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# Report on ethnopharmacological uses of ethno-medicinal plants by tribes of District Jashpur, Chhattisgarh, India

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**Abstract**

*This is a survey report about some ethnomedicnal plants used by various tribal communities of district Jashpur, Chhattisgarh, India. A record on 34 plants species belonging to 22 families, used for curing various human and animal ailments has been compiled for future bio-prospection and scientific validation studies.*



## INTRODUCTION

Medicinal plants are useful biological resource for human societies since time immemorial. The folklore records suggest that employment of plants in healthcare management by ancient people was largely a trial and error exercise to begin with that got gradually defined with passage of time. However, documentation of this knowledge was never seriously attempted and, codified information was mainly transferred orally through generations. Use of plant-derived naturals for health, food and cosmetic benefits, however, kept on rising because the quest for leading a healthy and happy life at an affordable cost is a natural human instinct. In this pursuance, several health care systems were evolved and practiced in the history of human civilization. Ayurveda, Unani, Homeopathy, Siddha and Allopathy are different streams of this process that have thrived in different times and parts of our globe.

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Thanks to the extensive scientific efforts during the last three decades, demand for plants as observational therapeutics to precision bio-molecules has multi-folded in both oriental as well as western societies. New pharmacophores are being searched not only for offering more powerful, safer and affordable solutions for up-coming diseases but also as important ingredients of health-promoting functional foods to prevent adverse effects of lifestyle associated disorders. The global herbal trade of medicinal plants has been growing exponentially, and with an annual growth rate of 15% stands at 62 billion US$ mark today; it is likely to touch a scale of five trillion US$ by 2050. An estimated 40,00,00 tonnes of medicinal herbs are traded annually. The range of species that comprise this group probably extends to over 70,000 worldwide, of which 3,000 are widely traded as high value products in commerce. Of these, only around 900 species are cultivated and the rest are sourced from the wild. Medicinal plants are normally sold in the market as crude drugs, semi-processed/ standardized extracts or finished formulations/ products. India's existing contribution to the present

global herbal trade is meager >2.0%. Out of 960 medicinal plant species in major trade in the country, 178 species are consumed by more than 200 large and small registered herbal industries in volumes exceeding 100-500 tons per year.

According to one estimate, only >10% of the known medicinal plants flora has so far been bio-prospected scientifically and a large proportion of available biodiversity is not only being underutilized but also getting endangered and extinct. Clearly, research on herbals in a country like India must advance with fresh perspectives and approach. Three logical step must be taken concurrently in is direction. Firstly we should try to approach, trap and document our tribal folklore knowledge at a faster pace to save our inherent strengths before they are lost. Secondly we must learn and promote organized commercial cultivation of those herbs that are required in bulk so that our dependence on their wild strands for industrial supply is checked. Thirdly we must strive to support our traditional herbal claims with convincing scientific validation data sheet of bioactivities associated with our medicinal plant resource.

This paper summarizes the folklore mapping of a herbal district Jashpur in the State of Chattisgarh. The north-south length of this district is about 150 km, and its east-west breadth is about 85 km. Its total area is 6,205 km². It is lying between 22° 172 and 23° 152 North latitude and 83° 302 and 84° 242 East longitude. It is divided geographically into two parts. The northern hilly belt is called the Upper Ghat. The remaining, southern part, is called Nichghat. The upper ghat runs from Loroghat Kastura, Narayanpur, Bagicha up to the Surguja district. This belt is a forest area and contains a reserve forest. It covers the Sanna, Bagicha and Narayanpur. The upper ghat is an extension plateau covering 1384 km² which is about 1200 meters above sea level and is covered by a dense forest. The elevated plateau is called "Pat". The Upper Ghat is climbed through Loroghat. Loroghat is about 4 km in length and there are three turnings that are very dangerous. Nichghat is flat in general but also has many big mountains. In Jashpur Raigarh road there are two more ghats, both climbing, Jhanda ghat before Kansabel and Belaghat after Kansabel (Fig. 1).


**Fig. 1: Location map of study area of district Jashpur, Chhattishgarh**

## MATERIALS AND METHODS

Jashpur district is rich in forest resources and has substantial coal reserves. Adequate information are available on herbal remedies and medicinal plant wealth of Madhya Pradesh and Chhattishgarh. Some of the noteworthy contributors are those of Ahirwar (2010, 2011, 2014, 2015), Brijlal and Dube (1992),Gupta *et al.* (1999) Gupta and Mishra (2000), Jain (1965), Jain *et al.* (1976), Khan *et al.* (2008), Khanna *et al.* (2004), Kumar and Sikarwar (2002), Maheshwari (1990), Oommachan. and Masih. (1993), Oommachan *et al.* (1986), Sahu (1983) and Verma *et al.* (1995). Survey of literature reveals that enough work have been done on various aspects of medicinal plants and herbal medicine. However, equivalent work on Medicinal plants of Korea district has not beendone, so far. An extensive survey of Korea district of Chhattishgarh was made to enumerate the medicinal plants used by the tribal and rural people. .Field work and collection of medicinal were made during two consecutive years. The specimens were processed as per method suggested by Jain and Rao (1976) and were deposited in the Department of Botany, Pt. S. N. S. Govt. P.G. College, Shahdol, Madhya Pradesh India. The specimens were identified on the basis of their taxonomical characteristics as well as informations recorded in available literatures (Panigarhi. and Murti 1989; Sharma *et al.*, 1993; Verma *et al.,* 1993; Khanna *et al.* 2001). Personal

interactions between tribal physicians and rural medicaments were carried out to gather the traditional medicinal knowledge and ethno medicinal uses of the collected species.

## RESULTS AND DISCUSSION

The district Jashpur has a very rich in floristic diversity and we recorded 34 medicinal plant species belonging to 22 families in the survayed district. This area provides an enormous range of indigenous medicinal plants that are used by the tribal and local communities in the treatment of various diseases and disorders. Most of the tribal groups that do not have modern health facilities use the traditional knowledge of locally available plants for medicinal purpose. Due to industrialization and

**Table 1: Ethnomedicinal observations collected on 34 plants species of District Jashpur, Chhattisgarh, India**

| Botanical Name | Local Name | Family | Ethnomedicinal use by tribal communities |
|---|---|---|---|
| *Abrus precatorius* L. | Ghumchi | Fabaceae | Root powder is given for the treatment of whooping cough with warm water, two teaspoonful a day for seven days. |
| *Achyranthes aspera* L. | Chirchita | Amaranthaceae | Decoction of plant root along with bark decoction of *Terminelia bellirica* (Gaestn.), *Terminalia chebula.* Retz and *Ficus religiosa* L. mixed with on Kg. cow or goat milk and heated to prepare curd. It is used in treatment of Asthama. |
| *Adhatoda vasica* Nees. | Adusa | Acanthaaceace | Leaf decoction is given for fifteen days for the treatment of Asthma, one glass twice a day. |
| *Aegle marmelos* L. | Bel | Rutaceae | Baiga Tribe used kernal of fruit, mixed with powder of black peper. It, is given for a month every evening for the treatment of Syphillis or Gonorrhea . Five to six tender leaf with powder of black peper also chewed for the treatment of stomach acidity. |
| *Andrographs paniculata* (Burm. F.) Wall | Bhul limb/Kalmegh | Acanthaceae | Baiga use its root to treat fever. A tea spoonful powder mixed with a glass of cow milk or slightly warm water is given for seven days, (twice a day) after meal. |
| *Argemone mexicana* L. | Pila Dhatura | Paperveraceae | Latex of Plants is suggested to apply one drop in eye lid for the treatment of conjunctivitis, once a day for three days. Root juice of Plants, one tea spoon full mixed with equal proportion of cow butter is given for the treatment of Eczema and other skin problems. |
| *Asparagus racemosus* Willd. | Sataveri | Liliaceae | Decoction of plant is used to treat Uraemia (Blood in urine), two times a day, a full of glass till the effect observed. |
| *Azadirachta indica* Juss. | Neem | Meliaceae | Seed oil one tea spoon full or crushed seed mixed with a glass of water is given 15 days every morning for the treatment of Piles. Aqueous solution prepared with bark of Plants is given seven days every morning empty stomach, to treat Eczema. |
| *Bauhinia vahlii*(Wt .&Arn.) Benth. | Mohlain | Caesalpiniaceae | Root paste mixed with a glass of water to prepare aqueous solution; is given for 15 days every morning to treat Syphilis or Gonourhea. |
| *Buchanania lanzan* Spr. | Chaar | Anacardiaceae | Baiga use its bark and leaf to treat snake bite. Two or three tender leaf paste, mixed with a glass of water and also mixed with 3-4 tea spoonful sugar to prepare aqueous solution. One glass solution is given for 5-7 days at a time to treat Syphilis. |

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| ***Butea monospera*** **(Lamk.)Taub** | **Palas** | **Fabaceae** | **Juice of stem bark, two or three tea spoon full mixed with a glass a water thrice a day is given 3-4 days for the treatment of dysentery is summer season.** |
| ***Caesalpinia bonducella*** **Roxb.** | Gataran | Caesalpiniaceae | Leaf Juice 2-3 tea spoon full mixed with equal part of *Tramarindus indica* L. bark ash, two times a day, is given for 15 days to treat Asthma or other cough complaints. |
| ***Calotropis procera*** **Br.** | Aak | Asclepiadaceae | Ash of flower mixed with honey; one teaspoonful twice a day taken to cure whooping cough and asthma. |
| ***Chlorophytm arundinacuem*** **Baker.** | Safedmusli | Liliaceace | Five gram paste of tuber mixed with water is taken orally three time a day for treatment of frequent nocturnal emission's. |
| ***Cissampelos pareira*** **L.** | Pathar/ Paat Korea | Menisper maceace | Baiga use its root to treat fever. Root decoction used as mild tonic, diuretic and stomach. |
| ***Costus specious*** **(Koen) Sm.** | Keokand | Costaceace | Juice of rhizome is used to cure leprosy. A tea spoon full, along with equal part of *Azadirachta indica* Juss. Bark powder is used two times a day for 15 days to treat jaundice. |
| ***Curculigo orchioides*** **Gaertn.** | Kalimusli | Hypoxidaceae | Baiga use its tuber for a period of 15 days empty stomach for the treatment of impotency. |
| ***Cuscuta reflexa*** **Roxb.** | Amarbel | Cuscutaceae | Juice of this twinner acts as antiseptic on wounds. Decoction of plant is used for bath to cure skin disease. |
| ***Dalbergia sissu*** **Roxb.** | Shisham | Fabaceae | Paste of four to five tender leaf is prepared and mixed with a glass of water. Give for a day to treat syphilis or other veneral disease. |
| ***Datura stramonium*** **L.** | Dhatura | Solanaceae | Leaf decoction is used by Baigas to cure joint complaints. The slightly warm decoction administered throughout the complaint area till the effect absorbed. Dry leaf used for smoking to treat Asthma. |
| ***Desmodium gangeticum*** **(L) DC.** | Balraj | Fabaceace | Whole Plant is pounded in little water to prepare paste and is applied on fore head to cure recurring headache. |
| ***Emblica officinalis*** **Gaertn.** | Amala | Euphorbiaceae | Its fruits used in fever, vomiting, indigestion, habitual constipation and other digestional troubles. |
| ***Ficus bengalensis*** **L.** | Bad | Moraceae | Tip of aerial roots are crushed and applied on lesions caused due to Syphilis. Latex of plant drench in sugar cake and used for 21 days every morning as physical tonic. |
| ***Ficus religiosa*** **L.** | Pepal | Moraceae | Tenders leaves or bark heated with milk and given seven days at a time for the treatment of Gonorrhea. Leaves mixed with rice is given to dumb child, So that his or her tongue will begin to tremble. |
| ***Ficus racemosa*** **Linn.** | Dumer | Moraceae | Latex is used to treat piles diarrhoea and dysentery. Fruits are used in urinary trouble and roots are used as anti-diabitic. |
| ***Gloriosa superba*** **(L.)** | Kalihari | Liliaceae | Root powder of about 20 gram mixed with oil of Linum is given to animals to treat dysentery. |
| ***Jatropha curcas*** **L.** | Bhakranda | Euphorbiaceae | Baiga tribe use its stem as tooth brush to cure toothache. |
| ***Madhuca latifolia*** **Roxb.** | Mahua | Sapotaceae | Paste of dry flowers are prepared and slightly warm paste is applied on aching muscle to relief pain. Seed oil is used to treat crack on heel. Baiga use its flower paste as ointment in scorpion sting to cure pain. |

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| *Mimodsa pudicea* L. | Chunimui | Mimosaceae | Seed about 5 gram mixed with equal part of sugar is given daily for three days to treat veneral diseases. |
| ***Mucuna puriens* L. DC.** | Kemach | Fabaceae | Baiga use its roots decoction to cure joint disease. A glass of decoction is given a day for 15 days to treat gout. |
| ***Pongamia pinnata* (L.) Pierre** | Karanj | Fabaceae | Seed oil used to apply externally throughout the affected area for the treatment of seasonal eczema. Baiga use its tender branch as tooth stick to treat toothache and gum trouble. |
| ***Shorea robusta* A.W. Roth.** | Sal/Sarai | Dipterocarpaceae | Fruits are used for dysentery and scorpion sting. |
| ***Syzgium cuminii* (L.) Skeel** | Jamun | Myrtaceae | Seed are dried and powdered. About 5 gram powder is dissolved in half a glass of water and given orally twice a day for 15 days to treat diabetes. |
| ***Terminalia arjuna* (Roxb.ex. Dc.) WT. & Arn.** | Kahua /Arjun | Combretaceae | Paste of unripe fruit is used as an stringent while ripe fruit paste is used as purgative. |

and unscientific exploitation of natural resources, this valuable traditional knowledge is depleting very fast. The etheno-medicinal observations based on personal interaction with tribunal communities of district Jashpur are summarised in table 1.

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