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## STUDY OF SOME MEDICINAL PLANTS IN BOHALGHAT , BALRAMPUR (C.G.)

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### Abstract

*Bohalghat is one of the richest biodiversity having rich vegetation, which need to be discovered, documented and look over. The Bohalghat is the part of Shankargarh block of Balrampur district on the road of Ambikapur Viz Ranchi. Bohalghat located in the northern part of Chhattisgarh state in central India. Estimated 50% - 60% of the population depends exclusively on traditional and herbal medicine for healing some type of diseases. The local people have very rich knowledge of medicinal plant and it is used by them for their health and livelihood security. A total number of ( 55 ) medicinal plant species belonging to ( 36 ) families were recorded. This chapter highlights some alternative and very safe medicinal plants of Bohalghat plant vegetation with good effects in our human body. Tribes people of Shankargarh block play very important and significant role in management of environmental problems. They know the importance of plants and forest for their survival. Hence, they were practicing sustainable use of the plant resource. The main aim of present study of Bohalghat is to explore the range of some medicinal plants by the local tribes in Shankargarh block of Balrampur district.*

**Keywords:** Medicinal plants, Bohalghat, Balrampur, Tribes people

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### Introduction

Bohalghat of Balrampur district nature is the most of divine creation of God around us, it is considered an integral part of mankind. Nature has bestowed us with water, air, plants, animal and much more to make us survive on our Shankargarh block. Medicinal plants of Bohalghat have a wide range of biological properties which need to be documented, discovered and explored. Remote area is rich in natural vegetation. The climatic conditions of our block like medium humidity, frequent rainfall, moderate to mild temperatures, without any extreme heat or cold weather and definitely edaphic factor like high quality of soil fertility contribute to grow healthy plants. A medicinal plant is any plant which is one or more of its parts contain

that can be used for medicinal purposes or which are precursors for the synthesis of useful drugs. Medicinal plants also called medicinal herbs, have been discovered and used in traditional medicine practices since prehistoric times. Approximate 70-80% of the Balrampur district population still depends exclusively on traditional or herbal medicines for treatment of any type of diseases. Tribes population of remote area who have does not any formal medicinal training it considered being completely to provide health care using plants and it's part.

Native people of Shankargarh have exploited a variety of herbal medicine for effective curing various ailments. People of Shankargarh are the well-wishers, protectors and preservers of their ecosystem. Human activities in

remote areas must be done in a sustainable way to ensure the development of plant vegetation. Survival of mankind without nature is not possible and human of Bohalghat understand it very clearly. Tribes and local population think very politely if nature has ability to protect and provide us ,it is also powerful and able to destroy the entire mankind. They live in a close harmony with nature and maintain relationships between human being. In such scenario the present work concluded that the tribes and local people of Shankargarh possess rich knowledge on the medicinal plants and their utilisation. The population of study area is predominantly characterized by tribal communities comprising of Baiga, Khairwar , Gond ,Kanwar , Panika, Uroan ,Koraku . All tribes communities possess significant knowledge of medicinal plants and associated traditional practices.

#### **Objective**

The present work shall be undertaken with the following objectives

A-Identification of plants used in Medicine.

B-To study the socioeconomic profile of the tribes in Bohalghat.

C-To Document the traditional knowledge of the tribes about the usefulness of the plants used in festival.

D-To study the conservation aspect of those plants used in medicine and festival.

#### **Methodology**

The data illustrated in this work is based on the first hand information obtained from tribal and rural people of Bohalghat. The present study was made between the July 2019 to June 2022 by visiting different localities of study area in different seasons to get the relevant information about medicinal plants which is used by the local people of this area. During field work some tribes community people Pahali korva ,kanvar ,baiga, khairwar person accompanied us into the forest . Information center of

the district government and forest map were also used for the selection of the thrust areas for easier botanical exploration which includes the local village of tribal people, forest villages, local markets and herbal practitioners and their rich private medicinal garden, medicinal plants nursery of the government etc. Besides the research scholar attended and participate in many cultural and religious ceremonies throughout the study area like Karma ,Sarhul, Nawakhani, Jiotia pooja ,Teeja etc.

Medicinal plant data were collected by means of a open questionnaire and interview, consultation with the herbal traditional healers, practitioners and experienced old folk . Full efforts were made by us for the collection of plants in their ambient flowering and fruiting stage as far as possible from their natural habitat. A standard questionnaire was conducted by visiting to gain information on medicinal plants with their local name, parts used, method of preparation and also mode of administration. But unfortunately questionnaire approach was not possible to get details data hence an informal conversation was adopted . During field survey most of the medicinal plants were collected directly from the forest, agricultural fields, foot hills, upper hills and river belts .

The gathered field information was analysed to know clear and updated picture of the some medicinal plants which are present in study area of Balrampur. To find the perfect medicinal plants stock picture photography is also done in different seasons. Photography is a way to ensure ,record, and communicate with others visually what we see . Standardized high resolution digital DSLR camera, and mobile phone camera used for

photography. Ethnobotanical importance of the collected plant species was recorded following the open ended door to door interactions and interview also conducted with the knowledgeable inhabitants at Bohal-ghat. Both gender male and female person which belongs different age groups, economic status, farmers, labourers, landless wagers person were interviewed for the collection of depth information about medicinal plants and its parts. The consent of the informants was taken verbally and their name, village name and age were recorded. Most of the informants were illiterate but their traditional knowledge about medicinal plants was very rich and strong. All the local informants, medicine men local healers were selected based on their knowledge of medicinal plants. In the first stage provisional identification of the Collected specimens was done in Taxonomy. Collected plant species were also identified by using of Bentham and Hooker's classification. Efforts have been made to use the latest and correct scientific name's for the collected taxa and after consulting the revision works of related plant specimen.

#### **Data collection-**

The data for the PhD work were collected mainly from the Primary sources and Secondary sources keeping in mind view the subject of the current study, quantitative and qualitative aspects of the data were given importance. It included the available updated printed material on the medicinal plants and herbs which are mostly used in traditional healing.

Method adopted for primary data collection -

The following given main methods and techniques were used for collection of primary data-

(a)- Questionnaire :- For the Primary data collection from the sample villages detailed questionnaire was designed. Data was collected from each villages by direct interview, local conversation,

group discussion with villages people, Panchayat Sachiv, Sarpanch, Patel, Baiga, Traditional healers, Local Tribes, Block forest officer, Vanpal. In addition to the above interviews with forest officials, stakeholders and chief executive of the NGOs were also conducted.

(b) -Survey method – The floristic and Ethnobotanical account is not easy unless one can be able to walk under the tree line and reach tribal area and villages of forest. Confusing rides and slopes, tough terrain are some major natural barriers for the study. Based on the gathered information and personal experience of previous year, a plan of action for collection of ethnomedicinal information and medicinal plant was prepared by us.

(c)- Focus group discussions– In order to collective perspectives from local community members, focus group consultations will be organized. A discussion guideline will be prepared for the conducting the discussions. Discussion were held in the study area with traditional healers, field guide, local herbal practitioners, vendors, tribe ethnic groups and also experienced old senior rural folk people's. Data from the focus group discussions will be documented in writing and through audio visuals.

(d) - Field observation – Field observation is another important instrument for collecting qualitative data, especially for socio-cultural and environmental impacts of with local people and the impacts of such interaction. Data recorded through field observation will be immediately documented. Secondary data has been collected by research scholar from various agencies. The main sources of information about medicinal plants and respective knowledge are given below:-

- (1) Balrampur forest department records, complete annual administrative reports.
- (2) Records of Revenue Department.

(3)Published data of Agriculture Department Balrampur District.

(4)Records of Semarsot wildlife sanctuary , Balrampur C.G.

(5)NGOs department data of Balrampur District

### Results and Discussion

The present study has revealed that the local inhabitants of Bohalghat were

generally using about 55 species of [ 36 ] families There is an urgent need of documentation of this irreplaceable knowledge.It may lost when traditional collapse with advent of modernization.Given table shows data related to plants which are used in different diseases in our Bohalghat area :-

S.N	Botanical name	Common name	Family name	Uses
1	<i>Achyranthes aspera</i>	Chirchitti	<i>Amaranthaceae</i>	Antibacterial, hypoglycemic, antihyperlipidemic, antiperiodic
2	<i>Acorus calamus</i>	Bach	<i>Acoraceae</i>	Stomach pain, skin disorder, piles
3	<i>Adhatoda vasica</i>	Wasak	<i>Acanthaceae</i>	Cough, asthma, breathing trouble, nasal congestion
4	<i>Adina cordifolia</i>	Karam	<i>Rubiaceae</i>	Skin diseases, wounds, vomiting, intestinal worms
5	<i>Aegle marmelos</i>	Bel	<i>Rutaceae</i>	Diabetes,acne,allergy, digetion problem , headache, heatstroke
6	<i>Aloe vera</i>	Gilyo	<i>Liliaceae</i>	Constipation,intestinal wound,antioxidant, weight loss dendruff, skin problem
7	<i>Amorphophallus campanulatus</i>	Jimi kanda	<i>Araceae</i>	Diabetes,piles ,joint pain,indigetion
8	<i>Anogeissus latifolia</i>	Dhaura	<i>Combretaceae</i>	Fever,liver complaints,skin diseases,
9	<i>Antidesma acidum</i>	Aamat sag	<i>Phyllanthaceae</i>	Fever, cough, diabetes,against dysentery,vomiting,indigetion,
10	<i>Argemone mexicana</i>	Satyanashi	<i>Papaveraceae</i>	Dropsy, jaundice, gonorrhoea, leprosy, scabies,fever, skin diseases, ulcer and hepatic
11	<i>Asparagus racemosus</i>	Satawar	<i>Asparagaceae</i>	Immunomodulatory activity, anti-ulcerogenic, antioxidant activity, anti-cancer, Anti-diabetic, anti-Candida, anti-inflammatory, antidiarrheal, antimicrobial, antidepressant, aphrodisiac, adaptogenic
12	<i>Azadirachta indica</i>	Neem	<i>Meliaceae</i>	Skin diseases, healthy hair, improve liver function, detoxify the blood, Pest and disease control, fever reduction, dental treatments, cough, asthma, ulcers, piles, intestinal worms, urinary diseases
13	<i>Benincasa hispida</i>	Raksa	<i>Cucurbitaceae</i>	Epilepsy, lung diseases, asthma, cough, fever, gonorrhoea and insanity, nervous diseases, urinary dysfunction, wounds and vaginal

				discharges
14	<i>Boerhaavia diffusa</i>	Punarnava	Nyctaginaceae	Epilepsy, hysteria, gastritis, jaundice, fever, convulsion, asthma, dysentery and diarrhea
15	<i>Buchnanian cochinchinesis</i>	Piyar	Anacardiaceae	Gastritis, Burning sensation, Fever, Aphrodisiac, Excessive thirst.
16	<i>Calotropis procera</i>	Aak	Apocynaceae	Digestive disorders including diarrhea, constipation and stomach ulcers; for painful conditions including toothache, cramps, and joint pain; and for parasitic infections including elephantiasis and worms.
17	<i>Cannabis sativa</i>	Bhang	Cannabinaceae	Treatment of pain loss of appetite, depression, insomnia, asthma and spasms
18	<i>Carica papaya</i>	Papita	Caricaceae	Warts, corns, sinuses, eczema, cutaneous tubercles, glandular tumors, blood pressure, dyspepsia, constipation, amenorrhoea, general debility
19	<i>Carisa carrandas</i>	Karonda	Apocynaceae	Colic, oedema, hepatomegaly, splenomegaly, indigestion, cardiac diseases, amenorrhoea, improve digestion, anthelmintic and antimicrobial, Fever
20	<i>Cassia fistula</i>	Bandarlou di	Fabaceae	It is used for treating constipation, fever, digestive troubles and skin diseases. Its fruit pulp along with some other herbs is cooked in water to prepare decoction which is used to treat fever and related complications
21	<i>Cassia tora</i>	Chakod	Caesulpinaceae	Treating skin diseases like ringworm and itching or body scratch and psoriasis, Fever leprosy, flatulence, colic, dyspepsia, constipation, cough, bronchitis and cardiac disorders.
22	<i>Centela asiatica</i>	Beng sag	Apiaceae	It Boosts Memory Power, It Cures Fever, It Removes Stains On Teeth, It Cures Skin Diseases, It Helps Recover From Fatigue It is a Remedy for Cold and Asthma, For Anemia, For Decreased Libido Chronic Ulcers, Eczema, Psoriasis
23	<i>Cheilocostus speciosus</i>	Keu kanda	Costaceae	Wounds, Cuts, Snakebites, Curing liver disorders, Skin eruptions, Blotches, Pimples, Diarrhea, Sore throats.
24	<i>Cissus quadrangularis</i>	Hadjod	Vitaceae	Hemorrhoids, Obesity, Allergies, Asthma, bone loss, gout, Diabetes, high cholesterol

25	<i>Curcuma caesia</i>	Kali haldi	Zingiberaceae	It is used in treating leucoderma, asthma, tumours, piles, bronchitis, bruises etc
26	<i>Cuscuta reflexa</i>	Banda	Convulvulaceae	Treatment of bilious disorder. The whole plant is purgative. It is used internally in the treatment of body pain and itchy skin. The plant is employed in Ayurvedic medicine to treat difficulty in urinating, jaundice, muscle pain and coughs
27	<i>Cynadon dactylon</i>	Dubghass	Poeaceae	Treatment of fever, ulcer, stomach infection and other health problems. Doob grass is rich in phosphorus, calcium, sodium, potassium proteins, carbohydrates, alkaloids and flavonoids.
28	<i>Cyperus rotundus</i>	Mothaban	Cyperaceae	Diaphoretic, diuretic, analgesic, antispasmodic, aromatic, carminative, antitussive, emmenagogue, litholytic, sedative, stimulant, stomachic, vermifuge, tonic and antibacterial.
29	<i>Datura alba</i>	<i>Datura</i>	Solanaceae	Asthma, cough, and other respiratory diseases. Relieve pain related to various diseases such as kidney stones, acidity,
30	<i>Elephantopus scaber</i>	Menjurchundi	Asteraceae	Headaches, colds, bronchitis, cardiac tonic, and diuretic, and is used for eczema, rheumatism, fever, and bladder stones,,
31	<i>Embelia ribes</i>	Vai vidang	Myrsinaceae	It gives comfort from a headache when the leaves are rubbed on the head. It is also used to treat mouth ulcers. The root bark is also used for the treatment of piles, epilepsy, insomnia, indigestion
32	<i>Euphorbia hirta</i>	Dudhi	Euphorbiaceae	It is used in the treatment of cancer, diarrhea, dysentery, jaundice, asthma, intestinal problem, bronchitis, fever, eyelid styes, cough, asthma, bronchial infections, bowel complaints, helminthic infestations, wounds, kidney stones and abscesses etc
33	<i>Gymnema sylvestre</i>	Gudmar	Asclepiadaceae	Helps Fight Diabetes, Aids Weight Loss, Improves Cholesterol Levels, Improves Arthritis Symptoms, Fights Cavities, Regulates Immune System,
34	<i>Hygrophila auriculata</i>	Talmakhana	Acanthaceae	The plant used in traditional medicine to cure rheumatic arthritis, kidney infection, jaundice, oedema, gout and as an aphrodisiac, lupeol, fatty acid

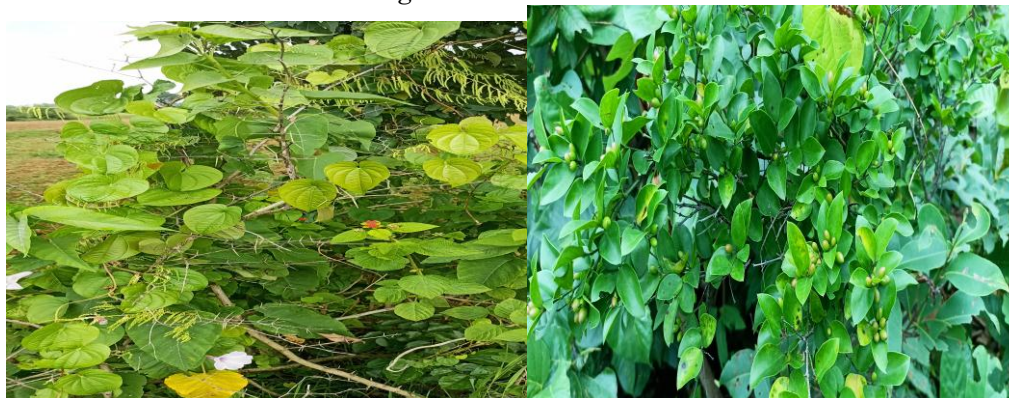
				,and alkaloids.
35	<i>Indiagofera tinctoria</i>	Jirhul	Fabaceae	Reduce fever , alleviate pain reduce inflammation, clean the liver and detoxify the blood
36	<i>Kalanchoe pinnata</i>	Patthar chatta	Crassulaceae	Cold and fever ,oral health, back pain, sun burn, and antibacterial, anti-inflammatory, antiviral, and antifungal , arthritis, hypertension and headaches.
37	<i>Linum usitatissimum</i>	Teesi	Linaceae	Fever, menstrual crumps ,obesity, digestive problem
38	<i>Macrotyloma uniflorum</i>	Kurthi	Fabaceae	Kidney stones, inflamed joints, fever, musculoskeletal disorders, sinus wounds and localized abdominal tumors
39	<i>Madhuca longifolia</i>	Mahua	Sapotaceae	Bronchitis and coughs, Rheumatism, Diabetes, Piles, Orchitis, Skin Disorders, Eczema, Tonsilitis, Bleeding Gums and Problem Of Breast Milk Secretion
40	<i>Oxalis purpurea</i>	Khati buti	Oxalidaceae	Insects bite, digestive problems, fever
41	<i>Phoenix sylvestris</i>	Chind	Arecaceae	Gonorrhoea, fevers, loss of consciousness, constipation and in heart complaints, abdominal complaints
42	<i>Phyllanthus emblica</i>	Amla	Phyllanthaceae	Diarrhoea, diabetes, fever, gonorrhoea, headache, piles, gout, eye disorder, nose bleed
43	<i>Phyllanthus niruri</i>	Bhumi amla	Phyllanthaceae	Liver health, hepatitis B, antioxidant benefits, kidney stones, anti-inflammation, gastric ulcers, bladder infections, diarrhea
44	<i>Pongamia pinnata</i>	Karanj	Fabaceae	Digestive, stomach, antihelmintic and are suitable for diarrhea, leprosy, dyspepsia and cough, diabetes, chronic fever, anemia and hemorrhoids
45	<i>Shorea robusta</i>	Sarai	Dipterocarpaceae	Headache, earache, cough, gonorrhoea, leprosy, wound, diarrhoea, dysentery, ulcers and vaginal discharges
46	<i>Sida acuta</i>	Bariyar	Malvaceae	Headache, leucorrhoea, diabetes tuberculosis, malarial, fever uterin disorder, asthma, ulcer, childbirth and worm
47	<i>Smilax zeylencia</i>	Ranpawan	Smilacaceae	Skin diseases, syphilis, gonorrhoea, and acts like a blood purifier.
48	<i>Swertia chirata</i>	Chiraita	Gentianaceae	Liver disorder, Hepatitis-B, Chronic fever and Malaria, Diabetes, Digestive disorder, Worms, Blood purification, Epilepsy, Cancer, Hypertension, Skin

				diseases, Hepatotoxic disorder, Constipation, Anemia, Dyspepsia
49	<i>Terminalia arjuna</i>	Arjun	Combretaceae	Hepatic, ulcer, fracture and antifeedant, antifertility and anti HIV activity, antibacterial, antimicrobial, antitumoral, antioxidant, antiallergic
50	<i>Terminalia bellirica</i>	Bahera	Combretaceae	Sore eye, dysentery, sore throat, cough and respiratory, liver problem
51	<i>Terminalia chebula</i>	Harra	Combretaceae	Stomachic, liver stimulant, mild laxative, digestive aid, gastrointestinal and appetite
52	<i>Tinospora cordifolia</i>	Giloe	Menispermaceae	Snake bite, eye disorder, poisonous insects, skin diseases, pain, asthma, bone fracture, fever, jaundice and chronic diarrhea.
53	<i>Vitex negundo</i>	Nirugundi	Lamiaceae	<b>Analgesic, Muscle relaxant, Larvicidal, Emmenagogue, Carminative, Antimicrobial</b>
54	<i>Vitex penduncularis</i>	Charaigoda	Lamiaceae	Black Fevers, malarial, chest pain, jaundice menstrual bleeding, diabetes
55	<i>Xanthium strumarium</i>	Latkan	Asteraceae	Antirheumatic, appetizer, diaphoretic, diuretic, emollient and sedative. laxative, fattening, anthelmintic, tonic, digestive, antipyretic, improves appetite, voice, complexion anodyne,

Photograph of some medicinal plants are given in Fig.



Sacred grove of *Shorea robusta*



*Dioscorea bulbifera*

*Carissa crandas*





*Cassia tora*

### Conclusion

Bohalghat of Chhattisgarh, India is well known for the occurrence of the diverse medicinal plants. Medicinal plants which are found in our area can be a good alternative for many human and animal diseases. They are low cost and have fewer to low side effects with positive response. There are a good number of herbal practitioners in this area who practice herbal medicine and also willing to share their rich knowledge of herbal medicine with the research scholars for the benefits of the good health of our society. Investigation about medicinal properties of the plants were recorded by the author with the help of traditional healers and Vaidraj. The information about medicinal plants through respondents by local people showed very diverse nature of medicinal flora, their uses in healing purpose with socio-economic / living standards upliftment. From this study, it could be concluded that Bohalghat possess a mixed vegetation. Botanical nomenclature are very important for human being which enables them to know the identity of plants and further helps them to select the maximum number of herbal plants according to their ambient uses. The long association with herbal medicinal plant life and their valuable properties helped the

human being to identify the plants according to their perceptions and they developed a branch of medicinal plant study called folk taxonomy. At present time it's covers a small number of herbal plants whose features and properties are well known by their ambient and respective uses. The study also underlines the potential of the Ethnobotanical research and urgent need for documentation of traditional knowledge pertaining to medicinal plants utilisation by the respondents under studied and helpful in different ailments in short time. Such information should be spread among other society living in urban area and villages. The conservation aspect of above plant resources for domestication, multiplication, sustainable utilisation and sustainable harvesting is required for future generations and also for the well ecological condition. Sacred grove, Sarna, Dham are several methods which are used by tribes to sustainable use and conservation of plants in our local area. Above traditional approach of conservation and management of natural resources through cultural and ritual ground in associated with a large number of herbal plants. Tribes people of Bohalghat believe, if any malicious activities in and around the above

conserved area is a sure cause of inviting natural disasters.

Nature and mankind are an inseparable part of the best life support system. The plants having cultural and religious closely association play an important role in local as well as regional biodiversity management and conservation. In our tribal area the sacred grove not only maintain the rich biodiversity from species to landscape but also provide habitats for many animals. Above traditional conservation represent a major contribution to the present day biodiversity.

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