



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2020; 6(10): 90-93
www.allresearchjournal.com
Received: 25-08-2020
Accepted: 27-09-2020

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Ethnobotanical study of traditional medicinal plants used by tribe of Dindori district (M.P.)

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Abstract

Ethno-botanical study on traditional medicinal plants was conducted between 2018-2019 in Dindori 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 ailments. The paper enumerates these medicinal plant species belonging to 26 genera and 18 families.

Keywords: Ethno-botanical, medicinal plants, tribes, Dindori district

1. Introduction

The main purpose of the current study is to collect data on plants used traditionally by Baiga, the ancient community of the Dindori district, Madhya Pradesh. The plants have been used in traditional medicine for a few thousand years. India is a breeding ground for medicinal plants. The wealth of herbal medicine is rich in its floral treasures.

Ethno-botany reasons to study the relationship between people and plants for medicines, Food, Shelter, Clothing, Fuel, Fodder and Other Household Needs (Balik, 1996) ^[1]. It deals with the interaction of native plants and local inhabitants of the area. The goal of ethnobotanists is to explore how these plants can be used as food, clothing, shelter, fodder, fuel, furniture, and how the use of such plants is related to other characteristics of plant species. They understand and gather knowledge of valuable plants through anthropological methods (Ram *et al.*, 2004) ^[2].

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) ^[3-4]. 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 Dindori 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 Dindori 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. Dindori is a district of Madhya Pradesh state of central India. The town of Dindori is the district headquarters. It was created on 25th May, 1998 with total 927 villages. The district is a part of Jabalpur Division. The district covers an area of 7470 sq.km. and is located on the eastern part of Madhya Pradesh, bordering the state of Chhattisgarh. It is surrounded by Shahdol in the east, Mandla in the west, Umaria in the north, and Bilaspur district of the state of Chhattisgarh in the south. Mathematically, the district is situated between the latitudes 22.17N and 23.22N and longitudes 80.35E and 80.58E. It is divided into seven blocks namely Dindori, Shahpura, Mehandwani, Amarpur, Bajag, Karanjia and Samnapur. Baiga and Sahariya are the major tribal communities of the district of which Baiga tribes comprise larger population. In Gwalior and Chambal divisions, ethno-botanical studies are concentrated on Baiga, Sahariya and Gond tribes (Anis and Iqbal, 2000; Sikarwar, 1997) ^[5-6] as well as ethno-botanical studies are continuing in several parts

of the state (Bhalla *et al.*, 1996; Srivastav *et al.*, 1999) [7-8]. 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.

2. Material and Method

An ethno-botanical survey was conducted in various tribal resistance areas in Dindori district between 2018-2019. Extensive field trips were conducted to collect plant species and data. The method followed for data collection is the uses of herbs in the treatment of various diseases.

Ethno-botanical information was collected by the standard method of (Jain and Rao, 1977) [9]. A questionnaire was prepared to collect data for this purpose, identifying plant specimens collected using the standard literature of flora and others (Verma *et al.*, 1993; Singh *et al.*, 2001; Mudgal *et al.*, 1997; Jain and Rao, 1991) [10-13]. Information on the use of plants other than Purpose medicine is also given. Information was calculated on diseases collected from the tribes, the plant part used, the formulation as well as the dosage and duration.

3. Results and Discussion

All plant species in the enumeration were established by their family, local name, components used, and various uses for the treatment of illness and disease (Table 1). A total of 32 plant species belonging to 26 genera and 18 families have been reported for various therapeutic uses. Ethnomedicinal uses have been reported on ethnic plants of the Baiga tribe in 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.

With a rich topography and climatic diversity, India has a very rich and diverse flora and fauna. Biodiversity forms the foundation on which the most important wealth of our planet and human civilization is built. All socio-cultural, economic and other activities of mankind are directly or indirectly related to various environmental resources. Ethnobotanical studies have been conducted in various parts of the world viz. Africa (Houessou *et al.*, 2012) [14], Canada (Uprety *et al.*, 2012) [15], Malaysia (Ong *et al.*, 2012) [16], Nepal (Singh *et al.*, 2012) [17].

Although considerable research work is being done in India (Alagesabooopathi, 2013; Murthy 2012; Kumar *et al.*, 2010) [18-20] 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 (Samar *et al.*, 2012; Jain and Vairale 2007; Jain *et al.*, 2006) [21-23] still there are some interior areas which need to be surveyed intensively like Dindori district for searching new traditional medicines.

Based on the initial surveillance survey and group discussion, it was found that information on the use of the plant was largely limited to the elderly. The younger generation is unaware of the vast medicinal drug resources available in their surroundings and is more inclined towards traditional drugs. Tribal practitioners were also found to be reluctant to reveal their knowledge. The indigenous knowledge system of herbal practice is still very rich and available in the tribal community of Dindori district in Madhya Pradesh. It is therefore necessary to document the traditional knowledge of useful plants and their therapeutic uses before they are permanently lost from society.

Table 1: List of plant species used by the Tribes of Dindori district

S. No.	Botanical name and Family	Family	Herbarium number	Local name	Part Used	Disease
01	<i>Acacia nilotica</i> Linn.	Fabaceae	DINDORI BKM09	Babool	Stem, Bark	Tooth Problem, Skin Diseases
02	<i>Acacia catechu</i> (L.f.) Willd.	Fabaceae	DINDORI BKM04	Khair	Bark	Skin disease especially eczema
03	<i>Acacia leucophloea</i> Willd.	Fabaceae	DINDORI BKM01	Reunja	Bark	diarrhea
04	<i>Aegle marmelos</i> Linn.	Rutaceae	DINDORI BKM05	Bilpatra	Roots, Leaves and Fruit	Digestive problem
05	<i>Albizia lebbek</i> (Linn.) Benth	Fabaceae	DINDORI BKM003	Kala Siris	Whole Plant	Asthma, reduces enlargement of cervical gland, cough and colds, ulcer, snake-bite wounds and in leucoderma.
06	<i>Annona squamosa</i> Linn.	Annonaceae	DINDORI BKM08	Sitaphal	Bark	Wound Healing, Diabetes.
07	<i>Anogeissus latifolia</i> Wall.	Combretaceae	DINDORI BKM11	Sharifa	Root, Leaves and Fruit	Antiseptic, used in wound healing, Treatment of tumor and cancer, Rheumatism and burning sensation.
08	<i>Argemone mexicana</i> L.	Papaveraceae	DINDORI BKM16	Satyanashi	Root, Latex	Gout, Dysentery, Liquid film in the eye
09	<i>Azadirachata indica</i> A. Juss.	Meliaceae	DINDORI BKM12	Neem	Whole Plant	Insecticidal, liver tonic and urinary astringent, leprosy, skin diseases, leucoderma, dyspepsia, ulcers, tuberculosis, eczema, malarial and intermittent fever.
10	<i>Bombax ceiba</i> L.	Bombacaceae	DINDORI BKM18	Semal	Root	Used for surgical dressing in the case of wounds and to increase sexual vigor
11	<i>Buchanania lanzan</i> Spreng.	Fabaceae	DINDORI BKM17	Achar, Chironji	Bark and Seeds	Used in cut and wounds, skin diseases, snake bite and Rheumatism.
12	<i>Butea monosperma</i> Lamk.	Fabaceae	DINDORI BKM22	Dhak, Palas	Flower and Seeds	Scorpion bite. The flowers are the source of a dye.
13	<i>Carissa spinarum</i> L.	Apocynaceae	DINDORI BKM29	Karaunda	Fruits and Roots	Rheumatic pain, fever and wound healing.
14	<i>Cassia fistula</i> Linn.	Caesalpiniaceae	DINDORI BKM25	Amaltas	Leaves, Stem and Roots	Leprosy, diseases of heart and is applied externally in rheumatism and snake bite.

15	<i>Centella asiatica</i> L. Urb.	Apiaceae	DINDORI BKM24	Brahami	Leaf	To increase memory
16	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	DINDORI BKM28	Dub	Leaves	Arthritis
17	<i>Dalbergia sissoo</i> Roxb.	Fabaceae	DINDORI BKM20	Sheesham	Leaves, Bark and Roots	Eye diseases and gonorrhoea, scabies, leprosy, diarrhea and dysentery.
18	<i>Euphorbia hirta</i> L.	Euphorbiaceae	DINDORI BKM26	Dudh Ghas	Leaves	Arthritis
19	<i>Ficus benghalensis</i> L.	Moraceae	DINDORI BKM31	Bargad	Whole Plant	Diabetes, gout, diarrhoea, leucorrhoea, dysentery, sores, ulcers, rheumatism, lumbago, pains, cracked and inflamed soles and toothache.
20	<i>Ficus religiosa</i> Linn.	Moraceae	DINDORI BKM34	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	<i>Lagerstroemia parviflora</i> Roxb.	Lythraceae	DINDORI BKM32	Siddha, Seja	Stem, Bark	Leucorrhoea
22	<i>Madhuca longifolia</i> var. <i>latifolia</i> (Roxb.)	Sapotaceae	DINDORI BKM39	Mahua	Fruit	Gout and rheumatism.
23	<i>Syzygium cumini</i> (L.) Skeels.	Myrtaceae	DINDORI BKM33	Jamun	Seeds	Diabetes
24	<i>Tamarindus indica</i> Linn.	Caesalpiniaceae	DINDORI BKM37	Imli	Leaves, Bark and Fruits	Destroying worms in children and for jaundice. Gastropathy, bilious vomiting.
25	<i>Tectona grandis</i> Linn. f.	Fabaceae	DINDORI BKM35	Sagun	Bark, flowers, seeds and oil	Headache, toothache, and to subdue inflammation and irritation of skin.
26	<i>Terminalia arjuna</i> Roxb. Wight & Arn.	Combretaceae	DINDORI BKM36	Arjuna	Bark, Leaves	Hypertension, pimples and other minor skin eruptions, cardio tonic, rickets in children, Skin diseases.
27	<i>Terminalia bellerica</i> Roxb.	Combretaceae	DINDORI BKM40	Baherha	Bark, Seeds and Fruits	Wound healing and sore throat, diarrhea and dysentery, gonorrhoea, piles and in chronic constipation.
28	<i>Terminalia chebula</i> Retz.	Combretaceae	DINDORI BKM46	Harra	Fruits	Astringent, digestive, laxative, cardio tonic, aphrodisiac and febrifuge.
29	<i>Vitex negundo</i> L.	Verbenaceae	DINDORI BKM42	Nirgudi	Leaves	Rheumatism
30	<i>Woodfordia fruticosa</i> (L.) Kurz	Lytharaceae	DINDORI BKM48	Dhawai	Leaves	Arthritis
31	<i>Zizyphus mauritiana</i> Lamk.	Rhamnaceae	DINDORI BKM41	Ber, Beri	Fruits	Cold and Cough.
32	<i>Zizyphus xylopyrus</i> (Retz.) Willd.	Rhamnaceae	DINDORI BKM02	Ghont, Ghuter	Fruits, Leaves	Skin eruptions and dye is used in tanning of lather.

4. Acknowledgement

The authors are thankful to the authority of research centre and forest department of Dindori district, for giving permission to carry out this work.

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