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#### *About the Institute*

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

Paper given at Kholodny  
Inst. Botany - 26-VI-'90.

Annotated by Dr. Dudka,  
translator, the day before.

Pauses indicated where I  
handed paper to Dr. D. for  
translation to audience.

*Ph*

notes on Russian by Dr. Dudka  
day before presenting my talk.  
Paper for Wasser

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text + illus + bibliogr.

26-VI-1990  
Kiev

Introductory Remarks - KIEV - VI - 1990

*M. S. Strik*

*ygara*  
It is a privilege and a pleasure to be in Kiev today, and I am grateful to the Academy of Sciences and the Kholodny Institute of Botany for your kind invitation. I have checked my correspondence, and find that 15 years have passed since Prof. Wasser and I began our collaboration which culminated last year in his visit to the Louisiana State University Botany Department in Baton Rouge.

That was a very fruitful event for our Department, and the first time that we had the opportunity for a personal exchange with a Soviet botanist, one who has distinguished himself in the field of mycology. As a result of Prof. Wasser's visit, my colleagues and I were able to establish a rapport and an appreciation for the work of your Institute that would otherwise have been impossible. I bring you friendly greetings from the entire Botany Faculty of our University.

If I may draw an analogy with the most recent, and still expanding manifestations of glasnost between our countries, the meeting of our two Presidents in Washington, which incidentally I watched with fascination along with millions of others around the world, including no doubt, many of you, I would be so bold as to suggest that our meeting here today, although not quite on the same grand scale, is in principle at least, also significant, for it represents our determination to broaden and deepen our fraternal as well as our scientific relationships, and to make them conform with more humane standards of human conduct. I am convinced that each small step in this direction has a cumulative effect, and in the long run contributes meaningfully toward establishing a more rational world order.

So I am greatly encouraged, that as one of the concrete results of the summit meetings, it was mutually decided by our Presidents to extend the interchange between



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So I am greatly encouraged, that as one of the concrete results of the summit meetings, it was mutually decided by our Presidents to extend the interchange between

our countries by 1000 students on each side. This agreement is already in effect.

As we all know, science is an international endeavor, and the world has much to learn from its fundamental approach toward the solution of problems, namely, that it is through cooperation, not confrontation, that progress on all levels may best be achieved.

With these few words as preamble, I would now like to present a brief overview of work in a field to which I have dedicated some time and effort--ethnomycology. Although not recognized by that name until the late 1950's, its history goes back several centuries, and as the name implies, concerns itself with those aspects of mycology that reflect the beliefs and conduct of man with respect to the uses and significance of fungi in human affairs.

Since my personal experience in this field has been <sup>largely</sup> confined to Latin America where I have worked and lived in most of the countries extending from Mexico to Central and South America, and where much of the early ethnomycological investigation was begun (specifically in Mexico), my emphasis will be on evidence that comes from that part of the world, and begins with the Spanish Conquest in the early 16th century, although its roots in America go back to pre-Columbian civilizations.



апофтерид  
некрофил

the furious efforts of the Spanish conquerors who strictly forbade the use of such mushrooms in this manner, considering it to be a form of idolatry, respect for this ancient tradition, even centuries later, still persists in parts of Mexico, and elsewhere in the Americas.

During the past few decades, because of the persistence of mycologists, ethnomycologists and anthropologists, there are no longer any secrets surrounding the celebrated agapé in which certain mushrooms are utilized and revered. But during the time of the conquest things were quite different. During the 3 centuries of Spanish occupation (1519-1821), and especially in the early decades, the church carefully monitored all aspects of the people's lives, including of course, the religious customs that had been established centuries before the arrival of the Spaniards. When it was discovered that the native people embraced practices that were completely foreign to those dictated by the Catholic church, there began a regimen of intimidation, punishment and torture which constitutes one of the saddest chapters in the history of the Americas. Among the many Spanish priests of those early times, only Bartolomé de Las Casas fought vigorously for the human rights of the Mexican natives, and defended them strongly when he returned to Spain in 1550 in order to give an account of the abuses perpetrated by the church. As a result, some of the worst abuses of the Spaniards were somewhat ameliorated, and Las Casas' name is honored to this day in Mexico.

The evidence that in precolumbian times there were religious cults in which hallucinogenic mushrooms were eaten, comes principally from four sources of information:

- 1) chronicles, works written by eye-witnesses, but not published until many years later;
- 2) surviving codices, historical documents painted on bark or on parchment produced by the indigenous population;
- 3) sculptures in stone or clay that testify to cultural practices

incorporating<sup>†</sup> the use of mushrooms; and 4) the existence of cults, ancient and modern, dedicated to the veneration of some mushroom species. I shall consider these briefly.

1) Concerning the chronicles, fortunately, there have come down to us books written by prominent observers during the early decades of the conquest, that are an indispensable source of authentic information about the early decades of the Spanish occupation. Among the most celebrated of these works is the book by the Franciscan friar Bernardino de Sahagún, author of the "Historia de las Cosas de Nueva España," written in the middle of the 16th century. Sahagún is an extraordinary source of information for understanding the interaction between the Mexicans and Spaniards. Here we find the first reference to the use of hallucinogenic mushrooms, described in part as follows: "The first thing that they ate in their ceremony were little black mushrooms which they called "nanácatl," causing drunkenness and producing visions, and even provoked lechery; they ate the little mushrooms with honey, and as the people began to react to them, they began dancing, and some of them cried because they were already drunk with the mushrooms."

Fray Toribio de Benavente, known as Motolinía, and a contemporary of Sahagún, also verified the ritual use of mushrooms in his book entitled "Historia de los Indios de Nueva España," in which he says, in part, speaking of the natives: "They underwent another kind of drunkenness which made them more cruel, and this was brought about with small mushrooms which are found here as well as in Castilla; after a short time they see visions, especially snakes, and as they were driven mad, it seemed to them that their legs and entire body were full of worms and that they were being eaten alive, so that half crazy they ran from their houses hoping that someone would kill them; and while under the influence of this bestial drunkenness and despair they sometimes hanged themselves, or acted cruelly toward others. In their language these mushrooms are called teonanácatl, meaning god's

flesh or more appropriately flesh of the devil whom they adored." <sup>покусачивали</sup>

The Popol Vuh, dedicated to the traditions of the Quiché people of Guatemala, is one of the most rare and important documents of Central America. The original manuscript is lost, but there is a Spanish translation made in Chichicastenango, Guatemala, by the Dominican friar Francisco Jimenez between 1701 and 1703 which is based on a   
 → version in the Quiché language written in the early part of the 16th century. Its theme is the creation of the world and of man by the gods in their pantheon, and deals with a powerful trinity including their supreme being called Huracán. <sup>впору</sup> An English translation of the Popol Vuh says the following: "The first manifestation of Huracán is called Kakuljá; the second is Chip-Kakuljá, and the third Raxa-Kakuljá, and these three constitute the heart   
 → of the sky."

Reading these words, no foreigner could have guessed that in this divine trinity a great secret was hidden; a secret known only to the Quiché people. The Popol Vuh clearly states that Kakuljá is the god of lightning, <sup>молнии</sup> Chip-Kakuljá the god of thunder and Raja-Kakuljá the god of the thunderbolt. <sup>гласа грома</sup> The surprising revelation in this is that Kakuljá is also the name of the mushroom sacred to them: Amanita muscaria. <sup>у нас</sup> The discovery came about   
 → unexpectedly. One morning on the road to El Quiché, Guatemala, I collected both Amanita muscaria and A. caesarea. I took my collections back to Chichicastenango, a few kilometers to the south, and sought the mushroom vendors <sup>продавцы</sup> in the market place, where several native women may be found there on Sundays selling edible mushrooms. I showed them my collections which they instantly recognized, and becoming alarmed, warned me not   
 → to eat the Amanita muscaria because it was poisonous. When I asked them what they called these mushrooms in their language (Quiché), they surprised me with the name "Kakuljá," which I asked them to repeat several times. <sup>Кекобаке</sup> Consequently, we have the

<sup>неожиданность</sup>  
unexpected verification that in the Quiché pantheon the thunderbolt and Kakuljá are one and the same!

2) Another source of information on precolumbian cults may be found in the Mayan and Aztec codices. Of the three principal Mayan codices presently deposited in Madrid, Dresden and Paris, paintings of mushrooms being used in religious ceremonies are to be found in the Madrid and Dresden codices. In another important non-Mayan codex, the Codex Vindobonensis Mexicanus I, now deposited in the National Library of Vienna, there are striking figures of gods or <sup>святых</sup> priests holding mushrooms, graphically illustrating their participation in a magico-religious ceremony. These are among the few codices that have survived in America, since the Spanish priests destroyed a great quantity of documents and idols sacred to the native people. We have the testimony of the priest Diego de Landa who now occupies a rather ambiguous position in the history of the conquest. We are in his debt for recording the Mayan glyphs denoting the days and months of the Mayan year, but <sup>us безобаян</sup> on the other hand he is responsible for the destruction of many Mayan codices. In his book entitled "Relación de las Cosas de Yucután," he describes an "auto de fé" that took place under his direction in the village of Maní, Yucután, on July 12th 1562. His laconic commentary translated into English reads as follows: "We found among them a great number of books written in these characters, and as they contained nothing in which there were not to be found <sup>судебные, и предрассудки</sup> superstition and devilish lies, we burned them all, which they regretted to an amazing degree and caused them great <sup>несчастье</sup> affliction." It was in this manner that Mayan treasures of inestimable cultural and scientific value disappeared forever.

<sup>загадочный</sup>  
Among the enigmatic figures in the Dresden codex are those of gods painted in a <sup>необычным</sup> curious posture, their bodies appear to be floating in air, head downward. There have been no satisfactory explanations of these figures which I'll show presently in slides. The

Guatemalan archeologist Antonio Villacorta states in his commentary on these gods that "they are falling, <sup>30. v. hastu bar</sup> dragging some leaves with them." He offers no explanation beyond this. Nevertheless, upon closer examination of these figures, it is apparent that at least one of them appears to be asleep or possibly in a trance. Also, close to the head of this figure is the Mayan glyph meaning death, Cimi, and there is another similar glyph near its feet. Attached to various parts of the body of this figure are objects that Villacorta calls "leaves." However, I am convinced that these "leaves," are instead representations of mushrooms, and that the figure itself forcibly shows the powerful magico-religious influence of hallucinogenic mushrooms! /

3) Let us briefly consider another enigma. In 1898 the ethnologist Karl Sapper discovered in Guatemala and El Salvador the artifacts now known as mushroom stones, but designated by him in his native language as "Pilzförmige Götzenbilder," or mushroom-shaped idols. The great majority of these objects, carved from volcanic rock, have been found in Guatemala, but a few have been unearthed in Mexico and El Salvador. The stones represent different styles, including those elaborately carved with human figures or with sacred animals, as I will show in a moment. Still others lack any figures whatever. A few were made of clay. Estimates indicate that the oldest of these stones date back to about 1500 B.C. and the most recent to the 10th century of our era. This latter date is critical in the history of Mesoamerica because it coincides with the sudden demise of the Mayan civilization. The last stelas, stone monuments that they erected, many of them splendidly carved with glyphs and with portraits of their monarchs in deep relief, such as those found at Copán and Quiriguá, bear dates no later than the 10th century.

The hypothesis that mushroom stones were used in religious ceremonies and specifically during the "consumption and adoration of hallucinogenic mushrooms," is

supported by the archeological record. Moreover, I shall present evidence that shows a notable similarity between certain figures in the Dresden Codex and heretofore unexplained figures on mushroom stones.

4) With regard to modern cults associated with hallucinogenic mushrooms, it is only necessary to call attention to María Sabina, the best known Mazatec "curandera" or herb healer of our times in Mexico. Although she died a few years ago at the age of 92, the mushroom ceremony pursued in her village Huautla, and in many other localities in Mexico continues as before in its centuries-old tradition. Hallucinogenic mushrooms have also had a profound influence on other cultures in diverse parts of the world. The ancient tradition still lives, for example, in the Rig Veda, a text sacred to Hindus, in which there are numerous references to Soma, the magical plant identified by the ethnomycologist Wasson as Amanita muscaria. Among some individuals in Siberia, including the koryak, a unique and curious custom survived at least to the early years of this century, in which reindeer urine was consumed after those animals had fed on Amanita muscaria, thus transferring the chief hallucinogenic agent, muscimol, to the participants in this ritual.

Finally, I wish to call your attention to a belief presently extant among the Tzutuhil-speaking people in the village of Santiago de Atitlán, Guatemala, where I lived for a short period. The legend is related to the history of creation as they understand it, and is intimately connected with the role of certain miraculous mushrooms. The indigenous religion of the Quiché, Kakchiquel, Mam, Tzutuhil and other people of Mayan culture in Guatemala, is founded in part upon traditional beliefs of great antiquity which they profoundly respect, and the account I wish to relate, and which was told to me by a trusted practitioner of the cult, is in this category.

The god of the Tzutuhils is known by the name "Rilaj Maam," meaning venerable

grandfather. He is also called "Maximon," meaning "tied with rope," because inside his effigie there is a rope network symbolic of his intricate connections with the supreme gods, his creators. Because the name Maximon is considered sacred, it is the custom to refer to him as Rilaj Maam, usually abbreviated to Maam. Maximon created the Nahuales, the most powerful of the Tzutuhil gods.

According to Tzutuhil legend, there once were 12 sacred trees, each associated with a different mushroom. The Nahuales decided to select one of these trees to rule over men on earth. Each tree in turn was asked whether it would accept the heavy responsibility. Only one accepted, an unlikely, undersized candidate called "Ch'iip" or Little Brother. He said he had a dream or vision in which he was directed to find a certain hill at the foot of the volcano San Lucas (still venerated by the Tzutuhil) where a tree called the "palo de Pito," a leguminous tree, *Erythrina rubrinervia*, grew surrounded by numerous mushrooms. As the tree was approached, a strong south wind arose bringing with it a violent storm, and presently the tree was split by a thunderbolt. The tree was hollow, and within it Ch'iip observed a vague countenance which he then proceeded to carve out of the soft wood. This effigy became the god Maximon. Each stroke of Ch'iip's knife was accompanied by a sacred word, and each stroke likewise gave origin to a musical note, tone or "son." The notes provided the musical basis for traditional songs. When Maximon was fully formed, each Nahual conferred upon the newly created god a special power. Then Maximon was commanded to stand, for he was to be tested to determine whether or not he was able to use the powers conferred upon him. A deaf mute from the village was brought before him and Maximon was directed to cure his infirmity. According to one version of the legend, a fragment of one of the mushrooms growing around the "palo de pito" was fed to the man, who thereupon became rejuvenated and his infirmity disappeared. The Nahuales were

pleased, and Maximon has ever since presided over the Tzutuhil people.

I wish to conclude this brief summary by emphasizing that the evidence overwhelmingly indicates that certain fungi have had a profound effect upon the people of diverse cultures, not only in distant precolumbian times in America and in other parts of the world, but that they continue to be venerated today, and constitute an integral and significant part of some contemporary societies.

*Followed by presentation of 70 slides.*

*Projector not operating properly.*

*A single 40-slide tray available.*

*Later replaced with carousel!*

for Kiew

PRECOLUMBIAN ETHNOMYCOLOGICAL TRADITION IN MEXICO AND  
GUATEMALA

B. Lowy

Since the time of the conquest there began to appear the first reports on the flora and fauna of the New World as well as a series of commentaries on the curious beliefs and customs observed among culturally distinct populations throughout the Americas. In the writings of Bernardino de Sahagun, Francisco Hernandez, Bartolome de las Casas, Diego de Landa, Motolinia and others, apart from their detailed observations describing many aspects of the life of the people, there may also be found numerous references to a surprising variety of plants very well known to the population at large. These include plants that were utilized directly in one way or another, edible plants or plant parts, and toxic and hallucinogenic plants. It is these and similar works that constitute the basis for the study of ethnobotany in America. According to the testimony of authors such as those I have mentioned, we know that throughout Mexico a number of hallucinogenic plants were commonly in use and were so highly regarded because of their special effects that their utilization was confined to religious ceremonies. Among those best known today are still designated by their Nahuatl names, and include: picietl, called tobacco in English, peyotl, various species of the cactus Lophophora, ololiuqui, known as Ipomea in Latin, and teonanacatl, encompassing various species (and genera) of hallucinogenic mushrooms which for a time gained great notoriety for their indiscriminate use among the curious and uninitiated. Of course, professors are not included in this category, since their interests are purely scientific! But more of this later. It is quite understandable that teonanacatl became of particular interest to ethnomucologists because it referred to a number of genera of agarics including Psilocybe, Stropharia, and Paneolus. Species of these genera and others were ritually employed in precolumbian America and presided over by shamans in religious ceremonies. In spite of the furious efforts

of the Spanish conquerors who strictly forbade the use of such mushrooms in this manner, considering it to be a form of idolotry, respect for this ancient tradition still persists.

During the past few decades, because of the persistence of ethnomycologists and anthropologists, there no longer exist any secrets surrounding the celebrated agape in which certain mushrooms are revered. But during the time of the conquest (which I prefer to think of as the three-centuries long occupation of the Americas by the Spanish), things were quite different. During the centuries of occupation, and especially in the early decades, the church carefully monitored all aspects of the people's lives, including of course, the religious customs that had been established centuries before the arrival of the Spaniards. When it was discovered that the people embraced practices that were completely foreign to those dictated by the Catholic church, there was instituted a regimen of intimidation, punishment and torture which constitutes one of the saddest chapters in the history of the Americas. Among the priests of those early times, only Fray Bartolome de Las Casas fought vigorously for the human rights of the Mexican people, and defended them enthusiastically when he returned to Spain in 1550 in order to give an account of the abuses perpetrated by the church.

The evidence that in precolumbian times there were religious cults that adored and consumed hallucinogenic mushrooms, comes principally from four sources of information:<sup>\*</sup> the codices, historical documents produced by the indigenous population; sculptures in stone or clay that testify to cultural practices; and the existence of cults, ancient and modern, dedicated to the veneration of sacred mushrooms.

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Concerning the chronicles, fortunately, there have come down to us books written by prominent observers during the early decades of the conquest, that are an indispensable source of authentic information about the early decades of the Spanish occupation. Among the most celebrated of these works is the book by the Franciscan friar Bernardino de Sahagun, author of the "Historia de las Cosas de Nueva Espana," written in the middle of the 16th century. Sahagun is an almost endless source for understanding the interaction between the Mexicans and Spaniards. Here we find the first reference to the use of hallucinogenic mushrooms, described in part as follows: "The first thing that they ate in their ceremony were little black mushrooms which they called nanacatl, causing drunkenness and producing visions, and even provoked lechery; they were eaten before dawn, and they also drank cocoa; they ate the little mushrooms with honey, and as the people began to react to them, they began dancing, and some of them cried because they were already drunk with the mushrooms."

Fray Toribio de Benavente, known as Motolinia, and a contemporary of Sahagun, also verified the ritual use of mushrooms in his book entitled "Historia de los Indios de Nueva Espana," in which he says, in part: "They underwent another kind of drunkenness which made them more cruel, and this was brought about with small mushrooms which are found here as well as in Castilla; but those found here are such that when they are eaten raw or bitter, so they take some honey afterward; and after a short time they see visions, especially snakes, and as they were driven mad, it seemed to them that their legs and entire body were full of worms and that they were being eaten alive, so that half crazy they ran from their houses hoping that someone would kill them; and while under the influence of this bestial drunkenness and despair they sometimes hanged themselves, or acted cruelly toward others. In their language these mushrooms are called teonanacatl, meaning god's flesh or more appropriately flesh of the devil whom they adored."

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is one of the most rare and important documents of Central America. The original manuscript is lost, but there is a Spanish translation made in Chichicastenango by the Dominican friar Francisco Ximenez between 1701 and 1703 which is based on a version attributed to Diego Reynoso who wrote it in the Quiche language in the early part of the 16th century. Its theme is the creation of the world and of man by the gods in their pantheon, and deals with a powerful trinity including their supreme being called Huracan. A Spanish translation says the following "The first manifestation of Huracan is called Kakulja; the second is Chip-Kakulja, and the third Raxa-Kakulja, and these three constitute the heart of the sky."

Reading these words, no foreigner could have guessed that in this divine trinity a great secret was hidden; a secret known only to the Quiche people. The Popol Vuh clearly states that Kakulja is the god of lightning, Chip-Kakulja the god of thunder and Raja-Kakulja the god of the thunderbolt. The revelation in this is that Kakulja is also the name of the sacred mushroom Amanita muscaria. The discovery came about unexpectedly. One morning on the road to El Quiche, Guatemala, I collected both Amanita muscaria and A. caesarea. I took my collections back to Chichicastenango, a few kilometers to the south, and sought the mushroom venders in the market place, several native women who may be found there on Sundays selling their mushrooms. I showed them my collections which they instantly recognized, and somewhat alarmed, warned me not to eat the Amanita muscaria because they were poisonous. When I asked them what they called these mushrooms in their language (Quiche), they surprised me with the name "Kakulja," which they repeated several times. Consequently, we have the unexpected verification that in the Quiche pantheon the thunderbolt and Kakulja are one and the same!

Another source of information on precolumbian cults may be found in the Mayan and Aztec codices. Of the three principal Mayan codices presently deposited in Madrid, Dresden and Paris, paintings of mushrooms being used in religious ceremonies

are to be found in the Madrid and Dresden codices. In another important codex, the Codex Vindobonensis Mexicanus I, deposited in the National Library of Vienna, there are striking figures of gods or priests holding mushrooms in their hands, graphically illustrating their participation in a magico-religious ceremony. These are among the few codices that have survived in America. The Spanish priests destroyed a great quantity of documents and idols sacred to the native people. We have the testimony of Fray Diego de Landa who now occupies a rather ambiguous position in the history of the conquest. We are in his debt for recording the Mayan glyphs denoting the days and months of the Mayan year, but on the other hand he is responsible for the destruction of many Mayan codices. In his book entitled "Relacion de las cosas de Yucutan," he describes an "auto de fe" that took place under his direction in the village of Mani, Yucutan, on July 12th 1562. His laconic commentary reads as follows: "We found among them a great number of books written in these characters, and as they contained nothing in which there were not to be found superstition and devilish lies, we burned them all, which they regretted to an amazing degree and caused them great affliction." It was in this manner that Mayan treasures of inestimable cultural and scientific value disappeared forever.

Among the enigmatic figures in the Dresden codex are those of ~~those of~~ gods painted in a curious posture, their bodies upside down as though they were floating in air. There have<sup>s</sup> been no satisfactory explanation of these figures. The Guatemalan archeologist Antonio Villacorta states in his commentary on these gods that "they are falling, dragging some leaves with them." He offers no explanation beyond this. Nevertheless, upon closer examination of these figures, it is apparent that at least one of them appears to be asleep or possibly in a trance. Also, close to the head of this figure is the glyph for death; Cimi, and another close to its feet. Attached to various parts of the body are objects that Villacorta calls "leaves." However, I am convinced that these "leaves," are instead representations of mushrooms, and that

the figure itself shows the powerful magico-religious influence of hallucinogenic mushrooms!

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The hypothesis that mushroom stones were used in religious ceremonies and specifically during the "consumption and adoration of hallucinogenic mushrooms," is supported not only by Borhegyi and other anthropologists, but by the archeological record. Moreover, I shall present some evidence that shows a notable similarity between certain figures in the Dresden Codex and heretofore unexplained figures on mushroom stones.

With regard to modern cults associated with hallucinogenic mushrooms, it is only necessary to call attention to Maria Sabina, the best known Mazatec "curandera" of our times. Although she died two years ago at the age of 92, the mushroom ceremony of Huautla and many other localities continues as before in its centuries-old tradition. Hallucinogenic mushrooms have also had a profound influence on other

cultures in diverse parts of the world. The ancient tradition still lives in the Rig Veda, sacred to Hindus, in which there are numerous references to Soma, the magical plant identified by Wasson as Amanita muscaria. Among some individuals in Siberia, a unique and curious custom has survived at least to the early years of this century, in which reindeer urine has consumed after those animals had fed on Amanita muscaria, thus transferring the chief hallucinogenic agent, muscimol, to the avid participants in this ritual.

Finally, I wish to call your attention to a belief presently extant among the Tzutuhi-speaking people in the village of Santiago de Atitlan, Guatemala, where I live among them for a short period. The legend is related to the history of creation as they understand it, and is intimately connected with the role of certain miraculous mushrooms. The indigenous religion of the Quiche, Kakchiquel, Mam, Tzutuhil and other people of Mayan culture in Guatemala, is founded in part upon traditional beliefs of great antiquity which they profoundly respect, and the account I wish to relate, and which was told to me by a trusted practitioner of the cult, is in this category.

The god of the Tzutuhils is known by the name "Rilaj Maam," meaning venerable grandfather. He is also called "Maximon," ie tied with rope, because inside his effigie there is a rope network symbolic of his intricate connections with the supreme gods, his creators. Because the name Maximon is considered sacred, it is the custom to refer to him as Rilaj Maam, usually abbreviated to Maam. Maximon created the Nahuales, the most powerful of the Tzutuhil gods.

According to Tzutuhil legend, there once were 12 sacred trees, each associated with a different mushroom. The Nahuales decided to select one of these trees to rule over men on earth. Each tree in turn was asked whether it would accept the heavy responsibility. Only one accepted, an unlikely, undersized candidate called "Ch'iip" or Little Brother. He said he had a dream or vision in which he was directed to

find a certain hill at the foot of the volcano San Lucas (still venerated by the Tzutuhil) where a tree called the "palo de Pito" grew surrounded by numerous mushrooms. As the tree was approached, a strong south wind arose bringing with it a violent storm, and presently the tree was split by a thunderbolt. The tree was hollow, and within it Ch'iip observed a vague countenance which he then proceeded to carve out of the soft wood. This effigy became the god Maximon. Each stroke of Ch'iip's knife was accompanied by a sacred word, and each stroke likewise gave origin to a musical note, tone or "son." The notes provided the musical basis for traditional songs. When Maximon was fully formed, each Nahuatl conferred upon the newly created god a special power. Then Maximon was commanded to stand, for he was to be tested to determine whether or not he was able to use the powers conferred upon him. A deaf mute from the village was brought before him and Maximon was directed to cure his infirmity. According to one version of the legend, a fragment of one of the mushrooms growing around the "palo de pito" was fed to the man, who thereupon became rejuvenated and his infirmity disappeared. The Nahuales were pleased, and Maximon has ever since presided over the Tzutuhil people.

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## LA TRADICION ETNOMICOLOGICA PRECOLOMBINA EN GUATEMALA Y MEXICO

B. Lowy

Desde los tiempos de la conquista comenzaron a aparecer los primeros informes sobre la flora y fauna del Nuevo Mundo y también una serie de comentarios sobre las costumbres y las creencias practicadas entre las distintas culturas de América. Encontramos en las crónicas de Bernardino de Sahagún, Bernal Díaz del Castillo, Francisco Hernández, Bartolomé de Las Casas, Diego de Landa, Motolinia y otros, aparte de sus detalladas observaciones referentes a muchos aspectos de la vida de la gente, hay en sus páginas abundantes referencias a una sorprendente variedad de plantas conocidas por la población; plantas útiles, comestibles, tóxicas o alucinantes. Estas y otras obras similares con su multitud de datos formaron la base de la disciplina etnobotánica en América. Según el testimonio de tales autores, sabemos que la gente mexicana utilizó entre muchísimas otras plantas, unas predilectas designadas en Nahuatl con los nombres: picietl, peyotl, pipiltzintzintli, olohiuqui y teonanacatl. Este último es lógicamente de interés particular a los etnomicólogos porque trata de especies alucinógenas de Psilocybe, Stropharia, Paneolus y otros géneros que pertenecen a los Agaricaceas (sensu lato). Sabemos también que estos hongos fueron altamente apreciados en el México precolombino y usados en ceremonias religiosas. El respeto por esta tradición antigua no se ha perdido. Debido al intenso

interés de antropólogos y etnomicólogos en las últimas décadas, no existen ya secretos en cuanto al celebrado ágape de los hongos. Pero no ha sido siempre así. En los tiempos de la conquista, los sacerdotes vigilaron minuciosamente cada aspecto de la vida de la gente, incluso, por supuesto sus costumbres religiosas que los indígenas habían seguido durante centenares de años antes de la llegada de los españoles. Cuando se descubrió que abrazaban costumbres muy ajenas a las de la iglesia católica, comenzó una era de intimidaciones, castigos y torturas que constituye un capítulo sumamente triste en la historia de las Américas. Entre los sacerdotes de esos tiempos, solo Bartolomé de Las Casas luchó vigorosamente por los derechos humanos de la gente mexicana, y regresó a España en 1550 para defenderlos con entusiasmo.

La evidencia que había cultos religiosos dedicados a la adoración y consumo de los hongos alucinantes en los tiempos precolombinos proviene principalmente de cuatro fuentes de información: <sup>las crónicas,</sup> los códigos, documentos históricos producidos por la gente indígena; esculturas de piedra, de madera o de barro, que muestran diversos aspectos de las culturas que representan, y los cultos antiguos y contemporáneos dedicados a la veneración de los hongos sagrados. Consideremos brevemente estas fuentes, ~~y después pasaremos a los diapositivos pertinentes.~~

Comenzando con las crónicas, existen afortunadamente libros escritos por observadores prominentes durante las primeras décadas de la conquista, que son indispensables para entender la historia de esa época. Entre los mas célebres esta el trabajo del fraile

franciscano Bernardino de Sahagún, autor de la "Historia General de las Cosas de Nueva España", escrito a mediados del siglo 16. Su trabajo es una mina inagotable de información sobre una multitud de detalles de la vida cotidiana, tanto de los mexicanos como de los españoles. También se encuentran en ella las primeras referencias al uso de los hongos alucinantes, como es evidente en sus siguientes palabras: "La primera cosa que se comía en el convite eran los honguillos negros que ellos llaman nanacatl, que emborrachan y hacen ver visiones, y aun provocan a lujuria; esto comían antes de amanecer, y también bebían cacao; aquellos honguillos los comían con miel, y cuando ya se comenzaban a calentar con ellos, comenzaban a bailar, y algunos lloraban, porque ya estaban borrachos con los honguillos." ~~¿No es posible que entre mis oyentes hoy, haya quizás algunos que podrían verificar la exactitud de estas observaciones de Sahagún hechas más de 400 años atrás? (Yo si!)~~

Fray Toribio de Benavente (conocido por el nombre Motolinia), contemporáneo de Sahagún, también verificó el uso ritual de los hongos en su libro titulado "Historia de los Indios de Nueva España," donde dice en parte: "Tenían otra manera de embriaguez que los hacía más crueles, y era con hongos o setas pequeñas, que en esta tierra las hay como en Castilla; mas los de esta tierra son de tal calidad, que comidos crudos y por ser amargos, beben tras ellos un poco de miel de abejas; y de allí a poco veían visiones, en especial culebras, y como salían fuera de todo sentido, parecíanles que las piernas y el cuerpo tenían lleno de gusanos que

los comían vivos, y así medio rabiando se salían fuera de la casa, deseando que alguno los matasen; y con esta bestial embriaguez y trabajo que sentían, acontecía alguna vez ahorcarse, y también eran contra los otros más crueles. A estos hongos llaman en su lengua teonanacatl, que quiere decir carne de dios, o del demonio que ellos adoraban."

El Popol Vuh, dedicado a las tradiciones de la gente Quiche de Guatemala es uno de los documentos indígenas más raros y significativos de América Central. El original del manuscrito está perdido, pero existe una traducción española hecha en Chichicastenango por el padre dominicano Francisco Ximenez entre 1701 y 1703 que está basada en la versión atribuida a Diego Reynoso quien la escribió en el idioma Quiche a principios del siglo 16. Trata de la creación del mundo y del hombre mismo por los dioses en su panteón, y habla de una trinidad poderosa, incluso el supremo poder nombrado por ellos Huracán. Citando una traducción española, dice lo siguiente: "La primera manifestación de Huracán es Kakuljá; la segunda Chip-Kakuljá, la tercera Raxá Kakuljá, y estas tres manifestaciones constituyen el corazón del cielo."

Leyendo estas palabras, ningún extranjero podría adivinar que en esta trinidad divina estaba escondido un gran secreto; un secreto conocido solo por la gente Quiche. El Popol Vuh dice claramente que Kakuljá significa el dios del rayo, que Chip-Kakuljá es el dios del trueno, y Rajá Kakuljá el dios del relámpago. La novedad es que Kakuljá es también el nombre del hongo sagrado Amanita muscaria! El descubrimiento fue inesperado. Una mañana en

el camino a El Quiche, Guatemala, colecté entre psinos A. muscaria y A. caesarea. Regresé con mis colecciones al mercado de Chichicastenango, unos kilómetros al sur, buscando a las vendedoras de hongos, señoras indígenas Quiche que regularmente se encuentran allá los domingos. Mostré mis colecciones a ellas, quienes reconocieron en seguida los hongos, y un poco alarmadas, me alertaron fuertemente no comer los de muscaria porque eran venenosos! Cuando les pregunté como se llamaban estos hongos en su idioma, me sorprendieron con la palabra Kakuljá, que repitieron varias veces. Resulta que tenemos la feliz verificación de que en el panteón Quiche, el rayo y Amanita muscaria están íntimamente relacionados con la divinidad Kakuljá.

Otra fuente de información sobre los cultos precolombinos se encuentra en algunos códices mayas y aztecas. De los tres códices principales mayas actualmente depositados en museos o bibliotecas de Madrid, Dresden y Paris, en los de Madrid y Dresden hay pinturas que representan el uso de hongos en ceremonias religiosas. Un cuarto códice maya (el Grolier) actualmente depositado en el Museo Nacional de Antropología de México, es un fragmento descubierto en Chiapas por el antropólogo Michael Coe alrededor de 1971. En el códice Vindobonensis Mexicanus I que está guardado en la biblioteca Nacional de Viena, pero de origen Mixteco del siglo 14, también hay figuras de dioses o de sacerdotes que llevan hongos en las manos, y muestran así gráficamente, un rito mágico-religioso. Estos están entre los pocos códices que sobrevivieron en América. Los sacerdotes destruyeron una gran cantidad de documentos e ídolos

sagrados al pueblo; todos los que pudieron encontrar. Tenemos el testimonio de fray Diego de Landa quien ocupa un lugar ambiguo en la historia de las Américas. Por un lado, merece nuestro elogio porque presentó en su crónica la primera explicación de los jeroglíficos de los días y de los meses del año maya. Pero a la vez no podemos perdonarle el fanatismo que lo llevó a destruir documentos únicos de la cultura maya. En su libro titulado

"Relación de las Cosas de Yucatán," escribe acerca de un auto de fe que ocurrió bajo su dirección en Maní, Yucatán, el 12 de Julio de 1562. Leemos su comentario lacónico: "Hallámosles gran numero de libros de estas sus letras y porque no tenían cosa que no hubiese superstición y falsedades del demonio, se los quemamos todos, lo cual sintieron a maravilla y les dió mucha pena." Así desaparecieron tesoros de inestimable valor cultural y científico.

Entre las figuras más enigmáticas en el código Dresden están las de unos dioses pintados en posición rara, con piernas arriba y cabeza abajo, como si estuvieran flotando en el aire. Hasta la fecha no había ninguna interpretación segura de estas figuras. El conocido arqueólogo guatemalteco Antonio Villacorta, nota en su comentario que estos dioses "caen en alto, arrastrando consigo unas hojas." No ofrece ninguna teoría por la posición de las figuras. No obstante, se nota que la cara de una de las figuras representa a una persona dormida o posiblemente en trance. Además, encima de la cabeza esta puesto el jeroglífico de la muerte: CIMI, y hay otro igual cerca de los pies. Atados a varias partes del cuerpo se

encuentran los objetos llamados "hojas" por Villacorta. Estoy convencido de que estas "hojas" son en realidad representaciones de hongos y que la figura misma es una manifestación de la poderosa influencia mágico-religiosa de los hongos alucinantes!

Consideremos brevemente otro enigma. En 1898 el etnólogo Karl Sapper descubrió en Guatemala y en el Salvador los artefactos conocidos con el nombre de "hongos de piedra," nombrados por él en su idioma "Pilzförmige Götzenbilder," o ídolos en forma de hongos, en inglés llamados "mushroom stones." La gran mayoría de estos artefactos, labrados de piedra volcánica, se han encontrado en Guatemala, pero algunos tenían su origen en el sur de México. Existen varios tipos de estas piedras, incluso unas elaboradas con las caras de dioses o de sacerdotes o de animales sagrados, mientras otras carecen de tales figuras. También hay algunas más simples hechas de barro. Según los estudios de Borhegyi, las más antiguas fueron labradas aproximadamente 1500 años A.C. y las más recientes llegan al final del siglo 10 de nuestra era. Esta última es una fecha crítica en mesoamérica porque coincide con la decadencia de la civilización maya. Las últimas estelas que ellos colocaron, algunas labradas maravillosamente con jeroglíficos y retratos formidables de sus reyes - como las de Copán y Quiriguá - lleven fechas no más tarde que el fin del décimo siglo.

La hipótesis que los hongos de piedra fueran usados en ceremonias religiosas y específicamente "durante el consumo y la adoración de hongos alucinógenos," está apoyada no solo por Borhegyi y otros antropólogos, mas también por los datos

arqueológicos. Además, quiero presentar diapositivos que muestran una similaridad notable entre algunas figuras en el código Dresden y unos hongos de piedra.

En cuanto a los cultos modernos relacionados con los hongos alucinógenos, solo es necesario llamar a la atención el nombre de María Sabina, la curandera Mazateca más conocida de nuestros tiempos. María falleció hace poco, pero los ritos en Huautla como en otras localidades continúan como siempre. En otras partes del mundo también, los hongos han ejercido su profunda influencia en distintas culturas. La antigua tradición vive en el Rig Veda, libro sagrado de los Hindues, en donde se encuentran referencias a SOMA, la planta mágica identificada definitivamente por Wasson como Amanita muscaria. En Siberia, entre cierta gente privilegiada, ha sobrevivido hasta principios de este siglo, la única y curiosa costumbre de tomar un trago de orina de reno saturada con muscimol, el ingrediente principal alucinógeno del hongo.

En este breve comentario vale la pena llamar la atención a un mito que existe actualmente entre la gente Tzutuhil de Guatemala en el pueblo de Santiago de Atitlán. La leyenda está relacionada con la historia de la creación y a la vez con algunos hongos milagrosos. La religión indígena de la gente Quiche, Kakchiquel, Mam, Tzutuhil y otras culturas mayas de Guatemala está fundada en parte en mitos tradicionales de gran antigüedad que ellos respetan profundamente, y el mito que les voy a referir pertenece a esta categoría.

→ Se conoce el dios de los Tzutuhiles con el nombre de RILAJ

MAAM, que quiere decir "abuelo venerable." Se llama también MAXIMON, que significa "atado con cuerda," porque en el interior de su efigie se encuentra una red de cuerda, símbolo de sus conexiones intrincadas con los dioses supremos, sus creadores. Porque el nombre MAXIMON se considera sagrado, es la costumbre referirse a él con el nombre de MAAM, la forma corta de RILAJ MAAM. MAXIMON era <sup>el creador,</sup> ~~la creación~~ de los NAHUALES, los más poderosos entre todos los dioses Tzutuhiles.

Según una leyenda Tzutuhil, había doce árboles sagrados en las orillas del lago Atitlán, cada uno de ellos asociado con un hongo distinto. Los Nahuales decidieron seleccionar uno de los árboles para gobernar sobre los seres humanos. Preguntaron a los árboles cuales entre ellos querrían aceptar tal importante responsabilidad. Solo un árbol respondió; el más flaco y pequeño de todos, uno llamado CH'IP, que en su idioma quiere decir 'hermano menor.' CH'IP dijo que aceptaba el pedido de los Nahuales porque había soñado o tenido una visión que lo dirigió al volcán San Lucas - actualmente venerado por la gente Tzutuhil - donde encontró otro árbol, el "palo de pito," (= *Erythrina rubrinervia*), rodeado por numerosos hongos. Cuando CH'IP se acercó al árbol, comenzó una tormenta y de repente un rayo quebró el árbol. El tronco estaba vacío, pero CH'IP observó en su interior la vaga figura de una cara, y comenzó de repente a tallarla en la blanda madera. La efigie que projujo resultó ser la del dios MAXIMON! Cuando CH'IP terminó su trabajo y MAXIMON fue liberado del árbol, cada uno de los Nahuales le proporcionaron un poder especial. Después le ordenaron que se

levantara, porque querían determinar si era capaz de usar sus nuevos poderes. Buscaron en el pueblo a un sordomudo y se lo presentaron a MAXIMON con el propósito de que tratase de curar el hombre de su enfermedad. Según una versión de la leyenda, MAXIMON ofreció al hombre un fragmento de un hongo grande y rojo que encontró alrededor del árbol, y después de comerlo el hombre recuperó milagrosamente su salud. Los Nahuales quedaron satisfechos con esta demostración del poder de MAXIMON, y desde entonces le consideraron el dios principal de los Tzutuhiles.

Solo una palabra final. No es exageración afirmar que algunos hongos han tenido una influencia profunda en la vida de diversas culturas, no solo en los tiempos lejanos precolombinos sino también siguen prosperando con gran vitalidad en las sociedades contemporáneas.