International Journal of Social Science and Humanities
www.humanitiesjournals.com
ISSN: 2664-8628
Received: 16-09-2026, Accepted: 16-10-2026, Published: 31-10-2026
Volume 8, Issue 4, 2026, Page No. 55-60

Indigenous plant knowledge among the Birjia Tribe of Latehar, Jharkhand

Vivek Kumar[1], Dr. Rabindranath Sarma[2]
[1] Research Scholar, Department of Anthropology and Tribal Studies, Central University of Jharkhand, Ranchi, Jharkhand, India
[2] Professor, Department of Anthropology and Tribal Studies, Central University of Jharkhand, Ranchi, Jharkhand, India
DOI: https://doi.org/10.66856/ijssh.2026.8.4.8156

Abstract
The Birjia, a Particularly Vulnerable Tribal Group (PVTG) of Jharkhand, possess a rich, but rapidly eroding body of Indigenous Plant Knowledge that remains poorly documented in the ethnobotanical literature. The present study documents the Indigenous Plant Knowledge of the Birjia in the Dauna and Purandih villages of the Mahuadanr block and the Batuatoli village of the Netarhat block of the Latehar district, Jharkhand, India. Field data were collected through semi-structured interviews and guided field walks with key informants identified through snowball sampling, a method suited to small, dispersed populations in which specialized knowledge is concentrated among a few elder practitioners. A total of 14 plant species distributed across 12 families were recorded as remedies for 14 categories of ailment, ranging from common complaints such as fever, cough, and stomach ache to culturally significant conditions such as barrenness and induced abortion. Roots were the most frequently used plant part (6 of 14 remedies), followed by bark and leaves (three each) and by seed and tuber (two each), and preparations were predominantly administered as pastes and decoctions taken orally or applied topically.
All botanical identifications were checked against Plants of the World Online and the International Plant Names Index to ensure currently accepted nomenclature. The study also situates plant-based healing within the wider Birjia worldview, in which persistent illness is attributed to malevolent spirits or ancestral displeasure and is referred to a ritual specialist for diagnosis. Some recorded species, notably *Peucedanum dhana* (Bhojraj), have been described in the literature as rare or endangered, underscoring the urgency of recording this knowledge before it is lost to acculturation and generational discontinuity.

Keywords: Birjia tribe, indigenous plant knowledge, ethnomedicine, Latehar district, tribal healing

Introduction

Indigenous Plant Knowledge, the body of knowledge through which human societies use and manage plants and the subject of ethnobotanical study (Martin, 1995) [8], occupies a central place in the documentation of indigenous knowledge systems that have sustained primary healthcare in rural and tribal India for generations. The WHO Global Report on Traditional and Complementary Medicine 2019, based on contributions from 179 WHO Member States, documents the widespread use and growing national recognition of T&CM. By 2018, 170 Member States reported its use, and 124 had regulations on herbal medicines (World Health Organization, 2019) [18]. India, with its exceptional floristic and cultural diversity, is home to 705 tribal communities (Ministry of Tribal Affairs, 2014) [9] many of whom maintain sophisticated, orally transmitted systems of ethnomedicine that have rarely been recorded in the formal scientific literature.

Jharkhand, formed from Bihar and located largely on the Chotanagpur Plateau, is home to 32 Scheduled Tribe groups, including eight Particularly Vulnerable Tribal Groups (PVTGs). PVTGs are identified using criteria that include pre-agricultural levels of technology, stagnant or declining populations, extremely low literacy, and subsistence-level economies (Government of Jharkhand, 2022; Ministry of Tribal Affairs, 2018 [10]; Tribal Welfare Research Institute, Jharkhand, n.d.). The Birjia are a small community found mainly in Latehar, Gumla, Lohardaga, Palamu, and some of the other districts of Jharkhand; the 2011 Census recorded a population of 6,276 in Jharkhand (Ministry of Tribal Affairs, 2017). While the plant-use repertoires of larger neighboring tribes, such as the Oraon of the Latehar district (Roy & Mandal, 2022). Munda and Birhor uses some invasive plants in Latehar and Hazaribagh districts for their medicinal purposes (Divakara & Prasad, 2015). Birhor which belongs to PVTGs have rich botanical knowledge (Mairh *et al*., 2010).

The present study was therefore undertaken with the following objectives:

1. To systematically document the Indigenous plants used by the Birjia of the Dauna and Purandih villages of the Mahuadanr block and the Batuatoli village of Netarhat block, Latehar district.
2. To verify and update the botanical nomenclature of the recorded species to ensure it aligns with current taxonomic standards.

3. This study aims to situate plant-based knowledge within the broader Birjia cultural framework of illness causation and healing, contributing both a botanical inventory and an anthropological account of use that may serve as a baseline for conservation, further pharmacological investigation, and policy attention to PVTG healthcare.

Study Area

The Latehar district lies in the northern part of the Chotanagpur plateau in Jharkhand State, characterized by undulating terrain, lateritic soils, and tropical dry-deciduous forest interspersed with sal (Shorea robusta) stands. The present study was conducted in two administrative blocks of the district. Mahuadanr block, in the northwestern part of the district, is a forested tract adjoining the Mahuadanr Wolf Sanctuary and is home to a cluster of Birjia hamlets, including the villages of Dauna and Purandih, both of which were selected for the present study. The Netarhat block, better known for the Netarhat hill station, popularly called the 'Queen of Chotanagpur', lies at a higher elevation on the plateau and experiences a comparatively cooler climate; the village of Batuatoli in this block was selected as the third study site. All three villages are small, forest-fringe settlements where subsistence agriculture, minor forest produce collection, and daily-wage labor form the principal livelihood base and where access to formal allopathic healthcare remains limited, sustaining continued reliance on home-based and traditionally transmitted herbal remedies. Maps are provided for Dauna (Fig. 1) and for Birjiatoli which includes Batuatoli (Fig. 2); no map is given for Purandih because it lies in dense forest.

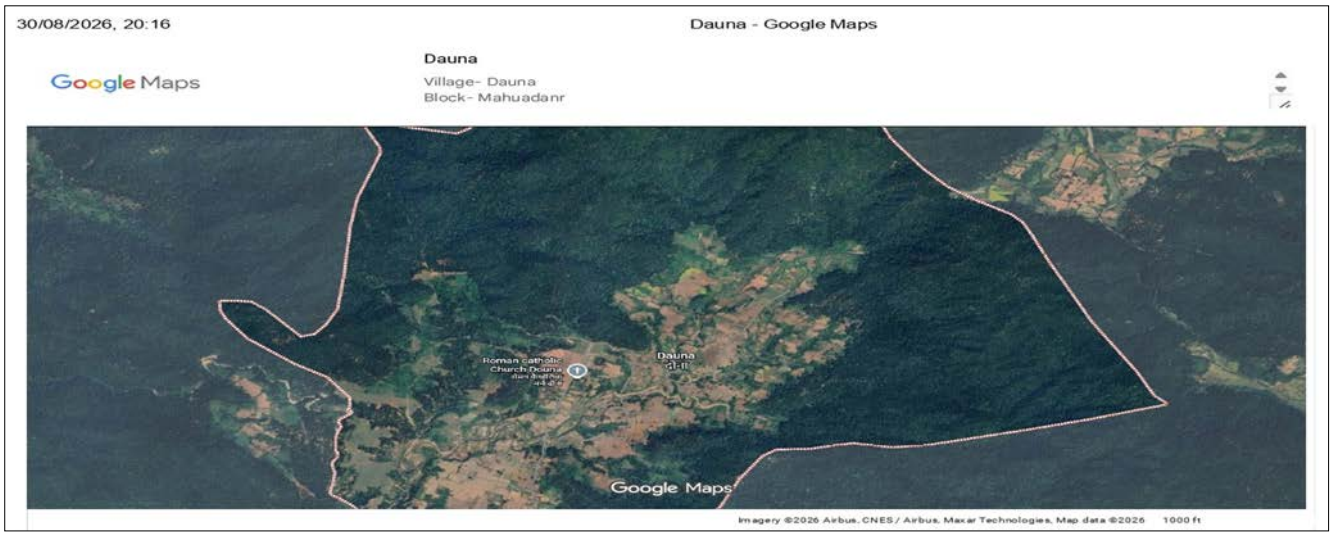


Fig 1: Map of the Dauna Village

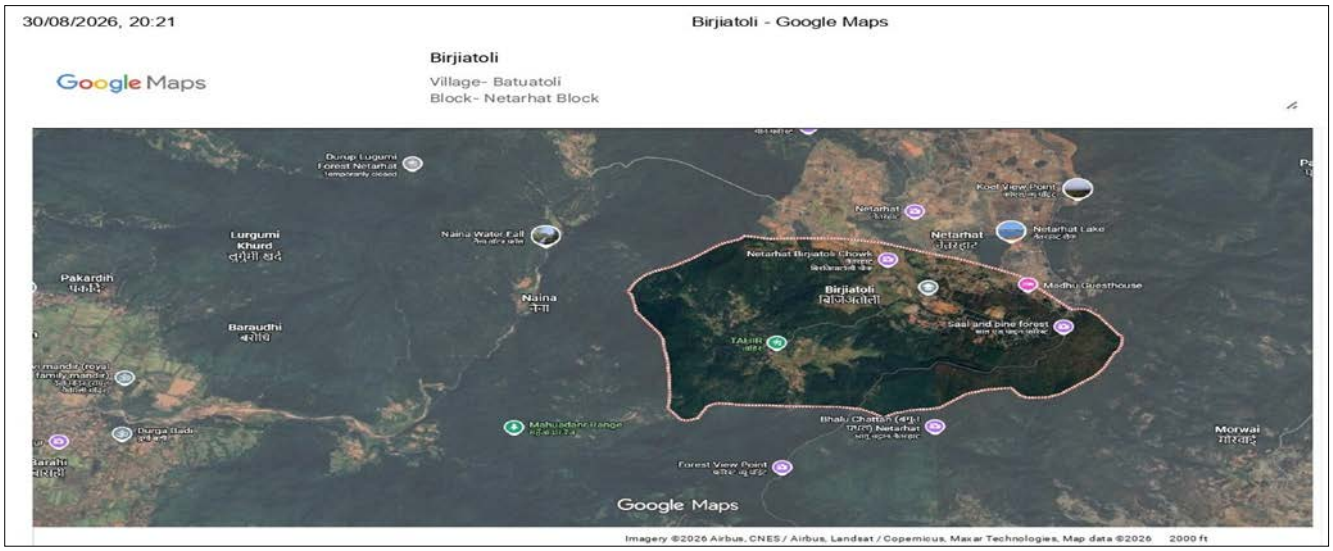


Fig 2: Map of the Birjiatoli (Batuatoli is inside the Birjiatoli)

Ethnographic Profile of the Birjia

The Birjia are classified by the Government of India as a Particularly Vulnerable Tribal Group (Ministry of Tribal Affairs, n.d.) and speak Birjia dialect. Their language is commonly assumed to belong to the Munda group and to be closely related to Asuri (Dr. Ramdayal Munda Tribal Welfare Research Institute, n.d.; Scheme for Protection and Preservation of Endangered Languages, n.d.). Ethnographic

work describes the Birjia as a forest -dependent community whose social behaviour, customs, beliefs and economy are closely associated to their local forest environment (Dasgupta, 1992) [1]. Early accounts describe them as nature worshippers (Dasgupta, 1994) [2]. In the three study villages, livelihood combine subsistence agriculture, minor forest produce collection and daily-wage labor (authors field observation).

Within this worldview, illness is not understood in purely biomedical terms. Informants across all three villages consistently reported that while everyday ailments are treated with herbal remedies known within the household or village, any sickness that fails to respond, or that recurs, is attributed to the malevolent action of an evil spirit, to sorcery by another person, or to the displeasure of deceased ancestors. In such cases, the Dewair and Pahans, a ritual specialist who diagnoses the supernatural cause of illness through divinatory performance, is consulted, and the herbal treatment is typically continued alongside or after his prescribed remedial rites. The coexistence of herbal treatment and ritual or spiritual healing has been documented in ethnomedical studies of tribal communities (Pegu & Sharma, 2011) [12]. This layered aetiology, in which herbal pharmacy and ritual diagnosis are complementary rather than competing explanatory systems, frames the interpretation of the plant-use data presented below.

Materials and Methods

1. Study design and sampling

Qualitative, field-based ethnobotanical research was carried out in the Dauna and Purandih villages of the Mahuadanr block and the Batuatoli village of the Netarhat block. Given the small and dispersed nature of the Birjia population and the concentration of detailed plant-use knowledge among a limited number of elder informants and village-level herbal practitioners, snowball sampling was adopted as the principal sampling strategy. Initial key informants, village elders, and locally recognized herbal practitioners were identified with the assistance of village heads, and each was asked to refer other individuals reputed to possess plant-use knowledge, a process repeated until no substantially new informants or plant citations emerged. Chain-referral (snowball) sampling is a recognized non-probability sampling strategy for recruiting additional participants through referrals from initial respondents (Newing *et al*., 2011) [11]. It was used here to reach Birjia knowledge holders identified as having specialized knowledge of medicinal plants.

2. Data collection

Data were collected through semi-structured interviews conducted in the local dialect, Sadri (with translation assistance where required), supplemented by guided field walks during which informants located, identified, and demonstrated the collection and processing of the plants they described (Martin, 1995) [8]. For each remedy, information was recorded on the local name of the ailment, the local name of the plant, the plant part used, the method of preparation, and the mode and frequency of administration. Prior informed consent was obtained orally from each informant before the interview, and the customary and collective nature of the knowledge being shared was explained and acknowledged, consistent with the principles of the Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization (Secretariat of the Convention on Biological Diversity, 2011) [15].

3. Plant identification and nomenclature

Plant specimens shown or described by informants were identified with reference to regional floras and, where fresh material was available, through field photography and comparison with herbarium records. All botanical names were subsequently cross-verified against Plants of the World Online (Royal Botanic Gardens, Kew) (POWO, 2026) [13] and the International Plant Names Index (IPNI, n.d.) to ensure that the currently accepted name, rather than an older synonym, is reported; family placements follow the Angiosperm Phylogeny Group system (The Angiosperm Phylogeny Group, 2016) [16] as reflected in these databases. Where a local identification could not be confirmed with certainty against a voucher specimen, this is explicitly flagged in Table 1 and discussed in Section 6.

4. Data analysis

Data were organized by disease category, plant family, and plant part used and summarized descriptively to identify patterns in resource use, consistent with standard practice in qualitative ethnobotanical reporting.

Results

Informants in the three study villages reported 14 plant taxa from 12 angiosperm families used to address 14 reported ailments or health conditions (Table 1). The reported conditions included fever, cold and cough, headache, chest pain, toothache, stomach ache, wounds and injuries, rheumatism, bone fracture, stomach upset, eczema, earache, and giddiness.

Roots were the most frequently reported plant part, appearing in 6 entries. Bark, seeds and tubers in two entries each. Fruit, and leaves were each recorded once. Paste prepared by crushing or grinding plant material with water was the most common mode of preparation, followed by decoction (boiling in water) and, less frequently, powder and expressed oil. Oral administration predominated, though topical application was recorded for wound, injury, chest pain, headache remedies, and for the navel application (stomach upset) and ear-drop (earache) preparations. Malvaceae (three species), and Apocynaceae (two species each) were the best represented families, and each of the remaining 10 families was represented by a single species.

Table 1: Indigenous Plant plants used by the Birjia tribe of Dauna, Purandih (Mahuadanr block) and Batuatoli (Netarhat block) villages, Latehar district, Jharkhand (India)

Sl. No.	Disease name	Disease name (local dialect)	Plant name (local dialect)	Plant name (English)	Botanical name	Family	Part used	Method of preparation	Mode of usage
1	Fever	Rautana / Jwar	Gethi	Air potato	Dioscorea bulbifera L.	Dioscoreaceae	Tuber	The outer rind of Gethi tuber is peeled off, crushed and soaked in water for a few hours; the soaked material is then boiled and the decoction is strained.	Taken orally twice a day, with an interval of at least fifteen minutes after meals, until the fever subsides.
2	Cold and cough	Khuktana	Harra	Black myrobalan	Terminalia chebula Retz.	Combretaceae	Bark	The bark is ground on a stone with a little water into a fine paste.	A small quantity of the paste is taken with plain water once daily; use at night is avoided.
3	Headache	Samangha Sutana	Chakkoar	Roselle	Hibiscus sabdariffa L.	Malvaceae	Root	The root is rubbed on a grinding stone into a smooth paste.	The paste is applied topically to the forehead once daily, before sunrise.
4	Chest pain	Kurainhasua	Chhatiani	Blackboard tree	Alstonia scholaris (L.) R.Br.	Apocynaceae	Bark	The bark is crushed into a coarse paste.	Applied externally over the chest, only at night before sleeping.
5	Toothache	Datahasua	Rangaina	Yellow-berried nightshade	Solanum virginianum L. (syn. S. xanthocarpum)	Solanaceae	Root	The root is crushed and ground into a fine paste.	A small amount of paste is applied directly to the affected tooth and gum, twice a day.
6	Stomach ache	Suantana	Marodotto	East Indian screw tree	Helicteres isora L.	Malvaceae	Root	The root is crushed and boiled in water to prepare a decoction.	The warm decoction is taken on an empty stomach in the morning.
7	Wounds and cuts	Ghaav	Naspati	Pear	Prunus communis L.	Rosaceae	Root	The root is ground with a little water into a fine paste.	Applied topically over the wound, two to three times a day, until healing is observed.
8	Injury	Mahtanai	Genda	Spreading Marigold	Tagetes patula L.	Asteraceae	Leaves	Fresh leaves are crushed into a paste.	Applied externally on the injured area, two to three times a day.
9	Rheumatism	Gethia	Champa	Champak / Golden Champa	Magnolia champaca (L.) Baill. ex-Pierre	Magnoliaceae	Root	The dried root is powdered.	One dose of the powder is taken with plain water, once daily.
10	Bone fracture	Haddi tutna	Dudhi Kanda	Indian sarsaparilla	Hemidesmus indicus (L.) R.Br.	Apocynaceae	Root	The root is crushed into a paste and mixed with locally distilled mahua liquor; the fractured limb is splinted with bamboo strips and wooden supports and bound with rope for about a fortnight.	The preparation is taken orally once every three to four days for the duration of splinting.
11	Stomach upset	Pet Kharab	Munjuni	Black oil plant	Celastrus paniculatus Willd.	Celastraceae	Seed	Two to three drops of oil expressed from the seed are applied to the navel region and gently massaged.	The area is fomented with a warm compress for two to three minutes after massage, once daily.
12	Eczema	Funsuri	Mahua	Mahua / Butter tree	Madhuca longifolia var. latifolia (Roxb.) A. Chev.	Sapotaceae	Seed	Seed oil, locally called Dori tel, is extracted and used for massage.	The affected skin is massaged with the oil once daily, followed by a bath after a short interval.
13	Earache	Luturhasua	Aura-Ghatti	Indian gooseberry / Amla	cf. Phyllanthus emblica L.	Phyllanthaceae	Tuber	The dried tuber is powdered finely and mixed with a small quantity of any locally available oil.	Used as an ear-drop, twice a day, into the affected ear.
14	Giddiness	Bultana	Kathal	Jackfruit	Artocarpus heterophyllus Lam.	Moraceae	Fruit	The fruit pulp is ground and mixed with hot water.	Taken orally once a day.

Discussion

The present inventory adds a hitherto poorly documented body of Indigenous Plant knowledge to the literature on tribal healing in the Latehar district, complementing existing accounts of the neighbouring Oraon community. While there is partial overlap at the level of plant genera commonly employed across Chotanagpur tribal groups (Marandi *et al*., 2016) [7] for instance, Solanum virginianum (syn. S. xanthocarpum), used here for toothache (Table 1), is a widely used medicinal plant whose fruit extracts showed antioxidant and cytotoxic activity *in vitro* (Kumar & Pandey, 2014) [6], although that study did not test root preparations or dental use, the Birjia vernacular terminology for both ailments and plants is largely distinct, reflecting a distinct linguistic heritage.

The most of the species has been described as a rare and endangered medicinal plant of the Chotanagpur plateau and has been subjected to phytochemical profiling that revealed a range of bioactive constituents (Marandi *et al*., 2018). The studies test the tonic or joint-related use reported here and validate that the Birjia people are using and practicing whenever they need. Which leads to emphasises the conservation value of present ethnobotanical record.

The persistence, alongside herbal treatment, of a supernatural etiology of chronic or non-resolving illness, attributed to malevolent spirits, sorcery, or ancestral displeasure and referred to the Pahan (ritual specialist) for ritual diagnosis, situates Birjia plant use within a coherent, non-biomedical explanatory framework rather than as an isolated pharmacopoeia. This dual system, in which herbal and ritual therapy are sequentially or jointly invoked, is a pattern reported for other tribal societies and cautions against any interpretation of Indigenous Plant citation lists in isolation from their cultural context. The present inventory also offers a starting point for future pharmacological and phytochemical validation studies, some of which have already begun for species reported here.

Conclusion

This study provides the first documented account of Birjia Indigenous Plant knowledge from the Mahuadanr and Netarhat blocks of the Latehar district, recording 14 plant species across 12 families used against 14 categories of ailment. The findings underscore both the richness and the fragility of this knowledge and point to the need for voucher-based taxonomic confirmation, pharmacological validation of promising species such as Peucedanum dhana, and sustained community engagement to conserve both the plant resources and the traditional knowledge that sustains their use.

References

1. Dasgupta S. Ecology and economy: A study among the Birjia of Chotanagpur Plateau. Journal of Human Ecology,1992:3(4):279–283.
2. Dasgupta S. Birjia: Society and culture: A study in cultural ecological perspective. Firma KLM, 1994.
3. Dr. Ramdayal Munda Tribal Welfare Research Institute. Tribes of Jharkhand. Retrieved October 24, 2026, from https://trijharkhand.in/en/tribes-of-jharkhand
4. Government of Jharkhand. Jharkhand Economic Survey 2021–22: Executive Summary. Government of Jharkhand, 2022.
5. International Plant Names Index. International Plant Names Index. Retrieved October 24, 2026, from https://www.ipni.org/
6. Kumar S, Pandey AK. Medicinal attributes of Solanum xanthocarpum fruit consumed by several tribal communities as food: An *in vitro* antioxidant, anticancer and anti-HIV perspective. BMC Complementary and Alternative Medicine,2014:14:Article 112.
7. Marandi RR, Britto SJ, George M, Minj E. Pharmacognostic, fluorescent, antibacterial and phytochemical analysis of tuber of Dioscorea bulbifera L. from Jharkhand. Journal of Pharmacognosy and Phytochemistry,2016:5(1):8–14.
8. Martin GJ. Ethnobotany: A methods manual. Chapman & Hall, 1995.
9. Ministry of Tribal Affairs. Report of the High-Level Committee on Socio-Economic, Health and Educational Status of Tribal Communities of India. Government of India, 2014.
10. Ministry of Tribal Affairs. Development of Particularly Vulnerable Tribal Groups. Press Information Bureau, Government of India, April 2, 2018.
11. Newing H, Eagle CM, Puri RK, Watson CW. Conducting research in conservation: Social science methods and practice. Routledge, 2011.
12. Pegu S, Sharma UK. Ethnobotany of religious and supernatural beliefs of the Mising tribes of Assam with special reference to the “Dobur Uie.” Journal of Ethnobiology and Ethnomedicine,2011:7:Article 16.
13. Plants of the World Online. Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. Retrieved October 24, 2026, from https://powo.science.kew.org/
14. Scheme for Protection and Preservation of Endangered Languages, Central Institute of Indian Languages. Birjia documentation. Retrieved October 24, 2026, from https://sppel.org/resources/language-documentation/birjia
15. Secretariat of the Convention on Biological Diversity. Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization. Convention on Biological Diversity, 2011.
16. The Angiosperm Phylogeny Group. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG IV.

Botanical Journal of the Linnean Society,2016:181(1):1–20.
17. Tribal Welfare Research Institute, Jharkhand. Tribes of Jharkhand. Retrieved October 24, 2026, from https://www.trijharkhand.in/en/tribes-of-jharkhand
18. World Health Organization. WHO global report on traditional and complementary medicine 2019. World Health Organization, 2019.