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Traditional Medicinal Plants and Their Socio-cultural Significance Among the Bodo Tribes

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Abstract

The Bodo tribes of BTC, Assam, India, possess a rich heritage of traditional knowledge that intertwines medicinal plant use with socio-cultural practices. This study aims to document and analyze the traditional medicinal plants utilized by the Bodo community, focusing on their therapeutic applications and socio-cultural significance. The research highlights how these plants are integral to various aspects of Bodo life, including healthcare, rituals, and folklore. Through ethnobotanical surveys and interviews with local practitioners, the study identifies key medicinal plants and their uses in treating common ailments, as well as their roles in cultural rituals and ceremonies. Findings reveal that these plants are not only vital for health and wellness but also serve as symbols of cultural identity and continuity. The study underscores the importance of preserving this traditional knowledge in the face of modernization and environmental changes, advocating for sustainable practices and community-led conservation efforts. By documenting and promoting the socio-cultural and medicinal value of these plants, this research contributes to the broader understanding of indigenous knowledge systems and their role in cultural resilience and biodiversity conservation.

Key Words- Socio-cultural and religious plant, Traditional, *Bodo* tribe, Assam

Introduction

The state of Assam, a constituent unit of the Eastern Himalayan Biodiversity region, is known for its rich biological diversity. Geographically, Assam is situated between 89°50' E to 96°10' E longitude and 24°30' N to

28°10' N latitude in the northeastern part of India. It spans a total area of 78,438 square kilometers, of which 28,761 square kilometers are covered by forests. Assam's diverse forest types are a result of its unique geographical terrain, leading many scholars to describe the state as the "Biological Gateway" of Northeast India. The Bodoland Territorial Council (BTC) is located in lower Assam, covering an area of 3,539.95 square kilometers of forest along the international boundary with Bhutan. This region's northern belt is situated in the sub-Himalayan alluvial tract known as the Bhabar tract. The Bodos, an aboriginal tribal community of Assam, dominate the demography of BTC. They possess a distinct culture and heritage, which includes a vast knowledge of herbal medicines derived from wild plants for healing and curing ailments. This knowledge is deeply intertwined with their cultural and social practices and the forests that surround them. The Bodos worship their God near a sacred place called "Bathou Gudi," commonly found in the northeast corner of their courtyards. When these sacred places are used for social gatherings in a field, they are referred to as "Bathou Shalee." The supreme God of the Bathouists is known by various names, including "Anan Gosai," "Bathoubari," and "Sibrai," with "Sibrai" being akin to the Hindu god "Shiva." The socio-cultural and religious activities of the Bodos have played a crucial role in conserving their traditional heritage, especially regarding their use of plants. Despite having their traditional religions, modern Bodos practice a variety of religions, including Bathou-Kherai, Brahma, Hinduism, and Christianity. This diversity in religious practices reflects the dynamic nature of their cultural evolution while maintaining a strong connection to their traditional heritage. The synthesis of their vast knowledge of herbal medicines and the integration of socio-cultural practices have ensured the preservation of their unique identity and the sustainable use of their rich biodiversity. This study aims to document and analyze the traditional medicinal plants used by the Bodo community, emphasizing their therapeutic applications and socio-cultural significance. Through ethnobotanical surveys and interviews with local practitioners, we seek to highlight the integral role of these plants in Bodo life, contributing to a broader understanding of indigenous knowledge systems and their importance in cultural resilience and biodiversity conservation.

Objectives of the Study

1. To identify and document the various traditional medicinal plants used by the Bodo tribes.
2. To explore the socio-cultural practices associated with the use of medicinal plants among the Bodo tribes.
3. To assess the impact of modern healthcare on the traditional medicinal practices of the Bodo tribes.

Materials and Method

The present study was conducted among the Bodo Tribe residing in four districts of the Bodoland Territorial Council (BTC) in Assam, India: Kokrajhar, Chirang, Baksa, and Udalguri. The research focused on gathering information regarding the use of different plants in various religious and socio-cultural activities.

Study Area and Population

The study targeted elderly individuals and religious headmen within the Bodo community, as they possess extensive knowledge of traditional practices and the use of medicinal plants. Surveys were carried out among the local population, with multiple visits to residential areas to ensure comprehensive data collection. The process continued until all requisite information for the proposed work was obtained.

Data Collection

Data was collected using a combination of questionnaires, interviews, and discussions. These interactions were conducted in the local language to facilitate accurate and detailed responses. Community leaders and knowledgeable individuals accompanied the researchers to specific locations where these plants were found, providing direct insights into their uses and significance.

Plant Specimen Collection and Identification

Plant specimens were meticulously collected and identified with the assistance of experts and by consulting relevant scientific literature. The collected specimens were preserved in the Department of Botany at Science College, Kokrajhar. During the field study and sample collection, several plant species were photographed to support documentation and further analysis.

Preservation and Documentation

All collected specimens were carefully handled to maintain their integrity. The documentation process included noting the plants' local names, their specific uses in socio-cultural and religious contexts, and any unique characteristics observed during the study. The preserved specimens serve as a reference for future research and contribute to the broader understanding of the region's ethnobotanical heritage.

This methodology ensures a thorough and respectful approach to documenting the traditional knowledge of the Bodo Tribe, highlighting the importance of their cultural practices and the role of medicinal plants in their community.

Result and Discussion

The present study successfully documented 48 plant species from 36 different families, all of which hold significant socio-cultural and religious value among the Bodo tribe of BTC, Assam. These plant species are integral to various socio-cultural and religious activities practiced by the Bodo community.

Documentation of Plant Species

The documented plant species are systematically arranged in alphabetical order, listing their botanical names, families, Bodo names, and specific uses. This comprehensive arrangement is presented in Table 1. Additionally, 49 photographs of these plant species are included, providing visual documentation and aiding in the identification and understanding of each species.

Socio-cultural and Religious Significance

The plants documented in this study are regularly used by the Bodo tribe in a variety of socio-cultural and religious activities. These activities include:

- **Rituals and Ceremonies:** Many of the plants are utilized in traditional rituals and ceremonies, often serving symbolic purposes or as offerings to deities.
- **Medicinal Practices:** Several plant species are used for their medicinal properties, treating common ailments and promoting overall health within the community.
- **Daily Life and Festivities:** Plants play a role in daily life and festive occasions, including decorations, food preparations, and as part of customary practices.

Table 1. List of plant species used by Bodo tribe in socio-cultural and religious activities.

Sl.no	Scientific name	Family	Bodo name	Uses
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1	<i>Aegle marmelos</i> (L) Corr. Serr.	Rutaceae	Bel	Leaves are used in offering to please Lord Shiva. This plant is considered as plant of „Bwrai Bathou“ (Lord Shiva).
2	<i>Allium sativum</i> L.	Amaryllidaceae.	Sambram gupur	Plant is used to drive away the evil spirits.
3	<i>Alpina allughas</i> Rose.	Zingiberaceae	Tarai	Used in „Gwka-gwkwi“a kind of social curry prepared during „Bwisagu“ the Assam new year.
4	<i>Ananas comosus</i> (L.) Merr.	Bromeliaceae	Anaros	Young leaves are used in the preparation of „Amao“ the starter cake for „Jwo“ a kind of country made rice beer which is cultural and social drinks of Bodos.
5	<i>Anthocephalus cadamba</i> (Roxb.) Miq.	Rubiaceae	Kwdwm	The plant is believed as a plant of Lord Krishna.
6	<i>Antidesma diandrum</i> (Roxb.)	Phyllanthaceae	Lapasaiko	Used in Gwka-gwkwi a kind of social curry prepared during „Bwisagu“ the Assam new year.
7	<i>Aquilaria agallocha</i> Roxb.	Thymelaeaceae	Agru	Agru aroma is used as fragrance during worship. This aroma is believed as fragrance of heaven.
8	<i>Areca catechu</i> L.	Arecaceae	Goi	It considered as holy fruits and used in offering to God and Goddess.

9	<i>Bambusa tulda</i> Roxb.	Poaceae	Owa	Bamboo plant has relation from birth to death of Bodo people. Sharp bamboo stick is used to cut the nari() of new born baby.They also use bamboo shang (carriage) which is prepared by tying with rope of cane (raidwng) strictly to carry the death soul.
10	<i>Benincasa hispida</i> Thunb.	Cucurbitaceae	Kumbra	Mature enough fruits called „kumbra bwrai“ are used in preparation of „Napam“ a fermented fish. „Napam“ is a traditional heritage and social dish of Bodos.
11	<i>Bixa orellana</i> Linn	Bixaceae.	Sindur bipang	The red dyes over the seed coat are used during worship.
12	<i>Brassica campestris</i> L.	Brassicaceae	Besor	Seeds are used to drive away the evil spirits. Seed oil is used

				to lighten the lamp during worship.
13	<i>Clerodendum infortunatum</i> Gaertn.	Verbenaceae	Lwkwna	Twig of flowers are used in celebration of „Bwisagu“ the Assam new year. Young leaves are used in the preparation of „Amao“ the starter cake for „Jwo“ a kind of country made rice beer which is cultural and social drinks of Bodos.
14	<i>Calamus latifolius</i> Roxb.	Arecaceae	Raidwng	The plant is used as rope to tie during preparation of many social and cultural articles of Bodos. Young tendered shoot- apex is used in „Gwka-gwkwi“ a kind of social curry prepared during Assam new year.
15	<i>Curcuma amarissima</i> L.Roscoe.	Zingiberaceae	Katri bipang	Twig of flowers are used in celebration of „Bwisagu“ the Assam new year. Leaves are used as traditional packaging materials.
16	<i>Cannabis sativa</i> L.	Cannabaceae	Ganja	Used during worship of Lord Shiva.
17	<i>Costus speciosus</i> Koen ex.Retz.	Costaceae	Buritokon	Young shoots are used in celebration of „Bwisagu“ the Assam new year. Used in Gwka-gwkwi a kind of social curry prepared during „Bwisagu“ the Assam new year.
18	<i>Canna indica</i> L.	Cannaceae	Pajati	The flower of this plant is believed as flower of heaven.
19	<i>Canarium bengalensis</i> Roxb.	Burseraceae	Dhuna	The brownish clear resin of this plant is use as fragrance during worship.
20	<i>Catharanthus roseus</i> (L.)G.Don	Apocynaceae	Parvati pul	Flower is used to offer Goddess „Parvati“.
21	<i>Curcuma longa</i> L.	Zingiberaceae	Haldwi	This plant is regarded as holy plant. Bathing with rhizome extract before doing any sacred work is seen among the Bodos.
22	<i>Cocos nucifera</i> L.	Arecaceae	Narengkol	It is considered as holy fruitsand used in offering to God and Goddess.
23	<i>Colocasia esculenta</i> (L.)Schott.	Araceae	Taso	Used in preparation of „Napam“ a fermented fish. „Napam“ is a traditional heritage and social dish of Bodos.
24	<i>Corchorus capsularis</i> L.	Malvaceae	Patw (Narji)	Dry leaves are used in preparation of a social curry „narji wngkri“. Dry leaves are also used in ritual believes of Bodos to cut off relation with departed soul.

25	<i>Cynodon dactylon</i> (L)Pers.	Poaceae	Dubri hagra	The twigs of leaves are used in holy water (Dwi Santi) during worship.
26	<i>Datura stramonium</i> L.	Solanaceae	Datura	Used during worship of Lord Shiva.

27	<i>Dillenia indica</i> L.	Dilleniaceae	Taigir	The persistent calyx (false fruit) is used in lightning during Kartik gasa i.e. lamp of „Kartik“ the Assam month. The five persistent calyx of this plant is significantly mentioned in „Bathou“ prayer.
28	<i>Eleocarpus ganitrus</i> (Roxb.)	Eleocarpaceae	Undurmala	The beaded chain prepared from the seeds of this plant is used during the worship of „Bwrai Bathou“ (Lord Shiva).
29	<i>Erianthus</i> spp.	Poaceae	Engkwr	Plants are used in „Bathou“ the altar of <i>Bodos</i> . This plant is also used in construction of traditional kutcha house of <i>Bodos</i> .
30	<i>Euphorbia neriifolia</i> Linn.	Euphorbiaceae	Sejou	In the preparation of „Bathou“ the altar of <i>Bodos</i> this plant is surrounded by a round fence of five bamboo strips. This plant is regarded as plants of „Bwrai Bathou“ (Lord Shiva).
31	<i>Entada gigas</i> (L) Fawc & Rendle	Fabaceae	Gila	Seeds are used in indigenous sports „Gila gelenai“.
32	<i>Ficus religiosa</i> Linn.	Moraceae	Pakri	<i>Bodos</i> worship their God under this tree. It is believed as a plant of Lord Krishna. They have ritual of offering drinking water to death soul with leaves of this plant.
33	<i>Ficus bengalensis</i> L.	Moraceae	Dhob	This plant is considered as devils plant.
34	<i>Hibiscus rosa sinensis</i> L.	Malvaceae	Joba pul	This flower is used for offering to God and Goddess.
35	<i>Imperata cylindrical</i> (L) P. Beauv.	Poaceae	Turi	The plant is used as thatch for roofing for a kutcha house. <i>Bodos</i> have their own traditional design kutcha house.
36	<i>Justicia gendarussa</i> Burm.f.	Acanthaceae	Jatrasa	The twig of leaves is used in holy water (Dwi Santi) during worship.
37	<i>Leucas aspera</i> (Willd.) Linn.	Lamiaceae	Kansingsa	The flower of this plant is specially used in offering to please the Lord Shiva.
38	<i>Laportea crenulata</i> Goud	Urticaceae	Koma	The leaves with stinging hairs of this plant are used for irritating the guilty person as a social punishment.

39	<i>Musa paradisiacal</i> L.	Musaceae	Tailir	Whole parts of the plant are used in social and religious activities. Fruits are used for offering. Portion of leave apex called „lajwo“ and portion of petiole called laikong are used as article for offering.
40	<i>Maranta</i> sp.	Marantaceae	Laihulai	Used in making of „Kopri“ a

				traditional and cultural bamboo article. Bodos are use Kopri as umbrella in rain.
41	<i>Mangifera indica</i> L.	Anacardiaceae	Taijwo	Leaves are used in offering.
42	<i>Nephrodium cucallatum</i> (Blume) Baker.	Dryopteridaceae	Saldaokumwi	This plant is used to keep away of evil spirit from ill soul of humans.
43	<i>Ocimum sanctum</i> Linn.	Lamiaceae	Tulsi	The twig of leaves is used in holy water (Dwi Santi) during worship.
	<i>Oryza sativa</i>	Poaceae	Mai	Seeds are used in many religious occasion of Bodos.
44	<i>Piper betle</i> L.	Piperaceae	Patwi	Leaves are used in offering. Bodos have rituals of „Patwi lai bisinai“ i.e. teacing of betel leaves during divorce.
45	<i>Ricinus communis</i> Linn.	Euphorbiaceae	Indi bipang	Leaves are used as food plant for eri-silk. The rearing of eri-silk worm is traditional heritage of Bodo women.
46	<i>Scoparia dulcis</i> L.	Plantaginaceae	Bongpang rakeb	Young leaves are used in the preparation of „Amao“ the starter cake for „Jwo“ a country made rice beer which is cultural and social drinks of Bodos.
47	<i>Sesamum indicum</i> L.	Pedaliaceae	Sebeng	Seeds are used in preparation of rice cake (pitha) a social cake during festival “Domasi”.
48	<i>Tabernaemontana divaricata</i> R.Br. ex Roem & Schult.	Apocynaceae	Pul daodwi	This flower is used in offering God and Goddess.

Conclusion

The study of socio-cultural and religious plants among the Bodo tribes reveals the profound importance of plants in human life beyond their commercial uses in food, medicine, clothing, and shelter. These plants, often lesser-known, are vital to the socio-cultural and religious heritage of the Bodo community, illustrating the deep connection between human traditions and the natural world. This research highlights how the Bodo community actively contributes to the conservation of plants and forests. Their traditional practices, driven by socio-cultural and religious beliefs, play a crucial role in preserving biodiversity. By valuing and protecting these plants, the Bodos demonstrate a sustainable approach to using natural resources, ensuring the continuity of their cultural practices while promoting ecological balance. In today's context of biodiversity crisis, the Bodos' conservation efforts through their socio-cultural and religious activities offer valuable insights. These activities underscore the significance of integrating traditional knowledge and practices into modern conservation strategies. Understanding and preserving the cultural heritage associated with these plants is essential for achieving sustainable biodiversity conservation. The study emphasizes the need to recognize and support the role of indigenous communities in biodiversity conservation. By documenting and appreciating the socio-cultural and religious significance of plants, we can foster a greater understanding of the interconnectedness of human and ecological well-being. This approach not only helps in conserving biodiversity but also ensures the preservation of cultural identities and traditional knowledge systems for future generations.

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