ETHNOBOTANICAL STUDY OF MEDICINAL PLANTS USED IN THE SIRAMAN RITUAL OF BLITAR COMMUNITY, EAST JAVA

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Abstract

The siraman ritual in Blitar, East Java, represents a pre-wedding cleansing ceremony deeply rooted in Javanese tradition. This study aimed to identify plant species utilized in the ritual, their modes of application, and their ethnomedicinal significance. A descriptive exploratory approach was employed from January to February 2026 in several villages in Blitar Regency. Data were collected through semi-structured interviews with nine informants, including traditional elders, ritual practitioners, and women aged 35–70 years who have conducted or participated in the ritual. The results documented 15 plant species belonging to 12 families. Leaves and flowers were the most commonly used plant parts. Plants were applied through immersion in water, topical application, and aromatic diffusion. Beyond symbolic purification, several species possess pharmacological properties such as antimicrobial, anti-inflammatory, antioxidant, and skin-brightening effects. The continuity of this ethnobotanical knowledge relies on cultural custodians and family-based transmission. However, modernization and commercial cosmetic substitution threaten knowledge sustainability. Documentation of ritual plant use contributes to cultural preservation and provides baseline data for ethnopharmacological development.

Keywords: ethnobotany, siraman, medicinal plants, Blitar, East Java

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1. INTRODUCTION

Human interaction with plants within Javanese society extends far beyond basic subsistence or utilitarian purposes. Plants are embedded in complex cultural systems where biological properties, symbolic meanings, and philosophical values intersect. In Javanese cosmology, nature is not perceived merely as a resource but as an interconnected entity that maintains harmony between humans, the environment, and the spiritual realm. This worldview has shaped the development of numerous traditional ceremonies in which plant species function simultaneously as ritual media, medicinal agents, and symbols of moral teachings. Ethnobotany, as an interdisciplinary field, provides a framework to analyze these dynamic human–plant relationships and to understand how traditional ecological knowledge is constructed, maintained, and transmitted across generations.

In Blitar, traditional ceremonies continue to play a significant role in maintaining social cohesion and cultural identity. One of the most important life-cycle rituals is the *siraman* ceremony, performed prior to marriage. This ritual symbolizes purification, emotional maturity, and readiness to enter a new phase of life. Within Javanese philosophy, marriage is

not only a social contract but also a spiritual transition requiring physical and metaphysical cleansing. The use of water infused with selected plant species represents the integration of natural elements into the process of spiritual preparation. Water symbolizes life and purification, while plants contribute fragrance, cooling effects, and protective symbolism.

The *siraman* ceremony involves bathing the bride or groom with water that has been infused, boiled, or mixed with specific flowers, leaves, rhizomes, and fruits. These plant species are not randomly selected; rather, they are determined based on inherited ethnobotanical knowledge passed down through family lineages and traditional elders (*sesepuh adat*). Selection criteria include aroma, color symbolism, perceived cooling properties, antimicrobial effects, and associations with beauty and harmony. For example, fragrant flowers symbolize purity and grace, while antiseptic leaves are believed to ward off negative influences. Such practices demonstrate that traditional knowledge systems often integrate empirical observation of plant efficacy with symbolic cultural interpretations.

From a scientific perspective, many of the plants used in *siraman* rituals have documented pharmacological properties. Several species possess antimicrobial, anti-inflammatory, antioxidant, antifungal, and dermatological benefits. This overlap between traditional usage and modern phytochemical evidence suggests that ritual plant selection may have been influenced by long-term empirical experimentation within the community. Ethnobotanical studies in various regions of Indonesia have shown that ritual plant use frequently reflects adaptive strategies that promote health, hygiene, and environmental sustainability. Thus, ritual practices should not be dismissed as purely symbolic, but rather recognized as repositories of biocultural knowledge.

Despite the continued practice of *siraman* in Blitar, systematic documentation of plant identity, plant parts utilized, preparation methods, and associated medicinal functions remains limited. Rapid modernization, commercialization of wedding services, and the increasing use of industrial cosmetic products have begun to replace traditional plant-based preparations. Such changes pose a risk to the continuity of ethnobotanical knowledge, particularly among younger generations who may no longer learn plant identification or preparation techniques. Without proper documentation, valuable local knowledge may gradually erode.

Therefore, this study aims to (1) document the diversity of plant species used in the *siraman* ritual in Blitar, (2) identify plant parts and modes of utilization, and (3) analyze their medicinal relevance within the local ethnobotanical knowledge system. By integrating qualitative cultural analysis with ethnomedicinal perspectives, this research seeks to contribute to cultural preservation efforts while providing baseline data for future ethnopharmacological and conservation studies.

2. MATERIAL AND METHODS

2.1 Study Area

The research was conducted in several villages within Blitar Regency, East Java, Indonesia. Blitar represents a region where Javanese cultural traditions, including pre-marital ceremonies, are still actively practiced within community life. The siraman ritual remains an essential component of wedding customs, particularly in rural and semi-urban settings where traditional knowledge transmission is maintained through family and community structures.

2.2 Research Design and Duration

This study employed a descriptive exploratory design aimed at documenting ethnobotanical knowledge related to plant use in the siraman ritual. The research was conducted over a one-week period, from late December 2025 to early January 2026.

The selected timeframe coincided with the wedding season, during which multiple siraman ceremonies were organized, allowing direct observation and efficient data collection.

Although the duration was relatively short, data saturation was achieved due to the focused scope of the study and the targeted selection of knowledgeable informants.

2.3 Informant Selection

Informants were selected using purposive sampling to ensure inclusion of individuals with direct experience and deep understanding of the ritual. A total of 3 informants participated in this study, consisting of:

1. Traditional elders (sesepuh adat) responsible for overseeing ceremonial procedures;
2. Ritual organizers involved in preparing plant materials;
3. Married women aged 35–70 years who had previously conducted or participated in siraman ceremonies.

The inclusion of both key cultural custodians and general community members enabled cross-validation of information and strengthened data credibility. All informants provided verbal consent prior to participation.

2.4 Data Collection

Data were obtained using the following techniques:

a. Semi-structured interviews

Interviews were conducted using a flexible interview guide covering plant species used, local terminology, plant parts utilized, preparation techniques, symbolic meanings, and perceived medicinal benefits. This approach allowed informants to elaborate on experiential and inherited knowledge.

b. Direct observation

Observation was conducted during ritual preparation, including plant cleaning, slicing, boiling, mixing, and arrangement within ceremonial containers. Field notes were recorded to document preparation sequences and contextual practices.

c. Plant documentation and identification

Plant specimens mentioned by informants were photographed and recorded in situ. Identification was performed using botanical references and relevant literature to determine scientific names and family classifications. Taxonomic verification was conducted to ensure accuracy of species identification.

2.5 Data Analysis

Data were analyzed descriptively by tabulating plant species according to local name, scientific name, botanical family, plant part used, preparation method, symbolic meaning, and reported medicinal function. Traditional claims regarding medicinal properties were compared with existing ethnopharmacological literature to assess biological relevance. Usage patterns of plant parts were examined to evaluate sustainability aspects, particularly the predominance of regenerable parts such as leaves and flowers. To enhance validity, triangulation was applied by comparing responses among informants and confirming observational findings with interview data. Information consistently reported by multiple informants was considered representative of standardized local knowledge.

3. RESULTS

3.1 Diversity of Plant Species Used in the Siraman Ritual

Based on interviews with and direct observation of three siraman preparations conducted during the study period (late December 2025 – early January 2026), a total of 15 plant species belonging to 13 botanical families were documented as being consistently used in the ritual in Blitar Regency.

The families most represented were Zingiberaceae (2 species) and Rosaceae (1 species), while other families were represented by a single species each. The recorded species consisted of flowers (5 species), leaves (6 species), rhizomes (2 species), fruits (1 species), and succulent gel (1 species).

3.2 Plant Parts Utilized

The most frequently used plant parts were leaves (46%) and flowers (33%), followed by rhizomes (13%), fruit (4%), and gel (4%). Field observations indicated that leaves and flowers were preferred because they are easily obtainable, readily regenerable, and visually appealing when placed in ceremonial water containers. Informants em-phasized that fresh plant material is essential; wilted flowers or old leaves are considered inappropriate for ritual use.

Rhizomes such as Curcuma longa and Curcuma xanthorrhiza were typically crushed or lightly sliced before being added to warm water. Their inclusion was described as providing "inner cleansing" properties, even though they are not directly applied topically in concentrated form.

3.3 Preparation Techniques

Observation during ritual preparation revealed three primary methods of plant processing:

1) Water Infusion (most common method)

   Flowers and leaves were immersed in clean water placed in large earthen or metal containers. Informants stated that the water is preferably drawn in the morning. Fragrant species such as Rosa damascena, Jasminum sambac, and Cananga odorata were added last to preserve aroma.

2) Decoction or Warm Extraction

   Rhizomes (Curcuma longa, Curcuma xanthorrhiza) and stems (Cymbopogon citratus) were lightly boiled or soaked in warm water to release color and aroma before being mixed into the main water container.

3) Topical Application

   Aloe vera gel was prepared separately and applied lightly to the hands or face before the bathing process. This step was reported in two of the three observed ceremonies.

Preparation was typically conducted by female family members under supervision of a senior woman or ritual guide. No synthetic fragrances were observed being added in the documented ceremonies.

3.4 Symbolic Meanings of Plant Use

Interview data indicated that plant selection reflects layered symbolic meanings. These meanings were consistently reported across informants, suggesting cultural standardization.

- Flowers (mawar, melati, kenanga) symbolize purity, grace, and harmonious married life.
- Daun sirih (Piper betle) symbolizes protection and moral integrity.
- Kunyit (Curcuma longa) represents prosperity and radiance.
- Jeruk purut (Citrus hystrix) is believed to remove negative energy.
- Kelor (Moringa oleifera) was described as a plant that "strengthens the body and spirit."

Interestingly, symbolic explanations were often accompanied by practical reasoning. For example, informants mentioned that daun sirih "makes the skin feel clean" and jeruk purut "removes body odor," indicating awareness of functional benefits.

3.5 Reported Medicinal Functions

When asked about the practical benefits of the plants, informants consistently mentioned skin freshness, fragrance, prevention of body odor, and calming effects. The most frequently cited functional benefits were:

- Antiseptic and cleansing properties (especially Piper betle and Citrus hystrix)
- Skin brightening and soothing effects (Curcuma longa, Rosa damascena)

- Relaxation and stress reduction (Cananga odorata)
- Moisturizing and skin hydration (Aloe vera)

Cross-checking with scientific literature confirmed that many of these species possess antimicrobial, antioxidant, or anti-inflammatory compounds. This alignment between traditional explanation and documented phytochemical properties strengthens the credibility of local knowledge.

DISCUSSION

The siraman ritual in Blitar demonstrates a structured ethnobotanical knowledge system where biological efficacy aligns with symbolic purification. Flowers such as Rosa damascena, Jasminum sambac, and Cananga odorata symbolize purity and beauty, while their essential oils provide antimicrobial and calming effects.

Leaves such as *Piper betle* and *Moringa oleifera* reflect protective symbolism while scientifically recognized for antiseptic and antioxidant properties. Rhizomes like *Curcuma longa* and *Curcuma xanthorrhiza* provide anti-inflammatory effects beneficial for skin health.

Most utilized plant parts are regenerable (leaves and flowers), indicating indirect conservation practices embedded within tradition. However, younger generations increasingly replace traditional preparations with commercial spa products, risking erosion of local knowledge transmission. Ethnobotanical documentation thus plays a crucial role not only in cultural preservation but also in supporting potential ethnopharmacological research.

CONCLUSIONS

The siraman ritual in Blitar utilizes 15 plant species with integrated symbolic and medicinal significance. Plant selection reflects inherited knowledge combining antimicrobial, anti-inflammatory, antioxidant, and dermatological benefits. Knowledge transmission remains dependent on traditional elders and family practice but faces modernization challenges. Proper documentation contributes to safeguarding cultural heritage and biodiversity resources in East Java.

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