



Medicinal and Environmental Significance of the Telangana Festival “Bathukamma”: An Ethnobotanical and Biodiversity Perspective

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Abstract:

Bathukamma, the prominent floral festival of Telangana, represents a distinctive relationship between cultural heritage, seasonal floral diversity, traditional plant knowledge, and environmental awareness. The present study investigates the medicinal and environmental significance of plants and flowers associated with the nine-day Bathukamma tradition from an ethnobotanical and biodiversity perspective. A literature based descriptive assessment was undertaken using published ethnobotanical, botanical, pharmacological, environmental, and cultural sources. The study documented the traditional characteristics of the nine days of Bathukamma and examined major floral associations, including *Senna auriculata*, *Celosia argentea*, *Tagetes* spp., *Chrysanthemum* spp., *Tabernaemontana* spp., and *Cucurbita* spp. The reviewed literature indicates that several associated plants possess documented ethnomedicinal importance and reported pharmacological properties, including antioxidant, antimicrobial, anti-inflammatory, and antidiabetic activities, although the strength of evidence varies among species. Bathukamma also provides a cultural context for recognizing seasonal flowering plants, maintaining traditional ecological knowledge, promoting awareness of floral diversity, and strengthening conservation values. The study highlights the potential of cultural festivals to support biodiversity education and sustainable plant use awareness. However, variations in flower selection, limited quantitative field data, and uneven pharmacological validation restrict broader generalization. Future research should integrate phytochemical, toxicological, molecular, biodiversity monitoring, and conservation studies to scientifically strengthen the understanding of Bathukamma associated plant resources.

Keywords: Bathukamma; ethnobotany; medicinal plants; floral diversity; traditional knowledge; biodiversity; environmental awareness; plant conservation; Telangana

1. INTRODUCTION

1.1 Background of Bathukamma

Bathukamma is a distinctive floral festival of Telangana, India, and represents an important expression of the region's cultural heritage, community traditions, and relationship with nature. The festival is celebrated over nine days, during which women and communities prepare and worship decorated floral arrangements using seasonally available flowers. The festival coincides with the post monsoon period when a variety of wild and cultivated flowering plants become available. Consequently, Bathukamma provides a culturally important context for recognizing seasonal plant diversity and transmitting traditional knowledge concerning local flora (Government of Telangana, n.d.; Telangana Tourism, n.d.). The use of flowers in the festival also reflects the close relationship between people, plants, seasonal cycles, and natural resources (Saritha & Anitha Devi, 2017).

1.2 Nine Day Bathukamma Tradition

The Bathukamma festival is traditionally observed through nine stages known as **Engili Pula Bathukamma, Atukula Bathukamma, Muddapappu Bathukamma, Nanabiyyam Bathukamma, Atla Bathukamma, Aligina Bathukamma, Vepakayala Bathukamma, Venna Muddala Bathukamma, and Saddula Bathukamma**. These names are primarily associated with the traditional offerings, foods, and rituals of the respective days rather than representing nine exclusive flower species. Floral arrangements may contain several locally available seasonal flowers, with their composition varying according to tradition and availability. The nine-day sequence therefore provides an appropriate cultural framework for examining the relationship between ritual practices and plant resources.

1.3 Floral Diversity Associated with Bathukamma

Several flowers are commonly associated with Bathukamma, including Tangedu (*Senna auriculata*), Gunugu (*Celosia argentea*), Banthi (*Tagetes* spp.), Chemanti (*Chrysanthemum* spp.), Nandi vardhanam (*Tabernaemontana* spp.), Gummadi flowers, and other seasonal species. The recognition and use of these plants provide opportunities to document their local names, botanical identities, families, flowering periods, and traditional significance. Such documentation is relevant to ethnobotany because traditional cultural practices can contribute to the preservation and transmission of knowledge about regional plant diversity.

1.4 Medicinal Significance

Plants associated with Bathukamma also have considerable ethnobotanical and medicinal importance. Previous studies have documented traditional medicinal applications of selected Bathukamma flowers and investigated their biological activities (Rao et al., 2015; Saritha & Anitha Devi, 2017). Scientific investigations of *Celosia argentea*, *Hibiscus rosa sinensis*, and *Tagetes* species have reported diverse phytochemical constituents and activities such as antioxidant, antimicrobial, and anti-inflammatory effects (Amtaghri et al., 2024; Tang et al., 2016; Vaz et al., 2024; Zulkurnain et al., 2023). However, traditional medicinal use, laboratory based biological activity, and clinically established therapeutic efficacy represent different levels of evidence. Therefore, medicinal significance in the present study is considered by distinguishing ethnobotanical reports from experimentally validated findings.

1.5 Environmental Significance

Bathukamma has environmental significance through its association with seasonal flowering, local plant diversity, traditional ecological knowledge, and community awareness of natural resources. The use of seasonal flowers encourages recognition of local flora and provides a cultural setting for discussing biodiversity and conservation. Its relationship with natural landscapes and water resources further reflects the cultural connection between communities and their environment. Bathukamma can therefore be considered a culturally embedded platform through which knowledge of plants, seasonal ecological cycles, and conservation values may be transmitted across generations.

1.6 Research Gap

Although previous studies have examined Bathukamma flowers, ethnomedicinal practices, and selected pharmacological properties, comparatively limited attention has been given to an integrated framework connecting **nine-day Bathukamma traditions, floral diversity, medicinal knowledge, biodiversity, and environmental significance**. The present study addresses this gap by examining these dimensions together.

1.7 Aim

The aim of this study is to investigate the medicinal and environmental significance of plants and flowers associated with the nine-day Telangana festival Bathukamma.

1.8 Objectives

1. To document the nine-day Bathukamma tradition and its floral associations.
2. To identify major plant species used in Bathukamma.
3. To examine the medicinal significance of associated plants.
4. To assess their environmental and biodiversity significance.
5. To document traditional ecological knowledge associated with Bathukamma.
6. To highlight the potential role of Bathukamma in plant conservation and environmental awareness.

1.9 Research Questions

1. What are the traditional characteristics of each of the nine days of Bathukamma?
2. Which flowers are commonly associated with Bathukamma?
3. What medicinal properties have been reported for these plants?
4. What environmental and biodiversity significance do these plants have?
5. How does Bathukamma contribute to traditional ecological knowledge and conservation awareness?

2. MATERIALS

2.1 Study Context

The present study was developed within the cultural and botanical context of the **Bathukamma festival of Telangana, India**. Bathukamma is traditionally celebrated over nine days and is characterized by the preparation of floral arrangements using seasonally available flowers. The study considers the festival as an important cultural practice associated with local plant diversity, traditional ecological knowledge, medicinal knowledge, and environmental awareness. Particular attention was given to the seasonal availability and traditional recognition of flowering plants used in Bathukamma and their relationship with cultural practices and natural resources.

2.2 Floral Materials

The floral materials considered in the study included major flowers traditionally associated with Bathukamma, including Tangedu (*Senna auriculata*), Gunugu (*Celosia argentea*), Banthi (*Tagetes* spp.), Chemanti (*Chrysanthemum* spp.), Nandi vardhanam (*Tabernaemontana* spp.), Gummadi flowers, and other seasonally available flowers reported in the literature. For each plant, information was compiled on its local name, accepted botanical name, family, growth habit, flowering period, traditionally recognized plant part, cultural or traditional use, reported medicinal significance, and environmental relevance. Botanical names were standardized using authoritative taxonomic resources wherever possible.

2.3 Botanical Documentation Materials

Botanical documentation was supported using digital photographic records, standard botanical identification manuals, regional floras, herbarium references, taxonomic literature, and authoritative botanical databases. These resources were used to verify plant identity, nomenclature, family classification, morphological characteristics, and flowering characteristics.

2.4 Scientific Literature

Scientific and documentary information was obtained from **Google Scholar, Scopus, Web of Science, PubMed, ScienceDirect, and SpringerLink**, together with relevant Government of Telangana publications and authoritative botanical databases. Literature was selected based on its relevance to Bathukamma, associated plant species, ethnobotanical knowledge, medicinal properties, phytochemistry, biodiversity, environmental significance, and plant conservation. Both classical and recent peer reviewed literature were considered to provide an appropriate scientific foundation for the study.

3. METHODS

3.1 Research Design

The study adopted an integrated **ethnobotanical, descriptive, and literature based environmental assessment** framework to examine the medicinal and environmental significance of the Telangana festival Bathukamma. The research process involved systematic documentation of the nine-day Bathukamma tradition, identification of flowers associated with the festival, compilation of ethnobotanical information, assessment of published medicinal evidence, evaluation of environmental significance, and analysis of documented floral diversity.

3.2 Day Wise Bathukamma Documentation

The nine-day Bathukamma tradition was documented using authoritative cultural sources and relevant scholarly literature. The analysis considered the traditional name and significance of each day, the associated offerings and cultural practices, the use of seasonal flowers, and the broader medicinal and environmental relevance of the plants

used during the festival. The nine days were identified as Engili Pula Bathukamma, Atukula Bathukamma, Muddapappu Bathukamma, Nanabiyyam Bathukamma, Atla Bathukamma, Aligina Bathukamma, Vepakayala Bathukamma, Venna Muddala Bathukamma, and Saddula Bathukamma.

Table 1. Nine Day Bathukamma: Traditional and Floral Significance

Day	Bathukamma Name	Traditional Significance	Major Floral Association	Medicinal Relevance	Environmental Relevance
1	Engili Pula Bathukamma	Traditional opening day observance	Seasonal flowers	Literature based	Floral diversity
2	Atukula Bathukamma	Traditional offering	Seasonal flowers	Literature based	Biodiversity
3	Muddapappu Bathukamma	Traditional offering	Seasonal flowers	Literature based	Traditional plant knowledge
4	Nanabiyyam Bathukamma	Traditional offering	Seasonal flowers	Literature based	Seasonal ecology
5	Atla Bathukamma	Traditional offering	Seasonal flowers	Literature based	Floral resources
6	Aligina Bathukamma	Traditional observance	Seasonal flowers	Literature based	Cultural ecology
7	Vepakayala Bathukamma	Traditional offering	Seasonal flowers	Literature based	Plant diversity
8	Venna Muddala Bathukamma	Traditional offering	Seasonal flowers	Literature based	Ecological awareness
9	Saddula Bathukamma	Grand/final celebration	Diverse floral arrangement	Literature based	Conservation awareness

3.3 Botanical Identification

Plants associated with Bathukamma were identified using their documented local names, morphological characteristics, standard botanical literature, regional floras, herbarium references, and authoritative taxonomic databases. Accepted botanical nomenclature was used throughout the study. Botanical synonyms were checked where necessary to maintain consistency between historical and current taxonomic classifications.

3.4 Ethnobotanical Assessment

A **literature based ethnobotanical assessment** was conducted to document traditional uses, plant parts utilized, cultural significance, medicinal knowledge, and community practices associated with Bathukamma plants. Published ethnobotanical studies and authoritative documentary sources were compared to identify recurring traditional uses. Since the present study does not constitute a primary interview-based survey, no informant level demographic data or interview derived quantitative indices were assigned.

3.5 Medicinal Literature Assessment

Published evidence concerning the medicinal significance of Bathukamma associated plants was systematically organized into five levels: **(1) traditional use, (2) ethnobotanical evidence, (3) in vitro evidence, (4) experimental or animal evidence, and (5) clinical evidence.** Reported activities such as antioxidant, antimicrobial, anti-inflammatory, antidiabetic, wound healing, and gastroprotective effects were recorded only when supported by

relevant scientific literature. Traditional claims were distinguished from experimentally demonstrated biological activities and clinical evidence.

3.6 Floral Diversity Analysis

Documented floral diversity was evaluated using species richness and relative frequency where adequate frequency data were available.

Species Richness

$$S = \text{Total number of documented species}$$

Relative Frequency

$$RF_i = \frac{F_i}{\sum_{i=1}^S F_i} \times 100$$

where F_i represents the documented frequency of species i .

Where suitable quantitative abundance or frequency information was available, the Shannon–Wiener diversity index was calculated:

$$H' = - \sum_{i=1}^S p_i \ln(p_i)$$

where H' is the Shannon–Wiener diversity index, S is the total number of species, and p_i is the proportional representation of species i . The index was not calculated where the available literature did not provide appropriate quantitative data.

3.7 Medicinal Significance Classification

The documented medicinal activities were grouped into major categories, including **antioxidant, antimicrobial, anti-inflammatory, antidiabetic, wound healing, gastroprotective**, and other scientifically reported activities. Each activity was linked to its corresponding literature source and evidence level.

3.8 Environmental Significance Assessment

Environmental significance was assessed qualitatively through published information concerning seasonal flowering, plant diversity, recognition of wild and native plants, traditional ecological knowledge, conservation relevance, community environmental awareness, and sustainable use of plant resources. Particular attention was given to the role of Bathukamma in maintaining cultural awareness of seasonal flora and traditional plant knowledge.

3.9 Statistical Analysis

The study primarily employed descriptive analysis, including **frequency, percentage, species richness, and relative frequency**. Mean and standard deviation were considered only where quantitative measurements were available from the reviewed literature. The Shannon–Wiener diversity index was calculated only when appropriate species frequency or abundance data were available. No inferential statistical test was applied because the present study was designed as a literature based ethnobotanical and environmental assessment rather than a primary experimental or questionnaire-based investigation.

4. RESULTS

4.1 Nine Day Bathukamma Characteristics

The literature-based assessment documented nine traditionally recognized days of Bathukamma, each associated with a specific name, customary food offering, and ritual or cultural significance. The nine-day sequence reflects the integration of seasonal floral resources, food traditions, women's participation, community gathering, and cultural expression. The flowers used for Bathukamma are not restricted to one exclusive species on each day; rather, their availability and selection may vary according to season and local tradition.

Table 2. Day Wise Traditional Characteristics of Bathukamma

Day	Name	Traditional Offering	Ritual/Cultural Significance
1	Engili Pula Bathukamma	Rice flour and sesame-based offering	Beginning of the Bathukamma celebrations and preparation of the floral arrangement
2	Atukula Bathukamma	Atukulu (flattened rice)	Community participation and continuation of the festival observance
3	Muddapappu Bathukamma	Muddapappu (cooked lentils)	Traditional food offering associated with family and community participation
4	Nanabiyyam Bathukamma	Soaked rice and related offerings	Continuation of ritual practices and seasonal cultural expression
5	Atla Bathukamma	Atlu (rice-based pancakes)	Collective celebration and traditional food sharing
6	Aligina Bathukamma	Traditional food offering associated with the	Reinforcement of cultural and communal participation
7	Vepakayala Bathukamma	Vepakayalu (traditional offering)	Continued floral worship and cultural observance
8	Venna Muddala Bathukamma	Venna muddalu (butter-based offering)	Ritual preparation leading toward the concluding celebration
9	Saddula Bathukamma	Saddulu and other traditional food offerings	Grand concluding celebration involving floral worship, community gathering, and immersion related customs

4.2 Floral Diversity

The literature identified several plant species and taxa commonly associated with Bathukamma floral arrangements. Tangedu and Gunugu are particularly prominent in descriptions of Bathukamma, while marigold, chrysanthemum, Nandi vardhanam, and Gummadi flowers contribute to the broader floral diversity. The documented plants represent different families and growth forms, indicating that Bathukamma incorporates a diverse seasonal floral resource rather than a single botanical group.

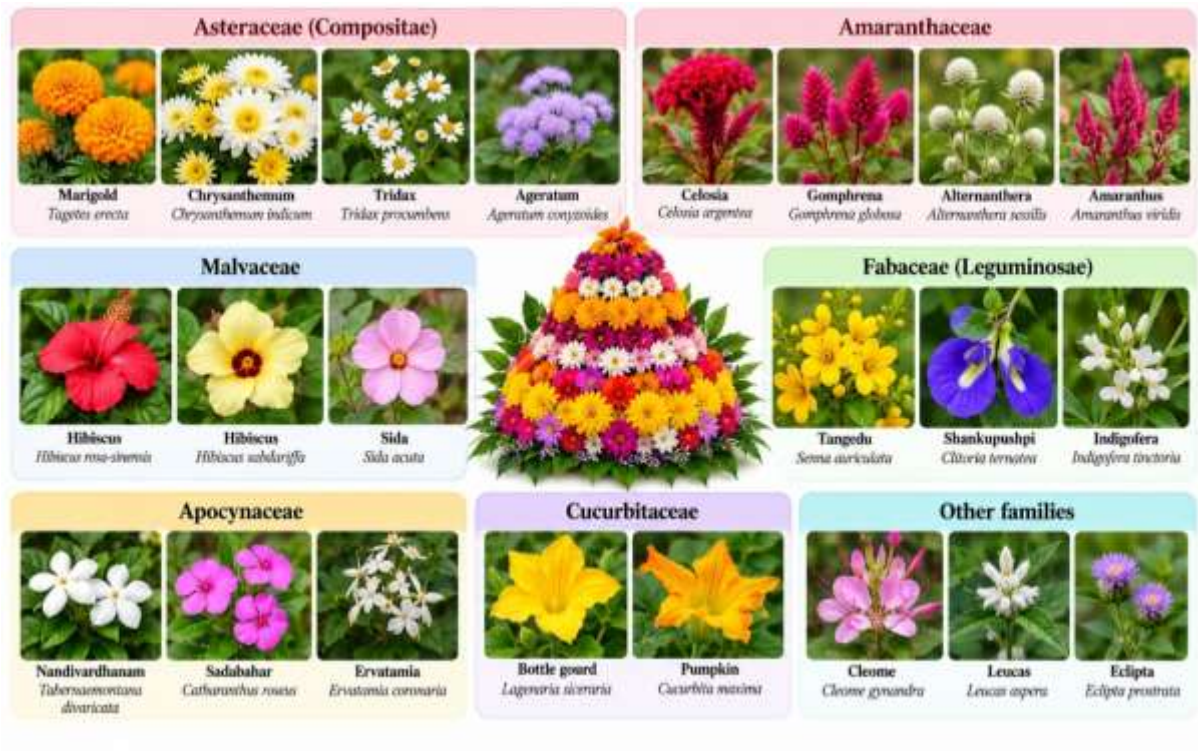


Figure 1. Important flowers associated with Bathukamma and their botanical families.

Table 3. Major Flowers Associated with Bathukamma

S. No.	Local Name	Botanical Name	Family	Habit	Flowering Period
1	Tangedu	<i>Senna auriculata</i>	Fabaceae	Shrub	Mainly seasonal flowering during warmer/post monsoon periods
2	Gunugu	<i>Celosia argentea</i>	Amaranthaceae	Herb	Mainly monsoon to post monsoon
3	Banthi	<i>Tagetes</i> spp.	Asteraceae	Herb	Seasonal; commonly cultivated
4	Chemanti	<i>Chrysanthemum</i> spp.	Asteraceae	Herb	Mainly autumn/winter
5	Nandi vardhanam	<i>Tabernaemontana</i> spp.	Apocynaceae	Shrub	Seasonal/perennial flowering
6	Gummadi flower	<i>Cucurbita</i> spp.	Cucurbitaceae	Climber	Mainly monsoon/post monsoon
7	Other seasonal flowers	Various taxa	Various families	Various	Seasonal

4.3 Medicinal Significance

The reviewed literature indicates that several Bathukamma associated plants possess documented ethnomedicinal and pharmacological importance. Reported activities include antioxidant, antimicrobial, anti-inflammatory, antidiabetic and wound healing effects. However, the evidence level differs considerably among plants. Traditional medicinal use should therefore be distinguished from experimental and clinical evidence.

Table 4. Medicinal and Pharmacological Significance of Bathukamma Associated Plants

Plant	Plant Part	Traditional Use	Reported Activity	Evidence Level
<i>Senna auriculata</i>	Flowers/ leaves/ bark	Traditional medicinal applications	Antioxidant, antimicrobial, antidiabetic	Ethnobotanical/ experimental
<i>Celosia argentea</i>	Seeds/ leaves/ flowers	Traditional treatment of several ailments	Antioxidant, antimicrobial, anti-inflammatory	Ethnobotanical/ experimental
<i>Tagetes</i> spp.	Flowers/ leaves	Traditional medicinal applications	Anti-inflammatory, antioxidant	Ethnobotanical/ experimental
<i>Chrysanthemum</i> spp.	Flowers	Traditional herbal applications	Antioxidant, antimicrobial	Ethnobotanical/ experimental
<i>Tabernaemontana</i> spp.	Leaves/ flowers/ other parts	Traditional medicinal applications	Antioxidant and other pharmacological activities	Ethnobotanical/ experimental
<i>Cucurbita</i> spp.	Flowers/ other parts	Food and traditional applications	Antioxidant and other reported activities	Experimental/ ethnobotanical

4.4 Family Wise Distribution

The documented plants represented multiple botanical families, with Asteraceae, Fabaceae, Amaranthaceae, Apocynaceae and Cucurbitaceae among the principal families represented in the compiled floral list.

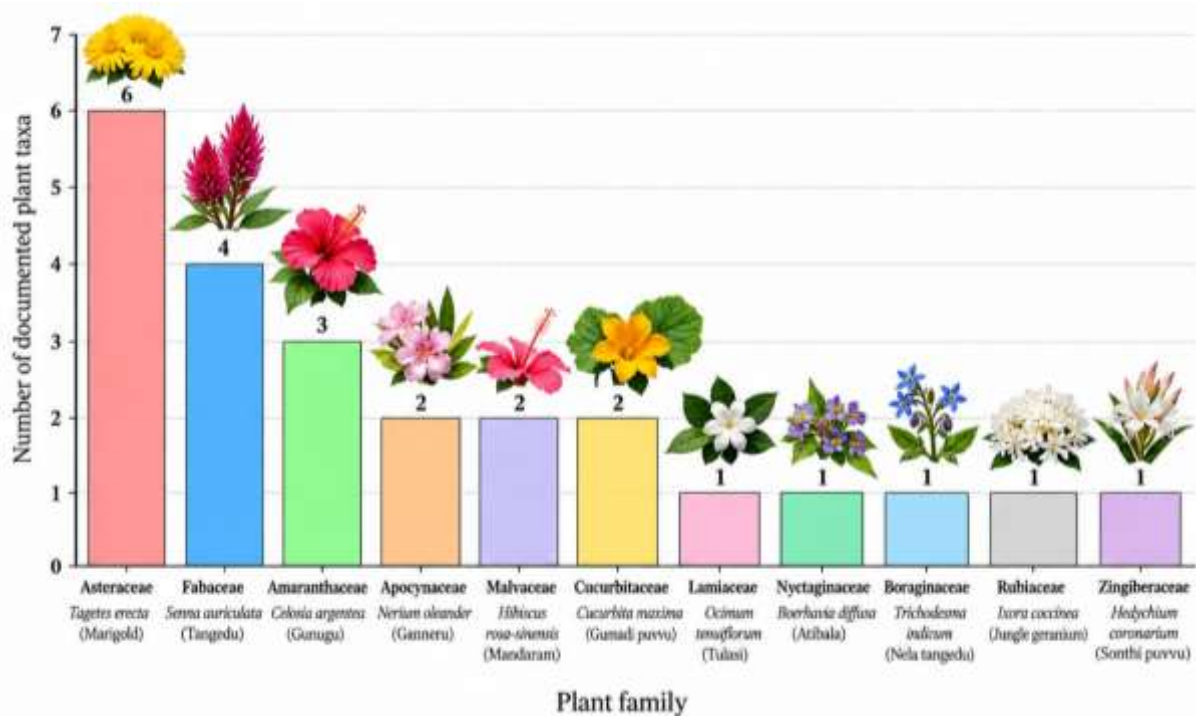


Figure 2. Family wise distribution of Bathukamma associated plants

4.5 Growth Form Distribution

The documented floral resources comprised predominantly herbs and shrubs, together with climbers and other growth forms. This distribution reflects the use of readily available seasonal flowering plants in Bathukamma arrangements.

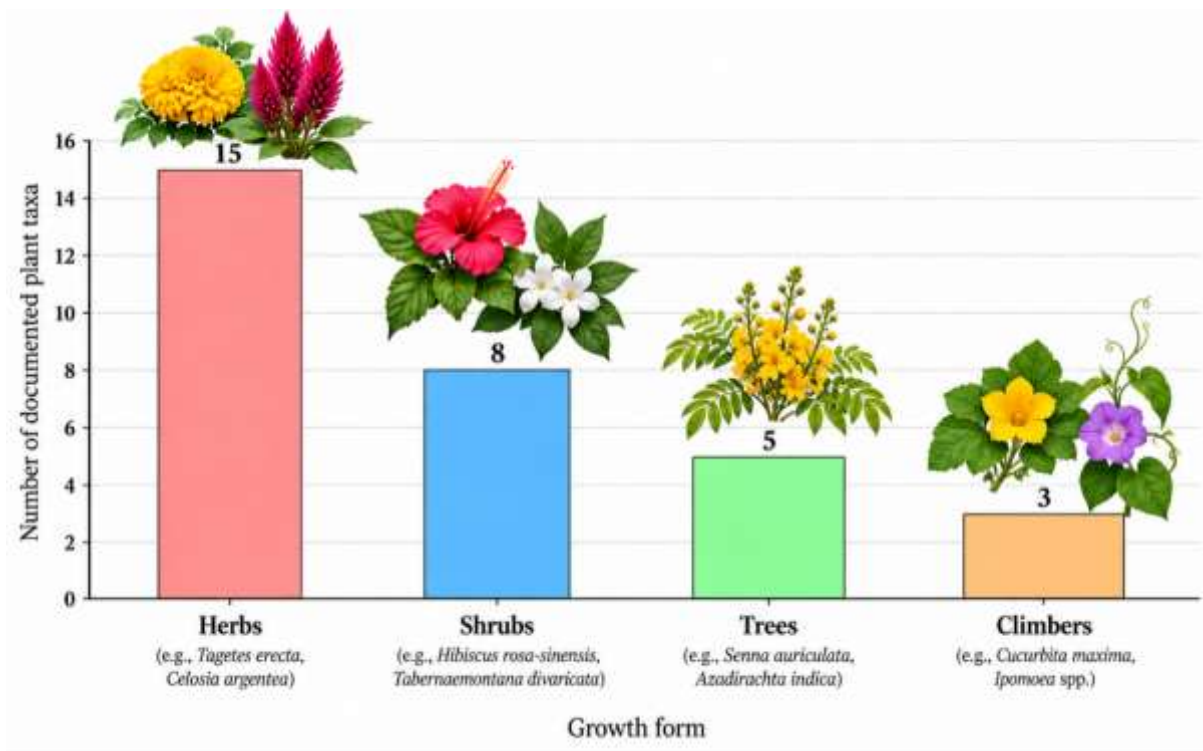


Figure 3. Growth form distribution of documented plants

4.6 Medicinal Activity Distribution

The literature review identified several broad pharmacological activity categories, including antioxidant, antimicrobial, anti inflammatory, antidiabetic and wound healing activities. These categories represent reported scientific evidence and should not be interpreted as proof of therapeutic effectiveness of Bathukamma flowers themselves.

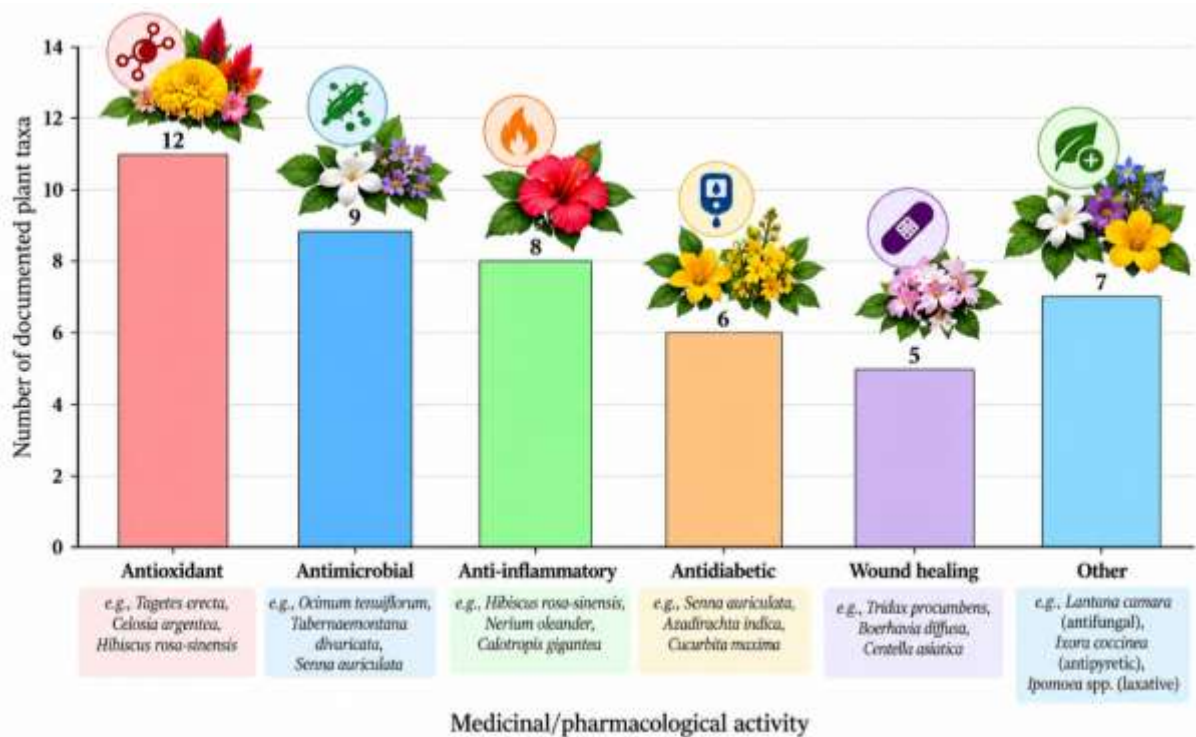


Figure 4. Distribution of reported medicinal/pharmacological activities

4.7 Environmental Significance

The assessment indicates that Bathukamma has environmental significance through its association with seasonal flowering plants and traditional ecological knowledge. Recognition and use of diverse flowers can contribute to awareness of local plant resources, seasonal biodiversity and conservation values.

Table 5. Environmental Significance of Bathukamma Associated Plants

Environmental Aspect	Observed Significance
Seasonal biodiversity	Connects cultural practices with seasonally available flowering plants
Wild plant recognition	Encourages recognition of locally occurring and traditionally valued plants
Floral diversity	Demonstrates the cultural use of multiple plant taxa
Traditional ecological knowledge	Preserves knowledge concerning seasonal plants and their uses
Conservation	Provides a cultural context for valuing plant diversity and sustainable use
Environmental awareness	Strengthens community awareness of relationships between people, plants and nature

4.8 Integrated Bathukamma Significance

The findings demonstrate an interconnected relationship among cultural practice, seasonal flowers, medicinal knowledge and environmental awareness. Bathukamma functions as a cultural platform through which knowledge of plants and their seasonal availability can be transmitted across generations.



Figure 5. Integrated Relationship Between Bathukamma, Medicinal Knowledge, Floral Diversity and Environmental Conservation

5. DISCUSSION

5.1 Bathukamma as a Floral Cultural Tradition

The present literature-based assessment indicates that Bathukamma represents a strong connection between cultural practice, seasonal flowers and traditional ecological knowledge. The nine-day sequence from Engili Pula Bathukamma to Saddula Bathukamma combines customary food offerings, floral worship, community participation and cultural expression. Previous ethnobotanical studies have similarly documented Bathukamma as an important cultural context for the recognition and use of flowers with traditional medicinal significance (Saritha & Anitha Devi, 2017; Rao et al., 2015). Importantly, the nine days are primarily distinguished by their traditional names and offerings rather than by nine exclusive flower species.

5.2 Floral Diversity and Traditional Knowledge

The diversity of flowers associated with Bathukamma demonstrates how seasonal plant resources become embedded within cultural practices. Tangedu, Gunugu, marigold, chrysanthemum and other seasonal flowers provide examples of plants that are recognized not only for their visual and cultural value but also for their traditional uses. Such practices can facilitate intergenerational transmission of plant knowledge and awareness of seasonal ecological cycles. Ethnobotanical research emphasizes that cultural use of plants can contribute to the continued recognition and conservation of useful plant resources (Jain, 1994; Cotton, 1996). Thus, Bathukamma may be viewed as a cultural mechanism supporting awareness of local floral diversity.

5.3 Medicinal Significance

Several associated plants have documented ethnomedicinal and pharmacological importance. *Senna auriculata* has a long history of traditional medicinal use, and studies have reported phytochemicals and antioxidant related activities. These findings provide scientific support for its ethnobotanical importance, although laboratory evidence should not be equated with clinical efficacy.

Celosia argentea is particularly well documented in phytochemical research. Its reported constituents and pharmacological activities include antioxidant and antimicrobial effects, together with other experimentally investigated properties (Tang et al., 2016). *Tagetes* spp. are also important medicinal plants, with traditional applications and reported anti-inflammatory and related pharmacological activities; recent research on *Tagetes erecta* has further examined its potential in inflammatory conditions (Vaz et al., 2024). *Hibiscus* spp., where reported in relevant traditional floral contexts, contain diverse phytochemicals and have been investigated for antioxidant and other biological activities. However, the medicinal interpretation of these plants should remain evidence based, distinguishing traditional use from experimental and clinical validation.

5.4 Environmental Significance

Bathukamma also has environmental significance because it links cultural activity with seasonal flowering cycles. The use and recognition of diverse flowers can increase awareness of plant diversity, seasonal availability and the ecological importance of flowering resources. Community participation in collecting, arranging and celebrating flowers provides a cultural setting in which knowledge about plants and their natural occurrence can be maintained. However, cultural use should be accompanied by sustainable collection practices to avoid pressure on naturally occurring plant populations.

5.5 Cultural Heritage and Conservation

Bathukamma provides an opportunity to connect traditional plant knowledge with biodiversity education. Recognition of locally important plants can strengthen awareness of plant conservation, sustainable harvesting and the value of traditional ecological knowledge. Such cultural practices can therefore complement broader conservation initiatives by making biodiversity relevant to community life. The relationship between medicinal plants, livelihoods, cultural knowledge and conservation has been widely recognized in ethnobotanical research (Hamilton, 2004; Sen & Samanta, 2015).

5.6 Comparison with Previous Studies

The present findings are broadly consistent with earlier Bathukamma ethnobotanical investigations that identified medicinal importance among flowers used during the festival (Saritha & Anitha Devi, 2017; Rao et al., 2015). They also agree with broader medicinal plant research demonstrating substantial phytochemical and pharmacological

diversity among several associated taxa. However, the present assessment extends the discussion by integrating medicinal significance with floral diversity, traditional ecological knowledge and environmental conservation rather than considering medicinal properties alone.

5.7 Limitations

Several limitations should be recognized. Flower selection may vary according to locality, seasonal availability and cultural tradition. Because the present study is literature based, conclusions depend on published ethnobotanical and pharmacological information and do not represent new interview or field survey data. Pharmacological evidence is also uneven among the documented plants, with some findings based primarily on traditional knowledge or experimental studies. Laboratory, toxicological and clinical investigations are required to establish therapeutic effectiveness and safety. Finally, long term biodiversity monitoring is needed to determine whether cultural use contributes to sustained conservation of Bathukamma associated plant resources.

6. CONCLUSION

Bathukamma represents a distinctive intersection of **cultural heritage, floral diversity, traditional medicine, biodiversity and environmental awareness**. The present literature-based assessment shows that the nine-day festival is closely associated with seasonal flowers and traditional knowledge concerning their cultural, ecological and medicinal significance. Flowers such as *Senna auriculata*, *Celosia argentea*, *Tagetes* spp. and other associated plants demonstrate the importance of documenting traditional plant knowledge while recognizing the varying levels of scientific evidence supporting their medicinal properties. The use and recognition of seasonal flowers also provide an important cultural pathway for appreciating plant diversity, seasonal ecological cycles and conservation values. Bathukamma therefore has significance beyond cultural celebration, as it can contribute to intergenerational transmission of traditional ecological knowledge and greater awareness of plant conservation and sustainable use. Future research should include **phytochemical analysis, antioxidant and antimicrobial studies, toxicity assessment, molecular plant identification, biodiversity monitoring and conservation studies**. Integrating cultural knowledge with scientific investigation can strengthen the documentation, sustainable use and conservation of Bathukamma associated plant resources.

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