*Ethobotanical Leaflets 10: 129-138. 2006.*

# Plants Used for Gynecological Disorders by Tribals of Mayurbhanj District, Orissa, India

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**Issued 4 June 2006**

**Abstract**

The present paper reports with 24 plant species belonging to 22 families, mostly used for various Gynecological disorders by the tribal people of Mayurbhanj district, Orissa. The tribal population of the region primarily depends upon these plants for curing of various Gynecological disorders. They are enumerated with binomial, family, vernacular name by different tribes, parts used and ethnomedicinal uses by different tribes. Further studies on chemical and pharmacological actions are suggested to validate the claims.

**Keywords:** Phytotherapeutic claims, Ethnomedicine, Tribes, Herbal healer, Gynecological disorders.

## Introduction

Use of plant based drugs and chemicals for curing various ailments and personal adornment is as old as human civilization. In India, the sacred Vedas dating back between 3500 B.C and 800 B.C give many references of medicinal plants. One of the remotest works in traditional herbal medicine is "*Virikshayurveda*", compiled even before the beginning of Christian era and formed the basis of medicinal studies in ancient India. "*Rig Veda*", one of the oldest Indian literatures written around 2000 B.C. mentions the use of Cinnamon (*Cinnamomum verum* Prel.), Ginger (*Zingiber officinale* Rose.), Sandalwood (*Santalum album* L.) etc. not only in religious ceremonies but also in medical preparation (Bentley and Trimen, 1980). Plants and plant-based medicaments are the basis of many of the modern pharmaceuticals we used today for our various ailments (Abraham, 1981; Atal & Kapur, 1982). At one time, nearly all medicines were derived from biological resources. Even today they remain vital and as much as 67%-70% of modern medicines are derived from natural products (State of the Environment Report, 2001). Nearly 80% of the world populations rely on traditional medicines for primary health care, most of which involve the use of plant extracts (Sandhya et al., 2006). In India, almost 95% of the prescriptions are plant-based in the traditional systems of Unani, Ayurveda, Homoeopathy and Siddha (Satyavati et al., 1987).

Ancient ethnic communities around the world had learnt to utilize their neighborhood herbal flora for various curative as well as offensive purposes (Subramoniam and Pushpangadan, 1995). Due to lack of literacy, their knowledge on plants developed often at the cost of their dear life through

centuries old experience could not be perfectly documented and it had rather descended from one generation to another as a domestic cultural heritage. As the ethnic groups migrated from place to place in search of their livelihood, their folklore knowledge also became fragmented and traveled with them often with 'additions and deletions'. Their findings in course of time have become basic leads for chemical, pharmacological, clinical and biochemical investigations, which ultimately gave birth to drug discovery. The present paper is an attempt to collect all the information available on ethno medicinal uses of plants for Gynecological disorder used by different tribes for combating various ailments.

**Study area**

Mayurbhanj District is located in the northern part of Orissa. The district is located between $21^0$16' and $22^0$34' North longitudes and between $85^0$ 40' and $87^0$ 11' East longitudes. The district is bounded by the Singhbhum district of Jharkhand and Midanapore district of West Bengal in the north; Balasore and Keonjhar in the south; Midanapore and Balasore district in the east; Keonjhar and Singhbhum in the west. Mayurbhanj was an important kingdom of Orissa even after independence. This kingdom got merged with Orissa and got the recognition of a district on 1st January 1949. This is the largest district of Orissa in terms of area and area under forest. Mayurbhanj is a heavenly place that includes the river Budhabalanga, the waterfall Barehipani, Meghasana mountain, and the bioreserve Similipal. It is also recognized for its irrigation and power project, namely Sunei and Kaladam. Mayurbhanj district is famous for horn works, stone & clay works, Tussar silk, jute mills and spinning mills. The total area of the district is 10,418.00 sq km; out of which 4392.13 sq. km is under forest, or about 50% of the area. The predominant species in the forest is Sal (*Shorea robusta* Gaertn.f ), where as the Similipal range shows diversified vegetation pattern i.e. from tropical deciduous to a virgin semi-ever green forest which express the climatic climax type of vegetation. (Braham et al, 1990). Agriculture is the main occupation of tribal people but forest and its products plays important role to meet their multifarious requirement such as-food, medicine, fibres etc (Bal, 1942; Saxena et al, 1989). For food they are mainly dependent on agriculture but they also collect roots, tubers, leaves, flowers, fruits as supplementary food. The total population of the district is 2, 221, 782, out of which scheduled caste is 1, 70,853 and scheduled tribe is 12, 58,495. (Accordingto 2001 census ). The physiography of the district gives a perfect platform for the tribals in sustaining their ethno-cultural identity. Tribal people mostly inhabit the deep forest area, and depend on the forest resources for their livelihood. The district has been the homeland of various tribal communities with their sub-tribes, who are found in different level of development depending upon their assimilation with the so called mainstream or modern communities. There are 46 -tribes inhabited in this district which is 64.86% of the total population of the district (Tiwari et al,1999,) The dominated tribes of the district are Santal, Munda, Kolha, Bhumija, Bathudi, Lodha, Gond, Kondha, Saunti, etc. Although the floristic and ethno medicinal investigation have been done by various workers like Ambasta, 1986; Jain, 19791; Hajra, 1981; Majumdar, 1971, the information on plants used for Gynecological disorders is meager in these publications. The present work concentrates on the alternative medicines used by the tribals and local folks for various Gynecological disorders. The soil is mostly red throughout the district and in the east there is a small patch of black cotton soil. The

important minerals available in huge quantity in the district are Iron-ore, Manganese and Chromites. The temperature ranges from 20.8 ° C during winter and about 32.5 ° C - 40° C in summer, where as the mean annual rainfall is 1648.2 mms. The bulk of the rain is in the month of August to October, while March to May are the driest months.

**Materials and Methodology**

A literature survey was carried out on the study area before the field work started (Das and Misra, 1987; Das and Misra, 1988a; Das and Misra, 1988b, Hemadri and Rao, 1989; Hemadri, 1991; Dash, 1994; Das and Misra, 2000). Most of the works were based on taxonomic surveys. Very few works were in the field of ethnobotanical studies. The present work is the outcome of extensive survey of different tribal villages of Mayurbhanj district undertaken during 2004-2005 to collect information on the medicinal uses of different plant species for Gynecological disorders. During field work, interviews were conducted with local knowledgeable villagers, the herbal healer called '*Vaidyas*' (local physicians in Indian System of Medicine), old woman and medicinal plant vendors. Plant specimens were collected and identified with local flora (Saxena and Brahmam, 1996). The Gyonocological medicinal value of each plant was enumerated in the following pattern: a) Binomial; b) Family; c) Collection number; d) Vernacular name used by different tribes ( O- Oriya,Sa-santal, Su-Saunti, Ba-Bathudi, Bh-Bhumija, Mu-Munda, Lo-Lodha, K-Kondha, Ko-Kolha, G-Gond; e) Parts used; and f) Ethnomedicinal uses by different tribes in different localities.

**Results and Discussion**

The data on medicinal plants used for Gynecological disorders was collected from the local inhabitants in the Mayurbhanj district, and analyzed. The enumeration and utilization of these plants are described below.

**Table 1**: **Enumeration and utilization of plants**

1. ***Abrus precatorius*** L.

**Family with Collection Number – FABACEAE**/225

**Vernacular Name** - Kaicho,Kaincho,Lalgunj,Runjo (O,Ba,Bh,Su);Gujjbai,Arakeej,(Sa); Karjani (K); Kouch, Ked, Ara-kuch (Lo).

**Parts Used** - White seeds

**Ethnomedicinal Uses –** For antifertility: White seeds kept in unboiled cow milk for the period of over night and the seed is given to woman in the morning at the end of menstruation cycle for preventing conception.Sarat (Sa);Raikalia (Ba); Gandidhar (Mu).

**2. Annona squamosa** L.

**Family with Collection Number** - (**ANNONACEAE**)/222

**Vernacular Name** - Maghua,Ata, (O,Ba,Bh); Boror - daru (Lo); Newa,Mondal (Sa); Nenwa, Mandal (Ko).

**Parts Used** - Dried root powder

**Ethnomedicinal Uses** - For abortion of pregnancy: Dried root powder (5gm) is taken once in

morning for five days by women for abortion of 3 to 4 months of pregnancy. Taldiha (K); Debakunda(Ba,Bh); Kundabai (Mu); Marsinga (Ko).

**3. Annona reticulata** L.

**Family with Collection Number** - (**ANNONACEAE)** /320

**Vernacular Name-** Rajamaghua,Ramphala,Barhial,(O,Ba,Bh);Naga-newa, Ramphal(Lo); Mandargam,Gom (Sa).

**Parts Used -** Seed powder

**Ethnomedicinal Uses** - For spoiling of pregnancy: A mixture of seed powder with black pepper (*Piper nigrum* ) (about 3gm) is prescribed for spoiling of pregnancy up to 3-4 months duration.Badajhada (Ko,Ba,Go); Hadarachua (Sa,Bh), Handiphuta. (Mu,K,Ko).

**4. Argemone mexicana L**.

**Family with Collection Number - (PAPAVERACEAE**)/208

**Vernacular Name** - Agara, Agora, Kantakusum, Deng bejari, Sarpuni, Udasmari (O, Ba); Nya-dudid (Lo); Bakula Janum (Mu); Sundi satkeu, (Sa).

**Parts Used: Leaf.**

**Ethnomedicinal Uses** - For Leucoderma: Leaf juice is taken by women twice a day for fifteen days as a cure for leucoderma. Sarabasa (Sa); Chhanua(Ba); Kaptipada (Ko).

**5. Boerhavia diffusa** L

**Family with Collection Number** - ( **NYCTAGINACEAE** )/340

**Vernacular Name -** Puruni saga (O,Ba); Punarnava (Mu); Ohoic-araka (Sa).

**Parts used –**Whole plant

**Ethnomedicinal Uses** - For the treatement of Leucorrhoea: Decoction of plant (15ml) is given once a day in the early morning for fifteen days for the treatment of Leucorrhoea and dried plant powder is smoked as cigarette once a day for the treatment of ashma. Uthanisahi (Sa,Ba,Ko); Kantagadi (Ba); Badajhada (Mu,Go); Kaliasahi (Ko,K).

**6. Borassus flabellifer** L.

**Family with Collection Number** - (**ARECACEAE**)/260

**Vernacular Name -** Tala, Tal, Talo, (O,Ba,Su,Bh); Tar (Sa); Rola-daru (Lo).

**Parts used -** Male infloresence

**Ethnomedicinal Uses** - For contraceptive:Ash (after burning of male infloresence) with powder of black peppers (*Piper longum*) & cow milk in the ratio of 2:1:1,is prescribed to women as contraceptive. Kotoria ( Lo); Sarat (Ba); Gandidhar (Mu).

**7. Borreria articularis (**L.f.)Wlliams.

**Family with Collection Number** - (**RUBIACEAE**)/365

**Vernacular Name -**Solaganthi, Sanaghar podia, Jibkata (O,Ba,su); Pitu arak (Sa).

**Parts used -** Whole plant and Root

**Ethnomedicinal Uses** - For menstrual disorder**:** For the regulation of excessive menstrual flow root paste (15gm) with hot water is taken by women in empty stomach just starting of their periods. Uthanisahi (Sa,Ba,Ko); Kantagadi (Ba); Badajhada (Mu,Go); Kaliasahi (Ko,K).

**8. Bombax ceiba** L.

**Family with Collection Number** - (**BOMBACACEAE**)/.231

**Vernacular Name -** Semulo, Simili ,Simal (O,Ba,Bh); Simal-dare,Daldara (Sa,Ko); Edel -daru (Lo).

**Parts used -** Fleshy roots

**Ethnomedicinal Uses** - For menstrual disorders**:** Pasty mass of fleshy roots of young plant (1 gm) mixed with unboiled cow milk (2ml) is taken once a day in the early morning for a week by women to regulate irregular menstruation. Taldiha (K); Debakunda (Ba,Bh); Kundabai (Mu); Marsinga (Ko).

**9. Calotropis gigantean** R.Br.

**Family with Collection Number** - ( **ASCLEPIADACEAE** )/335

**Vernacular Name -** Arakha (O,Ba); Patladhudha (Mu,Ko); Parkha (Sa.).

**Parts used -** Root

**Ethnomedicinal Uses** - For Leucorrhoea: Decoction of root (3ml) with Paste of **Piper longum** (1gm) is given to women in empty stomach continuously ten days for the treatment of Leucorrhoea. Podadiha (Ba); Kotoria (Sa,Ko).

**10. Crateva nurvala** Buch.-Ham.

**Family with Collection Number** - ( **CAPPARACEAE)/344**

**Vernacular Name -** Barun,Varuna, Pitmaiel (O,Ba); Banena-ba (Sa); Barun daru (Lo).

**Parts used -** Stem bark

**Ethnomedicinal Uses** - For contraceptive:Fresh juice of stem bark (3ml) mixed with seed powder of **Piper nigrum** (1gm) is taken by women in the seventh days of menstrual cycle as a contraceptive. Monobhanga (Mu); Nuasahi (Ba).

**11. Dillenia aurea** Sm.

**Family with Collection Number** - ( **DILLENIACEAE**) /136.

**Vernacular Name** - Rai,(O,Ba); Rai-daru,(Lo); Korkotta (Sa,Ko).

**Parts Used -Stem bark**

**Ethnomedicinal Uses** - Gaining of vitality after child birth: Extract of stem bark (10ml) istaken once a day for two week in empty stomach for restoration of health after child birth. Dangarachua (Sa); Nuasahi (Ba); Gandidhar ( Mu).

**12. Dillenia pentagyna** Roxb.

**Family with Collection Number** - ( **DILLENIACEAE**) /231

**Vernacular Name** - Rai(O,Ko,Bh); Aghai (Mu); Sahar, Korkota (Mu).

**Parts Used -** Stem bark

**Ethnomedicinal Uses** - For easy delivery: Midwives (Dhai) of ethnic group uses tree gum for easy delivery purpose. Handiphuta (Sa); Uthanisahi (Ba); Nandurusahi (Ko).

**13. Ficus hispida** L.f. Suupl.

**Family with Collection Number** - ( **MORACEAE).**/366.

**Vernacular Name -** Panidimiri,Demburu,Kharsen,Dimiri,Baidimiri, (O,Ba);Duma (Sa); Kosta (Lo).

**Parts Used** - Fruit

**Ethnomedicinal Uses** - For Milk secretion: Boiled green fruits given to mother as a glactogogue for better milk. Hadarachua (Sa); Kantagadi (Ba); Badajhada (Mu).

**14. Heliotropium indicum L.**

**Family with Collection Number** - **(BORAGINACEAE**)./250

**Vernacular Name** - Hati-sura (Lo); Hatisundha (O,Ba,Su,Go).

**Parts Used** - Root

**Ethnomedicinal Uses** - For anemia: Decoction of root (10ml) with honey (2ml) is taken as vitamin for iron deficiency by woman against anemia during pregnancy period.

Sarabanaghati (Ba ,Su); Sarabasa (Sa); Hadrachua (Ko); Noto (Lo).

**15. Hemidesmus indicus** (L) R. Br.

**Family with Collection Number** - (**ASCLEPIADACE** ). /254

**Vernacular Name** - Anantamul (O,Ba ,Su); Gargeri, Analsing (Sa); Tarjamala (Mu).

**Parts Used** - Root

**Ethnomedicinal Uses** - For leucoderma: Root paste (about 10gm) is taken in empty stomach continuously seven days for the treatment of leucoderma.

Handiphuta, Sagadi (Sa ,Ko); Bhaluhuduca (Mu); Kantagadi (Ba,Su).

**16. Hibiscus rosa-sinensis** L.

**Family with Collection Number** - ( **MALVACEAE**)./346.

**Vernacular Name** - Parijat, Mondaro, Mandar (O,Ba); Jaba-gacha (Lo,Mu,Sa).

**Parts Used** - Stem bark

**Ethnomedicinal Uses** - For Contraceptive: Stem bark paste (15gm) is given to woman continuously five days for causing abortion and mixture of pasty mass of flower buds (3gm) with rust of iron (2gm) and country liquor (2ml) is taken by women at the days of menstruation as a contraceptive. Kotoria ((Lo,Ko); Bhalughudura (Sa,Su); Asanbani (Ba Go).

**17**. ***Nelumbo nucifera*** Gaertn.

**Family with Collection Number** - (**NYMPHAECEAE**)/204.

**Vernacular Name** - Padam, Ranga padam, Dhala padam, Kani (O,Ba); Pundi - Salakid, Kakanada - Salukid (Lo).

**Parts Used** - Rhizome.

**Ethnomedicinal Uses** - For white discharge: Decoction of rhizomes of white flowered plant (pundi-salukid,)about 15 ml is taken by women in empty stomach for fifteen days, as a cure for white discharge. Sarabasa (Sa); Gohira (Ba); Mahulbani (Mu).

**18. Oroxylum indicum** (L.) Vent**.**

**Family with Collection Number - ( BIGNONIACEAE**)./322.

**Vernacular Name** - Phonphana,Phampan (O,Ba,Su); Rengebanam, Samahauk (Lo); Bans-hatak pareri (Sa).

**Parts Used** - Stem bark

**Ethnomedicinal Uses** - For Menorrhagia: Decoction of stem bark (2ml) with common salt (1gm) is prescribed twice a day for one month against menorrhagia of women.

Noto (Lo,Ko) Kaptipada (Sa); Jambabni (Ba,Bh), Gandidhar (Mu ).

**19. Phyla nodiflora** (L.) Greene.

**Family with Collection Number** - (**VERBENACEAE**). /318

**Vernacular Name** - Gosingi,(O,Ba,Su);Jalapipla (Sa).

**Parts Used** - Root

**Ethnomedicinal Uses** - For promoting Sexual desire**:** Decoction of root (3ml) with unboiled egg (2mg) is given to women to promote sexual desire. Gadiapala (Sa); Ashanabani (Ba,Su); Kaliasahi (Ko).

**20. Strychnos nux-vomica L**.Sp.

**Family with Collection Number** - (**LOGANIACEAE** )./299

**Vernacular Name** - Kuchila (O,Ba,Su, Go); Gorumar (Sa).

**Parts Used** - Stem

**Ethnomedicinal Uses** - For Leucoderma: Pasty mass of stem (3gm) with Kusum (*schleihcera oleosa)* Seed oil (1ml) is prescribed twice a day after food for ten days contiously for the treatment of Leucoderma. Hadrachua (Sa); Nuasahi (Ba); Kantagadi (Su); Patharakhani (Ko).

**21. Terminalia bellirica** (Gaertn.) Roxb.

**Family with Collection Number** -(**COMBRETACEAE**). /303.

**Vernacular Name** - Bhadara, Bahada (O,Ba); Behra (Sa); Lupung -daru (Lo).

**Parts Used** - Stem bark

**Ethnomedicinal Uses** - For Leucoderma: Stem bark paste (2gm)is prescribed to women with hot water twice a day after food continiously ten days as a cure for leucoderma. Kotoria (Lo,Ko); Sarabasa (Sa); Gandidhar (Mu);Thakurmunda (Go).

**22. Tephrosia purpurea** (L.) Pers.

**Family Collection Numbe** - (**FABACEAE**). /304

**Vernacular Name** - Bano-kuthi,Gileri, Kulathio, Ban-nilo, Mohisia-Kotathiya, Pokha, Soropokha, Kulathia (O,Ba,Su); Nol-gach, Bir-chakunda (Lo); Anuraida (Sa).

**Parts Used** - Leaf

**Ethnomedicinal Uses** - For post natal complications: Decoction of leaf (5ml) mixed with honey (2ml) given to women twice a day continuously for one month against post natal complications. Podadiha (Ba,Su); Monobhanga (Go); Gandidhar (Mu).

**23. Woodfordia fruticosa** (L.) Kurz, J.Asiat.

**Family with Collection Number** - ( **LYTHRACEAE**)./315

**Vernacular Name** - Dhai, Dhatuki, Dhatki, Dhatuk, Jaliko, Harwari, Dhia, Dhataki (O,Ba,Su,Go); Icha,Ichak,Patakalu; (Sa); Dhawai-ba,Ichak-ba.(Lo).

**Parts Used** - Dried flowers

**Ethnomedicinal Uses** - For leucorrhoea: Dried flower powder(5gm) with honey(1ml) is given to women once a day continuously one month for the treatment of leucorrhoea. Hadarachua (Sa); Nuasahi (Ba); Nandurusahi (Mu); Kaliasahi (Ko).

**24. Zizyphus mauritiana Lam**.

**Family with Collection Number** - (**RHAMNACEAE**)./211

**Vernacular Name** - Borokoli, Bodokoli, Bodori,Boyer, Barakuli (O,Ba,Su); Janumjan (Ko), Dodari, Kanta-pitali, Serka (Lo); Barkoir, Jam-janum (Sa).

**Parts Used** - Stem bark

**Ethnomedicinal Uses** - For relieve of abdominal pain: Stem bark paste is taken twice a day after food as a cure for abdominal pain during pregnancy. Karanjia (Sa); Kantagadi (Ba); Kuliana (Ko).

The investigations revealed the medicinal plants of 24 species of 22 genera belonging to 22 families. Among all the species, trees are found to be more (13) followed by herbs (3), shrubs (5) climber (2) and aquatic (1). The use of plant resources as remedies is probably an ancient as man himself. The aforesaid uses are the ones practiced in day-to-day life of tribals living in forests. The use of traditional medicine for Gynecological disorders is widespread in this region with higher percentage of the population relying on it. This is because of lack of modern medical facilities available in this region and the expensive medicare system which these tribal people are unable to afford.

**Conclusion**

Traditional healthcare practices of indigenous people pertaining to human health are termed as ethnomedicine. Ethnomedicine is the mother of all other systems of medicine. Recently the importance of these traditional medicines has been realized worldwide as some of them proved to be very effective (Marini-Bettolo, 1980) and some other prescriptions of these traditional healers may be of benefit to human kind when thorough scientific analysis is conducted into their properties. The study revealed that whatever knowledge on plants exists with the people of Mayurbhanj district, they

are on fast declining because lack of interest of local youth to learn the traditional knowledge from the old herbal healer. The highly interesting findings for Gynecological disorder require further research, while the efficacy of the various indigenous practices will need to be subjected to pharmacological validation. Therefore, greater efforts are required to document traditional knowledge of the local people so as to prepare a comprehensive account of it, which will open new vistas in plant research which is much more safe, less costly and Eco-friendly.

**Acknowledgements**

The author thankful to Forest officer and the local villagers of Mayurbhanj district for providing logistic support during the field work. The help received from Dr N.K.Dhal and N.C.Rout (Taxonomist) Herbarium section of Regional Research Laboratory, Bhubaneswar are thankfully acknowledged.

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