>.

### Results and discussion

Plant species used for different health problems, together with botanical name, family, local names, parts used followed by folk uses were recorded and compiled. The specimens are deposited in the

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Table 1—Ethnomedicinal uses among the villages in district Mayurbhanj

Plant name	Family	Local names	Parts used	Ailments
<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	<i>Pedipedica</i>	Root	Jaundice, piles
<i>Achyranthes aspera</i> L.	Amaranthaceae	<i>Apamaranga</i>	Bark	Sprain, dysentery, constipation,
<i>Adhatoda vasica</i> Nees	Acanthaceae	<i>Basanga</i>	Leaf	Rheumatism, cold fever, constipation, malaria, diarrhoea, and cough
<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	<i>Bela</i>	Leaf, young fruit	Pneumonia, loss of appetite, indigestion and diarrhoea
<i>Ageratum conyzoides</i> L.	Asteraceae	<i>Pokasungha</i>	Leaf	Mouth ulcer
<i>Allium cepa</i> L.	Liliaceae	<i>Ptaja</i>	Root, Tuber	Diarrhoea, dysentery
<i>Aloe vera</i> (L.) Burm.	Liliaceae	<i>Ghee Kuanri</i>	Fresh leaf	Headache
<i>Alstonia scholaris</i> (L.) R.Br.	Apocynaceae	<i>Chhatiana</i>	Leaf	Lice
<i>Andrographis paniculata</i> (Burm. f.) Wall. ex Nees	Acanthaceae	<i>Bhuin Nimba</i>	Whole plant, leaf, root	Skin disease, malaria, stomach pain, dysentery
<i>Aristolochia indica</i> L.	Aristolochiaceae	<i>Iswarmula</i>	Leaf	Snakebite
<i>Asparagus recemosus</i> Willd.	Liliaceae	<i>Satabari</i>	Root	White discharge, indigestion, colic, stomach pain, spermatorrhoea
<i>Azadirachta indica</i> A. Juss.	Meliaceae	<i>Nimba</i>	Leaf, flower, bark	Skin diseases, nasal bleeding, fever
<i>Bacopa monnieri</i> (L.) Penn	Scrophulariaceae	<i>Brahmi</i>	Whole plant	Increase of memory power
<i>Barleria prionitis</i> L.	Acanthaceae	<i>Daskerenta</i>	Leaf	Cuts, wounds, malaria
<i>Bryophyllum calycina</i> Salisb.	Crassulaceae	<i>Hemsagar</i>	Leaf	Burns, diarrhoea
<i>Butea monosperma</i> (Lamk.) Taub.	Fabaceae	<i>Palasi</i>	Seed	Diarrhoea
<i>Calotropis gigantea</i> R.Br.	Asclepiadaceae	<i>Arakha</i>	Root juice	Antiseptic, headache, eczema
<i>Capsicum frutescens</i> L.	Solanaceae	<i>Dhanua lanka</i>	Fruit	Waist pain
<i>Careya arborea</i> Roxb.	Barringtoniaceae	<i>Kumbhi</i>	Bark	Diarrhoea
<i>Carica papaya</i> L.	Caricaceae	<i>Amruta Bhandal/Papaya</i>	Juice	Toothache
<i>Cassia occidentalis</i> L.	Caesalpiniaceae	<i>Chakunda</i>	Root, leaf	Stomach pain, scorpion bite
<i>Cissampelos pareira</i> L.	Menispermaceae	<i>Okanabindi</i>	Root, leaf	Dysentery, stomach pain, poison insects bite, spermatorrhea ,
<i>Citrus limon</i> (L.) Burm.f.	Rutaceae	<i>Lembu</i>	Fruit	Diarrhoea
<i>Clausena excavata</i> Burm.f.	Rutaceae	<i>Agnijhal</i>	Root	Loss of appetite
<i>Coccinia grandis</i> (L.) Voigt.	Cucurbitaceae	<i>Kunduri</i>	Fruit	Stomach pain of children, filarial swelling
<i>Cocculus hirsutus</i> (L.) Diels	Menispermaceae	<i>Dahadahia</i>	Leaf, root	Spermatorrhea & leucorrhoea, stomach pain
<i>Coleus amboinicus</i> Lour.	Lamiaceae	<i>Rukmani hatapochhu</i>	Leaf	Indigestion, loss of appetite, cough and cold
<i>Curcuma longa</i> L.	Zingiberaceae	<i>Haladi</i>	Root	Nasal bleeding, skin diseases
<i>Cuscuta reflexa</i> Roxb.	Convolvulaceae	<i>Nirmuli</i>	Stem	Fever, malaria
<i>Cymbopogon flexuosus</i> (Nees ex Steud.) Wats.	Poaceae	<i>Dhanatwari</i>	Leaf	Cough and cold
<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	<i>Dubaghasa</i>	Leaf	Vomiting
<i>Cyperus rotundus</i> (L.) Pers.	Poaceae	<i>Mutha</i>	Root	Malaria, stomach pain
<i>Datura metel</i> L.	Solanaceae	<i>Dhutura</i>	Leaf	Ear pain, hair loss
<i>Dioscorea wallichii</i> Hook. f.	Dioscoreaceae	<i>Pita alu</i>	Root	Stomach pain
<i>Eclipta alba</i> (L.) Hassak.	Asteraceae	<i>Bhurusunga</i>	Leaf	Snakebite, malarial fever
<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	<i>Anla</i>	Fruit, juice	Scanty micturation, eczema, rheumatism

Contd.

Table 1—Ethnomedicinal uses among the villages in district Mayurbhanj—Contd.

Plant name	Family	Local names	Parts used	Ailments
<i>Euphorbia antiquorum</i> L.	Euphorbiaceae	<i>Mansa siju</i>	Whole plant	Cough & cold
<i>Euphorbia hirta</i> L.	Euphorbiaceae	<i>Dudhi</i>	Whole plant, root	Waist pain, stomach Pain
<i>Ficus racemosa</i> L.	Moraceae	<i>Dimiri</i>	Fruit	Headache
<i>Ficus religiosa</i> L.	Moraceae	<i>Aswashtha</i>	Bark	Vomiting
<i>Glycyrrhiza glabra</i> L.	Fabaceae	<i>Jasti Madhu</i>	Bark	Diarrhoea
<i>Hemidesmus indicus</i> (L.) R.Br.	Asclepiadaceae	<i>Dudhilata</i>	Root	Wound
<i>Holarrhena pubescens</i> Wall. ex G. Don	Apocynaceae	<i>Kuduchi,</i>	Bark, root, seed	Blood dysentery, stomach pain
<i>Hygrophila auriculata</i> (Schum.) Heine	Acanthaceae	<i>Koilirekha</i>	Leaf	Cough
<i>Laportea interrupta</i> (L.) Chew	Urticaceae	<i>Bichhuati</i>	Fruit	Headache
<i>Lawsonia inermis</i> L.	Lythraceae	<i>Manjuati</i>	Bark, leaf, root	Mouth ulcer, cold fever, jaundice
<i>Litsea</i> sp	Lauraceae	<i>Paja</i>	Bark	Wound
<i>Mangifera indica</i> L.	Anacardiaceae	<i>Amba</i>	Tender leaves, bark, gum	Vomiting, diarrhoea, stomach pain, crack feet
<i>Mimusops elengi</i> L.	Sapotaceae	<i>Baula</i>	Fruit	Loose teeth
<i>Momordica dioica</i> Roxb. ex Willd.	Cucurbitaceae	<i>Kankada</i>	Root	Spermatorrhoea, leucorrhoea
<i>Nicotiana tabacum</i> L.	Solanaceae	<i>Dhuan patra</i>	Leaf midrib	Diarrhoea
<i>Nyctanthes arbor-tritis</i> L.	Oleaceae	<i>Gangasiuli</i>	Leaf	Dysentery, malaria
<i>Ocimum sanctum</i> L.	Lamiaceae	<i>Tulasi</i>	Leaf	Diarrhoea, malaria, indigestion and loss of appetite
<i>Oxalis corniculata</i> L.	Oxalidaceae	<i>Amliti</i>	Leaf	Cough and cold
<i>Paediria foetida</i> L.	Rubiaceae	<i>Gandhalis</i>	Leaf, root	Joints pain, body ache, indigestion
<i>Phyllanthus fraternus</i> Webster	Euphorbiaceae	<i>Badianla</i>	Whole plant	Jaundice
<i>Piper betel</i> L.	Piperaceae	<i>Pana</i>	Leaf	Headache
<i>Piper nigrum</i> L.	Piperaceae	<i>Kalamorich</i>	Seed, fruit	Indigestion, loss of appetite, waist pain, cough & cold, diarrhoea
<i>Plumbago zeylanica</i> L.	Plumbaginaceae	<i>Doodhbachra</i>	Root	Diarrhoea
<i>Plumeria rubra</i> L.	Apocynaceae	<i>Kathachampa</i>	Juice	Finger nail pain
<i>Punica granatum</i> L.	Punicaceae	<i>Dalimba</i>	Flower, leaf, fruit	Nasal bleeding, diarrhoea
<i>Psidium guajava</i> L.	Myrtaceae	<i>Pijuli</i>	Leaf, fruit	Diarrhoea
<i>Pterocarpus marsupium</i> Roxb.	Fabaceae	<i>Piasala</i>	Bark	Dysentery
<i>Ricinus communis</i> L.	Euphorbiaceae	<i>Joda</i>	Root, oil	Rheumatism, burn and wound
<i>Saccharum officinarum</i> L.	Poaceae	<i>Akhu</i>	Juice	Scanty micturation
<i>Sesbania grandiflora</i> (L.) Poir	Fabaceae	<i>Agasti</i>	Leaf	Skin lice
<i>Smilax zeylanica</i> L.	Liliaceae	<i>Ramadantuni</i>	Root	Spermatorrhoea, leucorrhoea
<i>Solanum xanthocarpum</i> Schrad. & Wendl.	Solanaceae	<i>Bhegibaigan</i>	Leaf, Fruit	Fever, cough
<i>Spondias pinnata</i> (L.f.) Kurz	Anacardiaceae	<i>Ambada</i>	Bark	Diarrhoea
<i>Tamarindus indica</i> L.	Caesalpiniaceae	<i>Tentuli</i>	Bark	Diarrhoea
<i>Terminalia arjuna</i> (Roxb. ex DC.) W. & A.	Combretaceae	<i>Arjuna</i>	Bark	Sprain, dysentery, constipation
<i>Terminalia chebula</i> (L.) Retz.	Combretaceae	<i>Kasaphala / Harida</i>	Fruit, bark	Stomach pain, cuts, diarrhoea
<i>Tinospora cordifolia</i> (Willd.) Hook.f & Thoms.	Menispermaceae	<i>Guluchi</i>	Stem, leaf, bark	Malaria, vomiting, cough

Contd.

Table 1—Ethnomedicinal uses among the villages in district Mayurbhanj—Contd.

Plant name	Family	Local names	Parts used	Ailments
<i>Tridax procumbens</i> L.	Asteraceae	<i>Bishalyakarani</i>	Leaf, juice	Cuts, burns, wounds
<i>Vanda tessellata</i> (Roxb.) Hook ex G.	Orchidaceae	<i>Rasna</i>	Leaf	Ear pain
<i>Don</i>				
<i>Vitex negundo</i> L.	Verbenaceae	<i>Begunia</i>	Leaf	Body pain, cold fever, waist pain
<i>Withania somnifera</i> (L.) Dunal	Solanaceae	<i>Ashwagandha</i>	Root	Piles, cough and fever

herbarium, Department of Wildlife and Conservation Biology, North Orissa University, Takatpur, Baripada, Orissa. In the investigation, 77 plant species represented by 73 genera and 41 families were found to be used by the local people in traditional healthcare system (Table 1). The plants reported by the respondents were used to cure a number of diseases. From the study it was seen that the practitioners are giving more herbal medicines for the treatment of common diseases like diarrhoea, stomach pain, malaria, cough and cold and skin diseases. Non-availability of the modern healthcare facilities must have been a deciding factor to depend upon the traditional medicare practices<sup>13,14</sup>. For the effective treatment of different diseases different parts of plants such as roots/tubers, stem, bark, leaves, flowers and fruits were used. Leaves of 35 plant species, roots of 22 plant species, fruits and barks of 15 plant species, whole plant of 10 species and seeds of 4 plant species were used to cure different ailments. Among them, 16 are tree species, 12 are shrubs and 49 herb species. All the plants are used in the treatment of 44 different diseases.

Out of 77 plant species, 44 plants were used to cure two or more than diseases. *Adhatoda vasica* Nees locally called *Basanga*, was found to be used against 6 diseases, constipation, cold fever, cough & cold, diarrhoea, malaria and rheumatism. *Piper nigrum* L. (*Kalamorich*) was reported to cure 5 diseases, indigestion, loss of appetite, waist pain, cough & cold and diarrhoea. Since, there are reports of only 69 plants species used by the people of district Mayurbhanj, the paper reports 8 new plant species used for healthcare (Table 2). It was found that plants used in herbal preparation are mostly collected from the wilderness. However, some expert practitioners have their own small herbal garden. The degree of dependence of local *kaviraj* on the forest resources is partial rather than total. Efforts are urgently required for conservation of these plants involving the local

Table 2—Ethnomedicinal uses reported for the first time

Plant name (Family)	Part(s) used
<i>Abutilon indicum</i> (L.) Sweet (Malvaceae)	Root
<i>Allium cepa</i> L. (Liliaceae)	Roots, Tuber
<i>Bryophyllum calycina</i> Salisb. (Crassulaceae)	Leaves
<i>Capsicum frutescens</i> L. (Solanaceae)	Fruits
<i>Coleus amboinicus</i> Lour. (Lamiaceae)	Leaves
<i>Mimusops elengi</i> L. (Sapotaceae)	Fruits
<i>Plumeria rubra</i> L. (Apocynaceae)	Leaves
<i>Vanda tessellata</i> (Roxb.) Hook ex G. Don (Orchidaceae)	Leaves

tribal communities having unique eco-cultural traditions<sup>15-16</sup>.

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