



The entheomycological origin of Egyptian crowns and the esoteric underpinnings of Egyptian religion

Stephen R. Berlant*

P.O. Box 54, Broomall, PA 19008, USA

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Abstract

In this paper, I theorize that the Egyptian White and Triple Crowns were originally primordia of the entheogenic *Psilocybe (Stropharia) cubensis*, which an Egyptian tale known as *Cheops and the Magicians* allegorically explained grew on barley, and that Osiris was the God of spiritual rebirth because he personified this and other entheogenic mushrooms. I go on to theorize that the plant known commonly as the Eye of Horus, which the Egyptians included in cakes and ales designed to spiritually rebirth the living and the dead, was an entheogenic mushroom cap entirely analogous, if not identical, to Soma. Finally, I explain why so many scholars failed to discern these identities and relationships for so long.

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1. Introduction

Ethnopharmacology was derived from the Greek words *ethnos* for people and *pharmacology* for the characteristics, properties, and effects of a drug. Accordingly, *ethnopharmacology* is, by definition, as much a social science as it is an experimental science, in that it is concerned with the way people used and continue to use drugs derived from plants.

Ethnopharmacologists must therefore often rely as much on the methods and materials historians, archaeologists, and various other specialists use to study a culture as they do on the more rigid methods and materials clinical and experimental pharmacologists use to study a culture's drugs. In fact, when the drugs in question are those of an ancient culture, ethnopharmacologists must often rely to a far greater extent, and in some cases solely, on that culture's literature and art, than on scientifically derived data.

This is particularly true if the drugs in question were used in an ancient culture's religious rituals, for such rituals were typically performed covertly, as the following passage of the *Egyptian Book of The Dead* (Budge, 1969a,b) makes clear:

And you shall perform these ceremonies secretly in the Tuat-chamber of the tomb, for they are mysteries of the Tuat, and they are symbolic of the things which are done in Khert-Neter. . . Let no stranger anywhere have knowledge of it. Do not speak about it to any man. Do not repeat it. Let no [other] eye see it. Let no [other] ear hear it. Let no one see it except [thyself] and him who taught [it to thee]. Let not the multitude [know of it] except thyself and the beloved friend of thy heart.

Moreover, this is particularly true when the drugs in question were used in the ancient Near East, for paleobotanical evidence from this region is remarkably rare (Merlin, 2003).

Nevertheless, the literature and art of many ancient Near Eastern cultures have shed a great deal of light on the way members of these cultures used drugs recreationally, medicinally, and religiously. For example, *La droga en el Antiguo Egipto* noted pictures of the following psychoactive plants on the tomb walls of Egyptian Pharaohs and their bureaucrats: (1) the lotuses *Nymphaea alba* and *Nymphaea caerulea*, which contain the psychoactive alkaloid apomorphine; (2) *Lactuca verosa*, a substitute for opium with mild hypnotic effects; (3) the poppy *Papaver somniferum*, from which opium is, of course, extracted.

It is therefore not surprising that ancient Egyptian priests were designated by the Egyptian word *sem* for plants, or that these priests contemporaneously served as physicians—for the Egyptians, like all ancient peoples, believed that health and dis-

* Tel.: +1 610 353 1340.

E-mail address: berlant@comcast.net.

ease could be attributed to the actions of Gods. However, unlike the modern, Western medical practice of prescribing drugs for an afflicted person to take, an ancient Egyptian physician-priest would often himself take a drug that would presumably allow him to commune with the Gods on behalf of the afflicted person, and he would often administer drugs to spiritually rebirth, or even physically resurrect, the dead. Hence, Egyptian medicine and religion were inseparable.

In fact, since Egyptian physician-priests apparently had a considerable amount of expertise in the medico-religious use of botanicals, especially in the pursuit of immortality, it is not surprising that Medieval alchemists, whose occult religious pursuit of immortality ended up fathering pharmacology, were extremely interested in Egyptian religion, to the extent that our word *chemical* can ultimately be traced back through *alchemy* to the Greek word *Khemia* for Egypt. Heinrich (2002) presented a great deal of iconographic and textual evidence supporting his theory that the alchemical pursuit of immortality originally revolved particularly around the covert ingestion and investigation of the *Amanita muscaria*, and possibly the *Psilocybe cubensis*, just as Wasson (1968) presented a great deal of evidence that the ancient Hindu pursuit of immortality originally revolved around the covert ingestion of the *Amanita muscaria*, and later perhaps the *Psilocybe cubensis*, ostensibly as the deity Soma. Similarly, Graves (1960) and Ruck et al. (2001) presented a great deal of evidence supporting their theories that ancient Greek religion once revolved around the ingestion of the *Amanita muscaria* and, perhaps ergot, just as Wilson (2001) presented a great deal of evidence supporting his theory that Celts ingested the *Amanita muscaria* in their religious practices.

Indeed, Puharich (1959), a U.S. Army psychiatrist working at a chemical and biological warfare center in Maryland, claimed, on seemingly spurious grounds, that the ancient Egyptians used the *Amanita muscaria* to relieve pain and induce out-of-body experiences, and the U.S. government considered these claims important enough to spend many years investigating them.

It was subsequently learned that the ibotenic acid in the *Amanita muscaria* is an analogue of glutamic acid, which acts on nerve endings to effect analgesia, and that drying converts the ibotenic acid into muscimol, an analogue of GABA, which can indeed relieve pain. This paper examines the hypothesis that the ancient Egyptian practice of communing with their Gods, particularly in the pursuit of immortality, may have once revolved around the covert ingestion of the *Amanita muscaria* and *Psilocybe cubensis* in the hope that the positive results reported will be deemed interesting enough to prompt other studies of the subject.

2. Materials and methods

A variety of the ancient Egyptian texts and artworks are examined in view of the hypothesis that many Egyptian symbols were originally designed to represent entheogenic mushrooms, and Wasson's theory that a significant portion of the Rg Veda esoterically refers to *Amanita muscaria* and, perhaps, *Psilocybe cubensis* ingestion. As Merlin (2003) noted in his study of the ancient use of psychoactive plants, all such evidence is subject

to interpretation and reconstruction, and disagreement may arise concerning the represented species. However, a lack or scarcity of evidence, in this case paleobotanical, does not necessarily mean that the depicted plants were absent.

3. Results

Fig. 1 shows the striking resemblance one typical and two anomalous Egyptian White Crowns, or *hedjeti* (Fig. 1B–D), bear to the pin-stage primordium of the *Psilocybe (Stropharia) cubensis* (Fig. 1A). This mushroom is considered an entheogen (<Gk. *entheos* 'filled with God' + *gen-* 'to make') (Ruck, 1979), because the psychotropic chemicals, psilocybine and psilocin, it contains are known for leading people to believe, among other things, that they are divine and immortal.

Accordingly, there are grounds for believing that the Pharaohs – who also served as high *sem*, or herbal, priests – were essentially shamanic herbalists, whose well-documented belief in their own divinity and immortality was induced by *Psilocybe cubensis* ingestion, and that these monarchs then paid homage to the *Psilocybe cubensis*, first by wearing various stages of it on their heads and, later, by wearing representations of those stages as crowns.

This identification can also explain why, for instance, an Egyptian artist cross-hatched areas of the White Crown on an 11th Dynasty tomb wall at Deir-el-Bahari (Navelle, 1910; Abubakr, 1937) (Fig. 1B) in a way that caused its top, or handle, to correspond precisely to the head and necklace of a *Psilocybe cubensis* primordium (Fig. 1A), while an Egyptian sculptor flattened the lower part of the bulb, or handle, of pharaoh Sesostri I's White Crown (Fig. 1D) in a way that caused it to strikingly resemble a *Psilocybe* cap emerging from its primordium. Hence, Abubakr (1937), in his extensive work on Egyptian crowns, was prompted to describe Sesostri I's crown as "pilzartige Form" (mushroom-shaped), though Abubakr did not realize just how appropriate his characterization of this crown was or the reason for the crown's heretofore enigmatic shape.

In addition, this identification can explain why the so-called Triple Crown (Fig. 2B), or *hemhem*, strongly suggests it was designed to represent a cluster of *Psilocybes* (Fig. 2A and B), while the hieroglyph for the Egyptian Double Crown, known as the *shmtj* or *pschent*, comprising the White and the Red Crowns, was determined by two plants, and \ddagger , each obviously intended to represent one of these crowns.

It is generally believed that the Red Crown represented Lower Egypt, the White Crown Upper Egypt, and the Double Crown the unification of these regions under King Narmer. However, Wainwright (1923) presented evidence that the Red Crown may have actually originated in Upper Egypt.

In any event, no theory has explained what either the Red or the White Crown was designed to represent, why both crowns were determined by plants, or why an enigmatic inscription in the tomb of the Fourth Dynasty Pharaoh Unas clearly states, "He has eaten the Red Crown, He has swallowed the Green One [and] delights to have their magic in his belly." (Faulkner, 1998, Utterance 274).

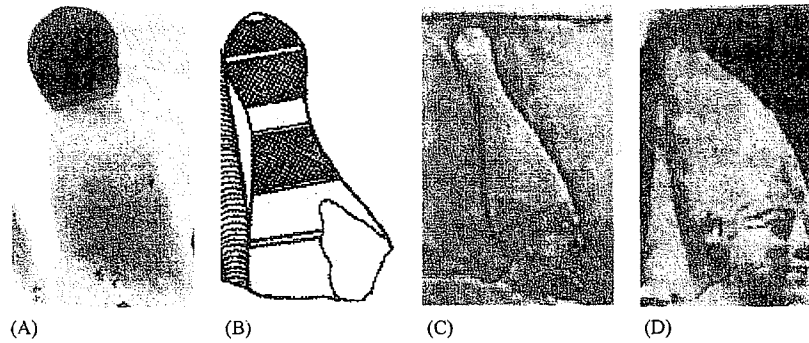


Fig. 1. (A) Pin-stage primordium of *Psilocybe cubensis* strikingly resembling (B) anomalous White Crown on an 11th Dynasty tomb wall at Deir-el-Bahari (Naville, 1910; Abubakr, 1937); (C) King Narmer's White Crown; (D) Pharaoh Sesostri I's anomalous White Crown (Evers, 1929).

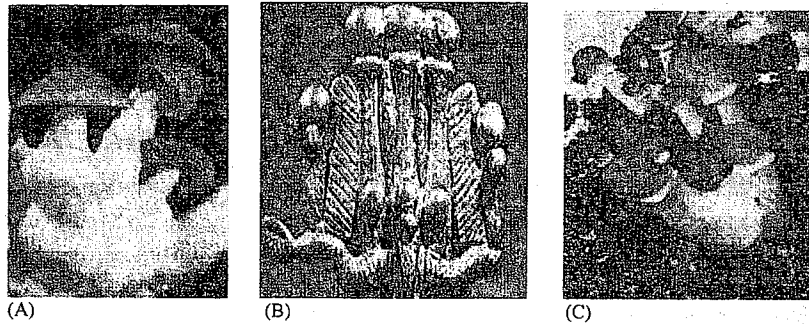


Fig. 2. Different stages of *Psilocybe cubensis* primordia (A and C) represented by the Triple Crown, or *henhem* (B).

Lefebvre (1949) theorized that the Red and the Green Crowns, or *wadjet*, were the same crowns because the Egyptian word for green referred to things that were fresh, young, and prosperous, in agreement with the botanical nature of the Double Crown's determinant. However, considering the Egyptian practice of using green to signify plants (Wilkinson, 1994) in view of: (1) the evidence that the White Crown was originally designed to represent a *Psilocybe cubensis* and (2) the Egyptian practice of personifying the White Crown as Osiris who, as for reasons discussed below, was often painted green (Fig. 22), the Green Crown could have also, or alternatively, been another name for the White Crown.

In any case, Egyptologists have interpreted the above statement as a metaphorical reference to, for example, Upper Egypt swallowing Lower Egypt, whereas these statements can and should have been taken literally, particularly considering that the practice of wearing edible plants, especially psychotropic ones, as headdresses was widespread in antiquity. For example, Fig. 3 depicts: (1) the head of a Greek deity, often identified as Demeter, wearing a crown depicting the poppy capsules that yield opium; (2) two versions of the Egyptian Nile God Hapi, one wearing a papyrus crown and the other psychotropic lotus flowers (Emboden, 1978); (3) a Hawaiian helmet sporting mushrooms that Hoffman (2002) argued were entheogenic.

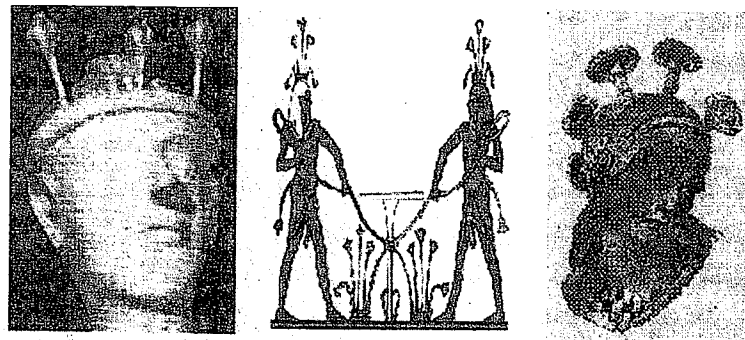


Fig. 3. (Left) Greek deity, often identified as Demeter, wearing a crown bearing the poppy capsules that yield opium. (Center) Two versions of the Egyptian Nile God Hapi, one wearing a papyrus crown and the other wearing entheogenic lotus flowers. (Right) Hawaiian helmet sporting mushrooms that Hoffman (2002) identified as entheogenic species.



Fig. 4. (Left) Glyphs of mushroom-crowned humanoids on cliffs in Chukchi region of Russia. (Right) Pictures of similarly crowned beings carrying mushrooms on cave walls in the Tassili N-Ajjer region of the Sahara.

Dikov (1971) found petroglyphs of humanoid figures wearing strikingly similar, mushroom-like headdresses high on a cliff in Chukchi Eskimo territory (Fig. 4, left), where the word for intoxication literally means “bemushroomed” (Wasson, 1968), and glyphs of similarly crowned figures carrying mushrooms were found in the Tassili-N-Ajjer region of the Sahara (Fig. 4, right) from which people may have migrated eastward to Egypt to escape the region’s desertification. Although this region is currently arid, between 10,000 and 5500 BPE, during which this art was produced, the region had large lakes and forests, which included conifers and oaks. It can therefore be inferred that some of the mushrooms in this art were *Amanita muscaria*, which typically grow in mycorrhizal relationship with these trees and birch.

In fact, not too far from these Saharan glyph is one of a dancer whose head and neck seemingly comprise a primordial *Amanita muscaria* (Fig. 5B) (Samorini, 1992), and a glyph of a humanoid bee (Fig. 5A), who appears to be a shaman, covered with mushrooms (McKenna, 1992; Samorini, 1992), which Lhote (1973) interpreted as oars, and Mori (1975) as flowers. Of particular interest here is the pharaoh’s use of the bee to symbolize that they were “bee-kings.”

Still another Saharan glyph depicts a humanoid figure that appears to be defecating mushrooms that Samorini (1992) interpreted as *Psilocybes* based on this mushroom’s coprophilia. However, this glyph may have been specifically designed to suggest that the depicted person was defecating the remains

of previously ingested *Psilocybes* that would again grow into *Psilocybes*. In any case, Samorini (1992) concluded from these paintings that “there are at least two species [of mushrooms] one of which is small and topped with a ‘papilla’ (a characteristic it would share with most known hallucinogenic *Psilocybes*) and the other of which is larger (like *Boletus* or *Amanita*).”

Egyptologists have unanimously believed that the ancient Egyptians neither had nor ingested mushrooms, let alone entheogenic species. But the Egyptian climate, like the Sahara’s, was far moister in prehistory than it is today, and Fig. 6 shows Egyptian glyphs depicting humanoid figures with mushrooms growing from their heads and ears that strikingly resemble pots from Mexico shaped like people with mushrooms growing from their ears (Schultes and Hoffman, 1992).

These Egyptian glyphs, catalogued by Winkler (1938–1939), were found at El Hosh, in the Upper Egyptian region associated with the White Crown, not too far from which are other glyphs (Fig. 7) that can now be fairly reliably identified as phallic stage *Psilocybes* emerging from their primordia.

This identification can also more than adequately explain why the White and Triple Crowns were often worn on ram or cattle horns (Fig. 2B): *Psilocybes* tend to grow on the manure ruminants deposit in pastures, and the horns were evidently intended to suggest that these ruminants carried *Psilocybes* in their digestive systems. The Egyptians therefore sanctified the dung beetle, or scarab, for the apparent wisdom it showed rolling this manure into balls, from which *Psilocybes* would then often emerge.

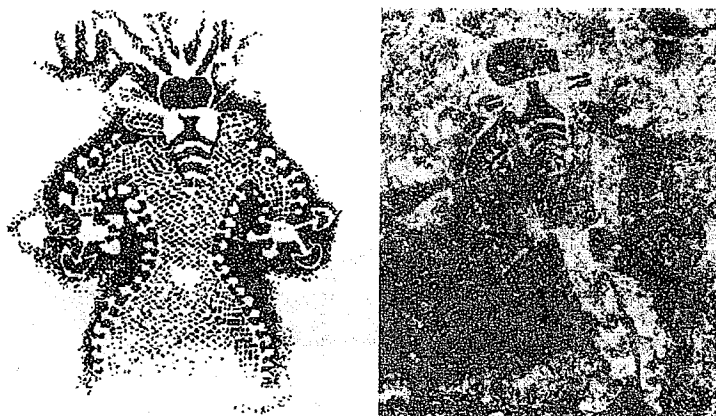


Fig. 5. (Left) Neolithic drawing of bee-headed humanoid from Tassili region of the Sahara. (Right) Mushroom-headed dancer from the same region.



Fig. 6. (Left) Glyphs of beings with primordial mushrooms growing from the top of their heads and ears from El Hosh, Upper Egypt. (Right) Mexican pottery depicting people with mushrooms growing from their ears (Schultes and Hoffman, 1992).

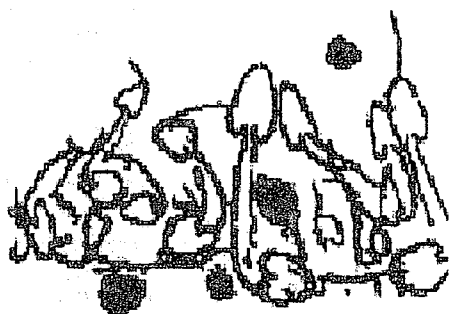


Fig. 7. Glyphs of phallic Psilocybes emerging from their primordia at El Hosh, Upper Egypt, the region the White Crown was associated with.

The Egyptians then associated this beetle with the sun, apparently because Psilocybe ingestion typically causes people to see the world bathed in or emitting a bright, white or golden, mystico-religious light, while Egyptian artists often depicted the scarab pushing the sun across the sky, and Psilocybe caps as miniature suns.

A well-known principle of sympathetic magic held in antiquity, as it still does in some tribal societies, that the spirit of a food is ingested along with the food, and subsequently manifests itself in the eater: for example, members of many tribal

societies believe that eating lion meat will make them strong like the lion, whereas eating rabbit meat will make them fast, or timid, like the rabbit. Accordingly, the ancient Egyptians who perceived this mystico-religious light after ingesting Psilocybes would have, and apparently did, attribute the phenomenon to the ingestion of the mushroom's indwelling light, hence solar, spirit, in full agreement with Spess's (2000) belief that entheogenic plants were anciently regarded as repositories of a divine light. By the same principle, these people would have also attributed that light to the manure from which the Psilocybes seemingly emerged, especially because the manure released light when burned.

Egyptian iconography is therefore loaded with many other structures that were clearly designed to depict mushrooms, though Egyptologists, for reasons explained below, have failed to identify these structures as mushrooms. Perhaps nowhere is this failure more evident than in the case of Egyptian ear studs, such as those depicted in Fig. 8. According to The Boston Museum of Fine Arts Catalogue (1982) depicting these studs, and Aldred's (1971) analysis of similar studs, they obviously resemble mushrooms. Yet, no explanation for this resemblance was given in these works, implying that it must be coincidental.

On the contrary, the resemblance can be explained far more instructively by recognizing that studs A and E evoke the image

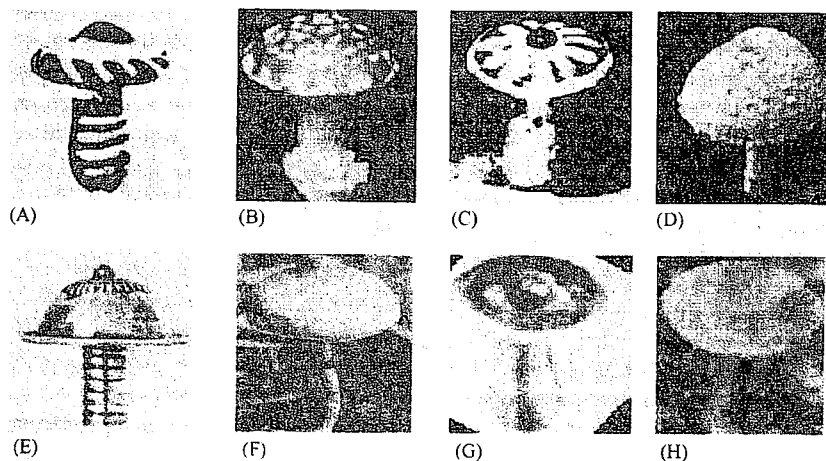


Fig. 8. 18th–19th Dynasty Egyptian ear studs (A, C, E, and G) were evidently designed to stylize the entheogenic *Amanita Pantherina* (B), *Amanita Muscaria* (D and H) and *Psilocybe (Stropharia) cubensis* (F) mushrooms.

of the entheogenic *Amanita pantherina* (Fig. 8B) and *Amanita muscaria* (Fig. 8D and H), typically found along the coast of North Africa (Festi and Bianchi, 1991), while stud E evokes the image of the coprophilic, gold-capped *Psilocybe (Stropharia) cubensis* (Fig. 8F). More specifically, the marginal whorl on the cap of stud A and the large rosette on the cap of stud C were evidently designed to suggest the patterns on the caps of *Amanita pantherinae* and *Amanita muscaria*, while the smaller rosette on the cap of stud E was evidently designed to suggest the dark circle on the caps of many *Psilocybes* (Fig. 8F) and some *Amanita muscaria* (Fig. 8H). The spirals on the stems of these studs were evidently designed to suggest the rings on the stems of the above-mentioned mushrooms; the central protrusions on the studs' caps were evidently designed to suggest the central protrusions on the caps of the so-called umbonate varieties of these mushrooms and, the caps of similar studs (Fig. 8G) have central depressions, which were evidently designed to suggest the depressions on the caps of so-called umbilicate varieties of these mushrooms (Fig. 8H). In particular, the incredible likeness between stud G and the umbilicate, gold, *Amanita muscaria* (Fig. 8H) cannot be easily ignored. Many studs were therefore made mainly or entirely from blue faience or lapis lazuli to evoke the blue color that distinguishes *Psilocybes* from similar looking mushrooms.

Other studs were made by combining blue with the reds, whites, and yellows of the *Amanitae* (Reisner, 1923; Aldred, 1971; Boston Museum of Fine Arts, 1982). And still other studs were made of gold to evoke the color of the gold-capped varieties of these mushrooms.

These mushrooms have traditionally been known for their ability to induce mystico-religious phenomena commonly known as ego death and spiritual rebirth which, as shown below, were apparently a central, though well-hidden, element in many Egyptian religious rituals long before relatively realistic representations of these mushrooms appeared as ear studs in the Middle Kingdom. The reasons this jewelry appeared relatively late in Egyptian history are unknown, but its appearance may have been caused by a relaxation in a long standing policy of secrecy stated in the previously cited passage of the Egyptian *Book of The Dead*, just as secrecy has traditionally surrounded the ingestion of entheogenic mushrooms elsewhere in the world (Allegrò, 1969; Wasson, 1980).

Regardless of why these representations of mushrooms appeared full blown so late in Egyptian history, it can be inferred that these ear studs, many examples of which were found in tombs at Abydos, Kerma, and Amarna, were more than just meaningless pieces of jewelry that only coincidentally resemble mushrooms. These studs were almost certainly intended to represent entheogenic mushrooms, like those growing from the ears of the bemushroomed Egyptians depicted at El Hosh. Based on the anciently widespread belief that symbols, especially amulets, were imbued with the power of the things they represented, these ear studs were probably used funerally in attempts to spiritually rebirth, and perhaps even physically resurrect, dead Egyptians, based on the also anciently ubiquitous belief that such mushrooms were plants of immortality—hence, The Food of Gods (McKenna, 1992).

4. The mycological origin of Egyptian crowns as told in *Cheops and the Magicians*

The theory that the White and Triple Crowns were designed to represent *Psilocybe cubensis* primordia can be supported by noting that this mushroom is commonly cultivated today in essentially the same way an ancient Egyptian story, known as *Cheops and the Magicians*, allegorically describes how crowns were bestowed on the newborn rulers of Egypt's Fifth Dynasty in a document known as *The Westcar Papyrus*. That is, *Psilocybes* are commonly cultivated today by placing grain in containers, inoculating the grain with spores, and keeping the grain moist for approximately 14 days while the spores incubate. Similarly, in *Cheops and the Magicians*, crowns are bestowed on Egypt's rulers by deities who had hidden them in barley that they exposed to a storm and later incubated in a storeroom for 14 days (Lichtheim, 1975).

The manuscript fails without explaining what happened to the hidden crowns, which Lichtheim (1975) suggested were "magical tokens of kingship," rather than crowns, in an obviously strained effort to explain the peculiarity of crowns being hidden in barley. But considering: (1) the striking resemblance the typical, and particularly the atypical, White Crowns in Fig. 1 bear to *Psilocybe cubensis* primordia; (2) the anciently widespread practice of wearing psychotropic mushrooms and other plants as crowns; (3) the rupestrian and iconographic evidence that the ancient Egyptians had *Psilocybes*; and (4) the well-known practice of cultivating *Psilocybes* on grain, it can be inferred with a fair degree of assurance that *Cheops and the Magicians* was designed to allegorically explain that Egypt's crowns were originally *Psilocybes* that grew from barley.

It is apparently for this reason that the hieroglyph for the White Crown (Fig. 9) comprises what can now be identified as a *Psilocybe* primordium, ostensibly as the White Crown, over the Egyptian hieroglyph for a basket, evidently designed to represent the barley from which the crowns emerged in *Cheops and the Magicians*. Hence, in Fig. 10, the Egyptian solar deity Horus holds the White Crown up to his face in a bowl or basket to signify that the crown is edible (Fig. 10).

The theory that the crowns in this story were *Psilocybes* can also explain why the story's author decided to create a storm out of the blue. Lichtheim (1975) attempted to explain this seemingly unnecessary peculiarity as a reason for the deities to return to the house. But the deities did not need an excuse, for they had already decided to return to the house to bestow crowns on the royal children before the storm even arose. In fact, it was apparently the deities themselves who created the storm, for the

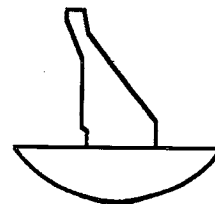


Fig. 9. White Crown hieroglyph.



Fig. 10. Horus, wearing the Double Crown, holds the White Crown up to his face in a bowl or basket to signify that it is edible and, perhaps, that he is preparing to eat it.

pertinent passage Lichtheim (1975) translated as, “Then they let a sky of storm and rain come up,” can be translated even better as “Then they caused the storm and rain to come up.”

The story’s author evidently decided to have the deities create the storm because the emergence of mushrooms typically follows rain, thunder, and lightning in the world’s fungal folklore, as (Wasson et al., 1986) pointed out in the definitive work on that relationship. The author of *Cheops* therefore cleverly had the deities create the storm to moisten the barley, thereby presaging the appearance of the mushrooms it held.

The theory that the hidden crowns were *Psilocybes* finds still more support in its ability to explain why the maid hears

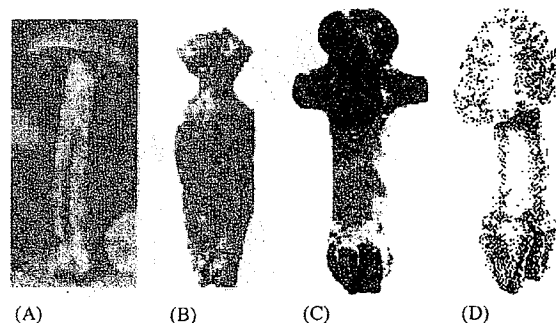


Fig. 12. Lawn Gallerina (A) personified in Egyptian figurine with conspicuous medial cleft (B), and maturing *Amanita brunnescens* (C) personified in anthropoid, predynastic, Egyptian figurine with conspicuous basal cleft (D).

music and dancing coming from the barley exactly 14 days after the barley had been exposed to the storm: the fruiting cycle of many *Psilocybes* is approximately 14 days (Stamets, 1996), and mushrooms, especially entheogenic species, were typically personified in antiquity, apparently based on the same tendency to personify plants that led modern commercial artists to personify, for instance, a banana as Chiquita Banana and a peanut as Mr. Peanut.

For example, Fig. 11A depicts: (1) the well-known Venus of Willendorf figurine, dated to approximately 25,000 BPE, and (2) a primordial *Amanita* (Fig. 11B). Comparing these structures, it becomes apparent that the figurine’s strange coif was designed to personify the characteristically knotted cap of a primordial *Amanita*; the figurine’s steatopygia was designed to personify the primordium’s bulbous base; the figurine’s strangely slender, segmented, and handleless arms were designed to personify the dentate ring the *Amanita* ruptured veil leaves on the mushroom’s stem; the red ochre the figurine was covered with was intended to color it the color *Amanita* caps often display (Berlant, 1999).

For the same reasons, the developing Horse Chestnut primordium (Fig. 11C) strikingly resembles the anthropoid figurine from Chiozza di Scandino, Italy (Fig. 11D) (Berlant, 1999).

That ancient Egyptian artists personified mushrooms, just as their European counterparts did, is readily apparent by observing that a Lawn Gallerina (Fig. 12A) was evidently personified in the Egyptian figurine with a conspicuous medial cleft (Fig. 12B);

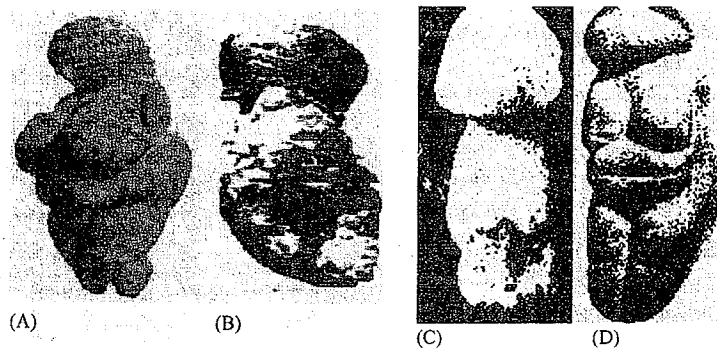


Fig. 11. (A) Venus of Willendorf; (B) primordial *Amanita muscaria*; (C) horse mushroom primordium; (D) anthropoid female figurine from Chiozza di Scandino, Italy (Berlant, 1999).

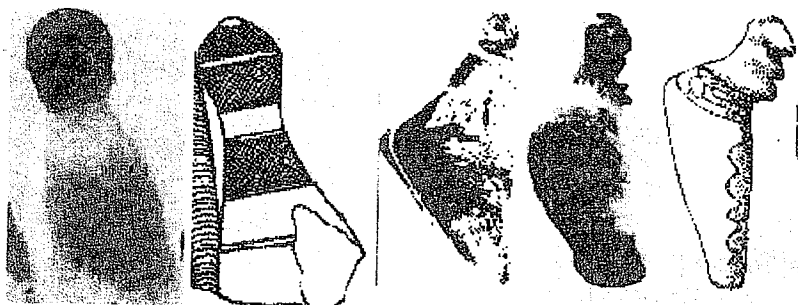


Fig. 13. *Psilocybe* primordium (left) symbolized by the White Crown (center) and personified by three, anthropoid, predynastic Egyptian figurines (right).

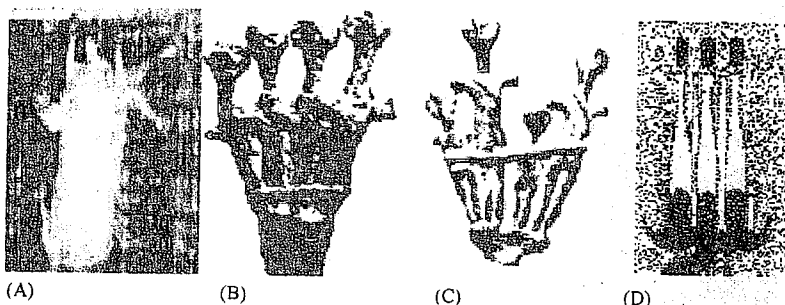


Fig. 14. *Psilocybe* cluster, here on growth media (A) personified in Canaanite figurines (B and C) and symbolized by Egyptian Triple Crown (D).

that a predynastic, Egyptian figurine (Fig. 12C) strikingly resembles the maturing *Amanita brunnescens*, or cleft foot, mushroom (Fig. 12D); that the three anthropoid, predynastic, Egyptian figurines beginning on the right in Fig. 13 strikingly resemble both the *Psilocybe cubensis* primordium on the far left and the White Crown on its immediate right (Berlant, 1999).

For the same reasons, the anthropoid Canaanite figurines in Fig. 14B and C reveal that they were designed to represent a cluster of *Psilocybes*, just as the Triple Crown (Fig. 14D) apparently was. Since the Egyptians traded extensively with the Canaanites and other Levantine peoples, it is very possible that this trade included *Psilocybes* and *Amanita muscaria* that grew in mycorrhizal relationship with the famous cedars of Lebanon, as they do with the less famous Moroccan cedars. Mabry (2000) quotes Dr. C. Bas of the Rijksherbarium/Hortus Botanicus in Leiden, Netherlands, who studied the *Amanitae* for over 25 years, as having said:

“It seems to me that it is; very probable that the *Amanita muscaria* grew (or still grows), in the Lebanon with *Cedrus* . . . *Cedrus* is mentioned as a partner of *Amanita muscaria*. In Morocco grows *Cedrus atlanticus*, in Lebanon, *Cedrus libanotica*. But the differences between the two species is; very small. Moreover, the two *Pinus* species . . . are widely cultivated around the Mediterranean.” (Cited in Mabry, 2000)

Ancient artists who personified entheogenic mushrooms may have also done so for another reason, however: i.e., people who ingest such mushrooms often see mushroom-like beings singing, dancing, and gesturing in ways that are culturally dependent. In Siberia, for instance, these beings are regarded as helpers that usually lead “bemushroomed” individuals on jour-

neys through realms that are regarded as spiritual, rather than illusory (Wasson, 1968), while in Central America these spirits are often referred to as “little children” or “clowns” (Munn, 1973; Wasson, 1980).

In view of this analysis, it is not coincidental that the Egyptian word *muu*, for the so-called *muu* dancers, (Fig. 15) who were responsible for bringing the souls of the dead to the afterworld, referred to jesters, buffoons, and dwarfs (Budge, 1978; Faulkner, 1986), for these dancers were evidently originally the Egyptian analogues of the dancing mushroom spirits people have typically seen after ingesting entheogenic mushrooms. This analysis is in full accord with: (1) the belief that the *muu* were originally dwarfs, just as the word for them implies (Moret, 1927); (2) the belief that the *muu* crown was a variation of the White Crown (Abubakr, 1937); (3) the belief that the *muu* were personified crowns (Altenmüller, 1975), for the *muu* were indeed originally

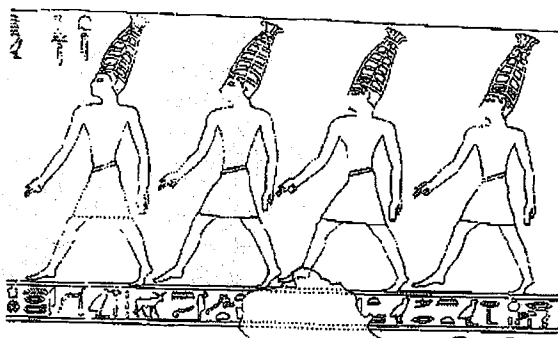


Fig. 15. *Muu* dancers wearing woven, basket-like, variations of the White Crown.

personifications of the Psilocybes their crowns were designed to represent.

The Egyptian shamans who personified the spirits that seemingly dwelled in the entheogenic mushrooms they ingested also deified these spirits as, for example: (1) the minor deity Nekhbet, the so-called Lady of El Kab, and (2) the major deity Osiris, the so-called “Lord of the White Crown [and he] . . . whose White Crown is lofty.” (Collier, 1996). Hence, the Papyrus of Ani explicitly calls Osiris “O thou [you] White Crown of the divine form!” (Budge, 1967).

Indeed, it is precisely because the Egyptians personified entheogenic mushrooms, on the one hand, as crowns, but on the other hand, as deities that the aforementioned inscription in the tomb of Pharaoh Unas also states “The Pharaoh is the bull of the sky . . . who lives on the being of every god . . . their big ones are for his morning meal, their middle sized ones are for his evening meal, their little ones are for his night meal” (Faulkner, 1998, Utterance 273–274), apparently in reference to the differently sized mushrooms, personified as Gods, that Pharaoh ingested.

Because Osiris was evidently originally the personification of a Psilocybe, the Papyrus of Ani says of him “Thy head is blue [like] lapis lazuli” (Budge, 1969a), obviously in reference to the tendency Psilocybe caps have of turning blue when touched, while the Egyptian Blue Crown, cap-crown, or *khepresh*, was designed to represent such a cap.

Because Osiris was originally a personified mushroom, the symbol Budge identified with him at the god’s cult center at Abydos, where many entombed ear studs were found, was a plumed mushroom transected by a serpent (Fig. 16). Feathers were, for obvious reasons, used ubiquitously in antiquity as symbols of flight, especially that of the soul, and serpents were anciently known ubiquitously for their poisons and their ability to shed their skins, in an act that clearly would have evoked, and apparently did, the ego death and spiritual rebirth that entheogenic mushrooms often induce.

Serpents were therefore intimately associated in antiquity with mushrooms, especially toxic and entheogenic species (Pliny the Elder, *Naturalis Historiae* XXII, line 95; Allegro, 1969; Nicander, 1953), and the Egyptians often surrounded the *Psilocybe cubensis* primordia on their crowns with both feathers and serpents to indicate that the mushrooms these crowns represented contained toxins that could confer immortality and divinity on people who ingested them. Hence, the aforementioned inscription in Unas’s tomb also states, “It is the serpent-raised head who guards them for him,” evidently referring to these serpents as guardians of the sacred mushrooms.

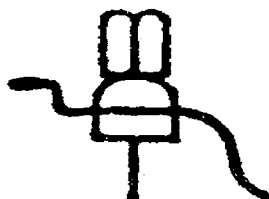


Fig. 16. Plumed mushroom and serpent symbol that Budge associated with Osiris at the god’s cult center at Abydos.



No. 23

Fig. 17. Osiris rising up from a basket, enfolded in the wings of Isis is symbolically equivalent to the White Crown hieroglyph (Fig. 9).

Because Osiris was originally a personification of a Psilocybe, which the White Crown symbolized, the picture of him rising up from a basket, enveloped in the wings of his consort Isis (Fig. 17), is entirely equivalent to the hieroglyph of the White Crown in a basket (Figs. 9 and 10).

Besides having been considered a personification of the White Crown, the Egyptians regarded Osiris as the personified spirit of barley; for example, the Coffin Texts quote Osiris as saying, “I am Osiris . . . I am barley . . .” (de Buck, 1947). Osiris therefore appears in Fig. 18 covered by and shedding the barley he personified with the Atef or Osiris crown, comprising the White Crown flanked by feathers, literally growing from his head, just as *Cheops and the Magicians* explains allegorically how the White Crown grew from the stored barley.

Osiris was therefore typically depicted monopodially with arms akimbo (Fig. 19, left), obviously so he would look remarkably like a mushroom (Fig. 19, right), especially to anyone who was privileged to the esoteric information that Osiris’s original nature was mycological. In fact, because the practice of personifying mushrooms as monopodial beings was widespread in antiquity, mummies were apparently fashioned with a single or fused legs and arms akimbo to look like mushrooms, as explained more below vis a vis the *tekenu*.

Because Osiris was a personified Psilocybe, the Egyptians also constructed beds of straw shaped like Osiris, to plant Psilocybes:

This is a coffin-like vessel of granite which stands on supports in a greater basin. In it lies the golden image of the god. The vessel is filled with earth, which is intermixed with sacred material—incense, precious stones and so on. Seeds



Fig. 18. Osiris shedding the barley he is personifying with a Psilocybe crown growing from his head, ostensibly as a crown.

of differing kinds are embedded into this mixture, and their germination and growth signify the revival of the dead. (Otto, 1968, p. 58)

Plants subsequently grew from the straw and earthen image of Osiris, though the nature of these plants and the reason they were associated with Osiris's resurrection have never been adequately explained. It is generally believed that the plants were probably barley, but if so, there would have been no reason to construct a bed of precious stones and straw.

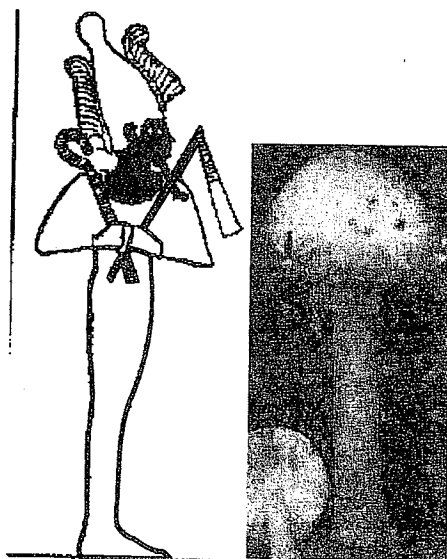


Fig. 19. (Left) Osiris in his typical mushroom-like pose. (Right) *Amanita muscaria*. Particularly noteworthy is the striking resemblance Osiris's hands bear to the annulus, just under the mushroom's cap.

This practice can now be adequately explained as a ritualized personification either of the practice of growing *Psilocybes* from grain, as *Cheops and the Magicians* allegorically describes, or the practice of growing *Psilocybes* from straw and mycelia, known as spawn. In a modern version of the latter technique, used by people who typically grow *Psilocybes* for recreational use, a plastic cooler or tub is filled with vermiculite, just as the Egyptians filled Osiris's casket with earth and stones. A bed of sterilized straw is placed over the vermiculite, just as the Egyptians placed papyrus or straw over their stones, and *Psilocybe* mycelia, or spawn, is placed over the straw. Shortly thereafter, *Psilocybe* primordia begin sprouting, and about two weeks later the *Psilocybes* are mature and ready to eat.

It was apparently from ingesting these *Psilocybes* and experiencing the spiritual rebirth they could induce that Egyptian kings derived their knowledge of what they subsequently called the "Second Birth." This birth was then attributed to the spirit of the sun passing first into the straw, then into the *Psilocybes*, and finally back into the deceased Pharaoh, who was presumably then resurrected as the solar deity Osiris.

Mabry (2000) recognized that Osiris was a personified mushroom, though Mabry argued that Osiris personified the *Amanita muscaria*. Mabry's suspicion finds a great deal of support in its ability to explain why, for example, the Egyptians gave valiant warriors golden flies, like those in Fig. 20, upon their induction into the so-called Order of the Golden Fly. No comprehensive study has ever been done on the significance of this order or its symbol, though Egyptologists have speculated that the Egyptians must have regarded the fly as brave.

Indeed, the *Amanita muscaria* has traditionally been known in societies where it is still ingested for its ability to greatly increase a person's strength and bravery, and it has therefore been implicated as the drug Viking warriors, known as berserkers, took before going into battle (Wasson, 1968). Moreover, the *Amanita muscaria* is commonly called the Fly-Agaric, because it attracts and reputedly stuns or kills flies. Hence, the fly has often been used to symbolize this mushroom and would have indeed been an appropriate ancient Egyptian symbol of strength and bravery.

Mabry's theory that Osiris personified the *Amanita muscaria* finds still more support in its ability to explain the enigmatic ritual of the *tekenu*, during which an Egyptian shamanic priest was pulled on a sled while lying in the fetal position wrapped

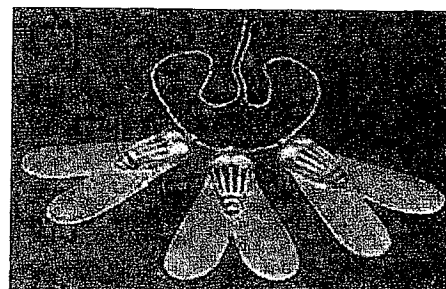


Fig. 20. A necklace of golden flies from the tomb of Queen Ahhotep, mother of Ahmose I.

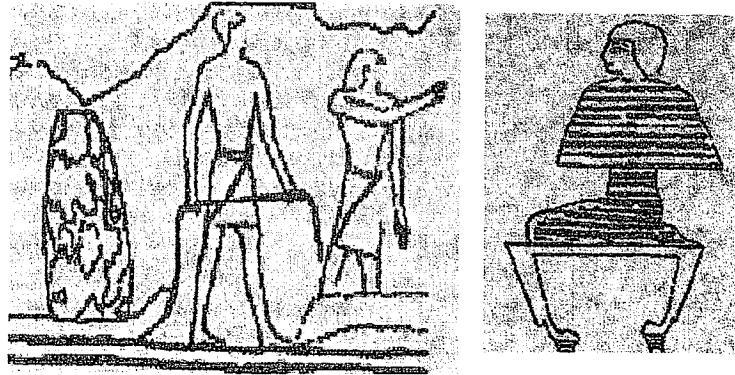


Fig. 21. Tekenu wrapped in a bull's hide representing an *Amanita muscaria* primordium. The priest eventually emerges in the same distinctly mushroom-like pose that Osiris typically manifests, in a position to administer the sacred mushroom cap he then personified.

completely in a bull's hide, emerging later in the same distinctly mushroom-like form that Osiris typically manifests (Fig. 21).

The *Amanita muscaria*'s mottled red and white cap, combined with its ability to greatly increase strength, led ancient mytho-poets and artists to personify it as a bull (Wasson, 1968; Hoffman et al., 2002; Ruck et al., 2004). It can therefore be inferred that the *tekenu* ceremony was designed to recapitulate the birth of Osiris, whose spirit the Egyptians believed dwelled in barley and, consequently, in the parasitic, entheogenic mushrooms that absorbed the spirit of barley. Having been reborn as the mushroom deity, the priest was then in a position to administer the sacred mushroom cap he himself personified in the rebirthing ceremony appropriately known as "Opening of the Mouth."

The evidence presented above suggests further that the Egyptians were also ritualistically ingesting entheogenic *Amanita pantherina*, which can explain why Osirian priests typically wore panther skins.

In Fig. 23, Wepawet (*Upuaut*), the dog or jackal God, known as The Opener of The Ways, stares at Osiris's mushroom embodiment, perhaps because the predynastic Egyptians used dogs to search for the mushrooms Osiris personified, just as modern mushroom hunters often do. That this mushroom was probably a *Psilocybe* can be inferred by noting that standing on the right and left of it are non-steatopygous, ithyphallic, monopodial beings, evidently representing personified *Psilocybes*, rather than steatopygous *Amanita muscaria*, primordia. Their erect phalluses were apparently designed to resemble arms bearing the mushrooms these primordia yield, in accordance with the anciently ubiquitous practice of representing mushrooms as phalluses (Allegro, 1969).

These puppet-like creatures are evidently depictions of those used in processions honoring Osiris who, according to Herodotus (2.42), was the Egyptian analogue of Dionysus, the Greek God of intoxication. According to Egyptian legend, Osiris was dismembered by his brother Set and re-assembled by his consort Isis, except for his phallus, just as the Titans murdered Dionysus who was then represented by a disembodied phallus (Ruck, 2005). During this procession, led by a flautist and singers praising Osiris, the hinged, erect penises of these puppets, about

18 in. tall, were made to bob up and down by women who carried them through villages.

Herodotus claimed that the seer Melampus, who presumably introduced the worship of Dionysus to the Greeks, was well aware of this Egyptian procession, but did not quite understand it. Nevertheless, it was Melampus who reputedly transformed this procession into the Dionysian parade of the phallus (Ruck, 2005).

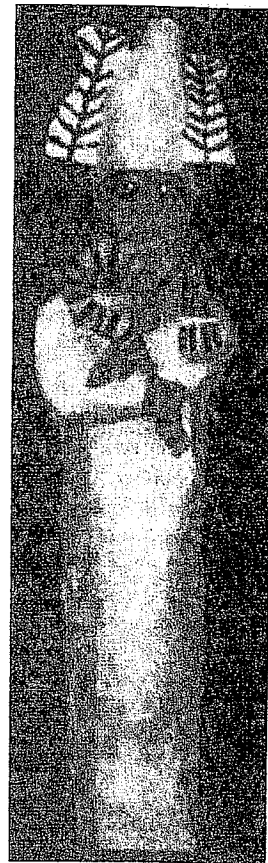


Fig. 22. Osiris as a green God.

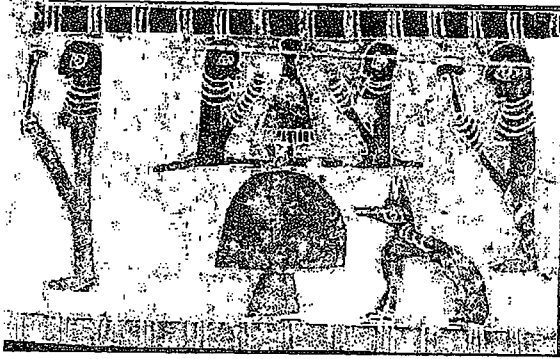


Fig. 23. The dog-God Wepwet (*Upuat*) pointing to Osiris's mushroom embodiment, surrounded by personified, ithyphallic, monopodial, *Psilocybe* primordia (from Mabry, 2000).

Because Osiris was originally an entheogenic mushroom, he also figures prominently in an Egyptian legend wherein he was resurrected after ingesting a structure the Egyptian called the *utchat*, now known commonly as the Eye of Horus.

The Eye of Horus (Fig. 24) has generally been regarded as a solar, lunar, and ornithological symbol because Horus was a solar and lunar deity with the head and, often, body of a hawk. But the Eye of Horus was heretofore unexplainably also a plant from which the Egyptians made an elixir and cakes they believed could confer immortality on people, about which E.W. Budge wrote:

The gods nourished themselves with celestial food which was supplied to them by the Eye of Horus, that is to say, they supported their existence on the rays of light which fell from the sun which lit up heaven, and they became beings whose bodies were wholly of light. According to one myth the gods themselves lived upon a 'wood or plant of life,' which seems to have grown near the great lake in Sekhet-hetep, round which they were wont to sit In other places we read of 'bread of eternity' and 'beer of eternity.' (Budge, 1969a,b, vol. I, p. 164)

The Egyptians therefore included this plant of immortality in the ale and cakes they entombed with dead Egyptian kings, in accordance with the legend in which Osiris, whom every king aspired to become, was resurrected after he somehow ate the Eye of Horus (Griffiths, 1980). The entheomycological significance of this plant, and the reason Egyptian priests believed it could confer immortality on those who consumed foods made from it, can now be fully understood by noting that eyes are

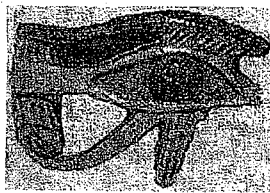


Fig. 24. An Egyptian *utchat*, representing the Eye of Horus, Re and Thoth, as well as a plant that could reputedly yield an elixir of immortality.

intuitively appropriate symbols of entheogenic mushroom caps, because such caps are ovoid like eyes and typically have a central protrusion or depression suggesting an eye's iris (Ott, 1969).

In addition, eyes, like suns, are very appropriate symbols of entheogenic mushroom caps, because ingesting such caps induces the luminous phenomena that solar and lunar symbols so aptly describe metaphorically. Hence, such caps were reputed to give people the ability to see into other realms of reality. Thus, Odin, while hanging, like a personified rhizophyllic mushroom, from the sacred Yggdrasil tree, gained the gift of omniscience and prescience only after he drank from a well into which he had dropped his eye.

The theory that the Eye of Horus was an entheogenic mushroom cap can also be supported by noting that the Egyptians personified this eye in the very same way ancient Hindu priests personified Soma. More precisely,

- (1) The Egyptians personified Horus and Osiris as eyes, just as the Rg Veda describes the Soma plant and its elixir as an eye (Rg Veda I 875ab; IX 94; IX 10 ab).
- (2) The Egyptians personified Horus and Osiris as the sun, just as The Rg Veda personifies the spirit of the Soma plant, which also yielded a divine elixir, as a luminous, solar deity (Rg Veda I, 4610ab; IX, 26c; IX, 275ab).
- (3) The Egyptians described Horus and Osiris as luminous lunar deities, just as the Rg Veda describes the Soma plant and its elixir as a luminous lunar deity (Rg Veda 8.082.08; 10.052.02; 6.039.03).
- (4) The Egyptians claimed that the Eye of Horus could confer immortality on those who consumed it, or an elixir made from it, just as the Rg Veda describes the Soma plant and its elixir as having the ability to confer immortality on those who consumed it (Rg Veda, 8.048.03; 1.091.06; 1.091.18; 8.048.12; 8.048.11).
- (5) The Egyptians associated or personified Horus and Osiris as hawks, just as the Rg Veda as well as the Taittiriya Samhita and Aitareya Brahmana, associate Soma with a hawk, claiming more specifically that this hawk brought Soma to India (Rg Veda 1.080.02; 1.093.06; 8.082.09) (Taittiriya Samhita 6.1) Aitareya Brahmana (3.25–27).
- (6) The Egyptians believed the Eye of Horus was submersed in and then taken from the primeval waters, just as the Rg Veda claims that Soma plant emerged from the primeval waters, and was an earthly, consumable part of those waters (Rg Veda, IV58.1) (Lidova, 1995).

From the above and many other Hindu textual passages too numerous to mention, it can be inferred that the Eye of Horus was almost certainly the Egyptian analogue of Soma. R.G. Wasson argued convincingly that Soma was originally the *Amanita muscaria* (Wasson, 1968), and perhaps later, a *Pilocybe*. The theory presented in this paper fully supports Wasson's theory.

5. Discussion and conclusions

This paper contains textual and graphic evidence strongly suggesting that the Egyptian White and Triple Crowns were

originally primordia of the entheogenic *Psilocybe* (*Stropharia*) *cubensis*, which an Egyptian tale known as *Cheops and the Magicians* allegorically attributed to barley. In addition, the paper contains textual and graphic evidence strongly suggesting that Osiris was the God of spiritual rebirth, because he originally personified *Psilocybes*, the *Amanita muscaria* and, probably, the *Amanita pantherina*. Finally, the paper theorizes that the plant known as the Eye of Horus, which Egyptians included in cakes and ales they concocted to spiritually rebirth the living and the dead, was intimately associated with Osiris, because this eye symbolized an entheogenic mushroom cap that was the Egyptian analogue of Soma.

One might ask why Egyptologists who have studied the above material for so many years could have missed the identities and relationships I have just elucidated. The reason for this is, I believe, several-fold. First, as the eminent philosopher of science, Kuhn (1962) pointed out, professional education often leads students to view things in the same way their professors viewed them, often to the extent that getting either group to view those things differently is very difficult, if not impossible. It was for this reason, coupled with the failure to realize that authority is not tantamount to truth, that the Aristotelian notion of heavier objects falling faster than lighter ones managed to survive for over 1600 years, and current theories about the origins and underpinnings of Egyptian religion have existed virtually unchanged for decades. The theory presented in this paper is a radical departure from those theories, but rests on the same body of textual and graphic evidence.

Second, Egyptologists, as a general rule, know little or nothing, and implicitly care even less, about how drastically entheogenic plants can affect one's world view, or the extent to which such plants have traditionally been used ritualistically in other cultures, for example, to commune with ancestors who, in many cases, were deities. Osiris was the pharaonic patriarch, and communing with him apparently involved ingesting his botanical embodiments, entheogenic mushrooms. This, just as the Greeks ingested Dionysus's botanical embodiment, the grape – or as Graves (1960) suggested, entheogenic mushrooms in wine – after which his spirit seemingly rose up and possessed them. Herodotus's belief that Osiris was the Egyptian analogue, if not predecessor, of Dionysus was thus well founded.

Third, entheogenic mushrooms are regarded as illegal drugs used in this culture mainly by young adults for recreation, and the effects these mushrooms induce are regarded as hallucinations or illusions. In contrast, the ancients held psychotropic plants and the effects they induced in high regard, to the extent that the ingestion of these plants was typically reserved for priests and seers. The implicit tendency of Egyptologists to regard entheogenic mushrooms disdainfully is therefore a cultural bias that has evidently had a prejudicial effect on the wealth of evidence that the ingestion of such mushrooms underpinned ancient Egyptian religion.

Finally, Egyptologists and laymen alike have romanticized the Egyptians and their deities from the very advent of Egyptology. The theory that Egyptian religion and culture was built around the practice of ingesting entheogenic mushrooms, which

we now condemn, can create a cognitive dissonance that some people may never be able to resolve.

References

- Abubakr, A.M.J., 1937. Untersuchungen über die ägyptischen Kronen Verlag J.J. Augustin, Gluckstadt.
- Aldred, C., 1971. *Jewels of The Pharaoh: Egyptian Jewelry of the Dynastic Period*. Praeger Publishers, New York, Pl. 68, p. 210.
- Allegro, J., 1969. *The Sacred Mushroom and The Cross*. Doubleday, Garden City, NY.
- Altenmüller, H., 1975. Zu Frage Der Mww in Studien Zur Altägyptischen Kultur 2 (Hamburg, 1975), 1–37. Cited in Reeder, G. Fall 1995. The Mysterious Muu and The Dance They Do, KMT 6:3, available on-line at <http://www.egyptology.com/reeder/muu/>.
- Berlant, S., 1999. The prehistoric practice of personifying mushrooms. *Journal of Prehistoric Religion* 13, 22–29.
- Boston Museum of Fine Arts, 1982. *Egypt's Golden Age, the Art of Living in the New Kingdom, 1558–1085 B.C. Catalogue of the Exhibition*. Museum of Fine Arts, Boston.
- Budge, E.A.W., 1967. The Chapter of Driving Back The Slaughters Which Are Formed in Hensu. In: *The Book of the Dead, the Papyrus of Ani in the British Museum*. Dover Publications, New York, the Egyptian text with interlinear transliteration and translation, a running translation, introduction, available on-line at http://www.sas.upenn.edu/African.Studies/Books/Papyrus_Ani.html.
- Budge, E.A.W., 1969a. The papyrus of Ani, sheet 2. In: Budge, E.A.W. (Ed.), *The Gods of the Egyptians or Studies in Egyptian Mythology*, vol. 2. Dover Publications, New York, p. 153ff.
- Budge, E.A.W., 1969b. *The Gods of the Egyptians or Studies in Egyptian Mythology*. Dover Publications, New York.
- Budge, E.A.W., 1978. *An Egyptian Hieroglyphic Dictionary: With an Index of English Words, King List, and Geographical List with Indexes, List of Hieroglyphic Characters, Coptic and Semitic alphabets, etc*. Dover Publications, New York, p. 294.
- Collier, S., 1996. *The crowns of the Pharaoh: their development and significance in ancient Egyptian kingship*. Ph.D. Dissertation. U.C.L.A.
- de Buck, A., 1947. *Egyptian Coffin Texts III Texts of Spells 164–267*. University of Chicago Press, Chicago, Spell 168.
- Dikov, N.N., 1971. *Naskalnuie Sagadki Ciukotki (Pietroglifui Pegtimelia)*. Nauka, Moscow (cited in: Wasson, R.G., 1986. *Persephone's Quest: Entheogens and the Origins of Religion*. Yale University Press, New Haven, p. 69).
- Emboden, W.A., 1978. The sacred narcotic lily of the Nile: *Nymphaea Caerulea*. *Economic Botany* 28, 304–310.
- Evers, H.G., 1929. *Staat aus dem stein: denkmäler, geschichté und bedeutung der agyptischen plastik während des mittleren reichs*. F. Bruckmann, München, Tafel 35b.
- Faulkner, R.O., 1986. *A Concise Dictionary of Middle Egyptian*. Oxford. Griffith Institute, Ashmolean Museum.
- Faulkner, R.O., 1998. *The Ancient Egyptian Pyramid Texts*. Sandpiper Books Oxford University Press, New York.
- Festi, F., Bianchi, A., 1991. *Amanita muscaria: mycopharmacological outline and personal experiences*. In: Lyttle, T. (Ed.), *Psychedelic Monographs and Essays*, vol. 5. P.M.&E. Publishing Group. Available on-line at <http://leda.lycaenum.org/?ID=16317> (accessed on 18 September 2005).
- Graves, R., 1960. *Food for Centaurs: Stories, Talks, Critical Studies, Poems*. Doubleday, Garden City, NY.
- Griffiths, J.G., 1980. *The Origins of Osiris and His Cult*. Brill, Leiden, p. 27.
- Gow, A.S.F., Scholfield, A.F. (Eds.), 1953. *Nicander: The Poems and Poetical Fragments*.
- Heinrich, C., 2002. *Magic Mushrooms in Religion and Alchemy*. Park Street Press, Rochester, VT.
- Hoffman, M., 2002. *Mushroom myth and imagery in Hawai'i: evidence for an indigenous cult*. *Entheogen Review* 11, 41–47.

- Hoffman, M., et al., 2002. The entheogenic eucharist of Mithras. *Entheos* 2, 13–50.
- Kuhn, T.S., 1962. *The Structure of Scientific Revolutions*. University of Chicago Press, Chicago.
- La droga en el Antiguo Egipto, available on-line at http://www.institutoestudiosantiguoejipto.com/begona_drogas.htm.
- Lefebvre, G., 1949. Rouge et Nuances Voisines. *Journal of Egyptian Archaeology* 35, 72–76.
- Lhote, H., 1973. A la découverte des fresques du Tassili Arthaud, Paris (cited in Samorini, 1992).
- Lichtheim, M., 1975. *Ancient Egyptian Literature: A Book of Readings*. University of California Press, Berkeley.
- Lidova, N.A., 1995. The Vedic Sources of Hindu Creation Myth. *Prakrti*, vol 5.
- Mabry, M., 2000. Osiris: Eine Reidentifikation. In: Bauer, W., Klapp, E., Rosenbohm, A. (Eds.), *Der Fliegenpilz: Ein Kulturhistorisches Museum*. Verlag, Wienand.
- McKenna, T., 1992. *Food of the Gods: The Search for the Original Tree of Knowledge: A Radical History of Plants, Drugs and Human Evolution*. Bantam Books, New York, NY, p 71.
- Merlin, M., 2003. Psychoactive plant use in the Old World. *Economic Botany* 57 (3), 295–323.
- Moret, A., 1927. *Mysteries Égyptienne*, p. 257ff.
- Mori, F., 1975. Contributo al pensiero magico-religioso attraverso l'esame di alcune raffigurazioni rupestri preistoriche del Sahara. In: *Valcamonica Symposium*, vol. 72, pp. 344–366 (cited in Samorini, 1992).
- Munn, H., 1973. The mushrooms of language. In: Harner, M.J. (Ed.), *Hallucinogens and Shamanism*. Oxford University Press, New York.
- Naville, E., 1910. *The XIth Dynasty Temple at Deir el-Bahari*, published by order of the Committee, London.
- Ott, J., 1969. Carved disembodied eyes of Teotihuacan. In: Wasson, R.G. (Ed.), *Persephone's Quest*, p. 141ff.
- Otto, E., 1968. *Egyptian Art and the Cults of Osiris and Amon*. Thames & Hudson, London.
- Pliny the Elder, 1969–1989. *Natural History with an English translation* by H. Rackham. Cambridge, Mass. Harvard University Press.
- Puharich, A., 1959. *The Sacred Mushroom: The Key to the Door to Eternity*. Doubleday, Inc., Garden City, NY.
- Reisner, G., 1923. Excavations at Kerma. *Harvard African Studies*. Parts IV–V, Peabody Museum Harvard University, Cambridge, MA, pp 256–257.
- Ruck, C., 1979. Entheogens. *Journal of Psychedelic Drugs* 11, 45–46.
- Ruck, C.A.P., 2005. Personal communication.
- Ruck, C., Staples, B., Heinrich, C., 2001. *The Apples of Apollo: Pagan and Christian Mysteries of the Eucharist*. Carolina Academic Press, Durham, NC.
- Ruck, C.A.P., et al., 2004. The brotherhood of the warriors of Mithras. *New England Classical Journal* 31, 335–362.
- Samorini, G., 1992. The Oldest Representations of Hallucinogenic Mushrooms in the World (Sahara Desert, 9000–7000 B.P.). *Integration*, vol. 2/3, pp. 69–78, available on-line at <http://www.shroomery.org/index/pat/25043>.
- Schultes, R.E., Hoffman, A., 1992. *Plants of the Gods: Their Sacred Healing and Hallucinogenic Properties*. Healing Arts Press, Rochester, Vermont.
- Spess, D., 2000. *Soma: The Divine Hallucinogen*. Park Street Press, Rochester, VT.
- Stamets, P., 1996. *Psilocybin Mushrooms of the World: An Identification Guide*. Ten Speed Press, Berkeley, CA.
- Wainwright, G.A., 1923. The Red Crown in early prehistoric times. *Journal of Egyptian Archaeology* 9, 26–33.
- Wasson, R.G., 1968. *Soma, Divine Mushroom of Immortality*. Harcourt, Brace & World, Inc., New York.
- Wasson, R.G., 1980. *The Wondrous Mushroom: Mycolatry in Mesoamerica*. McGraw-Hill, New York.
- Wasson, R.G., et al., 1986. Lightningbolt and mushrooms. In: *Persephone's Quest: Entheogens and the Origins of Religion*. Yale University Press, New Haven, pp. 83–94.
- Wilkinson, R.H., 1994. *Symbol and Magic in Egyptian Art*. Thames and Hudson, New York, NY.
- Wilson, P.L., 2001. *Ploughing the Clouds: The Search for Irish Soma*. City Lights Books, San Francisco, CA.
- Winkler, H., 1938–1939. *Rock Drawings of Southern Upper Egypt*. The Egypt Exploration Society, H. Milford, Oxford University Press, London.