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## STUDY OF SOME ETHNOMEDICINAL PLANTS USED BY BHEEL, A PRIMITIVE TRIBE OF GUNA DISTRICT, MADHYA PRADESH, INDIA

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### ABSTRACT:

Though there are a good number of publications on ethno-botany on particular and different tribes but the present studies were carried out to explore the vascular plant diversity and investigate the ethnomedicinal potential and their conservation status in the villages of Guna district, Madhya Pradesh, India. The paper deals about some medicinal plants used by the Bheel primitive tribe of Guna district, Madhya Pradesh. The paper enumerates 43 medicinal plant species belonging to 37 genera and 26 families used by Bheel tribes for curing various ailments among human beings and animals.

**KEY WORDS:** *Ethnomedicinal, Medicinal Plants, Bheel, Guna district, Madhya Pradesh.*

### INTRODUCTION:

The main aim of the present study is to collect information on plants used traditionally by Bheel, a primitive tribal community of District Guna, Madhya Pradesh. Plants have been used in traditional medicine for several thousand years. India is a repository of medicinal plants. The herbal treasure of nation is rich in its floristic wealth.

Ethno-botany accounts for the study of relationship between people and plants for their use as medicines, food, shelter, clothing, fuel, fodder and other household purposes<sup>1</sup> (Balick, 1996). It deals with the interaction of indigenous plants and the local inhabitants of the area. The aim of ethno-botanists is to

explore how these plants are used as food, clothing, shelter, fodder, fuel, furniture and how medicinal use of such plants is associated to other characteristics of the plant species. They understand and collect the knowledge of valuable plants by the use of anthropological methods<sup>2</sup> (Ram *et. al.*, 2004).

Central India is one of those region in India where the tribal population and forest dwellers form a considerable part of the population<sup>3-4</sup> (Jain, 2010; Mishra *et. al.*, 2010). Their studies brought to light numerous less known uses of plants and interesting data on about ethnomedicinal plants. In many parts of the Madhya Pradesh especially in the Guna District there is a rich tradition in the use of plants as an herbal medicine for the treatment of many diseases. Therefore, an ethno-medicinal study was undertaken to collect information proposed to be useful for research on medicinal plants of the Guna district of Madhya Pradesh. The state of Madhya Pradesh comprises of a large population of tribal communities belonging to various ethnic groups. These forest dwellers live in forests and possess a vast knowledge on various aspects of plants. Guna, an administrative district of Madhya Pradesh is the gateway of Malwa and Chambal and is situated in Gwalior division of northern part of Madhya Pradesh, situated between 24°19' N latitude and 77°15' E longitudes, at a height of about 476m above msl<sup>5</sup> (Jain *et. al.*, 2010). Bheel and Sahariya are the major tribal communities of the district of which Bheel tribes comprise larger population. In Gwalior and Chambal divisions, ethno-botanical studies are concentrated on Bheel, Sahariya and Gond tribes<sup>6-7</sup> (Anis and Iqbal, 2000; Sikarwar, 1997) as well as ethno-botanical studies are continuing in several parts of the state<sup>8-9</sup> (Bhalla *et. al.*, 1996; Srivastav *et. al.*, 1999). This paper is useful to understand the basis of the various actions and attitudes of the folk in their daily chores and behavior as also their concepts of various natural phenomena and natural resources.

### **METHODOLOGY:**

An attempt has been made to report the medicinal plants used by the Bheel primitive group. The information has been gathered from the local medicine-men, village elders, etc. during field trips (2011-13) to different areas of the Guna district. The medicinal plant species were identified by the Taxonomist of the Department of Botany, S. S. L. Jain P. G. College, Vidisha and deposited in the herbarium of the Department of Botany, Government Girls College, Vidisha, M. P..

### **RESULT:**

In the enumeration all the plant species are arranged with their family, local name, parts used and various uses for the treatment of illness and diseases (Table 1). A total of 43 plant species belonging to 37 genera and 26 families were reported for different therapeutic uses. Ethnomedicinal uses have been reported and investigation on the medicinal plants among the Bheel tribe of the district. Fabaceae is the dominant family with 8 species followed by Combretaceae (4), Caesalpiniaceae (3), Apocynaceae, Lythraceae, Malvaceae, Moraceae, Rhamnaceae each with two species and others Acanthaceae, Amaranthaceae,

Annonaceae, Apiaceae, Asclepiadaceae, Asteraceae, Bombacaceae, Boraginaceae, Euphorbiaceae, Meliaceae, Menispermaceae, Myrtaceae, Papaveraceae, Poaceae, Rubiaceae, Rutaceae, Sapotaceae and Verbenaceae with one species each.

### DISCUSSION:

India with its great topographic and climatic diversity has a very rich and diverse flora and fauna. Biodiversity is the most important wealth of our planet and form the foundation upon which the human civilization is built. All socio-cultural, economic and other activities of mankind are directly or indirectly associated with various environmental resources. Ethno-botanical studies has been done in various part around the world viz. Africa<sup>10</sup> (Houessou *et. al.*, 2012), Canada<sup>11</sup> (Upriety *et. al.*, 2012), Malaysia<sup>12</sup> (Ong *et. al.*, 2012), Nepal<sup>13</sup> (Singh *et. al.*, 2012), Pakistan<sup>14</sup> (Qureshi *et. al.*, 2007).

Although considerable research work is being done in India<sup>15-17</sup> (Alagesaboopathi, 2013; Murthy 2012; Kumar *et. al.*, 2010) a lot of important information and indigenous knowledge base have already been lost as knowledge hold with older generation could not be transmitted to younger generations and remains unrecorded. Although the literature is replete with general references to ethno-botany for the country as a whole, efforts to document specific details of this knowledge have been still limited and several workers are being made their efforts on this direction.

A review of literature reveals that though much work has been done on ethnomedicinal plants in India<sup>18-20</sup> (Samar *et. al.*, 2012; Jain and Vairale 2007; Jain *et. al.*, 2006) still there are some interior areas which need to be surveyed intensively like Guna district for searching new traditional medicines.

Based on the initial reconnaissance survey and group discussion, it was found that information on the medicinal use of plant is mostly confined to elder people. Younger generation is ignorant about the vast medicinal resources available in their surrounding and is more inclined towards the conventional medicines. It was also found that the tribal practitioners are hesitant to disclose their knowledge. The indigenous knowledge system of herbal practice is still very rich and available among tribal community of Guna district of Madhya Pradesh. Hence it is necessary to document the traditional knowledge of useful plants and their therapeutic uses before being lost forever from the community.

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**Table 1. List of plant species used by the Tribes of Guna district**

S. No.	Botanical name and Family	Herbarium number	Local name	Part Used	Disease
01	<i>Acaccia nilotica</i> Linn. (Fabaceae)	GUNA-01	Babool	Stem, Bark	Tooth Problem, Skin Diseases
02	<i>Acacia catechu</i> (L.f.) Willd. (Fabaceae)	GUNA-54	Khair	Bark	Skin disease especially eczema
03	<i>Acacia leucophloea</i> Willd. (Fabaceae)	GUNA-12	Reunja	Bark	diarrhea
04	<i>Achyranthes aspera</i> L. (Amaranthaceae)	GUNA-10	Chirchira	Root	Giddiness, Indigestion, Piles
05	<i>Adhotoda zeylanica</i> Medic. (Acanthaceae)	GUNA-12	Adusha	Leaf	Tuberculosis
06	<i>Adina cardifolia</i> Hook. f. (Rubiaceae)	GUNA-42	Haldu	Root, Leaves	To remove pain and swelling
07	<i>Aegle marmelos</i> Linn. (Rutaceae)	GUNA-16	Bilpatra	Roots, Leaves and Fruit	Digestive problem
08	<i>Ageratum conyzoides</i> Linn. (Asteraceae)	GUNA-18	Ajgondha, Bhakumbar	Leaf	Leucoderma
09	<i>Albizzia lebbek</i> (Linn.) Benth (Fabaceae)	GUNA-15	Kala Siris	Whole Plant	Asthma, reduces enlargement of cervical gland, cough and colds, ulcer, snake-bite wounds and in leucoderma.
10	<i>Annona squamosa</i> Linn. (Annonaceae)	GUNA-19	Sitaphal	Bark	Wound Healing, Diabetes.
11	<i>Anogeissus latifolia</i> Wall. (Combretaceae)	GUNA-59	Sharifa	Root, Leaves and Fruit	Antiseptic, used in wound healing, Treatment of tumor and cancer, Rheumatism and burning sensation.
12	<i>Argemone mexicana</i> L. (Papaveraceae)	GUNA-20	Satyanashi	Root, Latex	Gout, Dysentery, Liquid film in the eye
13	<i>Azadirachata indica</i> A. Juss. (Meliaceae)	GUNA-22	Neem	Whole Plant	Insecticidal, liver tonic and urinary astringent, leprosy, skin diseases, leucoderma, dyspepsia, ulcers, tuberculosis, eczema, malarial and intermittent fever.
14	<i>Bombax ceiba</i> L. (Bombacaceae)	GUNA-24	Semal	Root	Used for surgical dressing in the case of wounds and to



15	<i>Buchanania lanzan</i> Spreng. (Fabaceae )	GUNA-25	Achar, Chironji	Bark and Seeds	increase sexual vigor Used in cut and wounds, skin diseases, snake bite and Rheumatism.
16	<i>Butea monosperma</i> Lamk. (Fabaceae)	GUNA-28	Dhak, Palas	Flower and Seeds	Scorpion bite. The flowers are the source of a dye.
17	<i>Carica papaya</i> L. (Caesalpiniaceae)	GUNA-29	Papita	Fruit's Latex	Latex of young fruits is dried and given it for abortion.
18	<i>Carissa spinarum</i> L. (Apocynaceae)	GUNA-75	Karaunda	Fruits and Roots	Rheumatic pain, fever and wound healing.
19	<i>Cassia fistula</i> Linn. (Caesalpinaceae )	GUNA-11	Amaltas	Leaves, Stem and Roots	Leprosy, diseases of heart and is applied externally in rheumatism and snake bite.
20	<i>Centella asiatica</i> L. Urb. (Apiaceae)	GUNA-30	Brahmi	Leaf	To increase memory
21	<i>Cordia dichotoma</i> Forst. f. (Boraginaceae)	GUNA-13	Lasura	Leaves, Fruits and Seeds	Coughs, diseases of chest, uterus, urethra, ulcers and in headache.
22	<i>Cynodon dactylon</i> (L.) Pers. (Poaceae)	GUNA-32	Dub	Leaves	Arthritis
23	<i>Dalbergia sissoo</i> Roxb. (Fabaceae )	GUNA-65	Sheesham	Leaves, Bark and Roots	Eye diseases and gonorrhea, scabies, leprosy, diarrhea and dysentery.
24	<i>Euphorbia hirta</i> L. (Euphorbiaceae)	GUNA-35	Dudh Ghas	Leaves	Arthritis
25	<i>Ficus benghalensis</i> L. (Moraceae)	GUNA-37	Bargad	Whole Plant	Diabetes, gout, diarrhoea, leucorrhoea, dysentery, sores, ulcers, rheumatism, lumbago, pains, cracked and inflamed soles and toothache.
26	<i>Ficus religiosa</i> Linn. (Moraceae)	GUNA-02	Pipal	Whole Plant	Gonorrhoea, scabies and snake bite. Its juice relieves toothache and strengthens the gums. Powder of seeds taken for three days during menses sterilizes women for long time.
27	<i>Hemidesmus indicus</i> Linn. (Asclepiadaceae )	GUNA-12	Anatmool	Roots	Roots are boiled in water or milt and administered as a general tonic.
28	<i>Hibiscus rosa-sinensis</i> Linn. (Malvaceae)	GUNA-40	Gurhal	Flower	Diabetes
29	<i>Holarrhena antidysentrica</i> Wall. (Apocynaceae )	GUNA-06	Dudhi	Leaves, Bark, and Roots	Dysentery, toothache and the leaf and root powder is taken by women after delivery to control menstrual cycle.

30	<i>Lagerstromiaparviflora</i> Roxb. (Lythraceae)	GUNA-54	Siddha, Seja	Stem, Bark	Leucorrhoea
31	<i>Madhuca longifolia</i> var. <i>latifolia</i> (Roxb.) (Sapotaceae)	GUNA-43	Mahua	Fruit	Gout and rheumatism.
32	<i>Sida cordifolia</i> (Burm. f.) Borss. (Malvaceae)	GUNA-45	Rala	Leaves	Gout
33	<i>Syzygium cumini</i> (L.) Skeels. (Myrtaceae)	GUNA-65	Jamun	Seeds	Diabetes
34	<i>Tamarindus indica</i> Linn. (Caesalpiniaceae)	GUNA-12	Imli	Leaves, Bark and Fruits	Destroying worms in children and for jaundice. Gastropathy, bilious vomiting.
35	<i>Tectona grandis</i> Linn. f. (Fabaceae)	GUNA-42	Sagun	Bark, flowers, seeds and oil	Headache, toothache, and to subdue inflammation and irritation of skin.
36	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn. (Combretaceae)	GUNA-15	Arjuna	Bark, Leaves	Hypertension, pimples and other minor skin eruptions, cardio tonic, rickets in children, Skin diseases.
37	<i>Terminalia bellerica</i> Roxb. (Combretaceae)	GUNA-12	Baherha	Bark, Seeds and Fruits	Wound healing and sore throat, diarrhea and dysentery, gonorrhoea, piles and in chronic constipation.
38	<i>Terminalia chebula</i> Retz. (Combretaceae)	GUNA-42	Harra	Fruits	Astringent, digestive, laxative, cardio tonic, aphrodisiac and febrifuge.
39	<i>Tinospora cardifolia</i> Hook.f. & Thoms. (Menispermaceae)	GUNA-15	Giloe, Gurch	Stem and Roots	Constipation, vomiting, jaundice and skin diseases.
40	<i>Vitex negundo</i> L. (Verbenaceae)	GUNA-02	Nirgudi	Leaves	Rheumatism
41	<i>Woodfordia fruticosa</i> (L.) Kurz (Lythraceae)	GUNA-06	Dhawai	Leaves	Arthritis
42	<i>Zizyphus mauritiana</i> Lamk. (Rhamnaceae)	GUNA-42	Ber, Beri	Fruits	Cold and Cough.
43	<i>Zizyphus xylopyrus</i> (Retz.) Willd. (Rhamnaceae)	GUNA-15	Ghont, Ghuter	Fruits, Leaves	Skin eruptions and dye is used in tanning of lather.

### Some Photographs of the field trip in villages of District Guna

