

The Magnetism of Peyote

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*...peyote is everything, it is the crossing of the souls,
it is everything that is, without peyote nothing would exist.*

*Jose Bautista, shaman and peyote pilgrim
(Schaefer, 1996, p.138).*

*Peyote has 'power'; it 'works inside of you';
it gives you a 'good feeling,
a religious feeling.'*

*Kiowa-Apache, Native American
Church member (Brant, 1950, p. 219) .*

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Abstract

Peyote (*Lophophora williamsii*), is a psychoactive cactus with a long history at the heart of the religious beliefs, healing practices and transformative meaning experienced by various native peoples in Mexico and North America. The Wixárika (Huichol Indians) have the longest known history of continuous peyote use, whereas peyote practices of the NAC in the United States and parts of Canada evolved more recently. This paper will provide a brief description of the botany, chemistry, medicinal qualities, ecology, archaeology, history, and religious practices that center on peyote. Indigenous knowledge, rituals, individual understanding and adaption to change are presented, along with sentiments expressed by indigenous people inspired by this sacred plant. In conclusion, the alarming growing scarcity of peyote is discussed along with conservation efforts to protect the future of this charismatic plant.

Keywords: Peyote; Wixárika; Native American Church; religion, cultural adaptation; conservation.

¹ Falta adscripción del autor.

Resumen

El peyote (*Lophophora williamsii*) es un cactus psicoactivo con una larga historia en el centro de las creencias religiosas, las prácticas curativas y el significado transformador que experimentan diversos pueblos indígenas de México y América del Norte. Los wixárika (indios huicholes) tienen la historia más larga conocida de uso continuo del peyote, mientras que las prácticas relacionadas con el peyote de la NAC en Estados Unidos y partes de Canadá se desarrollaron más recientemente. Este artículo ofrece una breve descripción de la botánica, la química, las cualidades medicinales, la ecología, la arqueología, la historia y las prácticas religiosas que giran en torno al peyote. Se presentan los conocimientos indígenas, los rituales, la comprensión individual y la adaptación al cambio, junto con los sentimientos expresados por los pueblos indígenas inspirados por esta planta sagrada. En conclusión, se analiza la alarmante escasez creciente del peyote, junto con los esfuerzos de conservación para proteger el futuro de esta carismática planta.

Palabras clave: *Peyote*; *Wixárika*; *Iglesia Nativa Americana*; *religión*, *adaptación cultural*; *conservación*.

Introduction

Peyote (*Lophophora williamsii*) is a distinctive, spineless cactus with psychoactive properties that grows in northern Mexico and in Texas along the United States border (Figure 1). For centuries, it has been revered by indigenous peoples for its ability to provide a sense of well-being and to give meaning to life. Peyote is an omnipresent cultural keystone species among the Wixáritari (Wixárika singular, Huichol Indians) of Mexico, the last remaining indigenous culture to preserve ancient peyote knowledge and religious practices, which they continue to pass down through the generations. In more recent times, peyote has been adopted by indigenous peoples in the United States and Canada who are members of the Native American Church (NAC) and who use this plant as a sacrament in their prayer meetings. This paper presents a holistic approach to understanding peyote and the attraction it has for Wixáritari and members of the NAC. The archaeology, history and botany of peyote will be examined, followed by indigenous traditions and perspectives regarding this plant. Finally, this paper will address concerns and strategies to protect the future of this charismatic plant.

Botanical and Chemical Properties

Peyote is a small, low-growing cactus that takes the form of a flat, fleshy, globular or button-like shape that is depressed in the center, where it typically bears white or pink flowers, followed by a pink fleshy fruit that contains seeds (Figure 2) (Figure 3). Peyote is almost always spineless, the areoles bear prominent tufts of wool-like hair instead. Each peyote has usually five to 13 sections or ribs with a scattering of clusters of white tufts of hairs or trichomes (Figure 4). The top

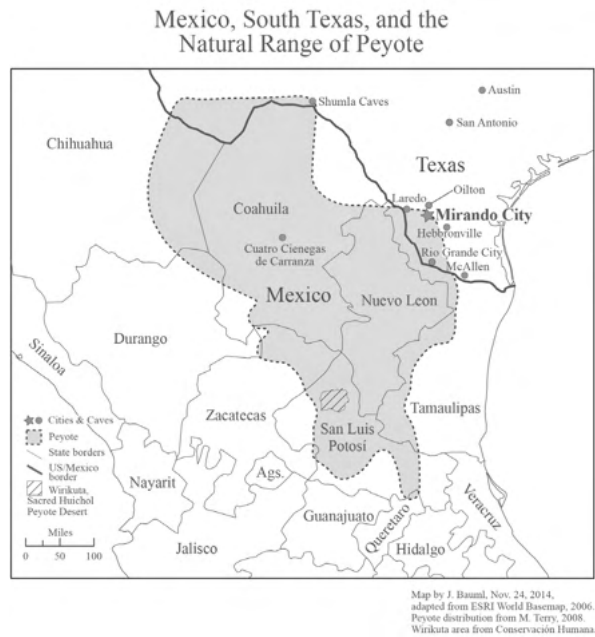


Figure 1. Range of peyote in Mexico and Texas. Map by James A. Bauml.



Figure 2. Peyote in bloom, West Texas. Photo by Stacy B. Schaefer.



Figure 3. Fleshy fruit containing seeds. Photo by Keeper Trout.



Figure 4. Different sized peyotes in Wirikuta. Photo by Stacy B. Schaefer.

of the peyote, which grows above the soil, averages around three to five inches (eight to 12.7 cm) wide and two to three inches (five to 7.62 cm) tall. It has a long, thick, underground stem that commonly measures 3-5 inches long. The color of the peyote varies from green, to gray-green, to blue-green, to gray with a reddish tinge; its inner flesh is light yellow in color. Peyote begins as small individual heads, that gradually increase in size. If a head is cut slightly below the soil level, “pups” or smaller heads may branch from below. Peyote is very slow-growing, and

from seed in the wild can take five years to reach two inches and up to 15 years to reach maturity. New peyote plants may grow from the root of a mature plant, the seeds of peyote naturally scattered around the original plant can germinate and grow, and pups from the root of a cut peyote will form individual plants as the root shrivels. Over time these form clusters in various formations (Figure 18) (Trout personal communication November 23, 2024; Trout, 2014).

For such a seemingly unassuming cactus, peyote produces a surprisingly large number of naturally-occurring alkaloids; over 60 have currently been reported. Mescaline (3, 4, 5 trimethoxy phenethylamine) is the predominant alkaloid in peyote, and is the chemical that is most responsible for its psychoactive effects. Striking visual designs in brilliant colors and dream-like states are experienced as are altered auditory, tactile, gustatory, and olfactory sensations (Figure 5).



Figure 5. Peyote-inspired embroidery design by Maria Clara Minjares, San Andrés Cohamiata. Photo by Stacy B. Schaefer.

This occurs from the effect of mescaline binding to and activating serotonin receptors, which affect mood and perception.¹ Additionally, several other major alkaloids that have been noted in the literature are pellotine, anhalonidine, and hordenine which effect respiratory and heart rates, wakefulness and sleep (Bruhn & Homstead, 1973). And there are isoquinolines found in peyote, some of

¹ Mescaline binds to and activates the serotonin 5-HT_{2a} receptor; this subsequently causes the release of calcium (Ca²⁺) from the endoplasmic reticulum (Doesburg-van Kleffens *et al.*, 2023).

which may inhibit the deactivation of alkaloids which could diminish the effect. Although still not well-understood, researchers propose that the interaction of isoquinolines and all these various alkaloids create a synergy, an entourage effect, that is felt throughout the whole body and the mind.

Natural Habitat

Peyote naturally occurs in parts of the Chihuahuan Desert that extends from west Texas along the Mexican border, and south into north-central Mexico in the state of Durango, Zacatecas and San Luis Potosí. Peyote also grows in Tamaulipan thorn scrub habitat along the south Texas border with the Mexican states of Tamaulipas, Nuevo Leon, and Coahuila. The Tamaulipan thorn scrub habitat is more humid, and occasionally this area experiences torrential rains from hurricanes traveling north from Mexico. The habitat is largely alluvial with gravelly loam, and shallow, rocky limestone soils. In the Chihuahuan desert habitat, drought is more frequent and winters in West Texas are much colder. There are areas of rocky outcrops, the soil is more alkaline and peyote there thrives in soils rich in calcium that thinly covers limestone beds. In the west Texas part of this habitat range the vegetation is not as dense and typically has open stands of creosote bush and other desert shrubs. The altiplano of San Luis Potosi of the Chihuahuan habitat is high desert and is a kind of “forest” of biological diversity of flora and fauna that include at least 526 species of vascular plants, a wide variety of cacti, and shrubs and trees such as mesquite which are nitrogen-fixing and augment the



Figure 6. Peyote with rock to provide shade and protection, West Texas.
Photo by Stacy B. Schaefer.

biodiversity in the region benefiting the flora in this area (Arellano, 2024; Flores Rivas & Martínez de la Vega, 2019, p. 18; Flores-Rivas *et al.*, 2019, p. 38). In both Chihuahuan and Tamaulipan environments, some shrubs and trees serve as “nurse plants” that provide peyote with partial shade from the intense sun; in west Texas it is common for rocks to provide shade (Figure 6) Preliminary studies present some differences between peyote populations in each habitat; it appears the peyote that grows in the Chihuahuan desert environment can tolerate greater cold and that the drought stress may cause the plant’s alkaloids to be stronger or more concentrated (Weniger 1970, Trout personal communication November 23, 2024). Also, peyote in Tamaulipan thorn scrub habitat and the populations in West Texas may be able to self-pollinate, whereas some areas of Mexican peyote from the Chihuahuan environment are genetically more diverse and appear to need cross-pollination to make viable seeds (Terry, 2008).

Medicinal Properties and Ethnobotany

Peyote is valued for its medicinal qualities; some indigenous peoples consider it to be a panacea that cures or at least eases the symptoms of a multitude of illnesses and diseases, and its use is believed to fortify the body and promote longevity. In most contexts, smaller amounts of peyote are consumed for medicinal outcomes. Wixáritari integrate peyote into their herbal apothecary to assuage the potent effect of scorpion stings, for headaches and other physical pain, stomach ailments, and for purifying the body. Wixáritari also consume peyote to diminish hunger and thirst, and to provide energy and stamina. Members of the NAC commonly refer to peyote as “medicine” and believe it has a positive effect on healing alcoholism and drug addiction and that it lessens the symptoms of diabetes, colds, fevers, and toothaches to name a few (Schultes, 1940).

Mexican and Mexican American populations use peyote as a tonic, mashed and applied as a poultice for arthritis, to assuage eye problems by squeezing the liquid of fresh peyote into the eye, and to treat headaches and lessen pain in the body. It was recommended in the official 1846, *Mexican Pharmacopoeia*, that peyote extract acts as a tonic for the heart (Olvera-Hernández, 2023). During the Civil War in the United States, Texas Rangers, the primary military force in Texas history, who were taken prisoners were deprived of “stimulating drinks” and substituted peyote soaked in water as an intoxicating beverage (Lumholtz, 1902, vol 1, p. 358). However, a recent study showed that almost no contemporary peyote-containing medicines actually include active levels of peyote alkaloids (LeBlank *et al.*, 2021).

Peyote is also associated with fertility, and some Wixárika and NAC women consume it throughout pregnancy and in childbirth. Over centuries of this practice, it does not appear to be maladaptive nor have deleterious effects, nor does it cause abnormalities or chromosomal damage (Dorrance *et al.*, 1975; Halpern *et al.*, 2005). Scientific studies indicate that the feti receive a diminished amount of peyote from their mothers. Pregnant women claim that their babies can feel the

effects of the peyote and at times responds to it, like dancing in the womb. Wixárika women will consult a shaman to help calm the effects of peyote and ensure that they will have a healthy full-term pregnancy. Shamans explain that in Wirikuta, the desert region in the state of San Luis Potosí, Mexico where Wixáritari travel to collect peyote, babies who receive peyote while in the womb are predisposed to becoming shamans. One NAC woman explained to the author that she thought babies receiving peyote while in utero makes them smarter. And a midwife who attends to NAC women said that, through her years of experience she empirically has noted that peyote consumption helps establish the placenta and maturation of the fetus. Some Wixárika and NAC women will eat small amounts of peyote to induce childbirth or to assuage the pain. Women who consume peyote report that their labor is not as long and there is less blood during the delivery (Schaefer, 2011; Schaefer, 2018, pp. 223-231).

Western scientific research has discovered that some of the peyote alkaloids, such as hordenine, have antibiotic qualities that can inhibit the growth of penicillin-resistant strains of bacterium *Staphylococcus aureus* (McCleary *et al.*, 1960; Rao, 1970). More recently, laboratory research provides strong evidence that peyote alkaloids increase an immune response to cancerous tumors and can activate signals in human cells to actively fight acute and chronic inflammation (Franco-Molino *et al.*, 2021, 2023).

Peyote is ingested in various ways. Freshly-harvested peyote buttons are usually the preferred form of consumption. Wixáritari pick the white hair-like tufts from the plant, which they place in their votive bowls as offerings, remove the tough bark-like portion of the root where it connects with the flesh of the button, and will oftentimes place the entire peyote in their mouth which they slowly masticate. Wixáritari also dry peyote to store for future use to eat or make into a coarse powder with a *metate y mano* (grinding stone and rock surface) (Figure 7 and Figure 8). The powdered peyote is mixed with water and served as a frothy ritual drink during the ceremony *Hikuri Neixa* (Dance of Peyote). Small amounts of peyote are also eaten in non-ceremonial contexts for physical endurance. Members of the NAC eat fresh peyote buttons when they are available; otherwise, they are eaten dried, powdered, as tea, and sometimes fermented in water.

Consuming peyote can also be psychologically therapeutic, especially in a ritual setting. In Wixárika traditions a typical setting may be in aboriginal temple grounds, family temples, or in the peyote desert under the guidance of a shaman. Wixárika shamans spiritually purify each person they treat and advise their patients on the size and type of peyote buttons and how much they should consume. Throughout the ritual, shamans are present, overseeing the well-being of their patients. Afterwards, patients recount their experiences and encounters while under the influence of peyote, and the shaman helps interpret the meaning of such accounts and advises the patient on actions, prayers, and offerings needed to complete the healing.

The NAC prayer meeting is normally held in a tipi or hogan, and a roadman takes on the role of a kind of priest and guide (Figure 9). The meetings proceed



Figure 7. Drying peyote in Wirikuta. Photo by Stacy B. Schaefer.



Figure 8. Peyote strung on cord, like deer meat to transport back to the Sierra. Photo by James A. Bauml.

in a strict and organized manner. All participants are required to remain the entire night in the ceremony, although the roadman may give them permission to exit for a brief interlude. Roadmen are trained to look after people who may exhibit overwhelmingly strong emotions or who become excessively withdrawn. A roadman may speak to the individual, pray with them, or have them “take a smoke” by having them roll tobacco in a corn husk leaf and smoking it as they pray. The roadman purifies the individual by “fanning them off” with an eagle feather fan and burning cedar incense which is fanned over the person. Participants experience a sense of family and community bonding that grows stronger through the night into the dawn (Baggot, 1996).



Figure 9. Mrs. Amada Cardenas exiting a prayer meeting on her property. The design on the tipi is of bear prints and represents the Ute Indian tribe. Photo by Stacy B. Schaefer.

History of Use

Peyote certainly predated human origins because diversification within the cactus lineage originated around 7.6-6.3 million years ago during the late Miocene (Arakaki *et al.*, 2011). In the archaeological record, the oldest conclusive evidence of human knowledge and interaction with peyote dates to 4043-3960 B.C. In one of the Shumla caves, located in the Lower Pecos region of southwestern Texas, effigies of peyote were found made from a mixture of ground peyote and mixed plant material (Terry, 2006). Rock art from the complex of caves in the Lower Pecos River area depict supernatural figures that have been interpreted as shamans or deities – with outstretched arms holding power objects, and accompanied by other supernatural and animal-like figures

(Boyd, 2016). In a burial cave in the Cuatro Ciénegas basin in the Mexican state of Coahuila, a desiccated string of nine peyotes dated to 1070-1280 A.D. was excavated (Taylor, 1988, p. 3; Terry, 2006, *ibid*). In both the Shumla and Cuatro Ciénegas caves peyote is associated with ritual observances, as suggested by the rock art and evidenced by burials in Shumla caves, especially one burial that included numerous, exotic grave goods interred with the individual (Turpin, 2018, p. 36).² The peoples who lived in these areas are believed to have been nomadic hunter-gatherer bands who quite likely spoke a proto-Nahuatl language. The Nahuatl language family includes languages spoken by various indigenous groups from North to central Mexico, Nahuatl is also the language spoken by the Aztecs (Mexicas).

The borderlands between Mexico and deep south and southwest Texas have been the entryway for the peyote religion in what is currently the United States. Early nomadic hunter-gatherers, generally referred to as Coahuiltecs, lived in this desert environment and undoubtedly learned about the psychoactive and medicinal properties of peyote through experimentation. They must have also become acquainted with the power of peyote to transcend their human existence. The encroachment of Spanish explorers and missionaries brought chaos, death and destruction to many of these early inhabitants. Several missions were established in this region, such as the mission of Dulce Nombre de Jesús de Peyotes, which was founded in Coahuila in a hilly region called Lomería de Peyotes (Peyote Ridge). The missionizing efforts gave life to a unique cross-fertilization among these indigenous people, one between Christianity and earlier religious beliefs and worldview including local peyote traditions. In 1700, one priest from this mission relates "I noted that only on the occasion of a mitote, or general dance, do they [the Indians in the Province of Texas] drink peyote and [the juice of] other herbs, which cause a disturbance of the senses, producing visions and apparitions" (Slotkin, 1955, p. 220). Another priest wrote that he had allowed some Karankawa Indians that were settled in the Texas mission of Refugio to travel to the Laredo region to collect a year supply of peyote for their customary use (Stewart, 1990 p. 147; Schaefer, 2015, p. 33).

Shortly after their arrival, Spanish government officials translocated the Coahuiltecan Indians from the peyote region to the five missions established in San Antonio, Texas. In effect, this fostered further syncretic forms of Christianity and peyote religious traditions and stimulated their diffusion. Additionally Spanish chroniclers described free-roaming indigenous people within the peyote lands of Texas and the northern part of Mexico. Some were the original inhabitants, while others were newcomers who were Southern Plains Indians fleeing the violent encroachment of white settlers onto their tribal lands further north. Lipan Apaches, Comanches, and Kiowas roamed east of the Pecos

² The grave of this individual contained approximately 50 artifacts, which included a buried pouch containing two rattlesnake vertebrae necklaces, painting paraphernalia, and "a pencil" made of deer bone with a piece of manganese inserted in its marrow cavity (Turpin, 2018, p. 36).

River; Mescalero Apaches occupied the land west of the River including south to Big Bend. Alliances were made between some of these groups. The Carrizo Indians, who were native to the region from Laredo west to the Pecos River, are considered to have been one of the tribes that were purveyors of these peyote traditions to displaced peoples and tribes. In 1859, after Mexico ceded the region to the United States, the federal government relocated these once autonomous Indians and other tribes to southwestern Oklahoma, which was designated as Indian Territory (Stewart, 1990, p. 54-55). There, in such close proximity to one another, the peyote religion spread among members of various tribes.

Further south of the border, in the Chihuahua Desert region, there were other Nahuatl speakers that were nomadic desert-dwelling bands that traversed the present day states of Zacatecas, San Luis Potosí, and beyond. They were generally known as Chichimecs. The language spoken by the Wixárika is a Nahuatl language, and Wixáritari are believed by some to have been closely related to the Chichimecs (Grady & Furst, 2011). The arrival of invading Spaniards caused a massive diaspora of indigenous people throughout that region, and waves of people escaped to remote areas such as the Sierra Madre Occidental. These refugees, who could have included some people of Chichimec heritage, joined other pre-existing groups in the mountainous area where Wixáritari and several other contemporaneous indigenous groups live today (Aguirre, 1967, Velazquez, 1961). Consequently, scholars propose that Wixáritari knowledge and rituals revolving around peyote are ancient, dating to pre-Colombian times.

Peyote use among the Aztecs (Mexico) was observed and described in Spanish chronicles from the sixteenth and seventeenth centuries (Sahagun, 1950-1963, Ruiz de Alarcón, 1984). Chichimecs were credited with having introduced this vision-producing cactus, perhaps through trade, to the Mexica and other indigenous groups in central Mexico prior to the arrival of Europeans to the New World. Spanish missionaries in the colonial era aggressively sought to abolish the consumption of peyote, and all indigenous religious traditions for that matter. An Inquisition ensued in which indigenous, but even more so, non-Indigenous people were interrogated for what the Spanish clergy saw as blasphemous practices; peyote was equated with witchcraft and evil, and it needed to be eradicated (Stewart, 1990; La Barre, 1989; Dawson, 2018).

Daunted by the rugged geography of the Sierra Madre Occidental, Spaniards arrived relatively late to the core of Wixárika territory and with fewer numbers of missionaries who did not reside in the communities for any length of time. There are few published Spanish documents regarding the Wixárika. What is known is that Franciscan missionaries experienced frustration at every turn. They wrote of encountering clandestine shrines on various occasions, and when destroyed by the missionaries, they were reconstructed again (Santoscoy, 1899). Wixáritari held firm to their peyote traditions, and despite the threat of Catholic indoctrination, or the danger of enslavement by Spanish military to work the silver mines in Zacatecas and San Luis Potosí, Wixáritari made clandestine trips to their sacred peyote desert (Blosser, March 5, 2000, personal communications).

In the sierra, Spanish missionary presence lasted less than one hundred years. Mexico's Independence from Spain in 1821 enabled Wixáritari to be left relatively undisturbed for another hundred years.

Wixáritari Peyote Traditions

The first documentation of peyote use among Wixáritari comes at the end of the 19th Century from the writings of several European ethnographers, Carl Lumholtz (Norwegian), Conrad Theodore Preuss (German), and Leon Diguët (French) who traveled separately by foot and pack animals to these mountain communities to document Wixáritari and their cultural lifeways. Although none of these ethnographers traveled to Wirikuta, the sacred peyote desert of the Wixárika, Carl Lumholtz describes the first Wixáritari he encountered, peyote pilgrims who had recently returned from Wirikuta. Lumholtz also included in his ethnographic account the experience he had consuming peyote. He marveled at how it quenched his thirst and allayed his hunger. He felt renewed energy while walking strenuously with his Wixáritari guides. This was especially noteworthy as he had been recovering from a bout of malaria. Lumholtz wrote that when he closed his eyes and tried to sleep that he saw “colour visions consisting of beautiful purple and green flashes and zigzags” and by noon the next day he felt he had entirely recovered (Lumholtz Unknown Mexico, vol 2, p. 177-179).

It was not until the 1960s that Wixárika peyote traditions were more thoroughly documented through film and publications by anthropologists Peter T. Furst and Barbara G. Myerhoff who participated with Wixáritari on a peyote pilgrimage (Furst, 1972; Myerhoff, 1975). This was also a time when the Mexican government organized a campaign called “Indigenismo”, a strategy to “modernize” rural indigenous peoples with the intent of assimilating them into the larger Mexican society (Reed, 1972; Nahmad Sitton, 1996). Over the decades, increasing external influence on Wixárika culture with the development of roads, airstrips and other infrastructure, medical clinics and schools, etc., and the arrival of foreigners to these sierra communities, have brought change. Subsequently, Wixáritari in the 21st century are part of the global world. Many Wixáritari embrace these connections, and younger generations are able to integrate both the traditional and modern worlds into their lives (Negrin, 2024). Wixáritari continue to maintain pride and a strong sense of cultural identity, one that is fluid and adaptive to influences of change. Peyote, and the myths and traditions associated with this visionary cactus, are also fundamental to the resilience of this enduring culture.

The Pilgrimage

The pilgrimage to Wirikuta, the place where peyote originates, is quintessential to understanding the magnetism of peyote in Wixárika culture. The origin myth, or history as referred to by Wixáritari, tells of two women who traveled

to Wirikuta via the path that appeared while they were weaving designs on a backtrap loom. They marveled at the peyote they encountered. They consumed this psychoactive cactus and became pregnant. One of the women remained in Wirikuta and became the “Mother of Peyote”. The other returned to her community with peyote to share, and knowledge of the path to return to the sacred desert, which then set the precedent for the peyote pilgrimage today (Schaefer, 2015a) (Figure 10). Wixáritari travel to Wirikuta along the ancient paths that their ancestors and the gods, as told in their myths, once traveled; ultimate purpose for this pilgrimage is to ask for rain and well-being.³ It is a 360-mile (581.4 kilometer) journey that, in times past, was traveled on foot and lasted a month or more to complete. Along the route, Wixáritari visit sacred sites and encounter certain fauna (wolves and deer), and natural phenomenon such as wind and clouds, and unique rock and other geological formations, that they identify as deities and teachers (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2004). Nowadays Wixáritari rely on trucks and buses for transportation, and the journey takes much less time. Wixárika people who go on this pilgrimage have religious roles and responsibilities in the native temples and family shrines in the ranches, and some make this journey for individual reasons. In contemporary times, temple groups typically arrange the timing of the pilgrimage to accommodate the schedules of members who work or are students in the schools, or other professions.

Wixáritari mark the year with the rainy and dry seasons. The dry season, around December to June, is the time that peyote-related activities occur. It is marked by the first ritual deer hunt of the season. Deer and peyote are the same in Wixárika worldview, (and this becomes a trilogy with the addition of a third element, maize). Each can transform into the other, and shamans rely on the tutelary deer deity, Kauyumarie, to be able to communicate with the other gods in their cosmology. Temple members are given five-year ritual roles for particular gods. On the pilgrimage to Wirikuta, participants take on the personas of the gods they represent and care for them in the form of sacred rocks in their

³ In the 1990s, organizations such as Conservación Humana A.C. (CHAC) under the direction of Humberto Fernandez, consulted with Wixárika shamans and elders to document the ancient routes and sacred sites from the Sierra Madre Occidental to Wirikuta. The information compiled assisted Mexico's National Commission for UNESCO in the submission of “Huichol Route through the sacred sites to Huiricuta (Tatehuari Huajuye)” in 2004 as a World Heritage site. It still remains on UNESCO's tentative list. The author and co-investigator, Jim Bauml, noted that the route and sacred sites documented for the UNESCO World Heritage petition were based primarily on places recognized by Wixáritari from the community of Santa Catarina (Tuapuri). In the late 1990s to 2000 both Schaefer and Bauml traveled three times to Wirikuta with a Wixárika shaman from the community of San Andrés Cohamita (Tateikie), who in his youth made the pilgrimage on foot with his elders. Some of the sacred places visited on these trips were not the same as those recognized by the Santa Catarina Wixáritari. On one of the pilgrimages, a Wixárika shaman apprentice and his children from the San Sebastian (Watüa) community accompanied the group in San Luis Potosí, and it was noted that the area in Wirikuta where the San Andrés pilgrims congregated was different from that where San Sebastian pilgrims go.



Figure 10. Drawing of the origin myth of the pilgrimage to Wirikuta by Turama Hernandez. Note that the two women standing are the goddesses who became pregnant upon entering Wirikuta and eating peyote. Photo by Stacy B. Schaeferthe.

special prayer bowls. These are safely bundled in their woven baskets that contains power objects. Those learning to be shamans or are already shamans, keep a keen eye open for objects in the natural surroundings, such as unusual stones, rocks, or plants (Figure 11). They keep these and add them as companions that accompany the feathered power wands in their oblong woven shaman's basket. Along the path from the mountains to the desert, pilgrims visit sacred spots that are geographically unique in the landscape and have corresponding meaning as part of the Wixárika creation story. Water is precious in this desert environment, and, as told in the origin myth, Wixáritari travel to sacred bodies of water and leave offerings to the gods pertaining to these springs and lagoons, taking the time for shamans on the journey to conduct purifying and healing rituals for participants (Figure 12).

Upon reaching the sacred desert, the pilgrims search for peyote, which they liken to hunting deer, since they believe deer can transform into peyote. The first grouping of peyotes encountered is considered especially auspicious. People gather and pray; they place votive arrows, bowls, and other prayer objects recently anointed with the blood of an animal sacrificed before the journey. In some community traditions, small simple yarn paintings are also made and left with the petitioner's prayers (these may be precursors to the larger yarn paintings made for sale (Figure 13). Holy water from revered sources of water in their sacred geography is sprinkled over the offerings and the location. The peyote heads are ceremoniously harvested at the root, slightly below the level of the soil. More peyote is collected throughout the area, and some of them are



Figure 11. Shaman Rafael Pisano Carrillo with sacred rocks he collected on pilgrimages. Photo by Stacy B. Schaefer.



Figure 12. Wixárika family leaving offerings at the sacred springs Tuimaye'u, Wirikuta. Photo by Stacy B. Schaefer.



Figure 13. Wixárika shaman in training from San Sebastian leaving offerings with daughter at the site in Wirikuta where the first peyote was found. Note the small yarn painting offerings. Photo y Stacy B. Schafer.

sectioned and laid out to dry in the sun to be later strung on a cord, like deer meat (Figure 14). The harvested peyote will be taken back to the Wixárika sierra to families and communities for future ceremonies and other uses.

Wixárika shamans are keenly aware of the distinctions among different kinds of peyotes. (Schaefer, 1996). They recognize which peyotes are stronger than others, and they know the intended effects of combining peyote with other plants. Shamans may cut pieces of flesh from the ribs of the barrel cactus (*Echinocactus* sp.), remove the thorns and skin, and combine slices of peyote with it and place the bundle into a person's mouth to eat (Figure 15). Wixáritari say this calms the peyote and lessens its strength. In addition to the barrel cactus, makutse, a potent high nicotine tobacco (*Nicotiana rústica*), may be smoked to induce greater concentration and lessen the psychoactive effects of peyote. One shaman, Rafael Pisano Carrillo, put it this way:

Even if you eat lots of peyote, you will not feel it that much [...] it makes you feel it very gently, that's how people do it [...] because if you eat peyote you feel differently, sometimes (the peyote) is gentle, sometimes it is very heavy [...] and then you hear things from far away, people talking from far over there. But with *makutse* no, it



Figure 14. Wixárika yarn painting made for commercial sale depicting peyote and the fire in the center. These are. Photo by Stacy B. Schaefer



Figure 15. Barrel cactus in Wirikuta, sliced pieces can be eaten with peyote. Photo by Stacy B. Schaefer

lessens the feeling of being drunk with peyote [...] so that you come down, that's why they smoke [...].

Other plants combined with peyote heighten the experience. Wixáritari speak of consuming pieces of *Ariocarpus retusus* to achieve this effect. Another plant admixture that accelerates the experience is 'uxa (*Mahonia trifoliolata*, today considered a synonym of *Berberis trifoliolata*) the plant whose ground roots are the source of yellow face paint (Bauml *et al.*, 1990) (Figure 16). The same shaman who discussed the effects of tobacco had this to say about "uxa":

(The 'uxa), this you feel with the peyote. You feel more, but it is different, it is not like smoking makutse...when you combine ['uxa and peyote] it is as if they elevate you, they raise you up zzzzzooooommmmm. That's how I felt. I saw the whole world very small, very round. I was moving as if I were the sun, that's the way I saw everything. I saw the gods, where they come from and where they reside, I saw everything."



Figure 16. Uxa (*Mahonia trifolioata*), the yellow root is ground and mixed with water to make face paint used during the pilgrimage. Some Wixáritari eat slices of the root with peyote. Photo by Stacy B. Schaefer.

The culminating ceremony in Wirikuta commences at night around the fire, with the leading shaman and his assistants singing the entire *corpus* of myths that pertain to this point in the pilgrimage. At five times in the shaman's song,

the participants dance in a circle around the fire, marking each cycle in the epic myth. At dawn, in greeting the sun, pilgrims paint their faces, wrists, base of their feet, and sacred objects and offerings with yellow paint 'uxa in geometric and deer designs so that they can be more clearly visible to the gods. The group walks to a large cluster of peyote that had been identified by the shaman as the "mother of peyote" (*Wiri'uwi*), where they pray and leave additional offerings. Then they return to the fire and campsite, some immersed in their peyote visions until they sleep. Afterwards, participants will recount the visions they encountered when "traveling" with the peyote. The shaman interprets the meaning of their experiences and will advise them on what rituals and offerings they should make in gratitude to the gods that appeared to them. The final healings in Wirikuta take place with the shaman gently sweeping his feathered power wands over the body and sucking foreign objects from it, most often from the stomach, and spraying holy water upon the face, throat, and stomach. Barren couples are especially hopeful their experience in Wirikuta and the healing they receive there will enable them to have children and grow their family.⁴

Afterwards, the pilgrims travel to the sacred mountain of of Reu'unar, an inactive volcano near the colonial mining town of Real de Catorce. Inside is a cave where they leave their final offerings and pray to the sun. This location is the furthest east in their cosmological geography, and the place where the sun was born in the times of creation and where it is born every day. Upon returning to the sierra, the peyote pilgrims are greeted by their families, members of the temple, and the local government officials. The final peyote ceremony, *Hikuri Neixa* (Dance of Peyote), takes place to mark the end of the dry season when Wixáritari will turn their attention to planting and caring for their maize fields during the rainy season. With the coming of the dry season another year begins following the annual cycle, as it has since ancient times.⁵

Reasons for Going on the Peyote Pilgrimage

What are the motivating factors for Wixáritari to continue these peyote traditions and seek the experiences gained from them? One shaman simply, but powerfully stated that Wixáritari go to Wirikuta "to find our lives" (Furst, 1972). This may mean to fulfill ritual obligations past family members carried out in the temple or family shrines. For others it may be to heal themselves and family members from illness or misfortune, or to ask the gods for luck, health and productive crops and livestock. Still others take this journey, oftentimes at a young age, to learn specialized skills such as becoming a master artisan, violin player, or to become a shaman. No matter the age of a participant, there is always more to

⁴ Schaefer (2018) proposes that the interaction from peyote ingestion by women of reproductive age may increase fertility by stimulating the neuroendocrine system via the hypothalamus/pituitary complex in the brain as well as in the reproductive system, including the uterus.

⁵ The five major temple groups in the San Andrés Cohamiata community in the Sierra travel to Wirikuta on the first, third, and fifth years of their five-year cargo roles.

learn. What follows are some thoughts and experiences Wixártari friends have shared with the author:

[...] you pray [...] that you will get something from it [the peyote], that you will gain knowledge and see things [...] The first time I ate peyote I ate a small amount to see if it would bring me luck. I wanted to play the violin ...a light like a star appeared, it came from over there where the sun rises...then the light fell all around me and cleaned me all over. Then I appeared like a bright light, a really beautiful light [...] (Rafael Pisano Carrillo).

I made some votive arrows for Kauyumarie, the deer god, to leave where there is peyote in Wirikuta. They were for Kauymarie because he knows everything about the world [...] When I arrived to Wirikuta, I left one of the arrows [...] the other peyoterros (pilgrims) took out a large bowl and filled it with peyote. They told me that since this was my first trip to Wirikuta, I had to eat all of the peyote in the bowl. I wanted to know about god, how the world began, and how the sun first appeared, how the fire, the maize, the earth, and the god of rain first appeared[...] (Guadalupe Carrillo).

It doesn't matter if it is a woman or man, it is the same. One eats pure peyotes, many of them. There in Wirikuta is where it is done, and there they are in a kind of classroom for shamans. There in Wirikuta is the foremost school. Really. All they do is eat peyote, become inebriated with the peyote, and there they learn in the school for shamans (Turama Hernanadez).

These sentiments are deeply compelling. They express a desire that through consuming peyote they will receive visions that will enable them to better know the gods, learn from them, and, in doing so, gain greater access to the many worlds in nature and the cosmos that are integral to Wixárika identity and cultural survival.

The Native American Church Peyote Traditions

With the establishment of "Indian Territory" around 1870 in the state of Oklahoma, the Bureau of Indian Affairs (BIA) instituted practices intended to assimilate Native Americans into white society. Kiowa and Comanches, who appear to have learned about peyote from the Carrizo Indians when they roamed the borderlands, are credited with introducing peyote religion to others. A Roadman, the one who ran the peyote meetings, was most often someone who was a chief or tribal leader, had attended one of the government schools for Indians or had spent time in the camp for prisoners-of-war, knew English, and had exposure to white culture. People who sought to learn to be Roadmen usually were medicine men. And most of these leaders were members of a Christian mission and devoted themselves to missionizing (Stewart, 1987, p. 68). Variations of the peyote religion evolved out of the contact and diffusion that took place in Indian Territory where some forms of peyotism were more strongly shamanistic and drew from the old ways and others reflected greater influence from Christian indoctrination; the most widespread is called the Half Moon, or Crescent Moon service (Schaefer, 2013). One form of the peyote religion, known as the Cross

Fire service, included a Bible placed on the altar and a minister present. In some cases, Christian elements were intentionally added to the ceremony in attempts to make this religious practice more acceptable to the larger white society (Maroukis, 2010, p. 46). The peyote religion, in all its variations, increasingly appealed to Native Americans on the reservations, it provided healing and meaning for people coping with efforts by the U.S. government to take their homelands and eradicate their former way of life.

The BIA, legislators and additional government officials teamed up with Christian churches and other white groups to stamp out the peyote religion in all of its forms by prohibiting the possession, sales, and use of peyote. In the early 1900s, in response to these repressive measures, peyotists on the reservation organized into larger groups. This set into motion a campaign on behalf of peyotists for First Amendment protections, declaring that the U.S. government cannot prohibit their free practice of religion or restrict their freedom of speech. Anthropologist James Mooney, who worked for the Bureau of American Ethnography (BAE), now the Smithsonian Institute, was the one of the first non-Indians to attend and study a peyote meeting on the reservation. He understood the importance peyote and this religion had for practicing members and advocated for their rights. He testified before congressional hearings along with prominent Roadmen from various tribes, among others. Mooney also advised and assisted lead peyotists in establishing the religion as a legally incorporated church with an organizational structure, a governing body, a clear statement of peyote as a sacrament, and a new name, The Native American Church (NAC). The NAC was incorporated by the state of Oklahoma in 1918 (Maroukis, 2010, pp. 54-57).⁶

The U.S., in its efforts to toughen federal laws on drug use, instituted the Comprehensive Drug Abuse Prevention and Control Act of 1970. Peyote was classified, along with other hallucinogens (entheogens) and narcotics, as a Schedule 1 controlled substance. Attitudes towards the sacramental use of Peyote looked more favorably upon the NAC, and the Department of Justice added a clause that exempted the NAC from this legislation. Later, in 1978, the American Indian Religious Freedom Act (AIRFA) was passed but did not offer protections at the state level. The 1994 amendment to the AIRFA protects on a federal level, the use of peyote in *bona fide* religious ceremonies, and includes the legal harvest, possession, and consumption of peyote. The amendment also states that Native Americans have the right to consume peyote during Native American Church services while incarcerated, and that those members serving

⁶ There are three main groups of the Native American Church (NAC): the Native American Church of Oklahoma, which is the first and oldest Church; The Native American Church of North America, which has the largest number of members and chapters, and the Navaho Church, Azeé Bee Nahaghá. There are also many other Native American Church organizations throughout the United States, and a few in Canada and Mexico.

in the military can attend peyote prayer meetings, allowing at least twenty-four hours afterwards to return to service.⁷

Acquiring Peyote

Unlike Wixáritari who make a pilgrimage to collect peyote in the desert of Wirikuta, many NAC members have never seen peyote growing in its natural habitat nor do they have access to the peyote gardens to pray with this sacred plant. Most of them obtain peyote from local Mexican Americans (Tejanos) living in peyote country in south Texas, known as the Peyote Gardens. Since fresh peyote in South Texas does not survive well in colder climates, these peyote traders dried the plants they harvested from the countryside and initially shipped them on rail cars north to Oklahoma (Morgan, 1983). In the early 1900s few Native Americans had the means to travel to the Peyote Gardens. Those who did brought empty trunks to transport the dried peyote buttons. Over time, the peyote traders, also known as distributors or dealers, mailed dry peyote to their NAC customers. As the Church grew, so did the demand for peyote. Eventually, the trade evolved into a commercial enterprise, and increasingly more NAC members made a kind of pilgrimage to South Texas to purchase peyote (Morgan 1983). Few Native Americans were able to collect their own peyote because it grows on private lands and the landowners refused to allow them on to their property. Most dealers sought permission or leases to access the peyote on these lands. A unique relationship grew between peyote dealers, who were respectful of these peyote traditions, and NAC members. These dealers usually have a shrine they've created with planted peyote as a sanctuary garden where NAC customers, if so inclined, can pray and leave offerings (Figure 17).



⁷ The 1994 Amendment to the American Indian Religious Freedom Act known as H.R. 4230 can be viewed at this website: <https://www.congress.gov/103/bills/hr4230/BILLS-103hr4230enr.pdf>.

Figure 17. Peyote shrine at the home of a peyote dealer in South Texas. Note the clumps of peyote growing. Photo by Stacy B. Schaefer.

One such peyote dealer, Mrs. Amada Cardenas, was the first federally-licensed dealer to legally sell peyote to NAC members; she became a dear friend, grandmother, mother, and sister to many Native Americans who came to her house to buy peyote and pray in the garden beds that she filled with peyote (Figure 18). Even after Mrs. Cardenas became a widow and no longer worked the trade, she welcomed all Native Americans, and whomever else showed up on her doorstep for that matter, and she helped direct them to dealers for their medicine. She also allowed them to put up their tipis and run meetings on her property in the Peyote Gardens, and intimately knew generations of NAC families who came to visit. Many times in her life the NAC acknowledged her contributions to the Church and she received honorary recognition.⁸



Figure 18. Peyote with smoked tobacco prayers in the garden of Mrs. Amada Cardenas, South Texas. Photo by Stacy B. Schaefer

The Native American Church Peyote Meeting

Peyote meetings, also known as prayer meetings or church services, are held in a tipi or, among some Navajo, in a traditional dwelling called a hogan. The description offered here refers to the more widely-practiced Half Moon or Crescent Moon service (Figure 19). The tipi is erected, with the doorway to the

⁸ Amada Cardenas and her husband, Claudio Cardenas were recognized for their acts of valor in times of legal peril for members of the Native American Church. As a widow, Mrs. Cardenas was an Officer of the newly reinstated Native American Church of the United States in 1988, and her home served as the Church's official address (See Schaefer, 2015b).

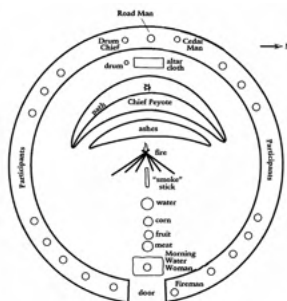


Figure 19. Diagram of NAC meeting inside tipi with crescent moon altar after La Barre (1989, p. 44).

east, on grass that is freshly cut, or on bare earth that is relatively level and swept clean of debris and cleared of rocks. The circular nature of the tipi is representative of the “sacred circle” and symbolizes the continuity of the cosmos (Maroukis, 2010, pp. 72-73). Inside, towards the west part of the tipi, a special soil or clay brought from a sacred location is mounded into a crescent or half-moon shape. A thin line is drawn lengthwise on the top of the mound, often with the tip of an eagle feather. The line represents the peyote road and symbolizes the journey one takes during the course of the peyote meeting, and one’s life journey in the Peyote Way. A branch of sage (*Artemisia tridentata*) is placed on top in the middle of the altar followed by a large, dried peyote, with prominent fuzzy areoles, like a crown of white hair in the center of the plant, that rests atop the fragrant sage. This is the Peyote Chief and embodies “Father Peyote”. It protects and guides the ceremony by enabling communication between the participants and God or the Holy Creator (Schaefer 2015b: 131) (Figure 20 and Figure 21). Just east of the altar is the fireplace; the fire is the focus of the meeting and the center where prayers are expressed, while the Peyote Chief listens and watches from its altar by the fire. Within the framework of the NAC peyote meeting, the Roadman who officiates has his own way of running the church service, and this is referred to as his Fireplace; the tradition of each Fireplace is passed down from another well-respected Roadman.

There are five major figures in the meeting. The Roadman leads the service and sits with his wife or relative to the west side wall of the tipi with the altar in front, the fire, and the doorway facing east to the outside. The Chief Drummer sits to the right of the Roadman, and with his drumstick sounds a pounding beat on the water drum made from a cast iron kettle that has charcoal and stones placed inside, filled with water and tied taut with animal skin. Several NAC practitioners explain that the drum represents the “Indian heart beat”, and “through the night the Peyote drum is the heartbeat of the meeting” (Maroukis 2010:86). The Cedar Man carries a beaded leather pouch filled with dried cedar (*Juniperus virginiana*), and as instructed by the Roadman, he casts cedar upon the fire at the beginning of the meeting and throughout for prayers through its fragrant smoke (Figure 22).]



Figure 20. Mrs. Amada Cardenas making a peyote chief at her home in South Texas. Photo by Stacy B. Schaefer.



Figure 21. Peyote Chiefs on miniature Navaho blankets. Photo by Stacy B. Schaefer.

The fire man tends the fire with wood brought from special trees selected for the meeting. He keeps the fire bright, adding wood in a V-shaped configuration, and raking the ashes into a pile. At dawn, as the meeting winds down and is concluded, the Fire Man deftly arranges the remaining embers into the shape of a waterbird, the symbol of the Native American Church. For many participants the water bird is a cormorant, admired for its ability to dive deep into water, like



Figure 22. Medicine man and Roadman James Yazzie holding his eagle fan and cedar bag with wife Elva Yazzie at Mrs. Amada Cardenas' house in South Texas. Photo by Stacy B. Schaefer

the night in the peyote meeting, but also surfaces and travels up to the sky, just as the sun does in the morning.⁹

A fifth major role in the peyote meeting is that of the Morning Water Woman, who represents the Peyote Woman, the woman in the origin myth of peyote in the NAC tradition, who is credited with finding the first peyote and for having introduced it to her family and tribe (La Barre, 1989, p. 51 [Ftn 113]). The Morning Water Woman is most often the wife or a female relative of the Roadman. When called by the roadman at dawn, she enters the tipi and brings a large pail of water for all the participants to drink. Before it is passed around the circle, the Morning Water Woman sits near the entrance on a blanket facing the fire and the Roadman, Chief Drummer and Cedar Man, and is offered tobacco and a corn husk to roll it into a cigarette, which is lit by the Fire Chief's sacred fire stick. The Water Woman kneels with the pail of water in front of her. She speaks eloquently about the meeting, the peyote faith, and expresses sympathetic, healing as well as uplifting thoughts that leave a compassionate air to the meeting. Her words summarize and reinforce the deep meaning of the meeting, and the profound feelings of bonding and unification of the participants. She then prays to the fire and the Peyote Chief on the altar.

⁹ Depending on the Roadman, some women may also sing songs during the peyote meeting. This is most common when the prayer meeting is held by family members or occurs in one's community.

The Meeting

The prayer meeting commences after all the participants have entered the tipi, walking clockwise around the fire to their places around the perimeter of the tipi. The Roadman and the sponsor of the meeting greet everyone, speak words of encouragement and express sentiments to set the tone of the meeting in a meaningful way. A pouch or packet containing loose-leaf tobacco is passed around the tipi circle along with corn husks for all the participants to roll the tobacco into cigarettes. A bundle of sage is passed around and everyone is encouraged to gently brush the sage over their body for purification; some may also take a leaf to chew. The Fire Chief's sacred fire stick is passed around to light the cigarettes. Everyone prays out loud, expressing their devotion to the Holy Creator, their intentions and their hopes for the meeting, and with their hands pull the wafting tobacco smoke over their heads and the outline of their bodies. Then the Cedarman places cedar onto the fire, the aromatic smoke that rises is fanned out with a feather to all the participants to purify and bless themselves. The Roadman reaches for a bowl of peyote, takes his share, and passes it around the circle of participants. Other forms of peyote passed around can be dry, powdered, tea, or fermented, each person decides which form of peyote to consume and the dose.

Then, the Chief Drummer begins to set the beat while the Roadman holds a carved and beaded staff and a feathered fan in his left hand, and in his right he shakes a gourd rattle. The Roadman sings an opening song followed by three more songs accompanied by the drum. The fast, energetic beat of the drum and rapid succession of short sharp sounds of the rattle intensify the atmosphere within the tipi. The ritual accoutrements are handed clockwise to adjacent persons who shake the rattle and hold the staff and feather fan while singing four songs to the accompaniment of the Chief drummer who sits by their side. The singing continues around the circle until midnight, at which time the Roadman sings the midnight water song and three more songs. He steps out of the tipi and blows into an eagle bone whistle making a high pitched, clear and trilling sound four times. He returns inside the tipi and the Fireman brings in a pail of water for the midnight water part of the ceremony, places it down by his side and kneels.

The Fireman rolls a tobacco cigarette addressing everyone in the meeting in a familiar way. He prays out loud expressing special thoughts for people who seek to be healed. A cup of water accompanies the pail as it is passed clockwise around the tipi. More cedar is placed upon the fire and everyone is encouraged to bless themselves with the aromatic smoke. Bowls of peyote are again passed around the circle. At this point in the meeting, people are feeling peyote's effects and the energy from the songs and prayers, and they may use their own feather fans and rattles, turning inwards with their own prayers (Figure 23). Throughout the night, the water drum releases a powerful, pounding sound into the air that can be felt resonating within one's body. Along with the acoustics component to the peyote experience, the smell of cedar smoke intermittently throughout the



Figure 23. Mrs. Amada Cardenas' peyote box with her feather fans and peyote chief. Photo by Stacy B. Schaefer.

night can bring personal memories to the surface. One NAC member shared with the author:

My mother said that when I was born that my grandfather put up a tipi and prayed for me, my tracks on mother earth. Now, my life as an adult, I go into the tipi. [During the meeting] somebody would do something, throw cedar on the fire, and it would trigger off memories, like my [past] relatives are there, their presence is there and I can see my relatives that have died (Margaret Behar, Lakota).

The Roadman encourages people to “take a smoke”, speak their minds, and express themselves. Participants who do so are rewarded with approval and praise from the group. The singing continues and, in the early morning hours, the sponsor or a participant selected by the Roadman also “takes a smoke” with tobacco, prays and speaks about the purpose and importance of the meeting, of peyote and the peyote faith. Cedar is spread over the fire, people bless themselves, and more singing ensues until dawn. The Fireman exits the tipi to call on the Morning Water Woman to enter the tipi with the pail of morning water and the Roadman sings the morning water song and three additional songs. The same NAC member who spoke about memories of her family that had passed, recounts her experience in the role of the Morning Water Woman praying over the morning water and everyone there:

You know when you go into prayer, it is like chaos. I did not know what I really was going to pray about. The main thing that kept coming to me was the peyote. I ate peyote all night, so I was peyote-effected. So I started talking about the fire and the fireplace, that it is the process of life, and it led up to the peyote...And the prayer just came out and it linked. You know, it related to the whole altar there...and then I prayed for the people (Margaret Behar, Lakota).

The thoughts expressed by the Morning Water Woman bring a lightness with the dawn. Afterwards, people take turns speaking openly about the gratitude they feel for this new day together, and some may emotionally share personal stories, feeling safe to express themselves with everyone who sat through the meeting. The Morning Water Woman and her female assistants carry bowls of corn, shredded deer or beef meat, and fruit and place them with the pail of morning water in a straight line from the entrance to in front of the fire. The Roadman sings three songs with renewed vigor followed by the closing song as the sun rises. Then the drum is untied, the stones inside are removed and the water inside of it is poured alongside the crescent moon shaped altar. The food is blessed, and the water followed by the food are passed around the tipi. The atmosphere becomes more informal and social as people carry on conversations with each other or to the group. The Roadman thanks everyone for attending the meeting, and as everyone gathers their belongings with them and exit the tipi, they speak heartfelt greetings of “good morning” to the tipi members and to family and friends awaiting them outside. Some may stay in the tipi, and “doctoring” to heal individuals is done by the Roadman or a relative who is a Medicine Man. A community meal is shared later in the day, enabling more socializing and networking with other members of the Church, some who may have come from far away. The participants, feeling inspired and renewed make their way home until the next peyote meeting.

Meaning

What makes peyote and the NAC religion so important for Native Americans? As with Wixárika peyote ways, the Native American Church traditions provide fulfillment, healing, and a spiritual path in life. There are various generations of families that have a long history of following the peyote road, and are proud to represent their churches, tribes and communities. Some of these sentiments are expressed below.

My parents just said you should take at least a bit of it so that it recognizes you and that you recognize it for the future. And that when you grow up the peyote will understand where you're coming from and who you are as a person.” Amber Labahe, Diné (Native Lens. 2022).

I come from five generations of peyote people, myself being the 6th, and then my son being the 7th generation. To me, peyote is a very intimate, medicinal herb. We use it as a guide. We use it as a means to synchronize with the universe. My grandparents explained to me at a very young age that we could acquire any means of success through medicine and peyote if we approached it with the right intent.” Adrian Primeaux, Yankton Lakota (Nova, 2022)

Other Native Americans seek healing from the ongoing trauma caused by the violent, upheaval inflicted upon their ancestors. Broken families, poverty and lack of education, alcoholism, drug addiction, government schools, or criminal

activities are heavy burdens some carry. The peyote prayer meetings can also help families find closure to tragedies, grief, and unresolved experiences in life:

Last year in June, I had a son and through Covid-19 he passed on. That's how my baby passed on. Here we had a peyote ceremony done for us. What we wanted was to be strong. We wanted to move forward. Which is why we had the ceremony. Before Oct 1st, I wasn't strong enough. I was grieving and I was lonely. We prayed that from here on out we want to be strong and we want to move forward. I wanted to have a good life with my husband and my kids.....I want to have my heart happy and strong to move forward. Those were the prayers we said at the peyote meeting. Alice L. Bahe, Diné (Native Lens 2022).

Native Americans are drawn to this peyote Church because they want to follow a path that leads to a healthy, happy, caring and meaningful life, one that brings healing and community and enables them to proudly identify with their indigenous heritage and culture. Some Native American Church members shared thoughts about peyote and the peyote faith express in this way:

The White Man goes into his church and talks about Jesus, but the Indian goes into his tipi and talks to Jesus [through peyote]. Quannah Parker, Comanche (Comanche National Museum and Cultural Center, 2019).

(Y)ou take Peyote, you have an inner eye that clears up and tells you what is right and wrong. Joe American Horse, Lakota (Smith & Snake, 1995, pp. 40-41)

We eat peyote to pray for ourselves, our family and the land. Ultimately to heal physically, mentally, emotionally and spiritually. Peyote is a living entity that allows us to gather together and gain strength throughout the night we chose to have a ceremony [...] You're just this individual person at that time and place, and it tells you whatever you've experienced is going to be ok. And so, peyote helps us collectively come together to feel those emotions and just to cry about it if you need to because if you hold something for so long it just builds up and it hurts you even more. Amber Labahe, Diné (Native Lens, 2022).

Conservation of Peyote – United States (Texas)

A critical conservation crisis has reached epidemic proportions in peyote's limited range in Texas. Much of the environmental destruction in Texas is caused by root plows promoted by the state to ranchers to "clear brush"; and plant grass as forage for their cattle. These practices not only drastically alter the local habitat, but also uproot entire peyote plants that never may grow there again. Wind turbines and oil drilling cause disturbances, environmental degradation and damage to the area, which in turn, affects peyote plants and impacts its natural pollinators. Other destructive forces include Texas' construction of a border wall and massive detention center to deport undocumented immigrants on a recently purchased 1,400-acre ranch in peyote country along the U.S.-Mexico border (Serrano, 2024).

Commercial interests and poachers are also putting pressure on peyote populations. The number of federally-licensed peyote dealers in South Texas has diminished to between three to five in any given year, and they scramble to find as much peyote as possible for their clients. Some landowners may charge a flat fee for harvesters, so they take as many plants as they are able. These actions encourage over-harvesting of peyote (Figure 24 and Figure 25). Demand from the Native American Church is increasing; a conservative estimate is that the Church is over 300,000 members strong. In recent years, leaders from the NAC of North America (NACNA) have lobbied several times for federal protection of peyote habitat in South Texas. They have petitioned the administration for an executive order to protect peyote and the lands where it grows from “eradication due to climate change, over-harvesting, and the degradation of its environment” (Native News Online, September 28, 2023). The NACNA requested

\$5 million in federal funding for a new program to be established by the Department of the Interior’s Office of the Assistant Secretary – Indian Affairs. The program would compensate private landowners for agreeing to convert their lands into a protected peyote habitat and would fund activities that focus on the conservation and managed harvest of peyote (Native News Online, August 30, 2023).



Figure 24. Peyote dealer in south Texas tending to peyote on his drying racks. Photo by Stacy B. Schaefer.



Figure 25. Harvested peyote at a dealer's home in South Texas. Photo by Stacy B. Schaefer.

Other efforts to protect peyote in its native habitat in South Texas come from the establishment of the Indigenous Peyote Conservation Institute (IPCI) in 2017. It is a 501(C)(2), that obtained 605 acres of peyote habitat in South Texas through the support of the RiverStyx Foundation. This land, also known as the 605, is a spiritual center where the Native American Church and other peyote people can come, pray with the medicine in its native habitat, hold meetings, and learn about conservation measures and ecologically sound harvesting practices to protect the peyote. The IPCI also has lease agreements on other properties in the area to sustainably harvest peyote to supply some NAC members who come to the 605 to acquire peyote to take to their communities (<https://www.ipci.life/>). Having access to peyote in its native land is a powerful accomplishment:

In order to assure this medicine is going to be available, we have to have some kind of direct connection with this land. And this land, I think is an answer to a prayer from years ago, that there will be medicine for our children. Steven S. Benally, Diné (Nova, 2022).

This land means the world to all of us. Mother Earth and what she has provided us, this represents the future. It's about what you are going to teach your children, what you're gonna leave behind, the essence of generational responsibilities. Words cannot suffice what the spirit feels in connecting with this land. Sandor Iron Rope, Oglala Lakota (Nova, 2022).

The protection and regeneration of peyote is a major focus for Morning Star Foundation, a nonprofit organization, in Arizona. Its mission is to attend to the "well-being of the medicine, peyote," and to primarily serve established Native American Church chapters through the Seedling Sanctuary (morningstarconservancy.org/mission). The Sanctuary cultivates peyote plants through the germination of its seeds as an alternative to harvesting it in the wild. The aim is to provide sustainably harvested medicine through cultivation "for future ceremonies, as well as provide seedlings to be planted on *in situ* conservation land" (morningstarconservancy.org/in-situ, accessed December 4, 2024).

Additionally, the non-profit organization the Cactus Conservation Institute (CCI) is dedicated to scientific research on the ecology and biology of peyote and other endangered cactus species in West and South Texas. It also strives to study and educate about conservation strategies to optimize the protection of the plants. The CCI's mission statement states that "to accomplish this vision the latest techniques are being applied to understand these vulnerable species, from their DNA up. All interests are being respected: the regulatory agencies, the Native American Church, the ranchers, as well as the scientific community." Some research conducted by the CCI includes: "measuring the size and growth (or diminishment) of populations; determining and communicating proper techniques for harvesting and cultivation; studying the ecology of *Lophophora*; and compiling a checklist of the vegetation associated with *Lophophora*." <https://cactusconservation.org/> accessed November 12, 2024) (Ermakova *et al.*, 2021) (Figura 26).



Figure 26. Anna Ermakova, Jim Bauml and Keeper Trout conducting botanical field research of peyote in West Texas. Photo by Stacy B. Schaefer.

Peyote Conservation – Mexico

The health of peyote and the conservation of its habitat in Mexico is even more dire, more complex and involves multiple interests and entities vying for access and/or protection of peyote lands. Along the Mexican border with Texas, illegal

harvesting and smuggling of peyote into the United States has been going on for years to meet the demand by members of the NAC. The amount of peyote from South Texas that dealers procure for the NAC is simply not sufficient for their needs. As a result of these clandestine operations, the peyote populations are increasingly declining from over-harvesting in northern Mexico.

Deeper into Mexico, in the altiplano of the San Luis Potosí desert of Wirikuta, the Wixáritari are forced to contend with increased scarcity of peyote in the sacred places where they have harvested over generations. As of 2022, there has been a 40% decline of peyote in these areas (Busby & Virdi, 2022). Since the 1960s, improper and illegal harvesting for the black market by non-Wixáritari is one factor that has decimated the peyote populations there. National and international psychedelic tourism has also descended onto this desert and has impacted the health of peyote and its natural habitat.

Wirikuta, where, according to Wixáritari beliefs, the world was created and its surrounding areas, are endangered by numerous other forces. Despite its designation in 1999 by UNESCO as one of the world's 14 Sacred Natural Sites, and its formal recognition between 2000 and 2001 by the Mexican government as the Protected Natural Area known as the "Sacred Natural Site of Wirikuta," more than 75 mining licenses have been granted to subsidiary companies of the Canadian mining company First Majestic Silver Corp. to extract silver and other precious minerals within Wirikuta zone. In response, in 2011, traditional, agrarian, civil authorities, and members of the Wixáritari communities in the Sierra Madre Occidental formed the Wixárika Regional Council for the Defense of Wirikuta to protect and defend it. They initiated a legal confrontation against these mining concessions and held the companies responsible for the destruction of the environment, including peyote, and for impacting the precious water sources in this desert (Arellano, 2024). As the time of this writing, the legal battle to protect Wirikuta has been ongoing for thirteen years, and the Wixárika Defense Council has not seen any resolution. In fact, they have been threatened, and over the years, all the coordinators of the Council at various points of time have been kidnapped (Diana Negrín da Silva: Personal Communications December 7, 2024).

Even more devastating to this fine-tuned ecosystem that has evolved over millennia is the expansion of agro-industrial corporations such as PROAN and Huevos San Juan that were granted licenses by the state and they have cleared parcels of land to establish large greenhouses to grow tomatoes, peppers, and other vegetables, as well as construct chicken, pig, and egg farms that span hundreds of hectares in the Wirikuta area. A number of these facilities are built in areas where peyote grows.

Millions of chickens, tens of millions of eggs, and tens of thousands of pigs now are bred and slaughtered in one of the world's most biodiverse and culturally significant deserts. The debris of these animals' lives and deaths are then moved to another deforested parcel of land a few kilometers away, attracting a growing plaque of flies that gather around the fetid waste and now overwhelm local residents' homes (Negrin 2022).

Vast quantities of water are necessary to operate these industrial farms that require drilling deep into the aquifer, which is already overexploited. To irrigate 160 hectares of tomatoes under cultivation requires more than four million cubic meters of water (Negrin, 2021).

Heightening this situation is the mostly well-intentioned, yet commercial and neo-colonial interests of some non-Wixárika organizations. Several of these are based in the United States; one is in Mexico. They either do not know and perhaps chose not to know the decades-long history of conservation efforts of the altiplano Potosino of Wirikuta by Wixárika communities and their governing organizations, the Mexican municipal and state, as well as national and international organizations. Organizations that have more recently entered the scene or have been involved in the last ten years or more, may not understand the complexity and multivocality of the stakeholders, they have interests in profiting from the acquisition of peyote or land in Wirikuta. These newcomers bring their own ideas about the conservation of peyote and Wirikuta, and the growing interest in psychedelic medicine to benefit Western society. Ultimately, they work with individual Wixárika, or just one community of Wixárika instead of going through the proper communal Wixárika committees and authorities, the primary ones being the Wixárika Regional Council for the Defense of Wirikuta and the Wixárika Union of Ceremonial Centers of Jalisco, Durango and Nayarit (Negrin personal communication December 8, 2024). The efforts of these more recent players focus on purchasing land for conservation in the area that has been communal ejido lands that, at a price, could now be turned into private property. The Wirikuta Preservation Project of the U.S. non-profit organization For Goodness Sake, has an ongoing funding campaign that may have now reached its goal to purchase a couple dozen hectares. This project has been presented as a land-based sanctuary/ecotourism project under the direction of the Wixárika people, although Wixáritari do not live in this area, nor do they entertain the idea of holding privately-owned land there (<https://www.goodnesssakeinc.org/wirikuta>). In more recent years, members of the NAC have also come to Wirikuta to harvest peyote. Researchers from the Colegio de San Luis Potosí have commented that the Indigenous Conservation Fund under the umbrella of IPCI and the parent organization RiverStyx has, or is in the process of, purchasing about 200 hectares in the area with the intention of protecting the land and having greater access to peyote (Buda & Garnica, 2023).

Importing peyote from Wirikuta has been occurring for twenty years or more; however, peyote and the entire cactus family are protected under the Convention on International Trade and Endangered Species of Wild Fauna and Flora (CITES). Enforcement of U.S. Drug Enforcement Agency (DEA) schedule 1 controlled substances like peyote from entering the U.S. falls to the Customs and Border Patrol; this had been a deterrent for bringing peyote into the United States. Yet, in 2009, at the 60th convention of the Native American Church, it was reported that Border patrol officials present at the conference said to Native American Church Members of North America that “members who go into Mexico to buy

the buttons for religious ceremonies shouldn't have a problem. The only ones who may have problems are those who buy the buttons and then come back to sell them at prices as much as four times what they paid for them in Mexico.” (Donovan 2009). The former president of the Native American Church of North America, Emerson Jackson, pointed out that

some NAC members buy in volume in order to stock up for their own use, yet risk being mistaken for a trafficker. For example, he has purchased as many as 1,000 buttons so that he would have enough to last for a year or more. Many buttons are consumed at large ceremonies - and it's not unusual to see a prayer meeting attended by 50 people use 200 or more buttons, he said. Jackson also pointed out that small tribes have what is known as “peyote custodians” who go to Mexico and buy for all the NAC members in their community. ‘They do this to save costs because gasoline is so expensive and it's cheaper to have one person go rather than a lot of people,’ Jackson said’ (Donovan, *ibid*).

And more recently, the Indigenous Conservation Fund under the IPCI applied to be registered as an importer of peyote with the U.S. DEA in 2021 to harvest peyote in Mexico and legally import it to the United States (Drug Enforcement Agency Application, October 26, 2021).¹⁰

In essence, there are competing ideas from different people and organizations, some of whom have a vested interest in the protection of the peyote populations, others the extraction of it. In the larger scheme, they all must involve the conservation of Wirikuta. It involves looking at this diverse desert biosphere as a shared territory and all people need to be included. Researchers are trying to articulate the positions of the real stakeholders who, ultimately, are the local Mexicans who communally hold the “ejido” lands, and the Wixáritari who have been coming to this sacred place for centuries (Negrin, Personal communication December 8, 2024).

Corporate entities that operate in Wirikuta promote the division and sale of land to expand their operations. This also fuels the interests of other groups to purchase “real estate”. In response the communal land holders in the Wirikuta area of San Luis Potosí asked federal authorities in 2024 for a decree to protect the sacred area for Wixáritari communities (Wixárika Research Center 2024). In alliance with these values, the former president of Mexico, Lopez Obrador, signed the Plan de Justicia, that recognizes the rights of the Wixárika and other indigenous groups. This decree establishes the protection of pilgrimage and sacred sites, Wirikuta included, that “will not be object to new concessions or permits related to mining or other industries that could affect and deteriorate them” (Piedra, 2023).

¹⁰ It is interesting to note that a number of NAC meetings are held every weekend, whereas Wixárika peyote ceremonies occur only during the dry season - during the pilgrimage, the return of the pilgrims, over the course of Semana Santa (Holy Week) and Hikuri Neixa (Dance of Peyote). Over a year's time NAC members consume vastly more peyote than Wixáritari do.

Ecologically-minded non-profit organizations are joining with Wixáritari in projects to conserve peyote. One project, sponsored by the Indigenous Reciprocity Initiative is called “Hablamos de Hikuri” (“Let’s talk about peyote”) and includes Wixáritari in discussions about the conservation of Wirikuta and raises awareness within Wixárika communities of current developments. It seeks to generate ideas from Wixáritari, both traditional and educated, environmentally trained individuals, to promote a “biocultural management plan that integrates the Wixáritari and highland communities for their care and conservation” (Indigenous Reciprocity Initiative, 2024). In the last few years, The Wixárika Research Center has coordinated a series of workshops on Agroforestry in the Natural Protected Area and land of Wirikuta. This project brings together Wixáritari and small mestizo farmers in the Wirikuta area in the practice of regenerative agriculture. It is an integral and agroecological approach to the conservation of Wirikuta, that will be beneficial for the biodiversity of Wirikuta, generate a livelihood for participants, and at the same time enable peyote to thrive (Negrin, 2022).

Conservation of Peyote

The importance of protecting peyote is expressed by the sentiments of several Wixáritari:

‘Hikuri is a master’” that teaches and brings wisdom, and which deserves respect in its consumption. ‘Before, the government treated us like animals. Now, the Wixárika people have been recognized for their culture and their pilgrimages, which bring rain and free us from disease. That is why we must take care of Wirikuta and the hikuri’. Doña Trini, peyote pilgrim (Bonilla & Nájera, 2021) https://chacrana.net/hikuri_peyote_conservation/

‘What will become of us when we go to Wirikuta and we do not find any tutuu (‘flower’)? Will the gratitude ceremonies be enough, or does something more have to be done to give back a little of what the hikuri has given us?’ Wixárika peyote pilgrim (*ibid.*).

[...] hikuri [peyote] is the flower of god, of [our] deities [...] It is the source for maintaining our culture - the spirit, the teaching, how to help and understand life [...] The hikuri [peyote] maintains the spirit of a wisdom walker, as well as us Wixáritari ...without these elements our culture cannot exist (Miguel Carrillo, Wixárika peyote pilgrim).

Conclusion

The desert ecosystems where peyote evolved within the natural habitat and flourished, was also the birthplace for the influential role this mind-enhancing plant had on some of the earliest indigenous peoples in these areas. A mutually-beneficial co-existence was born in which peyote was harvested by these people in a sustainable manner and, in return, offered ways for them to survive hunger and thirst as well as to provide medicinal relief. Peyote contributed to the development of spirituality and cosmological beliefs in these desert lands

as powerfully expressed in rock art, burials, pilgrimages and ceremonies. Despite the centuries-long dominance of Western culture over the native peoples in Mexico and the United States, peyote has and continues to have a vital role in the lives of various indigenous people in maintaining their core values, beliefs, health and identity. Now, more than ever, the survival of this revered plant is in peril. Dialogue and consensus among members of the Native American Church, environmentalists, and state and national authorities in the United States have made progress in providing measures for protecting peyote lands in South and West Texas. Cultivation and regeneration efforts would ease the strain on the existing peyote populations in Texas. The preservation of peyote and its native habitat in Wirikuta must be guided by Wixárika elders, and requires dialogue, education, environmental legislation and action from the local level, including the ejido holders, to global levels aimed at protecting the World's Sacred Natural Sites. For Wixáritari, the peyote desert of Wirikuta is the place where the sun was born, the place where the world was created. When they go on the pilgrimage to this sacred place, through their prayers, offerings and communication with their gods facilitated by peyote, they believe they are balancing the world. One Wixárika shaman explained:

What these people don't understand is that we do not have these ceremonies just for ourselves alone. We have them to ask the gods to care for all the people, everywhere, so that the world will keep going, so that life (in the world) will continue to exist (Schaefer, 1996, pp. 138, 166).

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