

Ritual use of *Rosa de Borracho* (*Clinopodium macrostemum* (Moc. & Sessé ex Benth.) Kuntze, Lamiaceae) in Oaxaca, Mexico

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Abstract. Calvo-Díaz DY, Aguilar-Hernández L, Jiménez-Noriega MS, Torres-Montúfar A. 2023. Ritual use of *Rosa de Borracho* (*Clinopodium macrostemum* (Moc. & Sessé ex Benth.) Kuntze, Lamiaceae) in Oaxaca, Mexico. *Biodiversitas* 24: 5105-5112. Plants play a vital role in the rich tapestry of Mexican culture, serving as medicine, food, clothing, rituals, and construction. Oaxaca is known for its abundance of bio- and cultural diversity, and as such, is home to numerous versatile and beneficial plant species alongside many traditional cultural festivals, including the famous *Guelaguetza* at the end of every July. Many plants have deep cultural and spiritual significance, and their traditional uses in ceremonies, rituals, and medicine have been passed down through generations. Here, we have studied the ceremonial use of *Rosa de Borracho*, or *poleo* (*Clinopodium macrostemum* (Moc. & Sessé ex Benth.) Kuntze), in two communities of Oaxaca: Ocotlán de Morelos and Villa Sola de Vega. Semi-structured interviews were conducted with 40 community members to acquire valuable and relevant information about this plant and its importance in these communities. In Villa Sola de Vega, where residents are known as *soltecos*, the *Rosa de Borracho* is an essential element of Soltecan wedding ceremonies, which includes dancing *Chilenas* (traditional folk music) such as the *jarabe de la rosa* (a dance called *syrup of the rose*). In this particular dance, the *Rosa de Borracho* is the show's star, and important guests such as the godparents and cooks are gifted handwoven crowns to wear and bundles of the plant to carry. In Ocotlán, the *Rosa de Borracho* is used to adorn baskets and other artifacts for a ceremony called *La Llevada del Guajolote*, and is also gifted to everyone during the festivities. The same plant is also used on a procession before Christmas and New Year's Eve, wherein pilgrims known as *roseros* journey to the mountain searching for the plant for use in the day's celebration. In this study, we have documented and described the ritual use of this plant and its cultural significance to these communities. In conclusion, *Rosa de Borracho* carries various symbolic meanings and is often included in sacred offerings to deities or spirits or in ceremonies to adorn altars, decorate ritual spaces, and create intricate floral arrangements, all of which lend it cultural significance in Oaxaca stemming from these ritual practices.

Keywords: Ceremonial, ethnobotany, mint family, *poleo*, traditional knowledge

INTRODUCTION

Plants play a vital role in the rich tapestry of Mexican culture, serving as more than just sources of sustenance or natural beauty. With its rich cultural heritage and diverse ecosystems, Mexico stands as a treasure trove of traditional knowledge, where plants have played a crucial role in the lives of its indigenous communities for centuries. Many studies have revealed the vast pharmacological potential of various plant species used by indigenous healers and traditional medicine practitioners (Balick and Cox 2020). These healing properties of plants have been recognized and utilized by indigenous healers for centuries, addressing a wide range of ailments and promoting overall well-being (Alonso-Castro et al. 2017; Cruz-Perez et al. 2021).

The indigenous cultures of Mexico have developed a profound understanding of plants, utilizing them for various purposes, including clothing, construction, food, medicine, and crafts. Of particular note to us, there is also a

large number of plants that are used ritually. Some are psychoactive, such as *peyote* (*Lophophora williamsii* (Lem. ex Salm-Dyck) J.M. Coulter), a small cactus considered sacred by various groups, or *pastora* (*Salvia divinorum* Epling & Játiva), which is used to induce altered states of consciousness and allow for spiritual journeys and visions (Winkelman 2019). Other ritual plants are burned, such as *copal* (*Bursera bipinnata* (Moc. & Sessé ex DC.) Engl.), where some communities believe the smoke provides a connection with the gods (Rieger 2023). Some other plants are used as decorations or as a part of festivities, such as *Cucharilla* (*Dasyllirion* sp.), an Asparagaceae, the leaves of which are harvested, dried, and stripped to obtain the solid and durable fibers that are then meticulously woven into intricate patterns called flowers that are used to adorn catholic churches (Torres-Martínez et al. 2020). Common uses for ritual plants in Mexico are related to religion, reflecting the fusion of indigenous and Catholic traditions

that have arisen from the inevitable synthesis of these cultures.

Understanding and respecting the ritual plants of Mexico allows us to appreciate the profound connection between humans and nature. It is essential to approach these plants with reverence, guided by cultural understanding and scientific knowledge, in order to ensure responsible usage and preservation (Carod-Artal 2015; Estrada-Castillón et al. 2020; Feinman and Nicholas 2020). By recognizing the role of ritual plants in Mexico, we honor the diverse tapestry of indigenous cultures and their invaluable contributions to humanity's collective heritage.

Oaxaca is home to a remarkable number of indigenous communities. Located in the southern part of Mexico, Oaxaca is the most diverse state in Mexico, both biologically and culturally. It is home to the Zapotec, Mixtec, and Mixe peoples. These communities have preserved their ancestral languages, customs, and beliefs, enriching the cultural fabric of the region (Altamirano-Jiménez 2020; Aparicio et al. 2021a, b; Pascual-Mendoza et al. 2022). Oaxaca's indigenous heritage is evident in its traditional clothing, intricate craftsmanship, and ancient ruins such as *Monte Albán* and *Mitla*, tangible reminders of the region's Prehispanic past (Aparicio et al. 2021b). The preservation and celebration of indigenous cultures and traditions contribute significantly to the cultural wealth of Oaxaca.

Oaxaca is renowned for its vibrant festivals and traditions, which provide a glimpse into the intricate tableau of its many cultures. *Guelaguetza*, held annually in July, is a spectacular celebration of dance, music, and traditional attire, showcasing the diversity of Oaxaca's indigenous communities. *Guelaguetza* traces its roots back to Prehispanic times when indigenous communities in Oaxaca would gather to celebrate and exchange goods, fostering solidarity and cooperation. With the arrival of the Spanish people, Catholic elements were intertwined with indigenous traditions, resulting in a unique blend of cultural expressions. Over time, *Guelaguetza* evolved into a grand festival, embodying the spirit of unity, gratitude, and

mutual support among Oaxaca's diverse communities, which proudly display their cultural and natural heritage (Whitford 2008; Escala-Rabadán and Rivera-Salgado 2018; Cisneros 2022). The primary objective of this study is to report and describe the ritual use of the plant known as *Rosa de Borracho* (The Drunk's Rose) or *poleo* (*Clinopodium macrostemum* (Moc. & Sessé ex Benth.) Kuntze) in Oaxaca, where this plant holds important cultural significance.

MATERIALS AND METHODS

Study area. Interviews were conducted in the municipality of Ocotlán de Morelos and Villa Sola de Vega, in Oaxaca, in the Zapotec region (Figure 1).

Data collection. Interview activity and sampling took place between 2021-2023. Forty people (aged between 26 and 91) were interviewed. A semi-structured questionnaire was employed to make the inquiries with individuals within the community regarding these subjects: (i) how many years the interviewee has lived in the municipality in question (Sola de Vega or Ocotlán de Morelos); (ii) if the interviewee is familiar with the plant *poleo*; (iii) the uses and purpose of the plant in that community; (iv) known uses of the plant outside of their community; (v) the importance or cultural significance of the plant to their community; (vi) if the plant is used in any cultural celebrations, and; (vii) if it is kept or disposed of afterward; (viii) if kept after events, how the plant is stored by the community; (ix) if the interviewee has personally participated in any events in which the plant is used; (x) if the plant is sold or traded within the community.

The taxonomic identity of *poleo* or *Rosa de Borracho* (*C. macrostemum*, Lamiaceae) was assigned by a botanist at the Herbarium of Centro Interdisciplinario de Investigación para el Desarrollo Integral Regional-Oaxaca using specialized literature as Turner (2008).

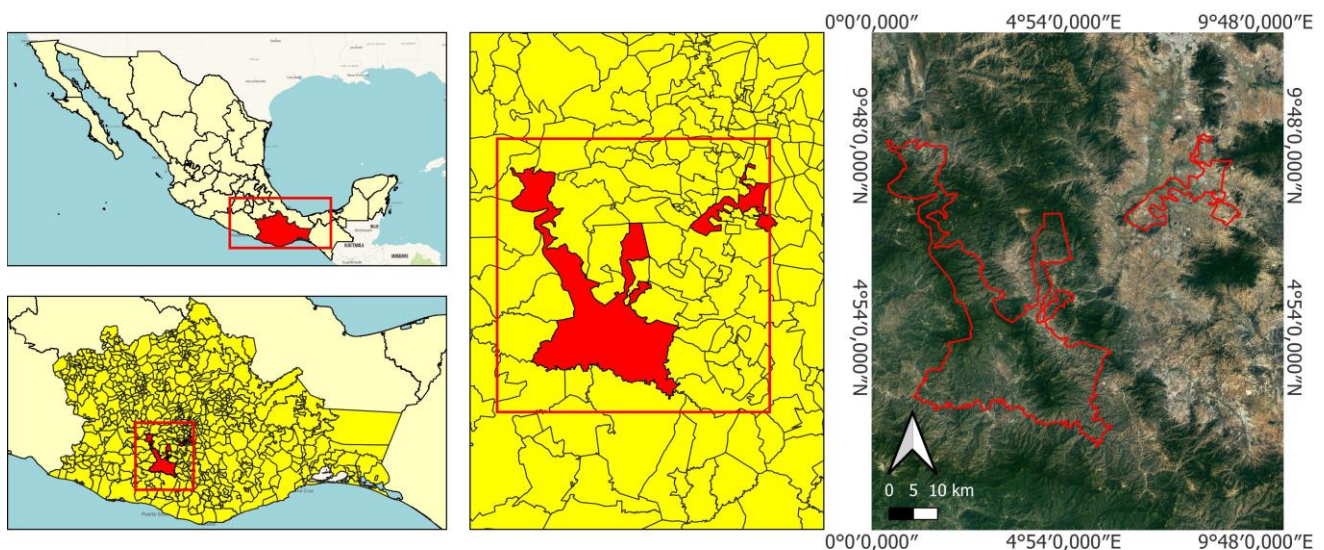


Figure 1. Map of the state of Oaxaca, Mexico

RESULTS AND DISCUSSION

Poleo is a native Mexican species with a widespread distribution in Hidalgo, Guerrero, Oaxaca, and Veracruz found in temperate forests (pine-oak forest and *Abies*). As a Lamiaceae, it has leaves arranged in opposite pairs, possesses square or four-angled shaped stems, bilabiate orange corolla, and produces aromatic compounds, such as essential oils, that give a distinctive fragrance. Many Lamiaceae are used as aromatic plants, such as sage (*Salvia* spp.), rosemary (*Rosmarinus officinalis* L.), lavender (*Lavandula* spp.), and thyme (*Thymus* spp.), among others. These plants possess distinct fragrances and chemical compositions that contributing to their ritual significance (Rzedowski and Rzedowski 2010; Ortega-Ortega and Vázquez-García 2014) (Figure 2).

Ritual uses

The *Rosa de Borracho* is used in Villa Sola de Vega as a part of Soltecan wedding rituals, which include dancing *Chilenas* (traditional folk music) such as the *Jarabe de la Rosa* (a dance called the *syrup of the rose*) in which the *Rosa de Borracho* is one of the stars of the show. The *syrup of the rose* is a purification ritual that is performed at weddings in the community in which some men carry a large bundle of *Rosa de Borracho* on their shoulder and wear a crown of the same on their hat. Women, meanwhile, carry a small bundle in their hands and are also crowned with the same plant by the men. In these Soltecan celebrations, special guests (such as the bride and groom, their parents, godparents, and the women who help with the massive task of preparing the food for these events) are distinguished with a crown of *Rosa de Borracho* and a palm leaf headdress. The first ones to be crowned are the cooks, who are also the first ones to start dancing, followed by the crowning of the godparents, the bride and groom and their parents (Figure 3).

During the *syrup of the rose*, it is customary to smoke *hualache*, which is a cigarette made with corn husk leaves filled with tobacco or a regular cigarette. *Tepache*, a fermented pineapple beverage, is consumed, and a sip of mezcal *Tobalá* is offered. In the dance, the crossing of the feet represents the planting method of the region, which involves bringing the soil close to where the corn is deposited. It is important to mention that no other dance includes the *Rosa de Borracho*, and so once the piece is finished, the crowns and bouquets are stored and the folk celebration continues.

For celebrations, the acquisition of the plant is a significant event. In this initial stage, men venture up the hill on horseback, donkeys, or foot. Upon returning to the community, the flowers are placed in water to prevent them from wilting. The same people who collected the flowers are in charge of making crowns and bouquets.

In Ocotlán de Morelos, it is mainly used for Catholic festivities such as Christmas, and it is associated with the procession to collect *Rosa de Borracho* and branches of fatwood or *Ocote* (*Pinus* sp.), which are brought from nearby forests. These are decorated and offered to the baby Jesus in his nativity scene as a sign of sacrifice or gratitude

for his blessings. The tradition begins twice in December, each three days before Christmas Eve and New Year's Eve alike, where individuals are appointed as commissioners or organizers who will go and collect the *Rosa de Borracho*, always respecting the conditions set by the communities in exchange for permission to collect the plant.

In Ocotlán de Morelos there is also a tradition called *la llevada del guajolote* (the carrying of the turkey). Here, the *Rosa de Borracho* is used to adorn the baskets and *piscadores* (Figure 4), a large basket that hangs from the chest using a *Mecapal* or tumpline, where gifts are carried (bread, chocolate, and *pinole*). During the event, the *Rosa de Borracho* while the traditional dance is performed.

Those who undertake the collection are familiar with the locations and collection conditions. Participants must spend the entire night camping at the site, where other activities occur, such as gathering firewood, attending mass, and dancing to wind music. The plant is transported wrapped in a palm mat to protect it from exposure to air and prevent it from burning. What is collected is stored in a designated house within the community and can only be opened on the days of the procession on December 24th and 31st (Figure 5).

The procession consists of a parade that starts at 5 a.m. from the house of the *Mayordomo* (head organizer) with the accompaniment of wind band music and fireworks that announce the beginning of the procession. The *roseros* show their appreciation to their godparents by giving them a ribbon band in the shape of a bow made of ribbon. In return, the godchildren give their godparents a bouquet of *poleo* herbs adorned with balloons, confetti, and a bundle of fibers, all wrapped in cellophane (Figure 6).



Figure 2. Poleo or Rosa de Borracho (*Clinopodium macrostemum*)



Figure 3. Soltecan Wedding. A. Bride placing the crown of radiance. B. Wedding guests with crowns. C and D. Traditional dance of the *Jarabe de la Rosa*, on their backs men carry a large bouquet of *Rosa de Borracho* and crowns of it on their hats and women carry a small bouquet in their hands



Figure 4. Baskets decorated with *Rosa de Borracho*



Figure 5. Collection of the plant. A. Camping houses at the collection site. B and C. Collection of *Rosa de Borracho*. D. Transportation of the covered plant for the procession

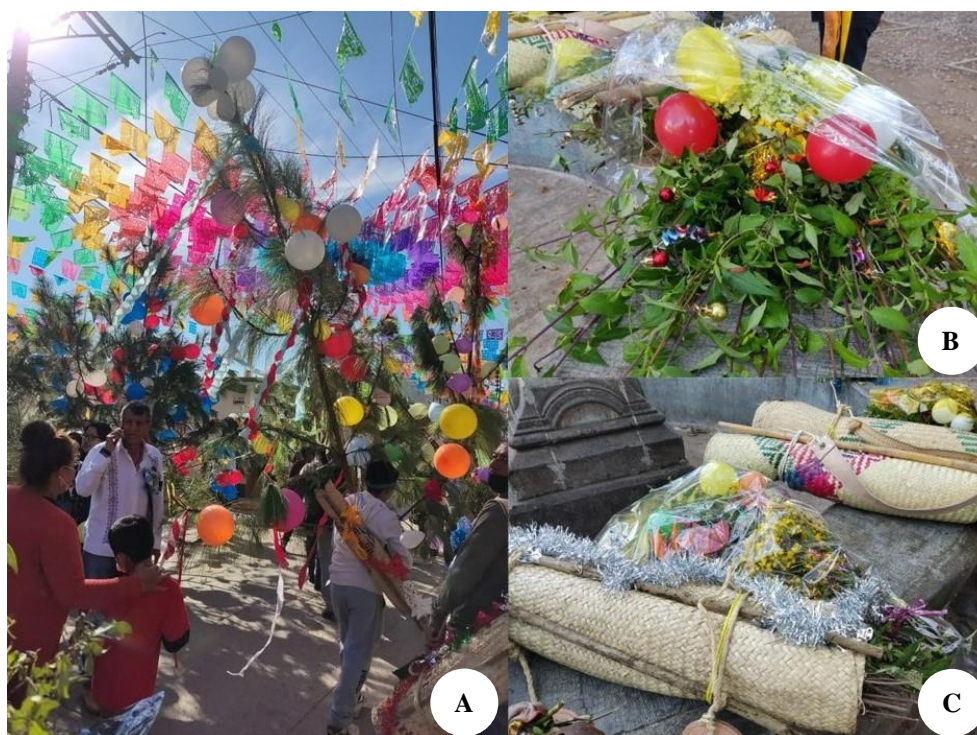


Figure 6. The procession. A. Start of the procession; B and C. Gifts that are taken to the Holy Child

The parade takes place along the main streets of the municipality, and at each corner, the *roseros* and godparents dance to the rhythm of the music as a symbol of joy and gratitude. During this procession, there are breakfast,

water, and food stops, each at a different godparent's house. On the other hand, some individuals choose to fast until noon as a form of penance. During the water distribution, the *roseros* take the opportunity to make two bouquets of

Rosa de Borracho as an offering to the *Santo Niño de la Carcel* (Holy Child of the Jail, a religious child figure who was in Ocotlán's jail), located in the temple of Santo Domingo de Guzmán, and the Niño de la Iglesia (child of the church), located in the house of the *Mayordomo*. Some of the *roseros* enter the altar of the baby Jesus on their knees to deliver their offering. The procession finally concludes after the meal, approximately at 7 p.m. (Figure 6).

The *Rosa de Borracho* has many uses; in many traditional festivities, it is common to give all the guests a small bundle of the herb so they can prepare a tea the next day to alleviate symptoms of the hangover that so often follows these celebrations. This plant is also used as a condiment in food and as a cotton substitute. The leafy branches gathered in bundles are also used as decorations in religious and other celebrations (Rojas-Olivos et al. 2018; Alvarado et al. 2020). In the markets of the Central Valleys of Oaxaca, *poleo* is sold and exchanged for food due to its multiple uses. It is valued for its medicinal, culinary, ritual, and ornamental properties (Table 1).

Plants have played a vital role in human history, serving as sources of sustenance and medicine and as integral elements in rituals across diverse cultures. This study explores the profound significance of plants in rituals, highlighting their ability to foster spiritual connections, preserve cultural heritage, and provide a tangible link to the natural world (Maqueda 2018; Treviño and Ramos 2018; Orozco-Martínez et al. 2020). Plants often have symbolic meanings within rituals, representing rebirth, purification, and transcendence.

Oaxaca is known for its rich cultural heritage and abundant biodiversity in Mexico. It holds a deep appreciation for ritual plants' importance as integral elements of traditional ceremonies and practices. As Smith (2006) noted, plants are revered as living ancestors and are believed to possess spiritual qualities in indigenous communities. For instance, during the annual *Guelaguetza* festival, flowers, herbs, and other botanicals are used to create vibrant displays and elaborate decorations, symbolizing the connection between nature and Oaxacan culture (López-Zenteno 2018). These cultural rituals reinforce a deep respect and reverence for plants, fostering a sense of identity and continuity within Oaxaca's diverse communities.

Oaxaca's culinary traditions are deeply intertwined with its plant diversity, resulting in a rich and varied gastronomy. Maize forms the basis of *tamales*, *tortillas*, and *atole* (Cagnato 2019). Furthermore, many herbs, spices, and edible flowers contribute distinct flavors and aromas to

Oaxacan dishes. For example, the use of aromatic herbs like *hoja santa* (*Piper auritum* Kunth) and *Epazote* (*Chenopodium* sp.) enhances the complexity of traditional mole sauces (Pascual-Mendoza et al. 2022).

It also bears mentioning that the traditional knowledge of medicinal plants has been passed down through generations in Oaxaca, contributing to the region's rich herbal medicine practices. Indigenous communities in Oaxaca deeply understand local plants' medicinal properties, which are passed down through generations. Traditional healers, known as *curanderos* or *yerberos*, play a crucial role in preserving and transmitting this knowledge. They possess an intimate understanding of the plants, their preparation methods, and their specific applications in treating various ailments. Plants are utilized for their therapeutic properties, treating various ailments and promoting well-being. Many studies emphasize the importance of traditional plant-based remedies in Oaxaca's healthcare system (Frei et al. 1998; García-Hernández 2015; Treviño and Ramos 2018; Orozco-Martínez et al. 2020).

Few plants have all three of these properties in Mexico (used in rituals, food, and medicine), and the *Rosa de Borracho* is one of them. It holds a special place in rituals and spiritual practices in various regions of Oaxaca, and it is noteworthy that the plant grows in other regions of Mexico but is only widely used in Oaxaca, perhaps due to the numerous indigenous cultures that have developed there and learned to appropriate their surrounding resources. Another comparable plant is known as *cucharilla* (*Dasyllirion* sp.), the primary use of which is the production of *sotol*, a traditional alcoholic beverage in which the plant's leaves are harvested and processed to extract the sweet sap, which is then fermented and distilled (Madrid-Solórzano et al. 2021). This plant is also used in ceremonies to adorn churches, and the procession to obtain the leaves is also an important cultural event (Torres-Martínez et al. 2020). Notably, this plant is also used as a medicine (Martínez-Cortés et al. 2017).

Rosa de Borracho, meanwhile, is used in traditional ceremonies to cleanse and purify spaces, individuals, and objects. The aromatic smoke generated by burning its leaves is believed to ward off negative energies, clear spiritual blockages, and create a sacred atmosphere (Rojas-Olivos et al. 2018). As Smith (2006) noted, plants are regarded as living ancestors, and their inclusion in rituals honors ancestral knowledge and teachings passed down through generations. The incorporation of *Rosa de Borracho* in rituals sustains cultural traditions and strengthens the spiritual bond between the community and its heritage.

Table 1. Uses of *Clinopodium macrostemum* in Oaxaca, Mexico

Medicinal	Food	Barter (Trueque)	Ornamental
The leaves are used as an infusion to treat stomach discomfort and cure a hangover from excessive alcohol consumption.	It is consumed as a tea, a seasoning for food (beans and tamales), and a refreshing beverage. It is considered a <i>quelite</i> , which means it is eaten as a vegetable.	In the Central Valleys of Oaxaca markets, it is sold and exchanged for food through bartering.	To adorn baskets.

This plant is also associated with healing; its leaves are used as an infusion to treat stomach ailments and alleviate the symptoms of a *cruda* or hangover resulting from excessive alcohol consumption. The medicinal properties of *Rosa de Borracho* are believed to restore balance and promote physical and emotional well-being (Rojas-Olivos et al. 2018; Alvarado et al. 2020).

Rosa de Borracho carries symbolic meanings and is often offered as a sacred offering to deities or spirits during ceremonies to adorn altars, decorate ritual spaces, and create intricate floral arrangements (López-Zenteno 2018). These offerings symbolize gratitude, reverence, and the desire to establish a harmonious relationship with the divine. The importance of *poleo* and similar uses found in our work are reported by Ortega-Ortega et al. (2014) in San Miguel Mixtepec, Oaxaca. It is worth noting that although *poleo* grows in many parts of Mexico, it is only used in certain communities in Oaxaca. This may be because, although Mexico is a multicultural country, many of the areas where *poleo* grows do not have indigenous communities, the knowledge of the plant has been lost over time, or because there are simply no ethnobotanical studies reporting its use.

In conclusion, with its aromatic properties, healing qualities, and cultural symbolism, the *Rosa de Borracho* holds excellent importance in ritual practices in Oaxaca; from purification to its role in ancestral traditions, this plant nurtures spiritual connections and serves as a vital component in preserving cultural heritage and reinforces the profound relationship between humans and the natural world. The study of plants with ritual and spiritual uses allows us to delve into the Mexican culture, which is diverse, providing a greater understanding of the plant-human relationship.

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