

AMANITA MUSCARIA AND THE THUNDERBOLT LEGEND IN
GUATEMALA AND MEXICO

B. Lowy

Botany Department, Louisiana State University, Baton Rouge, 70803

Early man was profoundly moved by the apparently miraculous attributes of lightning and thunder which first inspired in him fear, then respect and reverence for the power his gods displayed in those awesome phenomena. Of particular concern to the ethnomycologist is the causal association in the mind of primitive man of thunderbolts and mushrooms and among the cultures in which this magical alliance became integrated into national mythologies were the Roman and the Hindu. In Roman lore, some fungi were believed to spring from the ground in places struck by a thunderbolt and according to Hindu tradition as recorded in the Rig Veda, it is stated that "Parjanya, the god of thunder was the father of Soma" (Wasson, 1969). Wasson minutely examined the available evidence for the identification of soma and concluded that the most convincing interpretation we may hope for at present is its identity with *Amanita muscaria* (L. ex Fr.) Hooker.

During the past several years, I have examined some aspects of ethnomycology in the Americas, principally those relating to mushroom stones and Maya codices (Lowy 1968, 1971, 1972a, b). As a result of a study made in Guatemala, Mexico, and Honduras in June and July, 1973, it was established that there exists in the Guatemalan highlands and in southern Mexico a tradition that links *Amanita muscaria* with the thunderbolt. Preliminary inquiries in western Honduras have thus far failed to reveal a trace of this legend, nor have I found it in El Salvador. The first intimation that such a mythology might be extant among indigenous peoples of the Americas came in 1970 in the course of my field work in Mexico and Guatemala. Although I had by that time compiled a small mushroom vocabulary in several Indian languages, further opportunities were sought for the verification of the meanings of some words from other native informants and through consultation with professional linguists. Sufficient evidence is now at hand to justify the assertion that in some regions of the New World the *Amanita muscaria*-thunderbolt legend is firmly implanted in the minds of its autochthonous inhabitants.

While I was interrogating three young bilingual (Quiche-Spanish speaking) Indians who were participants in the linguistic "Proyecto Francisco Marroquín" in Antigua, Guatemala in June, 1973, these in-

Informants unequivocally identified *A. muscaria* from a color photograph. Their name for this mushroom in the Quiche idiom was "kaquljá:." When asked what the word meant, they translated it into Spanish as "trueno" meaning thunder. After consultation among themselves and questioning by myself and Dr. William Norman, Quiche specialist, it was evident that it was not thunder alone that was signified by "kaquljá:," but the accompanying lightning as it strikes the ground during a storm. The equivalent term in Spanish is "rayo." This was clearly differentiated from the Quiche word "xkoyopá:," or "relámpago" in Spanish, a lightning flash, which, according to my informants, was never used to designate the mushroom. It is of interest too, that the native speakers could offer no explanation for the use of the word "kaquljá:" for *A. muscaria*, indicating only that it was common usage. Its ancestral origins have long since been forgotten. To my knowledge, this is the first report that the thunderbolt and *Amanita muscaria* have been found to be intimately related in the folklore of an indigenous population in the Americas.

At the "Proyecto," *Amanita caesarea* (Scop. ex Fr.) Pers. ex Schw. was easily recognized from my color photograph by the native speakers of Quiche, Cakchiquel, and Mam. It was called "q'atzu:i" (or by one of its variants "atzui" or "atzu") by the Quiche, a word which I had confirmed on many previous occasions in the Quiche-speaking regions of Guatemala. Among the Cakchiquel of Sololá and Panajachel, *A. caesarea* is known as "q'uatzu:y" which was verified by Dr. Norman's Cakchiquel group at the "Proyecto." Lic. Nora England, specialist in the Mam language there, kindly allowed me to question her native Mam students and from them the word "xq'antzy:" was given for *A. caesarea*, but a photograph of *A. muscaria* was not recognized by them. The Cakchiquel group also identified *A. muscaria* from the photograph, knew it to be poisonous and called it "ruk'awach q'uatzu:y," the poisonous "q'uatzu:y," but no other connotation was associated by them with this mushroom.

A few kilometers north of Chichicastenango, in pine woods along the road to El Quiche, I again collected (July, 1973) both *A. muscaria* and *A. caesarea* and returned with the specimens to the Sunday market at Chichicastenango. There I sought the mushroom vendors and displayed my finds. The edible and poisonous species were immediately distinguished and I was strongly admonished not to eat the "kaquljá:" for it would have fatal consequences. Whereas "kaquljá:" refers to the legendary origin of *A. muscaria*, a Quiche expression that is descriptive of its dangerous, fearful potentialities is "itzel ocox," meaning the evil or diabolical mushroom.

In Comitán, San Cristóbal de Las Casas, and Tuxtla Gutiérrez in the state of Chiapas, Mexico, *A. caesarca* is a common and highly prized mushroom called "yuyo" (or "yullo") which in some regions of Latin America is a term used to signify "hierbas tiernas comestibles" (in "Diccionario de la lengua Española", Madrid, 1970), tender edible herbs. It is frequently prepared by roasting over a charcoal fire and I have eaten it in public places in San Cristóbal on numerous occasions. Incidentally, I have consistently found in my travels throughout the Americas that among lay individuals with a formal education, varying degrees of mycophobia is the general rule, but the educationally less privileged tend to be distinctly mycophilic. This is not as paradoxical as it may appear, since the peasantry are closest to the soil and know at first hand its products both cultivated and wild. *Amanita muscaria* is well known as a poisonous mushroom throughout the region of Chiapas under discussion and the revealing Spanish epithet for it in San Cristóbal de Las Casas and in Tuxtla Gutiérrez is "yuyo de rayo," the "yuyo" of the thunderbolt. I also discovered that among the Tzeltal-speaking natives of San Cristóbal and nearby Zinacantán, this expression has its exact counterpart in their language. *Amanita muscaria* is called by them "yuy chauk," "yuy" being a variant of the Spanish "yuyo" and "chauk" meaning "rayo" or thunderbolt.

Chiapas and Guatemala are not only geographically contiguous, but, more significantly, they share a common heritage, so it may be surmised that the similar mushroom mythologies that find expression there reflect the influence of a dominant Mayan civilization. It may only be conjectured how this legend came to be shared by such widely separated cultures as are those of the New World and the Indo-European, but it is not improbable that it arose independently among the Maya. Further inquiries among contemporary Guatemalan linguistic groups including the Cakchiquel, Kekchi, Mam, and Ixil in Guatemala and the Tzotzil, Tzeltal, Chontal, and others in Mexico are planned so that it may eventually be possible to trace the range and depth of this ancient tradition in the Americas.

LITERATURE CITED

- Lowy, B. 1968. Un hongo de piedra preclásica de Mixco Viejo, Guatemala. *Bol. Soc. Mex. Micol.* 2: 9-15.
- . 1971. New records of mushroom stones from Guatemala. *Mycologia* 63: 983-993.
- . 1972a. A newly discovered copy of a Maya codex. *Revista Interamer. Rev.* 2: 405-407.
- . 1972b. Mushroom symbolism in Maya codices. *Mycologia* 64: 816-824.
- Wasson, R. G. 1969. *Soma: divine mushroom of immortality*. Harcourt, Brace & World, Inc., New York. 381 p.

Amanita muscaria and the thunderbolt legend. III'. Guatemala and Mexico. B. Lowy. *Bull. Entomol. Res.* 1974. 64: 1-11. Louisiana State University, Baton Rouge, 70813. Roman lore, some fungi were believed to spring from the ground in places struck by a thunderbolt and according to Hindu tradition as recorded in the Rig Veda, it is stated that "Parjanya, the god of thunder was the father of Soma" (Vasson, 1969). Vasson minutely examined the available evidence for the identification of soma and concluded that the most convincing interpretation we may hope for at present is its identity with *Amanita muscaria* (L. ex Fr.) Hooker. *Leyendas de Guatemala* (Legends of Guatemala, 1930) was the first book to be published by Nobel-prizewinning author Miguel Ángel Asturias. The book is a retelling of Maya origin stories from Asturias's homeland of Guatemala. It reflects the author's study of anthropology and Central American indigenous civilizations, undertaken in France, at the Sorbonne where he was influenced by the European perspective. *Amanita Muscaria and the Thunderbolt Legend in Guatemala and Mexico* B. Lowy - *Mycologia* 1974. pp. 20 - 24. Russian Use of *Amanita Muscaria* - A Footnote to Wasson's Soma. However the dopamine concentration increased after muscimol in contrast to a decrease after LSD. After ibotenic acid an increase was observed in noradrenaline and dopamine concentrations in the mouse brain, whereas the serotonin concentration did not change. The relatively small changes in monoamine concentration in the mouse brain could originate from large changes in small brain areas.