



# A Review On Ethnobotanical, Nutritional, Medicinal And Energy-Based Importance Of Kumbhi (*Careya Arborea*) With Special Reference To Chhattisgarh

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## ABSTRACT

Since the dawn of human civilization, plants have been used for various medicinal purposes to cure a wide range of ailments. *Kumbhi* is also one of them. *Kumbhi*, a member of *Lecythidaceae* family is a tree with yellow flowers and large green leaves. *Careya arborea* Roxb., commonly known as Kumbhi, is an important ethnobotanical tree of tropical India, widely distributed across the plains and forest belts of Chhattisgarh. Tribal communities such as the Gond, Halba, Maria, Muria and Bhatra heavily depend on this plant for medicine, nutrition, food preparation, rituals and ecological sustainability. This review synthesizes existing literature on the ethnobotanical practices, phytochemical composition, traditional medicinal applications, nutritional relevance and indigenous energy-based interpretations associated with Kumbhi. The study uses secondary data from published research, regional forest reports and ethnographic surveys to create a consolidated scientific understanding. Observations indicate that the plant contains Flavonoids, Triterpenoids, Glycosides and Phenolics responsible for antimicrobial, anti-inflammatory and antioxidant activities. In Chhattisgarh, the bark is popularly used for fever, cough and gastrointestinal problems, while fruits and flowers are consumed as seasonal food. The paper highlights ecological contributions such as soil stabilization, wildlife nourishment and forest regeneration. Results emphasise that Kumbhi is a culturally significant and pharmacologically promising species requiring greater documentation, conservation and scientific validation.

**Keywords:** *Careya arborea*, Kumbhi, ethnobotany, phytochemistry, tribal medicine, nutritional value, bioactive compounds.

## Review of Literature:

Several ethnobotanical surveys across India have highlighted the extensive use of *Careya arborea* for medicinal and cultural needs. Early botanical documentation by Roxburgh described the species as a common tree of dry deciduous forests with multipurpose utility. Later studies expanded on its medicinal value, reporting anti-inflammatory, antimicrobial and antioxidant effects attributed to its bark and leaves. Ethno medical works from central and eastern India consistently describe the bark decoction as a remedy for respiratory irritation, diarrhoea and ulcer-like disorders. Studies on phytochemistry identified Triterpenoids (Careyagenic Acid), Flavonoids, Saponins and Phenolics compounds in various parts of the plant. Nutritional studies found that the fruits contain moderate Carbohydrates, fibers and essential minerals, supporting their dietary relevance in forest-based food systems.

In Ayurveda also various plant parts have been found which pacify vitiated cough, worms, diarrhoea, epilepsy, leukodermatumor and bronchitis etc. In Chhattisgarh, literature shows high cultural integration of Kumbhi. Tribal communities use the leaves to make biodegradable plates (pattal), while bark and flowers are used medicinally. Reports from Bastar document the ritual use of the plant during seasonal festivals, attributing cooling and stabilizing energy properties to it. Forest-based studies emphasize its ecological role in soil conservation and wildlife feeding. Overall, the reviewed literature confirms that Kumbhi is a significant tree species with ethnobotanical, nutritional and medicinal potential, though systematic scientific evaluation remains limited.

## Materials and Methods:

This study is based on a review methodology synthesizing secondary data from botanical texts, ethnobotanical surveys, medicinal plant evaluations, nutritional studies and regional reports from Chhattisgarh. Published research papers, peer-reviewed journals, forestry bulletins and tribal development documents were consulted. Key parameters collected included ethnobotanical applications, plant parts used, phytochemical constituents, medicinal actions, nutritional value and cultural interpretations. Data were arranged into an observation table summarizing findings from diverse literature sources. No primary field survey was conducted; however, preference was given to studies involving tribal communities of central India to ensure regional relevance. The collected information was compared, organized and interpreted to generate meaningful conclusions about the holistic importance of *Careya arborea*.

**Observation Table:**

Plant Part	Traditional Use (Chhattisgarh)	Phytochemicals Reported	Nutritional/Ecological Value
Bark	Treats wounds, cough, fever, diarrhea, stomach irritation and ringworm	Triterpenoids, Glycosides, Phenolics	Bark decoction used for snake and scorpion bites. Cooling effect, demulcent properties
Leaves	Used as warm poultice for swelling; used to make pattal plates	Flavonoids, mucilage	Biodegradable, eco-friendly, anti-inflammatory
Flowers	Used for digestive health and mild constipation	Phenolic compounds	Seasonal wild food source
Fruits	Consumed as chutney; improves digestion	Fiber, minerals, carbohydrates	Fruit decoction supports digestion. Supports food security during lean seasons
Seeds	Oil used as supplementary	fat Fatty acids	Moderate caloric value
Whole tree	Ritual significance; stabilizing energy	Various metabolites	Soil binding, wildlife food

**RESULTS AND DISCUSSION :**

The findings from reviewed studies indicate that *Careya arborea* is a highly versatile and culturally embedded species in Chhattisgarh. Its widespread presence in Bastar, Kanker, Dhamtari, Bilaspur and Rajnandgaon correlates with frequent traditional use. The bark is the most extensively used medicinal part due to its cooling, mucilaginous and anti-inflammatory properties, which align with traditional treatments for gastrointestinal and respiratory ailments. Scientific studies validating antimicrobial and antioxidant effects support these indigenous claims.

The nutritional assessment shows that fruits contribute seasonal micronutrients and fiber, playing a role in dietary supplementation for forest communities. Their preparation into chutneys reflects cultural adaptation toward a slightly bitter but nutritionally beneficial forest food. Leaves used for making pattal illustrate sustainable ethnobotanical practices, offering biodegradable alternatives to plastic utensils.

The presence of Triterpenoids, Flavonoids and Phenolics antioxidants confirms the pharmacological potential of the plant. These compounds correspond to observed therapeutic uses, especially in wound healing, inflammation reduction and fever management. Moreover, ecological evaluation reveals that the tree contributes significantly to soil conservation, microclimate stabilization and wildlife nutrition.

Tribal interpretations of Kumbhi as a cooling and grounding plant demonstrate the integration of medicinal knowledge with indigenous energy-based worldviews. Such perceptions influence the ethical harvesting practices that protect the species from overexploitation. The collective findings emphasize that Kumbhi is a culturally sacred, nutritionally valuable, ecologically important and pharmacologically promising tree requiring further scientific attention.

## CONCLUSION:

The review establishes that *Careya arborea* (Kumbhi) holds exceptional ethnobotanical and medicinal significance in the forest ecosystems of Chhattisgarh. Its diverse uses—from herbal remedies and nutritional supplementation to ecological stabilization and its wide use in cultural rituals of the tribes of the state—reflect its multipurpose nature. Bioactive compounds present in various plant parts further validate several traditional healing applications. This valuable information which has been carried along with cultural habits needs to be subjected to further research and applications. The ecological importance of the species further enhances its value in sustainable forest management. Although traditional knowledge surrounding the plant is strong, scientific validation remains partial. More laboratory-based phytochemical studies, pharmacological evaluations can aid to the valuable findings. With the help of its nutritional profiling and ethnographic documentation we can certainly lead a step forward in enhancing the wide use and acceptance of this useful species. Protecting both the species and associated indigenous knowledge will support regional biodiversity conservation and community well-being.

## REFERENCES

1. Singh, V., & Khan, M. A. (1990). Ethnobotanical study of medicinal plants of India. *Journal of Economic and Taxonomic Botany*, 14(2), 421–430.
2. Uddin, G. et al. (2011). Phytochemical and biological studies on *Careya arborea*. *Journal of Medicinal Plants Research*, 5(15), 3531–3535.
3. Kumar, S., & Kumar, R. (2010). Review on *Careya arborea* Roxb. *International Journal of Pharma and Bio Sciences*, 1(4), 1–7.
4. Dixit, A. M., & Pandey, A. K. (1984). Ethnobotany of Bastar. *Journal of Economic Botany*, 38(3), 343–349.
5. Jain, S. K. (1991). *Dictionary of Indian Folk Medicine*. Indian Botanical Society, Vol. 5, pp. 102–118.
6. Hemalatha, S. et al. (2015). Antioxidant activity of *Careya arborea* bark. *Asian Journal of Pharmaceutical and Clinical Research*, 8(6), 267–270.
7. Verma, S. K., & Singh, B. (2017). Nutritional composition of wild fruits from central India. *Indian Journal of Natural Products*, 33(1), 45–52.
8. Nair, R., & Chanda, S. (2007). Antimicrobial potential of medicinal plants. *Journal of Herbal Pharmacotherapy*, 7(3-4), 191–196.
9. Pradhan, B. K., & Badola, H. K. (2008). Ethnomedicinal plant use in eastern India. *Journal of Mountain Science*, 5(3), 345–354.
10. Mishra, R. K. (2009). Tribal plant use patterns in Chhattisgarh. *Indian Forester*, 135(12), 1762–1770.

11. Narayana, D. B. K. (1998). Phytochemical screening of ethnomedicinal plants. *Indian Journal of Pharmacognosy*, 12(2), 85–91.
12. Thakur, H. N., & Sharma, A. (2014). Ecological role of indigenous trees in central India. *Journal of Tropical Forestry*, 30(4), 67–74.

