

ELSI RESEARCH REPORT
STATE REGULATION OF PSILOCYBIN: RECOMMENDATIONS FOR THE OREGON HEALTH AUTHORITY

Historical and Indigenous Use

The use of mushrooms containing psilocybin has deep roots in human history. Pointing to stone paintings in modern-day North Africa and Spain, some experts believe that ancient cultures of those regions began consuming psilocybin mushrooms around 9000 BCE and 4000 BCE, respectively.¹ Some even hypothesize that use of the mushrooms extends much farther back and may have played a pivotal role in the evolution of *homo sapiens*.² Though speculative,³ this hypothesis is tantalizing because psilocybin alters perception, and evidence suggests that it promotes neurogenesis, and these characteristics could have aided early cultural and technological advancement.⁴ Speculation aside, the modern history of psilocybin usually begins with the Spanish discovery of Aztec ceremonies in the New World.⁵ Without surviving written history before this time,⁶ it is difficult to know when or where these traditions began, though some researchers estimate that religious practices involving the use of psilocybin mushrooms occurred in the Valley of Mexico and the rest of Central America starting at least 3,500 years ago.⁷ More is

¹ See KEVIN MATTHEWS ET AL., PSILOCYBIN MUSHROOM POLICY REVIEW PANEL: 2021 COMPREHENSIVE REPORT 7 (Nov. 9, 2021), available at <https://cdn.chacrana.net/wp-content/uploads/2021/11/2021-Comprehensive-Report.pdf>.

² See TERENCE MCKENNA, FOOD OF THE GODS: THE SEARCH FOR THE ORIGINAL TREE OF KNOWLEDGE – A RADICAL HISTORY OF PLANTS (1992) (presenting the “Stoned Ape Theory,” which posits that psilocybin consumption may have been pivotal in the evolutions of homo erectus into homo sapiens by contributing to the growth of language and culture); Paul Stamets, *Psilocybin Mushrooms and the Mycology of Consciousness*, Multidisciplinary Association for Psychedelic Studies video, May 11, 2017, <https://www.youtube.com/watch?v=vFWxWq0Fv0U&t=455s> (arguing that psilocybin may be responsible, in part, for the rapid growth in the neocortex of bipedal apes as they evolved into humans).

³ See also Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 408 (2008) (“Guzmán (1983) showed that hallucinogenic species of Psilocybe occur on all continents. However, only in Mexico and perhaps in New Guinea (see Heim et al. 1967) are they confirmed to be traditionally consumed as visionary or “sacred” mushrooms. There is also some evidence to suggest ceremonial use of Psilocybe in Colombia and Africa (Samorini 2001; Guzmán et al. 2004).”). But see Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 3 (2004) (“None of the psilocybin-containing species of mushrooms outside of Mexico are known to have been associated with shamanic healing practices),

⁴ See Nicole Lopez, *An Exploration of Linguistic Relativity Theory for Consideration of Terence McKenna's "Stoned Ape Theory" on the Origins of Consciousness and Language: Implications for Language Pedagogy*, 16 J. CONSCIOUSNESS STUD. 1, 5 (2020).

⁵ See, e.g., Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 1-23 (2004) (beginning his history of psilocybin use with the Aztecs).

⁶ See Kaleb R. Smith, *Modeling the Flesh of God: Semantic Hyperpriming and the Teonancátl Cults of Mexico*, 14 NEUROQUANTOLOGY 297, 298 (2016) (discussing the “extensive book burning by the conquering Spanish Catholics”); Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 16 (2004) (“The suppression of the visionary mushroom cult by the Spanish clergy was effective and complete.”).

⁷ Francisco J. Carod-Artal, *Hallucinogenic Drugs in Pre-Columbian Mesoamerican Cultures*, 30 NEUROLOGIA 42 (2015). See also Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 11 (2004) (discussing the miniature mushroom stones, some of which date back to 1000 BCE, that have been found in the lands of the ancient Maya in Guatemala, Ecuador, and Southern Mexico and noting that they are currently understood to be effigies of a mushroom deity).

known about what happened to these traditions after the Spanish conquest. They continue today, with some modifications, in the modern practices of several communities indigenous to the mountains of Mexico, including the Mazatec, Mixe, Zapotec, Chatin, Totonac, Matlazine, and Nahuatl.

1. *Psilocybin Use by the Aztecs*

Franciscan friar Bernardino de Sahagún's *Historia General de las Cosas de la Nueva España* (hereinafter, *Historia General*) is the earliest and best-known source of information about the Aztec consumption of mushrooms containing psilocybin. Written in the mid-16th century, during Sahagún's 50 years as a missionary in New Spain, the *Historia General* includes several chapters on the subject.⁸ These chapters refer to the mushrooms as "teonanácatl," commonly translated to mean "flesh of the gods" or "god's flesh."⁹ Sahagún explains that the Aztec used teonanácatl for divinatory and therapeutic purposes.¹⁰ After a period of fasting, the Aztecs drank chocolate and ate the mushrooms with honey as part of nighttime ceremonies, festivals, and other celebrations.¹¹ According to Sahagún, teonanácatl were "intoxicating," "cause[d] visions to be seen," and "even provoke[d] sensuousness."¹² Once these effects had kicked in, some participants danced, some sang, some wept, and some sat silently in their quarters "and remained there as if in

⁸ Guerra-Doce, Elisa, *Psychoactive Substances in Prehistoric Times: Examining the Archeological Evidence*, 8 J. Archaeology, Consciousness & Culture 91 (2015); see also Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 11-12 (2004) (discussing Sahagún's writing).

⁹ See, e.g., Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 405 (2008) (translating it this way). But see R. GORDON WASSON, THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA 44 (1980) (arguing that "divine or wondrous or awesome mushroom" is a better translation). See also Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 1-2 (2004), noting these linguistic nuances and further explaining that the Aztecs also called psilocybin mushrooms "'little flowers,' although fungi do not bloom. For them, 'flower' was a metaphor, as it was for the Maya, for whom 'flowering dreams' refers to ecstatic visions." Metzner also notes that "[t]he names given to the mushrooms by some of the Mexican Indian tribes—Mazatec, Mixtec, Zapotec, and others—confirm the reverence and affection the mushrooms inspire: 'holy lords,' 'little saints,' 'children' (*los niños*), 'dear little ones that spring forth' (*nti-xi-tho*, Mazatec), 'little princes.'" *Id.*

¹⁰ Richard Evan Schultes, *Teonanácatl: The Narcotic Mushroom of the Aztecs*, 42 AMERICAN ANTHROPOLOGIST 429, 429-33 (1940) (indicating that the Aztecs used teonanácatl for therapeutic purposes, namely, as medicines for fevers and rheumatism); Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 12-13 (2004) (indicating that the Aztecs used teonanácatl for divinatory purposes). Teonanácatl also appears to be associated with *Xochipilli*, or "Prince of Flowers," the Aztec deity of "ecstatic mushroom trance." Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 14-16 (2004) (citing and quoting Wasson); see also R. GORDON WASSON, THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA 56-83 (1980) (discussing *Xochipilli*).

¹¹ Richard Evan Schultes, *Teonanácatl: The Narcotic Mushroom of the Aztecs*, 42 AMERICAN ANTHROPOLOGIST 429, 429-33 (1940) (quoting Sahagún); Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 12-13 (2004) (same); see also John W. Allen & James Arthur, *Ethnomycology and Distribution of the Psilocybian Mushrooms*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 56 (2004) ("As the conquest spread through Central America to Mexico, [early Spanish chroniclers] observed the Aztec priests and their followers being served the sacred fungi at festivals and other celebrations.").

¹² Richard Evan Schultes, *Teonanácatl: The Narcotic Mushroom of the Aztecs*, 42 AMERICAN ANTHROPOLOGIST 429, 429-33 (1940) (quoting Sahagún); Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 12-13 (2004) (same).

a meditative mood.”¹³ Once the mushrooms’ effects wore off, Sahagún explains, the participants “talked over among themselves the visions which they had seen.”¹⁴

Although there are a few other indications of the Aztec use of psilocybin mushrooms,¹⁵ the trail largely goes cold after Sahagún. This is likely a result of the Catholic Church’s persecution of mushroom related practices during the Spanish Colonial period.¹⁶ These efforts at suppression were so successful that the identity of teonanácatl remained a mystery—some believed it was the peyote cactus, which contains a different psychedelic substance called mescaline, rather than the psilocybin mushroom, while others questioned whether it ever existed at all—until American ethnobotanist Richard Evans Schultes confirmed its identity as a mushroom.¹⁷ In 1938, Schultes traveled to the Northern Oaxaca mountain town Huautla de Jimenez and discovered that the

¹³ Richard Evan Schultes, *Teonanácatl: The Narcotic Mushroom of the Aztecs*, 42 AMERICAN ANTHROPOLOGIST 429, 429-33 (1940) (quoting Sahagún); Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 12-13(2004) (same).

¹⁴ Richard Evan Schultes, *Teonanácatl: The Narcotic Mushroom of the Aztecs*, 42 AMERICAN ANTHROPOLOGIST 429, 429-33 (1940) (quoting Sahagún); Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 12-13 (2004) (same).

¹⁵ See, e.g., Kaleb R. Smith, *Modeling the Flesh of God: Semantic Hyperpriming and the Teonancátl Cults of Mexico*, 14 NEUROQUANTOLOGY 297, 297 (2016) (“The Aztec emperor, Moctezuma II, held an annual spiritual celebration called “the feast of revelations,” in which the philosophers and academics of his empire’s pipiltin or nobility class would consume mushrooms in order to achieve visionary states which were perceived to have far reaching spiritual significance, or to contain information concerning future events.”); Richard Evan Schultes, *Teonanácatl: The Narcotic Mushroom of the Aztecs*, 42 AMERICAN ANTHROPOLOGIST 429, 429-33 (1940) (citing Bourke’s quotation of Diego Durán, a Dominican friar who carried on Sahagún’s tradition a generation later and described the apparent consumption of psilocybin mushrooms by the Aztec masses at Montezuma II’s coronation, and Tompson’s reports of Saville’s speculation that Aztec ruler Tizoc may have been killed by the substitution of poisonous mushrooms for the intoxicating kinds normally eaten at ceremonies); John W. Allen & James Arthur, *Ethnomycology and Distribution of the Psilocybian Mushrooms*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 57 (2004) (stating that the Spanish codices relate that “the magic mushrooms” were often administered among the common people, merchants, and visiting dignitaries, and that the wealthy consumed them with honey or chocolate and that the codices reported the mushrooms’ effects in “diabolical terms,” claiming that they would cause “uncontrollable fits,” “rages,” and “stupors,” as well as acts of violence towards themselves or others).

¹⁶ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 410 (2008); see also Kaleb R. Smith, *Modeling the Flesh of God: Semantic Hyperpriming and the Teonancátl Cults of Mexico*, 14 NEUROQUANTOLOGY 297, 298 (2016) (“The subsequent suppression of the native spiritual heritage and extensive book burning by the conquering Spanish Catholics essentially erased record of the precolonial ceremonial practices from the literature, leading Saffor (1915) to write that teonanácatl was not a mushroom, but *Lophophora williamsii*, the entheogenic peyote cactus, native to regions of Mexico and the southwestern United States.”); Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 1, 16 (2004) (discussing how the Spanish friars banned the practice because they viewed it as devil worship and how this caused the Aztec “visionary mushroom cult” to “disappear[] from the memory of the general and scholarly public” for four hundred years).

¹⁷ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 405 (2008); accord Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 16 (2004); see also Richard Evan Schultes, *Teonanácatl: The Narcotic Mushroom of the Aztecs*, 42 AMERICAN ANTHROPOLOGIST 429, 429-33 (1940) (discussing Sahagún’s description of Aztec use of teonanácatl, among other things, and arguing that teonanácatl refers to psychoactive mushrooms); RICHARD EVANS SCHULTES, PLANTAE MEXICANAE II: THE IDENTIFICATION OF TEONANÁCATL, A NARCOTIC BASIDIOMYCETE OF THE AZTECS (1939) (identifying teonanácatl as a psychoactive mushroom).

Mazatec used psilocybin containing mushrooms in religious rituals.¹⁸ Indeed, Catholic persecution is ostensibly why the communities that use psilocybin in modern Mexico are limited to remote mountain regions.¹⁹

2. *Psilocybin Use by the Mazatecs*

A renewed interest in teonanácatl during the 20th century sparked several new findings. In 1938, a year before Schultes confirmed teonanácatl's identity as a mushroom, American anthropologist Jean Bassett Johnson is believed to have become the first Western academic to observe a psilocybin ceremony.²⁰ Like others before and after him, Johnson reported a nocturnal ceremony.²¹ Then, in 1955, American banker and amateur mycologist R. Gordon Wasson became the first known Westerner to participate in such a ceremony.²²

Wasson's infamous 1957 *Life Magazine* article "Seeking the Magic Mushroom" introduced psilocybin mushrooms to a mainstream Western audience.²³ In that photo-essay, Wasson describes and depicts his journey to the Mexican state of Oaxaca in search of a traditional mushroom ceremony and discusses his observation of and participation in nine "mushroom celebrations" led by seven different *curanderos*, or native healers.²⁴ Most of that article, however, is devoted to Wasson's detailed description of his first psilocybin experience, when he and his photographer participated in a ceremony led by Mazatec curandera Maria Sabina and her daughter (although Wasson used the pseudonym "Eva Mendez" in the *Life Magazine* article, he exposed Sabina's identity in later writings).²⁵ Wasson's writing unleashed a torrent of academic and popular interest in psilocybin, prompting Timothy Leary to found the Harvard Psilocybin Project.²⁶

¹⁸ Guzmán, *supra* note 17, at 405-406.

¹⁹ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 410 (2008); *see also* Kaleb R. Smith, *Modeling the Flesh of God: Semantic Hyperpriming and the Teonancátl Cults of Mexico*, 14 *NEUROQUANTOLOGY* 297, 298 (2016) ("Despite the violent and devastating persecution by the conquering Spanish on the sacred heritage of the Aztecs and other Mesoamerican cultures, the ancient teonanácatl ceremony continued in secret, surviving only by remaining hidden to outsiders").

²⁰ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 405 (2008); *see also* Jean Bassett Johnson, *The Elements of Mazatec Witchcraft*, 9 *ETHNOLOGICAL STUDIES* 119 (1939) (memorializing the ceremony he observed); Jean Bassett Johnson, *Some Notes on the Mazatecs*, 3 *REVISTA MEXICANA DE ESTUDIOS ANTROPOLOGICOS* 142 (1939) (same).

²¹ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 405 (2008); Jean Bassett Johnson, *The Elements of Mazatec Witchcraft*, 9 *ETHNOLOGICAL STUDIES* 119 (1939); Jean Bassett Johnson, *Some Notes on the Mazatecs*, 3 *REVISTA MEXICANA DE ESTUDIOS ANTROPOLOGICOS* 142 (1939).

²² *See* R. Gordon Wasson, *Seeking the Magic Mushroom*, *LIFE MAGAZINE*, May 13, 1957, at 101 (claiming to be the first Westerner to participate in such a ceremony).

²³ R. Gordon Wasson, *Seeking the Magic Mushroom*, *LIFE MAGAZINE*, May 13, 1957.

²⁴ R. Gordon Wasson, *Seeking the Magic Mushroom*, *LIFE MAGAZINE*, May 13, 1957.

²⁵ *See* R. Gordon Wasson, *Seeking the Magic Mushroom*, *LIFE MAGAZINE*, May 13, 1957 (using the pseudonym); Valentina P. Wasson & R. Gordon Wasson, *The Hallucinogenic Mushrooms*, *GARDEN JOURNAL*, vol. 8, Jan./Feb. 1958 (using Sabina's name); *see also* Thomas Riedlinger, *The "Wondrous Mushroom" Legacy of R. Gordon Wasson*, in *SACRED MUSHROOM OF VISIONS: TEONANÁCATL* (2004) (discussing Wasson, his writing, and his legacy in depth).

²⁶ Kaleb R. Smith, *Modeling the Flesh of God: Semantic Hyperpriming and the Teonancátl Cults of Mexico*, 14 *NEUROQUANTOLOGY* 297, 299 (2016); Ralph Metzner, *Visionary Mushrooms of the Americas*, in

Sabina suddenly became a celebrity, particularly among members of the countercultural movement, and tourists flooded her hometown Huautla de Jiménez.²⁷

In “Seeking the Magic Mushroom,” Wasson described a mushroom *velada*, or vigil, which he characterized as a “mingl[ing] of Christian and pre-Christian elements.”²⁸ The ceremony took place at night, in near total darkness, before “a simple altar table adorned with Christian images” in the underground, ceremonial room of a private home.²⁹ According to Wasson, twenty participants arrived wearing their best clothing and, like the Aztecs, they began the ceremony by drinking chocolate.³⁰ Children were present, though they did not participate in the ceremony.³¹ After Sabina and her daughter cleaned the mushrooms and, with prayers, passed them through the smoke of copal resin incense, the curanderos provided the participants with cups holding their doses.³² Wasson and his photographer received six pairs of mushrooms each.³³ The curanderos each ate thirteen pairs.³⁴ Then, in a solemn musical chant in her native language, Sabina “began with an invocation to the mushroom in the name of Christ and the saints” before proclaiming “her own good intentions and then, impatiently, entreat[ing] the spirits, ‘I am a mouth looking for you, but you are not paying attention. Come.’”³⁵

Wasson reports that throughout the night, as most participants lay in the dark room, Sabina sometimes meditated silently, sometimes hummed, sometimes chanted, sometimes sang, and sometimes tended to individual participants.³⁶ At one point, as her daughter sang, Sabina stood in the darkness and “began a rhythmic dance with clapping or slapping.”³⁷ Some participants took part in the humming, chanting, and singing, “utter[ing] exclamations of wonder and adoration, not loud, responsive to the singers and harmonizing with them, spontaneously yet with art.”³⁸ Wasson also describes brief intermissions, “perhaps every half hour,” during which Sabina would relax and some participants would light cigarettes.³⁹ Throughout this time, Wasson experienced intense visions, which he describes in detail.⁴⁰

During his journeys to Mexico, Wasson learned a great deal about psilocybin mushrooms and their place in Mazatec life. He explained that the Mazatec placed many restrictions on

SACRED MUSHROOM OF VISIONS: TEONANÁCATL 2 (2004); Thomas Riedlinger, *The “Wondrous Mushroom” Legacy of R. Gordon Wasson*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 87-88 (2004).

²⁷ *Id.*

²⁸ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 101.

²⁹ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 103-05.

³⁰ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 104.

³¹ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 105.

³² R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 104.

³³ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 104.

³⁴ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 104.

³⁵ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 105.

³⁶ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 105; *see also, e.g.*, Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 19 (2004) (discussing Maria Sabina’s practices during her ceremonies).

³⁷ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 112.

³⁸ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 112.

³⁹ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 112.

⁴⁰ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 105-12.

psilocybin mushrooms, which they referred to as perilous, never ate frivolously, and never sold in the marketplace.⁴¹ He also found that “the congregation is indispensable to the rite,” though “this does not mean that the mushrooms lose their potency if not eaten communally.”⁴² Wasson noted differences between the seven curanderos that he met, with only Sabina and her daughter being “dedicated votaries.”⁴³ Among the others, Wasson notes that the curanderos usually provided individualized doses for participants and usually took larger doses themselves, though he also highlights one curandero who took only a token dose of psilocybin and another who ate and served Wasson mushrooms that “had no hallucinogenic properties at all.”⁴⁴

Wasson further learned that the Mazatec used the mushrooms in a particular therapeutic way, not as a cure but rather as a way of determining “what led to the illness and whether the patient will live or die, and what should be done to hasten recovery.”⁴⁵ For example, by ingesting the mushrooms, curanderos reportedly might learn the location of wild herbs that they could find and apply to their patients.⁴⁶ The Mazatec also consult the mushrooms to glean information about issues unrelated to health, including, for example, information about a stolen donkey or about a relative who has traveled out of the region.⁴⁷ In a piece published after his article in *Life*, Wasson states that “[a] *Velada* is held in response to a request by someone who wishes to consult the mushrooms about a grave family worry.”⁴⁸ He adds that “[a] *velada* must be held for a worthy reason. It will be of no help in frivolous matters or for selfish ends.”⁴⁹ Since Wasson’s first article, many people have written about Maria Sabina and the Mazatec mushroom ceremonies, including Wasson and even Sabina herself through a Mazatec-speaking person from her village.⁵⁰

3. *Psilocybin Use by Other Modern-Day Indigenous Communities of Mexico*

In addition to the Mazatec, several other Indigenous communities of Mexico’s remote mountain regions use psilocybin ceremonially.⁵¹ They include the Nahuatl, the Matlazine, and the Totonacs spread across several Mexican states, though the Totonac tradition is now largely

⁴¹ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 106.

⁴² R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 113.

⁴³ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 118.

⁴⁴ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 118, 120.

⁴⁵ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 119.

⁴⁶ Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 19 (2004).

⁴⁷ R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 119.

⁴⁸ R. GORDON WASSON, THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA 32 (1980).

⁴⁹ R. GORDON WASSON, THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA 33 (1980).

⁵⁰ See, e.g., ALVARO ESTRADA, MARIA SABINA: HER LIFE AND CHANTS (1981) (Maria Sabina’s autobiographical account); Ralph Metzner, *Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 17-22 (2004) (discussing Maria Sabina’s practices); R. GORDON WASSON, THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA 1-30 (1980) (same); Valentina P. Wasson & R. Gordon Wasson, *The Hallucinogenic Mushrooms*, GARDEN JOURNAL, vol. 8, Jan./Feb. 1958 (same).

⁵¹ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 408, 410 (2008).

extinct.⁵² They also include the Mixe, Zapotec, and Chatin of Oaxaca, the home state of the Mazatec.⁵³

Although these tribes have cultural and linguistic differences, and although they consume different species of psilocybin mushrooms, their mushroom ceremonies have much in common.⁵⁴ Across these tribes, the ceremony is always held at night under the guidance of a shaman or another older experienced man or woman.⁵⁵ According to Mexican mycologist and anthropologist Gaston Guzman, the ceremonies appear to be held at night “in order to reduce distractions and intensify the mental concentration of the mushroom takers.”⁵⁶ The Nahuatl use psilocybin mushrooms in conjunction with two other fungi (Cordyceps and Elaphomyces) in their ceremonies.⁵⁷ All of the other tribes use only one species of mushroom—Guzman notes the widespread belief that different species of psilocybin mushrooms should not be mixed—which the guide typically provides to participants in “male-female” pairs in a gourd, or a *jicara*, after passing them through the smoke of copal resin incense.⁵⁸ The participants eat the mushrooms after a period of fasting from food,

⁵² Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 408 (2008).

⁵³ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 408 (2008).

⁵⁴ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 409 (2008); see also Kaleb R. Smith, *Modeling the Flesh of God: Semantic Hyperpriming and the Teonancátl Cults of Mexico*, 14 NEUROQUANTOLOGY 297, 300 (2016) (“[T]hese sacred sacramental ceremonies reveal a handful of common threads, suggesting a shared ancient ethnographic root extending back into Mesoamerican prehistory.”); R. GORDON WASSON, THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA 31-53 (1980) (describing the *veladas* in which he participated). Note, however, that in addition to the types of *veladas* described below, Wasson states that there is at least one other “manner[] of night-time divination with hallucinogens in Mesoamerica.” *Id.* at 31. In this second form of *velada*, “the shaman casts corn kernels and by the way they fall on the cloth spread before him he learns the answers to the questions put to him. He smokes a strong cigar and to reinforce his divinatory strength he may consume mushrooms or other hallucinogens. His answers come forth after long periods of silence and as he concentrates on the questions he sweats profusely.” *Id.*

⁵⁵ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 409 (2008); R. GORDON WASSON, THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA 33 (1980).

⁵⁶ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 409 (2008); see also Kaleb R. Smith, *Modeling the Flesh of God: Semantic Hyperpriming and the Teonancátl Cults of Mexico*, 14 NEUROQUANTOLOGY 297, 300 (2016) (“[T]he ceremony is exclusively held at night, with the belief, at least among the Mazatecs, that eating teonanácatl in the daylight will cause madness. The darkest depths of night are seen as facilitative to the visionary experience, as though the sunlit realm of physical surfaces presents only a distraction when attempting to perceive inwardly and navigate the more subtle ranges of natural life, as is believed to be revealed in the heightened sensitivity of the teonanácatl *velada* ceremony.” (internal citation omitted)); R. GORDON WASSON, THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA 33 (1980) (“Noise and light severely cripple, may render useless a *velada*.”).

⁵⁷ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 408-09 (2008).

⁵⁸ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 408-09 (2008). But see R. Gordon Wasson, *Seeking the Magic Mushroom*, LIFE MAGAZINE, May 13, 1957, at 120 (“Each kind has its own hallucinogenic strength, and if enough of one species be not available, the Indians will mix the species, making a quick calculation of the right dosage.”); Kaleb R. Smith, *Modeling the Flesh of God: Semantic Hyperpriming and the Teonancátl Cults of Mexico*, 14 NEUROQUANTOLOGY 297, 297, 301 (2016) internally inconsistent on the issue).

alcohol, medicines, and sex.⁵⁹ Depending on the tribe or the guide, participants may be asked to observe other restrictions as well, such as avoiding travel in the days following the ceremony.⁶⁰

Guzman explains that both Christianity and psychedelic tourism have influenced the shape of these ceremonies.⁶¹ For example, guides typically host the ceremonies in front of a Catholic altar in their homes, and the ceremonies usually involve prayers in Spanish or Indigenous languages.⁶² There is a widespread belief that more than twelve mushrooms can produce adverse effects.⁶³ Thus, guides traditionally offer participants up to six pairs of mushrooms, though the rise of psychedelic tourism has led some guides to offer outsiders only one or two pairs, requiring them to pay higher prices for larger doses.⁶⁴ More broadly, Guzman states that, after five decades of contact with psychedelic tourists, “[s]acred mushrooms are now widely commercialized, and even the ceremonies themselves have become a kind of tourist attraction.”⁶⁵

⁵⁹ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 409 (2008); R. GORDON WASSON, *THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA* 34 (1980). Wasson adds that, once the preparations for the ceremony are under way, participants may drink chocolate, “or nowadays coffee, a post-Conquest innovation.” *Id.*

⁶⁰ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 409 (2008); *see also* Kaleb R. Smith, *Modeling the Flesh of God: Semantic Hyperpriming and the Teonanácatl Cults of Mexico*, 14 *NEUROQUANTOLOGY* 297, 301 (2016) (“The teonanácatl is consumed on an empty stomach, and abstinence from sex, alcohol, heavy foods, and all other forms of medicine is practiced leading up to the ceremony, as well as a commonly-prescribed period sexual abstinence afterwards”).

⁶¹ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 409 (2008).

⁶² Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 409 (2008).

⁶³ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 409 (2008).

⁶⁴ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 409 (2008).

⁶⁵ Gaston Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 *ECON. BOTANY* 404, 409 (2008); *see also* Dakota of Earth, *Mexico’s Magic Mushroom Town*, *YOUTUBE* (May 29, 2019), https://www.youtube.com/watch?v=11HAdSKUGlk&list=PLvLK5ZuczSAr1yPH_wN94gtkLt57rC0Ru&index=3 (depicting modern Mazatec mushroom ceremonies, as well as modern psychedelic tourism to Huautla de Jimenéz); Dakota of Earth, *Mexico’s Magic Mushroom Woman*, *YOUTUBE* (June 2, 2019), https://www.youtube.com/watch?v=Pq3pKIM53uc&list=PLvLK5ZuczSAr1yPH_wN94gtkLt57rC0Ru&index=5 (same).