

Ethnomedicinal plants of Anacardiaceae family

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Abstract: The family Anacardiaceae comprises of several plant species with significant ethnomedicinal importance across tropical and subtropical regions. The present study documents the traditional knowledge associated with ethnomedicinal plants of the family Anacardiaceae used by indigenous and rural communities of Odisha, India. Field investigations were carried out in selected regions of Odisha through semi-structured interviews with local healers, elderly villagers and knowledgeable informants. A total of nine plant species belonging to eight genera were recorded, with their uses primarily related to gastrointestinal disorders, skin diseases, bone fracture healing, parasitic infections and hair care. Different plant parts such as bark, fruits, leaves, kernels and nut shells were used in the form of decoctions, pastes, oils or raw applications. The study highlights the continued dependence of local communities on plant-based traditional medicine and emphasizes the importance of documenting and conserving this valuable indigenous knowledge, which may provide leads for future pharmacological research.

Keywords: Ethnomedicine, indigenous knowledge, medicinal plants, Odisha, traditional healthcare

Introduction

Ethnomedicinal plants play a vital role in the primary healthcare systems of indigenous and rural communities, particularly in developing countries such as India (Das et al., 2025). Traditional knowledge related to medicinal plants has evolved over generations through close interaction with nature and continues to be an important resource for treating various ailments (Awoke et al., 2024). India is one of the world's biodiversity-rich countries and harbors a vast repository of ethnobotanical knowledge associated with its diverse cultural and ethnic groups (Bhat et al., 2021). Odisha, located on the eastern coast of India, is characterized by varied physiographic and climatic conditions and supports a rich floral diversity along with numerous indigenous communities who rely heavily on forest resources for their livelihood and healthcare needs (Rout, 2021). The family Anacardiaceae is represented by trees and shrubs known for their medicinal, nutritional and economic value (Salehi et al., 2019; Guerra et al., 2025). Several members of this family are widely used in traditional medicine for treating gastrointestinal disorders, skin ailments, inflammation, infections and bone injuries. Despite the widespread traditional use of Anacardiaceae species, systematic documentation of their ethnomedicinal applications in Odisha remains limited. Therefore, the present study aims to document and analyze the ethnomedicinal uses of selected Anacardiaceae species based on field observations and literature review, thereby contributing to the preservation of traditional knowledge and supporting future scientific validation.

Methodology

The ethnomedicinal data presented in this study were collected through field surveys conducted in different rural and forest-adjacent areas of Odisha in 2025. The study involved interactions with local healers, traditional practitioners, elderly villagers and community members who possess knowledge of medicinal plants. Information was gathered using semi-structured interviews, group discussions and informal conversations, focusing on plant names, parts used, methods of preparation, mode of administration and ailments treated (Lulesa et al., 2025). Plant specimens were identified using standard floras and taxonomic literature; and scientific names were verified with relevant botanical references (Saxena and Brahmam, 1994). The collected information was cross-checked through repeated interviews and compared with available ethnobotanical and pharmacological literature to ensure reliability. Only those uses that were consistently reported by multiple informants or supported by literature were included in the study (Kumar, 2025).

Results and Discussion

The present investigation documented nine ethnomedicinal plant species belonging to the family Anacardiaceae used by the local communities of Odisha. The recorded species are used to treat a range of ailments, with gastrointestinal disorders and skin-related problems being the most common. Bark and fruits were the most frequently utilized plant parts, followed by leaves, kernels and nut shells. The oil extracted from the kernel of *Buchanania lanzan* is traditionally applied topically to relieve skin itching, indicating its dermatological importance. *Lannea coromandelica* fruits are applied externally as a paste to promote bone fracture healing, reflecting indigenous knowledge related to musculoskeletal

treatments. The bark decoction of *Mangifera indica* and *Spondias pinnata* is widely used to treat diarrhoea and dysentery, which aligns with earlier ethnomedicinal reports from different parts of India. Parasitic infections are addressed using fruit-based remedies, such as the decoction of powdered fruits of *Rhus chinensis* and the use of raw fruits of *Semecarpus anacardium* for managing stomach worms. Skin-related ailments such as ringworm are treated using the nut shell of *Anacardium occidentale*, while insect bites are managed with leaf paste of *Nothopegia beddomei*. The use of *Cotinus coggygria* leaves for promoting hair growth further highlights the cosmetic and therapeutic relevance of Anacardiaceae species. The findings demonstrate a strong correlation between traditional knowledge and reported pharmacological activities of these plants, suggesting that the indigenous practices are based on long-term empirical observations. However, variations in preparation methods and dosage emphasize the need for scientific standardization.

Table 1: Common ethnomedicinal plants of Anacardiaceae family

Plant name	Common name	Uses
<i>Anacardium occidentale</i> L. (Plate 1a)	Cashew-nut Tree	Nut shell is used to cure ringworm.
<i>Buchanania lanzan</i> Spreng. (Plate 1b)	Almondette tree	Oil extracted from the kernel is widely used in traditional medicine for topical application to relieve skin itching.
<i>Cotinus coggygria</i> Scop.	Smoketree	Leaves are useful in hair growth (Matić et al., 2016).
<i>Lannea coromandelica</i> (Houtt.) Merr. (Plate 1c)	Indian Ash Tree	The fruits are edible and are used for promoting the healing of bone fractures when applied externally as a paste.
<i>Mangifera indica</i> L. (Plate 1d)	Mango	Bark decoction is used to cure diarrhoea.
<i>Nothopegia beddomei</i> Gamble	Malabar Top-Fruit Tree	Leaves paste is useful in insect bites.
<i>Rhus chinensis</i> Mill.	Chinese Sumac	Fruit powder decoction is used to kill stomach worm.
<i>Semecarpus anacardium</i> L.f. (Plate 1e)	Marking Nut Tree	Raw fruits are used to manage stomach worm.
<i>Spondias pinnata</i> (L.f.) Kurz (Plate 1f)	Indian Hog-Plum	A decoction of bark is a traditional remedy for diarrhea and dysentery.



Plate 1: Common ethnomedicinal plants of Anacardiaceae family a) *Anacardium occidentale*, b) *Buchanania lanzan*, c) *Lannea coromandelica*, d) *Mangifera indica*, e) *Semecarpus anacardium* and f) *Spondias pinnata*

Future Aspects

The ethnomedicinal plants documented in this study offer significant potential for future pharmacological and phytochemical investigations. Scientific validation of traditional claims through laboratory and clinical studies may lead to the discovery of novel bioactive compounds. Conservation of these plant species and associated traditional knowledge is essential, as habitat degradation and modernization pose serious threats to indigenous practices. Integrating ethnomedicinal knowledge with modern

healthcare systems and promoting community-based conservation strategies may ensure sustainable utilization of these valuable plant resources.

Conclusion

The present study highlights the ethnomedicinal significance of nine plant species belonging to the family Anacardiaceae used by indigenous communities of Odisha. The documented traditional practices reveal the important role of these plants in treating gastrointestinal disorders, skin diseases, bone fractures, parasitic infections and hair-related problems. Preservation and documentation of such indigenous knowledge are crucial, not only for cultural heritage but also for their potential contribution to future drug development. Further scientific investigations are recommended to validate the therapeutic efficacy and safety of these traditionally used plant species.

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