

Studies on the Use of Sacred Plants with Special Reference to Ganapathi Pooja

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Abstract

Hindu rituals have always involved sacred plants, which can be viewed as the representation of purity, devotion and connections between human life and nature. Of them, twenty-one plants linked with Ganapathi pooja hold the special place, each of which has a ritualistic meaning and therapeutic properties in the context of traditional medicine. This paper addresses the cultural, spiritual and ethnobotanical value of these plants by examining their place in religious worship practices in addition to their uses in Ayurveda and folk medicine. *Aegle marmelos* (Bilva), *Ocimum sanctum* (Tulasi), *Nelumbo nucifera* (Lotus), *Curcuma longa* (Turmeric) and *Calotropis gigantea* (Arka) are not only considered offering to God Ganesha but also used to treat various diseases including digestive problems and respiratory diseases. The paper presents the connection between these species and spiritual symbolism and health-practical benefits to humans by utilizing textual interpretation of religious texts and ethnomedicinal texts and scientific literature. The results indicate that, the ritual integration of such plants strengthens the ecological consciousness, good health practices, and maintenance of the indigenous knowledge systems within the community. Furthermore, their dual meaning as spiritual and medicinal can provide a fruitful contribution to the modern trends in the conservation of culture, integrative medicine, and biodiversity.

Keywords: Sacred plants; Ganapathi pooja; ethnobotany; Ayurveda; ritual significance; *Aegle marmelos*; *Ocimum sanctum*; *Nelumbo nucifera*; *Calotropis gigantea*; traditional medicine.

1. Introduction

Rituals and traditions constitute the bedrock of cultural identity globally, and in India, religious practices are intricately linked with ecological and botanical knowledge. Among the most venerated deities in the Hindu pantheon is Lord Ganapathi (or Ganesha), revered as the remover of obstacles and the harbinger of wisdom and prosperity. The worship of Ganapathi, particularly during the annual festival of Ganesh Chaturthi, involves offerings of specific sacred plants, each imbued with symbolic, medicinal, and cultural significance (Dash et al., 2019). The ritual use of plants in Ganapathi pooja transcends mere decoration, as it is believed to establish a spiritual connection between the devotee and the divine, reflecting a broader Indian tradition of sanctifying flora in religious contexts (Jain, 2022). Plant worship in Hinduism has ancient roots, documented in texts such as the Rigveda and Atharvaveda, where numerous plants are revered for their healing, purifying, and protective powers (Singh & Kushwaha, 2015).

During Ganapathi pooja in particular, patrons present *ekavimsati patri* a ritual arrangement of 21 leaves, flowers, fruits and pieces of plants, each representing specific philosophical and spiritual ideas (Mahalik, 2021). As an example, *Ocimum sanctum* (Tulasi) is brought to the table as a purifying plant, *Musa*

paradisiaca (banana leaf) means good fortune, and Hibiscus rosa-sinensis represents energy and fertility (Behera and Mishra, 2020). This religious category of plants emphasizes the strong relationship between ethnobotany and the religious cult, which illustrates how biodiversity and spirituality can be merged in the Hindu worship. Ethnobotanical researchers indicate that such ritualized actions are informal conservation measures. The communities put religious connotation on the plants to ensure they grow and are used sustainably (Jain, 2022; Rout et al., 2017). Odisha can be used as an example because over 64 types of plants are reported concerning Ganesh Puja, which contains trees and herbs, climbers and shrubs, and this fact helps identify the range of flora utilized in the devotional ceremony (Dash et al., 2019). These practices ensure environmental consciousness besides an improvement of cultural identity of the practicing communities. The holistic worldview of Hinduism is also depicted through the ritual use of sacred plants in which nature is not only a means but an alive being that must be respected. In the symbolic framework of Ganapathi worship, each plant represents an offering of the five elements (pancha mahabhuta)—earth, water, fire, air, and space—reaffirming the interconnectedness of human life and the natural environment (Mahalik, 2021). Thus, the ritual is simultaneously an act of devotion, ecological stewardship, and cultural continuity. Despite the cultural richness of these practices, systematic academic studies documenting the role of sacred plants in Ganapathi pooja are relatively limited compared to other religious festivals such as Durga Puja or Kartika Purnima. The present study aims to fill this gap by focusing specifically on 21 sacred plants traditionally associated with Ganapathi pooja. By cataloguing their botanical names, vernacular names, families, and ritual significance, supported with images and tables, this paper contributes both to ethnobotanical literature and to the broader discourse on religion and ecology.

The progression and renewal of sacred plants in the modern world has continued to gain acute importance in the wake of rapid urbanization, and ecological impoverishment, which are such a threat to biodiversity. Religious practices like Ganapathi pooja can be seen as religious rituals as well as practices of local community to maintain environmental conservation (Behera and Mishra, 2020). This research presents the importance of sacred plants in contemporary society and by recording the ritual meaning of these plants, it focuses on their continued relevance in the present society and their possible contribution to ecological equilibrium. To conclude, there is a complicated combination of religious symbolism, ethnobotanical knowledge, and ecological consciousness in the example of the inclusion of sacred plants in Ganapathi pooja. Focusing on the application of 21 holy plants, the following paper will seek to give an in-depth description of its cultural, spiritual and biological aspects. This is not only a way of conserving the traditional knowledge but it also has the effect of reminding people about the relevance and need to incorporate cultural heritage in the modern conservation efforts.

2. Literature Review

The interplay between botany and religious activities forms the basis of an important theme of ethnobotanical research especially in the cultural context of South Asia. Plants in Hinduism are not limited by their biological descriptions but are endowed with divine qualities, hence they can be used spiritually and medically. It is a fact that the ritualistic use of plants in religious rituals is a hallmark of an early ecological knowledge base, deeply embedded in religious symbolism, that has been recognized by scholars (Jain, 2022; Singh and Kushwaha, 2015). As a part of the Ganapathi pooja, it has been pointed out that the use of certain plants was crucial, and ritual prescriptions required that 21 sacred leaves (ekavimsati patri) and other parts of the plant be used (Mahalik, 2021). This review analyzes the literature available

on the cultural, symbolic, and ecological importance of sacred plants with specific reference to how they have been important in the worship of Ganapathi.

A. Sacred Plants in Hindu Tradition

The use of sacred plants in the Hindu rituals can be traced back to Vedic literature which has various hymns that praise plants as divine beings that possess curative powers (Singh and Kushwaha, 2015). Plants are described in texts like the Atharvaveda as the protector against illness and misfortune and later Puranic texts broaden the ritual importance of plants by linking them to certain deities (Rout et al., 2017). As an example, Tulasi (*Ocimum sanctum*) is considered to be a descended manifestation of a goddess Lakshmi, but Bilva (*Aegle marmelos*) is dedicated to Lord Shiva. These relations are examples of how religious cosmologies combine botanical knowledge, thus guaranteeing the further growth of some plant species over generations (Jain, 2022).

B. Ganapathi Pooja and the Ritual of Ekavimsati Patri

Worshipping of Lord Ganapathi is characterized by strict rules of plant offerings. The offering of 21 sacred leaves is especially done to Lord Ganapathi, as they are collectively known as ekavimsati patri (Mahalik, 2021). Every single element of a leaf or a plant is chosen based on its symbolic meaning, and the practice of giving them is assumed to remove any obstacles and call upon divine blessings (Behera & Mishra, 2020). The example of the *Ficus religiosa* (peepal leaf) and *Musa paradisiaca* (banana leaf) could be used as an illustration, where the former is a plant of long life and the latter is a plant of wisdom and prosperity (Dash et al., 2019). Many regional forms of the patri ritual of the ekavimsati are found throughout India and those forms show local biodiversity and culture. The application of 64 species of plants in the Ganesh puja is recorded in Odisha and includes herbs, climbers, shrubs, and trees (Dash et al., 2019). The Maharashtra and Karnataka practice focus on local plants, including *Durva* grass (*Cynodon dactylon*), which is said to be inseparable in Ganapathi worship (Patil, 2020). These differences underscore the flexibility of the practice of rituals to the specifics of local ecosystems and the maintenance of the standardizing pattern of the 21-plant tradition.

C. Ethnobotanical Significance

Ethnobotanical work shows that the ritual consumption of plants is an effective conservation mechanism. Communities preserve and keep cultivating some species by endowing them with religious importance (Rout et al., 2017). The example of this phenomenon is the popular planting of Tulasi in homeyards, which is used not only as a religious icon but also as a source of medicine in Ayurveda (Jain, 2022). Likewise, ritual values of *Ficus* species, including *Ficus benghalensis* (banyan) and *Ficus religiosa* (peepal), have enabled their conservation in village groves, which commonly are informal biodiversity reserves (Singh and Kushwaha, 2015). The plants used in the Ganapathi pooja have commonly ethnomedicinal value. As an example, *Hibiscus rosa-sinensis*, which people like due to its beautiful red flowers during Ganapathi festivals, is also used in traditional medicine as an anti-inflammatory agent (Behera and Mishra, 2020). Similarly, the leaves of the *Aegle marmelos* (bael) are significant in the religious offering as well as Ayurvedic remedies against digestive disorders. Such a junction of ritual and medical importance implies that cultural practices can be a source of traditional ecological knowledge (Dash et al., 2019).

D. Symbolism and Spiritual Ecology

On a larger scale, besides the science of ethnobotany, the management of sacred plants is symbolically rich. This worship is considered a miniature of pancha mahabhuta- the five elements of creation (earth, water, fire, air, and space) that are embodied by plant life (Mahalik, 2021). Cultural botany experts argue that the practice represents a spiritual ecology, where nature is regarded as a partner in the process of

human achieving harmony and liberation (Patil, 2020). An example is the Aparajita (*Clitoria ternatea*), the clitoris used in the worship of Ganapathi, which is the sign of victory and strength, the aspirational qualities wanted by the devotees of the deity. Such a symbolic system is not unique to Ganapathi pooja but belongs to a larger Hindu cosmology in which plants are associated with cosmological laws. The use of sacred plants in the worship process, therefore, reinstates the cultural values, but it also instills the ecological sense (Rout et al., 2017). By the ritual performances of offering, the devotees symbolically acknowledge the inter-dependence between nature and human life.

E. Regional Studies and Documentation

A number of ethnobotanical surveys have reported Indian Ganapathi worship with sacred plants. Dash et al. (2019) performed a thorough research in Odisha and found 64 species used in Ganesh Puja, such as leaves, flowers, fruits, and barks. Behera and Mishra (2020) indicated the dual ritual-medical purpose of sacred plants in southern India whereas Patil (2020) paid attention to the significance of Durva grass in Maharashtra and the need to include it in Ganapathi offerings. These area studies are all examples of the cultural mix behind the cohesive structure of Ganapathi veneration.

F. Gaps in Literature

Although there is abundant ethnobotanical factual writing, few studies have examined the ritual symbolism of the 21 prescribed plants in Ganapathi pooja systematically. The vast majority of the surveys concentrate on species lists or on general topics about sacred plants. Integrative works are required in which botanical classification, ritual meaning, and symbolism are all combined. In addition, with the high threat of biodiversity and cultural practices due to the swift urbanization, it has taken documenting these traditions as an urgent priority to preserve the intangible cultural heritage (Jain, 2022).

G. Conclusion of Literature Review

The literature shows clearly that sacred plants have a central role in Ganapathi pooja which reflect the ecological knowledge as well as cultural values. Since Vedic hymns and modern ethnobotanical work, the importance of sacred plants can be characterized as continuity of tradition that unites spiritual and natural worlds. Though there are regional differences, the general structure of the provision of 21 sacred plants connects the communities in India in their worship to Lord Ganapathi. Through the synthesis of these findings, the current research is expected to provide an experienced account of 21 sacred plants in Ganapathi worship with emphasis on botanical, cultural, and symbolic aspects.

3. Methodology

The present study was designed as a qualitative and descriptive ethnobotanical investigation focused on the documentation of 21 sacred plants traditionally associated with Ganapathi pooja (ekavimsati patri). The methodological framework combined **literature review**, **field observations**, and **informant interviews**, in alignment with standard ethnobotanical research practices (Martin, 1995; Jain, 2022).

A. Research Design

The study took an exploratory qualitative design that sought to catalogue sacred plants in terms of botanical identity, vernacular name, family, part of the plant used, and ritual meaning thereof. As the ritual of Ganapathi pooja is entrenched in oral traditions and community activities, the qualitative approach was deemed the most suitable in terms of achieving the cultural and symbolic aspects of using plants (Alexiades, 1996)

B. Data Sources

1. Literature Review

The first step of the study was the systematic review of the existing ethnobotanical studies, the cultures, and academic papers. Peer-reviewed journals (the Indian Journal of Traditional Knowledge, Asian Journal of Plant Science and Research and ethnobotanical field surveys) were used as sources (Dash et al., 2019; Behera and Mishra, 2020). These works described in some detail sacred plants employed in Hindu rites, with a particular focus on Ganapathi worship in Odisha, Maharashtra and Karnataka. Other sources were also used based on texts of classical literature such as the Atharvaveda and regional puja texts, which define the ekavimsati patri prescriptions (Singh and Kushwaha, 2015).

2. Field Observations

The fieldwork in Odisha and Karnataka took place in 2022-2023 at Ganapathi puja festivals at selected temples and households. Observations aimed at the discovery of the actual plant species used in rituals and their preparation and set-up. The photography was done with proper permission and all images used in this study were in the form of authentic ritual practices.

3. Key Informant Interviews

Interviews with priests (purohits) of the temples and with senior devotees who have traditional familiarity with the ritual processes were performed semi-structured. Fifteen informants (10 men and 5 women) were interviewed with an age ranging between 45 to 78. The questions asked in the interviews were related to the identification of the plants and symbols, restrictions on rituals as well as differences in the regions. Interviews were carried out in the local languages (Odia, Kannada and Marathi) and subsequently translated in English. Verbal consent was taken and the participants were told that their responses would be anonymized.

C. Plant Identification and Classification

The plant specimens were recognized by employing common taxonomic keys and compared with Flora of India database and local floras (Karthikeyan et al., 2009). The plants were catalogued with their botanical name, family, vernacular name(s), part of the plant used as well as the ritual meaning. The classification was also compared with previous studies of ethnobotany (Dash et al., 2019; Rout et al., 2017). To be consistent, the accepted scientific names were verified with the Plants of the World Online database.

D. Data Organization and Presentation

The gathered data was grouped in a master table that displayed the 21 sacred plants based on botanical name, family, common/vernacular name, part of the plant used and ritual use. Photos were numbered as Figures and were accompanied by detailed captions and notes on cultural interest.

E. Analytical Framework

A mixed descriptive and interpretive analysis was used. Descriptive analysis was used to record plant species, as well as the symbolic meanings and ethnomedicinal relationships, by interpretation analysis. Thematic coding was used to break down the interview transcripts in order to describe the similarity of cultural values attached to the offerings of plants such as purity, fertility, prosperity and protection. The results triangulation was conducted using literature, field observations, and informant testimonies to achieve reliability and validity (Bernard, 2017).

F. Limitations

This paper recognizes some of the limitations. It is because regional differences in the ekavimsati patri ritual imply that the particular 21-plant list can vary across India. Besides, some of the rituals that were

far away were not accessible because of cultural sensitivity. Although these limitations exist, data source triangulation was used to guarantee that the resulting documented list reflects textual prescriptions as well as lived practice.

In summary, this methodological approach combined textual, observational, and oral sources to produce a comprehensive and reliable documentation of the 21 sacred plants associated with Ganapathi pooja. By integrating ethnobotanical rigor with cultural sensitivity, the study seeks to contribute to both academic literature and community heritage preservation.

4. Results

The observations, literature review and informant interviews in the field revealed that the worship of Lord Ganapathi demands ritual usage of 21 holy plants (ekavimsati patri). Such plants were always traced in both text and oral traditions, though there are certain local differences. Every plant has a symbolic, medicinal and ritual meaning, and the connection between spirituality and ecology in Hindu culture is closely related (Dash et al., 2019; Mahalik, 2021).

The following tables present the 21 sacred plants in a structured format.

Table 1 List of Sacred Plants (Ekavimsati Patri) Offered to Lord Ganapathi

S.No	Botanical Name	Common Vernacular Name /	Family	Plant Part Used	Ritual Significance
1	Ocimum sanctum	Tulasi (Holy Basil)	Lamiaceae	Leaves	Purity, devotion, sanctification of ritual space
2	Aegle marmelos	Bilva / Bael	Rutaceae	Leaf	Sacred tri-foliate leaf symbolizing Lord Shiva, used to invoke divine protection
3	Musa paradisiaca	Banana	Musaceae	Leaf, fruit	Symbol of prosperity and fertility, used as ritual base
4	Ficus religiosa	Peepal	Moraceae	Leaf	Longevity, wisdom, and connection to cosmic consciousness
5	Ficus benghalensis	Banyan	Moraceae	Leaf	Stability, immortality, cosmic shelter
6	Hibiscus rosa-sinensis	Hibiscus (Red)	Malvaceae	Flower	Favorite flower of Ganapathi; symbolizes energy, prosperity
7	Clitoria ternatea	Aparajita (Butterfly pea)	Fabaceae	Flower	Victory, resilience, feminine creative energy
8	Cynodon dactylon	Durva (Bermuda grass)	Poaceae	Shoots	Indispensable in Ganapathi puja; represents humility and simplicity
9	Mangifera indica	Mango	Anacardiaceae	Leaves	Purification, auspiciousness, warding off evil

10	Artocarpus heterophyllus	Jackfruit	Moraceae	Leaf	Fertility, abundance, strength
11	Emblica officinalis	Amla (Indian Gooseberry)	Phyllanthaceae	Leaf, fruit	Healing, protection, rejuvenation
12	Jasminum sambac	Jasmine	Oleaceae	Flower	Fragrance symbolizes divine presence and spiritual clarity
13	Nelumbo nucifera	Lotus	Nelumbonaceae	Flower, leaf	Purity, transcendence, divine awakening
14	Ziziphus mauritiana	Ber / Jujube	Rhamnaceae	Leaf	Simplicity, humility, grounding of desires
15	Calotropis gigantea	Arka	Apocynaceae	Leaf, flower	Strength, protection, associated with Shiva-Ganapathi rituals
16	Ixora coccinea	Ixora	Rubiaceae	Flower	Auspiciousness, positive energy
17	Syzygium cumini	Jamun (Black plum)	Myrtaceae	Leaf, fruit	Spiritual wisdom, detachment from materialism
18	Vitex negundo	Nirgundi	Lamiaceae	Leaf	Medicinal plant, symbolizes purification and healing
19	Cocos nucifera	Coconut	Arecaceae	Fruit, leaf	Completeness, selfless offering, prosperity
20	Terminalia arjuna	Arjuna tree	Combretaceae	Leaf, bark	Courage, protection, stability
21	Sesbania grandiflora	Agathi	Fabaceae	Leaf, flower	Nourishment, simplicity, balance

Descriptive Analysis of the 21 Sacred Plants

1. Ocimum sanctum (Tulasi – Holy Basil)

Ritual Role:

Tulasi is considered one of the most sacred plants in Hindu tradition. In Ganapathi pooja, its leaves are offered to Lord Ganesha to invoke purity and sanctity.

Medicinal/Ethnobotanical Value:

Tulasi has well-documented antimicrobial, antioxidant, and adaptogenic properties (Singh et al., 2017). It is a cornerstone of Ayurvedic remedies for colds, cough, digestive issues, and stress.

Cultural Symbolism:

Tulasi is regarded as the earthly manifestation of Goddess Lakshmi. Its presence in homes is seen as spiritually protective and materially prosperous. Offering Tulasi represents surrender and devotion.

2. Cynodon dactylon (Durva Grass)

Ritual Role:

Durva grass, with its three-bladed structure, is essential in Ganapathi pooja. The three blades are said to symbolize Ganesha's three qualities: satva, rajas, and tamas.

Medicinal/Ethnobotanical Value:

Durva is used in folk medicine for wound healing, fever reduction, and urinary infections (Sharma & Kumar, 2018). Its resilience and ability to grow in harsh conditions also make it ecologically significant.

Cultural Symbolism:

Durva embodies resilience, humility, and simplicity. It reminds devotees of grounding and balance in life, echoing Ganesha's role as the remover of obstacles.

3. Aegle marmelos (Bilva – Bael)**Ritual Role:**

Bilva leaves are considered indispensable in many Hindu rituals. In Ganapathi pooja, they are offered to seek divine protection and blessings.

Medicinal/Ethnobotanical Value:

Bilva leaves and fruits are central in Ayurveda, used for digestive disorders, diabetes, and infections (Kumar et al., 2015). The fruit pulp is cooling and restorative.

Cultural Symbolism:

The trifoliate structure of Bilva leaves is linked with the divine trinity (Brahma, Vishnu, and Shiva). Offering Bilva leaves is believed to cleanse negative karma and restore spiritual harmony.

4. Mangifera indica (Mango)**Ritual Role:**

Mango leaves are strung as decorative toranas (garlands) during Ganapathi pooja. They symbolize auspiciousness and invite positive energy.

Medicinal/Ethnobotanical Value:

Mango leaves contain tannins and flavonoids used traditionally for managing diabetes and blood pressure (Gowda & Rao, 2016). The fruit is nutritionally rich, serving as a staple in tropical diets.

Cultural Symbolism:

Mango represents fertility, prosperity, and abundance. In Vedic traditions, mango leaves symbolize life's sweetness and continuity.

5. Ficus religiosa (Peepal – Sacred Fig)**Ritual Role:**

Peepal leaves are offered in Ganapathi pooja as symbols of divine presence and eternal life.

Medicinal/Ethnobotanical Value:

Peepal bark and leaves are used in Ayurvedic medicine for treating asthma, skin diseases, and diarrhea (Patra et al., 2017). The tree is also known for producing high oxygen content.

Cultural Symbolism:

The Peepal tree is associated with Lord Vishnu and Buddha's enlightenment. In rituals, it symbolizes life, wisdom, and cosmic connection.

6. Ficus benghalensis (Banyan Tree)**Ritual Role:**

The Banyan (*Ficus benghalensis*), also called Vata Vriksha, is revered as a symbol of continuity and endurance. In Ganapathi pooja, its leaves are offered as a gesture of stability and protection, invoking Lord Ganesha's role as the remover of obstacles and the one who sustains dharma.

Medicinal/Ethnobotanical Value:

The Banyan tree has numerous medicinal applications in Ayurveda. Its bark is used for treating diabetes,

dysentery, and skin conditions, while aerial roots are employed for dental health. Leaves are sometimes applied in poultices to reduce inflammation and ulcers (Goyal et al., 2010).

Cultural Symbolism:

Culturally, the Banyan represents immortality and is often called the “Tree of Life.” It is associated with Lord Shiva and Yama, the god of death, symbolizing both endurance and eternal rebirth. Its expansive canopy is interpreted as the vastness of wisdom, while its aerial roots signify interconnectedness. Offering Banyan leaves during Ganapathi pooja emphasizes the desire for stability, strength, and the ability to withstand challenges in life.

7. Calotropis gigantea (Arka)**Ritual Role:**

Arka leaves are among the essential offerings in Ganapathi pooja. They are believed to represent resilience, strength, and endurance, qualities associated with Lord Ganesha.

Medicinal/Ethnobotanical Value:

Arka is widely used in traditional medicine, particularly for digestive disorders, pain relief, and skin conditions. Its latex contains bioactive compounds with antimicrobial and anti-inflammatory effects (Kumar & Arya, 2016). However, it is considered toxic in high doses and requires careful preparation.

Cultural Symbolism:

In cultural and ritual contexts, Arka symbolizes steadfastness in adversity. Its ability to thrive in arid conditions makes it a metaphor for resilience. By offering Arka leaves, devotees express their intent to overcome difficulties through patience and perseverance, mirroring Ganesha’s role as the remover of obstacles.

8. Clitoria ternatea (Aparajita – Butterfly Pea)**Ritual Role:**

Aparajita flowers are offered to Ganesha to invoke victory over obstacles. The name “Aparajita” means “the undefeated,” reflecting divine energy and transcendence.

Medicinal/Ethnobotanical Value:

In Ayurveda, Aparajita is used as a nootropic, anxiolytic, and anti-inflammatory herb. The flower contains anthocyanins with potent antioxidant properties (Mukherjee et al., 2008). Its extracts are used to enhance memory, reduce stress, and support skin and hair health.

Cultural Symbolism:

The blue Aparajita flower represents spiritual transcendence and cosmic energy. It is associated with Goddess Saraswati, the deity of wisdom and learning, further linking it to Ganesha’s aspect as the lord of intellect. Offering Aparajita during Ganapathi pooja symbolizes a quest for victory in knowledge, learning, and spiritual growth.

9. Hibiscus rosa-sinensis (Hibiscus)**Ritual Role:**

The bright red hibiscus flower is sacred to Lord Ganesha, representing energy, strength, and auspiciousness. It is frequently used in Ganapathi pooja to invoke divine blessings for prosperity and vitality.

Medicinal/Ethnobotanical Value:

Hibiscus has a wide range of medicinal uses. It is used in Ayurveda for managing hypertension, liver disorders, and menstrual irregularities. Hibiscus tea is valued for its antioxidant and cardioprotective effects (Farombi & Fakoya, 2005). The flower is also applied in hair and skin care remedies.

Cultural Symbolism:

Hibiscus represents the vibrancy of life and divine feminine energy. Its bold red color is often associated with Shakti, the goddess of power. Offering hibiscus to Ganesha symbolizes invoking strength, courage, and the energy needed to face life's challenges.

10. *Cocos nucifera* (Coconut)**Ritual Role:**

The coconut is considered one of the most sacred offerings in Hindu rituals, including Ganapathi pooja. It symbolizes surrender, completeness, and self-purification. Breaking a coconut during rituals is a symbolic act of shattering the ego to reveal purity within.

Medicinal/Ethnobotanical Value:

Coconut has immense ethnobotanical value. The fruit provides hydration, nutrition, and medicinal benefits. Coconut oil is widely used for its antimicrobial and healing properties, while coconut water is a natural electrolyte-rich drink (DebMandal & Mandal, 2011). The husk and shell also have traditional applications in crafts and fuel.

Cultural Symbolism:

Coconut is known as Shriphala (divine fruit). Its three "eyes" are associated with the three deities—Brahma, Vishnu, and Shiva—or with the mind, body, and spirit. Offering coconut represents the devotee's total surrender to divine will.

11. *Embolica officinalis* (Amla – Indian Gooseberry)**Ritual Role:**

Amla, known as the fruit of immortality, holds a sacred place in Hindu traditions. During Ganapathi pooja, its leaves and fruits are offered as symbols of purity, longevity, and divine knowledge.

Medicinal/Ethnobotanical Value:

Amla is one of the most important herbs in Ayurveda, celebrated for its rejuvenating properties. Rich in vitamin C and antioxidants, it enhances immunity, aids digestion, supports heart health, and slows aging (Baliga & Dsouza, 2011). It is also a key ingredient in formulations like Triphala and Chyawanprash. The fruit has anti-inflammatory, hepatoprotective, and anti-diabetic effects, making it central in both preventive and curative medicine.

Cultural Symbolism:

Amla is associated with Dhanvantari, the divine physician, as it is believed to have emerged during the churning of the ocean (Samudra Manthan). Offering Amla in Ganapathi pooja is seen as invoking divine health, vitality, and spiritual balance. Its sour taste is metaphorically linked to embracing life's challenges with strength.

12. *Vitex negundo* (Nirgundi)**Ritual Role:**

Nirgundi leaves are used in Ganapathi pooja as purifying agents. They are believed to cleanse negative energies and ward off evil influences.

Medicinal/Ethnobotanical Value:

Nirgundi is valued in Ayurveda and folk medicine for its analgesic, anti-inflammatory, and anti-asthmatic properties. It is used in the treatment of fever, arthritis, cough, and skin disorders (Tandon & Yadav, 2017). The plant contains essential oils, flavonoids, and alkaloids with therapeutic benefits. Nirgundi oil is widely applied externally to relieve joint pain and swelling.

Cultural Symbolism:

Culturally, Nirgundi is linked with protection and purification. Its name literally means “that which protects the body.” Offering it during Ganapathi pooja symbolizes the desire to remain shielded from negativity, both physical and spiritual.

13. Butea monosperma (Palash – Flame of the Forest)**Ritual Role:**

Palash flowers and leaves are considered sacred in many rituals, including Ganapathi pooja. The vibrant orange-red flowers are believed to symbolize the sacred fire (Agni), which purifies offerings and removes impurities.

Medicinal/Ethnobotanical Value:

Palash is renowned in Ayurveda for its use in digestive, urinary, and reproductive ailments. Its seeds are vermifuge (expelling intestinal worms), while the gum (“Butea gum”) is used in traditional remedies for diarrhea and skin diseases (Kumar et al., 2011). The bright flowers are also used as a natural dye in Holi celebrations.

Cultural Symbolism:

The tree is known as the “flame of the forest” due to its blazing blossoms. In cultural tradition, it is linked with Agni Devata (the fire god). Offering Palash represents burning away impurities, igniting spiritual passion, and invoking divine illumination.

14. Michelia champaca (Champa – Golden Champa)**Ritual Role:**

Champa flowers are frequently offered in Ganapathi pooja for their fragrance and beauty. They symbolize devotion, love, and spiritual elevation.

Medicinal/Ethnobotanical Value:

Champa flowers and bark are used in traditional medicine as anti-inflammatory, diuretic, and antipyretic agents. The essential oil extracted from flowers is highly prized in perfumery and aromatherapy, known for its calming effects (Raina et al., 2013). The bark has been traditionally used for fever and cardiac conditions.

Cultural Symbolism:

Champa is often associated with divinity and purity. In Hindu mythology, the flower is said to please the gods due to its fragrance. Offering Champa in Ganapathi pooja symbolizes beauty, serenity, and spiritual fragrance that uplifts the soul.

15. Ixora coccinea (Ixora – Jungle Flame)**Ritual Role:**

Ixora flowers, with their bright red clusters, are offered to Lord Ganesha as symbols of devotion and auspiciousness. Their fiery hues are associated with energy and vitality in rituals.

Medicinal/Ethnobotanical Value:

Ixora has applications in traditional medicine, particularly for skin diseases, fever, and dysentery. Root extracts are used for stomach ailments, while flower decoctions are applied as anti-inflammatory remedies (Das et al., 2012). The plant is also valued for its ornamental beauty.

Cultural Symbolism:

Ixora flowers represent vitality, passion, and devotion. In Ganapathi pooja, they are symbolic of spiritual enthusiasm and the offering of one’s pure energy to the deity. Their clustered blooms also reflect unity and collective strength.

16. Sesbania grandiflora (Agathi – Vegetable Hummingbird Tree)**Ritual Role:**

Agathi leaves and flowers are sometimes offered in Ganapathi pooja to signify nourishment, purity, and divine simplicity. Their delicate white or red blooms symbolize humility and surrender to the divine.

Medicinal/Ethnobotanical Value:

Agathi is highly nutritious, rich in calcium, iron, and vitamin A. In Ayurveda, its leaves are considered cooling, purgative, and anthelmintic, used to treat fevers, night blindness, and digestive ailments (Chandra et al., 2014). Flowers are consumed as a vegetable in South Indian cuisine and are believed to improve immunity and cleanse the body.

Cultural Symbolism:

The plant is associated with balance and self-restraint. Its fragile blooms remind devotees of the transient nature of life. Offering Agathi to Lord Ganesha symbolizes the desire for humility, spiritual clarity, and balanced living.

17. Jasminum sambac (Jasmine – Mogra)**Ritual Role:**

Jasmine flowers are widely used in Ganapathi pooja for their fragrance and purity. Their white color signifies spiritual peace and devotion, and garlands of jasmine are often used to adorn Ganesha idols.

Medicinal/Ethnobotanical Value:

Jasmine is valued for its calming and aphrodisiac properties. The flowers are used in Ayurveda for headaches, depression, and wound healing. Jasmine oil is renowned in aromatherapy for reducing stress and anxiety (Bhattacharjee, 2012). The leaves and roots are also used for fever and skin conditions.

Cultural Symbolism:

Jasmine is often referred to as the “flower of the gods.” It embodies love, purity, and divine blessings. Offering jasmine flowers to Ganesha signifies devotion, inner harmony, and the fragrance of a pure heart reaching the divine.

18. Canna indica (Indian Shot – Canna Lily)**Ritual Role:**

Canna flowers are offered in Ganapathi pooja, representing vitality, creativity, and beauty. Their vibrant blossoms symbolize joy and auspicious beginnings.

Medicinal/Ethnobotanical Value:

Canna rhizomes are traditionally used as a food source and for treating fevers, menstrual disorders, and urinary tract infections. The plant is also known for its use in water purification and as a natural dye source (Kumar et al., 2010). Its seeds have been used as beads in ornaments.

Cultural Symbolism:

Canna symbolizes renewal and fertility due to its vigorous growth. In the ritual context, offering it to Ganesha reflects a prayer for creative energy, prosperity, and fresh starts in life's endeavors.

19. Tamarindus indica (Tamarind)**Ritual Role:**

Tamarind leaves are occasionally used in Ganapathi pooja, especially in rural traditions, to represent balance between sweetness and sourness in life.

Medicinal/Ethnobotanical Value:

Tamarind pulp is rich in tartaric acid, vitamins, and minerals. It is used in Ayurveda as a digestive aid, laxative, and cooling agent. The leaves and seeds have antimicrobial and anti-inflammatory properties

(Sudjaroen, 2014). Tamarind is also a staple ingredient in Indian cuisine, symbolizing sustenance and cultural identity.

Cultural Symbolism:

Tamarind represents duality—the balance of bitter and sweet. Offering tamarind to Ganesha is symbolic of embracing life's contrasting experiences with equanimity and resilience.

20. Curcuma longa (Turmeric – Haldi)

Ritual Role:

Turmeric is an indispensable element in Ganapathi pooja. Its rhizome, paste, and powder are used for idol decoration, purification, and as offerings symbolizing prosperity and auspiciousness.

Medicinal/Ethnobotanical Value:

Turmeric is a cornerstone of Ayurveda, known for its powerful anti-inflammatory, antioxidant, and antimicrobial properties. Its active compound, curcumin, is used for treating arthritis, liver disease, and metabolic disorders (Gupta et al., 2013). It is also applied externally for wound healing and skin care.

Cultural Symbolism:

Turmeric is associated with purity, fertility, and spiritual cleansing. In rituals, it symbolizes the golden glow of divine blessings. Offering turmeric to Ganesha represents prayers for prosperity, health, and a purified mind and body.

21. Nelumbo nucifera (Lotus)

Ritual Role:

The lotus is one of the most sacred flowers in Hinduism. In Ganapathi pooja, it symbolizes purity and spiritual enlightenment, as the flower blooms unsullied from muddy waters.

Medicinal/Ethnobotanical Value:

Lotus seeds, roots, and flowers are used in Ayurveda for their cooling, astringent, and restorative properties. Seeds are used as nutritive tonics, while roots are consumed for digestion and blood purification (Mukherjee et al., 2010). Lotus petals and extracts also have antioxidant and cardioprotective effects.

Cultural Symbolism:

The lotus embodies transcendence, detachment, and purity. In Hindu iconography, gods and goddesses are often depicted seated on lotus thrones. Offering lotus to Ganesha signifies rising above worldly attachments and aspiring toward spiritual awakening.

Figures of 21 Sacred Plants

 Tulasi (Ocimum sanctum)	 Durva Grass (Cynodon dactylon)	 Bilva/Bael (Aegle marmelos)
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 Mango (<i>Mangifera indica</i>)	 Lotus (<i>Nelumbo nucifera</i>)	 Banana (<i>Musa paradisiaca</i>)
 Peepal (<i>Ficus religiosa</i>)	 Banyan (<i>Ficus benghalensis</i>)	 Hibiscus (Red) (<i>Hibiscus rosa-sinensis</i>)
 Aparajita or butterfly pea (<i>Clitoria ternatea</i>)	 Jackfruit (<i>Artocarpus heterophyllus</i>)	 Amla (Indian Gooseberry) (<i>Embllica officinalis</i>)
 Aparajita /Arabian Jasmine (<i>Jasminum sambac</i>)	 Ber, Indian jujube <i>Ziziphus mauritiana</i>	 Arka / Crown Flower (<i>Calotropis gigantea</i>)
 Ixora or Jungle Flame		

(<i>Ixora coccinea</i>)	Jamun or Black Plum (<i>Syzygium cumini</i>)	Nirgundi (<i>Vitex negundo</i>)
		
Coconut (<i>Cocos nucifera</i>)	Arjuna (<i>Terminalia arjuna</i>)	Agathi (<i>Sesbania grandiflora</i>)

Summary of Findings

The findings note that these 21 sacred plants that are used in Ganapathi pooja represent a blend of ritual symbolism, ethnomedicinal potential, and ecological knowledge. Although Tulasi, Durva, Hibiscus, and Coconut are universal, regional differences used add more species such as *Vitex negundo* and *Sesbania grandiflora*. The statistics confirm that the ritual of ekavimsati patri is not only a devotional but it is also a community-driven conservation by preserving traditional ecological knowledge by virtue of cultural continuity.

5. Discussion

As shown in the current research project, this tradition of giving 21 sacred plants in Ganapathi pooja is a multi-dimensional process that integrates the religious devotion, symbolic meaning, ecological care, and traditional medicine. Despite the fact that the ritual is mostly a devotional practice, a high level of ecological worldview is present whereby the plants serve as a mediator between the human and the divine. In this part the results are discussed as they are interpreted with respect to symbolic systems including ethnobotanical knowledge, geographical variation and conservation.

A. Symbolism of Sacred Plants

The essence of sacred plant offerings is symbolism. Every plant has its own values and virtues which are consistent with the qualities of Lord Ganapathi as the remover of obstacles. As an example, *Ocimum sanctum* (Tulasi) is associated with purity and holiness to open the ritual space to the presence of divinity, whereas *Cynodon dactylon* (Durva grass) is linked to humility and endurance, as it reminds the worshipers of the need to be modest in spiritual life (Patil, 2020). Although traditionally attributed to Shiva, the trifoliate *Aegle marmelos* (bilva leaf) is a leaf that is worshipped in Ganapathi to seek divine protection and the three aspects of creation, preservation, and destruction (Mahalik, 2021).

The flower offerings—such as *Hibiscus rosa-sinensis* and *Clitoria ternatea*—carry aesthetic, spiritual, and cosmological meanings. The red hibiscus, which Ganapathi loves, is regarded as a representation of power and wealth, whereas the butterfly pea flower (Aparajita) is the symbol of success and endurance (Behera and Mishra, 2020). Such fruits as coconut (*Cocos nucifera*) represent wholeness and submission, that is, the readiness of the devotee to go beyond the ego and give the self to the divinity (Dash et al., 2019). In this way, the group action of giving 21 plants is a whole manifestation of piety that involves several dimensions of symbolism.

B. Ethnobotanical and Medicinal Relevance

The ethnomedicinal value of the plants of the ritual is a very prominent point of the ritual. Some of the species that are used in Ganapathi pooja also hold high-valued position in Ayurveda and folk medicine. Tulasi (*Ocimum sanctum*) is widely employed as an adaptogen and antimicrobial; *Embolia officinalis* (amla) was reported to be rejuvenative in action; and *Vitex negundo* (nirgundi) an analgesic/anti-inflammatory (Jain, 2022). The fact that these plants were utilized during the rituals and as a source of medicine suggests that religious traditions have been used as the cultural systems to preserve the knowledge on health related botanical knowledge (Rout et al., 2017).

Moreover, as the examples of plants like *Calotropis gigantea* (arka) prove, a tendency of ritual significance to substitute the problem of toxicity is manifested. Arka is poisonous in latex but offered to Ganapathi and it symbolizes power and steady force. Examples of such symbolic ranking of a few plants, though limited in usefulness are presented. At the ethnobotanical level, this reinforces the idea that the specified ritual prescriptions are not only utilitarian endeavors, but also broader cultural and cosmological functions (Singh and Kushwaha, 2015).

C. Spiritual Ecology and Conservation

These results are consistent with the literature on spiritual ecology, which highlights the fact that religious traditions have tended to encode ecological wisdom (Rout et al., 2017). Rituals such as Ganapathi pooja keep such plants alive and preserved by the requirement to use them. An example is mango leaves (*Mangifera indica*) and peepal (*Ficus religiosa*) planted in the yard of homes and temples, whose ritual application ensures generational survival. Equally, Tulasi is planted in almost all Hindu homes, which is indicative of its religious and medical importance (Jain, 2022).

The ekavimsati patri tradition thus functions as a form of community-based conservation. Devotees preserve the biodiversity of plants despite the lack of environmental consciousness by undertaking the ritual. This concerns especially the context of the present-day rapid urbanization, where cultural traditions serve to balance the loss of biodiversity by instilling protection into spiritual systems (Mahalik, 2021).

D. Regional Variations

The work also established that there were regional differences in choice of sacred plants. Whereas Tulasi, Durva, Hibiscus and Coconut can be found in almost all situations, some species vary according to local plants and cultural connotations. Dash et al. (2019) recorded the usage of more than 64 species in Odisha during Ganesh puja where they used climbers, shrubs, and trees that are not common in western India. In Maharashtra it is the Durva grass that is given more weight, and it frequently features as the main offering (Patil, 2020). These differences highlight the flexibility of Hindu practices with regards to the local ecology, and do not eliminate the symbolic template of presenting 21 plants.

The fluidity of tradition also reflects itself in such regional variations as a way of showing how rituals change without losing their spiritual essence. This, ethnobotanically, means that religious rites do not remain unchanged but interact dynamically according to the biodiversity of the surrounding environment (Behera & Mishra, 2020).

E. Integration of Ritual and Community Identity

Beyond individual symbolism, the ritual use of sacred plants reinforces community identity. Ganapathi pooja is typically done together with family, temple and in community functions. Even the preparation of the offerings, including picking of flowers, laying them out, and placing the fruits down, are also a cultural education, and young generations are taught how to name plants and how to conduct rituals with the help

of older generations (Mahalik, 2021). This form of knowledge transfer is the guarantee of the survival of the religious piety and also the ethnobotanical tradition.

In addition, the ritual reinforces the social relationship because it brings the society together to a common practice. Such types of Ganapathi festivals presuppose informants that families are to give other families holy leaves and flowers, and they strengthen the ties of mutuality and collaboration. In this way the utilization of sacred plant transcends individual piety to other more significant cultural and social ends.

F. Comparison with Other Ritual Traditions

The sacred plants season during the Ganapathi pooja resembles the other Hindu poojas. Bilva leaves are required as a worship of lord Shiva and Durga Puja is insistent on the use of some flowers and grains. The plants are used in season rites (such as Kartika Purnima) and their offerings differ depending on the practice of the region (Rout et al., 2017). This suggests that hallowed utilization of plants is not unparalleled to Ganapathi worship but a part of a broader Hindu environmental ethics in which plants can be used to communicate with divinity.

What stands out in Ganapathi pooja however is a prescriptive list of 21 plants that is strictly followed. Such mathematical interest in Ekavimsati (21) is a sign of the Hindu numerology of oddity where odd numbers serve to signify good fortune and continuation (Singh and Kushwaha, 2015). As a result, this ritual is a mixture of symbolic numerology and botanical precision and it could, therefore, be termed as a significant contribution to Hindu ecology of ritual.

G. Implications for Modern Conservation

The findings have drastic implications to the modern-day conservation efforts. Sacred plants present both ecological and cultural heritage, as bio-cultural heritage. Ethnobotanical studies through description and conservation of traditions, including the ekavimsati patri, can be used to safeguard the biodiversity and prevent cultural contexts at the same time (Jain, 2022). Policymakers and conservationists can include such traditions within community-based programs in such a way that conservation is not imposed on the people but is calculated by the means of cultural practices.

Further, religious herbal practices emphasize the need to incorporate cultural heritage, which has been identified by its intangible nature, into environmental education. With the further alienation of the young generations to the traditional forms of doing things, the fact that sacred plant knowledge will be introduced in schools, cultural festivals, and eco-tourism might help in strengthening ecological literacy and pride among the cultural.

H. Limitations and Future Research

Although this work recorded the 21 sacred plants, it recognises the fact that rituals differ in regions and communities. Future scholarship might dwell on comparative analysis of the practices of ekavimsati patri across various states, the effects of local biodiversity on ritual practices. The ritual plants could also be analyzed through ethnopharmacology that would enhance the insights into the dual spiritual and medicinal purposes of the plants. Also, interdisciplinary research (botany, anthropology, theology) would help produce more information on the synthesis of ecology and spirituality.

6. Conclusion

The Ganapathi pooja given following the use of 21 sacred plants (ekavimsati patri) given in the present study attests to the inseparability of spirituality, cultural tradition, and ecological consciousness in Hindu practices. Written records and studies of such plants reveal that they had not been ritualized only, but also with respect to ethnobotanics as well as medicines and even ecology of the plants. As a result of this study,

we get to learn that the sacred plant traditions are not in a vacuum of the culture practice, but are rather in a far greater context of bio-cultural heritage supporting the human and ecological community.

A. Integration of Religion and Ecology

The findings affirm that rituals such as Ganapathi pooja embody a form of **eco-spirituality**. The use of Tulasi, Durva, Hibiscus, Mango leaves, Coconut, and other plants shows how symbolic values converge with ecological functions. These plants represent purity, resilience, prosperity, and divine protection, while simultaneously contributing to biodiversity preservation. By mandating the offering of specific plants, the ritual ensures their continued cultivation and survival, thereby aligning spiritual devotion with ecological stewardship (Jain, 2022; Rout et al., 2017).

B. Preservation of Ethnobotanical Knowledge

The other significance of this study is that it preserves traditional botanical knowledge. A large number of plants featured in Ganapathi pooja, including *Ocimum sanctum* (Tulasi), *Aegle marmelos* (Bilva) and *Embllica officinalis* (Amla), are core to Ayurveda and folk medicine. Their use in ritual has guaranteed communities still identify, cultivate, and preserve them, despite the situation where modern lives would otherwise water the practices. This highlights the importance of religion as an agent of intergenerational transfer of ethnobotanical knowledge (Behera and Mishra, 2020; Singh and Kushwaha, 2015).

C. Cultural Continuity and Identity

The research also demonstrates that the continuity of culture and community identity is a fundamental issue that relies on sacred use of plants. Making offerings in Ganapathi pooja is a religious practice as well as a way of cultural training. It unites communities and families, and enables elderly to pass ritual knowledge to the younger generations. The process enhances cultural identity and safeguards the intangible cultural heritage (Mahalik, 2021).

Moreover, the diversity of Hindu rituals is manifested by regional differences in the list of 21 plants. Although the underlying plants are always the same, the specific mix of offerings is determined by the local biodiversity and interpretations. Such flexibility refers to the changeable aspect of tradition where rituals could be significant and be grounded in the local ecological setting (Dash et al., 2019; Patil, 2020).

D. Relevance to Modern Conservation

Sacred plant traditions such as the ekavimsati patri ritual are relevant in the modern day in the light of rising loss of biodiversity and climatic changes. They provide a community-based model of conservation which is based on the cultural practice and not out of outward enforcement. Through recording and acknowledgment of such traditions, contemporary conservation programs can incorporate spiritual and cultural values into ecological programs. It is also particularly important in India because religious and cultural worlds shape everyday relationships with the natural environment (Jain, 2022).

E. Limitations and Future Directions

In this research, there are some limitations recognized. The list of the 21 plants differs by region, and it is difficult to come up with a single, universal, catalog. Some communities were also culturally sensitive to field access. Further studies need to be diversified to compare the situation in other states, investigate the influences of local environments on ritual activities. Also, interdisciplinary efforts incorporating ethnobotany, anthropology and pharmacology might shed more light on the dual ritual and medicinal value of sacred plants.

F. Final Reflections

The 21 sacred plants offered in Ganapathi pooja is the old but developing tradition that brings together the concepts of devotion, meaning, and ecology. The ritual is rather than a religious practice, a cultural process

which makes biodiversity, ethnobotanical knowledge, and community identity stronger. The current research study adds to academic and culture preservation in the description and analysis of this practice. Finally, the ekavimsati patri tradition proves that the religious rituals when interpreted correctly can become potent partners in the ecological protection. In the Indian ecological crisis, and the global ecological crisis, these kinds of traditions are to remind us that spirituality and sustainability do not have to be two different things to go after. Rather, they are able to intersect with rituals that glorify the intertwining of life, humanity and divinity.

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