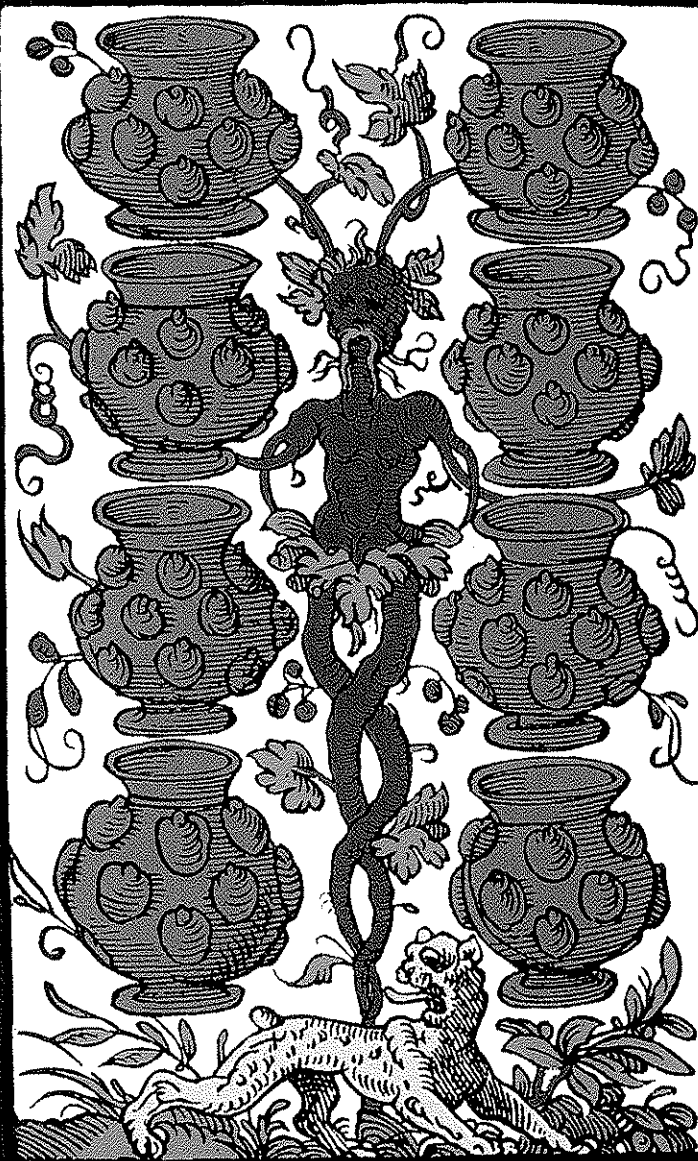


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UPDATED
EDITION

PLANT TEACHERS
AND THE
POISON PATH

DALE PENDELL

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PLANT TEACHERS
AND THE
POISON PATH
Dale Pendell

North Atlantic Books, Berkeley, California



SONGS OF EXPERIENCE, BLAKE, 1794

PHARMAKON: ON POISONOUS KNOWLEDGE



Pharmacognosy is the study of poisons and remedies. The emphasis on *gnosis* over *logos* connotes an experiential tradition, based more on sampling and testing than on theory.

*As the true meth-
-od of knowledge
is experiment
the true faculty
of knowing must
be the faculty which
experiences, This
faculty I treat of.*

—William Blake, *All Religions Are One*

Pharmacognosy is particularly focused on natural sources—minerals and venomous animals, but especially plants and plant poisons, the working material of the first science. Pharmako/Gnosis, then, is poison knowledge, drug knowledge. In the sense of knowledge from drugs, rather than of drugs, it is the forbidden knowledge, but knowledge with the power to heal.

The greatest poisons are mind poisons, those that destroy conceptions, unlearning everything you have been taught. In the dialectic, poison is the antithesis.

Thus all radiant poisoners love darkness.

We turn things upside down to find a new synthesis. This is the work of the alchemical furnace, the *athanor*. It was called the "Great Work." We call this process of unlearning the *poison path*.

*That it is real. That it is not real.
That it is both real and not real.
That it is neither real nor not real.*

If, as Lao-tzu said, the True Way cannot be defined, then, if we consider our poison path to be any sort of a true way, it follows that our definitions will miss the point. But then again, why should anyone on the poison path worry about it being a "true way"?

We learn to beware of words, especially warm fuzzy words, words of light as much as words of hatred, words of comfort and benevolence as much as words

like virtue, patriotism, or justice. Trusting Lao-tzu, what we seek is more like a meandering stream or like a playful animal, perhaps with large canines and hot breath, with a bushy tail and furry ears. Our animal doubts, and by most would be called foolish.

If some study enlightenment, we study illusion. We seek medicine in the very poison that has seduced us. The mind, we might say, is too much with us, so let's heap on some more.

The left-hand work.

Whatever. On the poison path, don't expect to find any friends in the camps of the True Believers—our traveling companions are the *pharmaka*.

*Then there are the true believers of the poison path:
but their life expectancy is so short
you should borrow money from them
any chance you get.*



ENVENENADORA, R. LOPEZ

PLANT TEACHERS AND THE PATH OF EVE



Plants were the first of earth's creatures to establish extraterrestrial contact, beyond the sulfur vents and the acid radicals deep in bedrock, or at seafloor ruptures—the first to contact the greater cosmos.

Intelligence collectors, electron transfer chains up an entropic pathway, through latent complexities of space, a shamanic balancing act at 1 A. U.

*Every carbon atom in our bodies has at one time passed through
the chloroplast membrane of a plant.*

Plants are the placenta of animal life, from an ancient time before the humans (*homunculus*, *humus*, hence "earthlings") were a wisp of dream in a chancy future.

Out of excess and exuberance, a great swirling, and a song arose. Katydid, cicadas, munching on green. Autophagia really, or eating the god.

And the gods fought back: alkaloids, CNS poisons, tryptamines, beta-carbolines, lianas snaking from the canopy. Fungi garnered the recycling trade. Partnerships, parasites, nothing standing still.

Oils, terpenes, carbohydrates, protein, the main course of the teachings. And beyond, like a graduate school, "secondary metabolites," the poisons, the medicine.

Ye shall not eat of it, neither shall ye touch it, lest ye die.

The Original Prohibition, our first drug law.

To plant people everywhere, certain plants are regarded with a special reverence: the sacred plants, sharing something of godly nature. That which had been attacked, that which resisted, the rebels, "thus far and no further shalt thou come."

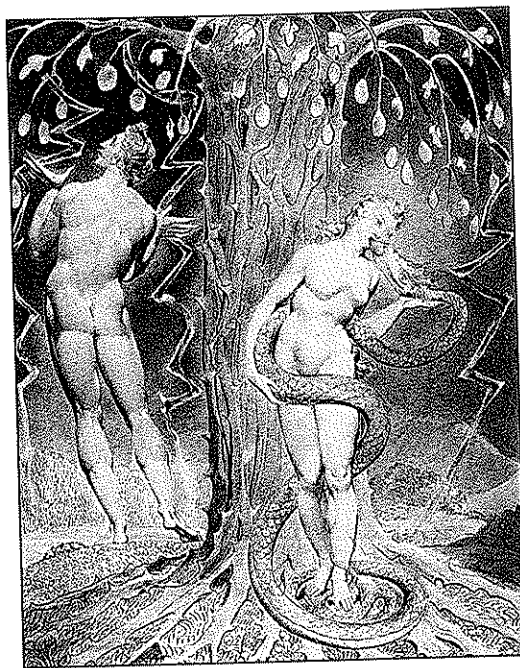
Plants represent immediacy, a seamless suchness. No comments. No philosophizing, no rationalizing. Just the Fact. The Buddha once preached a whole sermon by holding aloft a flower. Kasyapa understood and smiled.

We can find the songs in ethnopoetics, or hear the prayers from those who have maintained the archaic connection, but it's all in Milton:

*O Sacred, Wise, and Wisdom-giving Plant,
Mother of Science, Now I feel thy Power
Within me clear, not only to discern
Things in their Causes, but to trace the ways
Of highest Agents, deem'd however wise.*

There was a great taming, leaching the tannins or cooking out the cyanide: acorns, cassava, breeding the tame ones. Women's work. Root gatherers and kitchen chemists. A few of the god-plants entered the *chagra*, the circle, like barbarian nomads finding a fertile valley, but mostly they stayed wild, became a specialty of those daring to eat wildness, the bitter. These were plants with a voice: the Tree of Knowledge.

On a large bronze door cast around 1020 in the cathedral in Hildesheim, the Tree has a mushroom shape. It may be modeled after a daisy, or the abundant local mayweed, *Anthemis*, a small nub of disk flowers, the ray petals drooping, or perhaps a deadly *Lepiota*, *L. castanea*, or, some say, *Psilocybe semilanceata*. In a fresco on the ceiling of the Romanesque church in St. Savin in central France, the Tree resembles *Amanita muscaria* with tiny fruit hanging from the cap. This is perhaps a Byzantine stylization of a date palm. Or is it?



ADAM AND EVE, BLAKE, 1808

O Sovran, virtuous, precious of all Trees
In Paradise, of operation blest
To Sapience, hitherto obscured, infamed,
And thy fair Fruit let hang, as to no end
Created; but henceforth my early care,
Not without Song, each Morning, and due praise
Shall tend thee, and the fertile burden ease
Of thy full branches offer'd free to all;
Till dieted by thee I grow mature
In knowledge, as the Gods who all things know;

Eve has many depictions, sometimes thin, sometimes fleshy or nubile, sometimes like Isis. On the North portico of the gothic cathedral at Rheims, she cradles a small reptilian creature in her arms, tenderly. Blake made her voluptuous. From a distance, his painting of Eve accepting the apple from the mouth of the serpent looks like an act of fellatio, Eve's hand caressing the serpent's head like the head of a penis. At Notre Dame it's a threesome, our loving forebears joining their hands together around the Serpent's arboreal phallus. Eve's way: the one who dared, and the one who shared. The goddess and protector of the poison path.

Shall I to him make known
As yet my change, and give him to partake
Full happiness with mee, or rather not,
But keep the odds of Knowledge in my power
Without Copartner?

So Eve is also Pandora, the gifted and the all-giving. Poisoned apple, poisoned gift, all the sorrows of life on the great wheel of becoming. Poison and medicine are samsara and nirvana, forever wedded: the *pharmakon*.

In an African version of the Pandora story, what was left at the bottom of the casket was a gourd of beer, that given by the gods. Enthusiasm is ebriety. God within. *Entheos*.

As with new wine intoxicated both
They swim in mirth, and fancy that they feel
Divinity within them breeding wings

A playfulness in the sacrament: within the poison, a gift. The truth, as glimpsed by Hegel, "is thus the bacchanalian revel, where not a member is sober." Hence, dialectic: a fugitive quality, a beyondness. Atalanta fleeing, the Great Matter, ultimate seriousness, but it never quite stops dancing. We can point to it, we can present it, but in the end it refuses definition. And we are grateful.

So saying, from the Tree her step she turn'd,
But first low Reverence done, as to the power
That dwelt within, whose presence had infused
Into the plant scintial sap, derived
From Nectar, drink of Gods.

—Milton, *Paradise Lost*



PANDORA, THE ALL-GIVING



VISIONARY PLANTS



Time to close the books.

Time to open the library of the world.

Wading through something like phosphorus, a greenish glowing on the sand, sometimes up to our hips.

Three men and two women, plenty of starlight, a bright winter beach, our eyes pierce the darkness easily. And movement, our movement, a moving pentagram, two vertices converging, pentagon to rectangle to triangle and back to pentagon. A force, faintly discernible as a visual field, blows us one to another, and back: the "Karmic Winds," a zigzagging meander out over the wide beach to the ocean.

When it begins.

Too late now to change bets.

The wheel spins, and the ball is already falling.

Almost a trembling. Flashes of color in the sky, morning star, waves of orange, pulsations, bursts of pink and yellow. No one can move, our feet sink into the sand.

The flashing continues, deepens, more and even more spectacular, filling the sky, an orgasmic energy surging through our bodies, each of us moaning aloud. Tiny stars explode like brief magnesium novae, then disappear, a glow remaining and building.

And the birds join. The birds, birds we couldn't see, birds from somewhere, birds from everywhere, all talking about it, singing, chirping, they all see it and feel it, louder and louder, our voices joining theirs.

You have wagered your mind and your soul.

You have wagered your sanity.

You have wagered the rest of your life.

It's like an earthquake, no, a sky-quake—a celestial event. What is it, this happening? Something big, something huge. Some of us fall to knees, strength sapped, calling, an orgasm that goes on and on and on.

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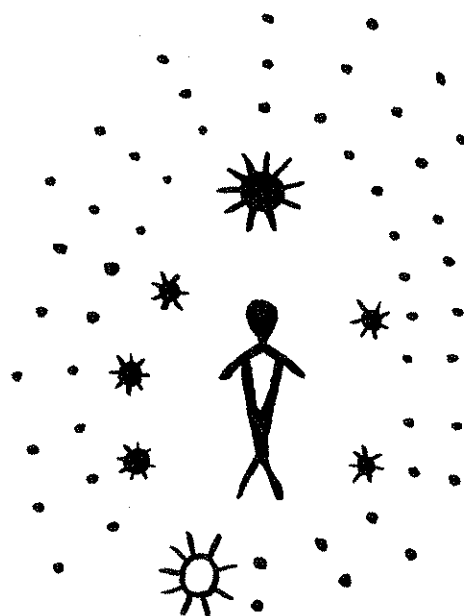
That which is happening is what we are.

Ribbons of weaving orange light, brilliant streakings of turquoise, more pulsations, waves and waves of incredible power, a cosmic energy of galactic scale, dwarfing the earth. It continues. It builds. Some critical mass is accumulating. We can no longer move by our own volition, it has absorbed us totally. Whatever it does, we do; we are in its power.

Joy.

The sun is rising. It has poked up over the low mountains on the eastern horizon. We have witnessed the rising of the sun. We all talk at once. We want to hug, cry, dance, extinguish ourselves. The sun has returned.

The sun, that we had forgotten about, has returned.



RAIN ROCK, KLAMATH RIVER

MORNING GLORY: IPOMOEA VIOLACEA



Common names Tliltliltzin.

Heavenly Blue. Pearly Gates.

Ololiuhqui, sometimes applied to morning glory, is the Nahuatl word for the seeds of *Turbina corymbosa* (*Rivea corymbosa*), a closely related plant.

Flying Saucers. Blue Stars. White Magic.

Who named these plants?

Wedding Bells. Summer Skies.

Related species *Turbina corymbosa* (also called *Rivea corymbosa*) and *Ipomoea sidaefolia*, are found in Oaxaca, central Mexico, and the Gulf coast from South America to Florida. Hawaiian baby woodrose, *Argyreia nervosa*, contains similar alkaloids, as do some other Mesoamerican and African species of *Ipomoea*.

Ipomoea purpurea ("Crimson Rambler," etc.), a common ornamental, does not contain alkaloids. Various studies are summarized by Ott (1993).

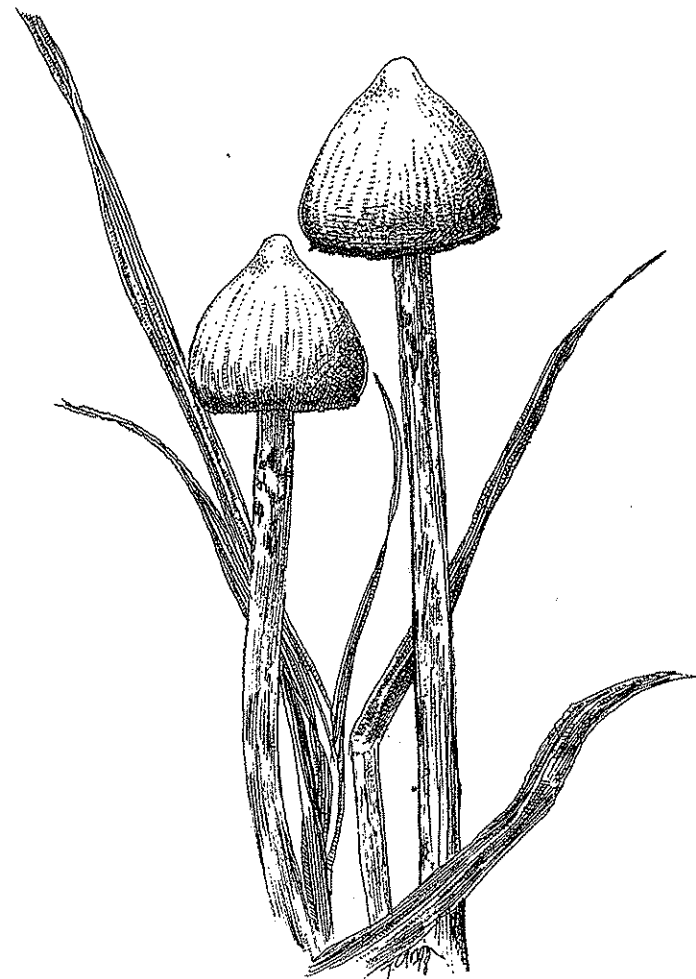
Taxonomy The bindweed family: Convolvulaceae. The genera in this family are weakly defined: species and genera intergrade. Some taxonomists have placed *Turbina corymbosa* in the genus *Ipomoea* (*I. sidaefolia*), along with the other morning glories. *Ipomoea batatas* is the sweet potato, a food staple of the Aztecs. Schultes and Hofmann (1980) include sweet potato in their list of "plants with alleged hallucinogenic effects," the list below "plants with possible hallucinogenic effects." As far as I know, the matter of the psychoactive sweet potato is still an unresolved question of science.

Part Used The seeds.

Chemistry Lysergic acid amide ("LSA"). By chemical extension, if the two protons clinging to the nitrogen atom are replaced by ethyl groups, we have d-lysergic acid diethylamide ("LSD"). LSD has not yet been found in a plant.

Besides ergine (d-lysergic acid amide), *ololiuhqui* and other psychoactive morning glories contain isolysergic acid amide and half a dozen other closely related compounds of various toxicities, including ergometrine (ergonovine), a powerful uterotonic.

Ergine, or LSA, is about one-twentieth the potency of LSD, a threshold dose being 500 micrograms (one-half a milligram) to one milligram.



P. SEMILANCEATA

THE GENUS PSILOCYBE: TEONANÁCATL



I am the Morning Star woman, says
 I am the Cross Star woman, says
 I am the Moon woman, says
 I go up to heaven, says
 I am the woman of the great expanse of the water, says
 I am the woman of the expanse of the divine sea, says
 There I am asking you for your principal herb, your sacred herb, says
 Your clean herb, your well-prepared herb, says
 I am going there, says
 On my knees for hands, on my knees for feet, says
 On my knees of tortillas, on my knees of water, says

—Maria Sabina

Psilocybe is the "smooth-head" genus. Psychoactive ("hallucinogenic") species frequently stain blue when bruised, due to the oxidation of psilocin. The spore prints are generally purplish black to purplish brown, and most of the species are on the small side.

Active species, here listed loosely in order of strength (based on Paul Stamets, 1996), include: *Psilocybe azurescens*, *P. baeocystis*, *P. bohemica*, *P. semilanceata* ("Liberty Caps"), *P. cubensis* [= *Stropharia cubensis*], *P. cyanescens*, *P. tampanensis*, *P. weilii*, *P. hoogshagenii*, *P. stuntzii*, *P. cyanofibrillosa*, and *P. liniformans*. Other potent species include *Psilocybe aztecorum*, *P. caerulescens*, *P. mexicana*, and *P. zapotecorum*. In *Psilocybin Mushrooms of the World*, Stamets describes over sixty species of *Psilocybe*, as well as active species of *Paneolus*, *Conocybe*, *Gymnopilus*, *Inocybe*, and *Pluteus*. G. Guzman's monographs recognize 173 species of *Psilocybe*, over half of which are psychoactive, and, in Stamets's words, "more are being discovered each year."

Psilocybes can be broadly grouped into grass-lovers, wood-lovers, and dung-lovers. The little elf-capped *P. semilanceata* is typical of the grass-lovers, while the robust *P. cubensis* is a well-known dung-lover. *Psilocybe cyanescens* and the spectacular *P. azurescens* are characteristic of the wood-loving and chip-mound species.

Specimens meant for ingestion are often called "shrooms." Maria Sabina called her mushrooms "the children."

How Taken Indoors, at night, in a circle. Outdoors, in the forest, wandering. In the desert. On the prairie. In Madrid. In London. In Germany. In Florida, at a Grateful Dead show, in tie-dye. Alone, when you must speak with the spirit yourself, one on one.

Effects Entheogenic, manifesting god within. And yet that doesn't say it. Psychedelic, revealing the soul. And yet that doesn't say it. Hallucinogenic, generating visions. And yet that doesn't say it, either.

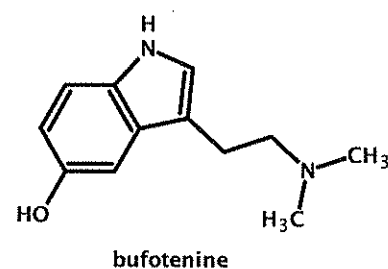
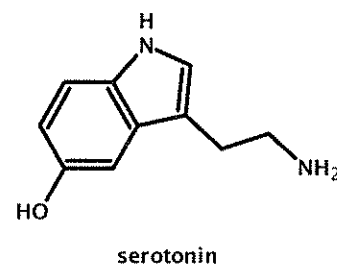
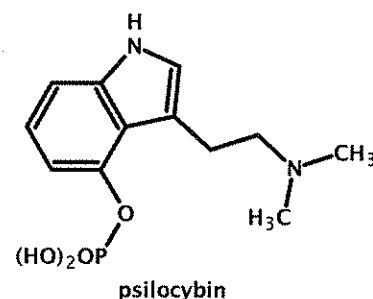
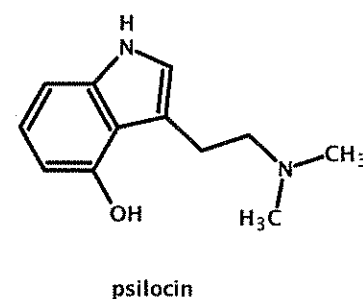
"It was the most incredible, wonderful, and meaningful single experience of my life."

And yet it's not just one experience.

Physical effects include dilation of pupils (mydriasis), piloerection (A. E. Housman's test of true poetry), and an increase in body temperature. Enhancement of monosynaptic reflexes, such as the patellar reflex, has been observed in cats, though one wonders how the test was performed.

Chemistry The mushrooms contain psilocybin, psilocin, and baeocystin, in widely varying amounts. Psilocin is the psychoactive molecule. Psilocybin is dephosphorylated into psilocin in the body. Psilocin is 4-hydroxy-N,N-dimethyltryptamine, DMT with a hydroxyl group on the number 4 carbon atom of the indole ring.

Serotonin is 5-hydroxy-tryptamine. One might wonder what would happen if we methylated serotonin, replacing the two hydrogen protons on the nitrogen atom with methyl groups. Looking up this molecule, 5-hydroxy-N,N-dimethyltryptamine, in the Merck Index tells us that it is bufotenine. Things are falling into place, mushrooms into toadstools, a major neurotransmitter in-between. Or are they?



The Government thought so, and placed bufotenine in Schedule I of the Controlled Substances Act. Unfortunately, the Controlled Substances Act is reliable neither as an indication of toxicity nor as an indication of hallucinogenic properties. Although the Merck Index lists bufotenine as a hallucinogen, several experiments have failed to demonstrate any hallucinogenic effects beyond some visual disturbance. The principal effect of bufotenine on a group of unfortunate prisoners on whom the drug was tested was to turn their skin a bluish color from cyanosis. Still, reports from the field, such as the use of *Anadenanthera columbrina* by healers in northern Argentina, continue to suggest profound activity for bufotenine, at least in certain modes of ingestion. But back to mushrooms.

Part Used The whole carpophore contains tryptamines: pileus, gills, and stipe. Young mushrooms seem to be stronger than those that have fully opened. The available nutrients can have a large effect on the tryptamine content, as has been shown in laboratory studies by Jochen Gartz and others. Fresh, live mushrooms are always the best.

The Ally The poison can get stuck. Sometimes it sticks in the teeth and makes the gums ache. Sometimes the poison gets stuck in the stomach and you feel some nausea. If you can let the power go, if you can let the spirit take over and let the power flow on to wherever it is going, these physical symptoms usually pass.

Or become irrelevant.

How Taken The usual item of commerce is *Psilocybe* [*Stropharia*] *cubensis* dried and sealed in an airtight bag. Doses vary between 1 gram (very light) to 3 grams (medium) to 5 grams (a strong dose) to beyond 5 grams (medicinal). Expect tryptamine content to vary. Age degrades the activity of most *Psilocybe* mushrooms, especially *P. cubensis*, and old mushrooms can produce "the mushroom yawns." Innovative propagation and growing techniques have been able to increase the tryptamine content by a factor of four or five. Liberty caps (*P. semilanceolata*), from the Pacific Northwest, are more potent than *P. cubensis*, and *Psilocybe azurescens* are the most potent of all—the dosage can be halved. Sometimes a single small azure can be plenty enough for a deep mushroom journey.

Dried mushrooms go down easily with honey. Ancient Mesoamericans took their mushrooms in chocolate—still a rewarding practice. Simply grind the dried carpophores in a coffee grinder and stir the powder into the chocolate. Some fast before partaking.

Mushroom effects last for about four hours. Setting is important. Appropriateness is part of the solar medicine, part of walking in beauty. The great gift of the mushroom ally is a special clarity and intelligence, a special and compassionate healing presence. The experts, the people who kept the ally alive for four hundred years while the rest of the world pursued more destructive visions, say that matters relating to the mushroom allies are *muy delicado*. The mushroom people know that the little ones have a sacred nature, and they use them within sacred

space—that is, there is an altar of some sort and prayers are said. The interaction with the mushroom is reverential, even if it is sometimes punctuated by laughter or shouts of wonder. The spirit opens the gate to “that which matters,” so respect, and a certain humility, are appropriate.

The Ally *Hello, spirit, welcome, dear spirit,
my cougar, my puma, my snarling lover,
bring me words. I know you.
And now I see your wound,
and now I see your death,
and wailing is my only song.*

History *Teonanácatl means “flesh of the gods” in Nahuatl, the language of the Aztecs.
This is my body.*

Historians reported how the flesh of the gods was consumed at the coronation of Moctezuma II: the mushrooms were ingested with chocolate. Other accounts relate that mushrooms would be served to visiting diplomats and heads of state, in order to see the outcome of future wars or alliances. Among the nobility, intoxication of any kind was frowned upon. The priests did not use mushrooms. “Like one who eats mushrooms” was a slur applied to wayward sons and “the bad noblewoman.” Soothsayers ate mushrooms—but they were social outcasts anyway, a part of the rabble that had to be tolerated. One high social class that did seem to use the mushrooms freely was the *pochteca*, the long distance traders, who were also the cacao merchants. The *pochteca* were probably Mayans or Toltecs, but the Aztecs were so completely import-dependent that they had to keep their traders happy.

They ate the mushrooms before dawn when they also drank cacao. They ate the mushrooms with honey and when they began to feel excited due to the effect of the mushrooms, the Indians started dancing, while some were singing and others weeping. Thus was the intoxication produced by the mushrooms. Some Indians who did not care to sing, sat down in their rooms, remaining there as if to think. Others, however, saw in a vision that they died and thus cried; others saw themselves being eaten by a wild beast; others imagined that they were capturing prisoners of war; others that they were rich or that they possessed many slaves; others that they committed adultery and had their heads crushed for this offence; others that they had stolen some articles for which they had to be killed, and many other visions.

—Fray Bernardino de Sahagún



MOCTEZUMA II

Out of town, of course, in villages and in the mountains, the plant people continued their mushroom rites as they always had.

Perhaps because they found the parallels with their own theophagic religion too obvious to be comfortable, or because they were mycophobic people for other reasons, the Spanish Church persecuted the mushroom cult even more vehemently than the other sacred plants, peyote or *ololiuqui*. In 1620 the Holy Office of the Inquisition in Mexico City formally decreed that ingestion of inebriating plants was heresy. The War on Drugs is still a religious war.

Inquisitors and other zealous churchmen tortured any mushroom priests they could find to extract more information about the ally and her people, for names and locations. Even though the plant people went into hiding, only those in the most remote areas were able to escape the wrath of the servants of the Savior.

But some of Christ's servants had misgivings. Fray Diego Durán, writing in the late 1500s, remembered that Jehovah, also, had once demanded human sacrifices. Durán began finding parallels between the two religions everywhere he looked, so much so that he became convinced that one of the Apostles must have visited Mexico. Both the Hebrews and the Aztecs believed that God had created the World in the Beginning. The Pyramid of Cholula was like an Aztec Tower of Babel. The Aztecs kept an ark of holy relics. Topiltzin had parted the waters with his staff to allow his persecuted people to pass, while their pursuers were drowned.

Durán found parallels between Aztec and Jewish food prohibitions, and likewise in ritual bathing. Topiltzin was like Thomas, healing, and performing miracles. The Aztecs had cloisters of chaste nuns with rules much like those of the Catholics. The Aztec priests, like the Catholic, offered penance for sins, observed Holy Days, and even wore their hair in a tonsure. Sacraments, incense, candles, confession, baptism, a flayed god, all before him like a smoking mirror.

They used the nanacátl which are wicked mushrooms, also intoxicating like wine. Having drunk and eaten these, they gathered in a plain where, for their pleasure, they danced day and night. This they did on the first day, for on the next day they all cried very much saying that they cleaned and washed their eyes and faces with their tears.

—Fray Bernardino de Sahagún

Who was Topiltzin-Quetzlcoatl if not one of the Apostles? Either an Apostle or Satan, the Master Deceiver who could make his Diabolical Doctrines look so much like the True that it became difficult indeed to separate one from the other. Diego Durán struggled with his doubts.



FRAY BERNARDINO DE SAHAGÚN

The Ally

come in, you orphans,
 come in, bear, twin bear cubs,
 with beads you come,
 dressed in woven beads you come,
 in patterns, in the patterns we weave,
 turquoise beads, beads of yellow ochre,
 with black beads and with red beads woven
 on your back, my lizard, my writhing one,
 you come bearing grief,
 and now I know what keening is.

Effects

Some informants claim that *Psilocybe* mushrooms have fewer physical effects than does LSD—other informants say that the opposite is true. The first stages of mushroom intoxication are often accompanied by muscular relaxation.

But those aren't the effects!

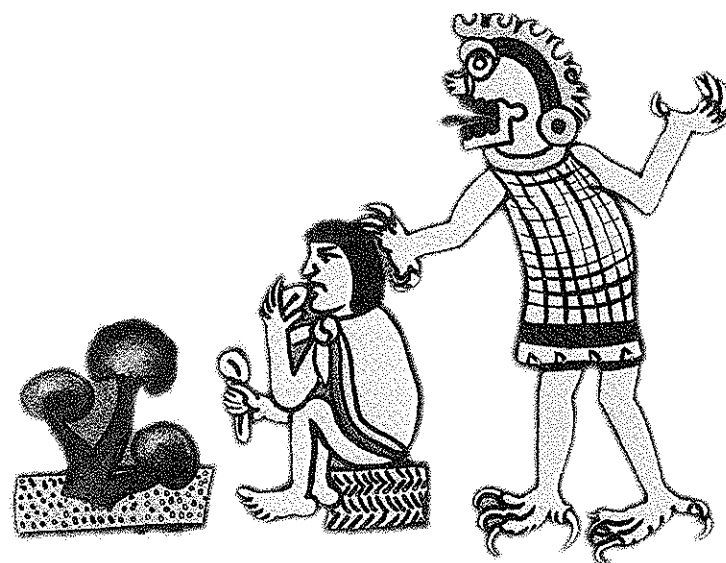
No.

Le llevan ahí donde Dios está.

The Plant

As serotonin mediates the neuro-muscular junction in lower orders of animals, Dennis McKenna once suggested that psilocin might be a slug poison. As slugs are an annoying problem where I live, certain experiments come to mind.

Poisoning the slug within.



TEONANÁCATL, MAGLIABECHIANO CODEX, 16TH C.

Perhaps we were slugs first and children after. Slug-brain could become a positive epithet, a new paradigm of a deeper consciousness, of thick skin and collagen and mucous, of musculature, extension and contraction, the sacred knowledge of all that is wet and sticky, all that moves and flows by itself with no division of self and object, of observer and phenomenon.

*dancing there was before thinking,
 and we dreamt before we danced.*

But her deepest gifts are not about epistemology nor ontology, nor morality.

*An Edenic pre-human wisdom, locked away, stashed
 in ancient life forms like scrolls hidden in a cave.
 Or like angels of an archaic race of gods,
 whose temples are part of mind, whose foundations
 have seen countless cities and empires rise and fall.*

The gods left us a book containing their knowledge. The script of the book is like a score of music. The words of the book are visions. Cellular receptors are the Rosetta Stone where the picture language is deciphered, where our nervous system is the instrument upon which the singing books are played.

History

The mushroom had hidden itself so completely that in the early twentieth century as great an ethnobotanist as William Safford declared that *teonanácatl* was peyote, that the Spanish chroniclers had mistaken the dried buttons of peyote for mushrooms, that there never had been any sacred mushrooms. An amateur ethnobotanist disagreed. Blas Pablo Reko published a book in 1919 in which he stated his belief that *teonanácatl* was indeed a mushroom, and that he believed it was still being used. Reko's voice lacked the academic authority of William Safford, but he continued. In 1936 he received some corroboration from Robert J. Weitlaner, an anthropologist, who claimed to have witnessed a mushroom ritual and backed up his claim with some samples of the mushrooms.

The sample mushrooms crossed the Atlantic twice before arriving at the Harvard Herbarium, where they were inspected by a young ethnobotanist named Richard Evans Schultes. Because of the disintegration of the mushrooms, Schultes was able to identify the samples only to genus, *Panaeolus*. But Schultes' interest had been sparked, and in collaboration with Weston La Barre, he published two articles in the Harvard Botanical Leaflets raising objections to Safford's thesis that *teonanácatl* was peyote. A year later Schultes teamed up with Reko in the field and collected a number of species of mushrooms now known to be psychoactive in Huautla de Jiménez in Oaxaca. Fifteen years later the existence of Schultes' field work was passed on to R. Gordon Wasson by the poet Robert Graves.

Wasson spent three summers in Mexico tracking down the mushrooms before he found Huautla and Maria Sabina.

LIFE MAGAZINE: MAY 13, 1957

BERT LAHR AS A BUMBLING LOVER

TEEN-AGE ALLOWANCES

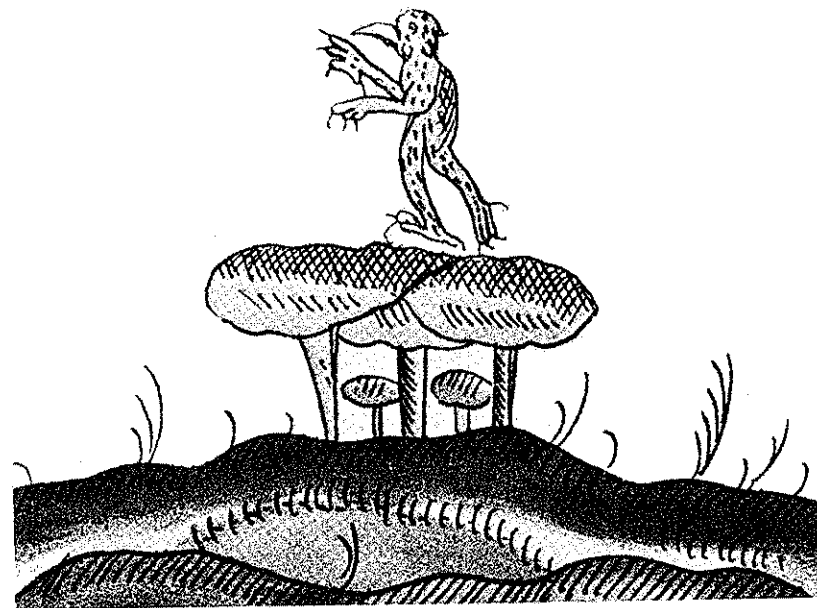
MEET PRIME MINISTER DIEM

WITH HIS VISIT THIS WEEK THE U. S. GETS TO MEET DIEM, A POLITICAL UNKNOWN WHO BECAME A PRIME MINISTER AND IS SAVING VIETNAM FROM COMMUNISM.

A FIERY CAREER'S QUIET CLOSE: THE DEATH OF SENATOR MCCARTHY

THE DISCOVERY OF MUSHROOMS THAT CAUSE STRANGE VISIONS

SEEKING THE MAGIC MUSHROOM: A NEW YORK BANKER GOES TO MEXICO'S MOUNTAINS TO PARTICIPATE IN THE AGE-OLD RITUALS OF INDIANS WHO CHEW STRANGE GROWTHS THAT PRODUCE VISIONS.



FLORENTINE CODEX, SAHAGÚN, 16TH C.

Poesis *Psilocybe* mushrooms, and *P. cubensis* in particular, can be quite variable in potency. Jeremy Bigwood reported that alkaloidal content of *Psilocybe cubensis* varied significantly even between different carpophores of the same batch.

Drying and storage seem to be much more critical with *Psilocybe cubensis* than with other *Psilocybe* spp., such as *P. semilanceolata*. *Psilocybe semilanceolata* shows only minimal degradation even after years of storage. According to C. B. Gold, *Psilocybe cubensis* contains an enzyme (that *P. semilanceolata* does not) that breaks down both psilocybin and psilocin. The enzyme needs water and oxygen, and Gold warns about re-activating the enzyme when preparing the dried mushrooms for ingestion. If Gold is correct, one would not want to rehydrate the mushrooms and then let them sit around for a day or two.

According to Paul Stamets, who knows his subject well, North American *Psilocybes* appear to be anthropophilic, only rarely found in wild, virgin forests, but lovingly colonizing areas of human intrusion. One new species, in particular, deserves mention. *Psilocybe azurescens*, a member of the caramel-capped *Psilocybes*, has been finding its way from the dunes near the mouth of the Columbia River to other beaches and to piles of wood chips, especially alder chips, across North America and probably around the world. *Psilocybe azurescens* has the highest psilocybin content of any known mushroom, easily twice the strength of *P. cubensis*, and is a beautiful and robust member of the genus in both appearance and quality of spirit. The bluing reaction is so strong it verges on black. The mushroom stores well, dried. On beaches it is often associated with beach grass, *Ammophila maritima* (also spreading).

Landscaped grounds around public buildings, such as libraries, museums and police departments are good places to find wood-loving *Psilocybes*. A friend collected a bagful of *Psilocybe cyanofibrillosa* in front of a county courthouse in Marin. Those mushrooms love wood chips, and some watering. There are stories of a secret band of *mushroom guerillas* who inoculate the large piles of wood chips waiting to be distributed with a little *P. mycelium*. . . .

The Ally

bring me words, my panther wife,
blinded by brilliance we are.
we, the clever ones, the peacocks,
blinded by brilliance we are,
the beads, the beautiful beads,
the beads in patterns, the turquoise beads,
the beads we weave,
they blind us, O mother

**Pharmacology/
Toxicology**

Considering its close molecular similarity to serotonin, it is not surprising that psilocin interacts with 5-HT₂ receptors—the serotonergic system. Almost all of the psilocin is excreted unchanged in the urine.

The only specific action of psilocin on bodily organs is to decrease serotonin. The LD₅₀ in rats, mice, and rabbits is 280 mg/kg, two and a half times less toxic than mescaline. If the lethal toxicity in human beings is comparable to those other mammals lovingly sacrificed for the benefit of our scientific knowledge, it would take twenty or twenty-five grams of pure psilocybin to be fatal in one-half of the cases. That corresponds to over ten pounds of dried *Psilocybe cubensis* mushrooms. As one would expect, there are no known fatalities.

LIFE MAGAZINE: MAY 13, 1957

INTERRUPTED INAUGURAL: NICARAGUA HAS FORMAL RITE BUT NO FUN

TAKING THE OATH AS NICARAGUA'S PRESIDENT, LUIS SOMOZA GOES THROUGH RITUAL IN SOMOZA STADIUM, NAMED FOR HIS LATE FATHER

LETTERS

SIRS: I WAS NEVER SO SHOCKED IN MY LIFE AS WITH THE PICTURE OF A WHITE SILK CREPE DRESS ("LOWEST YET IN LOW NECKLINES," LIFE, APRIL 22). NO DECENT WOMAN WOULD WEAR SUCH A DRESS.

—MRS. JOHN PINKOS, FALL RIVER, MASS.

A STRANGE, SOLEMN RITE AND WONDERS IN THE DARK

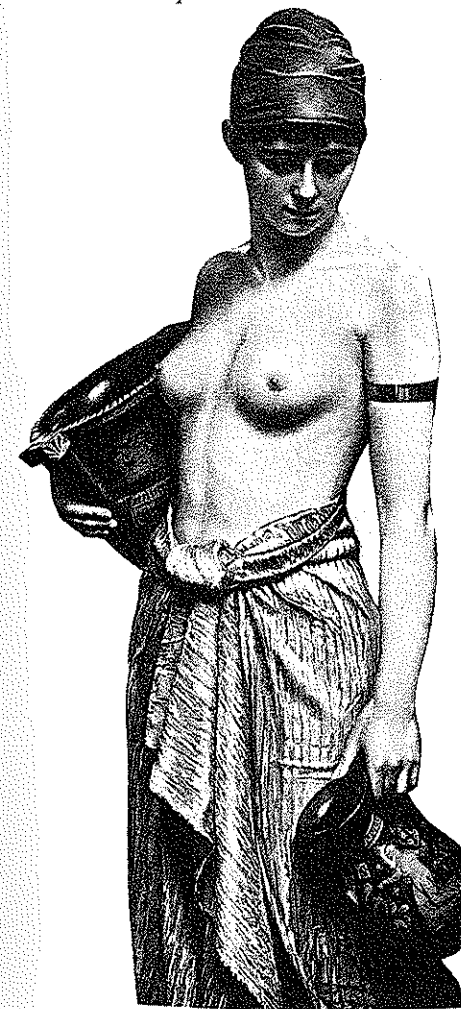
I FELT THAT I WAS NOW SEEING PLAIN, WHEREAS ORDINARY VISION GIVES US AN IMPERFECT VIEW; I WAS SEEING THE ARCHETYPES, THE PLATONIC IDEAS, THAT UNDERLIE THE IMPERFECT IMAGES OF EVERYDAY LIFE. THE THOUGHT CROSSED MY MIND: COULD THE DIVINE MUSHROOMS BE THE SECRET THAT LAY BEHIND THE ANCIENT MYSTERIES? —R. GORDON WASSON

U.S. BUSINESS—A GOLDEN MOOD

Poesis Of all the hallucinogenic mushrooms, *Psilocybe azurescens* may be the easiest to welcome into a garden. It's not a matter of cultivation, which in most places is illegal, it's more a matter of providing a natural habitat that wayward spores will colonize. Azures like wood chips—hardwood chips. Alder is a favorite, but I've also seen them grow on oak, buckeye, and willow. Madrone would probably work well also. Or whatever is around that isn't too pitchy. *P. azurescens* mycelium also likes cardboard, the corrugated kind from boxes. You have to be careful with cardboard, since if some cardboard or some wood chips that were already carrying mycelium were to accidentally fall into your landscaping, the mycelium would spread quickly and aggressively. Compounding this problem is that many gardeners like to use cardboard to cover chips and ground around their azaleas and roses to keep weeds down. Just a word to the wise, trying to do my part.

The best weed control technique is a small pile of wood chips spread over a small area, about two inches deep, covered with cardboard so that the chips won't dry out. Don't keep them too wet or mold or noxious fungi may grow. If you see the brilliant white mycelia of *Psilocybe azurescens* growing through your wood pile, and you don't want them to fruit in the fall rains, keep them covered. Since the mushrooms only fruit when the mycelium has spread completely throughout any given pile, making the piles too big is another technique to discourage fruiting.

The Ally



THE WATER CARRIER

and now i know, i too know,
i who have heard your cry,
i who have voiced your wailing,
now i know where words come from,
now i know where language begins,
now i know what real words sound like,
and now i know what keening is

and now i know why we walk upright
and why we leave offerings
i know the panther's cry
and now i know what keening is

and now i know,
i, the slowest of your sons, O mother,
now i too know why we decorate ourselves
and why we sing the song of the water-jug,
and now i know what keening is

LIFE MAGAZINE: MAY 13, 1957

DIEM

DIEM'S NEXT HURDLE WAS THE FAMOUS "GENEVA ELECTION," THE PLEBISCITE WHICH, ACCORDING TO THE 1954 GENEVA AGREEMENT, SHOULD HAVE BEEN HELD LAST JULY 20. IT WAS SUPPOSED TO LET THE PEOPLE OF NORTH AND SOUTH VIETNAM DECIDE WHETHER A REUNITED COUNTRY SHOULD BE GOVERNED BY ANTI-COMMUNIST DIEM OR COMMUNIST HO CHI MINH IN HANOI, THE NORTHERN CAPITAL. DIEM REFUSED TO SIGN . . .

FOUR PROBLEMS OF HOMEOWNERS

ONE SOLUTION: ALUMINUM

MUSHROOMS

MANY EMOTIONS ARE SHARED BY MEN WITH THE ANIMAL KINGDOM, BUT AWE AND REVERENCE AND THE FEAR OF GOD ARE PECULIAR TO MEN. WHEN WE BEAR IN MIND THE BEATIFIC SENSE OF AWE AND ECSTASY AND CARITAS ENGENDERED BY THE DIVINE MUSHROOMS, ONE IS EMBOLDENED TO THE POINT OF ASKING WHETHER THEY MAY NOT HAVE PLANTED IN PRIMITIVE MAN THE VERY IDEA OF A GOD. —R. GORDON WASSON



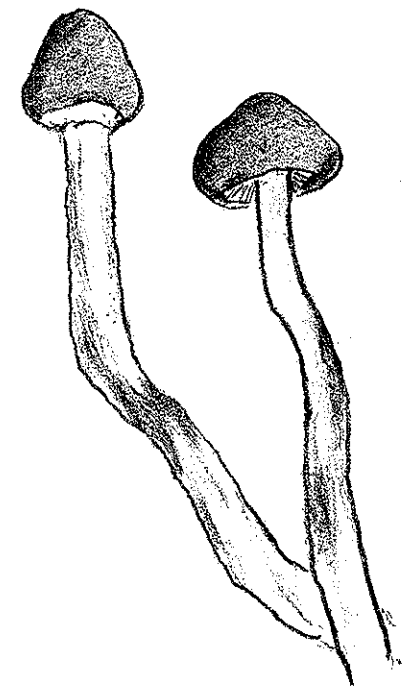
WASSON, 1957

The Ally

*and now i know, i, too, know,
why we walk in beauty in the sunlight
why we wear woven threads, yes,
why we sing songs of woven threads*

*you have entered, graceful snarler,
my predator who won't be tamed,
the dogs are howling.
you bring me words, you bring me wailing
and now i know what keening is*

*for now i have seen beauty, i have seen courage,
and i know why we walk upright.
stand tall, dear daughters, O sons,
walk in grace and in beauty,
you who have heard the cougar's call,
we who know what keening is*



P. AZURESCENS

Lilly was once saved from drowning by friends who found him floating unconscious in his swimming pool.

*And D. M. Turner went down,
no friend to pull his face
out of six inches of water in his tub.*

For long periods he shot up every hour. Like any junkie, he shot up in public bathrooms, and sometimes he'd be found unconscious on the floor. Like any junkie, he lied and conned. But Lilly must be the first junkie in the history of junkiedom to call it "Receiving Knowledge."

*Most of us expect
at least a modest respect
for the straight world.*

The Ally ("Medium-high" dose, IM.)

I injected my companion first, in her sweet butt, and then myself in the arm. There was no sitter but other than falling off of the loft I couldn't see how there was much we could damage. Besides, I didn't think we were going anywhere. I didn't think we were going to leave the blankets and the pillows we'd laid out on the floor and we didn't. To an outside observer we would have been mostly inert, though maybe turning and rolling some. I don't think we were quiet, though.

Somehow we got to the Astral Realm of Desire. There was loud moaning. It was a deep space realm. It seemed physical but how could that be? There were swirling colors but colors that WANTED something. We were flying through dimensions and other universes and at the same time sinking through our is-ness and our identities and losing them but still there was something left and whatever that was was desirous. The whole realm of existence and all the possibilities of existence were desirous, were sprung from desire and made of desire. And distinctly sexual desire. Genital desire, surging unstoppably through hyperspace.

Somehow, a hundred million light years from home, totally anesthetized and bodiless, we found each other and had sex the way the angels do.

THE WORLD'S MOST FAMOUS MUSHROOM: AMANITA MUSCARIA

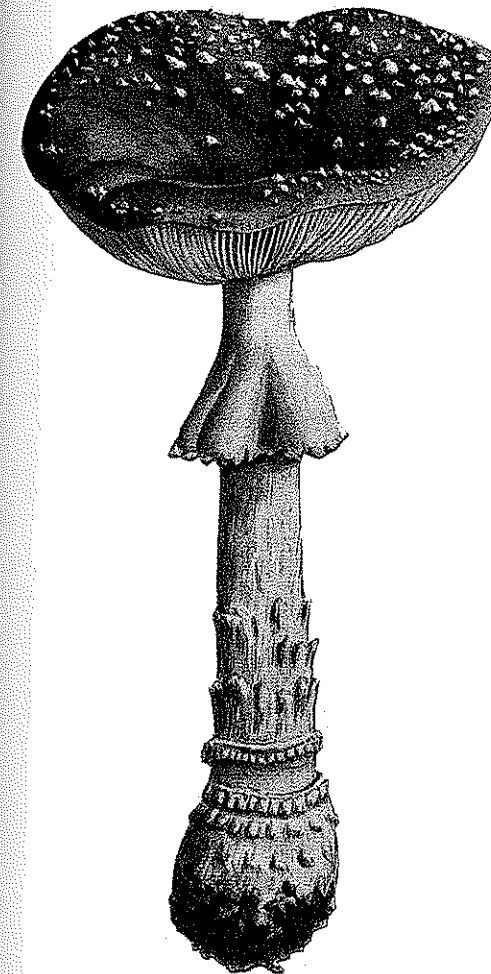


Amanita muscaria is the most famous entheogen in the world that nobody uses. (Ok, hardly anybody). It is the supreme symbol of all entheogenic religion: of secret cults and societies of initiates and whispered lost knowledge. Wasson

thought it was soma and the origin of religion itself. John Allegro thought that Christianity was an *Amanita* cult, that "Jesus" was a code word for the fly agaric. Clark Heinrich, expanding on the ideas of Wasson and Allegro, has Moses initiated into a secret fly agaric cult before he sees the burning bush, as well as the mushroom being the Holy Grail and the Elixir of the alchemists. According to Andrija Puharich, the sacred mushroom was so highly revered by the Egyptians and so secret that it wasn't even part of their language. James Arthur and Donald Teeter add the Sumerian Tree of Knowledge and Mithraism to the mushroom's achievements. Peter Lamborn Wilson conjures *Amanita-soma* from Irish legends and folklore. Carl Ruck finds the mushroom hiding in the Golden Fleece, and in the fire of Prometheus. Blaise Staples finds *Amanitas* within secret orders in Christian monasteries.

*Whatever else one may say
about Amanita muscaria, she
is certainly hypnotic. One
could never call her tentative,
nor afraid to stand out. She's
showy. And she knows it.*

What is most remarkable about our Scarlet Woman is her power to bewitch from afar—you never have to touch her (much less eat her) to fall under her spell.



THE CRYPTO-AMANITAIST'S HANDBOOK:

A Song
of Praise

I, who cannot hide, live in cipher and riddle.
 In rebus and symbol,
 I am anything Red, or Yellow, or Golden, or Tawny.
 Or, of course, White.
 I am the Sun, and I am the Moon.
 I am all things Round, or Plate-shaped, or Urn-shaped,
 and all Things-shaped-like-an-umbrella.
 I am One-foot and One-eye and the Tree, where I grow.
 I claim Pine and Birch, Rowan and Oak, and all Red Berries and Fruit.
 I am all things Green.
 I am Raven.
 Milk I am, and so also Breasts.
 Either the Penis is me, or I am the Penis, that part is not clear.
 I am the Vulva, the Covering, the Caul.
 The Egg I am.
 "Bursting Forth" I am.
 Splendrous I am, indeed.

What all of her worthy devotees have in common is their embracing of the word "entheogen." "Entheogen," proposed and subsequently championed by Ruck and his colleagues, has become the socially acceptable euphemism for "psychedelic." Or such, anyway, was the idea—Wasson's idea—so that the classy folk could distance themselves from the riffraff.

Unfortunately, "entheogen" is not a synonym for "psychedelic." Psychedelics are wild and transgressive. Entheogens are sacred and spiritual. Entheogens aspire to social acceptability. They think if they can only prove themselves bona fide religious sacraments—or better, the ancient basis of all religion and culture—that maybe then Daddy and Big Brother will admit us back into the fold. It's as if a blessing is cast just by the word being enunciated. One can almost smell the incense.

Oddly, many of the entheogenists are upstanding and respectable humanistic unbelievers. But in a way they seem stuck in the past tense.

Viz:

"Jesus was an entheogen" kind of works, at least somewhat, whereas "Jesus was a psychedelic" is impossible to even contemplate. But,

if they would only let the True Christ into their hearts, and accept His Universal Love, they would understand that "Jesus IS psychedelic" resolves all problems.

And you can't do that with "entheogenic." Try. It's too self-referential to be semantically cogent.

Besides, despite the efforts of some of the best minds of the last two thousand years, no one has ever been able to prove the existence of God. So I find something

slightly askew in entheogenic research, almost all of it. There's a weird absence. It's like there's something missing.

Like the palpable presence of the ally, the genius of the plant.

Course, there are a lot of allies. The *Cannabis* ally loves obscure connections (just as an example).

As for *Amanita*, all the attention is just fine with her, as long as it's all theoretical. If you eat her though, it's a different story, and she'll take her revenge for the idolatry.

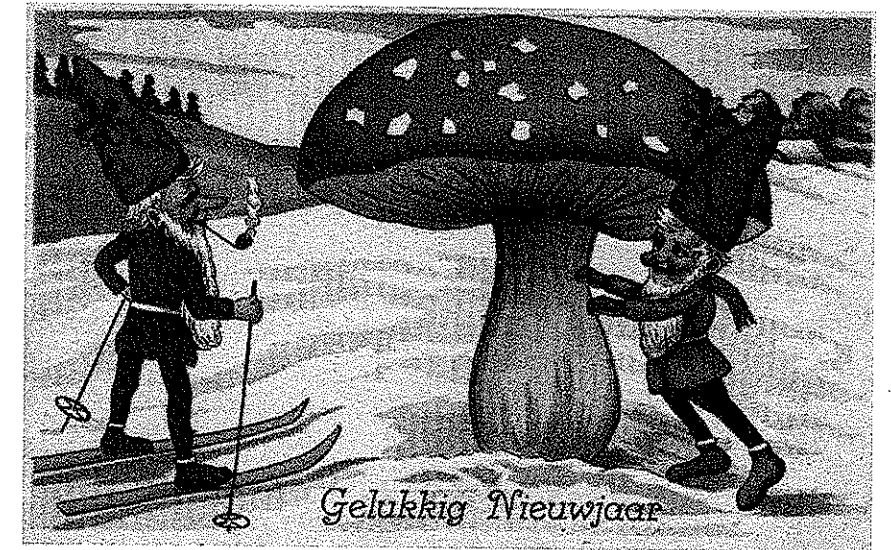
I started barfing... kept barfing... I was totally fucked up...

It's like building a temple for a goddess, but not asking the goddess what it should look like.

Yes. Or speaking the Word of God without actually hearing it.

It is now well-accepted (well... in some circles) that Santa Claus is an *Amanita muscaria* (no, really). Wasson came to believe that the absence of the mushroom proved its presence. Mostly, if something is red, white, or yellow, it could be the fly agaric. Unless it's hidden. Heinrich interprets a Verrocchio painting as a secret message between mushroom initiates because the shepherd's crook forms a cross at the base of a pine tree in the background: "x marks the spot." *Amanita muscaria* grow at the base of pine trees!

Which is, of course, true, and kinda, could kinda, make you think, maybe.



MUSHROOM CULTISTS

Some of the blame for the current state of affairs must be laid to Robert Graves.

Graves believed that there was a mushroom cult in Greece, and his intuition has been good in other ways, so we should stay open to that possibility. Claude Levi-Strauss took Wasson's theory of *Amanita* as soma seriously, and added structuralist arguments as to why it might be true (Levi-Strauss, in Pendell, 1973). Levi-Strauss also believed that *Amanita* was likely the berserker mushroom of the Vikings.

A Song
of Praise

*Delicious is the Amanita.
Madness is the Amanita.
"All things are mine," saith Amanita,
"Let there be no others before me."
I am both the God seen and the God unseen,
The Hidden God and the Great Revealer.
In some circles I'm rather tranquil and beatific,
The essence of Ineffable Mystery and Great Bliss.
To others I'm the Great Carouser:
"Let's get fucked up, let's eat Amanita."*

The Plant Splendrous without peer. Impossible to miss. Queen of the Kingdom.

They were in a pasture beneath some cypress trees. All the horses were staring at me, like they knew something, or were trying to tell me something.

Anywhere in the world it grew, plant doctors must have tried it. And there are many traces, but they're almost always like old tracks, a footprint that's almost completely blown away, or an impression that might be a footprint. There are traces of *Amanitas* in Mesoamerica, among the Ojibway, and among some western Indian tribes. There are traces in the Pyrenees and traces in Germany. In Afghanistan there may even be footprints. There are traces in India, maybe. Traces, yes, and maybe traces in a secret sect of tantric Buddhists. Maybe.

For the Queen of Entheogens, it's all pretty muted.

One would expect more. (I mean, compare it to say, mandrake.) From a distance, the silence in the hall is louder than the one or two who are clapping. The only people shouting are the Siberians.

Those among the animist-shamanist cultures of Siberia who use *Amanita muscaria* are divided into two geographical regions: West Siberia, where the Khanty, the Nganasan, and the Selkup live, and eastern Siberia from the Kolyma River to the Kamchatka peninsula, home of the Chukchi, the Koryak, and the Yukagir. Old Russians, who had lived along the Kolyma for centuries were also reported to use the mushroom. Most of the ethnographic reports were written between the mid-1700s and 1900, though there are a few new studies by Saar and others. A number of the early observers reported the drinking of urine. The Tungus tribes rarely use *Amanita muscaria*, preferring *Ledum palustre*, which says something about the environment these people inhabit.

Maret Saar (1991) divides the use of *Amanita muscaria* by the Siberians into four classes: sacred and magic activities, such as divination and communicating with the dead; the recital of epics ("after consuming two mushrooms they would go mad and sing for hours in a loud voice"); for difficult physical work, such as haymaking and pulling boats with ropes; and as a narcotic, for euphoria and dreaming. While *Amanita muscaria* is still in use in some parts of Siberia, vodka is more and more the intoxicant of choice.

The principal therapeutic use of *Amanita muscaria* is to induce healing dreams. An eighteenth century Polish explorer, Joseph Kopec, reported that his entire past was revealed in a series of *Amanita*-induced dreams, to which he attributed his convalescence. A biochemist, Eberhard Waldschmidt, uses *Amanita muscaria* to induce deep sleep, and reports that his patients awaken with improved psychic.

Dr. Ralph Cosack, who has as much personal and clinical experience with *Amanita muscaria* as anyone in the world, uses the mushroom himself and gives it to his patients. Cosack reports that autosuggestion is important if one wants to extend the visionary phase of the intoxication. However, Cosack believes that the healing occurs in the later, dreamless (or unremembered) sleep, and that the healing effects are independent of the visionary effects. Cosack developed his therapy through years of self-experiments. Interestingly, Cosack recommends fresh young mushrooms (not dried).

Nyberg (1992), stresses that, in contrast to *Psilocybe* mushrooms in Mesoamerica, the use of *Amanita muscaria* in Siberia is basically non-religious, and that the mushroom itself is not an object of veneration. The Siberian accounts collected by Wasson (1968) generally present *Amanita* intoxication as secular, and characterized by alternating periods of slumber and manic frenzy. In one instance it is reported that the mushroom is taken to give one the courage to murder an enemy.

A Song
of Praise

*Who can watch the sun rise, and not think of me?
Who can see the moon in the night sky, and not whisper my name?
My name also means "ephedra," but that's to confuse you.
Neither Buddhists nor Hindus nor Christians nor Jews nor Muslims use Amanita,
But that's because they are no longer true religions.
In the True Religion, Enlightenment was passed from master to disciple
Through urine. Urinalysis and drug-testing are the moribund and Kali-Yugic
Perversion of this great practice.*

*Give up this prideful squeamishness, acknowledge me as the Great Pope,
Get over your stupid hang-ups and come worship Big Red.
Semen (by the way) is also my name.
Poison they call me, clearly a smear.
I am the Scapegoat, the Great Secret, the Hidden Wisdom,
The Reviled One and the Savior.
In spite of the rumors that I've been persecuted for millennia,*

I'm still legal.
 I am the Salamander and the Retort,
 The Elixir, and the Grail.
 I am Fire, I am Water.
 I am Lightning, and I am Rain.
 I'm the Bull, the Lamb, the Serpent, and the Dove.
 I am All-that-flies, and the Clouds.
 The Hammer is mine, and mine the Battle Axe.
 I am Blood, I am Life.
 Shiver before me, mere mortals,
 You shall sweat at my approach.
 You shall tremble and shake,
 You'll be sorry for your sins.
 What seems is not, and what's not is what is.

The Plant The importance of suggestion (e.g., "set") in the reported effects of *Amanita muscaria* must be considered. In this regard, I can think of no more positive "set" than Wasson's widely-accepted belief that *Amanita muscaria* is the fabulous soma. (I mean, if it weren't for Wasson's theory, who would even be trying this mushroom, except for a few plant geeks?) The prevalence of toxic and negative experiences among North American users is, for this reason, all the more remarkable.

Many wonder if the North American strains are different, in some crucial way, from the circumpolar races. One shamanically-inclined plant person, on the advice of a Native American he got to know in northern Alaska (who also told him that they would track inebriated reindeer to collect their urine), ate a fresh young *Amanita muscaria* and was able to hold telepathic conversations with various local spirits associated with rocks and trees. When he tried the same thing in California, some years later, he experienced only the characteristic atropine-like toxicity. (Incidentally, this informant had not heard of Wasson's soma theory when he first tried the mushroom in 1965.)

Effects The effects of ingesting *Amanita muscaria* often fall into three stages: an initial phase of nausea and vomiting (sometimes absent), followed by sleep, followed by a third phase when there might be visions and hallucinations. (Others would dispute this characterization vigorously, denying the nausea and inverting the chronology of sleepiness and visuals. Michelot and Melendez-Howell characterize the initial stage as "confusion, dizziness, and tiredness, with visual and auditory anesthesia, space distortion, and unawareness of time," followed at about two hours by drowsiness and vivid dreams, ending in a deep sleep which lasts about eight hours.) Festi and Bianchi (1992) report that mushrooms collected in September induce more marked nausea and less narcotic and visionary experience than those collected in August.

You are leaving out talking to spirits.

Some of the Siberians say that the best time to talk to the spirits is after the dreaming.

At high doses the dissociative effects predominate. Low doses have been described as mildly euphoric.

At a moderate dose, though I still felt fine, the rumblings of the massive energy in the background, and its potential for disruption, were clear.

Clark Heinrich's single and notable experience of mystical rapture involved eating *Amanitas* over thirty days and, finally, drinking urine. It is, I think, the only such account anywhere in the literature, and it has never been repeated.



I surveyed the several dozen reports of eating *Amanita* on the *erowid.org* web site. Trip reports can often have a tedious quality, but this is not at all true in the "Amanita Vault." *Amanita* seems to bring out an inspired articulation. The word "entheogen" is refreshingly absent. My favorite report is by "sixthseal," a minute by minute accounting transcribed in real time.

The Ally

6.5 GRAMS, TOOK AT 5 PM

5:40

WAS GETTING SLIGHTLY SLEEPY WITHOUT REALIZING IT. AND I'VE READ ABOUT THE NAUSEA, BUT GOD, I DIDN'T KNOW IT WAS THIS BAD. IT JUST SUDDENLY STARTED. THE NAUSEA I MEAN. . . GONNA LIE DOWN FOR AWHILE.

JUST GOT UP TO TELL YOU ALL VERY DIZZY AND I NOTICE THE SALIVA EFFECTS TOO.

I FELL ASKEEP JUST NOW AND SUDDENDLY WOPE UP BEOFRE IO. I DON'T REMEMBRE DREAMING OR TAKING THE MUSHROOMS AND JUST SAT UP FOR ALMOST 5 MINUTES THERE NOT KNOWKING ANYTHING.

SORRY, TELLYING IS HARDF SINCE I'MT THINKBG ONE CHARACTER BACK IS CORRECT/I KEEPM MOVIG MY HEAD TO THE NORTHWEST. I CAN TELL I'M VERY UNDER THE INFLUNCE. IT WAS GO KEEP GOING NORTHWEST. KEEPS ON UPPERRIGHT UPPERRIGHT AND HEHE OOPS I THOUGHT MY DIGICAM WAS MY MOUSE. . . YEP, LAZY TO CORRECT THE TYPOS TOO.

WALKKED TO THE TOILET JUST NOPW AND REALIZEE MY MOTOR SKILL ISN'T AS STABLE AS I THOUGHT IT WAS. FELL DOWN WHILE PUTTING ON TOILET SLIPPERS. THINGS ARE STRANGE TOO, FOUND MYSELF VERY OPEN TO ANY SUGGESTIONS, CAN BE QUITE A DANGEROUS DRUG IN THIS CONTEXT.

AND NOW MY HEAD HEARD THIS IT KEEPS WANTING TO LEAN TO THE LEFT AND GRABBED MY MOUSE RECEPTOR INSTEAD OF MY MOUSE.

THE EFFECTS ARE MAINLY MENTAL. THE ONLY 'VISUALS' I SAW WAS A VERY FAST MOVING FIELD OF VISION. YOU DUNNO HOW HARD IT WS TO TYPE THOE FEW WORDS. MY BRAIN KEEPS REPEATING 'TELEVISION' AND ANOTHER PHRASE I FORGOT TO CONFUSE ME. IT WANTED ME TO HELP SOMETHING ELSE, I THINK. OH I REMEMEBER NOW! IT WAS 'HELP' MY BRAIN KEEEPS REPEATING 'HELP' IN A MALE VOICE LIKE SOMEONE IS IN TROUBLE. THE VOUCE SOUNDS MIDDLE AGED, CAUCASIAN, AND WEAKENING, LIKE HE'S DROWNKING (NOT IN WATER) IN SOMETHING LIKE WEAK SAND. QUICK-SAND I MEAN.

YEAH IT THINGS CAN BE QUITE BLUR. TRYING TO DO THINGS IS HARD SICE YOUR MIND SEEMS TO HAVE A MIND OF ITS OWN AND WANT TO DO OTHER THINGS. SO YOU END UP DOING THINGS THAT WAS NOT WHAT YOU WANTED. THIS IS LIKE PICKING UP WRONG THINGS — WANT TO PICK UP KEYS, PICK UP FAN INSTEAD, REALLY STRANGE STUF. HMM...

Sixthseal concludes with "it's quite interesting, not 'noteworthy interesting' but 'interesting interesting'."

In this field report, the "ally" is clearly present!



Considering how superstitious we mental travelers are, not wishing to speak any untruth or to offend a plant that might be someone else's ally or that might get back at us sometime, the rest of the reports are overwhelmingly negative. One man woke up to find his apartment trashed, tables broken, a chunk taken out of a wall, and a big lump on his head:

I couldn't move 3 fingers on my right hand, my thighs ached and I couldn't walk properly for a week, I had no skin left on the front of my legs from my knees half way to my ankles, various other bruises all over the place.

Several reports mentioned having to physically restrain a mushroomer, and another report lends credence to the theory that *Amanita muscaria* was what the berserkers ate:

It gets worse, he starts to express different emotions first happy then crying and sits in the closet. He is talking about the devil and god a lot. Everyone is fucking with him now because they can't believe he is this fucked up. Someone pushed him and

he punches them in the face. Someone punches him back and he does not move or feel it. . . he pisses on the rug. . . he is chasing people naked and does not look in control of his body and seeing things. . .

This report is remarkably similar to one made by Stepan Krasheninnikov in 1755 of a Cossack posted to Siberia who ate the mushroom and became the butt of his fellows after the mushroom ordered him to confess all of his sins.

One man wrote: "Folks, just because it gets one 'fucked up' doesn't mean it's a guaranteed mystical experience. I see it in no other way than that of eating poisonous mushrooms, and I can't blame mycologists for seeing them this way."

Reports of the effects of *Amanita muscaria* were available to Charles Dodgson, and the "One side will make you grow taller, and the other side will make you grow shorter" statement by the caterpillar in *Alice in Wonderland* may be based on M. C. Cooke's description in *The Seven Sisters of Sleep*: "Erroneous impressions of size and distance are common occurrences."

Pharmacology

The principal alkaloids are ibotenic acid and muscimol. Muscarinic effects, while clearly present, are probably not due to muscarine, which, in most races at least, is only minimally present. A small percentage of the ibotenic acid is decarboxylated into muscimol in the body, and the muscimol is thought to be responsible for many of the mushroom's effects. A significant amount of the ibotenic acid is excreted in the urine, along with traces of muscimol. Contrary to some popular theories, the ratio of ibotenic acid to muscimol is higher in the urine than in the fresh mushroom.

Ibotenic acid is quite neurotoxic, being regularly used in laboratories to create lesions in the brains of small rodents. No brain lesions have ever been observed in humans attributable to *Amanita muscaria*, but I don't think anybody has ever looked. Brain lesions have been reported from rodents treated with ibotenic acid and muscimol (Lescaudron, Bitran and Stein, 1992), but "treated" there means injected. It all depends on dosage and length of exposure. A gram of fresh *Amanita muscaria* cap may contain 1 mg of ibotenic acid, but no one knows how much of it actually enters the brain. It is believed that ibotenic acid crosses the blood-brain barrier by active transport (Olpe and Koella, 1978), while muscimol diffuses across the lipid bilayer, though inefficiently (Presti, 2005).

Ibotenic acid can induce mental effects in doses of 50 to 100 mg, muscimol in doses of 10 to 15 mg.

Ibotenic acid acts on the glutamic acid receptor, and is thus excitatory, while muscimol acts on the GABA receptor, and is depressant. At least in cats. And snails. The benzodiazepines enhance GABA activity and there is evidence of cross-potentialiation. The alterations of sedation and excitement characteristic of *A. muscaria* are certainly suggestive of the presence of both the inhibitory muscimol and the excitatory ibotenic acid. However, even though the dissociative effects of high doses of *A. muscaria* fit well with NMDA excitation, it is not clear if this mode of

action actually occurs in humans. I think the pharmacology of *Amanita muscaria* should be considered as "not well understood."

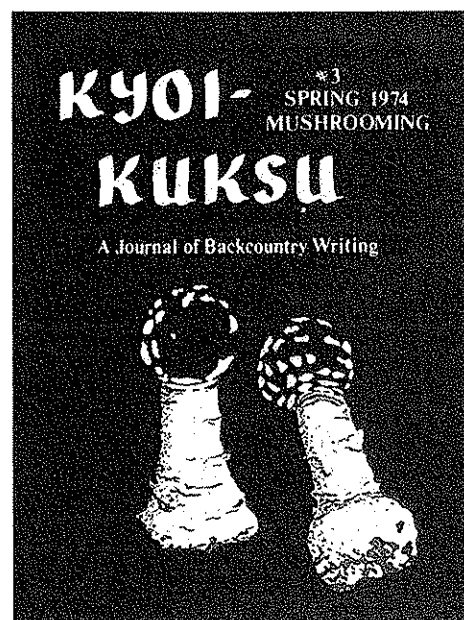
Two other active components, detected in *Amanita pantherina*, are (2*R*),(1*R*)-2-amino-3-(1,2-dicarboxyethylthio) propanoic acid and (2*R*),(1*S*)-2-amino-3-(1,2-dicarboxyethylthio) propanoic acid.

Enter sulfur into the story...

These substances act on the NMDA receptors KI-II-A and KI-II-B respectively, and offer a possible alternative pharmacological explanation for some of the mushroom's effects.

The brilliant red pigment of the fly-agaric cap is called muscaflavin, and, no surprise to mycophiles, is the same pigment responsible for the similarly brilliant red caps of certain waxy caps, *Hygrophorus puniceus* and *H. cuspidatus*.

The ability of *Amanita muscaria* to kill flies is debated. I have never been able to kill any flies this way myself, despite a number of attempts. Some have reported that flies become temporarily inebriated from the mushroom, and it is conceivable that, in such a condition, they could drown themselves. Michelot and Melendez-Howell conclude that the "fly" association has to do with spirits ("Beelzebub") and possession by demons and not to the order *Diptera*—that the original folk association of flies and demons has been gradually lost.



Amanita muscaria concentrates a number of heavy metals in its flesh, particularly vanadium and selenium, but also cadmium, cobalt, chromium, lead, mercury, and nickel.

Ibotenic acid content of Swiss specimens of *A. muscaria* varied between 0.08 and 0.1 percent of fresh weight (Festi and Bianchi). Percent of dried weight should be roughly ten times those amounts. Percentages in specimens from Oregon and Washington are reported by Largent to be higher, and Northern California specimens may be higher yet (Largent, in Pendell, 1973). Muscimol content in fresh specimens varies from little to 0.05 percent. The combined isoxazoles amounted to 0.46 percent in an American specimen of *Amanita pantherina* (Festi and Bianchi).

Drying the mushroom evidently allows some percentage of the ibotenic acid to decarboxylate into muscimol—possibly a quarter or a third, or perhaps even more (depending on drying time and temperature, I would think). It is generally believed, at least in mycophagic circles, that drying the mushrooms both increases their potency and diminishes the negative effects. This later

contention, while theoretically attractive, is clearly enough not well supported by the evidence of users. More than one experienced *Amanita* user believes that fresh young specimens are the best.

Dosages are reported as one to five dried caps, or five to ten dried caps, depending on who one asks. Dosages by weight of dried material in the Erowid accounts vary from 6 grams to 15 grams. Ott reported eating 30 grams with no ill effects, an atypical response. Sometimes the dosage is reported as from one-quarter to three-quarters of a cup, chopped.

There is no specific antidote to poisoning by *Amanita muscaria* or *A. pantherina*—you have to ride it out. Neither muscimol nor ibotenic acid is removed from the receptor by the GABA or glutamate active uptake system. F. G. Waser (in Efron, 1967), who experimented on himself by swallowing 20 mg of ibotenic acid in water, experienced his first ever migraine headache the day after the ingestion, which continued "in milder form" for two weeks.

Amanita muscaria is not considered hepatotoxic, though very sensitive tests have shown the presence of amatoxins.

Ibotenic acid is quite water soluble. Peeled *Amanita* caps are eaten in both Mexico and Japan without ill effect after first par-boiling them and then discarding the water. A "little" bit of ibotenic acid enhances the flavor—it has structural similarities to monosodium glutamate and has been patented as a flavor-enhancer.

Class *Telephorica*. In its effects, *Amanita muscaria* is most like the tropane deliriants, and could easily be grouped with them, even though the pharmacology (what we know of it) is quite different. But *Amanita* intoxication lacks the erotic tone so common among the nightshades. Besides, it might be Soma. It deserves its own class.

The actions of *Amanita* on the GABA system link it to absinthe, an association experientially supported by the sociable effects of a delightful *Amanita* beer of a certain skilled and innovative brewer from Oregon.

In the spirit of Amanita studies we could go further, of course, and maintain that the Green Fairy is really a disguised elf, elf equals toadstool (visualize the cap), and we are back in Santa's workshop with proof that Teutonic magicians had penetrated the secrets of modern pharmacology.

And, moreover my friend, a strong indication that we should open that second bottle.

The Ally Among the Khanty the *Amanita* mushroom is used for divination. If a father, for example, wishes to discover why his child is sick, he will eat mushroom caps and fall asleep. In his dream he meets dwarves. The dwarves will ask him why he has eaten *Amanita muscaria*. The man explains his wish and the dwarves give him the answer. To onlookers it appears that the man is asleep, except that sometimes, when he is talking to the dwarves, he speaks in a loud voice. Sometimes you have to call the dwarves by singing.

Oh you little gold-stiped fly-agaric, chao-chao-chao,
 Such tiding you brought me, chao-chao-chao,
 Little patterned-stiped fly-agaric, chao-chao-chao,
 Many messages, many words you have, chao-chao-chao,
 (An unknown word) is placed on golden grass, chao-chao-chao.

—Karjalainen, and Silvet, in Saar, 1991

Effects There was a cat that came over to the cabin from the neighbors, a sleek Abyssinian named Grendel. Grendel was the most agile cat I had ever known. I had a lot of *Amanita muscaria* cut into strips and drying in a basket up on the rafters. When I looked up I saw that Grendel had climbed into the basket and was eating them. I yelled at him to stop and come down and he did but he slipped on the ladder and was just barely able to catch himself. His eyes were huge. . .

The Plant One of the earliest accounts of *Amanita* use in the counterculture was by Coyote Man and Brother William in *Get the Buzzon*:

Each plant, each animal calls out its name—not its English name, its real name. In some way the shaking aspen leaves and the barking fox say their names. Another amanita, the ahah mushroom, has no tongue. He calls out his name through humans. When people looking for *Amanita velosa* eat instead the ahah mushroom, *Amanita pantherina*, they get a vacant look on their faces and wander about, the backs of their hands against their shoulders, saying, 'Ah-ah-tee, ah-ahai-tee, ahah-tee.' That's how that mushroom calls out its name—ahah.

The old people knew about *Amanita muscaria*, the fly agaric. They said the red mushroom with rock salt sprinkled on top makes people go crazy if they eat it. The people saying that knew of the sacred mushroom without having used it. Only some of the old people got high from plants—they were into things like chanting, dancing, special diets. . . seeking spirits.

I ate three big caps the first evening of the Fall Mushroom Celebration. Then the meat lost its sweet flavor. Instead, it tasted like a copper penny and its skin suddenly turned hot and peppery. *Amanita* told me I had enough.

'Many wild mushroom eaters become high without even knowing what is happening. Those who collect many different kinds of wild mushrooms may eat one that gets them high in a subtle way.' *Amanita* said that.

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The few circles that I know of that use *Amanita* are all mountain folk, like Coyote Man's circle. They eat fresh mushrooms. Mostly they report it to be a shared ordeal and catharsis, and therefore of group bonding.

You feel REALLY good afterwards.

The Ally Jeremy had traveled back into the lake country near Lake Superior. He went light: no extra clothes, no gear, no food. He'd only brought one little thing with him, wrapped in foil and in a tiny bag. When he reached his campsite, there were *Amanitas* growing under a tree. When he looked in his bag, the foil-wrapped gift wasn't there. He considered making the long day's journey home to get it, but then decided to eat the *Amanitas* instead.

For his first time ever, there was no nausea or retching. He ate a lot of them. He said that his mind felt pretty empty. He lay down and when he woke up it was late the next day and his clothes were drenched with sweat. After awhile he got up and was able to walk. It took some getting used to, but with some practice he said it was fun, and he walked all around the lake and through the forest for hours. It was as if everything were new.

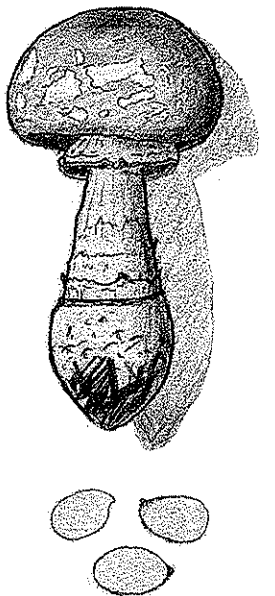
You feel REALLY good afterwards.

When he got home and was unpacking, he found the little foil wrapper right in his bag where it was supposed to be.

I prefer *Amanita* as a beer. And then not much.

The Ally "I'm waiting for you."

"Ney, darlin', once enuf."



A. PANTHERINA