

**INDIGENOUS KNOWLEDGE AND ETHNOMEDICINAL USE OF BIGNONIACEAE
FAMILY PLANTS IN BARGARH DISTRICT, WESTERN ODISHA, INDIA****Sunil Kumar Sen* and Lalit Mohan Behera**

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DOI: <https://doi.org/10.5281/zenodo.18430703>

How to cite this Article: Sunil Kumar Sen* and Lalit Mohan Behera (2026). Indigenous Knowledge And Ethnomedicinal Use Of Bignoniaceae Family Plants In Bargarh District, Western Odisha, India. World Journal of Pharmaceutical and Medical Research, 12(2), 280–287.

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Article Received on 22/12/2025

Article Revised on 12/01/2026

Article Published on 01/02/2026

ABSTRACT

Plants of the Bignoniaceae family exhibit remarkable morphological diversity, ranging from trees, lianas and climbers to shrubs. The plants of this family are also known for their ornamental, ecological, and medicinal values. It is one among the most medicinally diverse families within angiosperms, offering a wealth of therapeutic compounds used both in conventional and traditional medicine. The present study listed nine plant species of Bignoniaceae family from Bargarh district in Odisha. The paper enumerated the reported species in alphabetic order with recent scientific names, vernacular names including local names, brief description of the plants, ethnomedicinal uses including parts used, dosages and mode of applications.

KEYWORDS: Indigenous knowledge, Ethnomedicinal plants, Bignoniaceae, Tribals, Bargarh district.**INTRODUCTION**

The Bignoniaceae family is a prominent group of flowering plants belonging to the order Lamiales and the plants are mostly growing in tropical and subtropical region. The plants are known for their large size, showy and ornamental flowers. Some of the plants of Bignoniaceae are also known for the cultural and spiritual beliefs of the regions where they grow; frequently connected to medicinal practices and symbolic meanings. The family is commonly known as the Bignonias family, Trumpet vines, Trumpet creeper, Jacaranda family or the Catalpa family. Plants included in this family are mostly trees or lianas (woody climbers), some of them are shrubs and very less herbs. The family comprises around 112 genera and about 725 species worldwide,^[1] while a more recent report indicates about 110 genera and 827 species.^[2] In India, the Bignoniaceae family is represented by 34 genera and 58 species.^[3] In Odisha, the floristic studies have recorded the presence 12 genera and 29 species.^[4]

Plants of the Bignoniaceae family exhibit remarkable morphological diversity, ranging from trees, shrubs to lianas and climbers, and are known for their ornamental, ecological, and medicinal values. Their striking

beautiful, trumpet-shaped flowers not only attract pollinators but also made them popular choices for avenue and garden plantations.

Traditionally, many species within this family have been used in ethnomedicine for treating a wide array of ailments such as fever, respiratory disorders, digestive issues, skin diseases, and inflammation. For instance, *Oroxylum indicum*, *Stereospermum chelonoides* and *Millingtonia hortensis* are well documented medicinal plant in Ayurveda and other traditional systems of medicine known for its anti-inflammatory, antimicrobial and antioxidant properties.

Despite medicinal importance, the diversity and pharmacological potential of Bignoniaceae species remain underexplored in many regions. Therefore, the present study aims to document and evaluate the species diversity and traditional medicinal uses of plants belonging to the Bignoniaceae family, thereby contributing to the understanding of their ethnobotanical significance and supporting efforts toward their conservation and sustainable utilization. Moreover, this survey was conducted to collect, identify and document ethnomedicinal plants used by the local people in the

region, as well as to evaluate strategies for their protection and conservation. The present paper documents nine plants species such as *Dolichandrone falcata*, *Kigelia africana*, *Millingtonia hortensis*, *Oroxylum indicum*, *Pyrostegia venusata*, *Radermachera xylocarpa*, *Spathodea campanulata*, *Stereospermum chelonoides*, *Tecoma stans* that are traditionally used for the treatment of various diseases and ailments.

Brief description of the family

The family is known for its large leaves and spectacular flowers making species popular for ornamental landscaping and garden. The plants have opposite or whorled, rarely alternate and mostly commonly pinnately compound with terminal leaflet modified into tendrils. Flowers are in dichasial cyme with bracts and bracteoles. Calyx gamosepalous, campanulate; corolla gamopetalous, bell or funnel shaped, 5 lobes sub-equal or bilabiate with upper lip 2 lobes and lower lip 3 lobes. Stamens 4, tetradynamous, fifth one is staminode, epipetalous. Gynoecium bicarpellary, syncarpous, ovary superior, bilocular; style terminal, simple and stigma bifid.

MATERIALS AND METHODS

Study area

Bargarh district is located in the western part of Odisha. The region is covered by several forests with undulating hills and valleys, streams and waterfalls, grasslands, agricultural lands, and predominantly the tribal communities. The survey was conducted in various localities of forests and village surroundings. The district comprises a mosaic of forest types, predominantly tropical dry deciduous forests, and experiences a climate characterised by distinct dry and wet seasons. According to the 2011 Census, the district has a population of 1,481,255 and spans a total geographical area of 5,837 square Kms. It is home to several tribal communities, among which the *Sahanra (Saora)*, *Binjhal*, *Gond*, and *Kondh* are the most prominent and dominant groups. These tribal communities possess distinct cultural practices, spiritual beliefs, and customs that contribute to the district's rich cultural heritage. Notably, the region has a long-standing tradition of using ethnomedicinal plants to treat various ailments. Several studies have documented the traditional knowledge of these communities regarding the use of medicinal plants.^[5-11]

Ethnobotanical survey, data collection and verification

Between 2018 and 2021, a series of field surveys were conducted to gather data relevant to the study objectives. The surveys were conducted at various locations chosen for their ecological importance, accessibility, and relevance to the research. A team of researchers and field assistants carried out the visits, ensuring consistent data collection and documentation. Each field visit was conducted using a systematic approach that included in situ observations, voucher specimen collection, and

structured interviews with the village head, *Vaidyas*, *Guniyans*, *Kabirajs*, and other forest dwellers.

The plant species were identified using standard floras.^[4,12] Herbarium specimens were prepared in accordance with standard herbarium techniques^[13] and deposited in the Herbarium of the Department of Botany, Panchayat College, Bargarh for future reference. Ethnomedicinal data were recorded using a semi-structured questionnaire. Information on plant parts used, methods of preparation, and ailments treated was systematically documented. The traditional knowledge documented during the study was critically cross-verified using authoritative scientific literature and standard reference texts,^[14-19] to ensure the accuracy, reliability, and scientific validity of the ethnomedicinal claims.

ENUMERATION

The present study listed the reported species in alphabetic order, along with their recent scientific names, vernacular names (including local names), locality and collection number, brief descriptions of the plants, ethnomedicinal uses, including parts used, dosages, and mode of application.

1. *Dolichandrone falcata* (Wall. ex DC.) Seem

Local name: Belsurung; English: Falcata trumpet tree
Locality and Collection No. Ramkhol-385.

Brief description of the plant.

It is a small deciduous tree attaining a height of 15-20 feet. Leaves are imparipinnate, leaflets 5-11, ovate to obovate or oval-shaped, acute margin, obtuse base. Flowers are large, white, fragrant, in terminal racemes. Capsular fruit, flat, curved, 20-39 cm long, brown; seeds numerous, winged. Flowering and Fruiting: March to June.

Distribution: It is endemic to India.^[20] It is distributed in Andhra Pradesh, Karnataka, Tamil Nadu, Rajasthan, Madhya Pradesh, Odisha.

Ethnomedicinal Uses

- A combination of 5 ml leaf extract of the plant and 5 ml tuberous root extract of *Cyperus rotundus* is administered twice daily for one month to treat leucorrhoea.
- The leaf paste (3-5 g) is given once daily for 5-7 days to expel intestinal worms in children.
- Equal amount of leaves and fruits are crushed together to a paste. The paste (1-2 teaspoons) is taken regularly for 3 days on an empty stomach to induce abortion.
- Equal amount of bark of the plant, bark of *Syzygium cumini* and rhizome of *Curcuma longa* are crushed together and applied on the affected part and bandaged to cure bone fracture.
- The stem bark is traditionally used as a fish poison; it is crushed and introduced into water to immobilize or kill fish.

- f. The bark extract (1 teaspoon) is taken on an empty stomach for 5-7 days to relieve from menorrhagia.
- g. Root paste is applied on the wound to heal up quickly.

2. *Kigellia africana* (Lam.) Benth.

Local name: Kharsal, English: Sausage tree, Cucumber tree

Locality and Collection No.: Samardhara – 446

Brief description of the plant.

It is an evergreen tree attaining a height to 9- 15 m. Leaves pinnately compound, opposite, leaflets 5-9, leathery, elliptic to ovate-oblong, 4.5 -10 cm long. Flowers brick red, 7-9 cm long, in lax pendulous panicles. Calyx campanulate, leathery, irregularly lobed. Corolla tube cylindric, bi-lipped. Stamens 4, didynamous. Fruit long, elongated like a gourd, up to 50 cm, hanging from long, cord-like stalk. Flowering and fruiting: February – December.

Distribution: Native to South and Central Africa.^[21, 22]

Ethnomedicinal uses

- a. The root paste is applied to the affected area to treat ulcers.
- b. The fruit powder and coconut oil are mixed and applied to the boils for suppuration. It is also applied to the affected area to treat eczema.
- c. The fruit extract (1 teaspoon) is taken 1-2 times daily for 5 days to treat malaria.
- d. The fruit decoction is used to wash the affected area to treat fungal infection.
- e. The bark paste is applied as a wound healer.
- f. The bark extract (5-10 ml) is taken 2 times daily 7 days to treat dysentery.
- g. Warm leaves poultice is applied over the affected part to get relief from back pain.
- h. The leaf decoction (2 teaspoons) is taken once daily to cure abdominal pain due to worm infection.

3. *Millingtonia hortensis* L.f.

Local name: Akash mali, English: Indian cork tree, Tree jasmine

Locality and Collection No.: Nrusinghnath- 516

Brief description of the plant

Tree, 8 to 18 m. high, evergreen, tall tree and straight, cracking and rough bark. Leaf is imparipinnate, opposite, leaflets ovate to elliptic -ovate, 5-7, apex acuminate, glabrous. Flowers in panicles, white, showy and fragrant. Calx bell shaped, small, 5-lobes. Corolla white, tubular with a long throat and 5 lobes. Stamens 4. Fruit is a capsule, flat and smooth, seeds broad and winged. Flowering and fruiting: December to May.

Distribution: It is native to south Asia and South East Asia, mostly in India, Sri Lanka, Myanmar, Thailand, Burma and South China.^[23, 24]

Ethnomedicinal uses

- a. Bark extract with rhizome powder of *Curcuma longa* is taken one on an empty stomach to expel intestinal worm.
- b. Bark extract of the plant and rhizome extract of *Zingiber officinale* are mixed together and the mixture (5 ml) is taken 2 times daily to cure cough.
- c. Leaves extract (5- 10 ml) is taken 1-2 times daily to control fever and body pain.
- d. Flower paste or powder (5 g) is taken 2 times daily in empty stomach to control asthma.
- e. Root paste or extract is taken in empty stomach to expel intestinal worm.

4. *Oroxylum indicum* (L.) Benth. ex Kurz

Local name: Phanphen, Dhangrikhada, English: Indian trumpet tree, Oroxylum, Broken bones tree

Locality and Collection No.: Ramkhol-718

Brief description of the plant.

Tree, 9-16 m high, straight with few branches. Leaves are large, pinnately compound, petiole long, leaflet entire, acuminate. Inflorescence terminal raceme. Flowers large showy, reddish-purple. Fruit is capsule, long, like a sword, 30 - 90 cm, flat, hard, woody. Seeds flat, kidney shaped, winged. Flowering: July - October, Fruiting: December – March.

Distribution: It is native to India. It is also distributed in South and Southeast Asia, Sri Lanka, China Bhutan, Indonesia, Philippines, Mallaca and Malayasia in India, it is found in AP, Karnataka, Kerala, Maharashtra, Odisha, Tamil Nadu.^[25, 26]

Ethnomedicinal uses

- a. Bark (5 g) and *Piper nigrum* fruit (8- 10 numbers) are crushed and is taken once daily in empty stomach for 5 days to prevent smallpox.
- b. Bark paste is also applied to the body to relieve smallpox related-irritation.
- c. Bark decoction (2 teaspoons) is taken 2 times daily to cure stomach-ache.
- d. Root bark paste (1 teaspoon) is taken once daily regularly in the morning to cure dysentery and diarrhea.
- e. Seed paste is applied over forehead to cure headache.

5. *Pyrostegia venusata* (Ker Gawl.) Miers

Local name: Naringilata; English: Flame vine, Orange trumpet creeper,

Locality and Collection No.: Bargarh- 477

Brief description of the plant

A climber shrub, 4-5 meters in height. Leaves 3-foliolate, leaflet ovate-lanceolate, entire, acute, one leaflet modified to a tendril. The flowers are reddish-orange, tubular, in terminal or axillary clusters in corymbose cyme or raceme. Flowering and Fruiting: November – February.

Distribution: It is native to South America and Brazil.^[27, 28] Although it is a wild species in tropical and subtropical regions later on it has been naturalised in different counties including India.

Ethnomedicinal Uses

- The flower extract or paste is applied to heal the wound quickly.
- The flowers are soaked overnight in a glass of water. It is crushed along with the water and taken in the morning on an empty stomach to control diabetes.
- Equal amounts of leaves and flowers are crushed together to obtain the extract. The extract (2 teaspoons) is taken 1-2 times daily to relieve cold and cough.
- Tender leaf paste (1teaspoon) is taken once daily for 3-4 days to treat diarrhea.
- An infusion of tender leaves and young shoots is taken twice daily to relieve jaundice.

6. *Radermachera xylocarpa* (Roxb.) Roxb. ex K. Schum

Local name: Garud; English: Padri tree, Stag's horn trumpet-flower tree

Locality and Collection No. Nrusinghnath- 415

Brief description of the plant:

Large tree, up to 30 m height, trunk cylindrical, bark grey, soft and scaly. Leaves large, bipinnate, leaflets 2-4 pairs, elliptic-oblong, acute or acuminate, base rounded. Glabrous. Inflorescence in erect tomentose panicles. Flowers large, white with yellow tinge, fragrant. Calyx campanulate, 3-5 irregular. Corolla white with yellow tinge. Fruit capsule, about 2-3 m long, slightly curved, woody. Seeds flattened, winged. Flowering: February to April; fruiting: April to June.

Distribution: Native to India. It is distributed in several states in India like Andra Pradesh, Maharashtra, Tamil Nadu, Madhya Pradesh, Odisha and Bihar.^[3]

Ethnomedicinal Uses

- The root and bark are crushed into a paste and applied to relieve joint pain.
- An extract from the root and bark is applied to cure the wound.
- The root and seed paste are crushed together and the paste is applied to aid wound healing.
- Fruit powder (5 g) or fresh fruit decoction (10 -15 ml) is taken twice daily in the morning to relieve a common cold.
- Fruit powder and coconut oil are mixed and applied to the affected area to cure skin diseases.
- Equal amounts of leaves and fruit rinds are crushed and boiled together to obtain a decoction. The decoction (2 teaspoons) is taken once daily to relieve abdominal pain.

7. *Spathodia campanulata* P. Beauv

Local name: Turi; English: African tulip tree, the Fountain tree

Locality and Collection No.: Godbhaga- 44

Brief description of the plant

Medium-sized tree, 22-25 m tall. Leaves large, opposite, imparipinnate, leaflets 9-17, oblong, elliptic-oblong, entire, acute, rounded. Flowers large, showy, tulip-shaped, scarlet, many flowers in erect racemes. Calyx golden brown, spathaceous. Corolla bright red, campanulate. Fruit is capsular, woody, brown. Seeds are thin, flat, winged. Flowering and Fruiting: July to December.

Distribution: Native to Africa. It is distributed worldwide and has been introduced in several countries, including India. It was introduced in India, Sri Lanka, Indonesia, Australia, Brazil, China, Costa Rica, Cuba, Malaysia, and Mexico.^[29]

Ethnomedicinal Uses

- Bark decoction (15 ml) is taken 2 times daily for 5-7 days to treat malaria.
- Bark paste (1 teaspoon) is taken once daily to cure dysentery.
- Bark powder of the plant and rhizome powder of *Curcuma longa* are mixed with coconut oil and applied in case of skin problems.
- Leaves (5 g) are crushed with goat milk (half a cup) and taken on an empty stomach to get relief from body pain.
- Leaves decoction (1-2 teaspoons) is taken once daily on an empty stomach to cure a diuretic problem.
- The flowers decoction (10 ml) is taken 2 times daily to cure diuretic problems.
- The flower extract (2 teaspoons) and rhizome powder of *Curcuma longa* (half a teaspoon) are mixed and taken once daily on an empty stomach to relieve muscular pain.
- Root paste (5 m) is taken 1-2 times a day on an empty stomach to cure stomachache.

8. *Stereospermum chelonoides* (L. f.) DC.

Local name: Padhel, English: Yellow snake tree, Fragrant padri tree

Locality and Collection No. Khajuria-599

Brief description of the plant:

Large deciduous tree, 18-30 m. height. Leaves pinnately compound, opposite, 1-2 feet long, 3-5 pairs of leaflets, broadly elliptic. Flowers are pinkish, fragrant, borne on the large lax panicles. Pod is capsular, long, 1-2 feet, cylindrical, ribbed, rough. Seeds cylindrical, straight. Flowering and fruiting: January to March; fruiting: July to September.

Distribution: Native to India. It is widely distributed in East Asia – India Sri Lanka, Nepal, Bangladesh, Myanmar, Thailand, Malayasia, Cambodia, and Laos.^[30]

Ethnomedicinal Uses

- A seed is rubbed on a stone and the paste obtained is applied on the forehead to relieve headache.
- The roots (20 g) are boiled in 100 ml of water to obtain a decoction that is about one-fourth of its

original volume. The lukewarm decoction is taken once daily for 7-15 days to cure diuretic problems.

- c. The flowers powder (5 g) or the extract of flowers (10- 15 ml) is taken 1-2 times daily for 4-5 days to cure diarrhea.
- d. The bark decoction (2 teaspoons) or the bark paste (1teaspoon) is taken once daily on an empty stomach for 5-7 days to relieve indigestion.
- e. The bark extract (2 teaspoons) is taken 1-2 times daily to relieve cough and asthma.

9. *Tecoma stans* (L.) Juss. ex Kunth

Odia: Gaudichaudi, English: Yellow trumpetbush, Yellow bells, Yellow elder.

Locality and Collection No.: Barhagoda- 266

Brief description of the plant

A small tree or large shrub, 2-5 m tall, sometimes 10 m in height. Leaves imparipinnate, opposite, leaflets 5-13, ovate to obovate, serrate, acuminate, wedge base. Flowers in compound racemes, terminal, funnel-shaped, showy, golden yellow. Calyx lobes deltoid, acuminate. Corolla tubular, golden yellow, subequal. Capsular fruits, narrow, elongated. Seeds with membranous wings, numerous, yellow, flat, oblong.

Flowering and Fruiting: September- December.

Distribution: It is native to tropical Americas. It has been introduced and naturalized in Southern Africa, India, Hawaii, Australia East Africa and several other regions.^[31, 19]

Ethnomedicinal Uses

- a. The leaves extract (3-5 ml) is given to the children once daily to expel intestinal worms.
- b. The leaves of the plant and leaves of *Moringa oleifera* are crushed to obtain the paste is applied on the affected part and bandaged to cure bone fracture.
- c. The leaf powder or the paste is applied for healing of wounds.
- d. The bark paste is applied for healing of wounds.
- e. The flower paste mixed with a little salt is applied on the affected tooth to relieve pain.
- f. The flowers and leaves are crushed together into a paste which is applied to the affected area to relieve scorpion sting pain.

RESULT AND DISCUSSION

A total of nine ethnomedicinal plant species belonging to the family Bignoniaceae were documented from the study area. Among these, eight species were trees, while *Pyrostegia venusata* was recorded as the only climber species. The traditional knowledge associated with these plants highlights their significant role in primary healthcare practices of the local communities.

Ethnomedicinal data show that members of the Bignoniaceae family are traditionally employed in the treatment of a wide spectrum of ailments such as leucorrhoea, jaundice, malaria, smallpox, boils, eczema,

abortion, asthma, diarrhea, dysentery, abdominal pain, stomach pain, cold, cough, body pain, joint pain, muscular pain, bone fracture, headache, indigestion, diuretic problems, fungal infections, intestinal worm infestations and plant parts are used to kill (catch) the fish. These multiple therapeutic applications underscore the diverse ethnomedicinal potential of the family and reflects its importance in traditional healthcare systems. The predominance of tree species in ethnomedicinal practices may be attributed to their perennial availability, greater biomass, and accessibility of plant species such as roots leaves, barks, flowers, seeds and fruits.

The findings of the present study are consistent with earlier ethnobotanical surveys in India and other tropical regions, where Bignoniaceae has been cited as an important family in traditional medicine. However, despite the extensive local knowledge systematic pharmacological validation and phytochemical profiling of many of these species remain limited. Future research focusing on bioassay-guided isolation of active compounds and clinal evaluation could provide scientific evidence for their therapeutic applications and promote integration into modern healthcare systems.

The ethnomedicinal survey recorded the use of nine plant species employed in 61 traditional prescriptions for the treatment of twenty three categories of ailments, including leucorrhoea, jaundice, malaria, smallpox, boils, eczema, abortion, asthma, diarrhea, dysentery, abdominal pain, stomach pain, cold, cough, body pain, joint pain, muscular pain, bone fracture, headache, indigestion, diuretic problems, fungal infections, intestinal worm infestations and in one case plant part is used to catch the fish. Out of these formulations, 39 (64%) were administered internally, while 22 formulations (36%) were used externally (Fig 1).

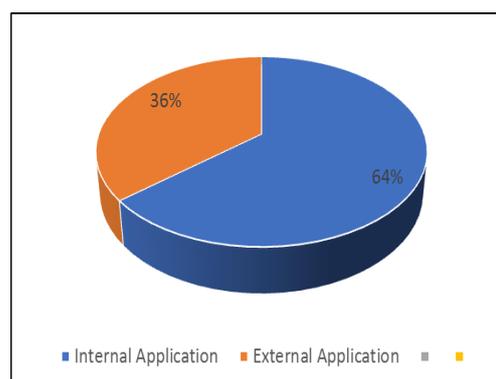


Fig 1: Percentage of mode of applications.

Regarding the plant part parts utilized, bark was the most frequently used in 18 cases, followed by leaves in 17 cases, flowers in 12 cases, roots in 9 cases, fruits in 8 cases, seeds in 3 cases, and stem in 1 case (Fig 2). The predominance of bark and leaves indicates their perceived therapeutic potency and accessibility of traditional healers. The use of multiple parts of a single

species also suggests a comprehensive understanding of each plant's medicinal potential.

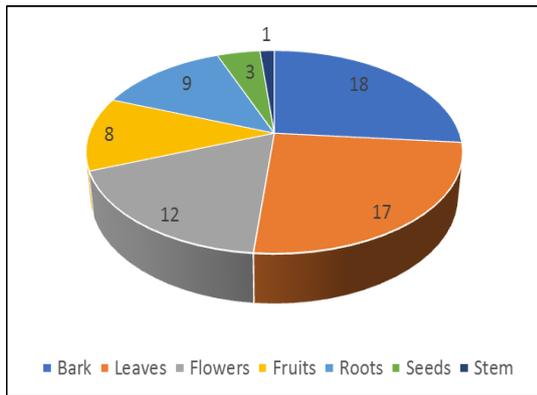


Fig 2: Habitat-wise plant parts used in different formulations.

Out of the 61 formulations, 39 cases involved single plant parts, whereas 22 cases included mixtures of plant parts and other natural ingredients, such as turmeric, honey, milk, salt, jaggery and other plant extracts. In addition of multiple ingredients often aimed to enhance the therapeutic efficacy, reduce toxicity, or improve palatability, this combinational approach reflects the traditional healers' empirical understanding of synergistic effects among different bioactive components.

The preparation of remedies involved various techniques reflecting the cultural and practical adaptations of the community. Among the formulations recorded, paste preparation in 26 cases (43%) were the most prevalent, followed by extracts in 13 cases (21%), decoction in 11 cases (18%), powder in 8 cases (13%), infusions in 2 cases (3%), and poultice in 1 case (2%) (Fig 3). The frequent use of paste and extract forms suggests that fresh plant materials are readily available and the local healers prefer simple, direct methods of preparation requiring minimal processing.

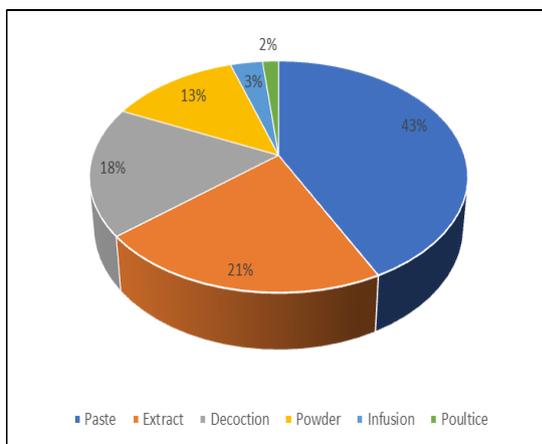


Fig 3: Percentage of mode of preparation of plant parts.

Internal administration was primarily observed in treatments for gastrointestinal disorders (diarrhea, dysentery, stomach pain, abdominal pain, indigestion, jaundice, ulcer), respiratory disorders (cold, cough), reproductive system disorders (leucorrhoea), infectious and parasitic diseases (malaria, smallpox, and intestinal worms), whereas external applications were common for joint pain, wounds, boils and skin infections. Such differentiation between internal and external uses of diseases-specific treatments among traditional healers.

The preferential uses of certain plant parts and preparation forms align with earlier ethnomedicinal reports from various regions of India,^[32-35] which emphasize the importance of easily preparable pastes and decoctions in indigenous therapeutic systems. The observed diversity of plant-based formulations and their disease-specific applications underline the deep-rooted ethnobotanical knowledge retained within the community.

These findings not only provide valuable baseline data for future pharmacological investigations but also stress the urgency of preserving indigenous knowledge systems that are gradually declining due to modernization and cultural transition. Further phytochemical and pharmacological validation of these plants may help identify bioactive compounds responsible for the reported therapeutic effects, thereby supporting their potential inclusion in modern herbal formulations.

CONCLUSION

The Bignoniaceae family represents a diverse and ecologically important group of flowering plants, comprising trees, shrub and climbers that enrich tropical and subtropical ecosystems. Many of its members are renowned for their ornamental beauty, producing large and attractive flowers that enhance the aesthetic value of natural and urban landscapes. Beyond their virtual appeal, several species hold significant ethnomedicinal importance, being traditionally used to treat various ailments such as fever, cough, inflammation, and skin disorders. In India, particularly in Odisha, these plants form an integral part of indigenous healthcare practices, reflecting a strong link between biodiversity and traditional knowledge.

The present ethnomedicinal investigation highlights the extensive traditional knowledge preserved among the local communities, who continue to rely on plant-based remedies for primary healthcare. The documentation of nine medicinal plant species with 61 prescriptions reveals a deep understanding of the curative properties of different plant parts and preparation methods. The frequent use of bark, leaves, and roots, along with a preference for paste and extract forms, shows the easy availability of raw materials and the practical knowledge of local healers. The observation that most remedies are prepared singly while some are combined with other ingredients illustrates an adaptive and experience-based

approach to treatment. Overall, the study underscores the cultural and medicinal importance of these plants and emphasizes the need for scientific validation, conservation of indigenous knowledge, and sustainable utilization of ethnomedicinal resources for future generations.

ACKNOWLEDGMENT

The authors express their sincere gratitude to all the informants for their involvement, support and assistance during the field survey and for sharing their valuable insights into the ethnobotanical uses of the collected plant species.

REFERENCES

1. Khanna KK, Saran R. Bignoniaceae. In Mudgal, V., Khanna, K. K., & Hajra, P. K. (Eds.). Flora of Madhya Pradesh. Vol. II. Botanical Survey of India, Calcutta, 1997; p. 260.
2. Mukherjee S, Hebbar DR., Alam SS, Krishnan R, Sharma BP, Mishra S, Kumar S. Medicinally important plants of Bignoniaceae family and their pharmacological potential. *Afr J Biol Sci*, 2024; 6(Si4): 4856-4866.
3. Madhukar VK, Srivastava S, Dubey NK. Enumeration of family Bignoniaceae of India. *Indian J For*, 2012; 35(4): 521-534.
4. Haines HH. The Botany of Bihar and Orissa. Vol. II, London: Arnold & Sons & West Nirman Limited, 1921-1925.
5. Saxena HO, Dutta PK. Studies in Ethnobotany of Orissa. *Bull Bot Surv India*, 1975; 17: 124-131.
6. Mudgal V, Pal DC. Medicinal plants used by the tribals of Mayurbhanj (Orissa). *Bull Bot Surv India*, 1980; 22: 59-62.
7. Sen SK, Pradhan NB, Behera LM. Ethnomedicinal plants used against diabetes at Bargarh district in Orissa (India). *Bull Bot Surv India*, 2001; 43: 195-197.
8. Sen SK, Behera LM. Ethnomedicinal plants used against skin diseases at Bargarh district in Orissa (India). *Ethnobotany*, 2003; 15(1&2): 90-96. 2003.
9. Sen SK, Behera LM. Ethnomedicinal plants used by the tribals of Bargarh district to cure diarrhoea and dysentery. *Indian J Trad Know*, 2008; 7(3): 425-428.
10. Sen SK, Behera LM. Ethno-medico-religious information on some plants used by the tribals of Bargarh district in western Odisha (India). *Ethnobotany*, 2014; 26: 52-57.
11. Pradhan A, Mishra SP, Behera N. An ethnobotanical survey of medicinal plants from sacred forest of western Odisha, India. *Int J Phytomedicine*, 2016; 8: 325-332.
12. Saxena, H. O., & Brahmam, M. (1995). The Flora of Orissa. Vol. II. Bhubaneswar: Regional Research Laboratory and Orissa Forest Development Corporation Limited, Orissa.
13. Jain SK, Rao RR. A Handbook of Field and Herbarium Methods. New Delhi: Today and Tomorrow's Printers and Publishers, 1977.
14. Jain, S. K. Dictionary of Indian Folk Medicine and Ethnobotany. New Delhi: Deep Publications, 1991.
15. Kirtikar KR, Basu BD. Indian Medicinal Plants. Reprint edn., Allahabad; Lalit Mohan Basu, 1991.
16. Ambasta SP, Ram Chandran K, Kashyappa K, Chand R. The Useful Plants of India. New Delhi: Publication and Information Directorate, CSIR, 1992.
17. Chopra RN, Nayar SL, Chopra IR. Glossary of Indian Medicinal Plants. Reprint edn., New Delhi: National Institute of Science Communication, CSIR, 1996.
18. Fischer E, Theisen I, Lohmann LG. *Bignoniaceae*. In: Kubitzki, K. (Ed.). The families and genera of vascular plants. London, Springer, 2004; 7: 9-38.
19. Singh A, Nagori BP, Mathur K. *Tecoma stans*: An important medicinal plant. *Int J Pharm Erud*, 2013; 3(2): 13-21.
20. Misal VD, Malpure PS, Bachhav RS. An overview: Pharmacological activities of *Dolichondrone falcata*. *Int J Creat Res Thoughts*, 2023; 11(5): 932-936.
21. Nabatanzi A, Nkadimeng SM, Namrita L, Kabasa JD, McGaw LJ. Ethnobotany, Phytochemistry and Pharmacological activities of *Kigelia africana* (Lam.) Benth. (Bignoniaceae). *Plants*, 2020; 9(6): 753.
22. Saini S, Kaur H, Verma B, Ripudaman, Singh SK. *Kigelia africana* (Lam.) Benth. -An overview. *Nat Prod Radiance*, 2009; 8(2): 190-197.
23. Kumari A, Sharma RA. A Review on *Millingtonia Hortensis* Linn. *Int J Pharm Sci Rev Res*, 2013; 19(2): 85-92.
24. Kaliyaperumal A, Murugan M, Murugesan P, Thangaraj V. *Millingtonia hortensis* L. f. (tree jasmine): botany, ethnopharmacology, chemical constituents, biological activities of extracts and essential oils-an updated review. *Discover Plants*, 2025; 2(1): 22.
25. Harminder VS, Chaudhury AK. A review on the taxonomy, ethnobotany, Chemistry and pharmacology of *Oroxylum indicum* Vent. *Indian J Pharm Sci*, 2011; 73(5): 483-490.
26. Dinda B, Silsharma I, Dinda M, Rudrapaul P. *Oroxylum indicum* (L.) Kurz, An important Asian traditional medicine: From traditional uses to scientific data for its commercial exploration. *Journal of Ethnopharmacology*, 2015; 161(23): 255-278.
27. Pool A. A review of the genus *Pyrostegia* (Bignoniaceae). *Ann Missouri Bot Gard*, 2008; 95: 495-510.
28. Veloso CC, Bitencourt AD, Cabral Layla DM, Franqui LS, Dias DF, Santos MH dos, Soncini R, Giusti-Paiva A. *Pyrostegia venusata* attenuate the sickness behavior induced by lipopolysaccharide in mice. *J Ethnopharmacol*, 2010; 132: 355-358.
29. Padhy GK. *Spathodea campanulata* P. Beauv. – A review of its ethnomedicinal, phytochemical, and pharmacological profile. *J Appl Pharm Sci*, 2021; 11(12): 17- 44.

30. Behera LK, Gunaga RP, Sinha SK, Sukhadiya M, Dholariya CA, Prajapati VM. *Stereospermum chelonoides*: Prospective of a lesser known and medicinal tree. Van Sangyan, 2019; 6(6): 1-5.
31. Pelton J. A survey of ecology of *Tecoma stans*. Butler University Botanical Studies, 1964; 14(2): 53-88.
32. Satpathy KB, Panda PC. Medicinal uses of some plants among the tribals of Sundargarh district, Orissa. J Econ Tax Bot, Addl Ser, 1992; 241-249.
33. Jain SK. Notable foreign medicinal uses of some plants of Indian tradition. Indian J Trad Know, 2003; 2(4): 321-332.
34. Pattanaik C, Reddy CS. Medicinal plant resources of Gandhamardan hill range, Orissa: an urgent need for conservation. Nat Acad Sci Letter, 2007; 30(1 & 2): 35-38.
35. Rout S, Panda SP, Patra HK. Ethnomedicinal studies in Bonda tribe of Malkangiri district Odisha, India. Int J Biodivers Conserv, 2014; 6(4): 326-332.