

A NEW MEXICAN PSYCHOTROPIC DRUG  
FROM THE MINT FAMILY<sup>1</sup>

BY

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FOR a number of years we have been exploring the highlands of southern Mexico in a study of the role played by hallucinogenic mushrooms in the religious life of the Indians. We began by visiting the Sierra Mazateca in 1953, in the northernmost part of the state of Oaxaca, returning there in 1955 and every year thereafter through 1962. At an early date we learned of a psychotropic plant that the Mazatecs consume when mushrooms are not available. But as we and our collaborator Roger Heim were concentrating on the difficult task of locating and identifying the various species of hallucinogenic mushrooms, we had to neglect for some time this plant that the Indians employ as a less desirable substitute. In 1960 and 1961, we brought back specimens and submitted them for determination to Schultes and to Epling. All of the specimens available proved to be unsatisfactory for specific identification. Finally, in September and October of 1962, satisfactory herbarium material reached us, when we were in San José Tenango, on which Dr. Epling could base his specific description. Tenango, at

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about 1200 meters altitude, is close to and above the *tierra caliente* of Vera Cruz.

We now identify a species of *Salvia* new to botanists, *S. divinorum* Epling & Játiva, as a psychotropic drug used traditionally by the Mazatec Indians of Oaxaca, Mexico, in their divination rites. To the ever growing family of Mexican *phantastica* a new member is thus added, and for the first time a species of the Labiatae joins this interesting group.

The plant is familiar to virtually all Mazatecs. In Huautla de Jiménez (1800 meters) we saw two or three plants growing, and a specimen taken to Mexico City is still alive there in the open air; but these plants do not flower. We have never seen the seeds, and no Indian has been able to tell us about them. The plant is reproduced vegetatively from a shoot stuck into the ground. It requires black soil, rather than clay, and for the plant to prosper moisture must be steady. Many, perhaps most, Mazatec families possess a private supply of the plants, but almost invariably they are not near the home nor near trails where passers-by might see them. We were on the watch for *Salvia divinorum* as we criss-crossed the Sierra Mazateca on horseback in September and October of 1962, but never once did we see it. The Indians choose some remote ravine for the planting of it and they are loath to reveal the spots. No Indian in San José Tenango was willing to take us to the plants whence they brought back specimens to us. *Salvia divinorum* seems to be a cultigen: whether it occurs in a wild state (except for plants that have been abandoned or have escaped) we do not know.

In former times the proprietors of land paid no attention to growths of hallucinogenic mushrooms and *Salvia divinorum*; but in the last four or five years the market for the mushrooms and the possibility of a market for

the *Salvia* have made them conscious of a potential value here. Several episodes have recently taken place in the vicinity of Huautla in which the owner has enforced his right to the plants.

The Mazatecs who speak Spanish refer to *Salvia divinorum* as *hojas de la Pastora*, or *hojas de María Pastora* ("leaves of the Shepherdess" or "leaves of Mary the Shepherdess"); and this is also the translation of the name in Mazatec<sup>3</sup>: *ška<sup>4</sup> Pastora*.

The Mazatec name is curious. In Christian tradition the Virgin Mary is not thought of as a shepherdess. Is the "Pastora" concept a survival of the pre-Christian *dueño de los animales*, "the Lord of the animals," that figures large in the folk tradition of the Middle American Indians? A pagan association would thus be sanctified by the addition of the Virgin's name.

*Salvia divinorum* is, in the minds of the Mazatecs, only the most important of several plants, all Labiatae, that they regard as members of the same "family." *Salvia divinorum* is known as *la hembra*, "the female." *El macho*, or "the male," is *Coleus pumila*, of European origin. Then there is *el nene*, "the child," and *el ahijado*, "the godson," which are both forms of *Coleus Blumei*. Some Indians insist that these others are likewise psychotropic, but we have not tried them; others say these are merely medicinal.

We have found no reference to the use of the leaves of *Salvia divinorum* in the 16th and 17th Century writers. We have found only two passages that may refer to them in modern writers. Dr. Blas Pablo Reko, a pioneer in Mexican ethnobotanical field work, discussing the hallucinogenic mushrooms, adds (*Mitobotánica zapo-*

<sup>3</sup> The superscript digit indicates the tone of the syllable, which is the lowest of four tones in Mazatec.

teca, Mexico, 1945, p. 17) a sentence that, translated, says:

We cannot fail to mention here another magic plant whose leaves produce visions and which the Cuicatecs and Mazatecs (in the districts of Cuicatlán and Teotitlán) call "divination leaf." The loose leaves that I have received do not permit their scientific identification.

This refers probably to the *Salvia divinorum* of the Mazatecs. There is a longer reference in a paper by Ing. Robert J. Weitlaner ("Curaciones Mazatecas" in An. Inst. Nac. Anthrop. Hist. 4, No. 32 (1952) 283). While Weitlaner was in Ojitlán, a Chinantec village, he encountered a native of Jalapa de Díaz, a neighboring Mazatec town, who told him of the use among his fellow-townsmen of a plant known as *Yerba de María*. This informant's account, in a shortened paraphrased translation, follows:

*Yerba María* resembles somewhat the *yerba mora*, but it has slightly wiler leaves. Only the leaves are used, putting them in water. First the leaves are rubbed together in the hands, the water is not boiled, and they are used for very specific purposes. When the *curandero* goes to the forest in search of this plant, before cutting it he must kneel and pray to it. They are not witch-doctors; but the leaves are cut only when they are needed, after praying.

For example, if someone is suffering from a sickness, and the doctors do not know what is the matter, then with this plant they divine the disease. The *curandero* who brings the leaves first asks the sick person if he is addicted to taking alcohol, because, when a man does not take alcohol, fifty leaves are prescribed; when he takes alcohol, then 100 leaves are prescribed. The sick person drinks the water in which the leaves have been rubbed. At midnight, the *curandero* goes with him and another person to a place where there is no noise, as for example an isolated house, where the patient takes the potion. They wait 15 minutes for the drug to take effect, and the patient himself begins to state the kind of sickness from which he suffers. The patient finds himself in a semi-delirious state, he speaks as in a trance, and the others listen attentively to what he says. He shakes his clothes, as though with the aid of the plant he would free himself from the little beasties [presumed cause, in the Indian mind, of the illness]. At dawn the *curandero* bathes the patient with the water of which he has drunk, and thereupon the patient is cured.

People say that with this bath goes away the drunken state produced by the plant that the patient has taken.

When it is a question of a theft, or a thing lost, the *curandero* listens to what is said by the man who has taken the plant, and thus the facts are disclosed.

There is in Jalapa de Díaz an individual named Felipe Miranda, who every three or six months goes to the mountains to gather the plant. He makes wonderful cures and finds himself in a good economic situation. They say he cultivates and tends to the plant, but he does not reveal the kind of plant that it is.

The identification of *Salvia divinorum* is long overdue. The plant is present the whole year round, and the Mazatecs do not hesitate to discuss it, since they are much less inhibited with respect to this plant than they used to be when talking about the sacred mushrooms. In recent years Huautla has changed greatly, the highway having reached there in 1958-9 and the new-born traffic in the psychotropic mushrooms having its focus there. Among the visitors to Huautla there have been a number of botanists and mycologists. In Mexico City the *hojas de la Pastora* are a frequent theme of discussion in botanical circles. It is hard to understand how the plant has avoided classification until now.

So far as our information goes, the area of diffusion of the *hojas de la Pastora* is confined to the Mazatec country and possibly the immediately contiguous Cuicatec and Chinantec areas. But it may well be known and used elsewhere. We shall await with curiosity the reports of informants from other regions following the publication of this article. *Ololiuqui* (*Rivea corymbosa* (L.) Hallier filius) is known among the Mazatecs; but they seem to prefer for divination the *hojas de la Pastora* to the *semilla de la Flor de la Virgen*, "seed of the Flower of the Virgin," as the Mazatecs call *ololiuqui*.

On Wednesday, July 12, 1961, I ate the "hojas de la Pastora" and experienced their effects. I was in Ayautla,

stopping in the home of Doña Inés Sosa de García. She introduced me to a number of *curanderas*: Augustina Borja, Clementina Unda, María Sebastiana Carrera, and Sara Unda de la Hoz.

On the evening of that day, the first two came to the house shortly before 11 o'clock, and Augustina Borja performed the ceremony in a large spare room. Those present were Irmgard Weitlaner Johnson, my daughter Mary X. Britten ('Masha'), Doña Donata, and her daughter Consuelo ('Chelo'). Augustina Borja was the daughter of a *curandero* who had died about ten years before. Her own daughters often accompany her on her healing visits and are themselves budding *curanderas*. On the evening that we spent with her, she came along with Clementina Unda. They were careful to orient themselves to the east as they set the stage for the ceremony. In the Mazatec country the rites are always so oriented or as near as possible in that direction; never to the west, which is considered sinister. Augustina was performing—she took mushrooms, rather than the *hojas*; these I had requested especially, as I had never taken them. Both mushrooms and leaves are counted in pairs. The leaves are paired off, care being exercised to assemble leaves that are flawless, without parasitic growths. In preparation for the ceremony, the leaves are placed on top of each other, each pair being face to face. It is customary for the Indians to consume the leaves by nibbling at the dose with their incisor teeth. This proved to be impossible for me, owing to the taste; and I was treated as a toothless person. There being no *metate* (stone grinding board) handy, Augustina squeezed the leaves with her hands and collected the juice in a glass. This was certainly an inefficient method. Some water was added. I drank the dark fluid, about half a glass full, the result of squeezing 34 pairs or 68 leaves in all. I was told

that frequently Indians vomit on eating the leaves, which is easy to believe. It was possible for me, however, to retain the fluid.

After having eaten her mushrooms, without more ado our *curandera* launched into singing, intoning in Mazatec with vigor. She kept this up for two hours, in a rather monotonous voice. I tape-recorded her singing but have yet to find someone who will give a rendering in English or Spanish.

The effect of the leaves came sooner than would have been the case with the mushrooms, was less sweeping, and lasted a shorter time. There was not the slightest doubt about the effect, but it did not go beyond the initial effect of the mushrooms—dancing colors in elaborate, three-dimensional designs. Whether a larger dose would have produced a greater effect, I do not know.

A day or two before the events that I have narrated, the *curandera* María Sebastiana Carrera had supplied us with many details about the use of the leaves and had even chanted the words of the ceremony after her usage. She had declined to admit us to an actual ceremony because her neighbors (and doubtless she herself) would have considered the performance before outsiders a desecration and scandalous. Even as it was, when her session with us was drawing to a close, she burst into uncontrollable tears, fell on her knees, and begged forgiveness for what she had done. She had also given us valuable cosmological legends that are still believed in among the villagers, which I hope to publish elsewhere.

On October 9, 1962, our party was in San José Tenango. This time it consisted of Dr. Albert Hofmann, his wife Anita, Irmgard Weitlaner Johnson, Herlinda Martínez Cid (who served as Mazatec interpreter), and me. Through the good offices of Roberto Carrera, the son of Aurelio Carrera of Huautla, we were introduced to Con-

suelo García, about 85 years old, a vigorous, good-looking curandera, who that night performed for us a divinatory rite. She used only the leaves, not mushrooms. She ground them on her *metate*, after passing them through the smoke of *copal*, and she did a thorough job of it. Water is added to the mass that comes off the metate, the whole is put through a strainer, and then we drank the liquor. I took the juice of five pair and Mrs. Hofmann of three pair. We both felt the effects, which were as I described them in the ceremony in Ayautla the year before.

It would seem, in summary, that we are on the threshold of the discovery of a complex of psychotropic plants in the Labiatae or Mint Family. We know that *Salvia divinorum* is so employed in the Sierra Mazateca, and *Coleus pumila* and two "forms" of *C. Blumei* are said by some of the Indians to be similarly used.