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CONNECTING CULTURE AND ECOLOGY: THE ROLE OF EKAVIMSATHI POOJA IN BIODIVERSITY PRESERVATION

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ABSTRACT
This study explores the cultural, ecological, and medicinal significance of the Ekavimsathi Pooja, a traditional Hindu ritual that involves the offering of 21 sacred leaves to Lord Ganesha. The ritual not only serves as a spiritual practice but also promotes biodiversity conservation by incorporating native plant species into religious ceremonies. By highlighting the traditional use of various plants such as *Artemisia vulgaris L., Solanum xanthocarpum Schradt. & Wendl.* and others, this paper underscores their medicinal properties and ecological roles. The findings reveal how the ritual fosters a deep respect for nature and preserves traditional knowledge systems, contributing to ecological sustainability. Through documentation of these plant species and their uses, the study emphasizes the interconnectedness of spirituality, traditional practices, and biodiversity conservation, demonstrating the importance of integrating religious rituals into modern environmental conservation efforts.

KEYWORDS: Hindu Rituals; Medicinal Properties; Sacred Plants; Traditional Knowledge.

1. INTRODUCTION

Hinduism, also known as Sanatana Dharma ("the eternal tradition" or "the eternal way"), is considered the world's oldest religion (Gandhi, 2018). Traditionally, Hindu practitioners use various plant species and parts for worshipping different gods and goddesses. Many plants are associated with religious functions, rituals, and festivals. Ganesh Chaturthi, a major Hindu festival, celebrates Ganesha as the God of New Beginnings, the Remover of Obstacles, and the god of wisdom and intelligence (Singh & Ratate, 2021). The idol of Lord Ganesha is typically made of earth or clay, and its decoration involves materials gathered from nature, often collected from areas around villages or towns. "Patri," a special decoration for Ganesha puja, includes leaves, flowers, and fruits sourced from natural surroundings or cultivated fields. This practice is significant in Hindu culture due to the easy availability of these plants.

Despite the religious importance of plants in Hindu rituals, there is limited literature and scientific study in this area. This paper aims to emphasize the use of plants in Ganesh Chaturthi.

2. MATERIALS AND METHODS

Data on the importance of various plants used in worshipping Lord Ganesha (as mentioned in the Skanda Purana) was collected through interactions with specialists, such as priests. An extensive literature review was conducted to compile information on traditional practices related to nature and natural resource conservation by different cultural groups. Relevant materials were gathered from books, scientific reports, journals, and online sources. Additionally, firsthand information was obtained from various cultural groups within Telangana. The botanical names of the plants were documented and identified with the help of The Flora of Andhra Pradesh (Pullaiah, 2018) and The Flora of Telangana (Reddy & Sudhakar, 2016).

3. RESULT AND DISCUSSION

The study documented 21 plant species belonging to 15 families that are used in the Ekavimshati Ganesha Puja ritual. Each plant carries distinct spiritual, medicinal, and ecological significance, which is summarized in Table 1.

Table 1: List of plants used in Ekavishati Ganesha Puja.

S. No.	Scientific name	Sanskrit name	Family
1	*Artmesia vulgaris L.*	Machi pathram	Asteraceae
2	*Solanum xanthocarpum Schradt. & Wendl.*	Bruhathi Patram	Solanaceae
3	*Aegle marmelos (L.) Corr.*	Bilva Patram	Rutaceae
4	*Cynodon dactylon (L.) Pers.*	Dhurvayugmam	Poaceae
5	*Datura metel L.*	Durthaara	Solanaceae
6	*Ziziphus mauritiana Lam.*	Badhari	Rhamnaceae
7	*Achyranthus aspera L.*	Apamarga	Amaranthaceae
8	*Oscimum sanctum L.*	Tulasi	Lamiaceae
9	*Mangifera indica L.*	Choota	Anacardiaceae
10	*Nerium indicum Mill.*	karaveera	Apocynaceae
11	*Evolvulus alsinoidesL.*	Vishnukantha	Convolvulaceae
12	*Punica granatum L.*	Dhadimi	Lythraceae
13	*Cedrus deodara (Roxb. ex D.Don) G.Don*	Devadaru	Pinaceae
14	*Origanum marjoram L.*	Maruvaka	Lamiaceae
15	*Vitex nigunda L.*	Sindhuvara	Lamiaceae
16	*Jasmium grandifolium L.*	Jaji	Oleaceae
17	*Solanum nigrum L.*	Gandaki	Solanaceae
18	*Prosopis Cineraria (L) Druce*	Shamee	Fabaceae
19	*Ficus reliogiosaL.*	Ashwattha	Moraceae
20	*Terminalia arjuna (Roxb.ex DC.) Wight & Arn.*	Arjuna	Combretaceae
21	*Calotropis gigantia L.*	Arka	Apocynaceae

3.1 Ekavimsathi Pooja: Worshipping Lord Ganesha with 21 Sacred Leaves

In Hindu tradition, the worship of Lord Ganesha, the deity of wisdom, prosperity, and the remover of obstacles, is often marked by the sacred ritual of Ekavimsathi Pooja. This practice involves offering 21 different types of leaves, each representing unique qualities and attributes, to honor Lord Ganesha. The ritual is not only a spiritual act but also carries a deep ecological and medicinal significance, promoting biodiversity and the conservation of nature.

The Ekavimsathi Pooja, derived from the Sanskrit words "Eka" (one) and "Vimsathi" (twenty), involves a collection of 21 leaves or plant parts that are offered to Lord Ganesha while chanting specific mantras. This ritual is believed to please the deity, invoking blessings for health, prosperity, and the removal of obstacles (Getty, 1936).

3.2 Promoting Biodiversity

The practice of using specific leaves in rituals such as the Ekavimsathi Pooja promotes the sustainable use of plant resources. By valuing native flora and integrating them into daily religious practices, the ritual fosters a deep respect for nature and encourages the conservation of indigenous plant species. All these plants used in Ekavimsathi Pooja are native to India and play a vital role in maintaining ecological balance. The ritual's focus on these plants helps in their preservation and prevents the loss of biodiversity (Das and Shukla, 2007).

3.3 Conservation of Nature and Traditional Knowledge

Ekavimsathi Pooja serves as a powerful reminder of the intricate relationship between spirituality, traditional knowledge, and nature conservation. It reflects the Vedic philosophy of "Vasudhaiva Kutumbakam" –is a Sanskrit phrase that means "The world is one family." It comes from the Maha Upanishad (Chapter 6, Verse 72) and conveys the idea of universal brotherhood, emphasizing that all human beings are interconnected beyond geographical, cultural, and religious boundaries. It promotes harmony, inclusivity, and global unity. By practicing such rituals, communities continue to uphold traditional knowledge systems that emphasize harmony with nature, contributing to ecological sustainability.

3.4 Medicinal and Cultural Significance of Selected Plants

Artemisia vulgaris L.: Commonly known as Davanamu and Mach patri (in Telugu), this plant is used in traditional medicine to address neurological conditions such as depression, stress, epilepsy, and insomnia (Ekiert et al., 2020). It is also utilized for managing hypertension and inducing labor. Medicinally, *Artemisia vulgaris* is valued for its therapeutic effects on the nervous and cardiovascular systems. Traditionally, it is used in folk remedies and rituals to promote well-being and safeguard against illness. In spiritual practices, it is believed to enhance spiritual awareness and provide protection during rituals.

***Solanum xanthocarpum Schradt. & Wendl.*:** Known for its use in treating respiratory ailments such as asthma, this plant holds medicinal benefits for alleviating breathing difficulties (Meena et al., 2010). Traditionally,

this plant holds great significance as one of the Dasamula in Ayurveda and plays a vital role in traditional medicine. In addition to its numerous potential uses, including eco-friendly benefits, *Solanum xanthocarpum* is culturally offered to Lord Ganesha, symbolizing the removal of obstacles and challenges.

Aegle marmelos (L.) Corr.: Bael, also known as Bengal quince or wood apple, is a widely recognized medicinal plant in traditional Ayurvedic medicine. The leaves and fruits of bael are used for their therapeutic properties in the treatment of various ailments, including dysentery, dyspepsia, malabsorption, neurological disorders, edema, vomiting, and rheumatism (Wali & Gupta, 2024). Additionally, bael has been traditionally used to support digestive health, regulate blood sugar levels, and strengthen the immune system. Ecologically, the bilva tree is a drought-resistant species that thrives in poor soils, making it valuable for sustainable biodiversity. It provides habitat and food for various insects and birds, contributing to ecological balance.

Cynodon dactylon (L.) Pers.: Commonly known as Bermuda grass (Garika in Telugu), it is valued for its medicinal properties in controlling diabetes, healing minor wounds, and reducing inflammation (Nagori & Solanki, 2011). Medically, it is utilized in traditional remedies for its beneficial effects on blood sugar levels and tissue repair. Culturally, *Cynodon dactylon* holds a special place in Hindu rituals, symbolizing purity and sacredness.

Datura metel L.: Traditionally used to treat conditions such as madness, skin diseases, and infections, *Datura metel* has notable medicinal applications, including analgesic and antispasmodic properties (Tripathi et al., 1996). Culturally, *Datura metel* holds a unique place in rituals, symbolizing spiritual purity and transformation.

Ziziphus mauritiana Lam.: Rich in vitamin C and antioxidants, *Ziziphus mauritiana* is used to treat respiratory ailments and boost immunity (Gupta, 2018). The jujube tree is highly resilient and can grow in arid and semi-arid regions, making it crucial for sustainable biodiversity and agroforestry. It provides food and shelter for various wildlife species, supporting ecosystem stability.

Achyranthes aspera L.: Known for its anti-inflammatory, antifungal, and antimicrobial properties, this plant is used in rituals to ward off negativity and evil (Talreja & Tiwari, 2023). The plant also contributes to sustainable biodiversity by thriving in various climatic conditions and enhancing soil fertility. It is often used in agroforestry systems to improve soil health and support other plant species.

Ocimum sanctum L.: Revered for its antimicrobial, antioxidant, and adaptogenic properties, *Ocimum sanctum* is used in Ayurvedic medicine for respiratory disorders (Kulkarni & Adavirao, 2018). Ecologically, Tulsi attracts pollinators like bees and butterflies, thereby supporting biodiversity. It is believed to bring spiritual purity and ward off evil.

Mangifera indica L.: Known for its anti-cancer, anti-diabetic, and antioxidant properties, the leaves are offered to promote prosperity and spiritual growth (Kumar et al., 2021). Mango trees are essential to a sustainable environment due to their benefits in carbon sequestration, soil conservation, and biodiversity. They also provide food, habitat, and shade, supporting various wildlife.

Nerium indicum Mill.: Used in Ayurvedic medicine for skin diseases, wound healing, and inflammation, *Nerium indicum* also supports local biodiversity by providing nectar and shelter to various insects, including bees and butterflies, despite being toxic to most mammals (Shrirao et al., 2023). Its robust growth in diverse environments makes it valuable for landscaping and soil stabilization.

Evolvulus alsinoides L.: Valued for its neuroprotective properties, this plant's extracts show significant potential in enhancing cognitive function and reducing symptoms of neurological disorders due to their antioxidant and anti-inflammatory effects (Rai et al., 2016). Its use in Ayurveda is supported by pre-clinical evidence demonstrating its ability to improve memory retention, learning ability, and mitigate epileptic episodes.

Punica granatum L.: Rich in antioxidants, anti-inflammatory, and antihypertensive properties, *Punica granatum* is widely used to support cardiovascular health, improve digestion, and manage inflammation (Kshirsagar et al., 2023). Culturally, the pomegranate symbolizes fertility and prosperity and is often featured in various rituals and festivals as a symbol of abundance and blessings.

Cedrus deodara (Roxb.) G.Don: Deodar cedar possesses anti-inflammatory, analgesic, and anti-cancer properties (Pathak et al., 2023). Its extracts are used in traditional medicine to relieve pain, reduce inflammation, and combat cancerous conditions. Traditionally, its wood is highly valued for its durability and aromatic qualities, making it a preferred choice for construction and crafting sacred artifacts.

Origanum marjoram L.: Known for its antianxiety, antibacterial, and hepatoprotective properties, *Origanum marjoram* is valued for its broad medicinal uses, such as alleviating stress, treating infections, and supporting liver health (Ayari et al., 2013). It is often used in traditional practices, including herbal remedies and culinary applications.

***Vitex negundoL.*:** Used to treat respiratory ailments, pain, and reproductive issues, *Vitex negundo* is valued for its anti-inflammatory and analgesic effects (Ahuja et

al., 2015). It is also culturally significant in various traditions where it symbolizes strength and protection.

Jasminum grandiflorum L.: Known for its essential oil with antimicrobial properties, this plant is also valued for its medicinal uses in treating respiratory and skin conditions (Galovicova et al., 2022). Ecologically, it contributes to local biodiversity by providing habitat and food for various pollinators.

Solanum nigrum L.: Black nightshade is used for its antitumor, antioxidant, and neuroprotective properties and plays a crucial role in supporting local biodiversity by providing habitat and food for insects and birds (Chen et al., 2022).

Prosopis cineraria (L.) Druce: Also known as the khejri tree, it holds significant cultural value in arid regions of India, where it is revered as a symbol of life and prosperity (Khatri, 2011). It plays a vital role in stabilizing sand dunes, improving soil fertility, and supporting desert ecosystems.

Ficus religiosa L.: Known for its antimicrobial, anti-inflammatory, and antidiabetic properties, the peepal tree is effective in treating respiratory disorders, skin diseases, and diabetes (Sandeep et al., 2018). It provides habitat and food for a variety of birds, insects, and animals.

Terminalia arjuna (Roxb. ex DC.) *Wight & Arn.:* Renowned for its cardioprotective properties, particularly in Ayurvedic medicine, where its bark is used to treat heart conditions, hypertension, and cholesterol (Amalraj & Sreeraj, 2016). It also supports sustainable biodiversity by providing habitat for various birds and insects.

Calotropis giganteaL.: Known for its potential anticancer activity, *Calotropis gigantea* is valuable for reclaiming degraded land and promoting biodiversity in arid environments (Ahmad Nejhad et al., 2023).

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