

## HALLUCINOGENS USED BY TAINO INDIANS IN THE WEST INDIES

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### Introduction

Since early times, man has used plants and their products as stimulants, soporifics, and hallucinogens. Fifty years ago, our knowledge of Antillean ethnobotany was limited to medicinal plants used by our ancestors to treat several common illnesses.

Early studies of the Taino's hallucinogenic rituals come from Haiti (Safford 1916), Cuba (Foner 1962), and the Dominican Republic (Caro Álvarez 1977). Liogier and Martorell (1982), Little and Wadsworth (1964), and Nuñez Meléndez (1989; 1990) reported on the taxonomy and distribution of the Puerto Rican flora, including the hallucinogenic and narcotic plants. Henker and Houston (1950) and Fish *et. al.* (1955) studied hallucinogenic plant chemistry.

The first part of this study documents preliminary research on the hallucinogenic and narcotic flora used by Taino Indians in the West Indies. The second part is devoted to offer a new interpretation to *potizas*<sup>1</sup> and the cohoba idols elaborated by Tainos, and a comparison with Mayan mushroom effigies from Guatemala and Mexico. The lack of scientific information regarding these subjects, leads us to rely on three anthropological sources: historical documents, ethnology and archaeology.

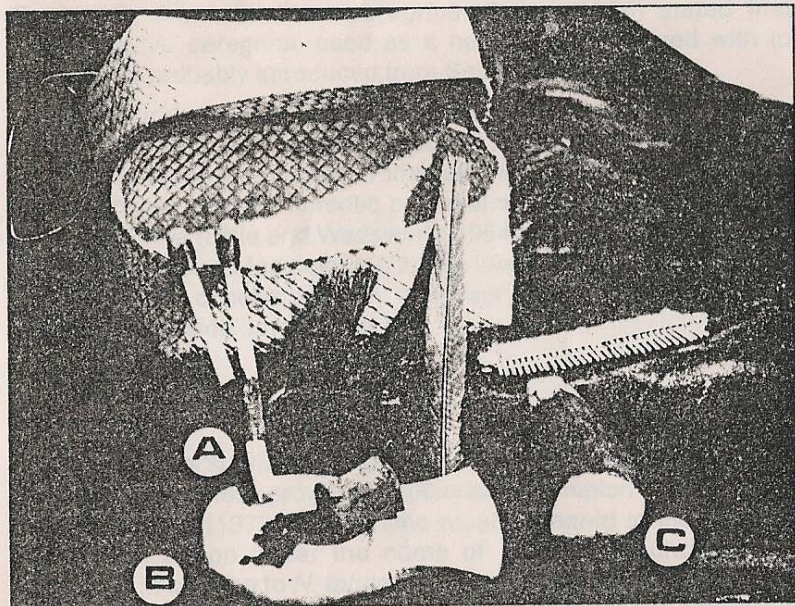
### I. COHOBÁ CEREMONY

The Taino Indians surrender themselves on a circle in a strange ritual in order to communicate with their deities. This was known as the ritual of the cohoba.

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<sup>1</sup> Bottle pots.

First, they must cleanse their bodies. This cleansing was done by provoking vomiting using a special spatula down their throats. Then, they inhaled hallucinogenic powders by wooden inhalators which looked like a nose pipe (see illustration 1A). These powders were a mixture of *cojóbana*<sup>2</sup> seeds and crushed shells.<sup>3</sup> The Indians said that the effect caused by the powders allowed them to communicate with the gods and the dead. They also believed they could foresee the future, being a reason why it was inhaled before making important decisions.



**Illustration 1.** Implements used by the Piaria shaman during the yopo (or cohoba) ritual. From Puerto Ayacucho, Venezuela (Muñoz-Vázquez Collection). **A.** Inhalator made of animal bones, wood and burned bee's wax. **B.** Wooden plate where yopo is crushed and inhaled. **C.** Yopo container made of wood, snail shell and burned bee's wax. Scale bar = 5 cm.

<sup>2</sup> *Anadenanthera peregrina* (L.) Speg. (Mimosaceae). Other botanical synonyms are: *Piptadenia peregrina* (L.) Benth. and *Niopa peregrina* (L.) Britton & Rosc. In 1964, plant taxonomist Siri von Reis Altschul published her study in which removed taxonomically the species ascribed as *Piptadenia* into a more appropriate genus called *Anadenanthera* (Furst 1992). Little and Wadsworth (1964) reported the range of this plant: "Hispaniola, Puerto Rico, Dominica, St. Vicent, Grenada and Trinidad (doubtfully native). Reported from Jamaica, apparently in error. Also Venezuela, British Guiana and Brazil."

<sup>3</sup> Probably *Strombus gigas*, *S. costratus* or *S. pugilis*.

## Historical documents

A description of the use of hallucinogens in the Antilles comes from historical documents. Cojóbana was mentioned by Pané (1498) for the first time. He stated: "... the cohoba is a certain snuff, which they use sometimes to purge themselves and for other uses... They take it with a cane about a size of an arm and a half; then, putting one side in the nose and the other in the snuff, they inhaled it and this makes them purge greatly" (Pané 1498). Fernández de Oviedo (1556) mentioned the description of an hallucinogenic tree used by the Taino Indians: "And this cohoba have peas in the sheaths about a palm long, more and less, with a lentil by fruit, not edible and the wood is very good and hard."

Tobacco<sup>4</sup> was mentioned by Fernández de Oviedo and Las Casas as follows: "The Indians of this island had a bad vice among others, which is taking a smoke they called tobacco, to leave the senses. This herb was most precious by the Indians, and it was planted in their orchards and farm lands for what I said; they insinuate if you take the weed and to smoke it was not only a sane stuff, but very sacred." (Fernández de Oviedo 1556). "These two Spaniards met many people on the way going back and forth to their villages, men and women, and the men always carried a firebrand in their hand and certain plants to make their smokes, which are some dried, too, in the shape of a *mosquete* or squib made of paper, like those boys make on the day of the Holy Ghost, and they light it at one end and at the other they suck or chew or draw in with their breath that smoke with which their flesh is benumbed and, so to speak, it intoxicates them, and in this way they say they do not feel fatigue. These *mosquetes*... they called by the name *tobacos*"<sup>5</sup> (Las Casas 1559).

The French chroniclers of the Carib Indians did not include *cojóbana* in their magical-religious rituals, but instead refer the use of tobacco. La Borde (1674) gave the following description: "To know the results of their illnesses, they send for a *piayé*<sup>6</sup> by night and he exit all suspicious persons, later he smoked a tobacco tip, then he crushed it and throw it into the air, snapping their fingers. They said the *cemí* will always come because it could not resist the smell of this incense and perfume administered by the *boye*,<sup>7</sup> who undoubtedly

<sup>4</sup> *Nicotiana tabacum* L. (Solanaceae).

<sup>5</sup> *Nicotiana tabacum*.

<sup>6</sup> Shaman or medicine man.

<sup>7</sup> Another name for shaman.

made a pact with the Devil... Later, he approaches the ill, and touches him, press him and massage several times the afflicted area, blowing always above and pretending extract some spines, or small pieces of manioc, wood, bones..., persuading the ill this was what caused the pain." He also mentions tobacco as a vomitive: "... and they made to swallow several times the tobacco juice, which caused to vomit the bowels and the entrails, until he faints, and then they said that his spirit has gone high to talk with the cemís" (La Borde 1674).

Safford (1916) identified the tree described by Fernández de Oviedo as *Anadenanthera peregrina*. Sauer (1966) stated that: "Cojóbana, *A. peregrina*, used as a narcotic snuff, mixed with tobacco, was probably introduced from South America."

Two introduced hallucinogenic-narcotic plants were known to be used by the Antillean Indians: cojóbana and tobacco. A tree mentioned as cojoba or cohoba, *Pithecellobium arboreum* (L.) Urban (Mimosaceae), with no narcotic potential was mistakenly appointed as *A. peregrina* (Little and Wadsworth 1964; Núñez Meléndez 1990). According to Veloz Maggiolo (1972), the identification of the ritual and the tree called cohoba used by the West Indian natives created a linguistic confusion among scholars.

### Ethnology

The study of surviving Amazonian cultures, who are related to the Antillean aborigines, provides additional information. According to Veloz Maggiolo (1972), the cohoba ritual appeared in the Orinoco-Amazonian region under the name of *yopo*.<sup>8</sup> It is unclear if *A. peregrina*, in addition to *N. tabacum* acted solely as ingredients in the Antillean ceremony, or if there was another component, capable of stimulating hallucinations and ecstasy. This practice exists today in the Amazonian zone, and extended deeper in South America; it is very similar to the one reported by the Spaniards in Greater Antilles (Alcina Franch 1982).

On a trip by J. Muñoz-Vázquez to Venezuela during the winter of 1992, he observed the use of inhalators in the form of a "Y" among the Piaroa Indians, who inhabit the area along the Orinoco River from

<sup>8</sup> *Anadenanthera peregrina*. According to Little and Wadsworth (1964), other common names to this plant are: "cojobillo, cojoba, cojobo (Puerto Rico); cojoba (Dominican Republic); yopo (Colombia); cojoba, niopa, niopo, yopo, curuba (Venezuela); savannah yoke, cohoba (Trinidad); bois galle, bois l'écorce, ceuf de poule (Haiti); paricá (Brazil).

Puerto Ayacucho (04°05'N, 67°50'W) to San Fernando de Atabapo (05°40'N, 67°45'W). The same ecstasy described by the Spanish chroniclers among the Taino Indians can be observed within these ethnic groups, with little or no variation. His visit to the house of a Piaroa shaman named Don Ramón revealed the presence of large quantities of ingredients for the elaboration of hallucinogenic and narcotic substances. Inside his *churuata*,<sup>9</sup> the ceiling and walls were covered with selected plants for this purpose, such as *N. tabacum* and *Virola* spp. He showed Muñoz-Vázquez the implements used in the ceremony, which include an inhalator (see illustration 1A), a ceremonial plate where yopo is crushed and therefore inhaled (see illustration 1B), and the container, where yopo is stored for future rituals (see illustration 1C).

### Archaeological evidence

Archaeologists have unearthed various instruments such as: inhalators made of wood, birds or manatee bones, conch-shell and clay, tables or plate idols for cohoba or tobacco powder, incensaries and vomitic spatulas used by the Tainos during their hallucinogenic or narcotic rites (Alden Mason 1941; Veloz Maggiolo 1972). Also, maracas with the function of vomitic spatulas has been recorded within Indian sites (Veloz Maggiolo and Ramos Ramírez 1980).

The ingestion of hallucinogenic drugs by primitive men can cause phosphenes,<sup>10</sup> thus originate myths and along with them the sacred art (Alcina Franch 1982). Scholars have suggested that Taino pictographs and petroglyphs found in caves, in rocks in streams or rivers, and along coastal shores in the Antilles were associated with sacred places. Perhaps those designs were done under hallucinogenic or narcotic influence. A pictographic representation of the cohoba ritual was discovered in Cuevas de Borbón from Dominican Republic (Pagán Perdomo 1982; Alegría 1986).

The evidence shows the use of cojóbana and tobacco as constituents of the cohoba ceremony by the aborigines from West Indies. Cojóbana is still in use today among the Surara and Pakidai tribes in the Amazon region. According to Veloz Maggiolo (1972), their ceremony is perhaps very closely similar to that of the Tainos.

Although Pané (1498) did not mention tobacco in his Relación,

<sup>9</sup> Hut.

<sup>10</sup> Visions.

Fernández de Oviedo (1556) reported shamanic practices for cures and spirit communication through tobacco. Today, tobacco is widely used by Amazonian groups: Kógi, Desana and Barasana in Colombia, Guajiros in Venezuela and Guyanan Indians (López Baralt 1985). They also use the bark resins of *Virola theiodora* (Spr. ex Bth.) Warburg, *V. calophylla* Warburg, *V. calophylloidea* Markgraf and *Psychotria viridis* R. & P. for rapid intoxication (Furst 1992).

A relationship could be found among dental characteristics in extinct cultures in the Antilles and the extant South American Indians who use tobacco. Although the Spaniards' documentation did not mention the custom of chewing huge quantities of tobacco, this habit was described for several groups of Amazonian Indians, such as the Yanomamo, Piaroa and other tribes. This custom probably also existed among the Tainos.

We can infer the following conclusions from the sources studied:

1. Taino Indians used actively cojóbana, tobacco and crushed shells as ingredients in the magical-religious ritual called cohoba.
2. Although tobacco is considered a narcotic plant rather than hallucinogenic, we included it because Sauer (1966) reported it as component in an hybrid mixture used by some Amazonian tribes.
3. Two ways of inhalation existed among Tainos, one related with smoking, and the other strictly shamanic where snuff was used related with the Taino ritual and idolatry of their deities.
4. The totality of ingredients in the cohoba snuff is still unknown.

## II. CARIBBEAN MUSHROOM EFFIGIES?

The cemí<sup>11</sup> is the Arawak word for good spirit, also called *zemí* or *zeme*. There are numerous in the Taino sites along the West Indian territory. According to Veloz Maggiolo (1972), the cemís can be defined as stylized anthropomorphic, anthro-zoomorphic and zoomorphic representations made of stone, wood, clay, shell, bone and cotton. Some cemís have morphological variations according to their purpose: clay effigies, menhirs, trigonoliths,<sup>12</sup> human-like representations made of wood of common *lignumvitae*,<sup>13</sup> idols replenished with

<sup>11</sup> Effigies of good spirits.

<sup>12</sup> Three-point carved stones. It is a type of cemí.

<sup>13</sup> *Guaiacum officinale* L. (Zygophyllaceae). Commonly named guayacán, guayaco (Puerto Rico); *lignumvitae* (Virgin Islands); palo santo (Cuba, Venezuela); guayacán negro (Cuba); guayacán de playa, guayacán colombiano, guayaco (Colombia); gaïac male (Haiti); bois saint (Martinique); wayacá, pokhout (Dutch West Indies); guaiaco, pau santo (Brazil) (Little and Wadsworth 1964).

cotton, and amulets (Veloz Maggiolo 1972; Alcina Franch 1982).

Pané (1498) stated: "Each one, when they worship the idols they have at home, which are called cemís, the natives observe a particular mode and superstition. They believe there are in heaven and are immortal, and nobody can see them, they have a mother, but have no beginning..." He reported they represent divinities, and every social caste has its own cemí. Their meaning as well as the deities they represent are still unknown.

The worship of cemís, called cemiism is not a formal religion in the strict sense that they build temples, but they had *Cu*,<sup>14</sup> where prophecies and cult to their ancestors were accomplished. By using the cohoba ritual, the *bohithu*<sup>15</sup> consulted their gods and predicted the future. The cemiism seems to have had a great diffusion in the Antilles, because we have reports from chroniclers in the sense there is no difference between the Tainos and Carib Indian worship.

## Mycolatry in the Caribbean?

A possible representation of a mushroom was registered among potizas and cohoba cemís. Traditionally, sexual interpretations were given to many of the potizas: the neck and mouth of the pot were phallic representations (see illustration 2a, b). Potizas contained water, *chicha*<sup>16</sup> or manioc liquor (Veloz Maggiolo 1972). Lowy (1981) clarified the use of a Mayan pottery figurine from Veracruz and stated that is a representation of a shamaness seated before a mushroom in attitude of praying, with her left arm raised to the sky. Perhaps this figurine had a practical use during a long forgotten ceremony. It presents two holes in the front and a greater hole in the back, suggesting the idea of some specific or ritualistic purpose (like the blowing of tobacco or aromatic smoke).

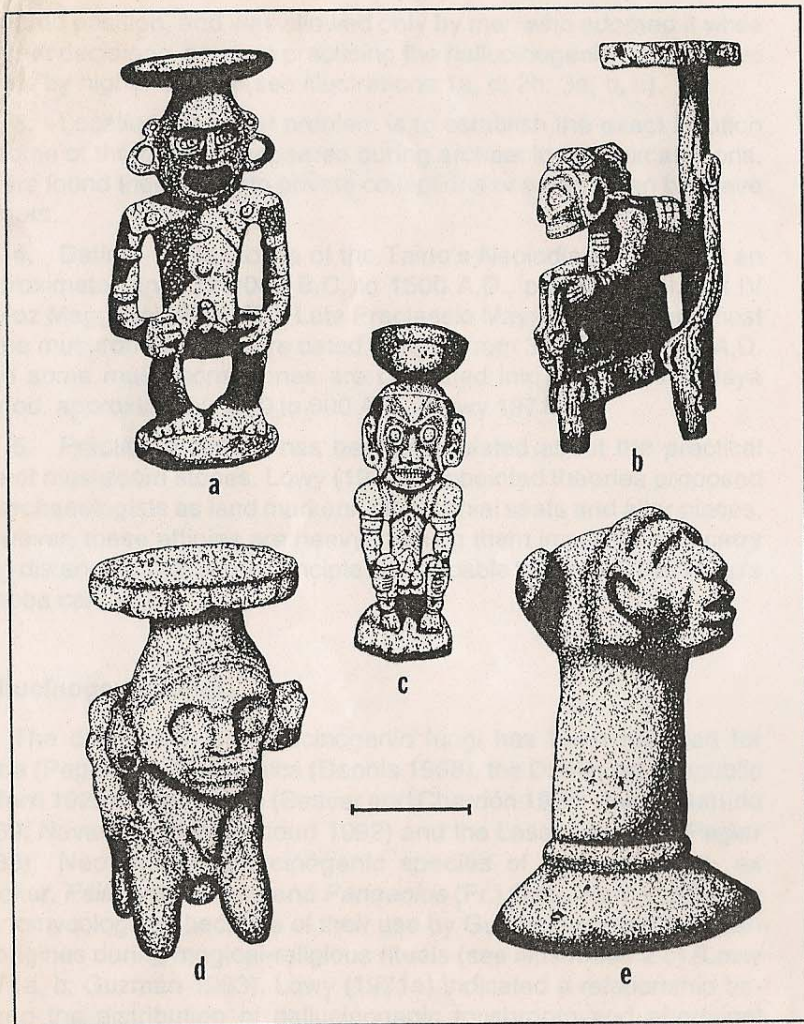
A closer examination into Taino and Mayan imagery, reveal morphological and ritualistic similarities:

1. Form.- Taino cemís, potizas and Mayan mushroom stones have three typical forms: anthropomorph, zoomorph and anthro-zoomorph. Nevertheless, their morphology is very similar. The central

<sup>14</sup> Oracles.

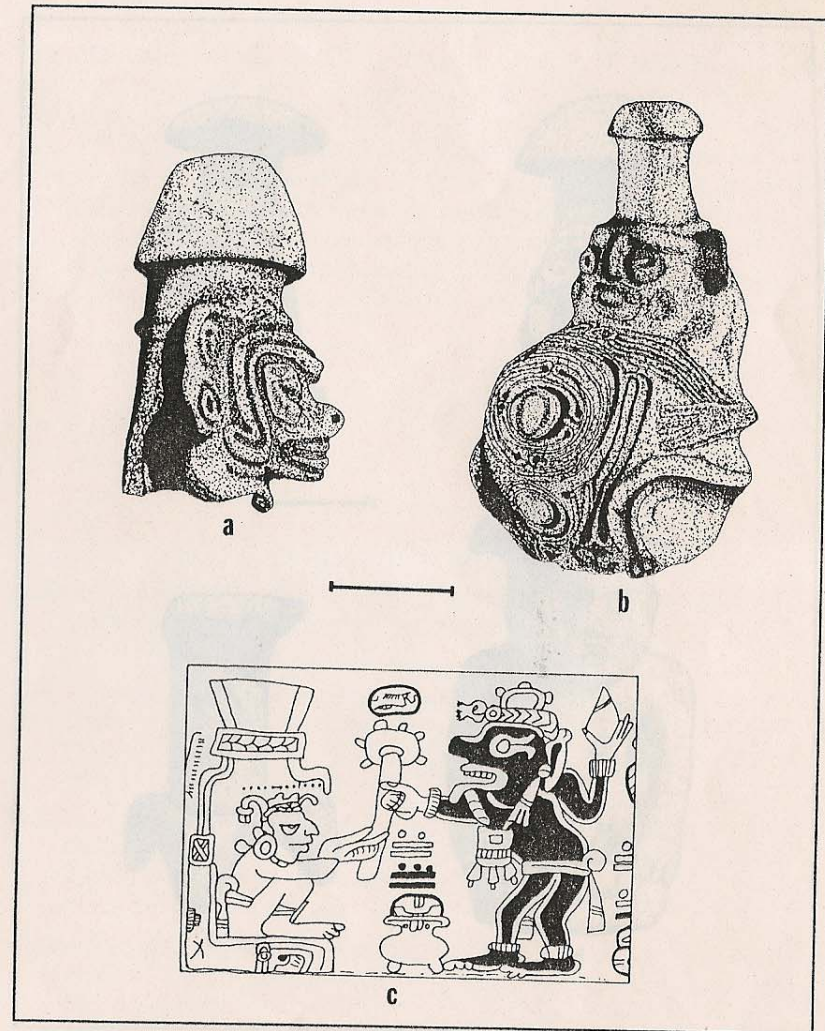
<sup>15</sup> Shaman or medicine man. Also called *behique*, *bohique*, *buhuhithu*, *behite* or *bujití*.

<sup>16</sup> Inebriant beverage made of corn, fruits and other ingredients. Another name for it was *Xixá*.



**Illustration 2.** Taino's cohoba idols. **a.** Stone, Dominican Republic. **b.** Wood, Dominican Republic. **c.** Stone, Jamaica. **d** and **e.** Stone, Puerto Rico. Scale bar = 9 cm for **a** and **c**; 11 cm for **b**; 10 cm for **d** and 12 cm for **e**.

body, resembling the phallus or stipe is visualized. Also a headdress or a cap is present. The interpretation of the headdress is that they may represent a mushroom cap, a phallic symbol or both. Lowy (1971b) suggested the possibility that at least some mushroom idols may have been linked to a fertility cult (see illustrations 3a, b).



**Illustration 3.** Additional imagery. **a.** Fragmented bottle pot, Dominican Republic. **b.** Bottle pot, Dominican Republic. **c.** Mayan manuscript showing the offering of the sacred mushroom, Mexico. Scale bar = 3 cm for **a** and 9 cm for **b**. Figure **c** is not to scale.

We suggested that this idea is compatible with the Taino imagery (see illustration 2b).

2. Position.- Both imagery are seated or in their knees. The traditional interpretation is that this position was similar to that of a fetal or frog typical position. For many archaeologists it is considered

a sacred position, and was allowed only by men who adopted it while in great decisions, or when practicing the hallucinogenic and narcotic rituals by higher castes (see illustrations 1a, d; 2b; 3a, b, c).

3. Location.- Another problem is to establish the exact location of some of them. Many appeared during archaeological excavations, others found their way into private collections or were stolen by grave diggers.

4. Dating.- Idols stones of the Taino's Neindian Stage had an approximate range of 1000 B.C. to 1500 A.D., periods II, III and IV (Veloz Maggiolo 1972). The Late Preclassic Maya Period, were most of the mushroom stones are dated, ranges from 300 B.C. to 300 A.D. Also some mushroom stones are classified into the Classic Maya Period, approximately 300 to 600 A.D. (Lowy 1971b).

5. Practical uses.- It has been speculated about the practical use of mushroom stones. Lowy (1971b) appointed theories proposed by archaeologists as land markers, ceremonial seats and altar pieces. However, these effigies are heavy, making them impractical to carry long distances. This same principle is applicable to some of the Taino's cohoba cemís.

#### Hallucinogenic fungi

The distribution of hallucinogenic fungi has been reported for Cuba (Pegler 1987), Jamaica (Dennis 1968), the Dominican Republic (Ciferri 1929), Puerto Rico (Seaver and Chardón 1926; Bor de Garrido 1969; Navarro and Betancourt 1992) and the Lesser Antilles (Pegler 1983). Neotropical hallucinogenic species of *Amanita* Pers. ex Hooker, *Psilocybe* Kumm. and *Panaeolus* (Fr.) Quél. were studied by ethnomycologists, because of their use by Guatemalan and Mexican aborigines during magical-religious rituals (see illustration 2 c) (Lowy 1971a, b; Guzmán 1983). Lowy (1971a) indicated a relationship between the distribution of hallucinogenic mushroom and aboriginal sites. We observed a similar pattern in the distribution of hallucinogenic mushrooms (i.e., *Psilocybe*) and the Antillean archipelago sites where Taino culture developed.

Veloz Maggiolo (1972) and Alegría (1986) indicated that Tainos brought fauna and flora from their commercial exchange with other cultures in Central, and probably South America. It is quite possible that this maritimal trade could explain the appearance of new flora in the Antilles.

A proof of this trade between Indian tribes was informed by

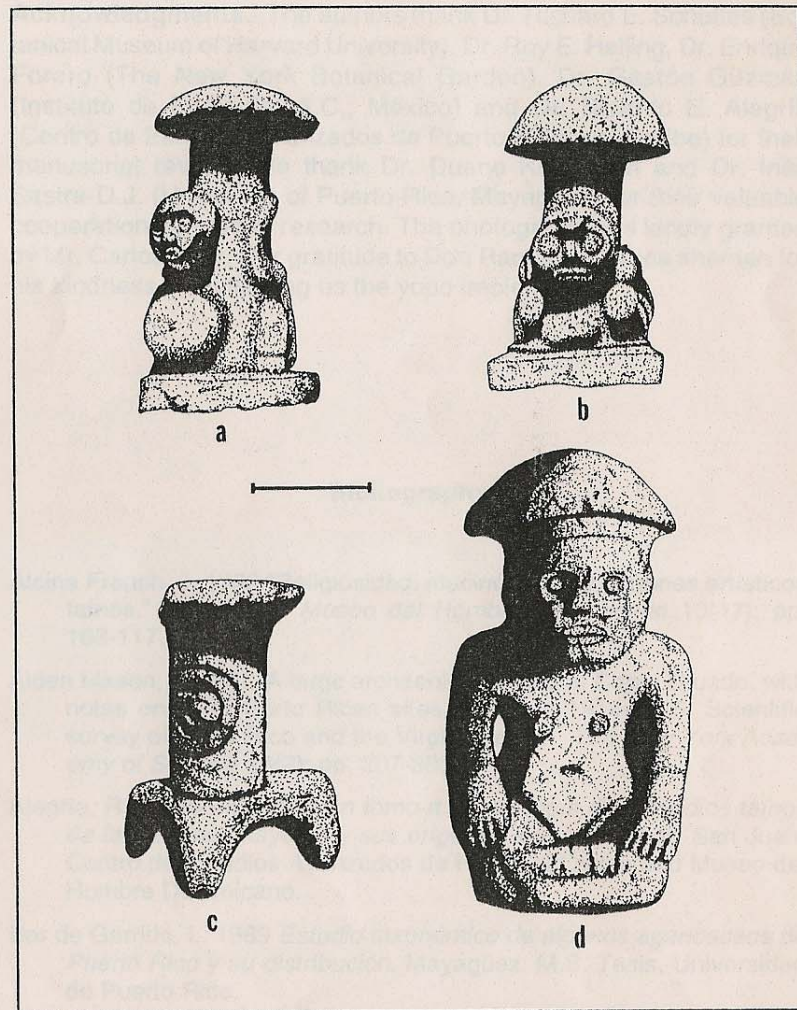


Illustration 4. Mayan mushroom stones. a and b. Pregnancy idols, Guatemala. c. Tripod style, Guatemala. d. Anthropomorphic, Guatemala. Scale bar = 11 cm for a, b and d, and 8 cm for c.

Schultes and Bright (1972). They reported one of the Darien pectorals (from the Darien and Quimbaya Province, Colombia) was obtained during an excavation at the north of Chichén Itzá in the Yucatán Peninsula. This anthropomorphic ornament was made of gold and dates from Pre-Columbian times (c. 500 to 1500 A.D.). The Colombian

effigies evoked morphological similarities along with the Mayan and Taino's mushroom idols.

Studies on extant Amazonian cultures related to Tainos, provides additional clues to the use of hallucinogenic fungi in the Antillean ceremony. In South America, Fidalgo and Prance (1976) reported the use of edible and nonedible fungi among the Yanomamo<sup>17</sup> tribe. Species of *Psilocybe* were registered among them, but no ceremonial use was given.

Another plausible explanation was offered by Guzmán (pers. comm.). He suggested when Europeans conquistadors discovered new routes from the Old World to America, cattle was brought along with them, and perhaps the basidiospores of these higher fungi were also carried to the New World. This is due to the fact that most species of *Psilocybe* and *Panaeolus* grow on equine or bovine dung.

In the first part of this manuscript, we studied the cohoba or yopo ritual. We concluded that cojobana, *Anadenanthera peregrina* and tobacco, *Nicotiana tabacum*, were the only two plant ingredients in the Taino ritual. However, neither documents, nor archaeological evidence to date reveals other plants or fungi used for the ceremony. Nevertheless, we often neglect the secretiveness surrounding some aboriginal rituals. This could explain the lack of historical information regarding the use of hallucinogenic fungi among the Antillean Indians. An example of this are the monolithic collar rings from Puerto Rico (Veloz Maggiolo 1972). They were excavated from different locations on the island, but there was no reference to them in previous historical documents. We can infer that no European had the opportunity to see these collars or their use.

From the sources studied, we can infer the following conclusions: 1. We found morphological similarities along Mayan mushroom stones and Taino's cohoba cemís and potizas. 2. Records have neglected to study the importance of cryptogams, such as fungi, in ceremonial rituals among West Indian aborigines. 3. A possible relationship could be found among the distribution of hallucinogenic flora in the Antilles and Taino's sites.

<sup>17</sup> Also known as Samana or Waika Indians.

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