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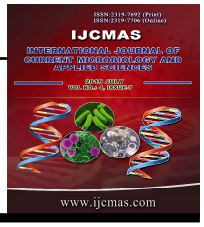

Original Research Article

Ethnobotanical Study of Traditional Medicinal Plants Used By Tribe of Guna District, Madhya Pradesh, India

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A B S T R A C T

K e y w o r d s

Ethno-botanical, Medicinal Plants, Tribes, Guna district, Madhya Pradesh

Ethno-botanical study on traditional medicinal plants was conducted between 2011 - 2013 in Guna district of Madhya Pradesh, India and documented different types of traditional medicinal plants used by the indigenous peoples. The study was focused on identifying medicinal plants, disease treated, part of the plant used, methods of preparation, route of administration, ingredients added etc. The data was collected using interview and questionnaires by selecting 16 healers using purposive sampling method. A total of 32 medicinal plant species were collected and identified from the study area for treating various human aliments. The paper enumerates these medicinal plant species belonging to 26 genera and 18 families.

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 (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 (Ram *et al.*, 2004).

Central India is one of those region in India where the tribal population and forest dwellers from a considerable part of the population (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 476 m above msl (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 (Anis and Iqbal, 2000; Sikarwar, 1997) as well as ethno-botanical studies are continuing in several parts of the state (Bhalla *et al.,* 1996; Srivastav *et al.,* 1999). This paper is useful to understand the basis of the various actions and attitudes of tile folk in their daily chores and behavior as also their concepts of various natural phenomena and natural resources.

Materials and Methods

Ethno-botanical survey was conduct in different tribal inhibited areas of Guna district during 2011-2013. Extensive field trips were organized for collecting the plant species and data. The method adopted for collection of data was about medicinal uses of plants in the treatment of various diseases.

Ethno-botanical information was collected by standard method of (Jain and Rao, 1977). A questionnaire was prepared to gather data for this purpose, the collected plant specimens were identified by using flora and others standard literature (Varma *et al.,* 1993; Singh *et al.,* 2001; Mudgal *et al.,* 1997; Jain and Rao, 1991). Information on plants used for other than medicinal purpose is also given. Information on ailments, plant part used, formulation along with dose and duration etc. gathered from tribal have been enumerated.

Results and Discussion

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 32 plant species belonging to 26 genera and 18 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 with four species, Caesalpiniaceae, Lythraceae, Moraceae, Rhamnaceae each with two species and others Annonaceae, Apiaceae, Apocynaceae, Bombacaceae, Euphorbiaceae, Meliaceae, Myrtaceae, Papaveraceae, Poaceae, Rutaceae, Sapotaceae and Verbenaceae with one species each.

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 (Houessou *et al.,* 2012), Canada (Uprety *et al.,* 2012),

Malaysia (Ong *et al.*, 2012), Nepal (Singh *et al.*, 2012), Pakistan (Qureshi *et al.*, 2007).

Although considerable research work is being done in India (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 ethno-medicinal plants in India (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.

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	*Acacia nilotica* Linn. (Fabaceae)	GUNA 01TEB	Babool	Stem, Bark	Tooth Problem, Skin Diseases
02	*Acacia catechu* (L.f.) Willd. (Fabaceae)	GUNA 02TEB	Khair	Bark	Skin disease especially eczema
03	*Acacia leucophloea* Willd. (Fabaceae)	GUNA 03TEB	Reunja	Bark	diarrhea
04	*Aegle marmelos* Linn. (Rutaceae)	GUNA 04TEB	Bilpatra	Roots, Leaves and Fruit	Digestive problem
05	*Albizzia lebbek* (Linn.) Benth (Fabaceae)	GUNA 05TEB	Kala Siris	Whole Plant	Asthma, reduces enlargement of cervical gland, cough and colds, ulcer, snake-bite wounds and in leucoderma.
06	*Annona squamosa* Linn. (Annonaceae)	GUNA 06TEB	Sitaphal	Bark	Wound Healing, Diabetes.
07	*Anogeissus latifolia* Wall. (Combretaceae)	GUNA 07TEB	Sharifa	Root, Leaves and Fruit	Antiseptic, used in wound healing, Treatment of tumor and cancer, Rheumatism and burning sensation.
08	*Argemone mexicana* L. (Papaveraceae)	GUNA 08TEB	Satyanashi	Root, Latex	Gout, Dysentery, Liquid film in the eye
09	*Azadizachata indica* A. Juss. (Meliaceae)	GUNA 09TEB	Neem	Whole Plant	Insecticidal, liver tonic and urinary astringent, leprosy, skin diseases, leucoderma, dyspepsia, ulcers, tuberculosis, eczema, malarial and

					intermittent fever.
10	*Bombax ceiba* L. (Bombacaceae)	GUNA 10TEB	Semal	Root	Used for surgical dressing in the case of wounds and to increase sexual vigor
11	*Buchanania lanzan* Spreng. (Fabaceae)	GUNA 11TEB	Achar, Chironji	Bark and Seeds	Used in cut and wounds, skin diseases, snake bite and Rheumatism.
12	*Butea monosperma* Lamk. (Fabaceae)	GUNA 12TEB	Dhak, Palas	Flower and Seeds	Scorpion bite. The flowers are the source of a dye.
13	*Carissa spinarum* L. (Apocynaceae)	GUNA 13TEB	Karaunda	Fruits and Roots	Rheumatic pain, fever and wound healing.
14	*Cassia fistula* Linn. (Caesalpinaceae)	GUNA 14TEB	Amaltas	Leaves, Stem and Roots	Leprosy, diseases of heart and is applied externally in rheumatism and snake bite.
15	*Centella asiatica* L. *Urb.* (Apiaceae)	GUNA 15TEB	Brahami	Leaf	To increase memory
16	*Cynodon dactylon* (L.) Pers. (Poaceae)	GUNA 16TEB	Dub	Leaves	Arthritis
17	*Dalbergia sissoo*Roxb. (Fabaceae)	GUNA 17TEB	Sheesham	Leaves, Bark and Roots	Eye diseases and gonorrhea, scabies, leprosy, diarrhea and dysentery.
18	*Euphorbia hirta* L. (Euphorbiaceae)	GUNA 18TEB	Dudh Ghas	Leaves	Arthitis
19	*Ficus benghalensis* L. (Moraceae)	GUNA 19TEB	Bargad	Whole Plant	Diabetes, gout, diarrhoea, leucorrhoea, dysentery, sores, ulcers, rheumatism, lumbago, pains, cracked and inflamed soles and toothache.
20	*Ficus religiosa* Linn. (Moraceae)	GUNA 20TEB	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.
21	*Lagerstromiaparviflora* Roxb. (Lythraceae)	GUNA 21TEB	Siddha, Seja	Stem, Bark	Leucorrhoea
22	*Madhuca longifolia* var. *latifolia* (Roxb.) (Sapotaceae)	GUNA 22TEB	Mahua	Fruit	Gout and rheumatism.
23	*Syzygium cumini* (L.) Skeels. (Myrtaceae)	GUNA 23TEB	Jamun	Seeds	Diabetes
24	*Tamarindus indica* Linn. (Caesalpiniaceae)	GUNA 24TEB	Imli	Leaves, Bark and Fruits	Destroying worms in children and for jaundice. Gastropathy, bilious vomiting.
25	*Tectona grandis* Linn. f. (Fabaceae)	GUNA 25TEB	Sagun	Bark, flowers, seeds and oil	Headache, toothache, and to subdue inflammation and irritation of skin.
26	*Terminalia arjuna* Roxb. Wight & Arn. (Combretaceae)	GUNA 26TEB	Arjuna	Bark, Leaves	Hypertension, pimples and other minor skin eruptions, cardio tonic, rickets in children, Skin diseases.
27	*Terminalia bellerica* Roxb. (Combretaceae)	GUNA 27TEB	Baherha	Bark, Seeds and Fruits	Wound healing and sore throat, diarrhea and dysentery, gonorrhoea, piles and in chronic constipation.
28	*Terminalia chebula* Retz. (Combretaceae)	GUNA 28TEB	Harra	Fruits	Astringent, digestive, laxative, cardio tonic, aphrodisiac and febrifuge.
29	*Vitex negundo* L. (Verbenaceae)	GUNA 29TEB	Nirgudi	Leaves	Rheumatism
30	*Woodfordia fruticosa* (L.) Kurz (Lytharaceae)	GUNA 30TEB	Dhawai	Leaves	Arthritis
31	*Zizyphus mauritiana* Lamk. (Rhamnaceae)	GUNA 31TEB	Ber, Beri	Fruits	Cold and Cough.
32	*Zizyphus xylopyrus* (Retz.) Willd. (Rhamnaceae)	GUNA 32TEB	Ghont, Ghuter	Fruits, Leaves	Skin eruptions and dye is used in tanning of lather.

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