

## Ololiuqui and Badah Negro:

### Nature's Cousins to LSD

Ololiuqui was the name given to the seeds of Rivea corymbosa by natives of Mexico long before the Spanish conquest. Hernandez and Serna, Spanish physicians reporting on plants used for medicinal purposes wrote about the seeds as early as 1575. Schultes translates these authors:\*

"The seed is round and very much like coriander, whence the name (in Nahuatl, the term 'ololiuqui' means 'round thing') of the plant. The seed has some medicinal use...it is said to cure eye trouble. Formerly, when the priests wanted to commune with their gods and to receive a message from them, they ate this plant to induce a delirium. A thousand visions and satanic hallucinations appeared to them."

As they tried to do with magic mushrooms, the Spanish attempted to abolish the use of the seeds by cruelly punishing the natives and making them publicly renounce their beliefs.

"They place offerings to the seeds in secret places so the offerings cannot be found if a search be made. They also place these seeds among the idols of their ancestors."

\*The Botany and Chemistry of Hallucinogens. Schultes and Hofmann, 1973. C.C. Thomas, publisher, Springfield, IL. Translations from Florentine Codex, 1629.

...The natives do these things with so much respect that when some transgressor of the law is arrested ...he denies vehemently that he knows anything about the practice. The natives do this not so much because of fear of the law as because of the veneration in which they hold the seed ololiuqui. They do not wish to offend ololiuqui with demonstrations before the judges... and with public destruction of the seed by burning."

--Serna

The identification of ololiuqui was somewhat confused until Schultes made a positive identification as R. corymbosa. Reko, in 1919, had made the correct identification, but it was refuted by William Safford who mistakenly identified ololiuqui as Datura metaloides of the Solanaceae family. Safford disregarded the early Spanish accounts because "it is not known that any of the Convolvulaceae are narcotic, though many of the Solanaceae are".\* The flowers of R. corymbosa are smaller than those of the morning glory, (Ipomoea violacea) and grow in clusters of five to seven or more on branchings from the main vine. Morning glories, on the other hand, have their flowers distributed fairly uniformly along the vine branches. (The drawings on pages 45 and 46 are modified from Smith and Wilson in Schultes and Hofmann's book.)

About 1960, Albert Hofmann extracted

\*The Hallucinogens. Hoffer and Osmond, Academic Press, New York, 1967.

lysergic acid compounds from ololiuqui, but the reports he made were not generally accepted by botanical chemists. Ergot compounds had previously been found only in the lower fungi, and it was considered extremely unlikely that ergotic alkaloids would also show up in higher plants. Some critics of his work suggested that Hofmann's ololiuqui seeds had become contaminated with spores of these lower fungi which had been floating around in Hofmann's laboratory. But Hofmann's work was later verified by other researchers, mainly Taber and Heacock (1962) and Genest (1964).

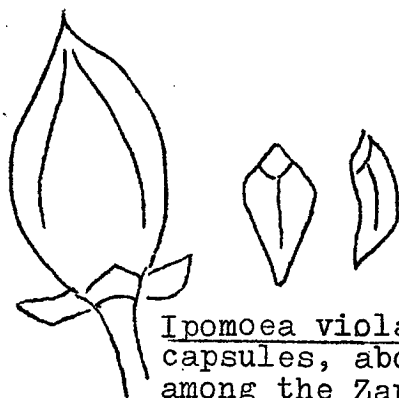
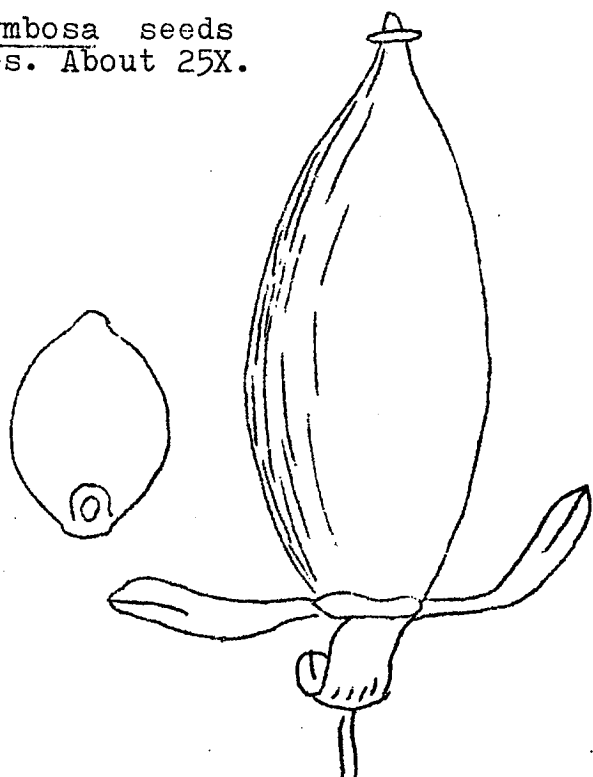
About the same time Hofmann was doing his extractions with ololiuqui, botanist T. MacDougall reported that the seeds of Ipomoea violacea were being used in conjunction with, or in place of, R. corymbosa seeds by groups of Zapotec Indians in Oaxaca who referred to them as "badah negro." These seeds are black, long, and angular, whereas the ololiuqui seeds are brown and round. R. Gordon Wasson suggested that badah negro was the Aztec narcotic "tlitliltzin", derived from the word for "black" with a reverential suffix.\* Hofmann also analyzed these seeds and found them to contain similar ergotic alkaloids, though in lesser quantities.\*\*

Schultes and Hofmann have stated that

\*"Notes on the Present Status of Ololiuqui and other Hallucinogens of Mexico." Botanical Museum Leaflets, 20: 164-193, Harvard University, 1963.

\*\*"The Active Seeds of R. corymbosa and Ipomea violacea." Botanical Museum Leaflets, 20: 194-212, 1963.

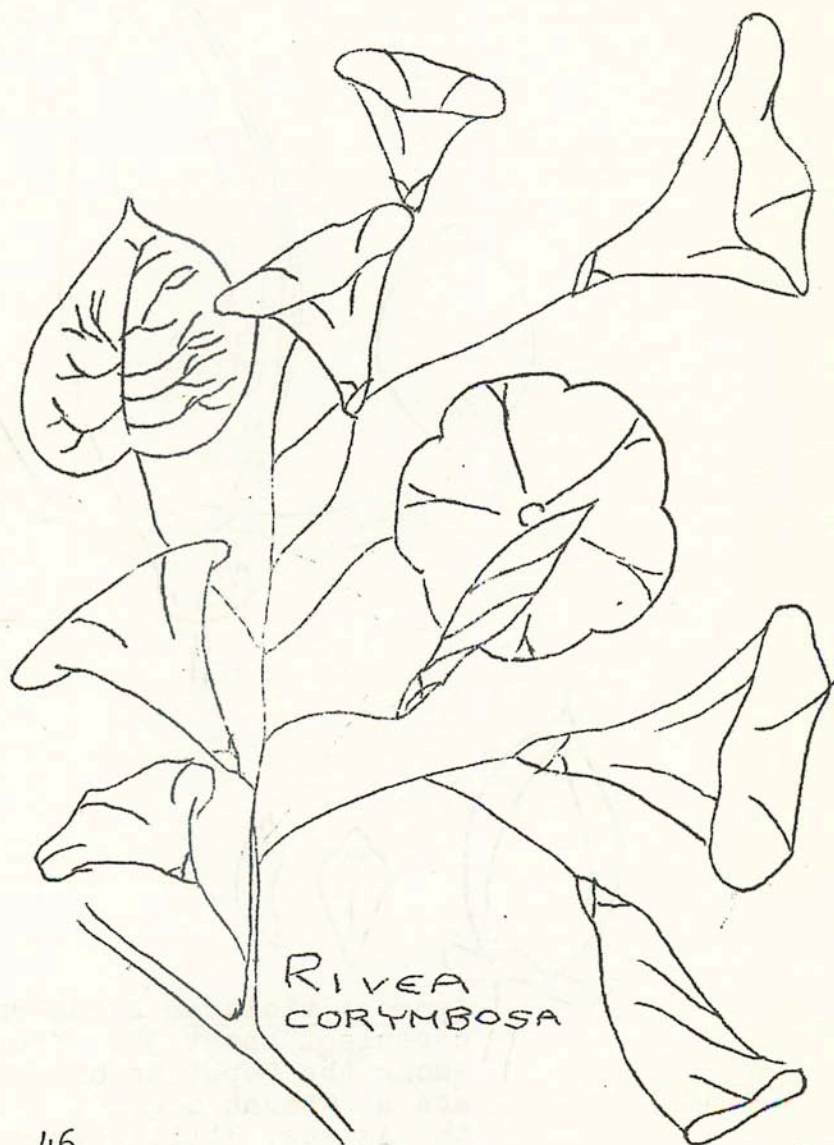
Rivea corymbosa seeds  
and capsules. About 25X.



Ipomoea violacea seeds and  
capsules, about 3X. Known  
among the Zapotecs of Oax-  
aca as "badah negro"; to  
the Aztecs, "tlitliltzin".



"OLOLIUQUI"



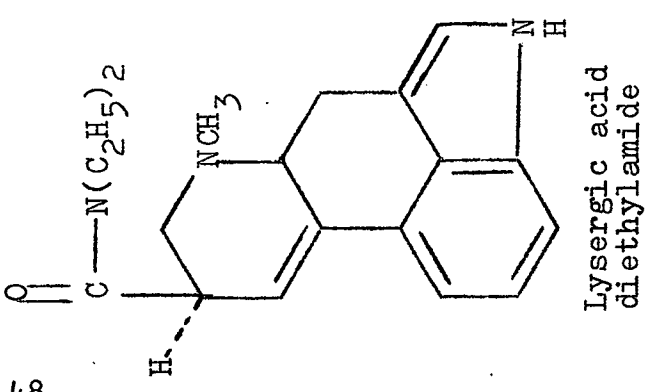
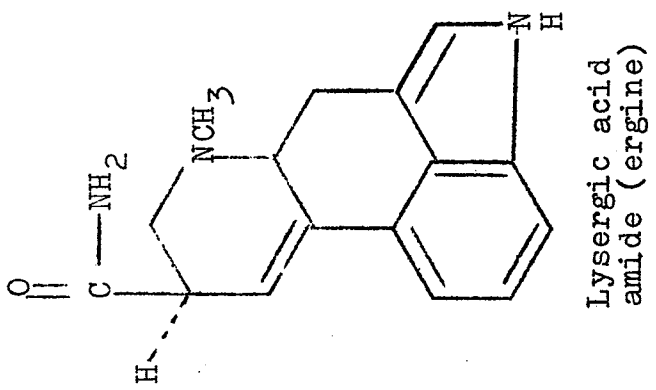
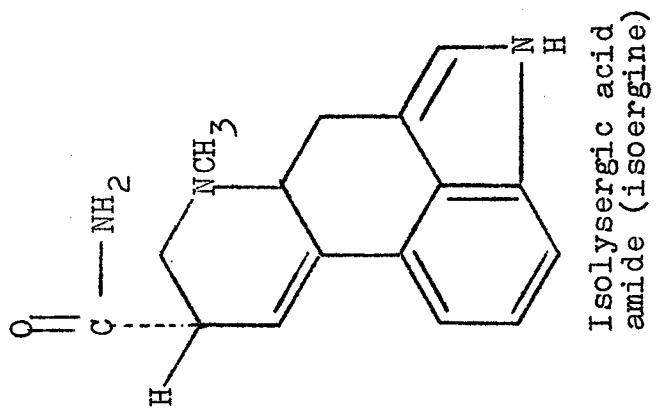
RIVEA  
CORYMBOSA

the seeds of R. corymbosa are about twice as potent as those of I. violacea, listing alkaloid contents as 0.12 percent and 0.06 percent respectively. Several other chemists have analyzed varieties of morning glory seeds, conflictingly indicating both the "pearly gates" variety and "heavenly blues" were the highest in psychoactive alkaloids. All seem to agree, however, that these blue and white varieties are the most potent; the red varieties such as "Scarlet O'Hara" contain only small traces of lysergic acid amides. Sidney Cohen has suggested that variations in results from quantitative analysis may be linked to harvesting the seeds at different stages of maturity.\*

Ipomoea violacea is the popular morning glory well known to horticulturists and popularized by the hippies in the late 60's as a substitute for LSD. In regard to chemical constituency, Ipomoea and Rivea are nearly the same. The two main active principles are d-lysergic acid amide (ergine) and d-isolysergic acid amide (isoergine). Other minor constituents are chanclavine, elymoclavine, and lysergol. I. violacea has ergometrine in place of lysergol, but this is not among the major psychoactive principles, so it would be difficult to tell them apart in terms of their psychic effects. Ergometrine is used in obstetrics as a uterine stimulant and hemostatic agent; therefore these seeds should not be used by pregnant women.

Humphry Osmond did some preliminary

\*The Beyond Within: The LSD Story. Sidney Cohen, Athenium, New York, 1972.



experiments with ololiuqui as early as 1955 to determine the extent of their psychedelic effect, varying doses from 14 to 100 seeds in five separate trials. It is interesting to note that Osmond took care to collect as much information as he could about the seeds before he began his experiments, noting how they were used by natives, their chemistry, his own prior experience with other psychedelics, and the setting in which he took them. Although Osmond doesn't define set and setting as such in his writings, he was obviously aware of their significance long before Leary, Alpert, and Metzner made their formal definitions in the 60's.

There were few effects until he had eaten sixty of the ground seeds. He noted effects of nausea, lethargy, and irritable apathy, with only minor pattern hallucinations. He referred to the experience as "a waking dream", and returned to normal in about four hours.

His final experiment with 100 seeds was more profound in effect, though not like LSD. The experience started in about twenty minutes with feelings of nausea, apathy, and withdrawal. He noted that after about three hours a "paralysis of will" made it very difficult to make decisions, or to do anything. As the effects began to wane after about six hours, his energy returned and he became more active. Osmond makes little reference to visual hallucinations, but did note that things seemed "newer, brighter, silence deeper, and noises crisper." In a conclusive write-up after the experiment, he noted that the "paralysis of



will" was analogous to some schizophrenic states, and this observation gave him insight into aspects of that form of mental illness.\*

Some producers of morning glory seeds have become aware of the use of these seeds as hallucinogens, and have coated them with an emetic agent. Northrup King Company, of Fresno, California, coats their seeds with "Thirium 50" to discourage their use as mind alterants. Ferry Morse, Burpee, and American Seed Company are among those who do not adulterate their seeds with toxic materials. If any company contaminates their seeds with toxic substances, the information must be stated on the package.

My own experience with morning glory seeds can serve to indicate the tremendous power of these seeds as an hallucinogenic agent. It turned out to be a bad trip, done in a poor set, with no clear purpose or expectation in mind, other than to have a high time. It was a trip from which it took about two years to recover mental confidence in psychedelics. The ill outcome was, of course, due to the reckless indulgence in an enormous overdose for which I was totally unprepared. Nevertheless, the experience was valuable in that I learned from it to have more respect for the power of hallucinogens on the mind. It motivated me to write my first notes on the psychedelic experience, and I have felt emphatically that because of this experience we should not neglect to realize that there are

\*Journal of Medical Science. 101: 526-537  
1955

both positive and negative effects to these drugs. But if we are to realize the value of the psychedelic experience, we have to "hit the target" so to speak, not overshoot or undershoot, or assume biased prejudices based on one-sided propaganda, whether it be positive or negative. This applies not only to dosage, but also to mental preparation, setting selection, and purposefulness of usage. My experience was deficient in all these categories to some degree, but the principle cause was dosage.

My prior experience with psychedelics had been only a single tab of LSD the year before. The experience had been profound and intensely pleasurable, but I had no access to any more. I therefore began an investigation within the realm of my limited knowledge, to search out my universe for a means of repeating that experience.

I read all the information I could find on LSD and on drug experiences in general. Eventually, I encountered references to the psychedelic effects of morning glory seeds; specifically the blue and white varieties. Within hours I had made the rounds to grocery stores and garden supply centers, bringing home fifteen or twenty packets of Pearly Gates and Heavenly Blues. "Pearly Gates" was certainly an appropriate name for a "heavenly" experience--if it was true. It took me two days to crush all fifteen packets with pliers. There were 70 to 80 seeds per packet in those days, and I recall calculating that I had between 1000 and 1200 seeds. I had read that about 300 seeds are sufficient, but I figured

that was probably a minimal dose; I might as well make sure of getting off really good.

I got home from work about 1:30 a.m. and soaked my ground seeds in warm water for about 15 minutes, then ate the mush. Horrible tasting stuff it was, but I managed to get it all down except the last teaspoonful or two. I could stomach no more, and abstaining from that last bit may have saved me more trouble than I'd like to think about.

In about 30 minutes I started coming on, and initially there was considerable nausea, though it subsided within another hour. My wife had gone to sleep earlier; I had stayed up with the light on listening to music. Soon notes of music were floating through the air; the walls became filled with geometric patterns of yellow and beige. Accelerated thought took me through a regression tour of my memory banks to the time of my childhood. Rather pleasant.

And now, a sort of numbness spread throughout my body. It was not an anesthetic numbness, but more of a neurological numbness; I felt as if my body was encased in a thick, warm gel. It was now after 3:30 and I spent the next couple hours engrossed in pleasant tripping, though I noticed the hallucinations were not so energetically vibrant as those I had experienced with LSD.

Eventually I began to phase into colors; thin wires of electrical blue and neon red accentuated the wall and ceiling intersections of the room. The advent of color-predominant hallucinations progressed rapidly; they boiled into frothy

undulations of tonal variations, which, for all their brilliance, were not entirely enjoyable because of their dynamic instability.

Presently I realized that this trip was going far higher and faster than I liked. Displacement hallucinations were occurring, all over the wrinkles of the bedsheets, the walls, and on the sleeping form of my wife beside me. I began to realize there was no way I could determine whether any given wrinkle was concave or convex, as light/shadow differences were also displacing, and they could no longer be associated with specific parts of the visual field.

Anyway, wrinkles on a bedsheet aren't too important; it's the overlying pattern that counts. A pattern of overlying white snowflakes appeared, here, there, overlapping, converging on one another. I dared not allow my gaze to fix on one spot, for those ominous patterns of dull white light would soon entirely obliterate visual perception.

I turned over after several centuries, looking up at the lightshade in the center of the ceiling, trying to see it as I knew it should appear. Instead, the displacement phenomenon returned, causing it to move about, as well as all the shadows on the room walls and furnishings. It was daylight outside now, nearly 6:00 a.m. I tried to see the light shade in its entirety, but I could only visualize partial aspects of it; i.e., I perceived it in a sequence of simpler forms, of which each was only a partial element of the whole thing. A square, an outline of a square, an undulating plane, a cross

wide at the center, narrow at the points. On and on it went, in a thousand permutations of its subelements.

(I should interject at this point that the accompanying thought processes were quite beyond description. Also there was by now a multitude of auditory compliments to the illusions. The interpretation I write here is derived from interjections of my mind into the consciousness I was perceiving. In spite of the fact that I was so high that the illusions were vastly predominate over reality perceptions, I was still aware of what the external was "supposed" to look like, and that I was a long ways away from it.)

One of the hallmarks of the psychedelic experience is its induction of an apparent acceleration of thought processes. I suppose this is caused by stimulation of brain cells at lower than normal thresholds of activity. Presently, however, this increases to such an extremely rapid rate that the individual's "point of consciousness" (ego, the "I am") can only integrate the vast amount of data by transferring to a more elementary state or a higher state of consciousness, as some would say. Suffice it to say that a written or verbal description of the psychedelic experience provides only a rudimentary outline of the totality of it.

I looked away from the lightshade at the wall on the opposite side of the room. Anyway, time was beginning to collapse, and I knew that I had been through it once before or something like this once before. This same thing had already happened to me again, or was it that this

same thing would just happen to me again? When time itself begins to collapse, how would I ever find the way back to my own time?

Shifting my gaze to the wall on the opposite side of the room, I saw coming toward me very rapidly, increasing in size, what I can only refer to as "the spinner". This was beyond anything I had ever experienced before and I'm convinced it would represent a phase of consciousness beyond perceptual alteration (illusionogenic hallucinations). It was beyond hallucination because the form was constant, rather than changing, color absent, and its center was my center of consciousness, whereas with visual hallucinations, they usually appear peripherally to the center of the visual field. The only variable aspect was its direction of spin, alternating clockwise and counterclockwise. Two or three times it approached, nearly filling the room, and I became really frightened then, fearful of dying. There was no escaping it; that center of rotation was the center of my own visual field, my own axis of rotation. With a terrible infinite energy it alternated its direction of spin; as it approached, I could feel myself melting into it, being absorbed; drained of identity and consciousness, a goner forever..

I turned over on the bed, and now two great rivers of firey red and brilliant green split my mind and I began to learn the dichotomy of mind/brain as only one expression of a perfectly dichotomous universe, from electron/proton to the bilobed cerebrum which generated my own conscious thought: All is split; eternal-



ly as divided as heaven and hell.

Now very much alarmed, I demanded my wife take me to the hospital. Somehow I managed to get dressed, but as I exited the bedroom, my split mind wanted to go either to the door on the left or into the living room on the right. My reason and logic seemed to be intact in reacting to what I was experiencing, but I could not have explained to anyone else what that experience was like. I was alarmed because I couldn't find my way back to ordinary perception--not enjoyable at all when it can't be turned off or controlled. Like the sorcerer's apprentice, I had started something here with no forethought as to how it could be turned off.

It was about 7:15 a.m., and there was no emergency doctor on duty. We had to wait for about an hour, but it seemed to be hundreds, thousands, even millions of years passing through my consciousness. I went through periods of acute nervous tension, building up to such a crescendo, I thought my body would snap in an apocalyptic convulsive seizure preceeding death itself. It was such an incredible battle to maintain muscular homostasis, yet each time I managed to override. Then the tension would subside, and I'd think at last I was going down: yet, down, down, and further down, below and opposite to those previous states. I knew I appeared to others to be in a catatonic stupor, but they weren't aware of what I was perceiving, seeing, knowing. I could hear the phase differences of the piped music coming from two different speakers, but what good would it do to try to explain that to anyone? I seemed to be

regressing back through countless generations of life, back through the simple minded, through prehistoric man, back through the genetic chain of the molecular memory of DNA to a reptilian consciousness. Snakes, lizards, and strange amphibians appeared, projected onto the floor tiles; half real, half synthesized from the chaotic, scrambled information which used to be my memory banks.

Eventually I saw the doctor, but my communicative attempt was a failure. I was doubtful if he knew much about the psychedelic state and I tried to explain. Apparently he thought I was trying to give him some fantastic revelation. "I don't have time for this" he said. "Go home and drink fluids; get it out of your system."

The phases of tension were also accompanied by very different types of hallucinations from those experienced during catatonic regression periods. There were often wire-like lines of red, green, and blue, and I knew these to be visualizations of neural circuitry within my brain, trying to become reorganized. Occasionally peripheral rainbows would appear, and I became fearful when they approached the central visual field, which would indicate I was going up again. The lines were most predominant though, and I could judge by their sequence, intensity, and complexity whether I was getting higher or going down. These were the primary circuits, the strongest and last to go out, consisting of straight parallel lines and concentric curves about external objects. Blue indicated my brain was capable of a little higher order of com-

plexity (three colors instead of two). The more lines there were, the less visual energy allotted to each; thus less brilliance and more lines indicated lower states. The goal was to have the lines match exactly with external objects, reducing to invisibility. At times the colored lines would weave into complex serpentine arabesques, signifying increasing capability of complex mental function.

I returned home and spent the rest of the day trying to come down. But early in the evening I returned to the hospital and saw a different doctor who seemed more understanding. He gave me a heavy sedative, after which I returned home and slept for about ten hours. The total period of hallucinosis was about eighteen hours, or three to five times as long as would be expected with a moderate dose of the seeds. Needless to say, it was a long time before I returned to experimenting with psychedelics. Yet I knew that it was inevitable that eventually I must do so, for the pleasant recollection of the earlier LSD trip would remain as vivid as that of the bummer.

Looking back on it, I consider myself fortunate to have had such an experience, for it allowed me to see so clearly the neurological network in operation, and to realize the obvious analogy to collective consciousness as manifested in political organizations and other forms of social order. But I also became aware of how easily the mind can become constricted by the physical limitations of brain and body, and the necessity for transcendence principles to operate if the human spirit

within is to survive. And I saw the continuity of life, and how we are all linked through the molecular heratige of genetic thread.

I could not avoid the feeling that I was stuck there; that I couldn't get down. Later I realized that it was only a plateau of transcendence, from which the descent took much longer because I started from a place much higher. I felt the terror of a mind helplessly naked in the fire of chemical sabotage, and I feared for my very existance.

Yet I did return to normal, and to my job at the mill the next week, and in the weeks following, things rolled along as smoothly as ever. I did not have any recurring flashbacks weeks or mounths later, but I could not help spending considerable time reflecting on the experience. All totaled, I could not be paid enough to repeat the experience, yet I wouldn't trade my memory of it for anything.

I do not mean this story to be a scare tactic to make people paranoid of using morning glory seeds as psychedelic agents. In more recent years I have eaten these seeds a number of times and had really fine experiences. But I've been more cautious about dosage since then, and have learned to approach these excursions with serious purposefulness, and not as a form of recreational entertainment.

People using morning glory seeds (or any other psychedelic) should be aware of their potential, and by relating this story to others, I hope to enable them to avoid making the same mistakes I have

made. With the current repressive atmosphere of governmental propaganda about drugs, information sharing becomes of crucial importance; this is one of the primary functions of the Psychozoic Press. Truth about psychedelics transcends both positive and negatively biased statements, and the simple truth I learned from this experience is that an overdose can be worse than no dose at all--but that doesn't negate the value of an appropriate dose.

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### A Short Note on

#### San Pedro in Spiritual Healing

The tall, columnar San Pedro cactus, known among botanists as Trichocereus pachanoi, is a native to mountainous elevations in Peru. Its use goes back at least 1000 years, and possibly 3000. An article by Douglas Sharon includes a photograph of an ancient ceramic vessel which depicts a ribbed, columnar cactus in close association with a jaguar, an animal long known for its mystical significance in indian folklore.\* Over the centuries, the Spanish influence became assimilated into various rituals, and Christian artifacts and symbolism now play an important part in the folk healings practiced today.

The curandero makes an infusion of San Pedro called cimora, by boiling sliced sections of the cactus in several gallons of water for seven hours. A blanket is spread on the ground on which a number of