

MESCAL BUTTONS

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Mescal Buttons by D. W. Prentiss & Francis P. Morgan

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D. W. PRENTISS & FRANCIS P. MORGAN

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1896

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MESCAL BUTTONS

**ANHALONIUM LEWINII—Hennings (LOPHO-
PHORA WILLIAMSII LEWINII—Coulter)**

BY

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ANHALONIUM LEWINII—HENNINGS (LOPHOPHORA
WILLIAMSH LEWINII—COULTER).

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THE study of *Anhalonium Lewinii* is of comparatively recent date, the subject having been brought to the attention of the medical world in 1888 by Dr. Lewin, of Berlin, who published at that time the results of his observations upon the drug. In 1894 Drs. Lewin and Heffter, of Germany, reported the results of further study of the subject. In 1891 James Mooney, of the United States bureau of ethnology, in a paper read before the Anthropological Society of Washington, first brought to public attention the remarkable religious ceremonial use of the plant by the Kiowas and other tribes of the Southern plains, among whom he had been conducting researches for some time. In 1894 he brought back to Washington for examination a large quantity of mescal, under the belief that investigation would corroborate the claim of the Indians as to its valuable medicinal properties. This was given over to Mr. E. E. Ewell, of the department of agriculture for chemical analysis, and to the writers for therapeutic test. Our study of the subject has shown that the mescal buttons possess properties which are

¹ Read before the Association of American Physicians, Washington, D. C., May 2, 1896.

remarkable, the exact likeness of which is not found in any other known drug, and also that it possesses virtues which, when applied in the treatment of certain diseased conditions, may prove the drug a valuable addition to our present list of therapeutic agents. It is for these reasons that we have chosen to present this subject in this paper for your consideration.

Anhalonium Lewinii is a plant belonging to the natural order of Cactaceæ or cacti, as they are commonly called. One of the divisions of this great order is the genus *Anhalonium*, of which there are several species, and among them *Anhalonium Williamsii*, and the one now under consideration, *Anhalonium Lewinii*.

As to the exact place in botanical classification which the *Anhalonium Lewinii* should occupy, there is some difference of opinion among botanists. Hennings,¹ who first published an accurate description of the plant, believed it to be a separate species of the genus *Anhalonium*. Dr. A. Heffter² holds the same view, reasoning both from botanical characteristics and the dissimilarity in physiological action between the *Anhalonium Williamsii* and *Anhalonium Lewinii*. On the other hand, botanists who have investigated the subject more recently hold that the *Anhalonium Lewinii* is but a variety of the species *Anhalonium Williamsii*. Coulter, an authority upon the cacti, holds this view and gives the plant the name *Lophophora Williamsii Lewinii*.³ The botanist in charge of the United States botanical gardens in Washington believes that the two plants belong to the same species.

The *Anhalonium Lewinii* inhabits portions of the valleys of the Rio Grande and Pecos rivers in Texas and New Mexico, growing in barren, rocky soil, and

¹ Therapeutic Gazette, 1888.

² "Ueber Peilote." Arch. f. exper. Path. u. Phar., 1894, xxxiv., 65.

³ J. M. Coulter: "Preliminary Revision of Cacti." Bulletin U. S. Depart. Agriculture, Washington, 1894.

often in places which can be reached only with difficulty by those who gather it. It reaches a height of about one inch above the surface of the ground. The body (Fig. 1) is comparatively thick, and is surmounted by a top, which is composed mainly of the



FIG. 1.

blunt leaves of the plant. In the centre of this top is a tuft about one-half to one inch in diameter, composed of yellowish-white filaments or hairs. These tops, when dried, constitute the mescal buttons, the commercial form of *Anhalonium Lewinii*.

The mescal buttons (Fig. 2) are of a brown color,

circular, about one-half to one and a half inches in diameter and one-fourth of an inch in thickness. The edge curls upward, giving to the under surface a con-

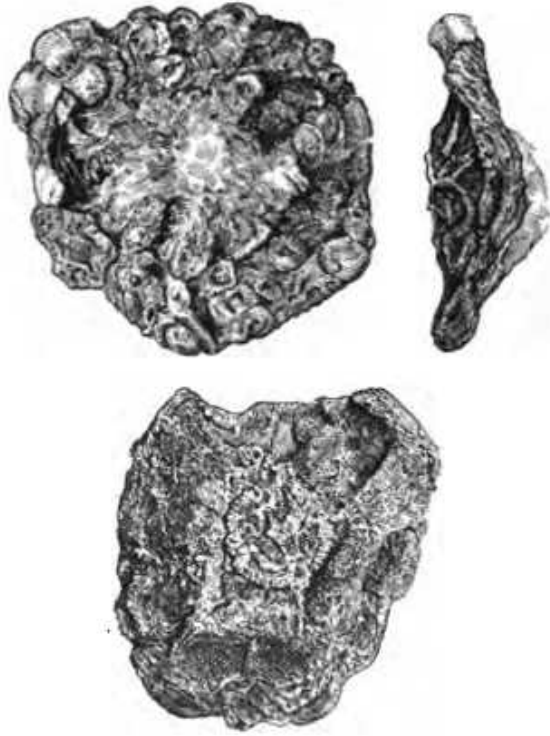


FIG. 2.

vex appearance. In the centre of the upper surface is a tuft composed of the yellowish-white hairs before mentioned, and matted down so as just about to reach the level of the upturned edge. The buttons vary in

weight from about one to eight grams, the average being about four grams.

The button is somewhat brittle and hard and can be pulverized in a mortar with difficulty. In the mouth, however, under the action of the saliva, it swells and rapidly becomes soft, the consistency which it acquires giving somewhat the sensation imparted by slippery elm. The taste is disagreeable and nauseous and very bitter, with a persistent after-taste. A marked sensation of stinging or tingling is produced in the fauces, which remains for some time after the drug has been swallowed. The powdered drug is odorless when dry, but acquires a nauseous odor upon being moistened.¹

Physiological Action.—In connection with the physiological action of the mescal, its use by the Indians is of great interest. The Kiowa Indians and their associated tribes, formerly ranging from the Arkansas River southward into Mexico, have, from the earliest period, made its use a regular part of their religious ceremonies. When finally gathered upon the Kiowa reservation in Oklahoma, which they now occupy, they continued the use of the buttons in their ceremonies, the demand being supplied by traders who obtain it from the valley of the Rio Grande. Its use has spread to such an extent that the rite has become the chief religion of all the tribes of the Southern plains. Complaint being made to the government authorities at Washington by missionaries and others, the eating of the drug was rendered unlawful and was forbidden under severe penalties. Nevertheless, the use of the mescal has persisted to the present time.

The religious ceremony, as described by Mr. Mooney, who has participated in it several times, usually takes place on Saturday night. The men seat themselves in a circle within the tent, around a large

¹ The writers, in *Therapeutic Gazette*, September, 1895.

fire which is kept burning brightly. After a prayer the leader hands each man four buttons, and each, having been freed from the tuft of hairs, is put into the mouth and, after it is thoroughly softened, is ejected into the palm of the hand, rolled into a bolus, and swallowed. At midnight each man calls for as many mescals as he wants, and in this way ten or twelve of the buttons, as a rule, are taken at intervals between sundown and daybreak. They sit quietly throughout the ceremony, while the fire is kept burning brightly and a continual singing and beating upon the drum is kept up. Most of the time they are in a state of reverie, the intoxication of the drug showing itself in the visions of color and other manifestations which will be described later. The hours are interspersed with songs, prayers for the sick, and baptismal rites. They sit thus from sundown to nearly noon of the next day. At the close of the ceremony they go out, it is claimed, without the slightest depression or unpleasant after-effect. Upon the day following the ceremony they carefully abstain from the use of common salt with their food; this, it seems, for a religious reason, and not because of any incompatibility of salt with the drug or its effects.¹

To determine the physiological action of the crude drug—the mescal buttons themselves—upon the human system, they were administered in varying quantity to different young men who kindly volunteered their services for the purpose. Eight of these experiments were made, and in each enough of the drug was given to produce decided characteristic symptoms. Observations were taken at frequent and regular intervals to ascertain the effects upon the different portions of the body. Most of these experiments have been reported in full,² but time does not permit

¹ See also "Mescal Plant and Ceremony," James Mooney, *Therapeutic Gazette*.

² *Therapeutic Gazette*, September, 1895.