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ETHNOBOTANICAL STUDIES ON THE BHIL TRIBES OF MADHYA PRADESH, INDIA, AND THEIR ROLE IN THE CONSERVATION OF FORESTS

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ABSTRACT: The Bhils are one of the largest indigenous tribal communities in India and the third largest tribal group in the country, following the Gonds and Santhals. Predominantly residing in the districts of Alirajpur, Dhar, Jhabua, Khargone, and Ratlam in Madhya Pradesh, they are also found in significant numbers across the neighbouring states of Maharashtra, Gujarat, and Rajasthan. The Bhils possess a rich repository of traditional ecological knowledge, especially regarding the use of wild plant species for medicinal, dietary, and ritual purposes. This ethnobotanical study explores the plant-based practices of the Bhils in Madhya Pradesh, documenting their traditional knowledge systems and deep-rooted connection with forest biodiversity. Data gathered through field surveys, interviews with tribal elders and healers, and participant observation reveal the use of a diverse range of plant species in everyday life. The study also highlights the Bhils' sustainable harvesting methods, which play a significant role in conserving forest ecosystems. Furthermore, the research emphasizes the importance of integrating indigenous knowledge into modern biodiversity conservation strategies. By acknowledging and preserving the ecological wisdom of the Bhils, the study advocates for inclusive and community-driven forest management policies that respect tribal rights and promote sustainable conservation practices.

Keywords: *Bhil tribes, Conservation, Madhya Pradesh, Ethnobotany*

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INTRODUCTION

India is home to a rich tapestry of indigenous communities whose lives are intricately interwoven with nature. Among these, the Bhils represent one of the most prominent tribal groups, renowned for their deep-rooted cultural traditions, distinct identity, and an exceptional repository of ethnobotanical knowledge. As the third largest tribal group in India (Joseph 2013), after the Gonds and Santhals, the Bhils primarily inhabit the

western districts of Madhya Pradesh such as Alirajpur, Dhar, Jhabua, Khargone, and Ratlam, with substantial populations extending into the neighbouring states of Rajasthan, Gujarat, and Maharashtra.

Ethnobotany - the study of the relationship between people and plants — has emerged as a critical field of research for understanding how traditional communities utilize, manage, and conserve biodiversity. For the Bhils, forests are not merely natural resources but sacred landscapes that sustain their livelihoods, spiritual practices, and cultural identity. Over generations, they have developed a sophisticated understanding of the flora around them, utilizing a wide variety of plant species for medicinal, dietary, agricultural, and ritualistic purposes. This knowledge, passed down orally through generations, forms a vital component of their intangible cultural heritage.

The Bhils' plant-based practices exemplify a symbiotic relationship with their environment, rooted in principles of sustainability, seasonal use, and minimal ecological disturbance. Their indigenous knowledge systems offer valuable insights into plant taxonomy, habitat preferences, and therapeutic properties - knowledge that often parallels or complements modern scientific understandings. More importantly, their practices often align with ecological conservation principles, such as selective harvesting, sacred groves, and species protection, which contribute to the maintenance of forest biodiversity.

However, the pressures of modernization, deforestation, loss of traditional lands, and the erosion of cultural practices pose serious threats to this knowledge system. Many younger members of the community are drifting away from traditional practices, leading to concerns about the preservation of this heritage. It is therefore crucial to document, analyze, and integrate this knowledge into broader conservation frameworks before it is lost.

Through fieldwork, interviews with tribal elders and traditional healers, and direct observation of community practices, this study seeks to illuminate the critical role that the Bhils play in sustaining ecological balance and conserving biodiversity. The findings are expected to contribute not only to academic knowledge but also to the development of more inclusive, community - based conservation policies that recognize and respect the wisdom of indigenous forest dwellers.

METHODOLOGY

During 2024, a series of bimonthly field visits were undertaken across various localities in the districts of Alirajpur, Dhar, Jhabua, Khargone, and Ratlam in Madhya Pradesh. A total of 12 villages were surveyed, with two individuals interviewed in each village. Special attention was given to engaging elderly community members between the ages of 50 and 80, including traditional medicine men, herbalists, and other individuals known for their expertise in medicinal plant use. Ethnomedicinal data were collected through oral interviews and informal discussions with local traditional healers who actively utilize native plant species in their practices. Detailed notes were recorded during these interactions, documenting local plant names, parts used, methods of preparation, modes of administration, dosages, and duration of treatments. Simultaneously, herbarium specimens of the cited plants were collected for identification purposes. The identification process was carried out using standard regional references, including Flora of Madhya Pradesh (Verma et al. 1993, Mudgal et al. 1997, Singh *et al.* 2001), and was verified in consultation with botanical experts. All voucher specimens have been preserved and deposited in the herbarium of Aurobindo Medical College, Indore.

ENUMERATION

The following ethnomedicinal plants are listed in Table 1, traditionally used by the Bhil community. They are arranged in alphabetical order based on their botanical names (*italicized*). Each entry includes the family, local name(s), parts of the plant used, and the associated ethnomedicinal applications as recorded during field investigation.

Table 1. Ethnomedicinal Plants Used by the Bhil Community

Botanical Name	Family	Local Name	Plant Parts Used	Ethno-medicinal Uses
Abrus precatorius L.	Fabaceae	Ghughchi	Fresh leaves, dried seeds	Fresh leaf juice used for snakebite; dried seed powder with honey used for pneumonia in children; leaf paste for piles.
Abutilon indicum (L.) Sw.	Malvaceae	Kanghi	Root	Root powder with cow milk given to induce lactation.
Acacia leucophloea (Roxb.) Willd.	Mimosaceae	Reujha	Bark, dried leaves	Bark powder for epilepsy and heart diseases; leaf powder with honey for cough.
Achyranthes aspera L.	Amaranthaceae	Chirchita, Chichiri	Root	Root extract for cough; root paste for snakebite.
Adhatoda vasica L.	Acanthaceae	Adusa	Leaf, flower	Leaf juice with honey for cough; flower juice applied to eyes.
Aegle marmelos Correa	Rutaceae	Bel	Leaf	Leaf extract for diabetes; decoction for blood dysentery.
Amorphophallus paeoniifolius Blume ex DC.	Araceae	Surankand	Tuber	Dried tuber powder with salt used to treat chronic fever.
Aristolochia indica L.	Aristolochiaceae	Kalesher, Batilaha	Leaf, whole plant	Leaf decoction for arthritis; whole plant decoction for fever.
Bauhinia variegata L.	Caesalpiniaceae	Kachnaar	Flower	Flower paste applied for skin diseases.
Butea monosperma (Lam.) Taub.	Fabaceae	Cheula, Dhak	Flower, seed	Dried flower powder with oil for skin disease; seed powder with honey for seminal weakness.
Cassia fistula L.	Caesalpiniaceae	Kirwar, Dagdaua	Leaf, root bark	Leaf paste for skin infections; root bark decoction for fever.
Cocculus hirsutus (L.) Diels	Menispermaceae	Patal Garudi	Whole plant	Powder with honey used to treat leucorrhoea.
Cordia macleodii (Griff.) Hook.f. and Thomson	Boraginaceae	Dahiman	Leaf, bark	Leaf paste for skin diseases; bark decoction for stomach sores.
Dalbergia latifolia Roxb.	Fabaceae	Shisham	Stem bark	Decoction with honey for gonorrhoea.
Diospyros melanoxylon Roxb.	Ebenaceae	Tendu	Outer bark	Bark paste applied to septic wounds.
Euphorbia hirta L.	Euphorbiaceae	Dudhi	Whole plant	Dried plant smoked for asthma; paste with long pipers for piles.
Ficus benghalensis L.	Moraceae	Bargad	Latex, leaf	Latex with sugar for diarrhoea; leaf powder with honey for rheumatism.

Table contd....

Hemidesmus indicus R. Br.	Asclepiadaceae	Jaruhava	Root, leaf	Root decoction for fever; leaf powder with honey for diabetes.
Lannea coromandelica (Houtt.) Merr.	Anacardiaceae	Bijaka	Bark	Bark extract applied to septic wounds.
Leucas cephalotes Spreng.	Lamiaceae	Gooma	Whole plant	Decoction taken for fever.
Litsea glutinosa (Lour.) Robinson	Lauraceae	Maida	Stem bark	Paste applied for bone fracture; powder taken for diabetes.
Ougeinia oojeinensis (Roxb.) Hochr.	Fabaceae	Tinsa	Stem bark	Decoction taken for post-natal complications.
Soymida febrifuga (Roxb.) A. Juss.	Meliaceae	Rohina	Stem bark	Decoction with honey for post-natal complications.
Stereospermum chelonoides (L.f.) DC.	Bignoniaceae	Ardhakapari	Stem bark	Decoction used for colic pain.

RESULT AND DISCUSSION

The present ethnobotanical study documented 24 medicinal plant species traditionally used by the Bhil tribes across five districts of Madhya Pradesh-Alirajpur, Dhar, Jhabua, Khargone, and Ratlam. The findings underscored the Bhil community's rich repository of indigenous knowledge related to local flora and its role in primary healthcare, particularly in rural and remote areas where access to modern medical services remains limited. These documented species span 18 different botanical families, with Fabaceae being the most represented, followed by Caesalpiniaceae, Malvaceae, and Acanthaceae. This diversity reflects the community's deep reliance on plant-based treatments and showcases both the ecological richness of the region and the traditional wisdom that guides healthcare practices among the Bhils.

The medicinal plants are employed to treat a wide spectrum of ailments, ranging from common conditions such as cough, fever, cold, and skin infections to more serious and chronic illnesses, including diabetes, epilepsy, piles, snakebite, and post-natal complications. Remedies involveda variety of preparations, with some plants administered internally as decoctions, juices, or powders, and others used externally in the form of pastes and poultices. This indicates a nuanced understanding of dosage, methods of preparation, and modes of application among the Bhil healers. Several species demonstrated multiple therapeutic uses; for example, *Abrus precatorius* (Ghughchi) is used to treat snakebite, pneumonia, and piles, while *Adhatoda vasica* (Adusa) is effective against respiratory ailments and eye irritation. *Aegle marmelos* (Bel) serves as a remedy for both diabetes and blood dysentery.

Some plants are especially valued for their role in women's reproductive health. Species such as *Abutilon indicum*, *Ougeinia oojeinensis*, and *Soymida febrifuga* are used to support lactation and aid in post-natal recovery, indicating a strong emphasis on maternal care within tribal health systems. Similarly, plants like *Aegle marmelos*, *Hemidesmus indicus*, and *Litsea glutinosa* are

Fig. 1. Chhote Bhavta Baba Dev - Alirajpur

Fig. 2. Gadhwal Baba Dev - Alirajpur

Fig. 3. Worship Place - Alirajpur

Fig. 4. Medo Devta and Meda Dev

Fig. 5. Bhils Festivals - Alirajpur

Fig. 6. *Abrus precatorius* L.

Fig. 7. *Butea monosperma* (Lam.) Taub.

Fig. 8. *Euphorbia hirta* L.

Fig. 9. *Ficus benghalensis* L.

Fig. 10. *Euphorbia hirta* L.

Fig. 11. *Ficus benghalensis* L.

employed in managing diabetes, reflecting the community's adaptive response to evolving health concerns, possibly linked to modern lifestyle changes. The frequent use of leaf and bark pastes from species like *Butea monosperma*, *Cordia macleodii*, and *Cassia fistula* in treating wounds, ringworm, and other skin infections illustrates a holistic approach to both preventive and curative healthcare using locally available resources.

ROLE OF THE BHILS IN FOREST CONSERVATION

The Bhils, as one of the oldest and most widespread tribal communities in central India, have traditionally lived in close harmony with forests. Their way of life — rooted in subsistence agriculture, foraging, and herbal medicine — is deeply dependent on the forest ecosystem. In Madhya Pradesh, particularly in the districts of Dhar, Jhabua, Khargone, and Ratlam, the Bhils continue to demonstrate ecologically sustainable practices that contribute significantly to forest conservation.

1. **SACRED GROVES AND RITUAL CONSERVATION**: The Bhils protect certain forest areas as sacred groves, where cutting trees or hunting animals is strictly prohibited. These groves act as biodiversity hotspots, preserving rare and medicinal plant species.

2. **SUSTAINABLE HARVESTING PRACTICES**: The Bhils follow sustainable harvesting techniques, such as collecting medicinal plants and forest produce without harming the plants. They often use selective harvesting methods to ensure the regeneration of plants.

3. **CULTURAL BELIEFS AND CONSERVATION ETHICS:** Cultural and spiritual beliefs play a significant role in shaping the Bhils' conservation ethos. Trees such as *Banyan (Ficus benghalensis)*, *Peepal (Ficus religiosa)*, and *Mahua (Madhuca longifolia)* are considered sacred and are protected from felling. Ritual practices often include offerings to forest spirits, and taboos are observed against cutting trees during certain months or disturbing wildlife during breeding seasons. These beliefs act as traditional forms of environmental regulation.

CONCLUSION

The Bhils of Madhya Pradesh have a profound understanding of forest ecosystems and contribute significantly to conservation efforts through their traditional knowledge and practices. Their sustainable use of forest resources highlights the importance of integrating indigenous wisdom into contemporary conservation policies. Recognizing and respecting their role in forest management can lead to more effective and community-led conservation efforts, ensuring the protection of biodiversity for future generations.

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