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The Zenú and the funga: Mushroom representations in pre-Hispanic Colombia goldsmithing

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ABSTRACT

In their article “Ancient gold pectorals from Colombia: Mushroom effigies?” Richard Evans Schultes and Alec Bright gave enough reasons to assure the reader that some goldsmithing pieces exposed mostly in the Museo del Oro located in Bogotá, Colombia that are part of the objects named “Darien Pectorals”, are representations of mushrooms. This is evidence of a mushroom cult that was practiced by the inhabitants of the places where these pieces were produced and found. Some of these pieces are located in private collections and museums all over the world. Such ornaments denominated “Darien Pectorals”, were not limited to a single region. They mentioned in their article that, these ornaments are not confined to one region, although their greatest concentration seems to be in the Sinu country in northwestern Colombia, near the border with Panama's Darien Province. They are found also in the Quimbaya region of Colombia, farther south.” In another part of the article, we find the following: “Interestingly, one such "Darien pectoral" has been found as far north as Chichen Itza in Yucatan, where it undoubtedly found its way as an item of long-distance trade, along with other lower Central American and Colombian gold artifacts.” The purpose of this paper is to contribute to the ethnomycological knowledge of Colombia, continuing what was proposed by Schultes and Bright, reinforcing their ideas with new evidence based on specialized bibliography and regular visits to the Museo del Oro in Bogotá to the Zenú Collection with the purpose of analyzing the pieces and finding indications that may suggest the possible use of hallucinogenic mushrooms by the indigenous culture of pre-Hispanic Colombia.

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Introduction

In the article “ANCIENT GOLD PECTORALS FROM COLOMBIA: MUSHROOM EFFIGIES?” Richard Evans Schultes and Alec Bright give enough reasons to

assure the reader that some goldsmithing pieces exposed mostly in the Museo del Oro located in Bogotá, Colombia (Fig. 1) that are part of the objects named “Darien

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Pectorals”, are in reality representations of mushrooms that also point to a mushroom cult that was practiced by the inhabitants of the places where these pieces were produced and found. Some of these pieces are located in private collections and museums all over the world. Such ornaments, denominated “Darien Pectorals”, are not limited to a single region. (Fig. 2).



Fig 1. Zenú cup with female figure resembling a mushroom. Zenú Culture. Museo del Oro. Bogotá, Colombia. Photo Courtesy of Juan Camilo Rodríguez Martínez.

At the beginning of the article, we read: “these ornaments are not confined to one region, although their greatest concentration seems to be in the Sinu country in northwestern Colombia, near the border with Panama’s Darien Province. They are found also in the Quimbaya region of Colombia, farther south.” In another part of the article, we find the following: “Interestingly, one such “Darien pectoral” has been found as far north as Chichen Itza in Yucatan, where it undoubtedly found its way as an item of long-distance trade, along with other lower Central American and Colombian gold artifacts.”

It is evident that the geographical diffusion of these pectorals all over the American territories was possible because of the cultural and commercial exchanges. It would not be unreasonable to imagine Mayan travelers visiting territories of pre-Hispanic Colombia and having a cultural exchange that involved not only goldsmithing pieces but also mycological knowledge regarding edibility of mushrooms and shamanic practices in spiritual contexts.

Also, the possibility of merchant travelers from Colombia to Mesoamerican territory has to be considered.

These pieces were known at first as “The telephone-bell gods”, the reason being that this is how the researcher Jose Perez de Barradas referred to the circular ornaments present in the upper part of these pectorals in his descriptions. The same author was also the first to suggest that these “Telephone-bells” present in the pectorals are vaguely like a pair of mushrooms. Years later the researcher A. Emmerich in his book “Sweat of the Sun & Tears of the Moon: Gold & Silver in Pre-Columbian Art”, published in 1965, would agree with the comparison of Jose Perez de Barradas. (In a note, Emmerich notes, “I owe it to Mrs. Mary A Light for identifying these ornaments as mushrooms.”

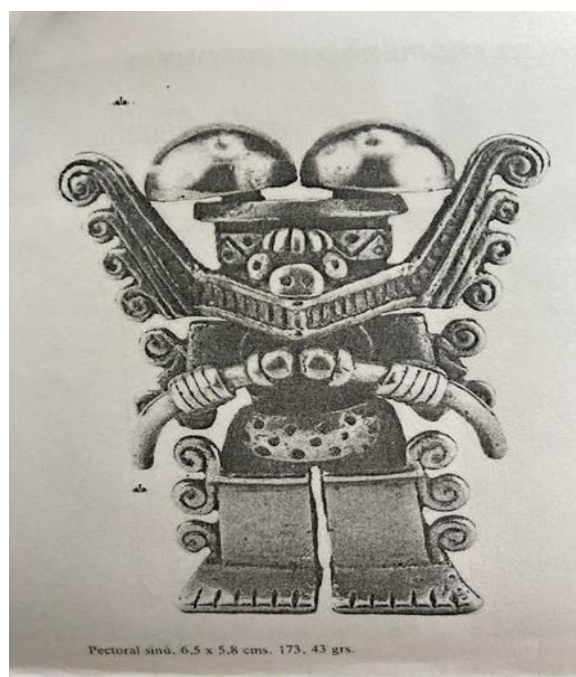


Fig 2. Zenú pectoral that appears in the famous article by Schultes and Bright. We can see what appears to be a pair of mushrooms of the genus *Psilocybe* sp. coming out of the head of this fantastic winged being. The spirals that decorate the piece could be symbolic representations in Colombian pre-Hispanic art of the hallucinatory experience of the shamans’ lives.

Schultes and Bright demonstrate in their article that in effect the golden pectorals exhibited in the Museo del Oro in Bogotá, Colombia are representations of mushrooms. The knowledge of psilocybin-producing mushroom species in Colombia is long-standing and increasing. Not long ago there was a common belief that the only psilocybin-producing mushroom available in Colombia was *Psilocybe cubensis*. The truth about other neurotropic species available in Colombia was only in the possession of the Academy. The access to articles and information was only

possible for members of educational institutions and specialized scientists part of the Academy. In current times attention to mushrooms has crossed academic limits and is a common interest among the Colombian population and the world in general, given current investigations into the medicinal use of psilocybin for helping people who suffer severe depression and anxiety. However, psilocybin-containing mushrooms were available to indigenous pre-Hispanic Colombian tribes. Some of these species are *Psilocybe caerulescens*, *Psilocybe zapotecorum*, and *Psilocybe muliercula*.

Mushroom species belonging to the genus *Panaeolus* and the genus *Gymnopilus* suspected of producing psilocybin are abundant in Colombian territories and reports are increasing according to social media pages. In the present day there are some indigenous tribes in Colombia that still perform ceremonies with psychedelic mushrooms in a spiritual context for religious purposes. Among them the most well-known are the Emberá-Chami. It is important to highlight the point that the Émbera-Chami are located in territories occupied by the Zenú culture of the past.

In the Schultes and Bright paper we read the following: “the field studies of Dr. Gaston Guzman in 1964 and 1971 have indicated that hallucinogenic species of *Psilocybe* occur in Colombia (Guzman and Varela, 1978).” You can also read in this article a letter by eminent Mexican mycologist Gastón Guzmán addressed to the authors: “I agree with you that the South American Indians used hallucinogenic species of *Psilocybe*. I reported 30 species from South America, but I think that there are more, but we need more explorations. Even I think that the Indians from the Atlantic zone and not only those of the Andes used the hallucinogenic mushrooms”. Next to the letter you read the following written by Schultes and Bright: “The recent field work of Dr. Kenneth Dumont has resulted in the registration from Colombia of other species of *Psilocybe*, a number of which may likewise be psilocybine-containing (Dumont, pers. comm.).

Something very interesting about this paper is how the authors relate the wings present on the golden pectorals with the shamanic fly attained after the ingestion of the entheogenic mushrooms. The relationships that are established between the shamans and different animals that represent the hallucinogenic experience such as birds, frogs, and toads are brilliantly recounted. The above is a very common theme in anthropological studies referred to as Totemism. These relationships between shamans and animals have been present since ancient times in many cultures all over the world. The shaman, after ingesting the entheogen, becomes one with his own protective animal spirit.

With every day that passes reports about mushrooms belonging to the genus *Psilocybe* increase all around the Colombian territory. Species like *Psilocybe caerulescens*, *Psilocybe zapotecorum*, and *Psilocybe hoogshagenii*, among others, support the idea that neurotropic mushrooms were available in Colombian territories to indigenous cultures before the arrival of the Spanish conquistadors and have been used in religious practices with spiritual purposes since pre-Hispanic times.

The reports of species that could be new *Psilocybe* species to science never documented before by the academy and endemic to Colombia is a plausible possibility and we cannot discard the distribution of endemic psilocybin-producing mushrooms in Colombian territories including other genera such as *Gymnopilus*, *Inocybe*, *Pluteus*, and *Panaeolus*.

Materials & Methods

The purpose of this paper is to contribute to the ethnomycological knowledge of Colombia, continuing what was proposed by Schultes and Bright, reinforcing their ideas with new evidence based on specialized bibliography and visits to the Museo del Oro in Bogotá to the Zenú Collection with the purpose of analyzing the pieces and finding indications that may suggest the possible use of hallucinogenic mushrooms by the indigenous culture of pre-Hispanic Colombia.

Results

An Analysis under the magnifier of Ethnomycology of the book “El Oro del Gran Zenu” by Ana María Falchetti

Ana María Falchetti is an eminent researcher in Colombian anthropologic academic circles. She is the authority regarding goldsmithing done by pre Hispanic indigenous tribes in Colombia. Schultes and Bright asked for her help in when writing the article already mentioned: “ANCIENT GOLD PECTORALS FROM COLOMBIA: MUSHROOM EFFIGIES?”

In this chapter, an analysis is made under the magnifying glass of ethnomycology of the book “EL ORO DEL GRAN ZENÚ: Metalurgia prehispánica en las llanuras del Caribe Colombiano” by Ana María Falchetti THE GOLD OF THE GREAT ZENÚ: Pre-Hispanic metallurgy in the Colombian Caribbean plains, published in 1995. It is a masterpiece on the subject of goldsmithing in Colombia and a very comprehensive study of the pieces that belong to the Zenú Culture that are guarded in the Museo del Oro in Bogotá and in other museums and private collections in various parts of the world.



Fig 3. Zenú outlined anthropomorphic pendant. (Darién Pectoral)

It is noteworthy that the author never mentions the word mushrooms in this book despite having collaborated on the article published by Schultes and Bright. We will proceed to identify artistic details that suggest mushrooms in the pieces analyzed in the book without making the mistake of seeing mushrooms everywhere, as usually happens in this type of ethnomycological research.

The photos published in this chapter are all from that book and the authorship of Ana María Falchetti (Figs. 3-15).



Fig 4. Zenú zoomorphic Pectoral Detail (In the middle of the eyes you can see a figure that resembles the shape of a mushroom).



Fig 5. Zenú zoomorphic pectoral (The raised circles may also be representations of the caps of the mushrooms. The mushroom also seems to sprout from the middle of its head).

The Spiral as a symbolic representation in pre-Columbian art of the hallucinatory experience

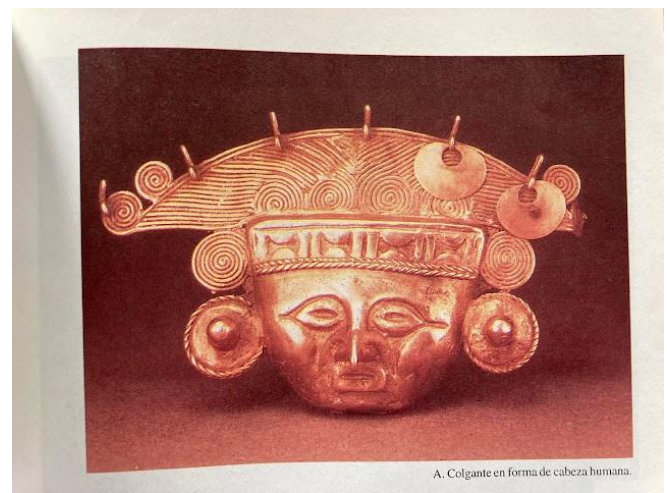


Fig 6. Zenú pendant in the shape of a human head.

A common motif in pre-Hispanic indigenous art is the use of the spiral. This motif is frequent in the different artistic expressions typical of the American Indian culture. R. Gordon Wasson was the first to propose the use of the spiral as a symbolic representation of ‘mushrooms’ in the pre-Hispanic indigenous art of Mesoamerica (Wasson 1980).

The spiral could also be interpreted as a symbolic representation in pre-Columbian art of the hallucinatory experience.



Fig 7. Zenú golden cane head

In the shamanic system present in many cultures the relationships established between the shaman, the entheogen (at the time of consumption of preparations of sacred plants or mushrooms), and a protective animal or totem, which can also be a great protective spirit or an object of nature, are well known. Among some indigenous communities in the Amazon, it is believed that after drinking yagé, shamans transform into jaguars.

Relating the hallucinatory vision that the shaman experiences with his different animal transformations and the spiral in several indigenous artistic representations makes sense when we think about the shape of the serpent and its relationship with entheogens and spirals. The spirals instead of eyes in representations of humans and animals can also be interpreted as the hallucinatory experience in art.

In the Zenú culture the spiral is very common in all its goldsmith artistic manifestations.

Gold instruments, pectorals, sex covers, among many other pieces are part of the legacy of Zenú goldsmithing. Many of these artistic expressions include the spiral.

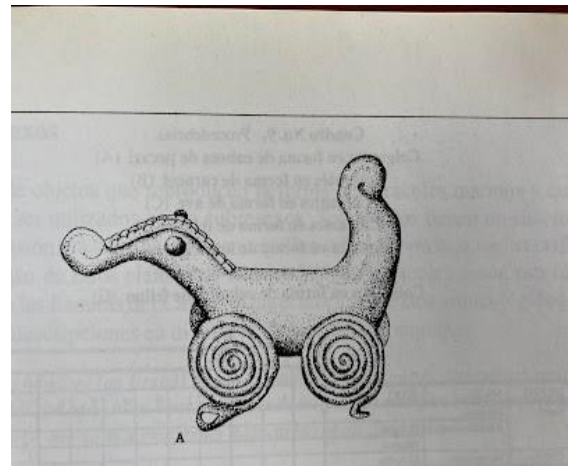


Fig 8. Zenú pendant in the shape of an Anteater

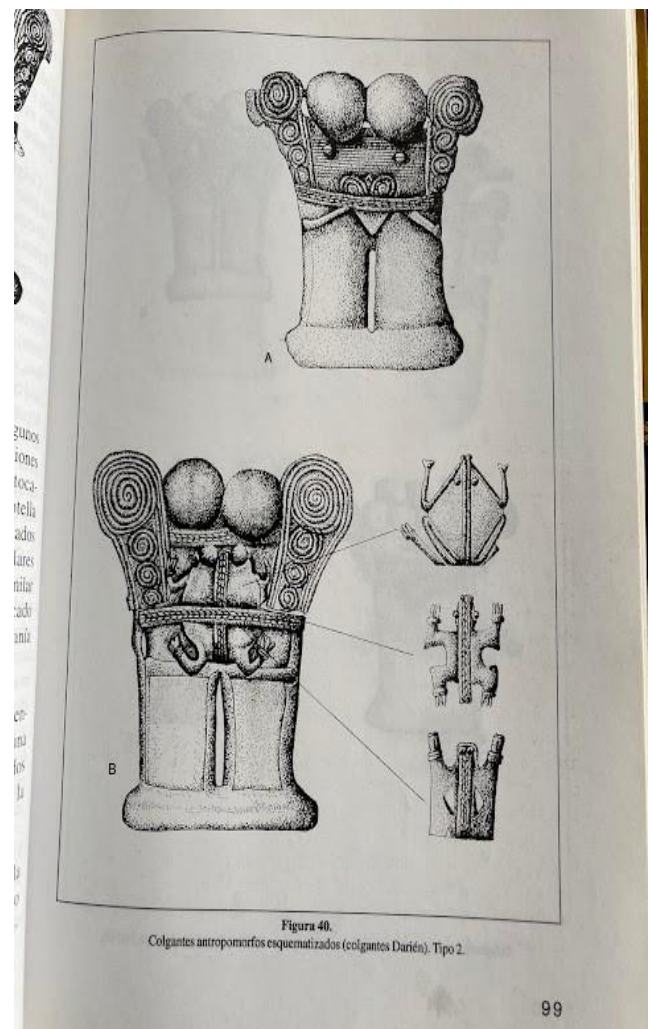


Fig 9. Zenú schematic anthropomorphic pendants. (Darién Pectorals).

Mushrooms emerging from the head?

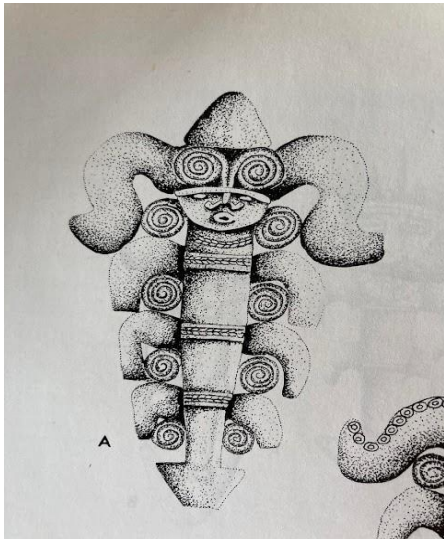


Fig 10. Zenú pendant with bifurcated headdress

One can easily make the mistake of interpreting everything that is seen as mushrooms, but it is not superfluous to do the exercise of detecting certain artistic indications that suggest the use of mushrooms and propose them as possible depictions of them in Colombian pre-Hispanic indigenous art.

Not only among the Zenú goldsmiths do we see forms coming out of the heads of the pieces full of spirals that probably represent the hallucinogenic vision of the shaman, but we also find them in different pieces from the Museo del Oro in Bogotá, Colombia, belonging to pre-Hispanic indigenous cultures such as the Calima, the Muisca, and the Tayrona.

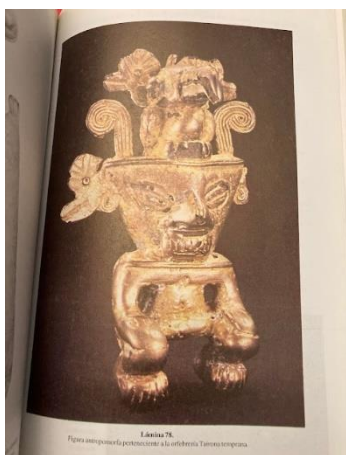


Fig 11. Anthropomorphic figure belonging to early Tayrona goldsmithing.

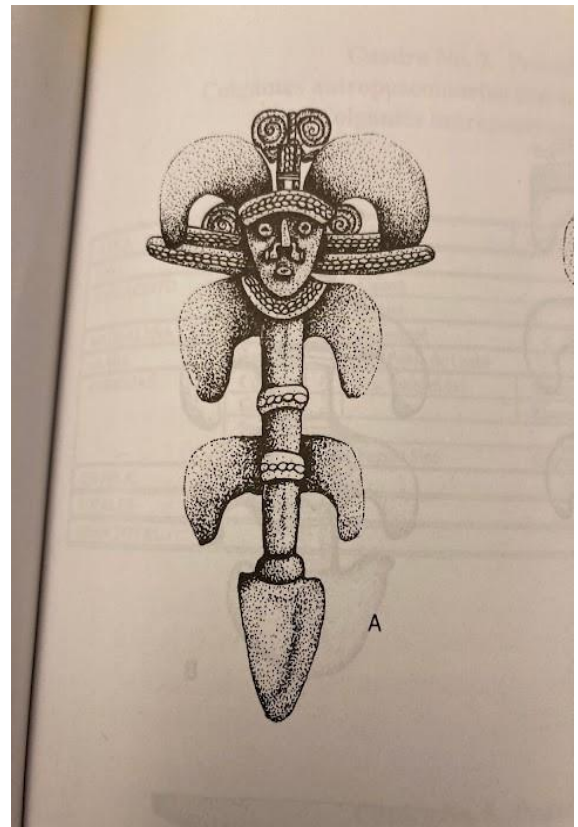


Fig 12. Zenú schematic anthropomorphic pendant (Darién pectoral).

The possible artistic representation of mushrooms is proposed in some of the pieces exhibited in this article where certain ornamentations seem to sprout from the heads of the zoomorphic and anthropomorphic goldsmith objects as part of the Zenú goldsmithing art manifestations.

These specific artistic details should be investigated in greater depth in other manifestations of South American pre-Hispanic goldsmithing. It could be stylized mushrooms emerging from the heads of the different pieces.

Ethnomycological investigations carried out in Peru and Ecuador are promising. Interdisciplinarity must be present in this type of research.

A connection between the mushroom cults practiced by different pre-Hispanic American indigenous cultures before the arrival of the Spanish conquistadores cannot be ruled out. This connection could be traced in the different mythological cycles of the pre-Hispanic indigenous cultures, as well as among the artistic manifestations related to the cosmogony of these ancient peoples.



Fig 13. Zenú anthropozoomorphic pendant with bifurcated headdress.

Some of these pieces, when their position is inverted, also suggest a mushroom.

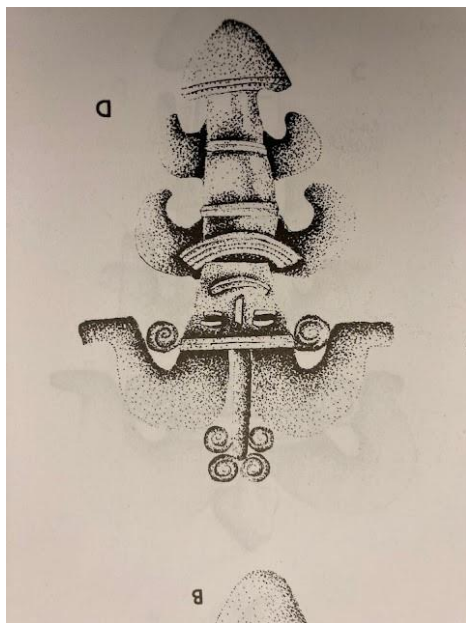


Fig 14. Zenú anthropozoomorphic pendant with forked headdress. When its position is inverted, a shape that resembles a mushroom can be observed.

Conclusions

The investigations presented in this book show that apparently what is called Zenú Goldsmithing was produced by the Zenú and another ethnic group different from the Zenú called the Malibú with certain similarities to the Zenú

but also with its own traits and characteristics that made it an independent tribe.

The first to propose uses of mushrooms by the Zenú Culture were Schultes and Bright. The Malibú tribe is also a strong candidate for having used neurotropic mushrooms in shamanic contexts. The cultural exchange could have allowed the expansion of knowledge in all the territories covered as well as the different trade practices that allowed the interaction of different ethnic groups. More research around this topic is needed.

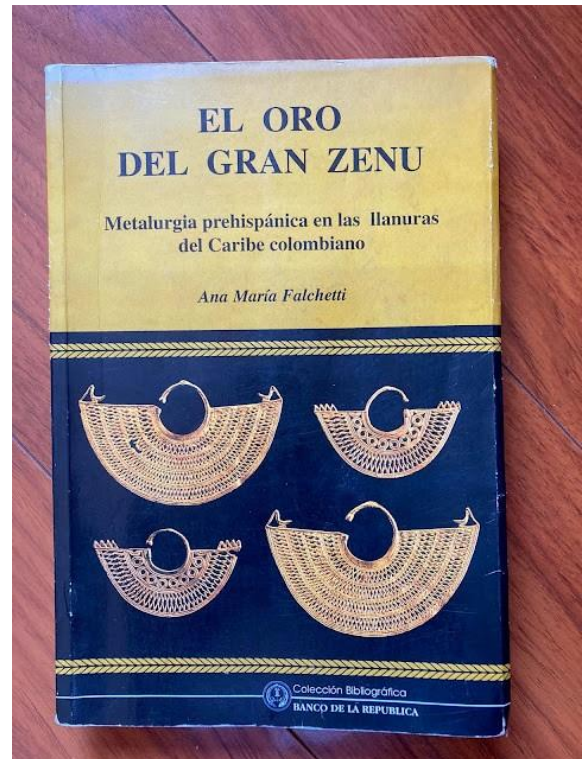


Fig 15. EL ORO DEL GRAN ZENU: Metalurgia prehispánica en las llanuras del Caribe Colombiano / THE GOLD OF THE GREAT ZENU: Pre-Hispanic metallurgy in the Colombian Caribbean plains by Ana María Falchetti.

A Visit to Museo del Oro in Bogotá, Colombia



Fig 16. Zenú golden bat.

There are so many pieces exhibited in the museum that each visit means a new discovery for the researcher who will notice pieces and details that could have gone unnoticed on previous visits to the place.



Fig 17. Zenú pendant (Darién Pectorals). Photo: Courtesy of Juan Camilo Rodríguez Martínez.



Fig 18. Shaman golden mask. Photo: Courtesy of Juan Camilo Rodríguez Martínez.

The Zenú nose rings

On this occasion, the nose rings made by the Zenú master goldsmiths attracted my attention since there are ornamental details in them that recall the shape of a mushroom. It is just a suggestion. (Fig. 19 and 24).



Fig 19. Zenú golden nose ring. Photo: Courtesy of Juan Camilo Rodríguez Martínez.

The ends of the pieces show ornamentation that, in addition to containing the shape of the mushroom, also sometimes expresses the spiral, which can be a symbolic representation of the hallucinatory experience as said.

On August 18, 2022, a visit was made to the Museo del Oro to personally inspect the Zenú pieces. In addition to having the opportunity to observe some of the objects that appear in the articles and books used in the preparation of this writing, other pieces caught my attention. (Figs. 16-18).



Fig 20. Zenú golden nose ring detail. Photo: Courtesy of Juan Camilo Rodríguez Martínez.

Could these objects have been used in rites involving neurotropic fungi in spiritual contexts for religious purposes?



Fig 21. Zenú golden nose ring. Photo: Courtesy of Juan Camilo Rodríguez Martínez.



Fig 22. Zenú golden nose ring detail. Photo: Courtesy of Juan Camilo Rodríguez Martínez

This mushroom-shaped ornamentation is recurrent in the nose rings of the Zenú culture exhibited in the museum

Are these nose rings representations of mushrooms?



Fig 23. Zenú golden nose ring. Photo: Courtesy of Juan Camilo Rodríguez Martínez.



Fig 24. Zenú golden nose ring detail. Photo: Courtesy of Juan Camilo Rodríguez Martínez.

Final Considerations

On the monumental book “Plants of the Gods” by Albert Hofmann, Richard Evans Schultes, and with a new edition revised and augmented by Christian Ratsch specialized in entheogens the authors dedicate a few lines to the Darien pectorals and their relationship with a possible use of mushrooms in rituals. And the following can be read: "In Colombia, many anthropomorphic gold pectorals with two domelike ornaments on the head have been found. They are in the so-called Darien style, and the majority of them have been unearthed in the Sinú area of northwestern Colombia and in the Calima region on the Pacific coast. For lack of a better term, they have been called "telephone bell gods," since the hollow semispherical ornaments resemble the bells of old-fashioned telephones. It has been suggested that they represent mushroom effigies. The discovery of similar artifacts in Panama and Costa Rica and one in Yucatán might be interpreted to suggest a prehistoric continuum of a sacred mushroom cult from Mexico to South America." (Schultes et al., 2006)

The latest evidence suggests that the indigenous tribes that inhabited the Colombian territories, which currently occupy the departments of Córdoba and Sucre in pre-Hispanic Colombia, were repositories of an ancestral mushroom tradition that was probably practiced throughout the whole American territory from northern America to Argentinian Patagonia. Worldwide evidence clearly shows the various mycophobic attitudes present in the history of humanity, the above also could have been adopted in parts of the American territory presenting indigenous cultures that rejected and avoided mushrooms. This should not be discarded in future ethnomycological studies. More research is necessary.

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References

- Caridad, C. de G. M., Restrepo, S. R., Franco-Molano, A. E., Emiliana, C. T. M., Estupiñán, N. V. (2012). *Biología de Hongos*. Bogotá: Universidad de los Andes, Facultad de Ciencias, Departamento de Ciencias Biológicas.
- Falchetti, A. M. (1995). *El Oro del Gran Zenu: Metalurgia prehispánica en las llanuras del caribe colombiano*. Bogotá: Banco de la República, Museo del Oro.
- Guzmán, G., Varela, L. (1978). Los hongos de Colombia - III. Observaciones sobre los hongos, líquenes y mixomicetos de Colombia. *Caldasia*, 12(58), 309–338.
<https://revistas.unal.edu.co/index.php/cal/article/view/34451>
- Herrera, T., Ulloa, M., Oronoz, R.M. (2013) *El reino de los Hongos: Micología Básica y aplicada*. México: Fondo de Cultura Económica.
- Perez de Barradas. J., *Orfebrería Prehispanica de Colombia: Estilo Calima* Graficos Jura, Madrid (1954).
- Plazas de Nieto, C., Falchetti, A. M. (1982). El legendario Zenú. *Boletín Museo Del Oro*, (12), 20–33. Recuperado a partir de <https://publicaciones.banrepcultural.org/index.php/bmo/article/view/7310>
- Pulido, M. (1983). *Estudios en agaricales colombianos: los hongos de Colombia 9*. Bogotá: Universidad Nacional de Colombia.
- Schultes, R. E., Bright, A. (1979). Ancient Gold Pectorals from Colombia: Mushroom Effigies? *Botanical Museum Leaflets, Harvard University*, 27(5/6), 113–142.
- Schultes, R. E., Hofmann, A., Rättsch, C. (2006). *Plants of the gods: Their sacred, healing and hallucinogenic powers*. Rochester, VT: Healing Arts Press.
- Torres, C. M. (2004). Los colgantes darién: ¿Evidencia para el uso de hongos visionarios en los Andes Septentrionales?. *Cultura Y Droga*, 9(11), 47–62. Recuperado a partir de <https://revistasojs.ucaldas.edu.co/index.php/culturaydroga/article/view/5922>
- Valencia, M.C. de, Ceballos, J.A. (2002) *Hongos liquenizados*. Bogotá: Universidad Nacional de Colombia.
- Wasson, R.G. (1980) *The wondrous mushroom: Mycolatry in Mesoamerica*. New York: McGraw-Hill.