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## ETHANOBOTANICAL STUDY OF DIFFERENT FLORA IN TRIBAL DISTRICT OF ALIRAJPUR, M.P.INDIA

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**Abstract:** Therapeutic plant knowledge gained from tribal would be very useful for pharmacognosists and pharmacologists. Alirajpur is one of the tribal districts of western Madhya Pradesh. Several tribal communities like Bhil, Bhilala and Barela inhabit in this area. The tribal residing in Alirajpur of western Madhya Pradesh are uneducated, socio-economically backward and still depend on medicinal plants for the treatment of various diseases. The objective of the present study was to investigate ethno medicinal claims of some unique medicinal plants utilized by tribal in this district. Data obtained by periodical and seasonal field trips, collection of information from tribal medicine men (Badwa), patients and elderly person in and around study area. The obtained data is cross-checked with more than eight elderly persons who have traditional knowledge of plants and two to five patients who received treatment from Badwa. Present investigation revealed that tribal are regularly using 52 species of plants belonging to 36 families to cure various diseases. The investigation also disclosed 14 new ethno medicinal uses of plants that are not available in the earlier literature. This research will help to find out new pilot compounds for welfare of mankind.

**Keyword:** Alirajpur, Barwahs, ethno medicinal plants, traditional medicine.

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**Introduction:** Ethno botany is the art of collection of useful plants by the society and describes its uses. Ethno botany deals with the uses of the plants for fiber, fuel, fodder, dyes, tannin and gum. Use of plants based drugs and chemicals for curing various ailments and personal adornment is as old as human cultivation [1]. India is good sources of medicinal plants. It has approximately 7500 medicinal plant species are found. Important information of medicinal plants is also given in Rig Veda. Ethno botany in the Indian subcontinent may be the earliest in the world and date back to 4000-1500 B.C. [2]. Medicinal Plants and its parts are good sources of medicine even today it is the backbone of pharmaceutical companies. Medicinal plants have been used in our country since time immemorial. Thousands of Indians are used herbal drugs regularly. They are used spices in their food for good health. Since last four decades considerable progress has been made in the field of ethno medicine. A review of literature on ethno medicine indicates that various workers have contributed from different parts of India including Madhya Pradesh [3], [4]. But still there are some isolated areas which could be served rigorously for the search of new traditional medicines [5]. In the present work is designed with an objective of providing identification of medicinal plants and formulation of ethno medicinal uses of plants present in Alirajpur district of Madhya Pradesh.

### **Methodology:**

**Study area:** Alirajpur District was carved out of Jhabua District on 17th May 2008. Alirajpur is predominantly a tribal district of Madhya Pradesh, located in the Western part of Madhya Pradesh. In the North-West it touches the state of Rajasthan while in the West it is surrounded by border of Gujarat. Maher and Narmada rivers make its Eastern and Southern border. Alirajpur district have divided into six blocks namely: Alirajpur, Sondwa, Katthiwada, Bhabra, Jobat and Uaigarh. Alirajpur district lying between 22°18'N latitude and 74°20'E longitude, covers an area of 3182 square kilometers (Fig.1).

According to census 2011, Alirajpur population is 728,999. Alirajpur District average Rainfall is 850 mm. Alirajpur District temperature ranges between 23-30°C. Their major part is covered with dense forest in which various tribal like Bhil, Bhilala and Patliya are living in majority. Bhilala are the main inhabitants of different villages of the district. Mangoes, wheat, maize, pulses, spices, sorghum, garlic, chili, brinjal are major agriculture product. It is the biggest trading center of mangoes in Madhya Pradesh. Bhagoriya is a special cultural public festival of Alirajpur district. The dryness of the climate and aridity different topography of the area provides a favorable ground to grow the plants.

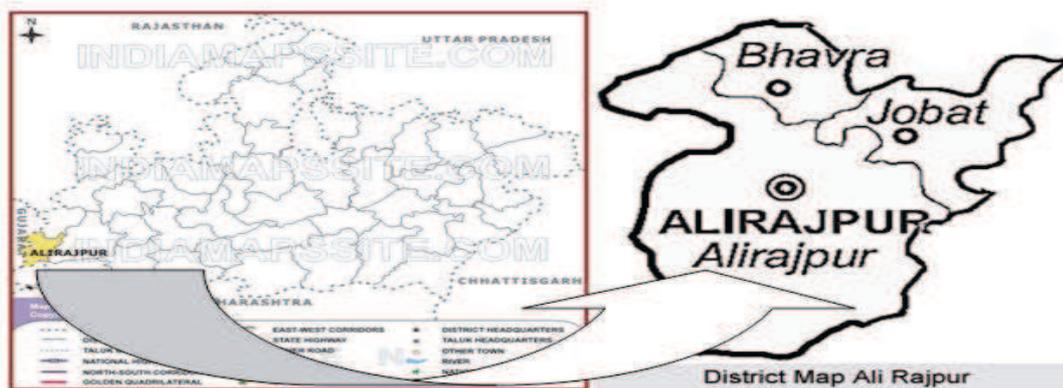


Fig.1 District Map of Alirajpur.

Ethno botanical survey was conducted in different tribal inhabited areas of Alirajpur district during 2012-2013. 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. During field survey, pre prepared questionnaires were used to cross-examine the local inhabitants of the area. Ethno botanical information was collected by standard method of Jain and Rao [6]. A questionnaire was prepared to gather data for this purpose, the collected plant specimens were identified by using flora and others standard literature [7], [8]. Information on plants used for other than medicinal purpose is also given. Information on diseases, plant part used, and formulation etc. collected from tribal localities have been described.

**Results and Discussion:** The plant species studied are arranged in alphabetical order. Scientific names, family, locality, local name, tribal uses and a plant parts used for medical purpose and mode of utilization and dosage were also given.

**Enumeration of plants:** During the field survey plant and plant parts are used for medicine in Alirajpur to treat different diseases have been explored. Analysis of the data revealed that Root and Leaves are mostly used for various disease followed by Fruits, Seeds Bark and whole plant (Table-1). The number of plant species used by the tribe for curing some of the important and common diseases, shown in the count are digestive problem, cough, uterus displacement, arthritis, tuberculosis, scorpion bite,

pneumonia, increase sexual vigor, male impotency, menorrhoea, increase memory, abortion, diabetes and impotency. The present testimonial certificates 68 plants species belonging to 48 Families are traditionally valued. The plants used are found growing and are available in the surrounding area and in many cases are immediately available as therapeutic. Different plants species were used in each treatment. *Butea monosperma (Lam.)* is the most common plant species is used by the tribal of this region to treat scorpion bite and male impotency.

**Conclusion:** A great number of plant varieties occur in localities of Alirajpur district. Looking to the intellectual property rights of indigenous people, identification of such knowledge is necessary. The people of "Bheel" community possesses enormous knowledge regarding different uses of plants. Besides medicinal uses, the tribes of the district also have a vast knowledge about the other uses of plants. More or less, all species are usually available in this area but many people are not aware about their importance. Few species like Terminalia and Dioscorea are facing threats due to diverse reasons and require urgent attention for their conservation. Our studies shows that tribal of Alirajpur are dependent upon the plant resources for medicine and other purposes. Our data provide a baseline to search for new drug. It is useful to Pharmaceutical Company to discover a new drug. Further work in ethno botanical studies is in progress. The flora of Alirajpur provides very good source of many medicinal plant used as traditional medicine.

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Table.1. Medicinal flora of Alirajpur District, Madhya Pradesh, India

S.NO	Scientific name	Family	Local name	Plant part used	Disease
1	<i>Adansonia digitata</i> L.	Bombacaceae	Khurasani imli;	the dried pulp of the fruit	body cooling and also given as appetizer
2	<i>Adhatoda zeylanica</i> Medik	Acanthaceae	Adusa;	Leaves powder	2-3 times daily in bronchitis.
3	<i>Andrographis paniculata</i> wall. Ex. Nees.	Acanthaceae	Kalmegh	Whole plant is boiled in water and the filtrate	malaria.
4	<i>Achyranthes aspera</i> Linn,	Amaranthaceae	Andijhada	Root paste	hydrophobia, fever, anaemia and night blindness
5	<i>Abelmoschus manihot</i> (L.)	Malvaceae	Jangli bhendi	Root extract	Male impotency
6	<i>Aegle marmelos</i> (L.)	Rutaceae	Bela	pulp of ripe fruit	stomach disorders
7	<i>Aloe vera</i> (L)	Liliaceae	Gwarpatha	Leaf paste with turmeric	Eruptions and wound healing
8	<i>Amorphophallus campanulatus</i> Blume	Araceae	Bhabdi	Extract of tuber	Snake bite
9	<i>Anogeissus latifolia</i> (Roxb. Ex DC.)	Combretaceae	Dhawda	Fried gum	spermatorrhoea
10	<i>Asparagus racemosus</i> Willd.	Liliaceae	Satawari	root paste	Fever, potency and Typhoid
11	<i>Azadirachta indica</i> (Linn.) A	Meliaceae	Neem	Sticks and leaves	Snake bite and skin afflictions
12	<i>Annona squamosa</i> L.	Annonaceae	Sitaphal	Seed powder	abortifacient
13	<i>Argemone mexicana</i> L.	Papaveraceae	Peli kateli	roots	jaundice.
14	<i>Ailanthus excelsa</i> Roxb	Simaroubaceae	Maharukh	Extract of stem	Tetanus and joint pains
15	<i>Balanites aegyptiaca</i> Delile	Simaroubaceae	Hingry	bark paste	swellings on the face
16	<i>Biophytum sensitivum</i> DC	Oxalidaceae	Lajuri (Lajwanti)	Leaf powder	impotency
17	<i>Boerhavia diffusa</i> Linn	Nyctaginaceae	Purnava	root paste	blood dysentery
18	<i>Bombax ceiba</i> Linn	Bombaceae	Semal	Chewing of roots	impotency
19	<i>Butea monosperma</i> (Lamk.)	Fabaceae	Palash	Leaf juice	Scorpion bite, Diabetes and male impotency
20	<i>Caesalpinia bonduc</i> (Linn.)	Caesalpinaceae	Gattar	Seed powder	Bleeding
21	<i>Calotropis gigantea</i>	Asclepiadaceae	Ankda	latex	pain and

	(Willd)				swellings
22	<i>Calotropis procera</i> (Ait.),	Asclepiadaceae	Akau	Leaves	swelled body parts
23	<i>Careya arborea</i> Roxb	Lecythidaceae	Kumbhi	leaf paste	face swellings
24	<i>Carissa congesta</i> Wt.	Apocynaceae	Karonda	juice of root	Fever
25	<i>Cassia glauca</i> Lamk	Caesalpinaceae	Kamarsothi	Wood beads	Jaundice
26	<i>Cassia fistula</i> L.,	Caesalpinaceae	Amaltas	fruit pulp	diabetes
27	<i>Caesalpinia bonduc</i> (L.)	Caesalpinaceae	Gattar	stem bark	Stomach pain
28	<i>Celastrus paniculatus</i> Willd	Celastraceae	Malkangni	seed oil	leprosy and bodyache.
29	<i>Centella asiatica</i> (Linn.)	Apiaceae	Brahmi	Whole plant	Jaundice and bleeding
30	<i>Chlorophytum arundinaceum</i> Baker	Liliaceae	Safed musli	Root	aphrodisiac, Diarrhoea, Menstrual disorders and Tonic
31	<i>Cissus quadrangularis</i> (Linn.)	Vitaceae	Gathan	Extract of entire plant	Fractures and wond healing
32	<i>Costus speciosus</i> (Koenig). Sm	Zingiberaceae	Kanda	Root paste	Fever
33	<i>Croton oblongifolius</i> Roxb. (	Euphorbiaceae	Jangli arandi	Root paste	dysentery and vomiting
34	<i>Crotalaria juncea</i> L.	Fabaceae	Sann	Seed powder	obesity
35	<i>Curculigo orchoides</i> (Gaertn)	Zingiberaceae	Kali musli	Root paste	Impotency
36	<i>Curcuma angustifolia</i> (Roxb)	Zingiberaceae	Haldi	Rhizome paste	Fever
37.	<i>Dillenia pentagyna</i> Roxb	Dilleniaceae	Kelia sag	Stem bark	Pregnant women for easy delivery
38	<i>Diplocyclos palmatus</i> (L.)	Cucurbitaceae	Shivlingi	Seed powder	male and female sterility.
39	<i>Drimia indica</i> (Roxb.)	Liliaceae	Jangli kanda	leaves	Sun stroke and thermo regulation
40	<i>Euphorbia nerifolia</i> L.	Euphorbiaceae	Thuwar	latex	Swellings and Burns
41	<i>Ensete superbum</i> (Roxb.) Cheesman	Musaceae	Jangli kela	Seed powder	Dog bite
42	<i>Euphorbia acaulis</i> Roxb	Euphorbiaceae	Khargoni	Root paste	dysentery and in fever
43	<i>Euphorbia hirta</i> Linn.	Euphorbiaceae	Chotidudhi	Latex	Scorpion bite
44	<i>Ficus religiosa</i> Linn	Moraceae	Pipal	Young leaves	Snake bite
45	<i>Ficus hispida</i> L.	Moraceae	Bhui gular	Boiled fruit	Jaundice and Liver disorders
46	<i>Ficus racemosa</i> L.,	Moraceae	Gular	fruit	Diabetes and to prevent abortion
47	<i>Flacourtia indica</i> (Burm. f.)	Flacourtiaceae	Dollar	Root paste	Skin diseases
48	<i>Gloriosa superba</i> Linn.	Liliaceae	Kalihari	root and flower paste	pregnancy upto four month.
49	<i>Glycyrrhiza glabra</i> (L)	Fabaceae	kubas-susa, mithilakd, Mulethi	Root	Skin disorders, antiulcer, laxative, antidiabetic

50	<i>Gymnema sylvestre</i> (Retz.)	Asclepiadiaceae	Gudmar	tuber powder	Diabetes and Menstrual disorders
51	<i>Helicteres isora</i> Linn	Sterculiaceae	Maror phalli	Seed extract	children in dysentery, fits, diabetes
52	<i>Hemidesmus indicus</i> R. Br	Asclepiadaceae	Dudhi	root paste	dysentery
53	<i>Holarhena pubescens</i> Wall. ex G.	Apocynaceae	Kudhi	fruit paste	stomachache
54	<i>Hymenodictyon exceba</i> (Roxb.)	Rubiaceae	Bhavar sal/ Bhaulan	extract of inner stem bark	relief from addiction to hard drink
55	<i>Indigofera tinctoria</i> L.,	Fabaceae	Neel	Seed paste	cataract
56	<i>Ichnocarpus frutescens</i> (L.)	Apocynaceae	Dudhi	Root paste	Fever
57	<i>Jatropha curcas</i> Linn. (	Euphorbiaceae	Ratanjot	Stem	Toothache and gum swelling
58	<i>Lawsonia inermis</i> L.	Lythraceae	Mehandi	Paste of whole plant	Boils Burn, Headache, Piles, Rheumatism, Snake bite
59	<i>Luffa acutangula</i> (L.) Roxb	Cucurbitaceae	Kadvi turai	Seed powder Fruit juice	Jaundice conjunctivitis
60	<i>Madhuca longifolia</i> (Koenig)	Sapotaceae	Mahua	flowers	male impotency
61	<i>Moringa oleifera</i> Lamk	(Moringaceae	Sehajana	Bark	Rheumatism
62	<i>Papaver somniferum</i>	Papaveraceae(Juss)	Poppy	Latex and seeds	Muscle cramps, hypnotic, narcotic, and sedative
63	<i>Physalis minima</i> L.	Solanaceae	Kanfuta	Root paste	Arthritis
64	<i>Ricinus communis</i> L.	Euphorbiaceae	Arandi	Seed oil	Rheumatism
65	<i>Tinospora cordifolia</i> (Willd.)	(Menispermaceae	Giloy	stem decoction	Arthritis
66	<i>Urginea indica</i> (Roxb.) Kunth	(Liliaceae	Jangali Piyaz	Bulb paste	Joint pains
67	<i>Woodfordia fruticosa</i> (L.)	Lythraceae	Dhawai	Leaf paste	Joint pains, Arthritis
68	<i>Ziziphus mauritiana</i> (Lamak)	Rhamnaceae	Ber,Beri	Dried fruits decoction	Cold and cough

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