

## **Birhor and their Traditional Botanical knowledge**

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### **Abstract**

*According to the World Health Organization about 65 percent of Indians, especially those from rural areas, are dependent on traditional medicine for treating diseases. However, large-scale habitat destruction is severely reducing medicinal plant availability. Birhors— the endangered tribe are curators of vast traditional knowledge and their acquaintances with respect of plants are significant. Their knowledge about plants are not only limited to their collection and use but they know about their specific characteristics including toxicity, palatability, medicinal use, their spatial distribution seasonal availability as well as ecological relationship. Besides these they have vast knowledge of some of the under exploited protein rich plants and their uses as supplementary food. But their knowledge is not documented yet. Verbally they used to pass their knowledge to their next generations. In this paper, attempt has been made to preserve their traditional botanical knowledge. In view of the short life expectancy and rapidly diminishing populations of Birhors earliest documentation of their knowledge is vital; needs to be authenticated and bring it into common practice. This can be open a new panorama in plant research as well herbal medicines, which is much safer, cheaper and eco-friendly.*

**Key Words:** *Birhor, Traditional Knowledge, Botanical Knowledge, Herbs and Medicines*

### **Introduction**

Birhor ('Bir' means Forest and 'Hor' means Man or the man of Forest) a forest tribe basically nomadic, hunters and food collectors and their day to day needs were totally depends upon the forest including Food, Medicines, Shelters and other household purposes. They used plant's roots, barks, fruits, seeds and flowers as medicines are typical and relatively new and their further scientific conformation is essential. The knowledge of Birhor's of the medicinal value of the plants attained significance in recent times due to establishment of several therapeutic values of these products as well as using these products in modern medicine

### **Study and Findings**

Under the study on the ethno medicinal plants of was carried out through questionnaire, personal interviews and conversation from several Birhors in the hilly terrain of Jharkhand, Ajodhya hill and its' surrounding birhor tribal villages in West Bengal; found that the major plant part used by birhor was

constituted by roots followed by leaves and stem. Gastrointestinal ailments, Fever, cough and cold related ailments, skin diseases and sexually transmitted diseases were the four major disorders treated by the use of medicinal plants in this area. More than ten plants were found to be useful in the treatment of gastrointestinal ailments, fever, cough and cold related ailments, skin diseases and sexually transmitted diseases respectively.

### **Ethnobotanical uses by Birhor tribe's --in Jharkhand,**

#### **Custard apple or Sharifa (Annonosqomoso)**

Parts Used – Fruits

Medicinal Uses – As contraceptive: 2 to 5 unripe fruit taken raw with warm water act as contraceptive.

#### **Semal (Bombax Ceiba)**

Parts Used – Flower

Medicinal Uses – As contraceptive: Flower is boiled with black pepper and the mixture are orally taken to prevent pregnancy.

#### **Palash (Buteo monospermo)**

Parts Used – Fruit

Medicinal Uses – As contraceptive : Petals are boiled in cow milk for one hour. The mixture taken thrice daily menstrual cycle acts as contraceptive.

#### **Pomegranate or Anar (Punicagmnotum Punicaceae)**

Parts Used – fruit

Medicinal Uses – As anti fertility agent: Used as anti fertility agent when it after boiled with water

#### **Carrot or Gaajar (Daucus carota)**

Parts Used – Fruit

Medicinal Uses – As anti fertility agent : Tribal take its decoction (boiled with water) to prevent pregnancy.

#### **Papaya or Papita (Carica Papaya)**

Parts Used – Bark

Medicinal Uses – As anti fertility agent : Peel of the bark of male plant root and sizeable fruit Xylophia aethiopia, little oil of Elais guineensis and cook with cat fish and taken orally to prevent pregnancy.

*While to restore fertility, carry out the above but with female plant.*

**Neem (Azadirachta Indica)**

Parts Used – Bark

Medicinal Uses – As anti fertility agent : Leaves, fruits, bark and other parts are used as contraceptive.

**Gunja (Abrus precatorius)**

Parts Used – fruit

Medicinal Uses – As anti fertility agent : Wash whole and boil in water obtained from fermented milled fruits of Zeamys. Take in small glass or cups three times daily before intercourse works as contraceptive.

**Rati, Gunja (Abrus precatorius)**

Parts Used - seeds

Medicinal Uses – For anti-fertility: 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.

**Maghua, Ata, Boror (Annona squamosa)**

Parts Used - Dried root powder

Medicinal 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.

**Rajamaghua, Ramphala, Barhial (Annona reticulata)**

Parts Used - Seed powder

Medicinal 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.

**Agara, Agora, Kantakusum (Argemone mexicana)**

Parts Used: Leaf.

Medicinal Uses - For Leucoderma: Leaf juice is taken by women twice a day for fifteen days as a cure for leucoderma.

**Puruni saga (Boerhavia diffusa)**

Parts used –Whole plant

Medicinal Uses - For the treatment 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.

**Tala, (Borassus flabellifer)**

Parts used - Male inflorescence

Medicinal Uses - For contraceptive: Ash (after burning of male inflorescence) with powder of black peppers (Piper longum) & cow milk in the ratio of 2:1:1, is prescribed to women as contraceptive.

**Solaganthi, Sanaghar podia (*Borreria articularis*)**

Parts used - Whole plant and Root

Medicinal 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.

**Semulo, Simili (*Bombax ceiba*)**

Parts used - Fleshy roots

Medicinal 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.

**Arakha, Patladhudha, Parkha (*Calotropis gigantean*)**

Parts used - Root

Medicinal Uses - For Leucorrhoea: Decoction of root (3ml) with Paste of Piper longum (1 gm) is given to women in empty stomach continuously ten days for the treatment of Leucorrhoea.

**Barun, Varuna, Pitmaiel (*Crateva nurvala*)**

Parts used - Stem bark

Medicinal 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.

**Rai, Rai-daru (*Dillenia aurea*)**

Parts Used - Stem bark

Medicinal Uses - Gaining of vitality after child birth: Extract of stem bark (10ml) is taken once a day for two week in empty stomach for restoration of health after child birth.

**Rai, Aghai (*Dillenia pentagyna*)**

Parts Used - Stem bark

Medicinal Uses - For easy delivery: Midwives (Dhai) of ethnic group uses tree gum for easy delivery purpose.

**Panidimiri, Demburu, Kharsen (*Ficus hispida*)**

Parts Used - Fruit

Medicinal Uses - For Milk secretion: Boiled green fruits given to mother as a galactagogue for better milk.

**Hati-sura (*Heliotropium indicum*)**

Parts Used - Root

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

**Anantamul (*Hemidesmus indicus*)**

Parts Used - Root

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

**Parijat, Mondaro, Mandar (*Hibiscus rosa-sinensis*)**

Parts Used - Stem bark

Medicinal 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.

**Padam, Ranga padam (*Nelumbo nucifera*)**

Parts Used - Rhizome.

Medicinal 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.

**Phonphana, Phampan (*Oroxylum indicum*)**

Parts Used - Stem bark

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

**Gosingi, Jalapipla (*Phyllanthus nodiflora*)**

Parts Used - Root

Medicinal Uses - For promoting Sexual desire: Decoction of root (3ml) with unboiled egg (2mg) is given to women to promote sexual desire.

**Kuchila, Gorumar (*Strychnos nux-vomica*)**

Parts Used - Stem

Medicinal Uses - For Leucoderma: Pasty mass of stem (3gm) with Kusum (*Schleichera oleosa*) Seed oil (1ml) is prescribed twice a day after food for ten days continuously for the treatment of Leucoderma.

**Bhadara, Bahada, Behra (*Terminalia bellirica*)**

Parts Used - Stem bark

Medicinal Uses - For Leucoderma: Stem bark paste (2gm) is prescribed to women with hot water twice a day after food continuously ten days as a cure for leucoderma.

**Bano-kuthi, Gileri, Kulathio, (*Tephrosia purpurea*)**

Parts Used - Leaf

Medicinal 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.

**Dhai, Dhatuki (Woodfordia fruticosa)**

Parts Used - Dried flowers

Medicinal 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.

**Borokoli, Bodokoli (Zizyphus mauritiana)**

Parts Used - Stem bark

Medicinal Uses - For relieve of abdominal pain: Stem bark paste is taken twice a day after food as a cure for abdominal pain during pregnancy.

**Chitwair** – In ordinary fever root of Chitwair is ground with water and the decoction is administrated orally. For curing stomach pain the root of the chitwair is boiled in one liter of water till its volume is reduced to half and the decoction is orally administrated. It also stimulated digestion and promote appetite.

**Satawar** – In heat fever root of satawar and root of patri are grounded with water and administrated orally. Birhors' also used it in Uraemia (blood in urine).

**Parhi** – In malaria fever root is ground with water and the decoction is administrated orally. In muscular and stomach pain root is grounded with water an past is applied

**Dudhia** – In body ace, fever and blood dysentery the dried root powder is taken with water. Root powder is also useful in removing worms in children. Though, the latex of the herb promotes formation and flow of milk in women.

**Kalmegh** - All parts of the plant above the ground are employed in preparing the medicinal decoction which is used in fever, worms, dysentery and gastritis.

**Somraj** – The seed of Somraj are used as a febrifuge and the leaves as vomitive. It is valuable medicine use ford destroying worm (antihelminthic).

**Koraia** – the pest prepared by the grinding the roots and bark with water which is massage downwards over the affected of swollen parts of the body.

**Brihmi** – Used for curing leprosy. The entire plant parts are boiled in water and the decoction given to the patients.

Besides many more these are few preparations that are commonly prescribed to birhor people by their practitioners. Study found that the traditional medicine practitioners collect plant samples from the forests.

Some of these plants have been reported to be poisonous and they may act as purgative. The pharmacognostic research into these plants is strongly recommended in order to establish their claims.

The use of plant resources as remedies is probably as 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.

The study of modern herbalism (phytotherapy) on contraception and abortion is rapidly evolving throughout the world. The curative parts of a plant are not simply its wood, stem or its leaves but the chemical compounds it produces.

Meanwhile the claims of the traditional medicine practitioners need to be investigated by subjecting these plants to further pharmacognostic screening and government support is strongly solicited.

This ethnobotanical study based on questionnaires, administered on both the practitioners as well as users in tribal localities in the hilly terrains across the Jharkhand, WestBengal, Odisha and Chhatisghar.

During the study several tribal people agreed to provide answer to questions raised in the questionnaire, some of which were answered correctly and multiple answers were given by others.

Some of the questions asked were-sex of traditional medicine practitioners, experience in trade, source of knowledge, age of users or customers, solvent for preparation, plant names used source of plant materials, method of preparation and their application methods.

Though the use of the plant species must be verified by further scientific experimentation and this rich folklore can be utilized in drug discovery and herbal therapy. Therefore, the plants require a thorough investigation of their bioactive compounds for the efficacy reported.

During study it is also evident that a particular medicinal plant used by one group to treat a particular ailment may not be used by another group for the same purpose. These formulations used by the tribals need further clinical trials to test their efficacy and also to develop new drugs based on herbal medicine for effective remedy of different ailments.

## Conclusion

Birhors a primitive tribe, India's poorest people live in the richest mining areas- their conditions continue to be the weakest. Mining has made the government richer but the people of the region poorer. Usually the first targets of land grab, displacement or development in the manse for globalization, urbanization, industrialization and mining tribal people in this country.

The degradation of the forest cover has uprooted the Birhors from their traditional sources of livelihood and brought in instability in their economic activities. They have been continuously moving in and out of their traditional economic activities.

Unless the tribal assert themselves in socio-political life their voice would be crushed. There should be a plan to help the birhor people fight for their livelihood, culture, languages, customs, traditions and values. Now tribal politicians failed to influence the policies that went against the interest of the tribes. Even after enactment of Panchayats (Extension to Scheduled Areas) Act, 1996 the tribes were not getting its benefits due to lack of awareness about the policies and the programmes.

The problems of tribes are manifold. Health is one of the major ones among these. The risk is increasing day-by-day with extensive deforestation, frequent climatic calamities and the change in the traditional economy.

Everyone should take an oath work for bringing unity among different tribal groups and fight for their common goal of protecting their livelihood, culture, traditions, language and values.

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