



*Research Paper*

**TAXONOMICAL STUDIES OF ETHNOMEDICINAL PLANTS OF  
JHARKHAND**

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**Abstract**

The knowledge about the ethnobotanical uses of plants is associated all over the socio - cultural life of the tribals. Though most of the tribal people know about some plants and their uses, all should not be taken as most reliable. There are many possibilities of misidentification of plants due to little knowledge or lack of interest in younger generation, which has been intensified on account of fastly growing modernization in tribal culture and alienation from anything traditional. In the present study, the possibilities of misidentification have been ruled out to a large extent, as various authentic persons have been contacted and maximum plants have been shown to them, along with checking up the botanical names. Though they give different names to the same plants only in a slight change of locality and also their utilization varied. The authentic persons of different areas of Districts of Jharkhand were contacted, namely Sri Sundar Soren, Shri Labeshar Marandi, Smt Baha Muni, Sri Simon Murmu, Smt Manjula Hembrom, Hirva soren, Lobin Murmu, Smt Sugia Soren, Sri Emmannel Tirkey, Sri Biru munda, Smt Emely Tuti, Sri Anil Surin are the main. In the present work the author has given first priority to the field studies of Jamtara and Ranchi district. During field work I went through village to village and gathered many informations from the tribal people. Collected informations from a particular village have been checked thoroughly by proper persons having practical experiences. The tribal people are very much secretive and do not like to divulge any information to the stranger. Key words: Taxonomical Studies, Ethnomedicinal Plants, Jharkhand, Rigveda, Folklore.

**INTRODUCTION**

Our vedic hymns which dates back about 2500 years, contain earliest references of plants used in medicine. Archaeological sculptures of Harappa culture however gives prevedic informations of some plants. It is very difficult to establish identity of these plants due to lack of proper botanical descriptions or preserved specimen of plants

referred in hymns of Rigveda. The knowledge about plants which has come through generations verbally or by folklore, folktale, etc, is the main subject of ethnobotany. The knowledge about the ethnobotanical uses of plants is associated all over the socio - cultural life of the tribals. Though most of the tribal people know about some plants and their uses, all should not be taken as most reliable. There are many possibilities of misidentification of plants due to little knowledge or lack of interest in younger generation, which has been intensified on account of fastly growing modernization in tribal culture and alienation from anything traditional.

#### **MATERIALS AND METHODS:**

The plants, their use as ethnomedicinal system, plant parts used, mode of preparation, locality of use and the particular group of tribals using the medicines were studied. Plant specimens were collected and documented in frequent field visits conducted from 2007-2011. The places of visit were the tribal villages of the Districts of Jharkhand and the adjoining areas. The villages were visited in different seasons (summer, monsoon and winter) to avail most of the plant resources in their flowering conditions. In the actual method of field studies, informants from different tribes who are familiar with the plants and their use by the members of their respective communities were selected by carefully taken interviews. Questions, problems and suggestions were put to them regarding the use of plants and their products in folk medicine and other uses. Mounted herbarium specimens known to grow in this area were placed to them and questions were asked on their usefulness. These were subsequently verified by taking them to field to identify plants on the basis of local tribal names previously noted from them. Local names and the areas were noted. Prior permission was taken from the informants for recording of the information. Photographs were taken of the plants and their uses. Abundant plants were taken to prepare herbarium sheets. The plant materials were preserved in formalin. Flowering twigs were dried, poisoned and placed on herbarium sheets and plant parts used in medicine were preserved in suitable preservatives. The place of collection and field number is mentioned in this thesis. The specimens have been identified with the help of manual floras and matching them with authentic herbarium sheets. The Botanical names are in accordance with the latest edition of International Code of Botanical Nomenclature. However the references of the plants in the Botany of Bihar and Orissa by Haines have also been mentioned. Specimens were dissected and proper taxonomic descriptions have been made. Photographs of materials have been taken from the fields, villages, markets and also during actual uses. In this study emphasis has been given on the medicinal uses of plants by the primitive societies. Sacred values of the plants for the tribal societies have also been mentioned

#### **RESULTS AND DISCUSSION:**

During field work the above factors were considered and information gathered from different areas has been thoroughly checked and verifying it from proper person having practical experience. The information about medicinal use of plants has been repeatedly checked in several villages by the author himself. The voucher number and locality has

been cited against each species. All the collected and identified plants have been detailed here:

## MONOCOTYLEDONS

**1. Asparagus racemosus, Wild; Haines 1137.:** Climbing shrubs, perennial, much branched, with fasciculated root. Spines 2-5mm long, erect, cladodes 2-8, together, narrow, linear, 0.7- 2 cm long. Flowers yellowish white in colour, sweet scented, filiform. Pedicels small, solitary or bunch, in 2-4 cm long auxiliary racemes. Tepals 6, ovate, acute, stamen 6. Stigma 3-fid. Berries globos, red. Seeds smooth and black. Wild as well as cultivated (Satsal,305)

Flowers and Fruits : August - January

Local Name : Satwar (santhali), Satmuli (Mundari)

Family : Liliaceae

Uses: Fleshy roots are used in fever, diarrhoea, dysentery, cough, rheumatism, strength, bleeding from nose and urine trouble.

**2. Urginea indica, (Roxb.): Haines. 1145:** Herbaceous, annual. Bulb 5-7 x 3.5 cm, ovoid, radical. Leaves radicle, linear, acute, spreading, oblong, lanceolate, fleshy green. Scapes stout, bracteate, may flowered, 8-16cm high. Flower purple, distant campanulate, spreading, caducous, linear oblong. Erect in fruit. Perianth campanulate, tepals-6, marcescent, stamen 6, stigma capitate, trigonous. Capsule, oblong, trilobed. Frequent in forests, in grass fields, moist and shady places (kita,95)

Flowers and Fruits : April -August

Local Name: Bir Piaj, Ban Payaj (Santhali), Koli kanda (Mundari)

Family : Liliaceae

Uses: Bulbs used for cough and cold, dysentery, rheumatism, skin diseases, animals stomach disorder and heart diseases.

**3. Musa paradisiaca, Linn; (Musa sapientum, Linn); Haines 1177.:** Herbaceous, perennial, leaves erect, spirally arranged, sheathing leaf base, parallel venation. Flower cream colour, spadix 30-80cm long. Bracts 20-50cm long, red or purple in colour. Spathe deciduous. Tepals 6= (5) +1. Fruit-berry, 7-14cm long, greenish or yellowish when ripens, edible, sweet. Planted in gardens (pandeydih-501)

Flowers and Fruits : Throughout the year.

Local Name : Koirā (santhali), Kela (Mundari)

Family : Musaceae

Uses: The stem, flower and fruits are eaten by cooked and ripened fruits eaten raw. Fruit is useful in dysentery, diarrhoea, sujak, piles, diabetes and jaundice. Leaves are used as plate and fruits are used in worship. Stem is used in fish catching.

**4. Smilax macrophylla, Roxb.; Haines 1135:** Climbing shrubs, prickly stem, 2 - 2.5 cm across, lined or angled. Leaves 12-18 x 9-13cm, elliptic or orbicular, acute, sheathing leaf base. Umbels 1-3, rare auxiliary cymes, peduncles 1-2 cm long, bracteate. Sepals

oblong, rounded with thickened tips. Petals narrower, thicker, greenish or white. Stamens 6, anthers linear-oblong. Stigma 3-fid. Berry globose. Common in forests (Rahe-613)

Flowers and Fruits : April- January

Local Name: Raipan (Santhali), itkir, Ram Datun (Mundari).

Family : Smilacaceae

Uses: Root paste used in pains, urine trouble and rheumatism. Root is used in preparation of Ranu. Stem is used as toothbrush.

**5. *Cyperus rotundus* , Linn ; Haines 946 :** Perennial, erect, glabrous sedges, 12-45 cm high. Rhizomes stoloniferous. Stem trigonous. Leaves 7-16 cm long, 0.3-0.5 cm wide, linear, acuminate, entire. Bracts 4-7cm long, three, foliar, longer than the umbels. Spikelat pale, yellow, linear-lanceolate. Glumes 1 - 3 mm long . Nuts 1 - 2 mm long, trigonous, obovoid. Common weeds of cultivated fields, roadside and moist places. (Tilabasa, 102)

Flowers and Fruits: July -December

Local Name : Motha ghas (Santhali) Mutha (Mundari).

Family : Cyperaceae

Uses : Tuber is used in fever, diarrhoea, dysentery, and dyspepsia. It is used as tonic. Tuber is also used as a food. Grass is used as a fodder for cattle.

**6. *Chrysopogon aciculatus*, (Retz.) Trin ,Haines 1083:** Annual, erect or ascending grasses, 15-45 cm high. Rhizome screeping. Leaves 6-9, 0.3-0.5 cm, tuft, linear, entire or spinous, hairy. Panicles 6-9 cm long, pale green or red or purple, filiform, oblong, solitary, erect, narrow, spreading. Spikelets 3, 3-5 mm long, one sessile, bisexual, two pedicellate male or neuter. Glumes subequal, stick on cloth, lodicules glabrous . Occur in waste places, road side or heavily grazed land. (Pandedih 01).

Flowers and Fruits: August -November

Local Name : Chorkanta, (Santhali), Jurgunda, (Mundari)

Family : Poaceae (Graminae)

Uses : Used as fodder and brooms.

**7. *Heteropogon contortus*, (Linn.) Roem. and schult; Haines 1088.:** Perennial, erect or decumbent, tufted, glabrous, cylindrical herbs, 40-80 cm high. Leaves 4-12" by 0.1-0.2", acute or obtuse, hairy, sheath present, linear, flat. Solitary terminal many jointed spikes, spikes on filiform peduncles, several flowering branches, the lower ones hairy, male or neuter, female-sessile, base bulbous hairy, green brown. Glume oblong-lanceolate. Keels symmetrically winged. Common in the hilly areas, dry places. (Kala Jharia, 709)

Flowers and Fruits: July - January

Local Name : Sohrai ghas (santhali), Jharu ghas (Mundari)

Uses: Young grass is used as fodder and mature peduncles are sold as brooms. The plant

is used in fever, dysentery and muscular pain.

**8. *Borassus flabellifer*, Linn . Haines 927:** Perennial, stout trees, 15-25 m high. Stem 40-60 cm across, columnar, leaf scars present. Leaves 60 -90 cm across, fan shaped, segments linear-lanceolate , folded along mid rib. Petioles 50 – 90 cm long, hard , margin spiny. Flowers dioecious. Male flowers in 15 -25 cm long, clustered spadix, bracteate. Stamens 6. Female flowers 1.5 – 2 cm across, globose. Stigma 3-fid .Drupes sub-globose, 5 -12 cm across, fibrous with persistent sepals. Seeds stony, fibrous. Frequent in dry places and near ponds (Changru 633).

Flowers & Fruits : March – August

Local Name : Tal, Tar (Mundari), Rola-daru (Santhali ).

Family : Arecaceae ( Palmae)

Uses : The fruit is edible. Inflorescence is used in rheumatism. The Leaves are used in thatching, making mat, hand fan, broom etc. The apex of Spadix tapped for 'toddy' which is very useful in sun stroke.

**9. *Curcuma longa*, Linn . Haines 1186.:** Annual, erect, leafy shrubs, 40 – 90 cm tall, aromatic. Leaves 46-52 x 7-10.5 cm, glabrous, oblong, white spotted, entire, sheathing at the base. Flowers yellow, bracteate. Sepals hairy, 3-lobed, yellow. Petals ovate-rounded, glabrous, staminodes present. Ovary hairy at the top. Cultivated for rhizome, wild in moist places in the forests. (Binda Pathar- 533).

Flowers and Fruits: September- December

Local Name : Haldi ,sasang (Santhali), Hardi (Mundari ).

Family : Zingiberaceae.

Uses : It is known for it's antiseptic nature. The rhizome is chiefly used for colouring food stuff. Mixed with lime helps in pain, bone fracture. Rhizome is also used in toothache, piles, fever and blood purification. It is also used to conserve the food.

## CONCLUSION:

Ethnobotany deals with total direct relationship between man and plants. The flora of India is very rich. The total number of higher and lower plant is estimated to be about 45,000 (higher plant 15000). There are over 400 different tribals and other ethnic groups in India. The tribal constitutes about 7.5 percent of India's population. A part from the tribal group many other forest dwellers and rural people also possess unique knowledge about plants. They use the plants for various purposes such as foods, medicines, house construction, agricultural tools, thatching, fodder, beads, coarse fibre, body ornamentation and other miscellaneous purposes. There has been resurgence of interest in ethnobotany all over the world during the last few decades. Jharkhand is one of the notable abode of the tribal populace. It is an irrefutable fact that nature has made it one of the richest regions of the earth .Among its various natural endowments vegetation is the most essential resource for mankind .The socio-economic status and

the culture of the tribal is woven around the forest. A number of plants are being used by the tribals in some form or other for the betterment of their life.

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