



Hunt Institute for Botanical Documentation
5th Floor, Hunt Library
Carnegie Mellon University
4909 Frew Street
Pittsburgh, PA 15213-3890
Telephone: 412-268-2434
Email: huntinst@andrew.cmu.edu
Web site: www.huntbotanical.org

The Hunt Institute is committed to making its collections accessible for research. We are pleased to offer this digitized item.

Usage guidelines

We have provided this low-resolution, digitized version for research purposes. To inquire about publishing any images from this item, please contact the Institute.

Statement on harmful and offensive content

The Hunt Institute Archives contains hundreds of thousands of pages of historical content, writing and images, created by thousands of individuals connected to the botanical sciences. Due to the wide range of time and social context in which these materials were created, some of the collections contain material that reflect outdated, biased, offensive and possibly violent views, opinions and actions. The Hunt Institute for Botanical Documentation does not endorse the views expressed in these materials, which are inconsistent with our dedication to creating an inclusive, accessible and anti-discriminatory research environment. Archival records are historical documents, and the Hunt Institute keeps such records unaltered to maintain their integrity and to foster accountability for the actions and views of the collections' creators.

Many of the historical collections in the Hunt Institute Archives contain personal correspondence, notes, recollections and opinions, which may contain language, ideas or stereotypes that are offensive or harmful to others. These collections are maintained as records of the individuals involved and do not reflect the views or values of the Hunt Institute for Botanical Documentation or those of Carnegie Mellon University.

About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.



Department of Botany
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803-1705

504/388-8485
FAX: 504/388-6400
TELEX: 510/993-3414
BITNET: BTRUSS@LSUVM

1 de junio de 1990

Licda. Yvonne Sommerkamp
Depto. de Micología
Escuela de Química Biológica
Facultad de CC.QQ. y Farmacia, USAC
Ciudad Universitaria, Zona 12
Guatemala, C.A.

Estimada Yvonne:

Recibí tu amable carta junto con la copia de la "Revista Científica" de 1989 en la cual publicaste los breves artículos sobre algunos hongos guatemaltecos.

En cuanto a tus planes para publicar (una lista con comentario y con ilustraciones?) unos datos originales sobre los hongos que se encuentran en venta en mercados de Guatemala, tengo la impresión que la revista Norteamericana más apropiada para presentar tal trabajo sería "Economic Botany," publicado por el Jardín Botánico de Nueva York cuyo editor es el Dr. John W. Thieret, Biological Sciences, Northern Kentucky University, Highland Heights, Kentucky 41076.

Permítame sugerir que sería prudente consultar los últimos números de la revista para averiguar algunos datos pertinentes sobre el estilo de presentación etc. de los artículos y después escribir al editor pidiéndole su consejo antes que mandarle tu manuscrito. Todavía falta mucho en presentar los resultados de tales estudios en tu país.

Sí, tienes razón que de vez en cuando el correo guatemalteco sea un poco flojo, pero el correo nuestro en estos últimos años no ha sido tampoco un modelo de eficiencia. De todos modos, recuerdo bien que te envié una carta

el año pasado agradeciéndote por las dos diapositivas que me mandaste y lamento que no lo recibiste.

Dentro de quince días comienzo un proyecto interesante de más de un mes, invitado por la Academia Soviética de Ciencias para consultar con ellos en el herbario micológico de Kiev y para presentarles una conferencia sobre etnomicología. A mi regreso estaré otra vez en Budapest con mis colegas del Museo de Historia Natural, Sección Micológica. Mi "dominación" del ruso es elemental, pero tengo el húngaro desde mi niñez.

Atentamente,

B. Lowy
B. Lowy

*Mis saludos cordiales también a todas nuestras
colegas y amigos de la universidad!*

UNIVERSIDAD DE SAN CARLOS
DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

Edificio "T-12"

Ciudad Universitaria, Zona 12
Guatemala, Centroamérica

Ref. 26/90
18 de mayo de 1990

Dr.
Bernard Lowy
Botany Department
Louisiana State University
Baton Rouge, LA 70803
USA

Estimado Dr. Lowy:

Reciba un cordial saludo de mi parte y de la familia micològica guatemalteca.

No he tenido mas comunicaciòn por parte suya y espero que haya recibido dos diapositivas que le enviè hace ya algun tiempo. El correo de Guatemala està bastante mal y no supe si usted recibio dicho material.

El motivo de la presente es para enviarle una publicaciòn sencilla que saca la Facultad de Ciencias Químicas de la Universidad de San Carlos de Guatemala, y en la cual hay dos breves artículos sobre macromicetos.

Se han publicado algunos artículos relevantes a macromicetos del país, o a cultivo de hongos pero no le enviè copias pues me imagino que los habra leído en la Revista de la Sociedad Mexicana de Micología. En el próximo boletín (1990) se publicará una lista de los macromicetos que se encuentran depositados en el herbario que actualmente trabajo.

Próximamente estaré publicando un manual sobre la investigaciòn de los hongos que se encuentran en venta en mercados de Guatemala, del cual le enviaré gustosa una copia. Como tengo esta informaciòn, me gustaría publicarla en inglés y mucho le agradecería indicarme en qué revistas podría publicarse.

Espero recibir prontas noticias suyas indicandome haber recibido el presente sobre. Mientras tanto, le deseo éxito en sus

UNIVERSIDAD DE SAN CARLOS
DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

Edificio "T-12"

Ciudad Universitaria, Zona 12
Guatemala, Centroamérica

actividades, esperando que algun día pueda llevar a cabo más in-
vestigaciones en mi país.

Atentamente,

Yvonne Sommerkamp

Laboratorio de Micología

Adj: Rev Cient 1989

Yvonne Sommerkamp



Guatemala, January 20th, 1989

Dear Dr. Lowy:

How are you? I hope fine! By the way, I want to start by wishing you a happy and successful 1989.

Thank you very much for the reprints you sent me. They will be SUPER useful. I will send you some of our reprints (in Spanish), and as soon as we get some out of print will send you a copy of each. I will also send you other slides I'm sure you'll like (by separate mail).

Thanks again for your kindness.

With warm regards,

Yvonne



Asociación Guatemalteca de Microbiología

Avenida la Reforma 0-63, Zona 10

Guatemala, C. A.

July 18, 1985.

Dr. Bernard Lowy
Professor Emeritus
Department of Botany
Louisiana State University and
Agricultural and Mechanical College
Baton Rouge Louisiana 70803-1705

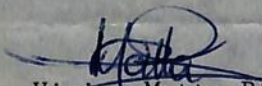
Dear Professor Lowy:

It is a pleasure for us advice recibed of your note date June 10, in which you sent us your check for \$50 (Fifty dollars).

In name of the Asociación Guatemalteca de Microbiología, we wish to express you our gratitude for your cooperation.

Very truly yours,




Licda. Vivian Matta Rios
Secretary.

VMR/mlb.

0600

Department of Botany
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803-1705

504/388-8485

10-VI-1985

Dra. Vivian L. Matta Rios
Asociación Guatemalteca de Microbiología
Avenida La Reforma 0-63, Zona 10
Guatemala, C.A.

Dear Dra. Matta:

I have at hand your announcement regarding the "RUBEN MAYORGA PERALTA AWARD," which is to be made in August by the Asociación Guatemalteca de Microbiología.

Because of my personal association with Dr. Mayorga, I am aware of his contributions to the knowledge of medical mycology in Guatemala, and of his efforts in encouraging scientific investigation in this and related fields. Consequently, I am glad to support the program that has been established in his memory, with the purpose of stimulating younger students to pursue microbiological research.

My check for fifty dollars, made out to the Asociación is enclosed. Kindly acknowledge its receipt as soon as it reaches you, since I would like to know of its safe arrival prior to my leaving for Europe in the first week of July.

Sincerely,

B. Lowy

Bernard Lowy
Professor Emeritus



ASOCIACION GUATEMALTECA DE MICROBIOLOGIA

AVENIDA LA REFORMA 0-63, ZONA 10

GUATEMALA, C. A.

Ref. AGM-#068-83

June 19, 1983

Dr. Bernard Lowy
Department of Botany, Art and Science
Louisiana State University and
Agricultural and Mechanical College
Baton Rouge, Louisiana 70803
USA.

Dear Dr. Lowy:

One of the goals of the Asociación Guatemalteca de Microbiología is to raise the academic standard of the members of that field, by means of scientific events held regularly.

In order to maintain alive the enthusiasm for scientific research and at the same time, to pay tribute to one of our highest who transferred book theory to laboratory practice, the "Asociación" since 1977 has instituted the "Rubén Mayorga Peralta award".

This award is issued annually to the month of August, for both professionals and students, and is awarded to the best research project on the field of microbiology, either if the report has not been published or is not older than one year.

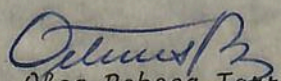
The amount of money has not been fixed yet, because it depends upon the contributions collected in the year.

This time we are appealing to Dr. Mayorga P. friends, asking them for a financial help or their contribution by means of a scientific book, which will be quarreled by next July at the "Feria del Libro", in order to collect a substantial amount of money.

Always grateful for any support you can give to the Asociación, we remain,

Very truly yours,




Dr. Olga Rebeca Torres Bolaños
SECRETARY



ASOCIACION GUATEMALTECA DE MICROBIOLOGIA

AVENIDA LA REFORMA 0-63, ZONA 10

Guatemala, C. A.

Ref. AGM 031-85

May 14th, 1985

Dr. Bernard Lowy
Department of Botany, Art and Science
Louisiana State University And
Agricultural and Mechanical College
Baton Rouge, Louisiana 70803
USA

Dear Dr. Lowy:

One of the goals of the Asociación Guatemalteca de Microbiología is to raise the academic standar of the members of that field, by means of scientific events held regularly.

In order to maintain alive the enthusiasm for scientific reseach and at he same time, to pay tribute to one of our highest who transferred book theory to laboratory practice, the Asociación since 1977 has institud the "RUBEN MAYORGA PERALTA AWARD".

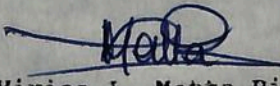
This award is issued annually to the month of August, for both profesionales and students, and is awarded to the best reseach project on the field of microbiology, either if the report has not been published or is not older than one year.

The amount of money has not been fixed yet, because it depends upon the contributions collected in the year.

This time we are appealing to Dr. Mayorga friends, asking them por a finantial help or their contribution by means of a scientific book.

Always grateful for any support you can give to the Asociación, we remain,

Very truly uours,


Dra. Vivian L. Matta Ríos
Secretarjfo



SECRETARIA

16-I-1985

Querido Miguel:

Muchas gracias por el valioso libro sobre la etnomedicina guatemalteca. Es un trabajo importante porque representa la colaboración de especialistas en diversas ramas de la ciencia. Por supuesto, tu presentación me interesa mucho y me alegro que sigues trabajando con entusiasmo y a la vez encontrando datos tan pertinentes en el campo de etnomicología. Te felicito en tus esfuerzos que indudablemente están contribuyendo al descubrimiento y a la preservación de antiguas tradiciones entre la gente indígena, tradiciones que están en peligro de desaparecer. Por lo menos debiéramos mantener y preservar a todo costo lo que todavía sobrevive de la preciosa cultura y civilización maya, única en el mundo.

Perhaps a word would be in order about a few points in your paper that especially came to my attention. I was glad to see a statement (fide Abdiel Orozco, p. 117) confirming my earlier report in MYCOLOGIA 64: 821. 1972, to the effect that the word "shtantilok" or "shtantalok" (= "ixtanteloc") is in the vocabulary of the "indígenas de Totonicapán." When I first heard the word I assumed that it had the same connotation as the expression "itzel ocox" (evil mushroom) which I also reported at that time. I would greatly appreciate it if you would ask your colleague for the exact translation of "ixtanteloc," and let me know whether it confirms my supposition.

Referring to your comment about the Galindo Codex (p. 99), I was subsequently told by a member of the Galindo family that in all likelihood it was purchased by Mr. Nottebohm. Perhaps you could confirm this, although I know it is difficult to get information of this kind. Presently I have the only known color photos which I took of the document, and have assembled them in the form of a codex.

Just a comment about the composit illustration on p. 136. I was surprised that many details of the figures have been altered from their originals, apparently to suit the aesthetic taste of the artist. I do not believe that this kind of "improvement" is justified in the name of art.

You correctly cite (p.74) Sahagún, Hernández and others regarding "teonanácatl," but it is also of interest that in modern times this word and its meaning (god's flesh) was first brought to the attention of scholars by Blas Pablo Reko in 1919, and later by R.E.Schultes of Harvard in 1939. These references are in my 1971 paper in the REVISTA INTERAMERICANA REVIEW. The work of Schultes is especially important because it led to much subsequent research. You will find his recent book, co-authored by A. Hofmann, to be extremely useful. It is entitled: THE BOTANY AND CHEMISTRY OF HALLUCINOGENS. 2nd ed. C.C.Thomas. 1980.

I hope that you continue your successful investigations, and that you inform me from time to time of your progress.

*Un abrazo fuerte
Bernardo*

P.S. La dirección de R.G.Wasson (no es "Roger," p. 58, sino Robert):

42 Long Ridge Road
Danbury, Conn. 06810
o en su casa:
Botanical Museum
Harvard University
Oxford Street
Cambridge, Mass. 02138

AUGUST 1983

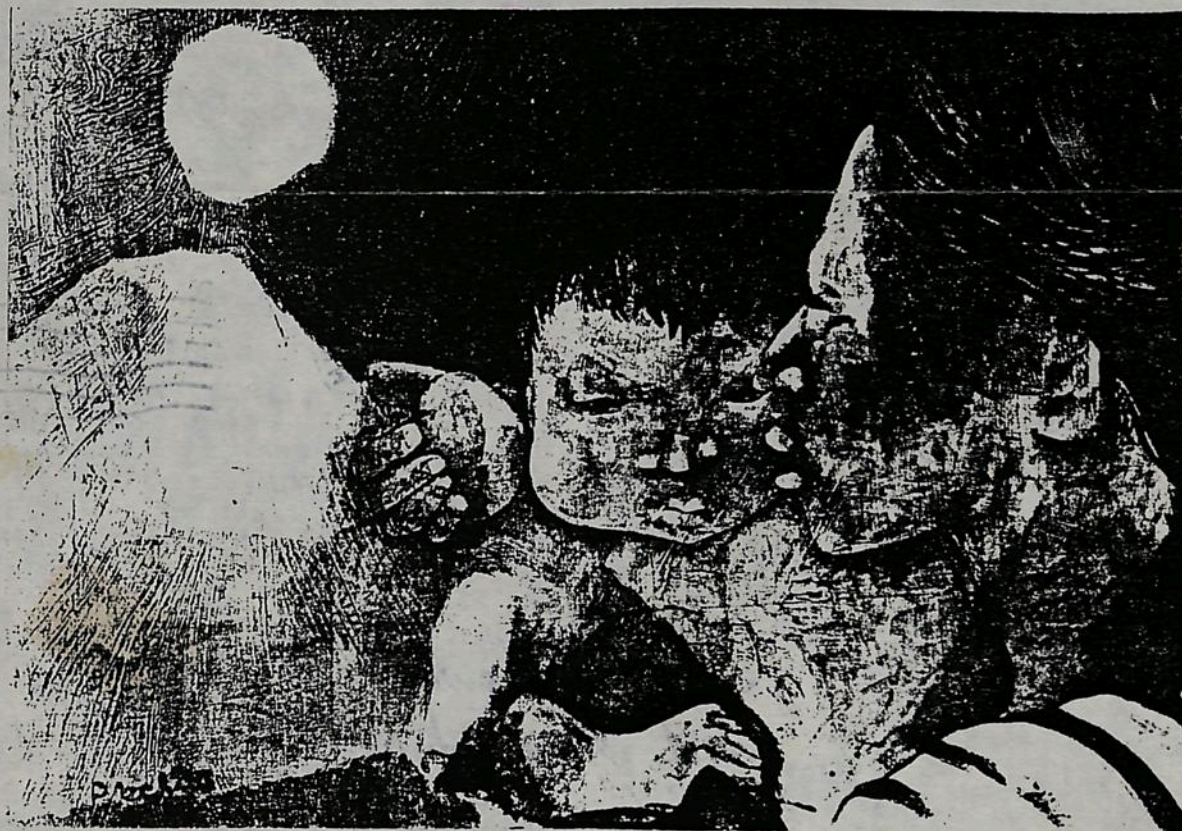
WIKIWIWI



WIKIWIWI

ART
FOLKLORE
TEXTILES

OPENING RECEPTION THURSDAY, JULY 28th FROM 5-7pm
AT ALLA, 102 W. SAN FRANCISCO ST.



AN EXHIBITION OF PAINTINGS BY MARTIN PRECHTEL

TZUTUJIL MAYA SHAMANISM

MARTIN PRECHTEL TEACHES FOUR LECTURE
CLASSES SUNDAY AFTERNOONS
AT 4PM BEGINNING JULY 31ST.

JULY 31: MAGIC TEXTILE

AUGUST 7: DIVINATION

AUGUST 14: TZUTUJIL WORLD VISION

AUGUST 21: TREE OF LIFE

EACH LECTURE \$ 5 OR ALL FOUR FOR \$15

BACKSTRAP WEAVING

GUATEMALAN MARINES PEREZ TEACHES
TRADITIONAL SINGLE FACED BROCADE
AND DOUBLE WEAVE PATTERNS
DURING FOUR WEEKLY CLASSES ON
MONDAY EVENINGS FROM 5-7PM
BEGINNING AUGUST 1ST.

ALL MATERIALS WILL BE SUPPLIED.
\$50 PER STUDENT.

WEAVING & EMBROIDERY
DEMONSTRATIONS THROUGHOUT THE DAY



FOR MORE INFORMATION OR REGISTRATION CALL ALLA: 988-5416

ALLA, 102 W. SAN FRANCISCO ST. (UPSTAIRS), SANTA FE, NM.

Department of Botany
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803-1705 504/388-8485

6-VIII-1984

Dear Ms Garnett:

Thanks for the notice of Martin Prechtel's workshop to be conducted in Albuquerque and Cerillos. I have tried unsuccessfully for some time to contact Martin, but am gratified to know that he is alive and well (I hope together with Dolores and Jorge).

Please let him know that I am still greatly interested in his progress and welfare.

Sincerely,

B. Lowy

B. Lowy
Prof. Emeritus

LEARNING TO WALK ON TWO LEGS

a workshop by

MARTIN PRECHTEL

Practitioner of Mayan Shamanic Way of Knowledge

MAYAN DREAM MEDICINE

In the Mayan village in Guatemala where Martin was taught Shamanism the dream is the central source of teaching and healing - both personal and social. A shaman has many ways of guiding the seeker to knowledge. Some of these ways will be explored.

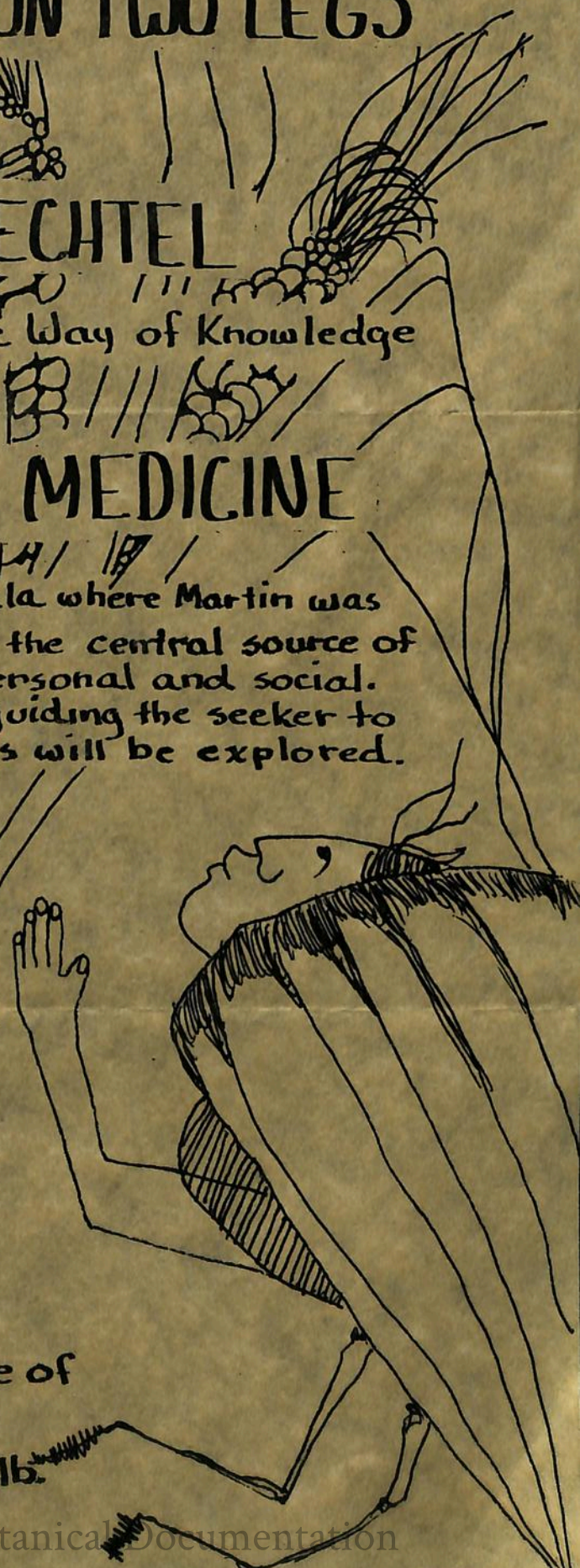
Sat. Sept. 8th 10AM-5PM
in Albuquerque

Sat. Sept. 15th 10AM-5PM
in Cerrillos

Sat. Sept. 22nd 10AM-5PM
in Santa Fe

\$45.00 per person

Phone early for reservations. Size of groups will be limited.
For information call 842-0572 in Alb.





Department of Botany
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803-1705 504/388-8485

26-VII-1983

Dear Martin:

Until today I was not sure that you had survived the mindless rage that has engulfed Guatemala in recent years, both before and since our meeting in Santiago de Atitlán in 1978. The announcement of your "Guatemalan Festival" together with the titles and dates of your forthcoming talks is the first evidence I have had of your survival. Rumors reached me a few years ago that you had gone to Mexico, and when I was in Xalapa last October for a mycological congress I hoped that I might have further news about you. Is Dolores with you?

I am enclosing a copy of a paper that I would gladly have sent to you had I known where you were. The part on Tzutuhil legend is acknowledged as yours. I wish you great success in the exhibit of your work in New Mexico!

As ever,

Bernardo



Department of Botany
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803-1705

504/388-8485

26-VII-1983

Dear Martin:

Until today I was not sure that you had survived the mindless rage that has engulfed Guatemala in recent years, both before and since our meeting in Santiago de Atitlán in 1978. The announcement of your "Guatemalan Festival" together with the titles and dates of your forthcoming talks is the first evidence I have had of your survival. Rumors reached me a few years ago that you had gone to Mexico, and when I was in Xalapa last October for a mycological congress I hoped that I might have further news about you. Is Dolores with you?

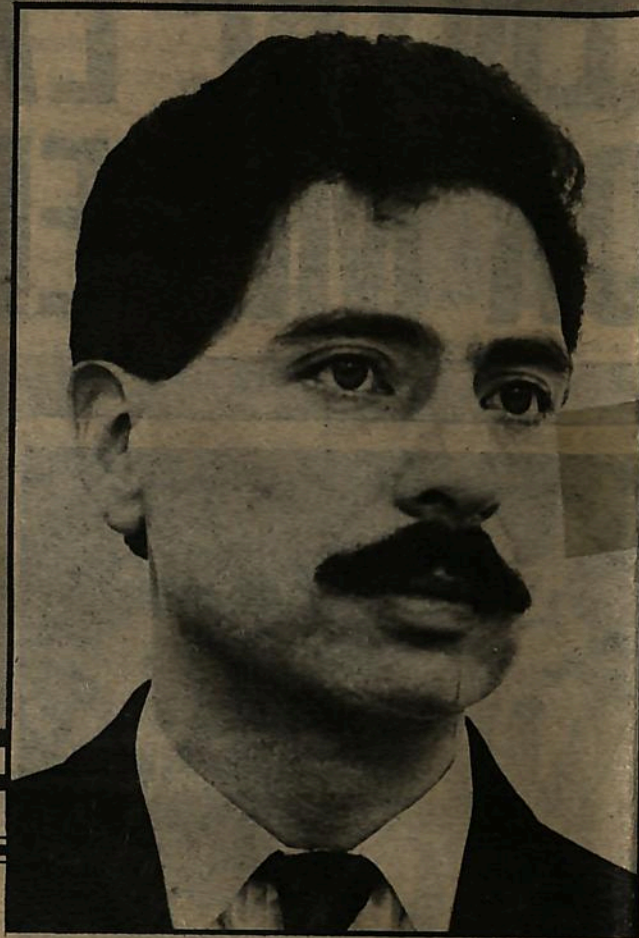
I am enclosing a copy of a paper that I would gladly have sent to you had I known where you were. The part on Tzutuhil legend is acknowledged as yours. I wish you great success in the exhibit of your work in New Mexico!

As ever,

Bernardo

UTILIZACIÓN RITUAL DE FLORA PSICOTRÓPICA LA CULTURA M

Para Bernardo con
aprecio, *Miguel Torres*



Doctor Miguel F. Torres

INTRODUCCIÓN

Pocas personalidades científicas en nuestro medio y más propiamente en Mesoamérica han tenido la oportunidad de escudriñar y penetrar al mundo de los Mayas, sus ritos, creencias y vida misma dentro del uso que éstos daban a las plantas psicotrópicas.

Para suerte y privilegio de Guatemala y de la Universidad de San Carlos, ha habido una persona que desde hace varios años lleva a cabo un estudio minucioso sobre la rama científica de la Etnomicología, una nueva ciencia, rica en experiencias y en descubrimientos, sobre el uso ritual de los hongos psicodislépticos que han dado las diversas culturas humanas.

Se trata del Doctor Miguel F. Torres, Químico Biólogo egresado de la Universidad de San Carlos de Guatemala, quien ha realizado estudios de especialización en Microbiología Médica en Universidades y Centros de Investigación de mucho prestigio. Entre las Universidades e instituciones científicas en donde ha compartido experiencias, se encuentran la Universidad de Duke, Carolina del Norte, Estados Unidos; Instituto Pasteur, París, Francia; Universidad de Lausanne, Suiza y otras.

El Doctor Torres, como uno de los primeros Etnomicólogos en Mesoamérica, se ha interesado con valioso empeño en el estudio y conservación de diversos aspectos

relacionados con la cultura popular, tradicional y etnológica de Guatemala.

Bien diría con suma complacencia el escritor Otto Raúl González, que los maestros-magos-brujitos y sumos sacerdotes mayas, han dado la potestad necesaria al Doctor Torres, para traspasar la cortina del tiempo y poderse separar del mundo consciente de los nueve inframundos hasta el seno mismo del ritual mayense, como un testigo fiel.

La presente publicación es un resumen de la conferencia ofrecida recientemente por el Doctor Miguel F. Torres al conglomerado estudiantil de la Escuela de Historia. A la vez que también representa un merecido reconocimiento a la personalidad científica del Doctor Torres, cuya labor sabemos no pasará inadvertido por los estudiantes y personas que se interesan por la reminiscencia histórica de nuestros ancestros.

El valor mismo del presente resumen, se reconoce en cada línea y en los diferentes párrafos del mismo, llenos éstos de datos valiosísimos e interesantes que despiertan el interés por la obra del mismo título que aún se encuentra en prensa en el Centro de Estudios Folklóricos de la Universidad de San Carlos de Guatemala, y que muy pronto estará a la disposición de todas las personas interesadas.

Ensayo por:

Dr. Miguel F. Torres, Q.B.M.A.

Las plantas microscópicas fueron los primeros seres vivos en el planeta tierra. Se originaron en el mar pre-histórico hace 3,200 millones de años durante el período pre-cámbrico y evolucionaron a plantas superiores que rápidamente poblaron la superficie terrestre. Mucho

más tarde en la escala evolutiva aparecieron los animales y la especie omnívora *Homo sapiens*. El hombre pre-histórico experimentó con las plantas y las clasificó en: comestibles, venenosas, inocuas y alucinógenas, éstas últimas capaces de alterar su estado mental provocando la

percepción imaginaria sin causa real. Estas plantas contienen sustancias químicas psicotrópicas, es decir que afectan la mente. También son llamadas plantas psicodélicas o psicodislépticas pues contienen principios que "dejan huella en el alma".

Mesoamérica es la región más rica del mundo en plantas psicotrópicas y su uso se remonta a las tribus paleo-siberianas que cruzaron el estrecho de Bering. Todas las culturas primitivas, y aquellas como la egipcia que alcanzaron un alto grado de civilización, las han utilizado. Entre las tribus primitivas, el "chaman" es el especialista en el éxtasis alucinatorio mediado por plantas consideradas sagradas, que le permiten desprender su alma del cuerpo con fines adivinatorios o terapéuticos.

Los antiguos sacerdotes mayas utilizaron ritualmente desde el pre-clásico plantas psicodislépticas, posiblemente por influencia olmeca, y transmitieron su uso a grupos mexicanos durante el post-clásico. Según investigaciones recientes basadas en pruebas arqueológicas y crónicas del siglo XVI, actualmente se acepta que los mayas usaron tres plantas psicodislépticas importantes que influenciaron profundamente su arte, religión y filosofía de la vida en general, éstas son:

1. Los hongos alucinógenos (*Amanita muscaria*/*Psilocybe* spp.)
2. El nenúfar blanco (*Nymphaea ampla*)
3. El tabaco silvestre (*Nicotiana rustica*)

La etnomicología es una ciencia moderna, polifacética y multidisciplinaria que estudia el impacto que ha causado la utilización ritual de los hongos con efectos psicodislépticos en las diversas culturas humanas. Los hongos alucinógenos que pertenecen al género *Psilocybe* deben su efecto psicotrópico a la psilocibina y psilocina, sustancias indólicas cuya molécula es muy semejante a la serotonina. La 5-hidroxi-triptamina o serotonina es la hormona cerebral que regula por medio de inhibición el "orden" y potencia de los impulsos nerviosos del cerebro. Cuando se ingieren los hongos, sus principios químicos compiten con la serotonina, y liberan su inhibición lo que causa alucinaciones visuales, introspección y otros múltiples efectos de percepción alterada relacionados con la conciencia personal.

El caso de *Amanita muscaria*, hongo rojo, manchado de blanco que se considera la planta psicodisléptica más antigua utilizada por el hombre en contexto ritual, es más complejo. Se creía que su efecto era causado por la muscarina, pero actualmente se acepta que es el muscimol y otras sustancias con efecto psicotrópico cuyo mecanismo es desconocido. Los hongos psicotrópicos

LA EN AYA



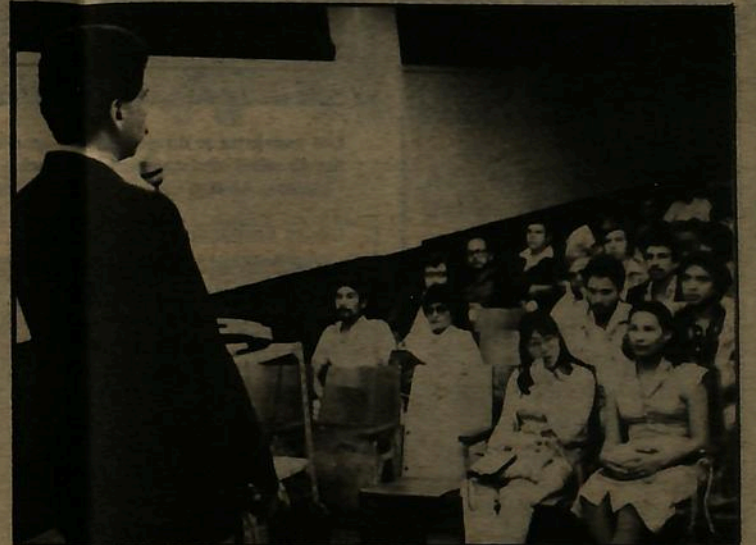
Representaciones de *Nymphaea ampla* en el arte maya provenientes de diversos sitios arqueológicos. Composición pintada para la presente publicación por el Dr. Edgardo Cáceres E.

7 DÍAS EN LA USAC

DIRECTORIO
 Universidad de San Carlos de Guatemala
 Doctor Eduardo Meyer Maldonado
 Rector Magnífico
 Ingeniero Jorge Cáceres Aragón
 Secretario Administrativo

Diagramación
 División de Publicidad e Información

Son deberes y atribuciones del Rector:
 Dirigir las publicaciones de la Universidad
 Artículo 17, (inciso n) de los estatutos vigentes



El Doctor Miguel F. Torres dirigiéndose a los asistentes a la conferencia.

pueden causar tres diferentes efectos sobre la mente humana así:

EFFECTO	PROVOCA	EJEMPLO
1. Psicotónico	Excitación mental	<i>A. muscaria</i>
2. Psicoléptico	Disminuye tensión mental (sueño)	<i>Lycoperdon mixt-corum</i>
3. Psicodisléptico	"Iluminación"	<i>Psilocybe</i> spp.

En la época actual utilizan ritualmente hongos *psilocibiosos* los aborígenes de Siberia, Nueva Guinea y más intensamente varios grupos en México. Aunque se tiene la certeza de que los mayas de Guatemala también los usaron, la práctica ritual entre los indígenas contemporáneos de nuestro país nunca se ha demostrado a pesar de varias investigaciones etnomicológicas. La ingestión ritual de estos hongos fue extinguida por el celo religioso de los misioneros españoles que acompañaron a los conquistadores.

Entre los antiguos aztecas Xochipilli era la deidad de las "flores" (metáfora de plantas psicodélicas en general). Uno de sus aspectos era Piltzintli el "dios-niño", patrón de los hongos alucinógenos. Cuando los dominicos de fines del siglo XVI introdujeron la iconografía de Niño Dios cristiano, los indígenas encontraron una forma velada de continuar el culto a Piltzintli, conocimiento que la ciencia ha sacado a la luz recientemente. Reminencias de este culto ancestral originaron en Guatemala la procesión

acuática del Niño de Amatitlán el 3 de mayo de cada año, y han motivado nuevas interpretaciones de arte barroco del país. De acuerdo con estos conocimientos pienso que la figura central en la decoración de la fachada del Convento de la Inmaculada Concepción en Antigua Guatemala (1694), un joven no alado de pelo negro aderezado en bucles, rodeado de motivos fitomórficos (similar al de Santa María Tonantzintla, Puebla), representa veladamente a Piltzintli con alegorías de las plantas psicotrópicas. Esta teoría es paralela al hallazgo científico de representaciones del quiebracajete blanco alucinógeno (*Turbina corymbosa*) en las columnas salomónicas del pórtico de la Iglesia de San Francisco El Grande, también en la ciudad colonial.

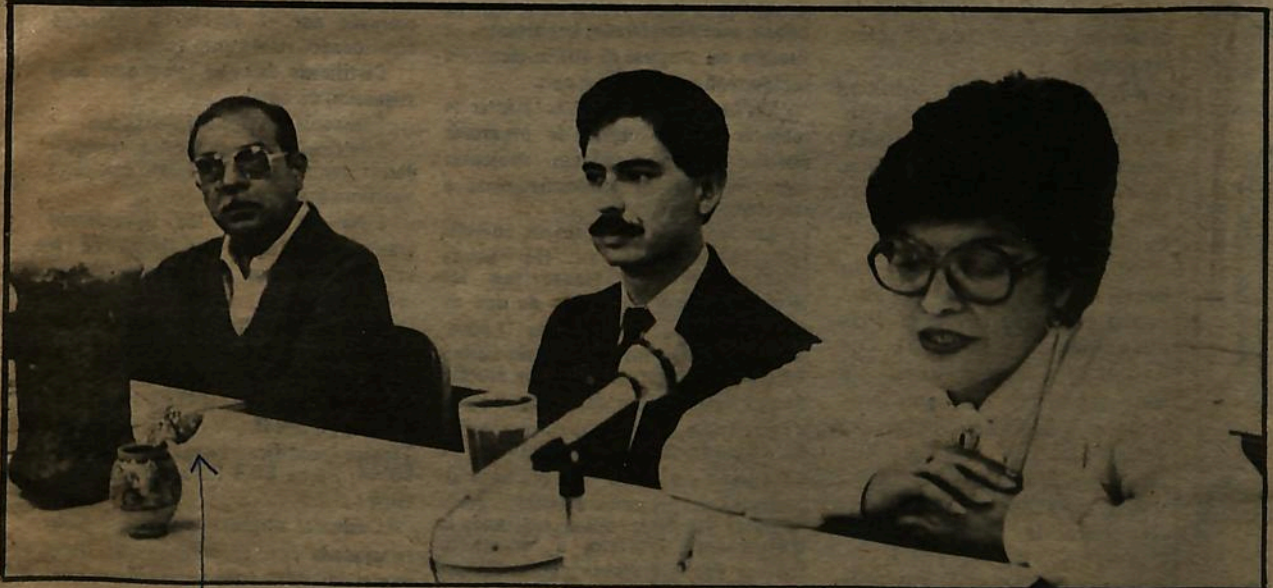
Desde el punto de vista botánico, en Guatemala, sólo una especie de *Psilocybe* ha sido identificada y reportada en la literatura internacional especializada es: *Psilocybe mexicana*, llamada comunmente "pajarito". En este trabajo se reporta por primera vez otra especie alucinógena, el hongo llamado "San Isidro": *Psilocybe cubensis*. *Amanita muscaria* crece en los bosques de coníferas como el pino, en las montañas de Totonicapán, El Quiché y posiblemente en otros sitios.

Se cree que el uso de plantas alucinógenas rituales entre los sacerdotes mayas del período clásico fue sumamente frecuente. Las aplicaban ingeridas, inhaladas y

por medio de enemas. Otra planta de uso común en esa cultura fue el nenúfar blanco de Mesoamérica: *Nymphaea ampla*, que contiene apomorfina y nufarina con efecto psicotrópico. Esta hermosa flor acuática influyó profundamente el arte maya durante el clásico, y se le representó en múltiples decoraciones de vasijas, frescos, dinteles, estelas, códices, etc., según se aprecia en la figura. El nenúfar representaba la realeza, poder y la separación del mundo consciente de los nueve inframundos. Su importancia en la casta sacerdotal se relacionaba con la tecnología agrícola apropiada. Muchas áreas del Petén son pantanosas e inapropiadas para el cultivo, por lo que los mayas idearon construir campos artificialmente elevados rodeados de canales llenos de agua mansa donde se cultivaba *Nymphaea ampla*. Esta planta acuática servía dos propósitos, alimentaba peces comestibles y el exceso de crecimiento se esparcía periódicamente sobre los campos elevados para dejarse pudrir y crear una capa de humus artificial, propicio para el cultivo del sagrado maíz, calabazas, chile, etc. Por esta razón el emblema real formado por un pequeño pez que muerde el blanco nenúfar representado colgando al frente de los espléndidos trabajos de plumería del tocado de los personajes importantes, fue muy frecuente.

Cuando llegaron los españoles y otros europeos a América, se dieron cuenta que prácticamente todos los aborígenes del continente reverenciaban al tabaco silvestre (*Nicotiana rustica*), que usaban de muchas formas. Es difícil situar al tabaco como verdadero alucinógeno, pues el estupor que causa la nicotina que contiene depende de la dosis. El tabaco usado hoy en día como droga socialmente aceptada es una especie brasileña con menos nicotina llamada *Nicotiana tabacum*. Otro alucinógeno posiblemente usado por los mayas, olmecas y otros grupos fue el veneno que segregan las glándulas parótidas y la piel del sapo *Bufo marinus* que también fue un motivo frecuente en el arte maya y el de otros pueblos mesoamericanos. Este veneno contiene bufotenina, cuya molécula es similar a la psilocibina de los hongos.

El presente ensayo será pronto publicado *in extenso* e ilustrado, como un capítulo del libro "La Etnomedicina en Guatemala", editado por la sección de Medicina Tradicional del Centro de Estudios Folklóricos de la USAC. Su objetivo fundamental es hacer una revisión de los conocimientos científicos actuales sobre el tema tendiente a la preservación y al fortalecimiento de la identidad nacional.



Al inicio de la Conferencia ofrecida recientemente en el Auditorium de la Escuela de Historia, sobre el tema que ocupa la presente publicación, aparecen en el orden usual el Licenciado Julio Galicia, Director de dicha Escuela, el expositor, Doctor Miguel F. Torres y la Licenciada Elba Marina Villatoro, Investigadora del Centro de Estudios Folklóricos, quien hizo la presentación de la Conferencia.

Pildra hongo pre-clásica

Amanita muscaria seca de Totonicapán, Guad.

Ceremonial vase. Classic period.
S. Morley Museum. Tikal
Vaso ceremonial. Período clásico. Museo S.
Morley. Tikal

Heidi me contó que te enfermaste un poco en el congreso de Micología de Talapa, Veracruz. Espero ya estés totalmente recuperado. Por favor manténme al día con nuevas publicaciones sobre etnomicología mesoamericana. Recibe un afectuoso abrazo de tu amigo:

Miguel Torres



GUATEMALA

Un saludo de envía Vivian!

Artesanías "Utatlán"
M.T. AGLIKKUNDO

© FEECHOS "ESPEVADOS"
PROHIBIDA LA REPRODUCCIÓN

Escribe cuando puedas!

Guatemala, 18/nov/1982

Querido Bernardo:

Recibí tu atenta nota del 29/VII/1982, donde me contabas de tu viaje a Hungría en julio. Me imagino la gran experiencia que ha de haber sido regresar a tu tierra natal. Gracias por la separata que te había pedido para mi viaje, y la autorización para reproducir tus fotografías.

En realidad desde junio de este año hasta el día de hoy, que entregué el manuscrito para publicación, he estado escribiendo e investigando obsesivamente para dar a conocer dos valiosos trabajos y dar a conocer en Guatemala la etnomicoología.

Adjunto te envío un resumen de mi

trabajo, el cual según veras en la publicación in extenso que saldrá a la luz algún día del año entrante, te estoy incluyendo un agradecimiento muy especial por haberme transmitido tus "valiosos conocimientos en etnomicoología". Este resumen lo publicó el periódico de la Universidad de San Carlos, y se refiere a la primera presentación pública de la obra, la cual ha tenido aceptación tanto por arqueólogos como antropólogos de la Facultad de Historia. Espero tu opinión sincera y crítica, después de que recibas el libro, que lleva 35 ilustraciones.

Espero de encuentros ya bien de tu espalda,

Para mi recordado y
querido amigo Bernard
Lamy,

Higginson

NEW ADDRESS FOR:
MERLE GREENE ROBERTSON

Pre-Columbian Art Research Institute

IS: 12/22

**1100 SACRAMENTO
SAN FRANCISCO, CA 94108**

Phone: (415) 776-0606

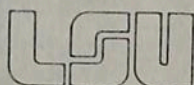
Old Address: Apartado 22, PALENQUE, CHIS., MEXICO

Note: The Pre-Columbian Art Research Center is still at Palenque, but my headquarters will now be San Francisco where **all** mail should be sent.

THE 5TH PALENQUE ROUND TABLE CONFERENCE

will be held June 12 - 18, 1983 at Palenque, Mexico

For information write to San Francisco or to:
George Stuart, National Geographic Society, Washington 20036, D.C.



29-VI-1982

Querido Miguel:

Hace media hora que llegó tu carta de "entrega inmediata," y te respondo en seguida porque esta será la última oportunidad que tendré para comunicarte contigo de la universidad hasta Agosto. Mañana a la mañana me voy a Hongría para todo el mes de Julio en un proyecto lingüístico, micológico y etnomicológico. Volveré a Baton Rouge a mediados de Agosto. En realidad tengo bastante apuro porque todavía hay varios asuntos a los cuales tengo que atender antes que salir de la universidad hoy. No obstante te mando estas líneas respondiendo a algunas de tus preguntas, y te mando la última separata que tengo de mi artículo publicado en la REVISTA/REVIEW INTERAMERICANA. Lamento que ya no tengo más separatas del artículo que apareció en MYCOLOGIA en 1971.

Te felicito y me alegro mucho saber que sigues estudiando la cultura Maya buscando más evidencia de la importancia de la influencia etnomicológica en la vida de esa civilización notable. Te ofrezco la autorización que pides para duplicar unas fotos de mis trabajos y también para citar tales pasajes del texto que quieras. Hace poco que me consultó Wasson otra vez en cuanto a unos detalles que necesita en un trabajo que está terminando. El viejo ya tiene 83 años de edad y sigue escribiendo y estudiando sobre los asuntos etnomicológicos!

Ojalá que tenga utilidad algunos datos míos en el ensayo que estás preparando. Sí, en cuanto yo lo sepa, nadie reportó anteriormente sobre P. cubensis y P. coprophila en Guatemala. Pues bien. Me voy. Estaremos en comunicación después de mi regreso en Agosto! Mientras tanto, un abrazo fuerte a ti y a Vivian.

Barrada

No sé nada de Martín.

Guatemala, 25 de junio de 1982

Querido y recordado Bernardo:

A pesar de que hace varios meses que no nos comunicamos, no me he olvidado de tí, al contrario; este mes especialmente he pensado mucho en tí y en tu valioso trabajo llevado a cabo en Guatemala con tanto amor y paciencia. La razón es la siguiente: el Centro de Estudios Folklóricos de la Universidad de San Carlos de Guatemala, me ha pedido que ponga por escrito (por fin!!), mi conferencia sobre "etnomicología", que he ofrecido en varias oportunidades.

Este trabajo, mas que un reporte científico strictu sensu, constituye un ensayo literario que resume los últimos conocimientos que tengo a mano sobre el tema, y da honor a quien honor merece en el campo de la "etnomicología", en el cual Rubén Mayorga, y yo como consecuencia, resultamos interesados gracias a haber tenido el privilegio de acompañarte en algunas de las memorables excursiones etnomicológicas. Este ensayo, en el cual estoy poniendo todo mi corazón, se llamará : "Utilización Ritual de Flora Enteógena en la Cultura Maya", será un capítulo de un libro que imprimirá la Universidad a fines del año sobre Medicina Tradicional.

Espero que el inconveniente que sufriste en noviembre de 1981, el cual mencionas en tu carta del 18-I-1982, ya haya pasado, y te encuentres bien y trabajando duro como siempre. París fue una gran experiencia el año pasado; nadie me contó que pasó en el Instituto Pasteur durante la ocupación nazi, ¿que fué el incidente memorable que mencionas en tu carta ?. No he tenido ninguna noticia de Martín Prechtel y tu?

Recibí tu valioso regalo, "The Wondrous Mushroom" de Wasson, que me enviaste en noviembre de 1981; mis disculpas por no habértelo agradecido antes, ha sido una obra de consulta fundamental para mi ensayo. En el incluiré mis teorías que te contaba en mi última

carta del 29 de octubre de 1981, en relación a las interpretaciones de los códices. A pesar que mi archivo con tu correspondencia y reimpresos está muy en orden, no puedo encontrar copia de dos de tus trabajos:

1. Lowy, B. "Etnomycological Inferences from Mushroom Stones, Maya Códices and Tzutuhil Legend". No estoy seguro si la referencia es Revista Interamericana 10(1):94-103, 1980.
2. Lowy, B. "New Records of Mushroom Stones from Guatemala" Mycología, 63:983-993, 1971.

Te agradecería muchísimo que me envíes copias de estos tus trabajos, ya que a ellos en mi humilde ensayo. También tuyo, de Wasson, o de otro que consideraría también me lo mandarás rápidamente manuscrito terminado en julio.

Como estoy de vacaciones, he aprovechado intensamente. Dentro de tres días iré profesional al "Museo Popol-Vuh", a las micromadas, que el Sr. Jorge C. en 1970. A ver que encuentro, también

y Etnología. Cualquier sugerencia o información que consideres pertinente será más que bienvenida. Cuando tenga copia del manuscrito te la enviaré para que hagas tus valiosos comentarios. Que yo sepa, con anterioridad no se ha reportado científicamente P. cubensis y P. coprophila de Guatemala, que opinas al respecto?

Espero que pronto tengas oportunidad de visitar Guatemala de nuevo; siempre te esperamos con los brazos abiertos!! Vivian te manda un abrazo. En espera de tus prontas noticias, recibe todo el aprecio de tu amigo de siempre:

Nota:

Podría contar con tu autorización para publicar copias de tus fotografías de Hallucinogenic Mushrooms from Guatemala (P. mexicana/ niños de Santa Elena Barillas), y del Codex Vindobonensis Mexicanus I.?

Considero fundamental darte por supuesto el crédito correspondiente, y difundir lo que has descubierto en Guatemala, para los guatemaltecos.

Gracias!

Nota = enviar reprints a mi casa:

1a. calle 16-97, zona 15, Colonia El Maestro

Liguel

Technical Documentation

carta del 29 de octubre de 1981, en relación a las interpretaciones de los códices. A pesar que mi archivo con tu correspondencia y reimpresos está muy en orden, no puedo encontrar copia de dos de tus trabajos:

1. Lowy, B. "Etnomycological Inferences from Mushroom Stones, Maya Códices and Tzutuhil Legend". No estoy seguro si la referencia es Revista Interamericana 10(1):94-103, 1980.
2. Lowy, B. "New Records of Mushroom Stones from Guatemala" Mycología, 63:983-993, 1971.

Te agradecería muchísimo que me enviaras lo más pronto posible copias de estos tus trabajos, ya que deseo hacer referencia directa a ellos en mi humilde ensayo. También, si tienes algún otro trabajo tuyo, de Wasson, o de otro que consideres me pueda ayudar, te agradecería también me lo mandaras rápido, ya que tengo que entregar el manuscrito terminado en julio.

Como estoy de vacaciones, he aprovechado el tiempo para escribir intensamente. Dentro de tres días iré acompañado de un fotógrafo profesional al "Museo Popol-Vuh", a estudiar la colección de vasijas mayas micromadas, que el Sr. Jorge Castillo te mostró brevemente en 1970. A ver que encuentro, también iré al Museo Nacional de Arqueología y Etnología. Cualquier sugerencia o información que consideres pertinente será más que bienvenida. Cuando tenga copia del manuscrito te la enviaré para que hagas tus valiosos comentarios. Que yo sepa, con anterioridad no se ha reportado científicamente P. cubensis y P. arophila de Guatemala, que opinas al respecto?

Espero que pronto tengas oportunidad de visitar Guatemala de nuevo; siempre te esperamos con los brazos abiertos!!. Vivian te manda un abrazo. En espera de tus prontas noticias, recibe todo el aprecio de tu amigo de siempre:

Nota = envían reprints a mi casa:

1a. calle 16-97, zona 15, Colonia El Maestro

Miguel

Miguel

18-I-1982

Mi querido Miguel:

Pido disculpas por el largo intervalo que ha pasado después de recibir tu carta del 29 de octubre, sin escribirte ninguna respuesta hasta ahora. En noviembre, por razones personales que prefiero contarte personalmente, no tenía ganas ni mucha oportunidad atender a mi correspondencia, mientras durante casi todo el mes de diciembre yo estaba afuera de Louisiana, en Nueva York, Boston (incluso el Museo Peabody), y Atlanta visitando con mi familia. A los principios de este mes tenía el lío (argentinismo para "nuisance") de trasladar todo mi herbario y biblioteca personal a otro edificio donde tengo mas facilidades y donde estoy más comodo que antes. En una palabra, todo está ya más o menos normalizado.

Tu carta tiene mucho de interés etnomicológico y estoy de acuerdo con la gran parte de tus interpretaciones. La verdad es que ningunos de nosotros tenemos la certeza que hemos leído correctamente todos los detalles que encontramos en los códices. El objeto que muestras en 3d de tu carta aparece en una forma u otra en varios códices y pienso también que son símbolos de hongos etnogénicos. El objeto en N° 5 he interpretado en 1972 (en MYCOLOGIA) como hongo estilizado (posiblemente A. muscaria), pero francamente no podía decirte si tu interpretación en el último párrafo de tu carta es el verdadero o no. De todos modos, me parece bastante razonable. (I am reminded that some cynical critic once said that trying to interpret the codices is as scientific as reading the entrails of a llama.) Incidentalmente, debieras saber que las interpretaciones que se encuentra en las lindas ediciones ilustradas de Villacorta (específicamente el Dresdensis) eran originalmente hechos por Ernst Förstemann de Alemania, el gran autoridad de su época sobre la civilización Maya.

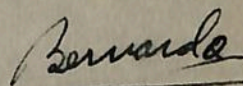
La colección de vasijas Mayas del recientemente difunto Sr. Jorge Castillo es un gran tesoro. Para acumular datos para un estudio etnomicológico sería necesario estudiar cada ejemplar, sacando fotos de las que muestran alguna relación con el rito de los hongos. Seguramente un trabajo largo. Pero mientras tienes felizmente la autorización para hacerlo, ciertamente vale la pena comenzar tal estudio porque es una oportunidad única. Recuerdo bien que el Sr. Castillo en 1970 me mostró unos centenares de vasijas Mayas que llenaron unos armarios grandes de madera que tenía en su casa. Pedí permiso para fotografiar algunos ejemplares pero Sr. Castillo no era dispuesto concederlo. Paso rápidamente de un armario a otro, abrió cada uno momentaneamente y con igual rapidez lo cerró. Solo me permitió sacar fotos de todos sus hongos de piedra que contaba con la más pequeña parte de sus tesoros Mayas.

Fue útil el curso de Bacteriología Médica en Paris? Durante la ocupación de Paris por los Nazis, pasó un incidente memorable en el Instituto Pasteur, también ocupado por ellos. Posiblemente lo contaron. En 1975 yo estuve brevemente con el Prof. Heim en el Museo Nacional donde tienen el herbario, pero ya estaba muy enfermo, y no lo ví nunca más. Recuerdo también con placer los momentos agradables que pasé contigo y Vivian en Guatemala. Algún día me gustaría seguir con otros estudios allá pero el momento no es

(y el tiempo?)

muy propicio. Todavía no tengo planes definitivos para el verano pero posiblemente regresaría a Lima para el III Congreso Latinoamericano de Botánica.

No podrías enviarme la dirección de Martín en México? Recibiste la copia del "Wondrous Mushroom" que te mandé el noviembre pasado? Sin otras preguntas, te manda un abrazo tu amigo



B. Lowy



FACULTAD DE CC. QQ. Y FARMACIA

Edificio "F"

Ciudad Universitaria, Zona 12
GUATEMALA, CENTROAMERICA

Guatemala, 23/nov/1981

Querido Bernardo:

Espero que hayas recibido mi carta del 29/octubre/1981 con algunas de mis ideas sobre los códices, espero tu opinión!

En tu carta del 5-XI-81 me cuentas que en 1970 visitaste la colección de varias policromadas del Sr. Jorge Castillo que murió hace algunos meses. Tal vez ahora tu sueño de estudiar esta colección se realice pronto, pues cuento con la autorización del Museo Popol-Vuh para fotografías y estudios de todo el material. Indícame como proceder a: Dr. Miguel F. Torres, 1ª calle 16-97 zona 15, Colonia El Maestro, Guatemala Ciudad. La Universidad cierra todo diciembre por vacaciones. Un afectuoso abrazo de tu amigo: Miguel

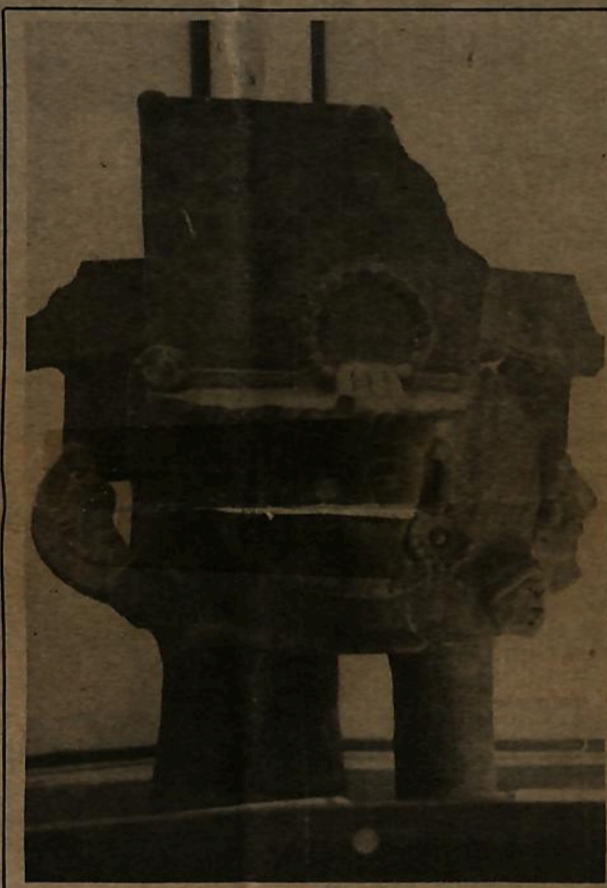
Una visita al Museo Popol Vuh

Valiosa colección básica sobre 4,500 años de historia guatemalteca en sus ocho salas

De nuestra redacción



Cabeza de piedra tallada, procedente de Kaminal Juyú, Valle Central.



Urna funeraria, período clásico. Procedencia: Ixíc - Chajul.



Valioso fragmento de una escultura maya en piedra.

CUATRO mil quinientos años de historia guatemalteca distribuidas a lo largo y ancho de sus ocho salas de exhibición, hacen del Museo Popol Vuh, de la Universidad Francisco Marroquín, una de las instituciones más importantes en la conservación del patrimonio cultural.

Una colección básica

El museo tiene apenas tres años de existir como tal. Se fundó en 1978 cuando don Jorge Castillo donó a la Universidad Francisco Marroquín, su valiosa colección de piezas de cerámica, escultura, alfarería mayas y su colección de objetos de folklore.

La historia de la colección de don Jorge Castillo no es una historia de latrocinios ni de depredaciones, como usualmente se conforman este tipo de exhibiciones. Es el fruto de la paciencia y de la previsión de un

hombre que supo valorar en su perfecta magnitud los objetos de arte y

arqueología que le iban ofreciendo. Ese afán coleccionista surgió mu-

chos años antes de que en nuestro país se adquiriera conciencia del pa-

trimonio cultural guatemalteco. El interés de don Jorge hizo que en frecuentes viajes al interior del país y en diversas localidades de la república, fuera rescatando de mercados y de manos incultas, los monumentos que atestiguan la historia de las culturas precolombinas de Guatemala.

Colateralmente, el señor Castillo es un pionero al iniciar la conservación de testimonios del folklore atesorados en la inmensa cantidad de máscaras de madera que logró adquirir. Hay entre ellas varias que se remontan a tiempos no inmediatos y cuya hechura es aún más cuidadosa que las que actualmente se utilizan en los bailes folklóricos.

Tratando de evitar que el fruto de largos años de paciencia y de recolección fueran frustrados por la dispersión de esta colección, el señor Castillo juzgó acertado donarla a la Universidad Francisco Marroquín.

De esa manera nació lo que consti-



Tallas en piedra que están situadas en el patio posterior del museo.

Tones



FACULTAD DE CC. QQ. Y FARMACIA

Edificio "F"

Ciudad Universitaria, Zona 12
GUATEMALA, CENTROAMERICA

Guatemala, 29 de octubre de 1981.

Dr.
Bernard Lowy
Herbarium
Department of Botany
Louisiana State University
Baton Rouge, Louisiana 70803
U. S. A.

Estimado Bernardo:

Espero que cuando te llegue esta nota, ya hayas recibido mi carta anterior de fecha 22 de octubre/81, con el artículo de Furst & Coe y dos slides. Poco después de mandarte esa nota, tuve noticias de Martin Prechtel, después de mucho tiempo de no saber de él. Según me contaron, salió de Guatemala y vive en México. Allá ha puesto varias exposiciones de sus pinturas, acuarelas y acrílicos, con mucho éxito. Yo me siento contento porque su arte esté siendo reconocida, y por lo que me han contado es muy bien pagada. Estoy seguro que estamos de acuerdo en que Martin se lo merece.

Mi esposa Vivian me ha pedido que te envíe sus saludos; recordamos a menudo la cena a la cual nos invitaste la última vez que pasaste por Guatemala, cuando conociste a Martin. Vivian y yo estuvimos todo el mes de mayo de este año en Paris. Yo estaba invitado con una beca al Instituto Pasteur para estudiar Bacteriología Médica Avanzada. Pensé buscar al Profesor Roger Heim, pero ya no pude hacerlo, y me enteré por tu artículo que desafortunadamente ya murió.

El objeto principal de esta carta es comunicarte y pedir tu opinión sobre algunas interpretaciones personales de ciertas partes del Codex Tro-Cortesianus, en las cuales he estado pensando después de leer tu interesante artículo de Revista Interamericana Vol. X (1):94-103, 1980. Yo le dí a Don Carlos A. Villacorta, quien copió los tres códices mayas, fotocopias de algunos de tus artículos relacionados con las interpretaciones hechas por su padre, el famoso Juan Antonio Villacorta (que ya murió), de los códices. Tanto él, como su hijo, el Dr. Jorge Luis Villacorta, no conocían tus trabajos, y tengo entendido que ellos te escribieron directamente. A continuación te envío algunas ideas sobre nuevas interpretaciones de los códices en espera de tu valiosa opinión sobre el asunto.

...../2.

...../2.

Todas las citas a las cuales haré mención, se refieren a la siguiente referencia:

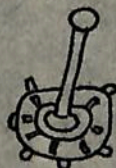
VILLACORTA C., J. Antonio y Carlos A. Villacorta
CODICES MAYAS Reproducidos y desarrollados, Segunda Edición,
Tipografía Nacional, 1976-77.

1. De acuerdo con el libro "La Civilización Maya" de Sylvanus Morley, la escritura maya se clasifica como "ideográfica", sin embargo, me llama mucho la atención que Amaní-ta muscaria de acuerdo con tus interpretaciones del Codex Dresdensis y el Tro-Cortesianus se representa por este pictograma no geroglífico:



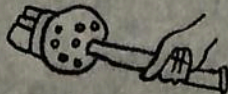
Creo que debe existir algún otro geroglífico ideográfico para el mismo hongo, y que aún no conocemos.

2. Estoy totalmente de acuerdo en que



es verdaderamente un pictograma que representa a A. muscaria por las siguientes razones:

- a. En la Pag. LXVII Codex Tro-Cortesianus, panel de arriba aparece una divinidad, posiblemente el Dios F, con una verdadera sonaja en la mano derecha representada así:



- b. Además en la Pag. XXXIV Codex Dresdensis aparece también el Dios F (arriba) con otra verdadera sonaja en la mano derecha representada así:



En otras páginas Villacorta interpretó el pictograma de A. muscaria como "rueda o círculo del calendario", según Thomas, o "instrumento también encontrado en Dresden"; "el instrumento que las divinidades llevan en las manos puede referirse al tiempo que tarda la planta del cacao en crecer y fructificar" (Villacorta Pag. 269).

...../3.

c. Este "instrumento" se repite muchas veces en el codex Tro-Cortesianus (pags. XXI, XXII, XXIII, LI, y XCV) y en Dresdensis (pags. XXV, XXVI, XXVII y XXVIII), en páginas sucesivas posiblemente relacionadas con su uso ritual o adivinatorio.

3. Creo también en tu teoría de la representación estilizada de los hongos en forma de hoja, de los dioses "descendentes o en el aire" de la pag. XV del codex Dresdensis, por las siguientes razones:

a. Sólo encontré otro dios "descendente" en la pag XXIII del Dresdensis (arriba), es el dios E que cae con el signo kan en la mano y no tiene "hojas", pero si un glifo con "cimi" en la posición 8.

b. Estas formas de "hojas" no las pude encontrar en otras partes de los códices, excepto en codex Dresdensis pag. XIII (centro) en el ave del tocado del dios E, donde obviamente es ornamental.

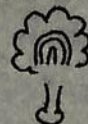
c. Otras hojas verdaderas aparecen en Dresdensis pags. XXX, XXXI, y XXXIII (abajo) relacionadas con el "arbol de la vida". Podra existir alguna relación con las "hojas-hongos"? Tambien se miran en Tro-Cortesianus pag. XCVI.

d. Pienso que el objeto:



Aparece en Tro-Cortesianus pag. XL (abajo) podría ser un paso de transición entre "arbol de la vida" y "hongo" lo mismo que la "columna conmemorativa ante la que hacen sacrificio 5 dioses" en el mismo códice pag. XC. ¿Cuál es tu opinión?

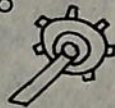
4. Creo que la relación que menciona Fray Bernardino de Sahagún entre la ingestión del "teonanácatl" y el sacrificio humano está claramente ilustrada en Dresden pag. II (arriba) donde la víctima del sacrificio lleva un objeto igual al del sacerdote que lo sigue así:



lo que creo que es una estilización mas compleja de A. muscaria, que opinas? ademas en Tro-Cortesianus pag. V (abajo), la víctima del sacrificio claramente llora y lleva un hongo interpretado por Villacorta como una "matraca", pero tendría la víctima deseos de tocar algun instrumento?

...../4.

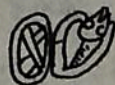
5. Lo que mas me ha llamado la atención después de estudiar detenidamente los códigos mayas, es que el signo



aparece dentro del texto jeroglífico en Tro-Cortesianus, pags. CVIII y CIX* (seguidas) relacionado con las abejas, en CVIII (centro) aparece junto al glifo



interpretado por Villacorta como "doble vasija para colar miel", abajo en la misma página aparece el glifo



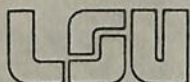
(abeja) al igual que en la pag. CIX* el glifo abeja esta inmediatamente debajo del glifo A. muscaria. He interpretado esta relación como el uso ceremonial de los hongos "enteogénicos" mezclados con miel, tal y como los utilizamos actualmente.

Espero ansioso tus comentarios acerca de la presente. Un abrazo de tu amigo,

Miguel

Dr. Miguel F. Torres
DEPARTAMENTO DE MICROBIOLOGIA

MFT/gppp.



5-XI-1981

Dr. Miguel F. Torres
Universidad de San Carlos de Guatemala
Facultad de CC, QQ. y Farmacia
Edificio "F"
Ciudad Universitaria, Zona 12
Guatemala, C.A.

Querido Miguel:

Muchas gracias por tu carta y por los diapositivos interesantísimos que me mandaste. Aunque conocí el artículo de Furst y Coe no lo cité porque el tema de que se trata es realmente un poco afuera de los aspectos de la vida maya que en mi papelito yo querría elaborar y subrayar. No obstante, el ritual del enema alucinante que se nota claramente en la vasija maya que tenías la bondad de mandarme es de gran interés. Es la vasija parte de tu colección personal (o de J. Brady?) o constituye parte de la colección del museo arqueológico? El otro diapositivo no puedo interpretar como "maya alucinando". No sé que representa.

Muchas veces pienso en la colección fabulosa de vasijas mayas que me mostró un día el Sr. Jorge Castillo cuando me invitó a su casa en 1970. Dudo mucho que se encuentra en cualquier lado una colección preciosa igual, que sea personal o institucional. Sería muy útil examinar toda la colección cuidadosamente, buscando más evidencia del uso de los hongos alucinantes entre los mayas. Necesitaría unos meses para hacer tal estudio, sacando fotos y notando datos pertinentes. Pero tengo la impresión que esto solo es sueño.

Te felicito en tus estudios continuos de la antigua vida maya. Ya no cabe duda de que los mayas conocieron y usaron las plantas alucinogénicas que formaron una parte íntegra, íntima y profunda de su cultura.

Estoy preocupado e inquieto porque no he recibido respuesta a una carta que escribí a Martín hace tres semanas y que mandé a su dirección en Antigua. Las últimas noticias que tengo de él son de julio 1980 cuando me escribió pidiéndome ayuda para regresar a los EEUU con Dolores y Jorge. Escribí en seguida a dos diputados en el congreso quienes me respondieron diciéndome que estaban dispuestos a ayudar a Martín si fuera posible. Desde entonces no he recibido ninguna palabra de él. No podrías averiguar si él y su familia se encuentran bien? Me deprime mucho los acontecimientos graves y tristes que se encuentran en el momento en todo el país. Hágame el favor de informarme si posible de la situación en cuanto a Martín y su familia.

Con un abrazo fuerte me despido de ti por el momento;

tu amigo invariable,

B. Lowy

Quiero agregar que pronto te voy a mandar aparte una copia del libro.

Como está la familia de Chilo? Mando mis afectuosos saludos a ellos. Incidentemente tampoco recibí carta del Dr. Jorge Villacorta a quien también mandé separatas.



FACULTAD DE CC. QQ. Y FARMACIA

Edificio "F"

Ciudad Universitaria, Zona 12
GUATEMALA, CENTROAMERICA

22 de octubre de 1981

Dr. Bernard Lowy
Herbarium
Department of Botany
Louisiana State University
Baton Rouge, Louisiana, 70803
U.S.A.

Querido amigo Bernardo:

No te imaginas el gran gusto que me dio recibir tu atenta carta del 23-IX-1981, especialmente porque la recibí al día siguiente de dar una conferencia ilustrada de una hora de duración, titulada "Etnomicología Mesoamericana". En esta conferencia que he venido preparando a través de varios años, hago múltiples referencias a tus trabajos, y ha sido bien recibida por el público guatemalteco en círculos muy selectos, desde la Asociación Guatemalteca de Psiquiatría, hasta la Asociación de Cultura Maya.

Por supuesto mi gran interés por la etnomicología no ha disminuído, a pesar de que como mencionas en tu carta, hace mas de un año que no nos comunicamos. Afortunadamente, mi familia y amigos nos encontramos bien, a pesar de la muy difícil situación socio-política por la cual atravieza nuestro querido país, y que ha afectado a todos directa o indirectamente. Por ejemplo a nuestro buen amigo Martín Prechtel lo amenazaron de muerte en Santiago Atitlán, y hace muchos meses que no sabemos de él. Por esto me dio gran gusto que publicaras en tu interesante artículo "Ethnomycolological Inferences from Mushroom Stones, Maya Codices and Tzutuhil Legend" la tradición oral que te relatara el buen Martín. A pesar de esta situación, por supuesto seguimos trabajando duro, y con fé en el futuro.

./...

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

Edificio "F"

Ciudad Universitaria, Zona 12
GUATEMALA, CENTROAMERICADr. Bernard Lowy
Baton Rouge, Louisiana. USA.Página 2
22-10-81

Me alegra mucho que tu viaje por el Amazonas haya sido todo un éxito, yo creía que ibas a pasar allí un año.

Adjunto a esta carta encontrarás fotocopias del artículo de Furst y Coe "Ritual Enemas", Natural History, LXXXVI (3), 1977. Es probable que lo conozcas, pero me llama la atención que no lo hayas citado en tus artículos. Yo tampoco lo conocía y me lo dieron los arqueólogos (guatemaltecos y norteamericanos) de la Asociación de Cultura Maya donde di la conferencia. Estoy seguro que en uno de los más recientes volúmenes de National Geographic (creo que el de agosto) leíste respecto al descubrimiento en el Petén de la cueva maya de "Naj Tunich" o "Cueva de las Inscripciones". Es una cueva fantástica con muchas inscripciones geroglíficas del período clásico en relación al dios del agua y a enterramientos de jugadores del juego de pelota. Aparentemente los mayas realizaban rituales mortuorios dentro de la cueva, y aunque aún no se han encontrado allí "piedras hongo", si se han encontrado huesos huecos de aves, y se postula que eran usados para aplicarse enemas de hongos "enteogénicos" dentro de la cueva. Esto está de acuerdo con el artículo de Furst y Coe donde explica el uso de bolsas de hule para enemas alucinógenos en el área maya.

Los arqueólogos de la Asociación de Cultura Maya me han invitado a explorar y excavar la cueva, de donde podrían salir a luz nuevos datos respecto a la "micolatría" maya, los que me encantaría publicar contigo. La excursión sería planeada para los primeros meses de 1982, y por supuesto nos encantaría tu valiosa presencia aquí. Ojalá puedas venir!

También te mando un slide de una vasija maya ceremonial policromada del período clásico, donde se ilustra la aplicación del enema ritual, estoy seguro que te va a interesar.

./...

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

Edificio "F"

Ciudad Universitaria, Zona 12
GUATEMALA, CENTROAMERICADr. Bernard Lowy
Baton Roug, Louisiana. USA.Página 3
22-10-81

Te agradecería mucho si me puedes mandar una copia del libro de Wasson "The Wondrous Mushroom. Mycolatry in Mesoamerica" (paperback of course!!). Estoy de acuerdo contigo en que vale la pena continuar los estudios etnomicológicos en Guatemala, en los cuales he tratado de mantenerme al día. Te agradecería también que siempre me envíes tus artículos y otros que sean de interés. Ya sabes que cualquier ayuda, investigación o referencia que desees que yo haga por ti en Guatemala, estaría deseoso de poder ayudarte en el fabuloso campo de la etnomicología.

En espera de tu respuesta, recibe un afectuoso abrazo de tu amigo:

Dr. Miguel F. Torres
Departamento de Microbiología

MFT : mmmg



Ritual Enemas

by Peter T. Furst and Michael D. Coe

The reexamination of a classic Maya vase has solved an intriguing mystery about this complex society

When the Spaniards conquered Mexico in the sixteenth century, they were at once fascinated and repelled by the Indians' widespread use not only of alcoholic beverages but also of numerous hallucinogenic plants.

From the Spaniards' point of view, however, both served the same purpose—to conjure up visions of demons and devils and to take imbibers from their daily life to supernatural realms.

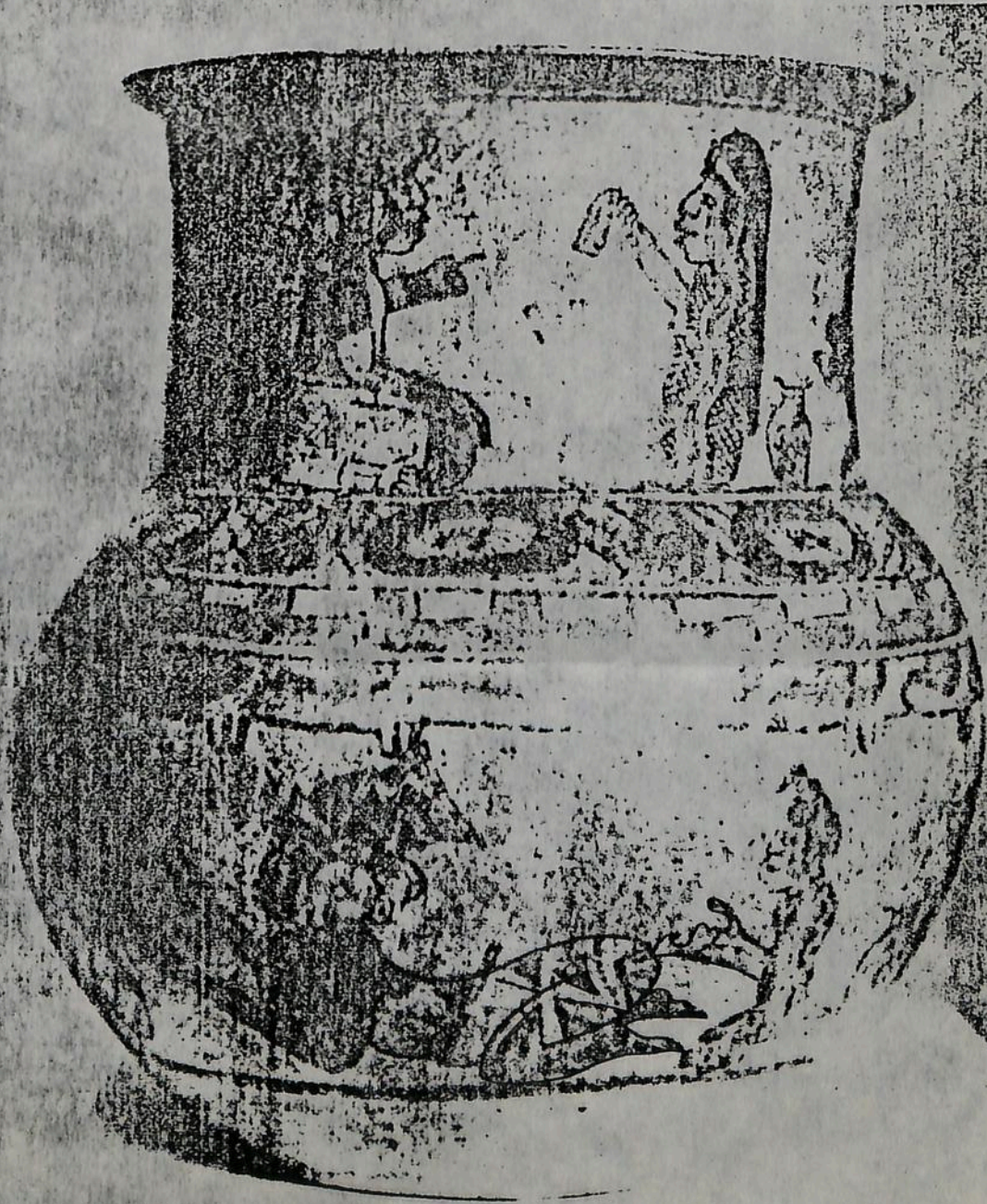
Distillation was unknown in the New World before the conquest, but Mesoamerican Indians were making, as they still do, a variety of intoxicating ritual drinks, principally by fermenting cactus fruit; agave, or cen-

tury plant, sap; or maize kernels. Among the Maya, the ritual beverage was balche, made from fermented honey mixed with a bark extract from the balche tree, Lonchocarpus longistylus. These concoctions were all taken orally.

But according to a Spanish writer known only as the Anonymous Conqueror, the Huastec people of northern Veracruz and southern Tamaulipas had pulque (fermented agave

Natural History 1977
Vol LXXXVI #3

Para Bernardo Lowy con un afectuoso abrazo de su amigo ¹⁹⁸¹ ^{GWATEMALA} Fiquel Torres



sap) "squirted into their breech," meaning that they used intoxicating enemas. There are indications that the Aztecs, as well as several other Mesoamerican groups, also followed this practice.

Mesoamerican Indians generally used liquor only on sacred occasions, when, according to such sixteenth-century observers as Bishop Diego de Landa of Yucatán, the Indians often drank themselves into states approaching oblivion. Similarly, the use of many botanical hallucinogens, first described by Fray Bernardino de Sahagún and his contemporaries, was strictly limited to occasions when direct communication with the other-world was required. Today, the best known of these is peyote, Lophophora williamsii, a small, spineless cactus native to the north-central desert of Mexico and southern Texas. The plant now serves as sacrament for 225,000 adherents of the Native American Church and also plays an important role in the religious life of the Huichol Indians of western Mexico. Before the conquest, peyote was widely traded throughout Mexico, where the Aztec priests numbered it among their important magical and medicinal plants.

At the time of the conquest the seeds of the white-flowered morning glory Rivea corymbosa were a widely used hallucinogen. In 1960, Albert Hofmann, the Swiss discoverer of LSD (a synthetic hallucinogenic drug), isolated the active alkaloids in this morning glory species and a related species, the purple- or blue-flowered Ipomoea violacea, and found them to be lysergic acid derivatives closely resembling LSD-25. The latter species is often referred to as "heavenly blue" in the United States.

This Maya vase was made more than 1,300 years ago in what is now Guatemala. Its explicit paintings reveal how the ancient Maya administered hallucinogens.

Mushrooms also played an important role in preconquest Mesoamerican Indian life. Certain species, most of them now known to belong to the genus Psilocybe, were perhaps the most extraordinary natural hallucinogens in use in Mexico. The Aztecs called them teonanácatl, or "God's flesh." Psychedelic fungi were widely employed in Mexico when the Spaniards came, and their use in divination and supernatural curing survives to this day in central Mexico, as well as in the state of Oaxaca (see "Drugs, Chants, and Magic Mushrooms," *Natural History*, December 1975). The Indians even used tobacco to induce ecstatic trance states, which the Spanish only saw as diabolic communication.

While Spanish writers of the sixteenth and seventeenth centuries left us relatively detailed accounts of the use of hallucinogens in central Mexico, there is little mention of this intriguing aspect of native religion among the Maya, who lived farther to the south. The silence is the more puzzling because we have circumstantial evidence of a very early cult of sacred mushrooms in the Maya highlands of Guatemala and the adjacent lowlands, in the form of more than 250 mushroom effigies made of carved stone, many dating to the first millennium B.C.

The Maya were an integral part of Mesoamerican civilization and shared many of its basic assumptions about the nature of the universe and the relationship of humans to the natural and supernatural environment. Like the central Mexicans, they divided the cosmos into upperworlds and underworlds with their respective gods, believed in the cyclical destruction and regeneration of the earth and its inhabitants, and followed the 260-day ritual calendar.

In view of these many similarities, as the Maya scholar J. Eric Thompson has written, it was hard to believe that the Maya did not use intoxicating plants. Thompson searched the pages of sacred traditional books of the Yucatec Maya, set down in the European alphabet in the colonial period, for hints of ecstatic visionary trances

through which the priests made their prophecies. In the Books of Chilam Balam (jaguar-priest) of Tizimin and Maní, he found mention of trancelike states but no hint whatever of any hallucinogenic plants. He also discovered scattered scenes in Maya relief sculpture that suggested visionary experiences characteristic of hallucinogenic ritual.

This is slim evidence, however, compared with the data from central Mexico, and some Maya scholars are not convinced that the Maya practiced the kinds of ecstatic shamanistic rituals or vision quests with botanical hallucinogens that played so pervasive a role in central Mexico, or among the Zapotecs, Mixtecs, Mazatecs, and other peoples of Oaxaca.

The silence of Spanish colonial writers on the subject of hallucinogenic plants or rituals among the Maya accords well with the view, once widely held among scholars, that the Maya were quite unlike their Mexican contemporaries in temperament, being less preoccupied with warfare and the Dionysian excesses than with the contemplative interpretation of the heavens and the passage of time. But the discovery at Bonampak, Chiapas, of mural paintings that depict, among other events, a fierce battle among Maya warriors, indicates that this traditional view is very wide of the mark.

As specialists have more closely examined Maya art and iconography in recent years, they have accumulated increasing evidence that among the classic Maya, ecstatic ritual was important. One suggestion for this is that some of the major Mexican hallucinogens—among them the morning glories and the hallucinogenic mushroom Stropharia cubensis—occur in the Maya country. These and other psychedelic plants were undoubtedly known to the Maya.

Had Maya specialists looked more closely at the earliest dictionaries of the Quiché and Cakchiquel languages, compiled in the first centuries after the conquest of highland Guatemala, they would have discovered mention of several varieties of mushrooms with hallucinogenic

properties. One is called xibalbaj okox (xibalba means "underworld," or "land of the dead," and okox, "mushroom"), said by the sixteenth-century compiler to give those who eat it visions of hell. If the association of this species with the Maya underworld left any doubt of its psychedelic nature, it is dispelled by a later reference to the same species in Fray Tomas Coto's dictionary of the Cakchiquel language. According to him, xibalbaj okox was also called k'aizalah okox, which translates as the "mushroom that makes one lose one's judgment." Still another fungus, k'ek'un, had inebriating characteristics, and another, muxan okox, apparently brought on insanity or caused one to "fall into a swoon."

We have recently come across a wholly unexpected use of psychoactive substances among the Maya—the ritual use of intoxicating enemas, unmistakably depicted in classic Maya art of the first millennium A.D., but not mentioned either in the colonial or the modern literature. This practice is well documented among the inhabitants of South American tropical forests as well as among the Inca and their contemporaries in the Andes, where archeologists have discovered enema syringes.

Sixteenth-century sources describe the Incas as regularly intoxicating themselves with infusions of willka, now known to be the potent hallucinogenic seeds of the acacialike Anadenanthera colubrina tree. Lowland Indians also used tobacco enemas.

South American Indians were the first people known to use native rubber tree sap for bulbed enema syringes. While medical enemas had a long history in the Old World, having been used by ancient Sumerians and Egyptians, as well as by Hindus, Arabs, Chinese, Greeks, and Romans, the rubber bulb syringe was unknown in Europe until two centuries after the discovery of the New World.

The native Amerindian enema was distinguished from its Old World counterpart in that its primary purpose was to introduce medicines and intoxicants into the body, while the Old World enema was employed principally to clear the bowels. During the seventeenth and eighteenth centuries, the enema as a relief for constipation, real or imagined, became a craze in Europe—so much so, that Louis XIV had more than 2,000 enemas administered to him during

his reign, sometimes even receiving court functionaries and foreign dignitaries during the procedure.

The wide dissemination of the intoxicating enema in South America suggests the discovery by Indians that the rectal administration of intoxicants could radically alter one's state of consciousness more rapidly, and with fewer undesirable side effects, such as nausea, than oral administration. The physiological reason is simple: Substances injected into the rectum enter the colon, the last segment of the large intestine; the principal function of the large intestine is the reabsorption of liquids into the system and the storage of wastes until they can be evacuated. The absorbed liquid immediately enters the bloodstream, which carries it to the brain. An intoxicant or hallucinogen injected rectally closely resembles an intravenous injection in the rapidity of its effects.

The first evidence that not only the Huastecs, whose language is related to the Maya languages, but also the classic Maya knew of and employed the intoxicating enema came to light this past year through the examination of a painted vase in a private collection in New York. This polychrome jar, with a high, vertical neck and flaring rim, was probably painted in the heavily forested Petén district of northern Guatemala during the classic Maya phase, which dated from the third century A.D. to the first decades of the seventh century. Seven male-female pairs, the women easily distinguished by their robes and long hair, are depicted in two horizontal rows. That one woman is fondling a child suggests a familial setting. The activity being portrayed would have brought blushes to the cheeks of the traditional Maya specialist, for while one man is inserting a syringe into his rectum, this delicate task is being carried out for another male by his consort. One male also has a bulbed enema syringe tucked into his belt.

Nine vases, identical in shape to the actual vessel, are painted between the couples, and painted dots at the mouth of each represent a foaming, fermented liquid that is probably balche, the common alcoholic drink among the Maya at the time of the conquest. We must conclude that the people on the vase are taking intoxicating enemas, a practice previously unrecorded for this culture.

An understanding of the scenes de-

icted on the Maya vase was only the first link in a chain of iconographic discovery of the Mesoamerican enema phenomenon. Suddenly, several previously enigmatic scenes and objects in classic Maya art had new meaning. A small clay figurine from a burial excavated in 1964 by Mexican archeologists on the island of Jaina, in the Gulf of Campeche, depicts a male in squatting position, his hand reaching back to his rectum. For a long time Maya experts were puzzled because the figure's position seemed to represent defecation. But would the Maya have interred such a scene as an offering to their dead?

A small hole in the anus suggested that a piece was missing—that some small object previously inserted there had either become lost during excavation or had been made of some perishable material, long since decayed. The discovery of the enema vase from the Petén district seems to have solved the riddle. The little Maya was probably not defecating but was in the act of giving himself an enema.

The gods themselves were also depicted as indulging in the enema ritual. One Maya vase has the figures of thirty-one underworld deities painted on it. A naturalistically designed enema syringe dangles from the paw of one of the principal figures. Maya experts did not recognize the significance of the object until they had examined the enema vase in New York. As another example, a polychrome bowl from Yucatán, now in the National Museum of Anthropology in Mexico City, shows a naked being with a pointed head injecting himself with liquid.

The ritual importance of the intoxicating enema is highlighted by the involvement in the rite of one of the greatest underworld deities, an old lord associated with earth, water, and agricultural fertility. The Maya may have believed that this god—now identified by Mayanists only by the letter N, but very likely the same deity as the ancient Yucatecan god Pauhatun—consisted of four parts, each part living in the underworld and supporting the four corners of the earth.

The quadripartite god is depicted on a fine vase in a private collection in Chicago. Each of the four parts has a characteristically chappfallen face. Four young and fetching consorts are apparently preparing each of the god's representations for the enema rite. Enema pots with syringes on top

front of two of the consorts. Female consorts may well represent the important Mother Goddess of the Maya, known as Ixchel, as several figurine examples of the god *N* embracing this goddess have been found.

The same association of the god *N*, females, and enemas is depicted on another pottery vase, with a consort shown standing behind each god representation and untying his loincloth. Again, the same enema pots are in front of the consorts. So often are the pottery forms and syringes encountered together that we must conclude that they were commonly used in the enema rite.

The explicit depiction of enema rituals on Maya vases has led us to take a new look at a hitherto puzzling type of clay figurine from central Veracruz, which also dates from the classic Maya period. Some archeologists have interpreted these curious sculptures as representing human sacrifice. They are usually of males whose facial expressions suggest pleasure or ecstatic trance, not death. Their legs are raised, either draped over a high pillow or some other type of support or else slightly spread, with the feet

up in the air. The posture—and the enraptured look—suggest the intoxicating enema. The reclining position also conforms to the Anonymous Conqueror's description of the method of enema intoxication among the Huastecs.

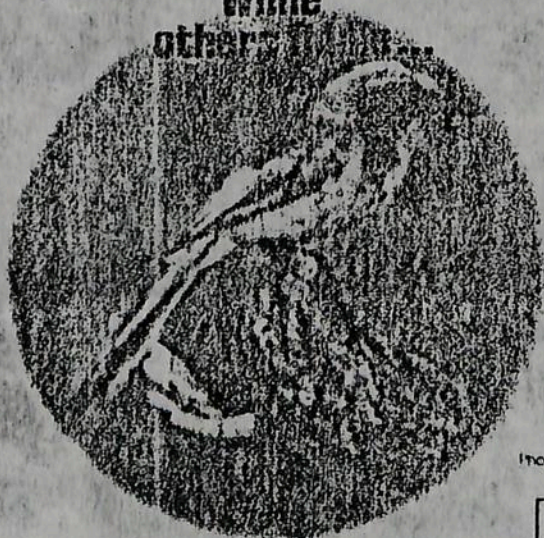
The hallucinogenic, or intoxicating, enema is by no means dead in Middle America. While conducting linguistic research among the Huichols of western Mexico, ethnographer Tim Knab was shown a peyote enema apparatus used by an elderly woman shaman in the community of Santa Catarina. The bulb was made from a deer's bladder and the tube from the hollow femur of a small deer. The shaman prepared her peyote by grinding it to a fine pulp and diluting it with water. Instead of taking the mixture by mouth (Huichols normally eat the cactus whole or drink it as an infusion), she injected it rectally, experiencing its effects almost at once while avoiding its bitter, acrid taste and the nausea that even some experienced Indian peyoteros continue to feel as they chew the sacred plant.

The choice of deer bladder and deer bone as materials for the Huichol

syringe is probably not a matter of practicality. Bird bone, light, slender and thin walled, would be more logical for the tube. But the Huichols hold the deer especially sacred, even to the point of deification, and they identify it so completely with the hallucinogenic cactus that peyote and deer become conceptually one and the same (see "An Indian Journey to Life's Source," *Natural History*, April 1973).

We do not know what materials the ancient Maya used for their syringes. To make the transition from Huichol to Maya requires an enormous jump in time and space. Fish bladders and bird bones, which are prominent in Maya art, might have served for the syringe, as might the milky sap of the latex, or rubber, tree. More important than the precise technology, however, is the discovery that, no less than the simpler folk of the South American tropical rain forests, the creators of the most flamboyant and intellectually advanced native civilization in the New World hit upon the enema as a technique of ecstasy—a practical means of ritually altering or transforming the ordinary state of consciousness. □

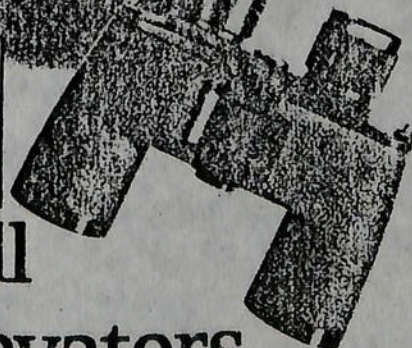
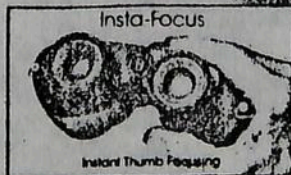
While
other binoculars



Insta-Focus lets
you focus instantly.



Photo by Don Bleitz



Bushnell's unique Insta-Focus lets you get a clean, sharp view instantly. And Bushnell's superior optics give you every feather and feature in a clean definition.

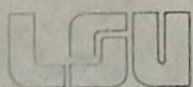
Bushnell binoculars are the perfect binoculars for birdwatchers and nature enthusiasts. Good for any other fast-moving action, too. That's probably why they are the number one selling binoculars in America. See them at department stores, camera and sporting goods stores everywhere. For a free catalog write: Bushnell Optical Company, Dept. NH17, Pasadena, California 91107.

Bushnell

Division of Bausch & Lomb

the Innovators.

Offices in Tokyo, Vancouver B.C. and dealers the world over.



25-12-1981

Dear Miguel,

More than a year has passed since we last communicated. I am eager to hear from you, and to know that you are well and working as hard as ever. I have not heard from Martin either. — I spent 3 great months in the Brazilian Amazon and am at work on the fungi collected. I don't know when I'll have a chance to go down and see you and do some further ethnomycological work, but I think it is worth following up.

Afectuosos saludos

Bernardo



25-IX-1981

Dear Martin,

I haven't heard from you in over a year.
I know that a lot must have happened.
Please let me know that you are well.
When we next get together I'll tell you
something about my recent experiences in
the Brazilian Amazon.

With all best wishes
to you and your querido familia

Bernarda

Dr. Jorge L. Villacorta C.

MEDICO Y CIRUJANO

7a. Av. 6-48 Zona 4 - Tel. 61451 y 61445

GUATEMALA. C. A.

Guatemala 2 de agosto de 1980.

Doctor
Bernard Lowy.
Louisiana State University.

Estimado Doctor:

Agradezco por este medio sus finos conceptos sobre la obra literaria de mi padre y de mi abuelo. Por correo certificado le envío los dos últimos libros que he publicado, uno de ellos como un homenaje a mi abuelo por cumplirse su centenario.

Asimismo, le agradezco infinitamente el haberme enviado sus estudios sobre hongos utilizados por los indigenas antiguos y modernos de mi pais, que casi he terminado de leer. Estos trabajos son importantísimos y serán motivo de una conferencia.

Su viaje de estudio al Amazonas, que durara un largo tiempo, no dudo que será el inicio de otras interesatímas publicaciones. n/si/!

Sin otro motivo en particular y deseandole toda clase de éxitos en sus investigaciones, quedo de Ud. como su atento servidor.

Villacorta
Dr. Jorge L. Villacorta C.



Department of Botany

LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803

504/388-8485

VILLACORTA

25 de julio de 1980

Dr. Jorge L. Villacorta C.
7a Av. 6-48, Zona 4
Guatemala, C.A.

Estimado Dr. Villacorta:

Recién llegó su amable carta y me agrada responder a su pedido. Hace muchos años que conozco algunos de los trabajos notables de su ilustre padre, el Dr. J. Antonio Villacorta C., principalmente su interpretación de los Códices Mayas de 1933 y su "Arqueología Guatemalteca" de 1930, los dos publicados con Carlos A. Villacorta. Son trabajos únicos y admirables!

Como Vd. sabe si habló con mi amigo Dr. Miguel Torres, yo soy micólogo pero tengo también un interés en algunos aspectos de antropología y arqueología, y por esto he publicado unas pocas cosas que tocan estos temas, esto es si hayan tenido alguna relación con el mundo de los hongos. En una palabra tratan de algunas interpretaciones etnomicológicas. Lamento que por la mayor parte las separatas son agotadas, pero le mando copias que le sirvan igualmente. El papelito de 1972 es el más pertinente en cuanto a la interpretación de ciertas páginas del Códice Madrid, especialmente 51b y 95b. Cuando yo estaba en Madrid en 1975 fui a ver el original del Códice en el Museo de América en la misma ciudad. Es formidable! Tengo ahora en mi biblioteca personal el facsímile del Códice elaborado hace pocos años en Alemania.

Ojalá que le sirvan en algo las separatas que le mando.

Le despide de Vd. muy atentamente

S.S.S.

B. Lowy
Bernard Lowy

Aguiso solo una palabra para informarle que comenzando con el 20 de agosto y hasta principios del año 1981, estare en Brasil (Amazonas) para participar en un proyecto misológico.

Dr. Jorge L. Villacorta C.

MEDICO Y CIRUJANO

7a. Av. 6-48 Zona 4 - Tel. 61451 y 61445

GUATEMALA. C. A.

Guatemala 18 de julio de 1980.

Dr.
Bernard Lowy.
Botany Department.
Louisiana State University.

Dr. Lowy:

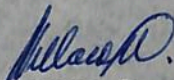
Después de saludarle muy atentamente y de desearle toda clase de éxitos en sus investigaciones, paso a distraer su ocupada atención con la siguiente molestia. En una conferencia que sobre medicina popular se llevo a cabo recientemente en el Instituto Indigenista de Guatemala, el Dr. Miguel F. Torres habló de las interpretaciones que sobre algunas de las paginas de los Codices Mayas, desarrolladas por mi padre en 1932, Ud. habia publicado en una revista científica.

El Dr. Torres me presto algunos de los articulos suyos, pero lamentablemente desconosco el estudio completo.

En 1972 publiqué un trabajo, que sobre los Expansores de la Mente, consideraba que era uno de los primeros publicados en mi país. Al hacer esta investigacion, desconocía completamente los suyos y por ello, es indudable, quedaron algunas lagunas en mi trabajo.

Por este motivo Dr. Lowy es que me tomé la libertad de rogarle que de ser posible, me facilitase una colección de sus trabajos. Espero poder enviarle en esta semana algunos de los míos.

Sin otro motivo en especial y en espera de sus gratas noticias, quedo de Ud. como su atento servidor.



Dr. Jorge L. Villacorta C.

Department of Botany
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803
504/388-8485

15 de agosto de 1980

Dr. Jorge L. Villacorta C.
7^a Av. 6-48, Zona 4
Guatemala, C.A.

Estimado Dr. Villacorta:

Muchísimas gracias por las dos publicaciones que Vd. ha tenido la bondad de mandarme. El drama "Rabinal Achí" es un trabajo original Quiche que no he leído antes, así que la adaptación en español hecho por su abuelo es para mí de gran interés. También encuentro interesantísimo su "Historia de la medicina....." y le agradezco por su fina atención en mandarme estos trabajos.

Le saluda muy atentamente su colega

B. Lowy

Dear Bernardo,

7/8/80
Antigua

You are probably in the Amazonas by now, but just in case I'm writing you to let you know that although the State Dept. has said that there should be no problem obtaining a Tourist Visa for Dolores, the Counsel here in Guatemala says he will disregard that and the multiple letters from my senators to the counsel to the effect. He claims we are escaping "political harassment" and that would tend to make us want to stay in the U.S. forever thus creating a problem. He doesn't "believe (I'm) he's going for his act." IF you have a chance write the State Dept. again to have this decision changed, as I said the senators said a III

was Fine. Some one obviously is
either self impressed or has a per-
sonal grudge. To make matters worse is
the political situation, and the Embassy here
claims that if they let Dolores into the states
as it is they will be "setting a precedent"
for future refugees fleeing Guatemala! I'm
a US citizen! we feel rather lost.

Anyway have a good time collecting and
learning in the Amazon. We love you and
think of your great visit often.

Sincerely,
Tu buen Amigo
Matter

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

*Center for Agricultural Sciences
And Rural Development*

LOUISIANA AGRICULTURAL EXPERIMENT STATION

PLANT PATHOLOGY AND CROP PHYSIOLOGY
302 LIFE SCIENCES BUILDING

August 14, 1980

Senator Peter Domenici
2317 Dirksen Building
Washington, D. C. 20510

Dear Senator Domenici:

I have just learned of a painful dilemma affecting a United States citizen now residing in Guatemala, and wish to ask your help by urgently calling the matter to your attention.

Mr. Martin Prechtel, born in New Mexico, now lives with his commonlaw wife Dolores Ratzan Pablo and their infant son Jorge Martin, in Santiago Atitlan, a Guatemalan village on the shores of Lake Atitlan. I first met Martin Prechtel at his home in Santiago in 1978, and was privileged to live there briefly with him and his family as their guest. He is a professional artist, and during the past several years there have been numerous public exhibitions of his work in Guatemala, the U.S., and elsewhere. I was deeply impressed with his dedication to his family and his work. He is also a talented linguist and musician, and I found that in Santiago he was held in the highest esteem.

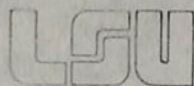
Mr. Prechtel has just informed me that he has been invited to exhibit some of his work in various cities of the U.S., and that it is his strong desire to have Dolores and their child accompany him. However, the consulate in Guatemala City has refused to grant them permission to travel together, apparently because of Dolores's commonlaw status.

This ruling imposes a hardship upon the artist, who, instead of receiving encouragement for his creative work, is confronted with a cruel restriction. I am unfamiliar with the legal strictures applicable in this case, but I am convinced that insisting upon them would be a grave injustice to this young artist.

I appeal to your sense of justice and propriety in this situation, and ask that you use your good offices to intercede in Mr. Prechtel's behalf to make it possible for him and his family to travel together in the United States.

Sincerely yours,

Bernard Lowy
Professor Emeritus of Botany



Department of Botany

LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803

504/388-8485

July 2, 1980

Congresswoman Elizabeth Holzman
Chairperson, Subcommittee on Immigration and Refugees
House Judiciary Committee
2137 Rayburn Building
Washington, D.C. 20510

Dear Congresswoman Holzman:

I have just learned of a painful dilemma affecting a United States citizen now residing in Guatemala, and wish to ask your help by urgently calling the matter to your attention.

Mr. Martin Prechtel, born in New Mexico, now lives with his commonlaw wife Dolores Ratzan Pablo and their infant son Jorge Martin, in Santiago Atitlan, a Guatemalan village on the shores of lake Atitlan. I first met Martin Prechtel at his home in Santiago in 1978, and was privileged to live there briefly with him and his family as their guest. He is a professional artist, and during the past several years there have been numerous public exhibitions of his work in Guatemala, the U.S., and elsewhere. I was deeply impressed with his dedication to his family and his work. He is also a talented linguist and musician, and I found that in Santiago he was held in the highest esteem.

Mr. Prechtel has just informed me that he has been invited to exhibit some of his work in various cities of the U.S., and that it is his strong desire to have Dolores and their child accompany him. However, the consulate in Guatemala City has refused to grant them permission to travel together, apparently because of Dolores's commonlaw status.

This ruling imposes a hardship upon the artist, who, instead of receiving encouragement for his creative work, is confronted with a cruel restriction. I am unfamiliar with the legal strictures applicable in this case, but I am convinced that insisting upon them would be a grave injustice to this young artist.

I appeal to your sense of justice and propriety in this situation, and ask that you use your good offices to intercede in Mr. Prechtel's behalf to make it possible for him and his family to travel together in the United States.

Sincerely yours,

B. Lowy
Bernard Lowy
Professor Emeritus of Botany

14-VIII-1980
Baton Rouge

Dear Martin

Just received your letter and immediately wrote to Senator Domenici. Hope he'll put some pressure on the Consulate in Guayaquil.

I was looking for clues to the use of honors in the Rabinal Aké and came across this transcription of música indígena - just for you.

I leave for Brazil on 25 August and will be incommunicado in the forests of Para thru December. Wish me luck!

Abrázos a toda tu familia,
Lambert, Demaria.

Received: 2-VII-1980
M. Prechtel

Please write letters to the following politicians in Washington, D.C. requesting that the American Government give a visa for entrance into the United States to Dolores Ratzan Pablo, wife of Martin Prechtel, so they can together be at the exhibitions of Martin's paintings in California and wherever else he will be exhibiting his work.

Congresswoman Elizabeth Holzman
Chairperson, Subcommittee on Immigration and Refugees
House Judiciary Committee
2137 Rayburn Building
Washington, D.C. 20510

Congressman Luhan (from New Mexico)
Rayburn Building
Washington, D.C. 20510

Senator Peter Domenici (from New Mexico)
2317 Dirksen Building
Washington, D.C. 20510

Dear Mr Bernardo,

Hojala mi cartita te encuentra bein y gozando el salud lo cual es famoso el Don Bernardo. simplemente una notita solicitando tu ayuda en un problema que tenemos. parece que no estan muy enamorado con migo los señores del Consulado de los Estados Unidos y no queire dejarme entrar con mi mujer e hijo (lo cuales estan muy bien y te recuerdan siempre.) a mi propio pais. Entonces yo he hablado con varios gente que me pueden ayudar pero ellos quierian que you fuera escribir algo para que tendran algo que mostrar. Eso de Escribir ya hemos hecho y ahora estoy pidiendo a usted Don Bernardo, si no me pudieras hechar una manita en escribir una notita al los direcciones encima diciendoles que merece mi mujer entrar con migo al los Estados Unidos donde naci yo. La carta que se encuentra aqui es una copia que yo mande a los tres. sin nada mas de contar te para ahorita por serme bien preocupado con este problema te despido Bernardo y espero que uno de estos dias nos veremos en persona de nuevo.

con amor y tambien un tu fuerte abrazo de cada uno de nosotros,

Martin
Dolores
Jorge

c/o 13 Calle 9-18, Zona 1
Guatemala, C. A.
June 25, 1980

Congresswoman Elizabeth Holzman
Chairperson, Subcommittee on Immigration and Refugees
House Judiciary Committee
2137 Rayburn Building
Washington, D.C. 20510

Dear Congresswoman Holzman,

I am writing to you with the sincere faith that you might be able to help me obtain entrance for my wife into the United States.

I am a native New Mexican raised on the Santo Domingo Indian Reservation in Sandoval County. My mother was an elementary school teacher for the Keres speaking Indians from San Felipe, Santo Domingo and Cochiti Pueblos. Later my mother became the Superintendent of the Northern Pueblo Agency.

I attended St. John's College in Santa Fe, New Mexico.

I have been a professional artist since 1969 having had shows of my paintings in the United States in the Navajo Gallery which was then in Taos, New Mexico; various galleries in Santa Fe, New Mexico; Albuquerque, New Mexico; Mary Livingston's Gallery 2 in Santa Ana, Orange County, California; Scottsdale, Arizona; and the Patrick Gallery in San Francisco. Some of my paintings are also in the traveling exhibition of the Allied Art Fund.

In 1973 I came to Mexico and Central America to paint the magnificent Indian element as I had in the United States. In the process I have had 5 public exhibitions in Guatemala City (See enclosed brochure), 1 in Antigua, Guatemala and 2 showings in San Salvador, El Salvador; and have also had numerous private showings throughout Central America. In September and October, 1978, I also had a show in the Armon Gallery in Jerusalem, Israel.

Embassadors have appreciated my work and own my paintings, exhibiting them in the following embassies in Guatemala: Belgium, Israel, Switzerland, Costa Rica, Uruguay, Panama, Germany, Austria, Spain, Norway and the United States.

My works are in prominent private collections in Mexico, Guatemala, Honduras, El Salvador, Costa Rica, Panama, Colombia, Venezuela, Ecuador, Argentina, Peru, Chili, Japan, Sweden, France, Spain, Germany, Italy, Austria, Israel, England, Canada, Holland, Norway, Switzerland and the United States.

I continue to paint and on the 13th of July, 1980, a show of my paintings will open at the Orange Coast College in Orange County, California, represented by Esther Leiner.

Since the Guatemalan earthquake in 1976, my career has been dedicated to depicting aspects of the mythological world of the Tzutuhil Maya Indians from Highland Guatemala, the southern

side of Lake Atitlan and the Pacific Coast.

When I first came to Guatemala in 1973 I married a Guatemalan woman with whom I have 2 children. We separated after 3 years at which time she left Guatemala with the children and went to live in the United States. Because of this the divorce proceedings have been very slow and difficult.

With good fortune I arrived in the village of Santiago on Lake Atitlan, and found myself becoming an integral part of an Indian village of 28,000 inhabitants. In the process I saw the imminent death of a way of life as encroached upon by our modern age. My love for this culture and its people has held me captive with a self-willed responsibility to try to communicate through my paintings the almost unreal profundity of the beauty and suffering of the everyday reality of these hardworking mountain Indians.

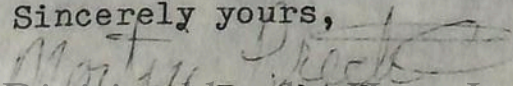
My involvement in the village of Santiago Atitlan caused my complete immersion into the religious and spiritual life of the village and my eventual mastering of the Tzutuhil language. I consider myself fortunate to have been a witness to the spiritual and physical crisis of these beautiful people. My love for these people has been manifested in an unprecedented union with my present common law wife Dolores, a Tzutuhil Indian woman who has borne me a beautiful son Jorge Martin. I owe all but a few of the insights and visions in my work to my wife. Her patience and inordinate dedication have been the vital factors in whatever small amount we have accomplished in communicating the legends and religious visions of her forebearers.

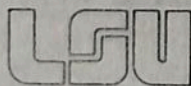
Because of the acceptance of my work on an international level we have been invited to exhibit in a number of cities throughout the United States. Dolores, Jorge and I would very much like to attend these exhibitions and visit my family who lives in New Mexico.

While trying to obtain a visa from the American Consulate in Guatemala City, we were told by the Consul that because Dolores and I are not married that he would not be able to classify Dolores under any single heading and therefore would not be able to issue her any form of permission to enter the United States with me. I would like very much to marry Dolores but cannot yet due to the slow process of the divorce proceedings from my former wife.

I have never been a person to complain and have generally considered myself to be a lucky person in face of all the misery in this world. For the first time I feel I have been deprived of my rights as a United States citizen, and for this reason am requesting your fine assistance in obtaining a visa for my wife to enter the United States with me and our son. I appreciate your help in seeking a solution to what I feel is an injustice to me and my family.

Sincerely yours,


R. Martin Prechtel



Department of Botany
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803

504/388-8485

July 2, 1980

Congresswoman Elizabeth Holzman
Chairperson, Subcommittee on Immigration and Refugees
House Judiciary Committee
2137 Rayburn Building
Washington, D.C. 20510

Dear Congresswoman Holzman:

I have just learned of a painful dilemma affecting a United States citizen now residing in Guatemala, and wish to ask your help by urgently calling the matter to your attention.

Mr. Martin Prechtel, born in New Mexico, now lives with his commonlaw wife Dolores Ratzan Pablo and their infant son Jorge Martin, in Santiago Atitlan, a Guatemalan village on the shores of lake Atitlan. I first met Martin Prechtel at his home in Santiago in 1978, and was privileged to live there briefly with him and his family as their guest. He is a professional artist, and during the past several years there have been numerous public exhibitions of his work in Guatemala, the U.S., and elsewhere. I was deeply impressed with his dedication to his family and his work. He is also a talented linguist and musician, and I found that in Santiago he was held in the highest esteem.

Mr. Prechtel has just informed me that he has been invited to exhibit some of his work in various cities of the U.S., and that it is his strong desire to have Dolores and their child accompany him. However, the consulate in Guatemala City has refused to grant them permission to travel together, apparently because of Dolores's commonlaw status.

This ruling imposes a hardship upon the artist, who, instead of receiving encouragement for his creative work, is confronted with a cruel restriction. I am unfamiliar with the legal strictures applicable in this case, but I am convinced that insisting upon them would be a grave injustice to this young artist.

I appeal to your sense of justice and propriety in this situation, and ask that you use your good offices to intercede in Mr. Prechtel's behalf to make it possible for him and his family to travel together in the United States.

Sincerely yours,

B. Low
Bernard Low
Professor Emeritus of Botany

2-VII-1950

Dear Martin,

I have just received your distressing letter and immediately wrote (copy enclosed) to the people you listed. I can't appraise the legal aspects of the consulate's refusal to issue a visa to Dolores and Jorgecito, but I hope this appeal to the lawmakers will have the desired effect! Please let me know as soon as you can, about the responses - and action - that you get from Washington.

I am preparing for my Brazilian project, to begin in late August, and

expect to be away in the Amazon
for the rest of the year.

Con abrazos fuertes
a toda la familia,

¡ Que tengas muchísimo
éxito en todo!

Bernardo

MANUEL LUJAN, JR.
1ST DISTRICT, NEW MEXICO

COMMITTEES:
INTERIOR AND INSULAR AFFAIRS
SCIENCE AND TECHNOLOGY

Congress of the United States
House of Representatives
Washington, D.C. 20515

WASHINGTON OFFICE:
1323 LONGWORTH BUILDING
(202) 225-6316

DISTRICT OFFICES:
ALBUQUERQUE, NEW MEXICO
(505) 766-2538

SANTA FE, NEW MEXICO
(505) 988-6521

July 7, 1980

Bernard Lowy
Professor Emeritus
of Botany
Louisiana State University
and Agricultural and
Mechanical College
Baton Rouge, Louisiana 70803

Dear Bernard,

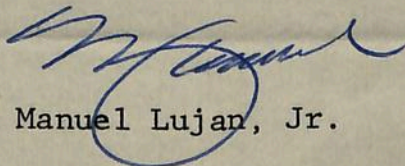
Thank you for your letter in behalf of Martin
Prechtel.

I have been in correspondence with him, the details
of which I cannot relay to you without a Privacy Release
Statement, advising him of what actions he might be able
to take to bring Dolores and Jorge into the United States.

Unfortunately, he cannot bring them in for immigration
purposes which is what he applied for since he is not married
to Dolores, however, I gave him some ideas about how he might
be able to get a visitor's visa for her and the boy.

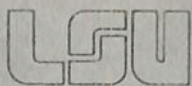
I appreciate your concern and assure you that I will
do whatever is possible to assist.

Best regards,



Manuel Lujan, Jr.

ML; dm



23-VII-1980

Dear Martin,

Writing to Congressmen is one matter;
getting them to act is quite another!
Anyway, I would not have written to
them had I not felt about you as
I do.

The enclosed is essentially a brief
summary I organized from information
you gave me in 1978. Please check it
for errors. It may form the nucleus
of a statement eventually to be expanded
with further pertinent details.

¡Brazos a todos!

Remarks

What reports did you get about your
show in California?

L
15/7/80

Dear Bernard ,

I have just recieved your beautiful letter and the wonderful letter you wrote to the politicians , I I mean we don't know how to thank you enough . Its a rough scene here now and I don't know how much longer we will be able to keep the present sense of calm if things keep going as they are . I am painting away and have been unable to attend the show in orange county calif. because of the present paper shuffle I have not forgotten your request for a mushroom painting and will somehow get it to you yet. Your trip to the Amazon sounds like a dream come true to me and I'm sure your going to be in some kind of micologists heaven. I only wish i could eventually do the same with the knowledge i have of Tzutujil ways . Solo Dios. any way thank you very very much for your great help and collaboration. Dolores says so too. and Jorge is too busy tearing everything to pieces to say anything intelligible but i'm sure he feels the same .

Love,

Martin

Political Killings Widen

In Guatemala, The Middle Is No Sanctuary

By ALAN RIDING

MEXICO CITY — Two years ago, Guatemala had just held presidential elections which were won by a general who promised social reform and a return to civilian rule. By last year, the country's two main opposition leaders had fallen victim to right-wing assassination squads and hopes for peaceful reform were fast fading. Today, a deeply divided Guatemala is caught up in a bloody underground civil war which could be the prologue to a leftist revolution.

Violence last week typified the bloodshed. After unidentified gunmen murdered the 15th professor at San Carlos University since last February and others tried to kill a student leader, students captured two men allegedly involved in the latter crime. One was reportedly tortured until he confessed that he was a Government agent and then was shot to death; the other was doused with gasoline and set on fire.

The speed of the political disintegration in Guatemala, the most populous of Central America's republics, has taken many outsiders, not least the United States, by surprise. A battle to the end between left and right, while perhaps not imminent, suddenly seems unavoidable: no one is looking for a negotiated solution.

Last summer's Sandinist revolution in Nicaragua and the continuing leftist insurgency in El Salvador have encouraged Guatemala's guerrillas, who have been responsi-



Syigma/Alain Keler

Gen. Romeo Lucas Garcia

ble for growing numbers of kidnappings, assassinations and ambushes of military patrols. Apparently unable to destroy the guerrillas, army and right-wing vigilantes have focused on Social Democratic politicians, union and peasant organizers, professors and student leaders. But the killings, rather than suppressing the opposition, have radicalized many moderate groups.

A similar pattern is apparent in the countryside, where the army's frequent brutality has won sympathy and support for the guerrillas among the previously apolitical Indian peasantry. In the western mountains of El Quiché province, Indians, who account for half of Guatemala's 6.5 million population, are for the first time taking up arms.

Rightist violence has discredited the regime of Gen. Romeo Lucas Garcia among many foreign human rights advocates, among them Amnesty International, which last December estimated that 2,000 people had died in Guatemalan political violence during the previous 18 months. Last fall, the International Commission of Jurists accused the Lucas Government of mounting "a systematic campaign to suppress dissent which has, in fact, generated a widespread climate of fear, demoralization and the growth of clandestine opposition." In January, Spain broke diplomatic relations with Guatemala after police stormed its embassy there to evict occupying peasants and 39 people were killed.

Guatemala's guerrilla groups, following the example of Nicaragua's Sandinists and trying to avoid the failings of El Salvador's squabbling left, are working toward their own unity as well as a broad alliance with democratic opposition groups. Significantly, the four rebel factions sent a joint message of "solidarity" to a meeting of the so-called Democratic Front Against Repression, sponsored by the Socialist International, in Costa Rica last month.

In contrast to the more militant strategy of earlier guerrillas, the rebels, notably the Guerrilla Army of the Poor and the Organization of People in Arms, have emphasized the development of strong labor and peasant movements and they frequently occupy remote towns and villages simply to hold propaganda meetings. They also claim to have killed about 100 soldiers this year, as well as several farm administrators and conservative politicians.

To counter the guerrilla propaganda, the Lucas Government has publicized its efforts to improve rural living conditions. Municipal elections were held in April to demonstrate that democracy is still alive. In practice, however, the Government has closed ranks with the private sector and ultra-conservative political parties and has stepped up arms purchases and recruitment for its already powerful armed forces. Many foreign diplomats in Guatemala believe the regime now condones and may even sponsor the right-wing "hit squads." Wealthy conservatives from El Salvador and exiled supporters of the deposed Nicaraguan dictatorship, seeing Guatemala as the last bastion against Communism in the region, are also supporting General Lucas.

Extremist violence has been part of Guatemalan political life since the left-leaning Government of President Jacobo Arbenz was overthrown in a United States-backed coup in 1954. In the early 1960's, several leftist guerrilla groups emerged, but they were crushed in a bloodbath that Amnesty International estimates took 20,000 lives between 1966 and 1974. By 1975, new rebel movements had appeared, although they failed to win a significant following until the murders early last year of two Social Democratic leaders, Alberto Fuentes Mohr and Manuel Colom Argueta, extinguished moderate hopes for peaceful change.

Preoccupied by events first in Nicaragua and later in El Salvador, the Carter Administration is only slowly recognizing the impending crisis in Guatemala. The Deputy Assistant Secretary of State for Inter-American Affairs, James R. Cheek, traveled to Guatemala City last month to urge the Government to control right-wing violence, but President Lucas refused to receive him. The United States Ambassador, Frank V. Ortiz, whom even moderate opposition groups find too close to the Lucas regime, is shortly to be replaced. But by formulating a policy toward Guatemala *after* the country has become polarized, Washington seems in danger of replaying its role in Nicaragua and El Salvador — an impotent spectator of a battle between two equally unacceptable extremes.

Bolivian Coup Again Threatened

When a drunken palace guard tried to knock down the door of Bolivian interim President Lydia Gueiler Tejada's bedroom with a rifle butt last weekend, his commanders quickly arrested him and apologized. They apparently hoped to subvert Bolivia's fragile democracy by more decorous methods. Thwarted in a coup attempt a fortnight ago by United States pressure, the military demanded the expulsion of the United States Ambassador, Marvin Weissman, and a one-year postponement of elections scheduled for June 29. Bolivia's Congress unanimously rejected the postponement and so did Mrs. Gueiler. She got her job after 200 people died in fighting after a two-week army coup attempt in November.

In the world

President-elect Cerezo meets with newsmen

GUATEMALA CITY (AP) — Vinicio Cerezo, whose inauguration as president Tuesday ends 16 years of military rule in Guatemala, said he will oppose U.S. efforts to isolate the leftist government of Nicaragua.

In a meeting with journalists at his home Monday, the president-elect was asked whether he would yield to pressure from the Reagan administration to isolate Nicaragua. "I won't," he replied, "because isolation means confrontation. We want peace, which means discussion, conversation, contacts and integration."

Cerezo, a 43-year-old moderate Christian Democrat, said he plans a meeting Wednesday with the presidents of the four other Central American countries, or their representatives, to initiate

peace talks for the region.

He also appealed for financial and moral support from the United States and Europe.

"I need unconditional economic aid and willingness to truly support an autonomous democracy at the service of national and Central American interests," he said.

Cerezo, a lawyer, said Europe has a "moral responsibility" in the Guatemalan and regional democratic processes to help "develop in the function of Central American interests and not those of the East-West conflict."

Cerezo was elected Dec. 8 in a runoff of a Nov. 3 election that did not produce a majority for any of the eight candidates. He will replace Gen. Oscar Humberto Mejia Victores, who came to power in a coup in August 1983.

BLOTTER

P.O. BOX 2544 • SANTA CRUZ, CA • 95063 • VOL. 1 NO. 2 MAY 1978

WHAT IS THE PEC?

by Michael G. Johnson

The Psychedelic Education Center is an organization dedicated to the dissemination of truthful information concerning various aspects of those substances called "psychedelic," plants or drugs which alter our state of consciousness and expand our awareness of reality. These substances include LSD, peyote and psilocybin; among the more notable

As the preponderance of scientific studies have demonstrated, psychedelic drugs used wisely are very effective as aids to reaching high ecstatic states of consciousness and for general personality development. We are working toward making such experiences more available.

For years we have witnessed the unjust and obscene scare tactics used by the media to smear and malign psychedelics and their users. One of our primary tasks shall be to deflate and refute this utterly false image.

Last October 14-15 we sponsored the Colloquium with Dr. Albert Hofmann, inventor of LSD. At the University of California at Santa Cruz Dr. Hofmann (notably not a drug crazed Hippie type) spoke to a gathering of name authors, academics and long time acidheads.

The following day a collective panel of distinguished rascals discussed the current issues with LSD. Among the panelists were Bruce Eisner, Peter Stafford, Stephen Gaskin, Allen Ginsberg, John Lilly and many others. A strong need for the establishment of an organization like the P.E.C. was a common thread running through all of the various discussions that went on that weekend. The successful Colloquium appeared to be a sign of a new emergence of a viable, respectable image for psychedelics and their users.

Throughout the remainder of 1977 and the beginning of this year informal meetings and events continued to be held. A film festival of "Dope Flicks" was staged on Jan. 14-15, 1978.

The founding conference of the PEC was held on Jan. 27, 1978 in nearby Soquel.

Present as guest speaker was Dr. Ron Siegel, one of the few LSD researchers in the field today. We agreed at the conference to concentrate on creating this newsletter to serve as a clearinghouse for information relating to the Psychedelic field.

On March 9 a group of local P.E.C. members enjoyed an intimate dinner and discussion with Robert Anton Wilson, noted author of *Sex and Drugs*, the *Illuminatus* trilogy, and most recently *Cosmic Trigger*. Wilson spoke of new advancements in the fields of Space Migration, Increased Intelligence and Life Extension (S.M.I.L.E.). For further related information see "What is the Network," elsewhere in this issue.

On April 8 we held the first Santa Cruz T Party, to protest recent revelations concerning the government poisoning of marijuana fields south of the border (see "Pot Proponents Protest Paraquat," elsewhere in this issue). Other speakers included Bruce Eisner, Michael Johnson and various representatives of the community.

Some of the projects we are currently working on include the production of a TV-videotape of the Colloquium, the publication of a book relative to the developments of the Colloquium, and the staging of concerts and rallies, along with the continuing lecture, seminar and discussion series we have been presenting thus far.



The P.E.C. gathered to wish Sash a happy first birthday and bid bon voyage to Peter and Lynn who are tripping in Hawaii.

Coming up soon is the annual Whole Earth conference, being held over the weekend of May 6-7 in Davis, California. Featured guests this year include Timothy Leary and Buckminster Fuller, with the overall theme being "Space Colonies." If you would like to join us in a caravan to Davis, please call (408) 429-4036, ask for Elizabeth.

From now on the PEC is whatever we make it. We hope that it will have a tremendous strengthening and unifying effect for the Psychedelic movement, increasing our power and communication. The PEC and this newsletter pledge to be an open and enlightening vehicle for the channeling of new and daring ideas, projects and more. Your comments, ideas, articles and any other forms of input are most welcome.

AN ALLEGORIAL MYTH OF CREATION

by L. Francis

In the beginning at a Thursday night soiree, Psychodelia, Discordia and Hedon sampled some grass for the first time whereupon they learned the lesson of spacing-out. In a vision, Psychodelia recognized the need for establishing a universal connection to be called "Network." And so it came to pass. From Network sprang PEC. And Hedon was pleased.

Discordia, however, crestfallen, left the couple for a temporary retreat in the woods, whereupon she happened upon some red-freckled fellows under a pine tree. They enticed her. They bid her to sample their fare and so she did. Everything thereafter mushroomed and the world became radiant with light. Becoming a mycophile, Discordia saw the need to share this new delicacy with her friends. And so it came to pass.

Energized and unified once again, this group pledged to incarnate until their work was done. Their avatars crystallize and materialize in each new age. Connections are spreading throughout the land and the group's visions are being realized. And so it has come to pass.

The innovation referred to is the use of LSD and other psychedelic chemicals for the improvement of mankind in general, and individuals in particular, by bringing about the fullest realization of human potential in the user.

The "elderly" are those in our society who through fear and/or ignorance, have stifled research with these chemicals and have made outcasts and criminals out of many of our brightest and most creative young people.

It is evident to thoughtful people that today's world stands on the brink of chaos on many fronts, chief among these being the age-old struggle for power among nations and among races. The current tendencies of society towards fear, distrust and inflexibility, may very well mean that centuries won't be available to mull over possible solutions; we may not even have another decade if the current pace of alienation, armament and war continues.

Although the analytical mind rejects panaceas, the possibility must be explored that a broadly-based solution to many of the world's problems exists through the new techniques being developed to more fully realize human potential.

These techniques almost invariably emphasize the *non-rational* as the well-spring of creative problem-solving, and focus on direct experience, total involvement, and intensified sensation of body awareness.

In the forefront of these techniques are those that have used psychedelic chemicals to provide the most rapid and efficient route for people to attain the heightened awareness and increased effectiveness that are the hallmarks of full realization of capability. In brief, it appears that properly controlled use of these chemicals temporarily alters the learned patterns of men's minds, and in so doing, enhances creativity, reduces anxiety, instills self-confidence, heightens sensitivity, and fosters mutual understanding. It should be recognized that these effects are not figments of an overactive psychedelic imagination; rather they are presented as reasonable extrapolations from the results of various preliminary studies, which now await further validation.

Essentially, evidence has accumulated that the psychedelic chemicals, notably LSD, peyote, mescaline, psilocybin, DMT, and marijuana temporarily alter the neurochemistry which underlies learned patterns of thinking. The alteration, in

turn, induces a state of mind in which consciousness is heightened or expanded, and sensory stimuli are amplified. This experiential state has been described in many ways, using terms such as transcendental, mystical, or oceanic—an experience in which the ego dissolves, the perceived and the perceiver blend into one, and the dichotomies of the "old world" dissolve into a new sense of unity, wholeness and integratedness. Such experiences may be frightening and unpleasant when they are not expected or when no preparation has been made for them, but throughout this article, it should be understood that the author's position is that the positive and beneficial effects of psychedelics arise from their *controlled use* and that "accidents" can occur when these powerful substances are used improperly.

The fact that radiation accidents occur in dealing with nuclear materials does not reduce their value when their power is properly channeled. Similarly, psychedelic chemicals are only harmful or harmless, good or bad, depending on how they are used. The analogy is especially appropriate if one accepts that the psychedelics are considered as a kind of atomic energy of the mind.

Abraham Maslow's brilliant treatise on the psychology of being provides a useful framework for understanding the how and why of psychedelic experience as it relates to the realization of human potential. Although Maslow did not refer directly to psychedelics, his descriptions of "peak experiences" as expressions of the fully actualized, fully humanized person, are closely similar or identical with those used to characterize psychedelic experiences. Maslow characterizes peak experiences as having the following attributes: wholeness, perfection, completion, justice, aliveness, richness, simplicity, beauty, goodness, uniqueness, effortlessness, playfulness, truth, honesty, reality, and self-sufficiency. Maslow goes on to account for these positive traits as an expression of one's natural being. In talking of a "state of being," he bridges an enormous cultural gap by incorporating into his Western Theory a concept of the self that is clearly Oriental in tone and which finds fullest expression in Zen Buddhism. Both Maslow and Zen speak of inner, natural selves which are biologically based and which have been channelled and narrowed as man has become enculturated. For Maslow, this inner nature has positive qualities which are to be encouraged rather than suppressed. If it is permitted to guide our life, he suggests, we grow healthy, fruitful and happy. In

Aen, the natural state is achieved by means of meditation, and self-actualization in Zen is called enlightenment or *satori*. According to Zen practitioners: "If all the people in the world achieved their human potential by Zen Buddhism or if they exerted their efforts in that direction, the world would naturally become peaceful, tranquil and pleasant."

Although many westerners would like very much to have the peaceful and tranquil world of Zen, they find the techniques of meditation, contemplation, and counting one's breaths somewhat alien. The procedures are time-consuming and rarely give the immediate results which most westerners need or require for encouragement.

Psychedelic chemicals, it is speculated, may bridge the gap between East and West by rapidly, conveniently and inexpensively producing the altered consciousness that leads to Being, to the transcendent state, to self-discovery, and to full human potential.

It is in contemplating the "how" of psychedelics that we come to understand both the benefits and risks involved in their use. Although research has barely begun to give us biochemically and psychologically detailed explanations of psychedelic chemical action, the broader picture of the effects has emerged rather clearly. In brief, the psychedelics appear to alter temporarily the pattern of neural activity by increasing the number and rate of dendritic connections per unit of time. The result is a more diffuse pattern of excitation, (thus accounting in part for the synesthetic experiences that have been reported) and an accompanying intensification of emotion simulating the less differentiated and more intense emotions of childhood. For the most part, however, man's reasoning powers remain intact, and he is capable of reflecting and being aware of the affective changes within him. Except at brief moments of peak intensity where self dissolves and reason is suspended, the consciousness-expanded mind is capable of greater logical effort and of more productive performance. The data that are given to the rational mind, however, are quite different than those usually available to it. Such data are somehow less hampered by pre-conceptions, and they are "truer" in the sense that the concept is less conditioned by the perceiver. In psychological terms, there is less functional fixity and increased functional flexibility. All of these characteristics are attributed to an experience that colloquially may be called "letting go!"

And it is precisely the "letting go" that is both the boon and the bane of the psychedelic experience. What needs letting go is the conscious control over self. For many, this kind of control is at the core of our egos. For some people, even a little scraping away at ego-defense is intolerable and it is resisted and feared. For others, enough deliberate control can be relaxed so that protectiveness is lowered and child-like spontaneity and openness return. For some, the reacquisition of these attributes has been considered most conducive to creative endeavor.

Full human potential, however, involves more than just creativity. The psychedelic experience for some people, has led to meaningful personal relationships. For others it has led to the achievement of deep religious experiences. Still others have gained important insights into their own personalities and motivations.

In general, it can be said that the beneficial effects of LSD use appear when the strength of the dosage is matched with the amount of ego-loss with which the individual can cope. Usually, with proper preparation, the LSD subject *can* cope with a very high degree of ego-defense reduction. Nevertheless, high anxiety and panic states can always occur if the session is inadequately guided, either by insufficient control of ambient circumstances or by poor preparation of the individual. Fortunately, an experienced guide, has at his command, both the techniques needed to minimize such anxiety and, where necessary the drugs to terminate the "trip." Risks of psychic damage are therefore minimal.

There are, however, other kinds of questions about "physical risks" to the LSD user. Much has been written about latent brain damage, and about chromosome breaks, but as yet there is very little specific evidence of either. Occasional reports have appeared in the scientific literature attesting to such types of damage, but these have been limited in scope, and exaggerated in the press. Chromosome breakage, for example, of the type purportedly induced by LSD also occurs following application of live measles vaccine, after use of certain tranquilizers or one of our other well known drugs, caffeine. Attribution of birth defects to such chromosome defects remains totally unsubstantiated.

It must be evident to all who are following the treatment of this topic in news magazines as well as in the scientific journals, that the controversy rages unabated. A recent article in the American Druggist Magazine, entitled "The World's Most Controversial Drug" counterposed LSD's beneficial effects as an aid to

psychotherapy with its more publicized harmful effects. Clearly the answers to the question of benefit vs. harm will emerge from the sound psychopharmacological research that is getting under way again. For a time, the "scare" stories threatened to eliminate the research that had begun, but fortunately greater objectivity prevailed, and funding is again available under the joint auspices of the National Institute of Mental Health and the Food and Drug Administration.

Research that is under way covers a wide range of features from the neurophysiological studies of Dominick Purpura of the Einstein College of Medicine to the long-term behavioral effects study of William McGlothlin at U.C.L.A. Studies related directly to enhancement of human potential are currently limited, but should be explored in depth by humanists, sociologists, psychiatrists, and psychologists interested in human capability and its fulfillment.

The current public illusion that LSD is just a bigger and wilder "kick" drug with which the kids are fooling around, should not be tolerated, either by the public or by the scientific community. Its enormous potential for human betterment must be explored before existing techniques for human destruction make research a moot point.



LSD AND THE MEDIA
by Bruce Eisner

Since its discovery by Albert Hofmann at Basel, Switzerland, in 1943, LSD has been around for about thirty-four years now, yet most people know little more than inaccurate propaganda about this most miraculous substance. Most regard it as a diabolical drug, akin to heroin, although its effects on the human *psyche* are totally different.

Typical of media distortion of information is the July 28, 1975 Associated Press dispatch which reported on the National Institute of Mental Health, over the past two decades. The A.P. story stated, "Sources disagreed on the findings of the studies. One said they 'all bombed

out' but another said the experiments suggested that LSD might have some limited value in curing certain alcoholics."

This is grossly inaccurate information. Medical researchers have published the results of N.I.M.H. research in a number of top medical, psychological and psychiatric journals. The studies range over a number of proven usages of LSD's unrealized potential.

One study found LSD more effective than group psychotherapy in treating "Neurotics" (which includes many of us in this high tension society). Earlier experiments in Czechoslovakia also found LSD to be effective in the treatment of "psychotics." Otherwise hopeless mental patients were released as "normal" after extensive LSD-assisted therapy.

Czechoslovakia and the Soviet Union are currently conducting many experiments with LSD, including research in the new field of "psychotronics"—a science of psychic energy. Czechoslovakia is the only country in the world that has legitimate LSD through government sponsored clinics. There is emerging a new space race. This one, aimed not at the moon or Mars but at the spaces of man's innermost being.

Other studies have shown LSD effective in treating addiction to narcotics such as heroin and alcohol, using high dosages in supportive settings. One heroin addict reported, "The two experiences of heroin and LSD are like night and day. Heroin is a night, a time of sleep and with sleep nothing comes but a dream. But with LSD, it is like a dawn, a new awakening, it expands your mind, it gives you a new outlook on life." Yet LSD is lumped with heroin in the California Health and Safety Code (as well as in other states) while a true narcotic like alcohol is vended from every street corner and supermarket.

Usage of LSD on autistic children has indicated that this might be the only path to contact with the external world for this terrible condition effecting small children. And dying cancer patients have been given LSD. The results have been relief of pain, more effective than opiates, plus an improvement in the psychological condition of the patient. And this may be only the beginning of LSD's role in the age old struggle against pain, disease and even death itself.

LSD has shown the ability to elevate man to a new kind of sanity. Recently, a new school of psychology called transpersonal psychology, has risen up to challenge the cliques of Freud and psychotherapy and the authoritarianism of

Skinner and behavior modification. It deals with the uncovering and exploration of the ultraconscious mind," a realization of man's unity with nature and the cosmos. LSD has been shown singularly effective in achieving these mental states, which methods such as biofeedback, TM, EST, and other recently developed attempts at the scientific production of the transpersonal state are revealed as inadequate by themselves.

Yet the media has presented a very odd picture of LSD. If a person were to take an uncritical view of the media's presentation of psychedelics, he would probably have the following picture. A typical LSD user either jumps off a high building (a la the CIA and Art Linkletter stories), becomes a psychopathic killer (the repeatedly publicized Manson case), or at the very best has freaks for children (the chromosome hoax). It is never explained that the CIA victims were dosed without their knowledge, that Art Linkletter's daughter was a speedfreak for a year before she jumped and that the Manson clan was into smoking belladonna (a deliriant hallucinogen), clearly not a psychedelic and of questionable mental effect along with his underground acid, of uncertain purity, and that Manson had spent his life in prison before coming to the Haight Ashbury.

The old chromosome hoax, that LSD causes chromosome breakage was finally dispelled recently. Over 2,000 subjects of pure pharmaceutical LSD and no chromosome breakages were found. Yet the headlines—"LSD CAUSES CHROMOSOME BREAKAGES" still echoes in the public mind.

This is not to say that bummers don't exist, that LSD is totally safe for immediate sales from bubble gum machines (which might be preferable to the presently rigid controls). Like in the space program, there are accidents. The aim is to make the experience safe, and like any technological tool, that takes repeated experimentation and an open and adventuresome attitude.

The media and even the underground have so distorted the truth about LSD that they moved Timothy Leary to remark, in his Folsom Prison Film, "I don't particularly recommend that you take LSD. First of all, 99 percent of what people call LSD isn't LSD and 99 percent of what they say about it isn't true."

It is this strange situation that has made the atmosphere surrounding the use of LSD more difficult than any time in its short history. Lies from the media

have a way of getting into a person's head and effecting his psychological set, one of the major determinants of the course an LSD session takes.

But recently, this plight has begun to change, within the glossy covers of national magazines—*Head* and *High Times*. More true and accurate information has been presented by these magazines than ever was presented in *Newsweek*, or the *New York Times* or other subsidiary publications. While there has been some misrepresentation of truths, some pushing of harmful drugs, some hype and commercialism found within these magazines also, on the whole they represent an encouraging sign. We can hope that this trend will spread to other publications and to other media as well. New Dimensions Foundation has already made a program about our October LSD conference and we are hoping a television documentary will be produced at some point. These "cool electronic media" as McLuhan called them, are the national conscious mind. And so it is that the content is as important as the medium and the content that has thus far been programmed is not very impressive. So we hope that into this conscious mind there can emerge a new light. And in this way, perhaps the ice of public opinion will melt and the needed research and implication of programs carried out in a more enlightened social milieu.

In the next issue of *PEC Blotter*, Bruce Eisner will present his vision of the future, and suggest some paths that might be followed.

the network

P.O. Box 317
Berkeley, Ca. 94701

The network is a clearinghouse for distributing information and for making contacts among persons interested in space migration, intelligence increase, and life extension.

SPACE MIGRATION

We believe that space migration is the next great evolutionary step for humankind.

The progress of space sciences and exploration in the last 25 years suggests that self-sufficient habitations in space are possible within the next 20 years. Engineering calculations by physicist Gerard K. O'Neill and the staff of NASA's Ames Research

Center Summer Studies in Space Colonization have shown that space habitats of thousands of people, with farmlands and miles of outdoor countryside, can be built with the current technology. These space islands around the sun could allow for unimaginable social diversity, while benefiting the Earth with cheap and nonpolluting satellite solar energy and with the technological, ecological, and social advances required for living in space.

And later starflight? If even one in a thousand of our galaxy's stars has developed life, there are tens of millions of inhabited stars. Intelligent life elsewhere in the universe is almost a certainty. Radio-telescope communication and even star travel are more plausible today than the Viking missions to Mars were a century ago.

INCREASED INTELLIGENCE

We propose deliberate programs to increase the level of human intelligence—understood broadly as awareness, competence, and social relationships, not just I.Q.

The Network is developing games and other non-totalitarian group processes designed to facilitate community. We are seeking tools for increasing group effectiveness through shared awareness and unspoken communication.

We are following with greatest interest research into the interface of the visionary and hard sciences. For example, can studies in quantum physics illuminate the nature of consciousness? Also of interest are the computerized investigations of U.F.O. reports, and creation of a periodic table of stages of human development.

LIFE EXTENSION

With the current rate of progress in biochemistry, experts have predicted that within twenty years the aging process can be slowed significantly—and eventually stopped or even reversed. For the first time ever, old age and death may not be inevitable.

The Network maintains contact with many pioneers in the fields of life extension and cryonics. We maintain extensive files on these subjects and continue to support the sadly underfunded research in these areas.

The prospect of immortality frightens many, who conjure horror images of boredom, overpopulation, or stagnation. But also it lets us re-examine our attitudes toward life. What is life without the prop of the shadow of death? Without the need to hurry through developmental stages? With more time to explore deeper wisdom and human potential?



UNANSWERED QUESTIONS FROM HUXLEY'S EXPERIMENTS

by Peter Stafford

The main writings of Aldous Huxley about psychedelics and the visionary experience have now been gathered into a single volume—entitled *Moksha*, Stonehill Press, edited by Michael Horowitz and Cynthia Palmer. Though more than a decade and a half has passed since Huxley's death, this material resurrected from letters, talks and articles is timely today. For as the law and public reassess psychedelic questions via the door of medicine, nowhere will they find a more profound study of implications and of the questions raised.

In 1931, Aldous described his delight upon coming upon an unpromising-looking, ponderous work by a German pharmacologist—"a thick book, dense with matter and, in manner, a model of all that literary style should not be." He read this from cover to cover with a growing interest in "how the story of drugtaking constitutes one of the most curious and also, it seems to me, one of the most significant chapters in the natural history of human beings." But it wasn't until 22 years later, after he had published 39 books concerning human nature, that Huxley tried a psychedelic—400 mg. of mescaline sulfate, administered at about 11 am on May 6th, 1953 by a young Canadian psychiatrist named Humphry Osmond.

In one of several remembrances of Aldous appearing in this volume, Osmond comments that the finest praise one could receive came in his expression, "How absolutely incredible!" Well, after about an hour and a half into the experience, Aldous noticed he was "not looking now at an unusual flower arrangement. I was seeing what Adam had seen on the morning of his creation—the miracle, moment by moment, of naked existence." (In a letter at Chatto & Windus just after this mescaline experience, Huxley writes: "It

is without any question the most extraordinary and significant experience available to human beings this side of the Beatific Vision; and it opens up a host of philosophical problems, throws intense light and raises all manner of questions in the fields of aesthetics, religion, theory of knowledge...")

Over the next decade, there were to be nine other tries—two more with mescaline, one with morning glory seeds (6 of them), two with psilocybin and four with LSD. This may not be considered by some that much experience. But Huxley and his colleagues—mainly Osmond—were unusually sensitive to and articulate about what was at stake here. In an important sense, they have affected the way in which we see the issues.

In the first of his two short books about psychedelics—*The Doors of Perception*—Huxley remarked that the "untalented visionary may perceive an inner reality no less tremendous, beautiful and significant than the world beheld by Blake; but he lacks altogether the ability to express, in literary or plastic symbols, what he has seen." Aldous, by way of contrast, by the time of his first contrived mystical experience had already spent a long lifetime as a student of the curious and mystical, and of English prose. Writing first about psychedelics at the age of 60, he was able to give (quoting from the above passage again) "some hint at least of a not excessively uncommon experience."

I mean by this that the exploration of inner space is at least as vast and mysterious a study as that of outer space—and that in the former we were lucky to have had an Aldous Huxley and Humphry Osmond aboard as investigators. It is as if we had sent poets that first time to the moon!

It took Huxley 70 pages to describe what had happened on that first trip, to give some hint of this "not excessively uncommon experience," as when he wrote that "all at once I saw what Guardi had seen and (with what incomparable skill) had so often rendered in his paintings—a stucco wall with a shadow slanting across it, blank but unforgettably beautiful, empty but charged with all the meaning and the mystery of existence." Compare just this fragment with the *total* remaining report from the Harvard Psilocybin Project investigators—when Huxley took 10 mg. psilocybin, and was observed: "No. 11 sat in contemplative calm throughout; occasionally produced relevant epigrams; reported experience as an edifying philosophical experience."

There is much truth to the claim that to get the Aldous Huxley mescalinated ex-

perience you had to be Huxley—especially if talking about the bringing back of souvenirs. Aldous Huxley, blind at the age of 20, after regaining his sight was probably not by accident to become the most listenable of all as to the content of the contrived visionary experience. That appeared principally in his two books on the subject, after only two or three experiments. What he thought of the rest—which were quite different—is here, in what should stand as an unparalleled guide to investigators.

Speculations and explanations provided by Huxley are based on wide-ranging inquiries he undertook after having been greatly energized by that initial experiment. Most of this seems fresh today. How odd it seems, for example, to hear him describe the work of John Lilly with dolphins, or that of those accumulating death and dying accounts—and to realize that this was written a quarter century ago!

What struck me, reading through this compilation, most forcefully was Huxley's questioning (mainly of Osmond). Here are some of those questions, which yet deserve clear answers:

How many of the current ideas of eternity, of heaven, of supernatural states are ultimately derived from the experience of drug-takers?

Do Galtonian visualizers react in a different way from non-visualizers? Again, is there any marked difference between the average reactions of extreme cerebronics, viscerotonics and somatotonics? Do people with a pronounced musical gift get auditory counterparts of the visions and transfigurations of the external world experienced by others? How are pure mathematicians and professional philosophers affected?

The inexplicable fact remains the nature of the visions. Who invents these astounding things? And why should the not-I who does the inventing hit on precisely this kind of thing?

What those Buddhist monks did for the dying and the dead, might not the modern psychiatrist do for the insane?

My old friend, Naomi Mitchison writes from Scotland, after reading the Doors, that she had an almost identical experience of the transfiguration of the outer world during her various pregnancies. Could this be due to a temporary upset in the sugar supply to the brain?

Have you ever tried the effects of mescaline on a congenitally blind man or woman? This would surely be of interest.

Can you tell me in a line or two what was the nature of the experiences induced by being shut up in silence, in the dark? Were these visions of a mescaline-like kind?

Why should gems ever have been regarded as precious? What has induced men to spend such enormous quantities of time, trouble and money on the finding and cutting of colored pebbles?

Did I tell you that my friend Dr. Cholden had found that the stroboscope improved on mescaline effects, just as Al Hubbard did? ...And anyhow, what on earth are the neurological correlations of mescaline and LSD experiences? And if neurological patterns are formed, as presumably they must be, can they be reactivated by a probing electrode, as Penfield reactivates trains of memories, evoking complete vivid recall?

Who, having once come to the realization of the primordial fact of unity in Love, would ever want to return to experimentation on the psychic level?

Who on earth was John Sebastian? Certainly not the old gent with sixteen children in a stuffy Protestant environment. Rather, an enormous manifestation of the Other—but the Other canalized, controlled, made available through the intervention of the intellect and the senses and emotions.

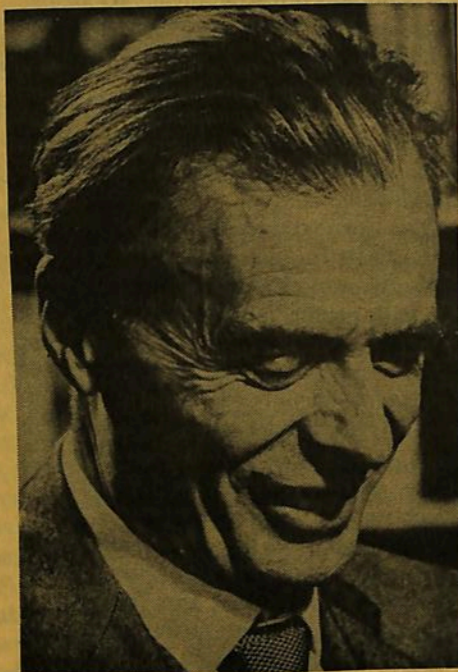
How and why is heaven turned into hell?

Can we with impunity replace systematic self-discipline by a chemical?

Is a mescalinated person hypnotizable? If so, can hypnotic suggestions direct his new found visionary capacities into specific channels—e.g. into the realm of buried memories of childhood, or into specific areas of thought and imagery. Can we suggest to him, for example, that he should see an episode from the *Arabian Nights*, or from the Gospel, or in the realm of archetypal symbols or mythology?

How strange that we should all carry about with us this enormous universe of vision and that which lies beyond vision, and yet be mainly unconscious of the fact! How can we learn to pass at will from one world of consciousness to the other? ...The supreme art of life would be the art of passing at will from obscure knowledge to conceptualized, utilitarian knowledge, from the aesthetic to the mystical; and all the time to be able, in the words of the Zen master, to grasp the non-particular that exists in particulars, to be aware of the no-thought which lies in thought—the absolute in relationships, the infinite in finite things, the eternal in time. The problem is how to learn that supreme art of life?

Did you get what I have got so strongly on the recent occasions when I have taken the stuff—an overpowering sense of gratitude, a desire to give thanks to the Order of Things for the privilege of this particular experience, and also for the privilege—for that one feels it to be, in spite of everything—of living in a human body on this particular planet?



Human beings will be able to achieve effortlessly what in the past could be only achieved with difficulty, by means of self-control and spiritual exercises. Will this be a good thing for individuals and for societies? Or will it be a bad thing?

If we have a meeting of this highly pickwickian organization, what (outside the pleasure and interest of meeting a number of intelligent people interested in the same sort of thing) will be gained? ...Would there be ulterior advantages? ...Couldn't the same results be attained more simply and cheaply by discussing matters at a meeting, or by correspondence, and dividing up the work among the various experimenters?

Is it possible for a powerful drug to be completely harmless?

Most of us function at about 15 per cent of capacity. How can we step up our lamentably low efficiency? ...Will it in fact be possible to produce superior individuals by biochemical means?

To think of people made vulnerable by LSD being exposed to such people is profoundly disturbing. But what can one do about the problem? Psychiatry is an art based on a still imperfect science—and as in all the arts, there are more bad and indifferent practitioners than good ones. How can one keep the bad artists out? Bad artists don't matter in painting or literature—but they matter enormously in therapy and education; for whole lives and destinies may be affected by their shortcomings...

Have you any idea why some people visualize and others don't?

If you were having a love affair with a woman, would you be interested in writing

about it?

What's happening in the brain when you're having a vision? And what's happening when you pass from a premystical to a genuinely mystical state of mind?

To what extent are our thoughts, beliefs and actions the products of our inherited physique and temperament, and of the fluctuations, in response to internal and external events, of our body-chemistry? Just how valid is a philosophy based upon a state of mind (say the conviction of sin) which can be radically changed by the prick of a needle or a small daily dose of Ritalin? And what about those experiences induced by Dr. Hofmann's physically harmless mind-changers—experiences of a world transfigured into unimaginable loveliness, charged with intrinsic significance, and manifesting, in spite of pain and death, an essential and (there is no other word) divine All-Rightness? Yes, what about them?

BLOTTER

P.O. Box 2544 Santa Cruz California 95063 1978

EDITOR

Bruce Eisner

Assistant Editor

Michael G. Johnson

Art, Copy, Layout and Production

Betty M. Turner

Photography

Dundee

Contributing Editors

Gregg Beebe
Debra Mae Cohen
Edwin H. Elkin, Ph.D.
Lyn Francis
Albert Hofmann, Ph.D.
Todd H. Mikuriya, M.D.
Sigrid Radulovic
Spencer Rumsey
Peter Stafford
Reverend E. M. Turner

The "P.E.C. Blotter" is the official publication of the Psychedelic Education Center, P.O. Box 2544, Santa Cruz, California 95063, U.S.A. Subscriptions are \$5.00 per year (four issues).

And many thanks to: Jim Bennett, Barry Crombe, Tom Fitzwater, Elizabeth Gips and Sita.

SPIRITUAL TRIPPING

by Sigrid Radulovic

The joke about the spiritual trip is that there is no such thing. You don't have to do anything to be spiritual. You already are spiritual. All you have to do is shovel out the stuff that clogs up your mind and you will experience your own marvelous transparency. You will experience yourself not only as your body, but also as part of the space surrounding your body. And that space is really where it's at. That is the Great Spirit, the Big Invisible which contains everything that exists. From here with our ordinary everyday waking eyes it looks like nothing much, but when you heighten your perceptions, through meditation, or fasting, or sickness, or pure psychedelics, you discover that the air is not empty and colorless.

I have experienced space, or air, as an unbelievably beautiful, etherlike substance, something alive eith ever changing patterns of color and light and it was *breathing*. When you go further out the patterns disappear and what is left is a sort of golden Nothing, except that it is not nothing. It is a moving, luminous, breathing, no-Thing, the Brahma of the Buddhists, the Father in Heaven (what a choice of symbols!) of the Christians, the Great Spirit of the Indians, Allah, Shiva, Universal force—all different symbols for the same thing: Consciousness, Energy, Love in other words—God, and you are sitting in Her at this very moment!

If you want to test it out in a hurry, fast for a few days until you feel the light inside you and you will begin to be able to see those patterns in the air and feel that rhythm. (Or, if you want a quick, lawful peek at this additional reality, go to your local dentist and inhale deeply.)

In our culture the word empty-headed is an insult. In Eastern religion an empty head is as desirable and as aesthetically pleasing as a magnificently blown, empty glass vase standing against a window. Memories, plans, concepts, opinions, thoughts and inner chatter are all pebbles in the glass vase of your mind. Sooner or later all that stuff has to go so that the light can shine through.

To work towards the light you can join a method or an ashram or a church or you can meditate or purify through diet, or whatever else seems right for you. If you ask me, you don't really have to do a damn thing except have faith and by some mysterious reprogramming process of your entire system that faith will get you there. Eventually.

My own rebirthing has been no sudden, cathartic *Aha!* experience, no jet flight

into the bright sun of the spirit self. Rather it has been a slow, spiraling trek up the rocky road of everyday existence with no major disciplines involved, except a continuous attempt to observe myself in everything I do, including all my sinning and self-polluting. If you think that's easy, try it. Observe everything you are doing for just ten minutes, especially when you do things you don't agree with. Your ego cringes as it is forced to see itself in action—lying, posturing, slothful, cowardly, whichever bag of shit happens to be yours—the aforementioned is clearly mine.

Nevertheless we persist. Once we accept that there is an additional reality—a higher frequency reality—surrounding us, there is nothing to do but to go towards it and a lot of us are on the march.

PSYCHIC PHENOMENA or Spiritual Attunement

by Rev. E. M. Turner

With the growth of interest in the psychic field, it becomes increasingly important to distinguish between psychic ability, most often called phenomena, and spiritual attunement. Many seekers appear to confuse the two and while actually seeking spiritual growth oft times experience Psychic phenomena. But one need not be seeking spiritual growth to experience the realms of psychic phenomena because it is not the property of gifted persons nor is it an extra sense of which many have been denied. Actually ESP is nothing more than the utilization of all the senses outside of linear time. Many who have ESP cannot explain in real scientific terms what its processes are and in fact merely exhibit their gift within boundaries the layperson can understand. Each and every person born is to some degree psychic. It is the capacity to which the ability is developed and used that separates the gifted from the so-called non-gifted.

On the other hand, psychic ability does not imply spiritual growth. Spiritual growth is a disciplined progression which produces changes in individual awareness. A heightened awareness which incorporates the more Christlike qualities into the individuals life. This is not to say that the seeker of spiritual growth will become like Christ, but is to say that the more humane qualitative moral enlightenment takes place, liken to the Christos: the most high light of the spectrum.

I have met many people with excellent psychic ability of some kind, which they were either developing or which had been

highly developed from birth. Yet at the same time that they were able to demonstrate such abilities as clairaudience, clairvoyance or telepathy, they displayed many traits which would not become a spiritually attuned person.

Many people are straining themselves to "open their psychic centers," and develop their natural gifts. All the while, those who encourage such straining are making nothing but profit and neglecting to give any real awareness of what such straining can produce beyond the eight week course. While nervous breakdowns and mental unbalance are not the automatic side effect of developing psychic ability, nonetheless they sometimes ensue when the individuals are not prepared properly for the resultant phenomena. Such consequences are prevalent when Ouija boards and Exorcism become faddish. Just because an individual opens the psychic centers does not mean he will become more spiritual.

The spiritual aspects of a life of harmony with oneself, one's surroundings and one's fellow individuals in the here and now are not a matter of controlling phenomena, but of recognizing the reality of the master teachers of which Jesus Christ was but one. In reaching for the highest teachings, the goal of cosmic freedom of the Universe, the secondary development of so-called psychic insights will come naturally and without danger either to the self or to others.

This is not to say that one should not seek to open these centers, called Chakras by the Hindus, but that one should also include the study of one's self among others, in the light of brotherhood. For the longest journey begins with the first step, and the desire to develop any gift is the first step to a fuller awareness of the whole being. "Seek and ye shall find; knock and the door shall open; Know the truth and the truth shall set you free."

THE SONG OF EARTH

*O, a planet loves her folk
and she always gives them time
to go and meet the other folk
and end the nursery rhyme.*

*My heart and brain and throat will speak!
My soul awakes and talks with Pan-Hu-Man.*

*O, I will fling out my Life to the galaxies
through the hands of my servomechs*

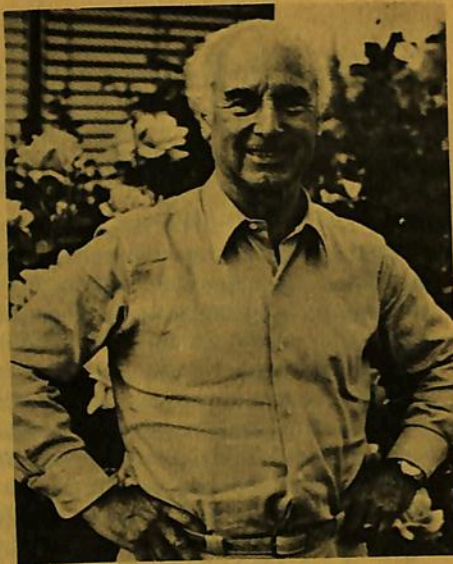
I have nourished them well.

I have given them my wisdom-plants.

*I've pushed my Heat up through their roots
And now It dares to burn the Sky!*

Up to now was my night. At last the dawn!

Barry Crombe



THE COLLOQUIUM WITH DR. ALBERT HOFMANN, OCTOBER 15TH, 1977

Alexander Shulgin: I wish to welcome you all to this Colloquium tonight, and I feel very honored to have the opportunity to introduce Dr. Albert Hofmann to you. I really can't imagine that there's anyone here who really needs to have him introduced, so in a sense it's sort of an exercise in futility to introduce you to the audience.

So I think in fairness it might be something of more interest to introduce the audience to you. We are a very manied group here—many of us are artists, either with pen or with brush, and many of us have looked into the area of chemical change of state as a means of perhaps learning some of our own techniques. Many of us are sociologists and have worked very closely with people who have been involved in drug use and drug abuse, and as such they are aware of your work and are very appreciative of it.

Many of us in a sense are philosophers, are lookers to our inner self and work with ourselves as individuals. And I think you will find that a large number of the people present—I'm introducing them to you as chemists, who have taken many of your starting spots and have gone on in other ways and chemical structures and in other chemical mysteries. Many of us are biochemists, and have looked at how these materials have acted in the body. And many of us are pharmacologists and toxicologists, who have looked as to their behavior induction in animals and in man. So there are many ways in which we are very, very different from one another, and yet are tied together in this one single thread.

And yet in many ways we are of a single thought and of a single mind in the way that we are all, indeed, students in this area of change of consciousness, and are very keenly aware of the fact that these are tools that can be used as ways of finding our own methods and our own procedures of our own mind. The second way in which we are all in common is we all bear a very, very deep respect and a deep reverence of your work and your contribution in this field.

And we are introducing ourselves to you, and I am very proud to introduce you to our audience. Dr. Albert Hofmann.

Albert Hofmann: Thank you very much, Dr. Shulgin, for a very nice introduction. And I should like to thank also Professor Bridgeman and Professor McGlothlin for their invitation to give this talk. And finally, I would like to express my best thanks to Bruce Eisner—who was my guide, and who was coordinating this meeting.

You may be disappointed. You may have expected to meet a guru, and you meet just a chemist. If I am going to tell you in what context LSD was synthesized, and how its psychic action was discovered, I realize that I am presenting an old story. But this may be justified by the fact that quite fantastic versions of how LSD was found are current, even in professional circles. You may be interested, therefore, to hear also the true story.

It is frequently stated in the literature that LSD was discovered by chance. The following account will show that LSD was not just the fruit of chance discovery, but the outcome of a more complex process which had its beginning in a definite concept, and was followed up by an appropriate experiment during the course of which a chance observation served to trigger off a planned investigation. This then led to the actual discovery. Such a train of events may often be found to underlie what is said to be a chance discovery.

LSD has been synthesized as part of a chemical and pharmacological investigation on ergot derivatives, which I carried out in the early '30's in the Sandoz Laboratories which were headed at that time by Professor Stoll. Ergot is the product of the fungus *Claviceps purpurea*, which grows on rye and ergagrum in the air. It is rich source of valuable medicinally useful alkaloids.

Most ergot alkaloids are derivatives of lysergic acid, and there are two types of ergot alkaloids—alkaloids in which lysergic acid is combined with a precyclic peptide distart. As is the case in the so-called alkaloids of ergotamine and the ergotoxin group.

And there are other simple types of ergot alkaloids, where lysergic acid is combined with a simple amine—as is the case in the alkaloid ergonamine or ergometrine, where lysergic acid is combined, connected with propylamine.

My first investigations in this field were directed toward the synthesis—the partial synthesis—of this compound. By means of a so-called Kirzlius procedure, it became possible to recombine lysergic acid with these simple amines. By this way, when I combined lysergic acid with propynolamine, I received this compound which proved to be identical with ergometrine.

Ergometrine is oxytoxic, specific oxytoxic principle of ergotamines—a principle which acts on the uterus, and which is used medicinally in obstetrics to stop post-partum hemorrhage. Then I did change the side-chains of this natural ergot alkaloid, using instead of propylamine, butylamine—and then I got another compound, a new compound, named metrogine, which is used today throughout the world in obstetrics for the arrest of post-partum hemorrhage.

Whereas most of these investigations were directed toward the synthesis of oxytoxic agents, I had prepared also other compounds which—on the basis of their structure—could

have been expected to possess other, different properties. First among other compounds, I synthesized the diethylamide of lysergic acid—this compound—with the intention to prepare an analeptic. That means, a compound with circulation stimulant activity.

This compound might have been expected to possess analeptic properties because of its structural relationship with the well-known circulation stimulant Nicatamide—here—and because the ring B-ring, as all well-known chemists can realize is a tetrahydronicotinimic ring. And here Nicatamide is a iocylamide of Nicatinic Acid. Do you see the structural relationship?

A number of pharmacological experiments were carried out by Professor Ernst Rothlin at the Sandoz laboratory with these compounds—with lysergic acid diethylamide—which was given the laboratory code name "LSD-25," because it was the 25th compound of the lysergic acid amide series. These experiments revealed a fairly marked uterotonic action, which was not unexpected in view of the close chemical relationship between LSD and the oxytoxic drugs ergometrine and metrogine.

But the compound did not seem to be of further pharmacological interest and work on LSD then fell into abeyance for a number of years. As I had a strange feeling that it would be worthwhile to carry out more profound studies with this compound, I prepared a fresh quantity of LSD five years later, in 1943.

In the course of this work, an accidental observation led me to carry out a planned self-experiment with this compound. The following is an extract of my original report on this experiment, addressed to the head of the pharmaceutical department—at that time to Professor Stoll.

"Last Friday, April 16th, '43, I was forced to stop my work in the laboratory in the middle the afternoon and to go home, as I was seized by a peculiar restlessness associated with a sensation of mild dizziness. On arriving home, I lay down and sank into a kind of drunkenness which was not unpleasant, and which was characterized by extreme activity of imagination.

"As I lay in a dazed condition with my eyes closed, I experienced daylight as specially bright. There surged up from me an uninterrupted stream of fantastic images of extraordinary plasticity and vividness and accompanied by an intense, kaleidoscopic-like play of colors. This condition gradually passed off after about three hours."

The nature and the cause of this extraordinary disturbance raised my suspicions that some exo-genic intoxication may have been involved, and that lysergic acid diethylamide—with which I had been working that afternoon—could have been responsible. I had separated two isomeric forms which are produced by the synthesis—namely, lysergic acid diethylamide and iso-lysergic diethylamide.

However, I could not imagine how this compound could have accidentally have found its way into my body in a sufficient quantity to produce such symptoms. Moreover, the nature of the symptoms did not tally with those previously associated with ergot poisoning.

In order to get to the root of the matter, I decided to conduct some experiments on

myself, with the substance in question. I started with the lowest dose which might have been expected to have any effect, namely with 0.25 milligram LSD.

The note in my laboratory journal reads as follows:

"April 19th: Preparation of 0.5% aqueous solution of d-lysergic acid diethylamide tartrate.

"4:20 pm: 0.5 ml., corresponding to 0.25 mg. LSD, ingested orally. The solution is tasteless.

"4:50: no trace of any effect.

"5:00: slight dizziness, unrest, difficulty in concentration, visual disturbances, marked desire to laugh..."

Next slide, please. You see here crystals of lysergic acid diethylamide tartrate. Next slide. Here is a photocopy of the original inscription in my laboratory journals which I just have read in English.

At this point the laboratory notes are discontinued. The last words were written with great difficulty. I asked my laboratory assistant to accompany me home as I believed that I should have a repetition of the disturbance of the previous Friday. While we were cycling home, however, it became clear that the symptoms were much stronger than the first time, and I had great difficulty in speaking coherently. My field of vision swayed before me, and objects appeared distorted like images in curved mirrors. I had the impression of being unable to move from the spot, although my assistant told me afterwards that we had cycled at a good pace.

Once I was at home, a physician was called. By the time the doctor arrived, the peak of the crisis had already passed. The following were the most outstanding symptoms:

Virtigo, visual disturbances. The faces of those around me appeared as grotesque colored masks. Marked, moderate unrest alternating with paralysis, intermittent heavy feeling in the head, limbs and the entire body as if they were filled with lead.

Clear recognition of my condition—in which state I realized, in the manner of an independent, neutral observer that I shouted sometimes or babbled incoherent words. Occasionally I felt as if I were out of my body, and wondered if I had already died.

In contrast to my subjective feelings, a doctor found only a somewhat weak pulse—but otherwise quite normal circulation and physical condition. The sixth hour after ingestion of the LSD, my psychic condition had already improved considerably.

Only the visual disturbances were still pronounced. Everything seemed to sway and their proportions were distorted like the reflect ions in the surface of moving water. Moreover, all objects appeared in unpleasant, constantly changing colors—the predominant shades being sickly green and blue. When I closed my eyes, an unending series of colorful, very realistic and fantastic images surged upon me.

A remarkable feature was the manner in which all acoustic perceptions—for example, the noise of a passing car—were transformed into optical effects, every sound evoking a corresponding colored hallucination, constantly changing in shape and color like pictures in a kaleidoscope. At about one o'clock in the

night, I fell asleep, and awoke next morning feeling perfectly well.

This was the first planned experiment with LSD—a rather dramatic one—a horror trip, as one would say today. Because I did not know if I would return from this very strange world!

Subsequent experiments on volunteer colleagues of the Sandoz laboratories confirmed the extraordinary activity of LSD on the human psyche. These showed that the effective oral dose of LSD in human beings is 0.03—0.05 mg. In spite of my caution, I had chosen for my first experiment five times the average effective dose.

LSD is, by far, the most active, and most specific hallucinogen. It is about 5,000—10,000 times more active than mescaline, which produces qualitatively nearly the same symptoms. The extremely high potency of LSD is not just a curiosity. It is in many respects of the greatest scientific interest. For example, it lends support to the hypothesis that certain mental illnesses, which were supposed until then to be of purely psychic nature, had a biochemical cause. Because it now seemed feasible that undetectable traces of a psychotomimetic substance produced by the body itself might be the cause of psychic disturbances.

LSD was quite unique with regard to its extremely high hallucinogenic potency, but it was not new with regard to the quality of its hallucinogenic property. As already mentioned, it produces qualitatively the same psychic effects as mescaline, a hallucinogen known long before LSD—mescaline being the active principle of one of the ancient magic plants of Mexico.

Hallucinogenic drugs were of great importance in all the Indian cultures of central America. The Spanish chronicles, and naturalists who came to the country soon after the conquest of Mexico by Cortez, mentioned in their writings a great number of plants with psychic effects. These plants were unknown in the Old World—and their use by the Indians, both in their medical practices and their religious ceremonies.

The cultic use and divine worship pegged to many of these drugs met with the disapproval of the Christian missionaries, who attempted by any means possible to liberate the Indians from this devilry. They were, however, fortunately only partially successful in this respect. The native population secretly continued to use the drugs, which they considered to be holy, after they had been converted to Christianity.

Three main magic plants were used by the Aztecs and neighboring tribes in their religious ceremonies, and in their medical practices. These drugs are still used today for the same purpose by the witch doctors in remote districts of Mexico. These three drugs are peyote, a cactus species; teonanacotl, certain foliate mushrooms; and ololiuqui, seeds of certain bindweeds.

The first magic plant to be studied scientifically—already at the turn of the century—was peyote, also named peyote. The history of peyote, its ancient cultic use by the Indians of South America and its present use as well as the psychic effects on human beings, were first described by Louis Lewin in his classical monograph entitled "Fantastica." Lewin es-

tablished the basis for psychotomimetic research by his standard publication. In this the psychotomimetics, or hallucinogens—named by him "fantastica"—were characterized and grouped for the first time in an independent group as psychopharmaceutical drugs.

The peyote cactus was named by the botanist Hennings *Anhalonium lewinii* in honor of Lewin. Arthur Heffter isolated the alkaloid mescaline in 1896 from the cactus, and in 1919 Ernest Spath, the chemist, in Vienna succeeded in elucidating the chemical structure of mescaline and in synthesizing this alkaloid. Mescaline made is possible, for the first time, to investigate the phenomenon of hallucinogenic effects from a scientific, pharmacological and clinical aspect, using a pure chemical compound.

The result of this first period of psychopharmacological investigation in the 1920s were published in the classical monograph *Der Meskalinrausch* by Karl Beringer. However, in the years to follow, the interest in hallucinogenic research faded. Not until the '40's, with the discovery of LSD, did this line of research receive a new impetus—leading to an upsurge of interest which lasted until the present time.

Our occupation with LSD was the reason why the second magic drug of Mexico—teonanacotl, which means sacred mushroom—was submitted to our laboratory for chemical analysis. Next slide. The use and worship of teonanacotl by the Indians of Central America must be very ancient. In Guatemala, mushroom stones have been found as the oldest specimens, which may be over 3,000 years old. Next one: that is the oldest one. Although the mushroom cult is very old, our knowledge of it is very recent. For some centuries, the reports in the old chronicles were given surprising little attention, probably because they were regarded as extravagances of a superstitious age.

It was not until the period from 1936 to 1938 that American investigators—Weitlander, Reko, Schultes—ascertained that mushrooms were still being eaten for magical purposes by the natives in certain remote districts of southern Mexico. Systematic studies of the mushroom cult in its present form were later made by the amateur investigators Gordon Wasson and his wife.

In the summer of 1955, Wasson was able—for the first time—to take active part in a secret nocturnal ceremony in Huautla de Jimenez, in the province of Oaxaca, and was probably the first white man to ingest the holy mushrooms. This happened in the hut of a curandera, named Maria Savina, during a nocturnal mushroom ceremony.

Here, in these remote places, people who have health problems or personal problems or family problems used to consult a shaman, a curandera—a wise woman, a wise man—and then the shaman ate the mushroom, and the mushroom tells through the mouth, the mushroom speaks through the mouth of the curandero if the patient will recover, if he will die, or he tells to the client who has stolen his horse, or where his wife is who has run away.

Next slide. You shall see here some pictures of such a nocturnal ceremony. That is Maria Savina, preparing the mushroom for ingestion. Next slide. Here she is already entranced, chanting. Next slide. And here she is together

with a client.

On our first expedition in 1956, Wasson was accompanied by the mycologist Roger Heim, director of the Natural Museum in Paris. Heim succeeded in identifying the sacred mushrooms and classifying them botanically.

They belong to the family of *Strophariaceae*, principally to the genus *Psilocybe*—though one species belongs to the genus *Sropharia* and another to the genus *Conocybe*. Artificial cultures in the laboratory provided a good yield—especially one of the sacred mushrooms named *Psilocybe mexicana* Heim. Next slide please. Here is such an artificial collection. They are Mexican—look at their hats!

After an unsuccessful attempt in Paris to isolate the active principles, Professor Heim sent the mushrooms to me—to the Sandoz research laboratories in Basel—believing that our experience with LSD would enable us to solve this problem.

After most of the very rare and valuable mushroom material had been used for animal testing without definite results, there was some doubt as to whether the mushrooms cultivated and dried in Paris were still active at all. In order to settle this fundamental point, I decided to test them on myself.

I ate 32 dried specimens of *Psilocybe mexicana*—weighing 2.4 grams, corresponding to a medium dose by Indian standards. I knew this. I should like to describe this experience by reading the English translation of my original published report of that experiment:

“Thirty minutes after taking the mushrooms the exterior world began to undergo a strange transformation. Everything assumed a Mexican character. As I was perfectly well aware that my knowledge of the Mexican origin of the mushroom would lead me to imagine only Mexican scenery, I tried deliberately to look at my environment as I knew it normally. But all voluntary efforts to look at things in their customary forms and colors proved ineffective. Whether my eyes were closed or open I saw only Mexican motifs and colors, and when the doctor supervising the experiment bent over me to check my blood pressure, he was transformed into an Aztec priest and I would not have been astonished if he had drawn an obsidian knife. In spite of the seriousness of the situation it amused me to see how the Germanic face of my colleague had acquired a purely Indian expression. At the peak of the intoxication, about 1 1/2 hours after ingestion of the mushrooms, the rush of interior pictures, mostly abstract motifs rapidly changing in shape and color, reached such an alarming degree that I feared that I would be torn into that whirlpool of form and color and would dissolve. After about six hours the dream came to an end. Subjectively, I had no idea how long this condition had lasted. I felt my return to everyday reality to be a happy return from a strange, fantastic but quite real world into an old and familiar home.”

So for my original report. This personal studies showed that the negative results of the tests in animals were not due to the mushroom material, but to the animals used. And that human beings provide a more sensitive index

of substances with psychic effects than do animals.

With the aid of this reliable test in human beings—which meant that myself and my colleagues ingested the fractions to be tested—with these tests it became then possible to extract the active principles from the mushrooms, and to qualify and crystallize them finally. The major active principle I named *psilocybin*, a minor component *psilocin*. Next slide.

The chemical elucidation of their structure showed that these were another type of indole derivatives. *Psilocybin* is the first compound with a phosphoric acid radical. Furthermore, in *psilocin* and *psilocybin* the hydroxyl group sits at the position 4—1, 2, 3, 4—whereas with all other naturally occurring ergot alkaloids, with the exception of the matragene alkaloids, the hydroxyl groups sit at the position 5, 6, or 7.

The final proof of the correctness of these structures was then provided by the total synthesis of *psilocin* and *psilocybin*, which is demonstrated in the following scheme. Next slide, please.

Just for the chemists in this audience, a very short comment. We started with 2-nitro-6-hydroxy-toluene, and used a procedure to produce the 4-basal-oxy-indole, which was then treated with oxyliquiride and then with prematyl-amide, to give this compound: the 4-benzyl-oxy-dimethylamide of beozyl indole. The carbons were reduced by leading in aluminum hydride, and the benzyl group was removed by aldehydium hydrogen, to give 4-hydroxy-dimethyl-triptamine. And this compound proved to be identical with *psilocin*. This compound was then phosphorylated by means of 3-phosphoral-phosphorene-foride, the benzyl group was removed again with aldehydium hydrogen, to provide 4-phosphoxy-dimethyltryptamine—which proved to be identical with *psilocybin*.

These substances, whose magic effects made the Indians believe for thousands of years a god was residing in the mushroom, could be prepared artificially by this way. My colleagues who participated in these investigations—in the elucidation of the structure and synthesis—were—next slide—Professor Heinrich and Dr. Bracht.

Next slide. A beautiful monograph on these investigations on the Mexican mushrooms was published by the National , by Heim and Wasson—*Les Champignons Hallucinogens du Mexique*.

An average human oral dose of *psilocybin* or *psilocin* is 6—10 mg. This means that *psilocybin* and *psilocin* are about 100 times more active than mescaline, and about 200 times less active than LSD. But there is no significant difference between these compounds in quality of hallucinogenic activity. The development of cross-tolerance between LSD and *psilocybin* lends support to the view that these two drugs cause psychic disturbances by acting on some common mechanism—or mechanism acting through a common find pathway.

When I was in Mexico on another expedition with my friend Gordon Wasson in 1962, in search of another hallucinogenic plant, we also

visited the famous *curandera* Maria Sabina, which you have seen on these slides, in Huautla de Jimenez. We were invited to attend a nocturnal mushroom ceremony in her hut. But as it was late in the year, and no more mushrooms were available, I provided her with pills containing synthetic *psilocybin*—explaining to her that the spirit of the mushrooms were in these pills.

She took a rather strong dose—corresponding to the number of mushrooms that she usually ingested. It was a gala performance, assisted by a number of people from the Maria Sabina clan. At dawn, when we left the hut, I remarked that the interpreter told us that Maria Sabina had said that there was no difference between the pills and the mushrooms. And this was the final proof that our synthetic *psilocybin* was identical, in every respect, with the natural product.

That was the story of the second magic Mexican drug, of *teonanacotl*. But there was still the riddle of *ololiuqui*, the third magic Mexican drug.

Ololiuqui is the Aztec name for the seeds of certain *Convolvulacous* plants, which since pre-Hispanic times have been used by the Aztecs and related tribes in the same way as the sacred mushrooms and the cactus *peyotyl*. *Ololiuqui* is still used, in our day, by certain tribes—such as the *Sapotecs*, the *Chinantecs*, *Mazatecs* and *Mixtecs*—who live in remote mountains of central Mexico in comparative isolation, little influenced by Christianity. An excellent review of the historical, ethnological and botanical aspects of the *ololiuqui* problem was given in 1941 by Professor Schultes of the Botanical Museum at Harvard in his monograph—a contribution to our knowledge of *Rivea corymbosa*, the *ololiuqui* of the Aztecs.

In 1955, the Canadian psychiatrist Humphry Osmond conducted a series of experiments on himself. After taking 60—100 *Rivea* seeds, he passed into a state of apathy and restlessness—accompanied by increased visual sensitivity. After about four hours, there followed a period in which he had a relaxed feeling of well-being that lasted for a rather long time.

In contrast to these results, Kinos Wright of England, published in 1958 experiments performed on eight naval volunteers, who had taken doses of up to 125 seeds, without any ascertainable effect.

After the chemical investigation of the sacred Mexican mushrooms had been successfully brought to a close, I decided to tackle also the problem of the third Mexican magic drug—of *ololiuqui*. Through the help of my friend Gordon Wasson, I was able to obtain the authentic *ololiuqui* by a Zapotec Indian in Oaxaca in Southern Mexico. One sample consisted of ground seeds—next slide, please—which on botanical classification—showed to be *Rivea corymbosa*. And a second sample of black seeds—were identical with those of *Ipomoea violacea*.

The following picture is taken from Schultes' monograph. It represents the first description and illustration of *ololiuqui*, published by Francisco Hernandez, a Spanish physician who between 1570 and 1575 carried out ex-

tensive research on the flora and fauna of Mexico for Phillip II. In his famous *Rerum medicarum Novae Hispaniae thesaurus*, which appeared in 1651, in Rome, Hernandez described *ololiuqui* under the heading “feu planta orbicularium foliorum” in the following way: An extract of the translation of this Latin work reads as follows:

“*Ololiuqui*, which some call *coaxihuitl* or “snake-plant,” is a twining herb with thin, green reeds, stems and long white flowers. The seed is round and very like coriander. Formerly, when the priest wished to commune with their gods and to receive a message from them, they ate this plant to induce a delirium. Astonishing visions and Satanic hallucinations appeared to them.”

The only report of chemical studies on the seeds of *Rivea corymbosa* mentioned in Schultes review of *ololiuqui* is that of the pharmacologist Santesson in Stockholm in 1937. He was, however, unsuccessful in isolating definite crystalline compounds.

Next slide. Here you see the flowers of *Rivea corymbosa*, which is a tropical plant. Next slide. And here, flowers of *Ipomoea violacea*, a picture which I took in Mexico. *Ipomoea violacea* is of Mexican origin—but is found in our gardens as an ornamental plant, as an ornamental flower.

The chemical analysis of the *ololiuqui* seeds gave a quite surprising result. The psychotomimetic principles which were isolated proved to be lysergic acid derivatives—lysergic acid amides and other ergot alkaloids. Thus in this strange Mexican drug we met old friends—since lysergic acid derivatives and ergot alkaloids had been favorite subjects of research in our laboratory since the time when I first synthesized LSD.

Next slide. The main constituent of *ololiuqui* is lysergic acid amide—this compound—accompanied by lysergic acid hydroxy-ethylamide, beside this chanoclavine, elymoclavine and so on.

The only difference between the main component of *ololiuqui*—or between lysergic acid amide—and lysergic acid diethylamide is the substitution of two hydrogens by two ethyl groups. That means that LSD has to be enclosed in the group of the naturally-occurring magic plants of Mexico.

And I come to the last section of my talk, where I should like to discuss, very briefly, some common features in the chemical structures of the hallucinogens which I have discussed. Next slide. The comparison of these structures reveals an interesting relationship with the structures of important brain factors—with neurohormonal substances, which are sometimes called neuro-transmitters.

This is certainly no mere coincidence, but of major importance. Mescaline, being a phenyl-ethylamine derivative, is closely related with the neurohormones norepinephrine and epinephine. And LSD, and the constituents of *ololiuqui*—as well as *psilocybin* and *psilocin*, being tryptamine derivatives, and furthermore tryptamine derivatives substituted in the 4th position—are closely related to the brain factor of serotonin.

Because of this structural relationship between the hallucinogens, on the one side, and nore-

pinephrine and serotonin, on the other side, it is probably that the psychotomimetic activity is due to an interaction between these substances in the metabolism of the central nervous system. Investigation of the relationships between intergenus neurohormonal factors and hallucinogens is still an evolving facet of psychopharmacological research.

As I am a chemist, I have mainly discussed the chemical—some chemical, biochemical and certain historical aspects of the discovery of LSD and of subsequent investigation of naturally-occurring hallucinogens. I did not speak about the role of these compounds in psychopharmacology and about their importance as valuable tools in experimental psychiatry and valuable drug aids in psychoanalysis and psychotherapy. Another aspect of the hallucinogens, and especially LSD, with enormous social impact is, of course, the para-medical use and also mis-use of these substances. But this very complex problem would provide material for a special lecture, or indeed, for a series of such lectures.

The aim of my talk was to describe an unusual cycle of chemical research full of coincidences—a kind of “magic circle,” which started with the synthesis of various lysergic acid amides and the discovery of the extraordinary psychotomimetic potency of lysergic acid diethylamide, of LSD, which stimulated the investigation of the sacred Mexican mushrooms and the isolation of *psilocybin*, and ended with *ololiuqui*, where lysergic acid amides were again encountered, closing the magic circle.

And so I am ending my lecture. Thank you for your attention.

Question: Mr. Hofmann, when is the last time you used LSD?

Albert Hofmann: Ah! The last time I took it, it was in '70. 100 micrograms.

Question: Dr. Hofmann, I doubt very many people here believe that LSD has any bad properties, but we've all heard the same rumors. What is your opinion of those rumors?

Albert Hofmann: I think it is clear that LSD has a very broad difference between the active dose and the toxic dose. Nobody has died, until now, from LSD. There is no one careful case. But many things happened, of course, after taking LSD—jumping out of the window and other accidents. But the toxic dose, the lethal dose, of LSD is not known. I mean, from the physiological point of view, LSD is not dangerous. But it may be very dangerous—and it may have very bad effect—that is what I understand is the question—it could have very bad effects, if you are not prepared for this experience.

That was the case with these persons—which I have read in the newspapers—when the CIA or the Army gave it to people who did not know that they did get LSD.

Question: Yes, Dr. Hofmann—I would like to know if you could explain to us briefly the metabolism of these compounds, after they are absorbed into the body. Now we know they are tertiary ammonium compounds—therefore, they are absorbed into the blood system, into the brain, and they are therefore active. Can you briefly tell us how they are metabolized after that?

Albert Hofmann: It depends on the species of the animals. In guinea pigs, they are excreted and oxidized in the 2-position, the indole ring is oxidized. And in the rabbit, there is the hydroxylation at the position 5. That has been observed in animal experiences. We don't know how these compounds are metabolized in human beings. Most of it is excreted in water-soluble form. That means that something must have happened—like in the rabbits, where these compounds are formed in water-soluble components.

Question: Dr. Hofmann, personally I would like to totally acknowledge you for the work that you've done, and second of all, I would like to— I would like to know if, in your course of working with LSD as far as taking it goes, and also with your creating of it, if you find that there has been more love in your life?

Albert Hofmann: More love? Ah, a very personal question! I had a lot of love in my life, and I don't know if it would have been—would be—without LSD. I cannot answer your question.

Question: Dr. Hofmann, in 1963 the United States virtually prohibited even among licensed experimenters in psychiatry and psychology the use of LSD. I wonder if you know of any areas in the world where extensive experimentation is going on, in psychoanalysis and psychotherapy, with LSD?

Albert Hofmann: Now? Not now after the LSD hysteria in the middle of '60s. Much research has been interrupted. But now our situation has quieted down, in many places research is going on. I mean, in Switzerland we have some places, in England, in Germany, the United States maybe, because we—I don't exactly know where in the United States who is working. Because Sandoz provides the Food and Drug Administration, and the Food and Drug Administration distributes LSD to people who are licensed to work with LSD.

Question: Dr. Hofmann, I was wondering if you had any opinions on theories that I've heard about LSD as either a learning-facilitator—by, you know, triggering the release of neuro-transmitters in the blood, it speeds up neuro-chemical processes—if that assists learning process? And also, some people have made speculation that it may be a drug which triggers psychic activity, which increases peoples' ESP sensitivity. And I was wondering what your opinion was on the link between ESP and LSD and learning?

Albert Hofmann: You know, we don't—one doesn't know how the LSD does work. In any case, the sensitiveness of our senses—sensitiveness to light, and to sound, and sensitiveness of our skin—everything is increased. That is one point. And on the other side, it seems that our psychic receptors are changed. It is something like if you hear a radio and you change the wavelengths, and then you get another sender. And that means that you get in another level of reality. Because if you consider reality as the sender, and the ego as the receiver, you can explain the activity of LSD—that you change just survival wavelengths. And so you get another program. Of reality.

Bruce: Dr. Hofmann would like to conclude his lecture now.

Astronauts Of Inner Space

the P.E.C. Lecture, Seminar and Discussion Series 1978.

by Spencer Rumsey

"We can make a better drug than LSD." That was one of the mind-boggling announcements made by UCLA psychopharmacologist Ron Siegel recently at the first meeting of the Psychedelic Education Center (PEC). Siegel, who is one of the few Americans licensed to conduct research with the hallucinogen LSD, was the keynote speaker before a Santa Cruz audience which ran the gamut from practicing neurologists to practicing acid heads.

"I assure you," Siegel declared, "it's being done right now with government money for the sole purpose of developing recreational intoxicants with no therapeutic pretensions. But," he added, "I haven't seen any drug that looks that good that I would want to see it legalized."

Siegel was the first speaker to address the newly-organized PEC, an offshoot of last October's Albert Hoffman Colloquium on LSD held at UC Santa Cruz (see Barb, Oct. 21, 1977). PEC's Betty Turner offered a capsule description of the group's goals: "We want to spread the truth and information about psychedelics." PEC feels the time is right for awakening public interest in the therapeutic benefits of psychedelic drugs and believes this can best be served by encouraging further medical research and dissemination of the latest findings.

Dr. Siegel, author of the book *Hallucinations*, was a perfect choice to discuss the state of current research on psychedelic drugs and human consciousness. Since 1970 he has been conducting LSD experiments at UCLA Medical School with funding from the National Institute of Mental Health and the U.S. Public Health Service.

"The research going on now with psychedelics is exactly where we hoped it would be in the Sixties," Siegel said. He noted, however, that while "there are now 80 experiments on pot in the country and a half dozen LSD programs with animals," there are only two studies involving humans.

Siegel is now trying to remedy that situation. Using carefully selected volunteers, he has been trying to train 36 "astronauts for the inner voyage." The psychedelic pathfinders are given daily doses of hallucinogens and are assisted in developing a code to objectify "the religious, the transcendental components of the experience." Siegel has trained his "astronauts" to the point where they can



Dr. Ronald K. Siegel—guest Lecturer for

describe a particular color by its wavelength.

"We told our subjects to go Out There and try to stay in touch with us as long as they could," Siegel said. "Their heads were more important than the experiment."

Almost 20 different drugs were used in the program. Siegel explained that, of all these psychedelics, government regulations controlling LSD are still the most stringent. Ironically, he observed, there are other "legal" drugs, such as Ketamine, which are more powerful than LSD. According to Siegel, Ketamine is commonly used as an anesthetic in hospitals since it makes patients clinically catatonic. Ketamine produces religious conversion states in its users more readily than LSD, Siegel added, yet it is not regulated as strongly as LSD: there are no rules requiring a six-month check-up as with LSD users.

Siegel went on to several other drugs he has investigated. He shared these findings with the PEC audience:

"Siegel found most bad trips resulted from THC. Subjects were surprised by the drug's potency, which proved far stronger than the smaller THC content of marijuana.

"Angel Dust (PCP -- a horse tranquilizer with psychedelic properties) is a problematic drug," said Siegel. "It's received a lot of bad publicity, but undeservedly so." (Siegel's study on this drug will appear as a government report on "PCP and Health" to be published sometime this month.)

"Studies with animals and mescaline have yielded interesting results, Siegel said. "A pigeon, trained in a Skinner Box, can communicate that it sees colors. Pigeons see red a lot when they get stoned!"



P.E.C. members and visitors.

Researchers still have a long way to go in their knowledge of psychedelics, however, partly because of the strict government regulation of mind-altering drugs. LSD is still classified by the Bureau of Narcotics as a "Schedule One" drug with "little medical use and high abuse potential." One hope expressed by members of the PEC is for a reclassification of LSD to make it more available for medical research and general study.

"The regulations may be overly protective," Siegel said, but he stressed the importance of protecting "the rights of the subjects. I advocate decriminalization but I don't think everyone can use it. None of these drugs is the ideal Moxa (Aldous Huxley's utopian palliative)."

The "overly protective" laws reflect a lingering fear of LSD as a "dangerous drug." "LSD is on trial in L.A.," Siegel said, referring to the Leslie Van Houton case. He has been consulting with the prosecution which hopes to show that LSD itself was not responsible for the La Bianca murders. Van Houton's defense has tried to blame the slayings on the effects of the hallucinogen. Siegel would like to see all judges educated on the realities of psychedelic drugs.

Siegel thinks that the present research climate is becoming more favorable. "If you persevere, you can get permission" (to study with government supplied Sandoz LSD), he said, "but it's hard to get money. You have to be affiliated with a Ph.D. or MD who will take responsibility."

On January 28, our founding conference was held at Soquel, California with featured guest U.C.L.A. researcher, Dr. Ronald K. Siegel. (From the "Berkeley Barb.")

The Psychedelic Education Center and Network PRESENT

THE GREAT SANTA CRUZ

Santa Cruz County Pot May Be Contaminated

3 Treated for Poisoned Marijuana

All Weed A Poison Threat

APRIL 8, 1978

DUCK ISLAND SAN LORENZO PARK

DOWN TOWN SANTA CRUZ

12:00 NOON

SAVE OUR POT!

STOP PARAQUAT!

STOP the SPRAY DAY PARTY

Speakers:

DR. TODD MIKURIYA
MARIJUANA MEDICAL RESEARCHER AND LECTURER AT PECC

BRUCE EISNER
WRITER - HYPNOSIS AND HEAD MAGAZINE

MICHAEL JOHNSON
RESPONSIBLE - PEC ACTIVIST

PARAQUAT PASSION PLAY

Food:

Renie and Petrucci - BEINO BOY

MUSIC: DANCING

Bring your Portable FM for in Park Sound reception

POT PASSION PLAYERS

By GREG BEEBE

Proponents of drug reform laws gathered at San Lorenzo Park Saturday afternoon to denounce spraying of the controversial herbicide paraquat on Mexican marijuana fields.

Representatives from many facets of the Santa Cruz community attended the event, which was sponsored by the Psychedelic Education Center. The National Organization of Marijuana Reform Laws (NORML) was also there to discuss the details of its recent suit in federal court to halt United States involvement in the spraying of defoliants on the fertile pot-growing valleys of Mexico.

Saturday's featured speaker was Dr. Todd Mikuriya, a nationally-known expert on marijuana and an advocate of drug law reforms.

Mikuriya has been a drug law reformer since the late 1950's, serving as the first director of marijuana research for the National Institute of Mental Health. A psychiatrist, Mikuriya is a graduate of Reed College and Temple Medical School and has worked for Oregon and Mendocino state hospitals.

He is the author of the "Marijuana Medical Papers," which the American Journal of Psychiatry hailed as "the best compendium available of the major studies and observations that have been made on marijuana and its derivatives during the past 135 years."

Prior to the rally, Mikuriya, a resident of Berkeley, said it is the "overwhelming irony" of the paraquat issue which distresses him.

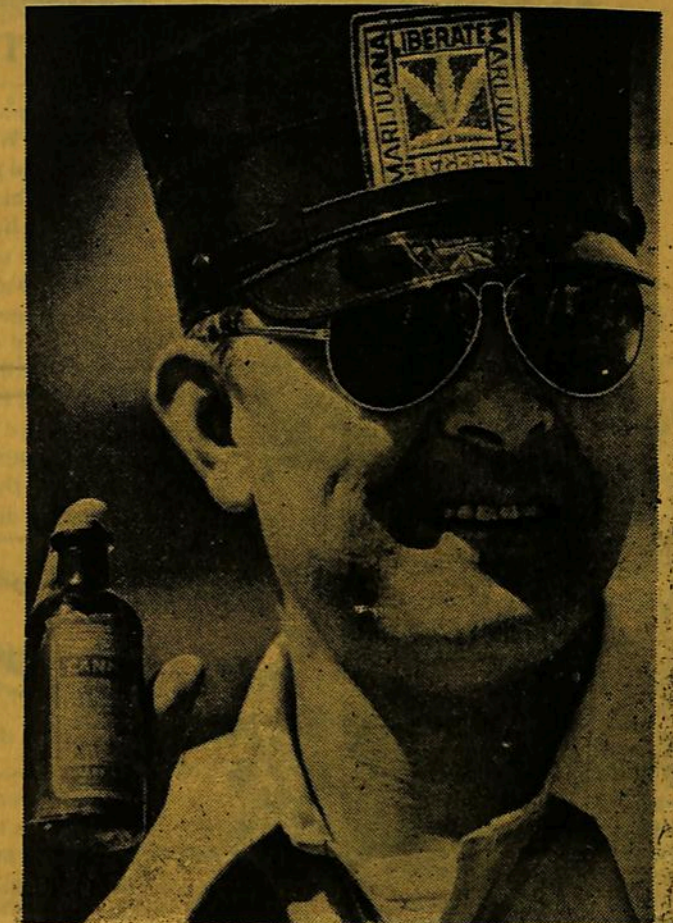
The United States has provided some \$40 million in equipment and funds as part of a mutual U.S.-Mexico defoliation program. Mexican pot growers, though, are quickly harvesting sprayed marijuana before the herbicide has chance to take effect, bagging up deathly packages of smoking material for speedy shipment to U.S. markets.

Cases of lung fibrosis have begun to turn up in California, with symptoms ranging from nausea to pulmonary hemorrhaging and respiratory distress.

The San Diego Evening Tribune has reported that in 1975, the U.S. Agriculture Department feared that paraquat was too poisonous to spray on Mexican marijuana fields. The newspaper said that in late 1975, Paul Vander Myde, deputy assistant secretary of the agriculture department, wrote Shelton Vance, a senior advisor to then Secretary of State Henry Kissinger that his agency "strongly opposed to the

use of this specific chemical in any joint or cooperative program that might be developing between the United States and Mexico." The warning was ignored.

Mexican authorities have said they will continue spraying marijuana fields with para-



Todd Mikuriya holds a bottle of Tincture of Cannabis

quat, but will add something to the herbicide to give sprayed pot a distinct taste and color.

Nevertheless, Mikuriya was not impressed. "The drug policies set by Nixon and LBJ are mindlessly being carried out by the Carter administration," Mikuriya said. It is this "incompetence in policy-making" which has led to the paraquat problem, Mikuriya said.

Mikuriya said the "state of unconsciousness" in which U.S. drug enforcement officials (the Drug Enforcement Administration, the National Institute on Drug Abuse and the Food and Drug Administration) have operated has led to a "contradictory policy" — the spraying of paraquat is not only failing to stop the flow of marijuana into the country, he said, but it is also literally poisoning some American pot smokers.

Mikuriya cited the U.S. government's mandatory tobacco warning labels and its simultaneous subsidization of the nation's tobacco farmers as another example of "contradictory policy."

He said marijuana has been found to be very effective in

combating the eye disorder glaucoma. New Mexico is currently the only state to recognize therapeutic benefits of marijuana, as an early-1977 bill made pot legally available to certified cancer and glaucoma victims.

Mikuriya at one time was researching marijuana for its use as a legitimate medical drug but said he quit after he was frustrated by very strict federal regulations.

The hold-up in using pot as a medicine and the paraquat spraying program are "disillusioning" to Mikuriya. "I just hope someday that the officials responsible in this crime (the spraying of paraquat) are indicted on conspiracy charges," Mikuriya said.

Yet, Mikuriya believes the current paraquat controversy will act "as a rallying point and motivational stimulus" for more public participation in marijuana reform.

Jamaican REGGAE

All Ages Welcome

ROOTS OF CREATION



VETS HALL Santa Cruz REGGAE BENEFIT FOR PLANTING PARTY NORML

SANTA CLARA VALLEY Spring Planting Festival
 WITH: **MOBY GRAPP SKYCREEK**
 SUNDAY APRIL 9TH 11:00 AM - 5 PM
 SPEAKERS: TERRY PERON, WAYNE GRAY, GOD SADE, DOCTOR PARAKAT, THE SEEDS
 ST. JAMES PARK DOWNTOWN SAN JOSE BETWEEN 1B & 2B STREETS

Marijuana Makes Good Medicine ... And Has for a Century

"We found that THC, taken orally, causes a dilation of the bronchial tract and thus provides moderate relief for asthmatics."

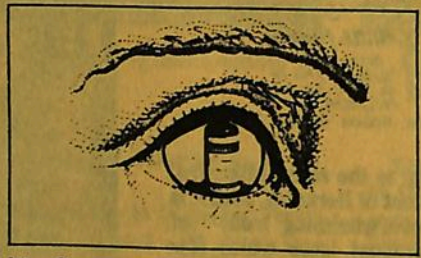


PRODUCT OF THE UNITED STATES
 I ADMIT ONE THING ABOUT THAT GRINGO GOVERNMENT, MIGUEL
 THEY ARE HONEST! THEY MEAN WHAT THEY SAY!
 HOW SO, PEDRO?
 LIKE WHEN WASHINGTON CLAIMS MARIJUANA IS DANGEROUS TO YOUR HEALTH? THEY DON'T JUST SIT AND DO NOTHING...
 THEY GO RIGHT OUT AND ARRANGE TO HAVE IT POISONED!

THE POLITICS OF PRESCRIPTION

Robert Randall, a young speech professor in Washington, D.C., learned that he had glaucoma in 1972. He was soon unable to drive or work, and none of the medications normally prescribed seemed to help. One of his eyes filled up with fluids to the point that it bulged, and white rings formed in his field of vision. One day when the symptoms were particularly bad, he smoked two joints of marijuana (he had smoked it for pleasure since 1968) and discovered within 45 minutes, he says, that the rings were gone.

Randall didn't inform his doctor of



his discovery, but proceeded to provide for his own medication. When he could not buy marijuana, he grew it himself. But he got into trouble in 1975 when he went on vacation, leaving behind four marijuana plants in his home. "When I came back," he recalls, "the plants had been replaced by a search warrant. I quickly informed my lawyers that I was using marijuana for medicinal purposes."

Even at that point, says Randall, "my inclination was to take the fine, rather than battle the bureaucracy." But, within a week of arrest, he discovered that researchers had, as far back as 1970, also discovered pot's benefits in treating glaucoma. Still under indictment, Randall was admitted as a research subject to Sidney Cohen's Human Pharmacology of Cannabis project. There, he was tested by researchers under the direction of Robert Hepler, who concluded that conventional drugs had failed in Randall's case. Marijuana was not only therapeutic for Randall, but without it, he would eventually go blind.

Armed with the test results, Randall petitioned the government for access to his medication. But marijuana is classed by the Federal Drug Administration as a "Schedule I" drug—one with no medical useful-

ness and a high potential for abuse. It can't be legally prescribed, and doctors who want it for research have trouble obtaining the special certification required. Thus, Randall could not find a doctor willing to take on his case. Among those who turned him down were the National Eye Institute and several Washington-area universities.

Finally, in 1976, John C. Merritt, a Howard University ophthalmologist, asked for a license to do research with marijuana. Unwilling to acknowledge Randall as a patient, the government responded to his petition by granting Merritt's license request and channeling Randall—as a nominal research subject—into his program. "This was a politically acceptable way of supplying me with marijuana," says Randall. He soon began receiving legal shipments of pot from the government. Two weeks later, the D.C. Superior Court finally cleared him of his possession charge. In a decision he likes to quote, the court declared, "It is doubtful that slight, speculative, and undemonstrable harm could be considered more important than defendant's right to eyesight."

All was peaceful until Merritt decided to move his research to North Carolina. "The government has tied my access to the drug to my physician, not to me," Randall complains. "They expect me to find another doctor willing to provide it under Schedule I, which I couldn't do before—and I don't want to be a research subject." Randall sees himself as the victim of a jurisdictional dispute in the government complicated by marijuana's Schedule I status. "For example," he says, "the National Institute on Drug Abuse can sponsor research—until the drug starts looking therapeutic. Then they can't; they're an abuse-oriented agency."

For Randall, it's a simple medical problem. He smokes eight to 10 joints a day—a dosage that has remained stable since the UCLA experiments—but though it relieves his pain, smoking is no longer a pleasure for him. "I've noticed no development of tolerance as far as the ocular effect goes," he says, "but I don't get high anymore."
 —Debra Rae Cohen



Elizabeth Cipe and George Hurd invite you to join our journeys into new geographies. Below are the highlights, but YOU are the changes! Share music, a poem, a message... unscheduled through the early morning. Leave word at 423-4234/423-4236 or come visit. Regular features: APRIL 23RD - the coming week reflected in the stars - 9:30 - George. THE TAPES RE-EXAMINED OF THE POLICE - Sacramento - & the spirit hiker - Elizabeth. And at 10:00 each Sunday:
 April 23: **Real People of J. Edgar Hoover, Esq.** - Bruce Elster leads a discussion with a group of real-life hippies, as said otherwise, based on his article in Seed magazine.
 April 30: **How to Grow the Sacred Mushroom** - and what to do with it after you grow it. You'll want to tape the tape on how to grow 'em and a talk on the history and possible future of psilocybin.
 THIS PLEASE SAYS: TAKE ME HOME AND POST ME BY YOUR RADIO... AND GOOD MORNING...
KZSC 88.1 fm - Sundays - 6 till noon

3 Day Session with Salvador Roquet, M.D.
 July 7, 8, & 9

Fear Fantasy Sensitivity Reason
DEATH LOVE

Most of our lives are based on fantasies and fears. Fantasies of money, sex, power, etc., fears of pain, illness, death. To go beyond requires developing and combining Sensitivity with Reason. It is hard work and it is a real work for at least through both knowledge and Love.
 The Mexican Indian knowledge of hallucinogenic states was combined with western depth psychotherapy to form a powerful technique that was originally developed and practiced from 1920 to 1934 at Dr. Roquet's Institute in Mexico City with over 2000 people. It has since continued to develop as he with experts throughout North America and Europe.
 From the work the essence of the function of the hallucinogenic state has been distilled. A measure of techniques has been developed to provide the environment for these powerful depth experiences without the use of psychedelic substances.
 These depth experiences lead to understanding and meaning in personal and interpersonal levels.
 Madness Death The Void Mystical Experiences Birth
 These are among the central aspects of existence. To live them consciously is to understand them for the first time. To vent without the person to know without the object.
 Only at that point is there the possibility of Love.
 For reservations mail \$20.00 deposit to:
 Marty Rose 174 Lavender Place Langport 94020
 Tel: (415) 524-4828
 \$175.00 for 3 days (room and board included)
 (Some restrictions apply)
 8 hour follow-up session (program - details to registrants)

MARIJUANA MEDICAL PAPERS

"The 1960-1970 '60s' are well-documented and well-reported... reports of this book are only shared with descriptive... should be read, but they are truly...
 Journal of the American Medical Association
 "This is probably the best comprehensive available of the... and observations that have been made on marijuana... and its derivatives during the past 125 years."
 Dana I. Farnsworth, M.D., American Journal of Psychiatry
 "The reason some of shared clinical observation... should feature prominently in the history of our...
 Edward M. Beecher, Medical World News
 "The papers... are absolutely fascinating and so many of... them that they should obviously be available to... level of the profession. I can only appreciate that... very much... I am, however, bound to charge my... it should be a valuable and probably...
 possible book."
 Humphrey Charney, Director, New Jersey... Bureau of Research, Neurology & Psychiatry
 Dear Friends...
 For 100 years, medical research showed cannabis to be a... useful drug.
 For the next 40, its useful medical properties were... covered up... by a hysteria that swept the nation.
 That hysteria is only now being corrected through... education and action.
 It was in this purpose that I researched, edited, and... published Marijuana Medical Papers, with the help of... High Lady Memorial Library and the N.M.M.L. I'm... you with the continued support of the N.M.M.L.
 N.M.M.L. is important to each and every one of us... only source but proper to assure a sane drug policy... State.
 For every step of Marijuana Medical Papers... I... making a donation to the N.M.M.L. This gives you the opportunity to... support N.M.M.L. - now... Marijuana...
 American Drug
 Progress through knowledge
 S. Mikoyan, M.D.
 Please include check or money order, no cash postage and mail to:
 Marijuana Medical Papers, P.O. Box 100, Berkeley, CA 94701
 Marijuana Medical Papers, P.O. Box 100, Berkeley, CA 94701
 California state sales tax where applicable.
 Name _____
 Address _____
 City, State, Zip _____

PSYCHEDELIC EDUCATION CENTER,
 P.O. BOX 2544, SANTA CRUZ, CA 95063

MEMBERSHIP AND SUBSCRIPTION

Name _____

Address _____

City, State, Zip Code _____

Choose one of the following and help support our mutual effort to a better understanding of Psychedelics through education.

- Member:** Members will receive all publications and mailings about Lectures, Seminars and Discussion Groups. Membership Only \$5.00/Year Supporting Member \$25.00/Year Lifetime Member \$50.00 (Eternally)
- Subscriber:** \$5.00 for the next four issues of the P.E.C. Blotter.
- Contact:** You will be kept on the general mailing list and notified of events, upon short notice and at your own expense.
- Shut-ins:** Membership extended for the duration of confinement.

Does Chevron Pump Paraquat?

A national boycott of San Francisco-based Chevron Oil Company and its parent company, Standard Oil of California, has been announced by leaders of six marijuana legalization reform groups because of Chevron's role as sole distributor of the toxic herbicide paraquat.

The groups are calling on people -- both marijuana smokers and non-smokers -- to burn their Standard Oil credit cards, to refuse to purchase any product from the company and to immediately discontinue payment of existing balances owed to the corporation.

Also a target of the newly-announced boycott are products made or sold by Imperial Chemical Industries (ICI), the British-based company which manufactures paraquat.

"The government has tried for years to find something wrong with marijuana and couldn't, and in a last ditch effort to justify laws against it they've adopted a genocide program as a reason to say 'It's poisoned, that's why you can't smoke it,'" Brennan said.



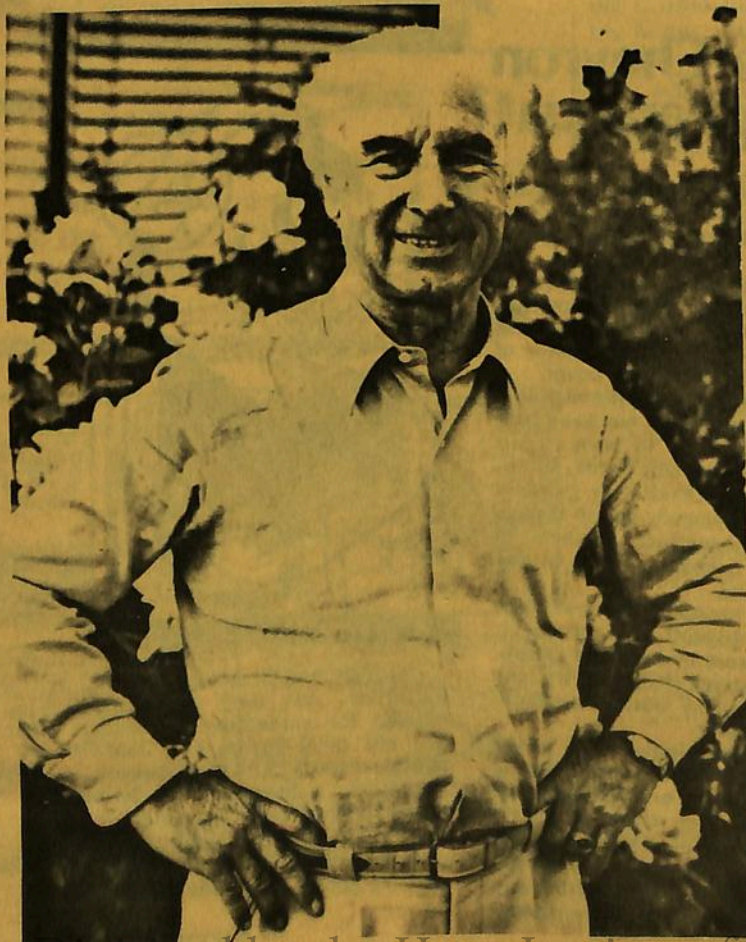
Chevron and Standard, in the meantime, say they are being blamed for something that they are not involved in. The companies report that Chevron Chemical, a Standard Oil subsidiary, distributes paraquat in the United States -- but that it does not even have a license to sell the potent herbicide in Mexico.

-- Warren Sharpe

Psychedelic
Education
Center P.O.Box 2544
*Santa Cruz, Ca. 95063



Bernard Lowy
Botany Department
Louisiana State Univer-
sity
Baton, Rouge, La. 70803



Dr. ALBERT HOFMANN

Ph.D., Dr. Pharm. H.C., Dr. Sc. Nat. H.C.
Father of the Psychedelic Age
Discoverer of LSD, psilocybin & psilocin

Colloquium

We of the P.E.C. have begun a committee to nominate Dr. Hofmann for the Nobel Peace Prize—LSD is better than dynamite!!!

LSD was not just the fruit of a chance discovery, but the outcome of a more complex process. It had its beginning in a definite concept and was followed up by appropriate experiments.

LSD is not just a curiosity, it is in many respects of the greatest scientific interest.

—Dr. Albert Hofmann

**FACULTAD DE CC. QQ. Y FARMACIA**

Edificio "F"

Ciudad Universitaria, Zona 12
GUATEMALA, CENTROAMERICA

Mayo 19 de 1980

Dr. Bernard Lowy
Department of Botany
Louisiana State University
Baton Rouge, Louisiana 70803
U.S.A.

Querido Bernardo:

Recientemente recibí con mucho gusto sus publicaciones sobre Sándor Petöfi y Tremellales (Flora neotropica). No me sorprende que una persona con tanto sentimiento humano como usted pueda escribir tan fácilmente de hongos y de poesía húngara. Muchas gracias por acordarse de mandarme siempre sus publicaciones, las cuales aprecio mucho.

Aprovecho la oportunidad para contarle que recientemente me visitó el Dr. Axel Ramírez, Etnólogo Mexicano, interesado en estudiar los remanentes del culto pre-colombino a los hongos alucinógenos en Guatemala. Espero que con su ayuda podamos iniciar un estudio serio en este sentido, basado en las publicaciones de usted.

Esperando que pronto tenga la oportunidad de visitarnos en Guatemala, reciba un abrazo y un afectuoso saludo de su amigo,

Dr. Miguel F. Torres, QB.M.A.
Departamento de Microbiología

Talpra Magyar!!

MFT:avb.-

Received 122-V-1980

Estimado Don Bernardo,

Thank you for the kind letter the other day and the pamphlet on taxonomy. I have become increasingly busy keeping fed and the family healthy but for that very reason i'm painting a whole lot . i had a show in oct. passed that was rough because of all the killings in the capitol at the time: no-body wanted to be seen in a group of rich guys cause they might get shot or bombed. But despite the slow opening night i sold 31 of the 37 pieces later on in the week. Dolores is fine her grandfather is on his deathbed but thats life. that old man saw the ubico regime and was a real hard struggler. so he deserves a rest after 70 years of tortillas and salt. my in-laws always remember you as a most fun and respected guest. So much so for their now reluctance to accept most outsiders as they have had some deceptive travelers make a lot of promises and never ever keep them. But you are always welcom any time. You were well recieved when a sculpter friend of yours show up about four days ago. he presented me with his introduction from you and everybody thought that it must be "your son " and were excited to see something from you tangible that they could relate to. unfortunately your friend had come on the launch and was crimped with a time limit so we had very little time to relly get to know each other but he seems like a great dude. My baby is doing well he is a little guy but pretty damned livly. If you ever come through again let us know for sure so as to fire up the touj(steam bth). take care and saludos a todos.

sinceramente,

Mortiz Precht

15-IV-1980

Dear Martin,

The bearer of this note is my good friend, colleague, and talented artist, Joel Bova, who dedicates himself with enthusiasm to making dead clay come alive. I don't know anything about this mysterious process, but you will understand it. Joel is deeply interested in the art and culture of the Americas and is in Guatemala brushing up on his Spanish. I suggested to him that he would be missing an important experience if he didn't meet and talk with you, so this is why he is here. Of course, I would not have asked him to cross the lake and look you up unless I thought you would also find him to be very simpatico.

Afectuosos saludos a Dolores y la familia,
y a todos los amigos de Baton Rouge

LSU



LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE, LOUISIANA 70803

College of Arts and Sciences
Department of Botany

10-II-1979

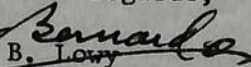
Dr. Miguel F. Torres
Department of Microbiology
Universidad de San Carlos de Guatemala
Facultad de Ciencias Químicas y Farmacia
Escuela de Química Biológica
7a. Avenida 2-84, Zona 1
Guatemala, C.A.

Dear Miguel:

I have received the specimen and attractive slides from your trip to San Juan Cotzal. The Gasteromycete is certainly Calostoma cinnabarina, a species well known from various parts of the U.S. and elsewhere. I have no data on its collection or distribution in Guatemala, but as you know, this may also be said of virtually all the saprobic fungi which have not been studied in your country. I do not think this alone merits publication. What is needed is a systematic study of the fungi, preferably by a Guatemalan student who would be willing to undertake advanced study in mycology and eventually begin reporting on the mycological flora there.

Presently I am working on a supplement to my monograph on Tremellales which will report collections made since 1971, including 11 new species that I have described since then. The New York Botanical Garden has invited me to do a study of the Tremellales of Amazonas, and I am scheduled to spend about 4 months in Brasil beginning in September 1980 with headquarters in Manaus. I expect to have a sabbatical leave by then. I have also been asked to give a short course in mycology in Egypt next year. Editorial work on MYCOLOGIA and other journals occupies some of my time and I am giving lectures in a class in biology with about 240 students. Perhaps some time soon, you may receive a little surprise publication, the result of my interest in Hungarian poetry.

With best regards,


B. Lowy

Santiago, Chile
22 Sept. 1979

Dear Bernardo,

Forgive my stupid silence for so long. I do have a mushroom painting for you here but I am afraid to send it as I don't know if it will get there and also it would be nice if I thought you were satisfied with it, so I am going to send a photo of it as soon as it is developed.

The term Calcha is unknown among the Tzutujil for the Amanita or any mushroom for that matter, but the term is widespread in all of the Quiché region where I recently came, Momostenango, Totó, etc. There are various nomenclatures of which if you are interested and/or don't already have I would be happy to send. Our baby almost died and had to spend 40 days in a "very expensive" hospital which cleaned me out. Not to mention that the village elected me "Primer Mayor" for 79 which also killed another 2,000 bucks so I've been really g-r-e-v-e-l-l-i-n-g-b-u-s-y. Family always thinks about you. Hope we hear from you.

Love,
Mortia
↓
Roberto

2-XI-1979
Baton Rouge, La.

Dear Martin,

Your letter came at a moment when I was extremely occupied in finishing a couple of manuscripts. Por fin, está hecho. I have more committee work than ever before, a dreadful - and mostly wasteful time consumer. Midterms are over, so I have a breather again, but what I could use most right now is a steamy tuj.

I'm still trying to educate some members of Congress in the right ways of thinking, but it's a losing battle. Some are ready to vote against the SALT II treaty only to save their political necks, even though it will put the rest of us in greater jeopardy. —

Congratulations on your election to Primer Mayor! More work and greater responsibilities. At 2000 clams you must have included one of the fanciest blowouts in history. Save a spot of chicha for me for when we next meet. Meanwhile I'll drink to your health in absentia.

I send my best wishes to you and Dolores
and your baby, who I hope is thriving by
now, and to all the rest of your family—
especially your father-in-law and mother-in-
law, and to the children.

Abriles Fuentes,

Bernardo

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICAGuatemala City
January 30, 1979

Dr. Bernard Lowy
Department of Botany
Louisiana State University
Baton Rouge, Louisiana 70803
USA

Dear Bernardo:

I hope that this 1979 is fullfilled with joy and sucess for you and your family.

During December I traveled with my wife Vivian, and Armando Cáceres to the remote north of Departamento de Quiché, where the "ixil" indians live.

On December 13, 1978 we found in a Meadow (slide enclosed) near San Juan Cotzal, 1,797 mt. above sea level, a very curious red gelatinous fungi. I photographed the specimens (2) on that cold and rainy day, and dried one for you.

I have identified it as Calostoma cinnabarina using myco--logical keys. Do you know if this species has been described in Guatemala? Do you think it deserves to be published? It is a common fungi?

Please find enclosed some in situ slides of the specimens, ~~one~~ of its habitat, and one dry mushroom. Will you please confirm this finding and comment on it?

If you have any news or publications on ethnomycology, please let me know. Thanking in advance your attention to this note, best regards;

YOUR FRIEND,

Dr. Miguel F. Torres
Department of Microbiology

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA
FACULTAD DE CIENCIAS QUIMICAS Y FARMACIA
ESCUELA DE QUIMICA BIOLOGICA
7a. Avenida 2-84, zona 1
GUATEMALA, C. A.



IV CONGRESO LATINOAMERICANO DE PARASITOLOGIA



IV CONGRESO
CENTROAMERICANO
DE MICROBIOLOGIA
Y PARASITOLOGIA

III CONGRESO
NACIONAL
DE MICROBIOLOGIA
Y PARASITOLOGIA

Reino: Fungi

División: Eumycota

Sub-división: Basidiomycotina

Clase: Gasteromycetes

Sub-clase: Gasteromycetidae

Orden: Tulostomatales

Familia: Calostomataceae

Género: Calostoma

Especia: Calostoma cinnabarina

It is correct?

Calostoma

UN SERVICIO DE:

Combantrin / Fasigyn-500



27, Jan. 79

Dear Dr. Lowy,

Just a note to let you know
I am now the father of a half-breed
Tzeltal son. Blond hair Blue eyes.
Dolores fine. We always keep remembering
you and wish you were here again.
I have been busy trying to stay alive
to work enough on the mushrooms.
I really love you a lot but there
is so much to learn. Let us know
how you are. And if you get
this letter.

Love,
Martin + Co.

Prochtel
Santiago Atitlan
Canton Panaj
Solola, Guatemala, C.A.

LSU



LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE, LOUISIANA 70803

College of Arts and Sciences
Department of Botany

3-II-1979

Dear Martin,

Congratulations to you and Dolores on your newly arrived son! He'll be lucky to be raised in the old Tzotuhil traditions — and to be trilingual besides. In spite of your many responsibilities, I hope you still find time to paint. How is the campaign coming to prevent further contamination and exploitation of your beautiful lake? And what's become of the latrine project? Are the authorities providing additional units for the community? Is your musical group still intact, and have you made other recordings? I listen often to your record and it gives me great pleasure. It deserves a far wider audience than I think it now has. You have already done a great service in helping to preserve Tzotuhil traditions and I don't doubt that you'll do much more!

I'm still quite busy with my hongos and am now at work revising my monograph of neotropical Tremellales (= jelly fungi = hongos gelatinosos). The New York Botanical Garden has invited me to return to the Brazilian Amazon for ± 3 months next year, a prospect I anticipate with enthusiasm. I'm expending a lot of energy this semester teaching a biology course (two 1½ hr. lectures a week) in a class of 240 students, so

to keep in shape I'm on a weight lifting program at a local gym, and to have something to aim at I've entered a small, local competition in the bench press to be held March 10. I'll be competing mostly against guys in their 20's but entry is based on body weight, not age. I expect to weigh \pm 90 kilos, but can't do much about my age, which will be 63 next month. My plans for the summer (June-July-Aug.) are not yet fixed, but there is an outside chance that I'll be returning at least briefly to Guate, and if I do, I don't want to miss seeing you. —

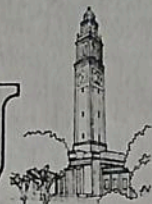
All my best wishes to you and your family for a happy and successful year!

Un abrazo fuerte a todos,

Bernardo*

* Please drop the quite unnecessary title! Después de todo, ni el hábito, ni el título, hace el monje!

LSU



LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE, LOUISIANA 70803

8-17-78 mailed:
toxicologic reports
+ 1972 Mushroom Symbolism.

College of Arts and Sciences
Department of Botany

Martin P.
CANTON PANAJ
SANTIAGO ATITLAN
SOLOLA, QUATE, C.A.

18-VIII-1978

Dear Martin,

When I returned from the Guatemala-Mexico trip, I looked for a copy of "Some" but it was not available locally so I ordered it from the publisher. It has just arrived and I am sending it to you together with "The Road to Elencis," both of which I think you will find to be of more than routine interest.

The photos I took in daylight came out fairly well, but the flash exposures were mostly poor. I've selected several of the better ones for prints and when they are processed I'll send them to you.

The kindness and generosity of you and your family is something I'll always remember with pleasure and satisfaction. I am deeply grateful to all of you for your warm hospitality.

The notes I wrote up from the information you gave me on the role of mushrooms in Tzotzil

mythology are in the same form that I showed you before I left Santiago. I think it would be worth while elaborating them for eventual publication, but there are some important gaps in the record and it would be better to wait for confirmation, if possible of the species of fungi associated with Maximon, and especially of the identity of the "healing mushroom", which I strongly suspect is Amanita muscaria.

Meanwhile, if there is some way in which I might be of service to you, I hope you will give me the opportunity of doing so.

With all best wishes and kindest regards,

Cordially,

Un abrazo fuerte de Bernardo

PRINTS MAILED: 21-VIII-'78

COPY of "Soma"

" " "Road To ELEUSIS"

Aug. 1978

Dear Dr. Lowey,

I salute you from these far reaches and hoping all is well you and the world of mycology.

The Books and your reviews arrived here 25th of Aug. on Friday. They had had been read by Sunday night. I've been stuck in them ever since. I was fabulously intrigued and started my mind rolling with a thousand considerations that I am trying to put together, that I think might eventually lead to something you might well be interested in.

I've gained an appreciation and comprehension you might say better a love for the concept of a mushroom like the Soma hypothesis or the Mexican ones being dieted and a way toward being able to communicate in the manner of dreams with the collective self inside that relates to the "All" so to speak. I mean dreams are real experiences that can save ones soul and/or hide by letting ones senses and emotions experience what in many cases they (the soul) need and perhaps otherwise couldn't experience, so that the organism can adjust to his stay on the earth.

Any way I was utterly flabbergated at the beauty and similarity of the thoughts and customs of the Siberian Tribes with our folks down here. I could have liked that a greater body of knowledge had been let out to us but as Mr. Wosson says it has become impossible.

One has to be careful with his hypothesis as Mrs. Wasson quotes in the Soma book. But correlating the Creek banky Fungus relationship with the Adetes and the Hindu and the Siberian earth religion I think I am beginning to formulate some ideas about all this. The real clincher of course is your having identified the Calcepha mushroom as the A. Muscaria. The word in Izotzil for Thunderbolt is Cak'ol hay a meaning very possibly relating to the substantive of the Color Red. I am going send you what I am thinking and have a trip to the coast planned this coming week to investigate a number of things relating to all of this. I need reference material and I have to learn something about mushrooms.

I have a small painting for you when I get the chance I am going get it to you. You've turn me into an investigator of sorts a thing I've always refused to become for anyone else, but the beauty of all this is too grand. I'm becoming an amateur ethnomycologist. Christ I must be "bemushroomed".

Sincerely, Martin

P.S. The Family all sends there highest regards as you having been the most impressive and likeable "big person" from the other side they know. And toast to your wisdom at having been able to earn your living off these children of the trees, mushrooms. They asked me to see if we had any fotos with you. I told them just to be patient I was studying mushrooms.

Dear Mother,

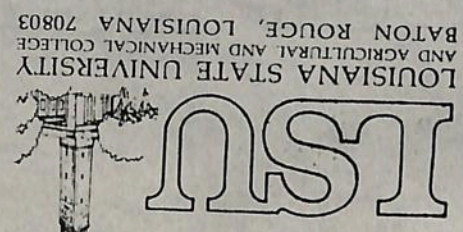
When I returned from the Guatemala-Mexico trip, I looked for a copy of "Juncus" but it was not available locally so I ordered it from the publisher. It has just arrived and I am sending it to you together with "The Road to Ensenada", both of which I think you will find to be of more than routine interest.

The photos I took in daylight came out fairly well, but the flash exposures were mostly poor. One selected series of the better ones for prints and when they are processed I'll send them to you.

The kindness and generosity of you and your family is something I'll always remember with pleasure and satisfaction. I am deeply grateful to all of you for your warm hospitality.

The notes I wrote up from the information you gave me on the role of mushrooms in Tzuculuc

18-VIII-1972



8-18-72
 Mailed 8/18/72
 Lorraine R. Brink
 +1972 Mushroom Symposium
 College of Arts and Sciences
 Department of Botany
 Baton Rouge, LA 70803
 CHADAN PAVAJ
 SUTARAD ATTAR
 SOLOH, GATE,

mythology are in the same form that I showed you before I left Santiago. I think it would be worth while elaborating them for eventual publication, but there are some important gaps in the record and it would be better to wait for confirmation, if possible of the species of fungi associated with Maximon, especially of the identity of the "healing mushroom", which I strongly suspect is Amanita muscaria.

Meanwhile, if there is some way in which I might be of service to you, I hope you will give me the opportunity of doing so.

With all best wishes and kindest regards,

Cordially,

Un abrazo fuerte de Bernardo

PRINTS MAILED: 21-VIII-'78

COPY of "Soma"

"Road To Eleusis"

Miguel Torres
Guatemala

Sr. Don
Martin Prechtel
Pintor mito-realista y
músico-folclorista.
Santiago Atitlán
Sololá, Guatemala

Muy especial!

June / 26 / 1978

10:30 AM

Dear Bernardo:

I am curious about
your findings in Santiago.

Call me at:

lat = 63-2-20

home = 69-02-66

Best regards
Miguel Torres

Guatemala 7/VI/78

①

Estimado Martin:

El Dr. Bernard Lowy Ph. D. profesor de la Universidad de Louisiana, portador de esta carta, es un muy buen amigo desde hace algunos años.

Es un sabio interesado en el estudio de nuestra nacionalidad. Descubrió una copia del Códice maya de Madrid. El Dr. Lowy es una persona muy especial, el que inició en Guatemala el estudio de los hongos alucinógenos. De esto ya hemos hablado muchas veces con nos Martin! Dentro del grupo pequeño de seres humanos que yo conozco, el Dr. Lowy y nos Martin, son dos personas que deben conocerse

Le regalé a Bernardo una copia
del disco que vos gravaste (Yu' L'jiuj Tijaas) (2)

Te agradecería muchas atenciones al Dr.
Lowy, estoy seguro que su admirable
personalidad te impresionará, como yo
estoy seguro que vos le vas a impresionar
a él.

Armando tiene un mensaje del Lic. Rojas
Lima, antropólogo autor de "Los escándalos
de Maximon" quien donará el grupo 15
libros para que los vendan.

Me voy a New York City por semana y
media.

Nadie mejor que el Dr. Lowy entenderá tu
misión en Santiago Adeltoán. Cualquiera
información que le des es como si me la
dieras a mi ya que él verdaderamente res-
petará nuestros derechos. Escríbele tu
arte. Te saluda a nos, Dolores y el bebé. Liquel Torres

Guatemala, 8 / VI / '78

Estimado Erick:

El portador de la presente es el Dr. Bernardo Lowy, de la Universidad de Louisiana, USA.

El es un eminente etno-micólogo, y ha escrito mucho sobre hongos alucinógenos.

Estoy seguro que disputarás con su conversación.

Te agradecería muchísimo que lo atendiera en Santiago y le indicaras donde quedarse a dormir y comer. Si fuera posible que lo llevaras a la finca del esposo de Doña Elida a coleccionar hongos te lo agradecería. Agradeciéndote de antemano tu hospitalidad de siempre, un saludo de tu amigo:

Liquel Torres

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



Guatemala City
January 31, 1978

FACULTAD DE CC. QQ. Y FARMACIA

7* Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICA

Dr. Bernard Lowy
Department of Botany, Art and Science
Louisiana State University
and Agricultural and Mechanical College
BATON, ROUGE LOUISIANA 70803
U. S. A.

Dear Dr. Lowy:

I think it would be a great idea to meet in Huhue early in June. Please let me know in advance the date of your travel, in order to make plans.

In the mean time I will try to collect some more information about the subje~~t~~c.

Please find enclosed some xerox copies of an article that I think could be of interest for you (incomplete, only the more interesting pages), and a comic.

Could you please send me extra copies of your article "Hallucinogenic mushrooms in Guatemala" J. Psychedelic Drugs 9:123, 1977.

Best regards from your friend,

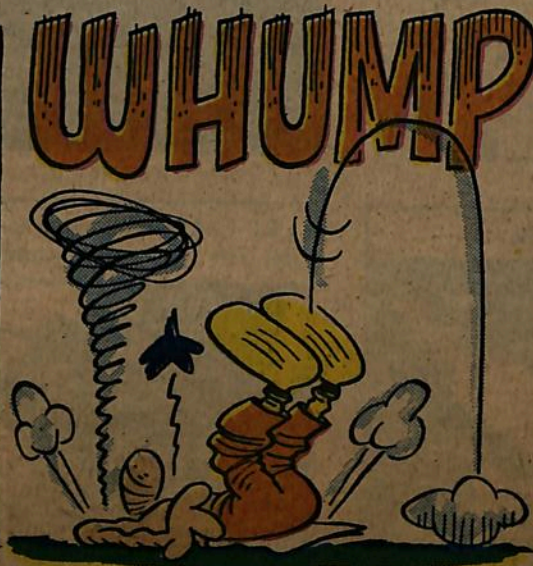
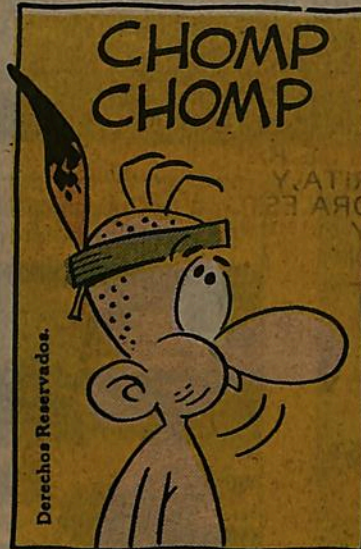
Dr. Miguel F. Torres
Dept. of Microbiology

cc: File

MFT:avb.-

OJO ROJO

por Gordon Bess



SERINARIO DE INVESTIGACION

"Los Hongos (MACROMICETOS) comestibles silvestres
en los mercados de XALAPA Veracruz "



Miguel Armando López Ramírez
Fac. de Biología
UNIVERSIDAD VERACRUZANA

Asesor: Biol. Mario Vázquez Torres

Presentado en ENERO de 1977.

A la fecha se han registrado Siete Familias en
17 Géneros con
25 Especies

Fam. HELVELLACEAE : Helvella lacunosa y H. crispa

Fam. Clavariaceae: Clavaria botrytis y

C. aurea

Fam. Boletaceae: Boletus aestivalis

B. edulis ✓

B. pinicola

Fam. Cantharellaceae: Cantharellus cibarius ✓

Gomphus floccosus

Fam. Ustilaginaceae: Ustilago maydis

Fam. Hypocreaceae: Hypomyces sp.

Fam. Agaricaceae: Clitocybe clavipes

C. infundibuliformis

Amanita caesarea ✓

A. rubescens

Lactarius indigo ✓

L. salmonicolor ✓

L. deliciosus

Rhodophyllus abortivus

Iyophyllum decastes

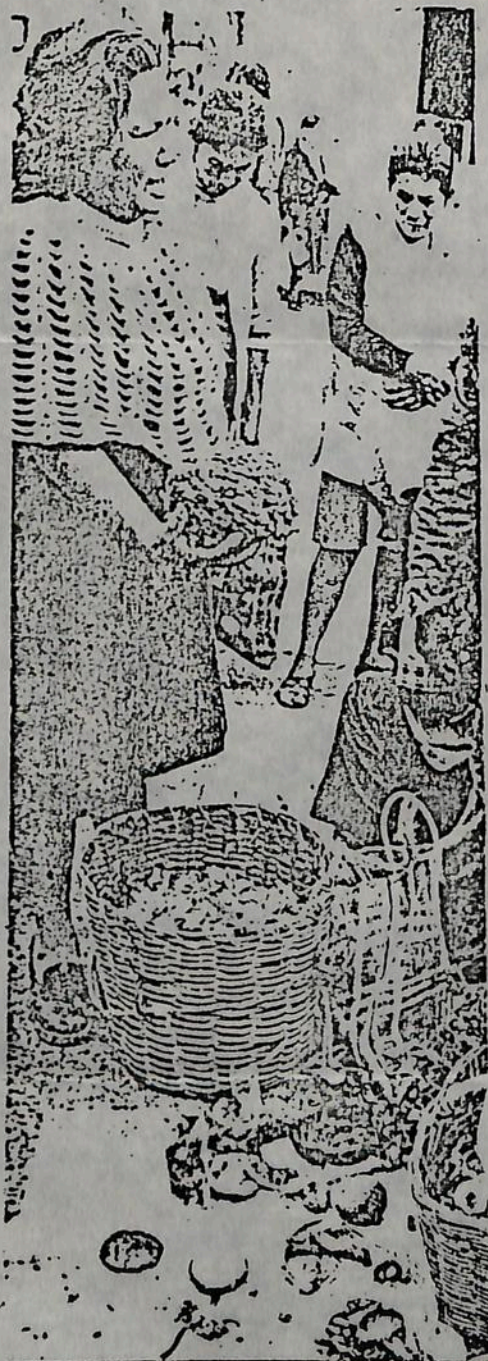
Armillariella mellea

Russula sp.

Laccaria laccata

Agaricus sp.

Hygrophorus chrysodon.



24
 NOMBRES POPULARES Y CIENTÍFICOS
 DE LOS HONGOS DEL MERCADO
 DE XALAPA VER.

NOMBRE CIENTÍFICO.	NOMBRE COMUN.
<u>Helvella lacunosa</u>	"Chile seco", "chilpoclitos".
<u>Helvella crispa</u>	"orejitas de ratón".
<u>Clitocybe clavipes</u>	"censos", "pata de chivo", "chivitos".
<u>Clavaria botrytis</u> , <u>C. aurea</u>	"escobeta", "pechuga".
<u>Amanita caesarea</u>	"tecomate".
<u>Rhodophyllus abortivus</u>	"tecolcoxtla", "tecolcoxeatl".
<u>Lactarius indigo</u>	"azul", "Queshque".
<u>Boletus aestivalis</u>	"pancitas", "pambazos".
<u>Cantharellus cibarius</u>	"amarillo", "suchil".
<u>Lyophyllum decastes</u>	"hongo de mazorca", "cocochalito", "censo".
<u>Ustilago maydis</u>	"huitlacoche"
<u>Amillariella mellea</u>	"alachos", "alachitos", "sopitza".
<u>Hypomyces</u> sp.	"enchilado", "trompa enchilada", "tronpa roja".
<u>Russula</u> sp.	"trompas", "trompitas", "trompa de cochino".
<u>Amanita rubescens</u>	"mantecoso", "mantecado", "amantecado".
<u>Gomphus floccosus</u>	"trompeta".
<u>Laccaria laccata</u>	"socoyul", "socoyulillos".
<u>Agaricus</u> sp.	"sanjuanero", "ojo de venado", "hongo de basura".
<u>Clitocybe infundibuliformis</u>	"pata de pájaro".
<u>Hygrophorus chrysodon</u>	"gachupín".
<u>Lactarius salmonicolor</u>	"carpintero".
<u>Lactarius deliciosus</u>	"enchilado", "hongo enchilado".
<u>Boletus biniicola</u> , <u>B. edulis</u>	"pancitas", "pambazos", "panzas".

El origen de los nombres populares de los hongos del mercado de Xalapa es oscuro, aunque algunos son NAHUATLISMOS algo deformados.

Cuitlacoche (o güitlacoche): Derivado de cuitlacochtli, vocablo compuesto de cuitla(tl), suciedad, basura, excremento, y cochtli, dormido. (suciedad dormida o no aparente por encontrarse cubierta por las brácteas en la espiga - parasitada por Ustilago maydis.

Socoyol : Corruptela de xocoyolli, hierba acceera, hongo ácido, agrico Laccaria laccata.

Sochi: Corruptela de xóchitl, flor, hongo como flor. Cantharellus cibarius

Sopitza : Corruptela de xonitzaactli, pata de ave. xo(tl) pie o pierna y pitzauac, delgado, alargado. Armillariella mellea

Tecomate : Nahuatlismo derivado de tecómatl recipiente a manera de olla . Amanita caesarea.

Totolcozcatl : de totolin , pavo o guajolote y cózcatl collar. Collar de pavo, aludiendo a la semejanza de Rhodophyllus abortivus con las carúnculas del cuello del pavo o - guajolote.

Tzenso : Término de difícil explicación, de no tratarse de una - corruptela de centzon(tli) o tzenzontli cuatrocientos, por la abundancia con que se producen. Clitocybe clavipes , Amanita rubescens y otros más .

(Según Martín del Campo, R. 1968)

NOMBRES POPULARES
QUE RECIBEN EN OTRAS
LOCALIDADES DEL PAIS LOS
HONGOS DE LOS MERCADOS DE XALAPA.

<u>Amanita Caesarea</u>	Ahuevoado(mex), Chichimán(mex), jicarita(D.F.) sochi(pue), tecomate(pue, Ver), xochilnana- catl(pue) yema(D.F., Mex., Oax.,) yema de hue- vo(D.F.), yemita(D.F., Mex., Oax.,).
<u>Cantharellus cibarius</u>	Amarillo(D.F., Mex), duraznillo(D.F., Mex), fuchila(Mex), hongo amarillo(D.F., Mex.), marillo(D.F., Mex.) membrillo(hgo.).
<u>Lyophyllum decastes</u>	Amontonado(D.F.), clavito(D.F., Mex., Mor., hgo), jolete(mex), Tzenzo(pue).
<u>Lactarius indigo</u>	Añil(mex), Azul(Mex), hongo Azul(D.F.), zuin(mex), zuine(mex).
<u>Armillariella mellea</u>	Babosito (hgo), Sopitza (Pue)
<u>Hypomyces lactiflorum</u> sp.	Barroso(Mex), Colorado(Mex), chilnanacate Mex), enchilado (d.f., Mex), hongos enchil- lado(D.f., Mex) trompeta(d.f., mex) oreja de de judas(d.f., mex), oreja de puerco(d.f.,), trompa(d.f., mex), trompa de puerco(d.f., mex., pueb).
<u>Clavaria botrytis</u>	Clavito(d.f., mex., mor., hgo), escobeta(d.f. , mex)
<u>Boletus edulis</u>	Cepa(d.f) corralito(d.f., mex), pambazo(d. f., Mex) panadero de encino(hgo), pancita (d.f., Mex., pue), pancita blanca (mex), po- posito(pue).
<u>Laccaria laccata</u>	Carda (hgo), hongo manzana (mex), manzani- lla (mex), manzanita (d.f., mex), socoyol (Mex), tzenzo(pue), xocoyol(D.F., Mex).
<u>B. pinicola</u>	Cepa(D.F.), Pambazo(D.F., Mex), pancita (d.f., mex, pue) pancita blanca(mex).
<u>Cantharellus floccosus</u>	Corneta(mex., Pue) custicnanácatl(mex) en- chilado(d.f., mex), hongo amarillo(d.f., mex) hongo enchilado(d.f., mex), trompa(d.f., mex) trompeta(d.f., mex).
<u>Helvella crispa</u>	Cuilche(d.f.), gachupín(d.f., mex) gachu- pín blanco(d.f., mex)
<u>Ustilago maydis</u>	Cuitlacoche (d.f., mex, hgo, mor, etc)
<u>Hypomyces</u>	Chilnanacate(mex), chilnanacate blanco(mex) chinanacate negro(mex), enchilado(mex), - hongo enchilado(d.f., mex), oreja de judas

(D. F., Mex), oreja de puerco (d. f., mex).

Lactarius deliciosus

Chilpán(mex), enchilado(mex, d. f.), hongo --
enchilado(d. f., mex), rubellón(d. f., mex).

Helvella lacunosa

Gachupín(d. f., mex), gachupín(d. f., mex), --
negrito(d. f., mex).

Amanita rubescens

Juandiego(mex), mantecoso(mex), mantequera
mex), tzenso(pue), venado(mex),

Hygrophorus chrysodon

Nichtmanácatl(mex).

Rhodophyllus abortivus

Totolcózcatl(pue), totolcózcatl de encino
(pue).

28

D I S C U S I O N

Como se ha podido constatar la micofagia está bastante difundida en ésta ciudad, además de que el número de especies es elevado (25 spp.) y cabe aclarar que no son todas las existentes, aunque si una gran parte, pues tenemos varias en estudio, entre ellas algunas sospechosas. Es obvio que pueden haber especies toxicas entre las comestibles, pese a la experiencia de los vendedores de hongos, ésto es comprensible por la estrecha semejanza que guardan ciertas especies una de las cuales puede ser toxica. En ocasiones ocurren ciertos envenenamientos por hongos por lo antes mencionado, presento aquí dos ejemplos en la siguiente página.

Ló uso como una prueba de la necesidad de estudios sobre este tipo de alimentos, estudios que como el presente podrán llevar la información necesaria hacia el consumidor y el comerciante (entre muchos otros) como una fuente de búsqueda de alimentos menos ortodoxos, alimento que a la fecha no sabemos la cantidad de proteínas etc. que contienen, pero que ya se está investigando su contenido alimenticio.

El presente estudio es solo un registro de las especies que se consumen en los mercados y un estudio más profundo tendría que llevar una metodología más organizada, con objetivos bien definidos.

Por último quiero mencionar que en la región de Xalapa existen muchas más especies comestibles que las aquí presentadas algunas(o muchas) de las cuales no son conocidas ni por la gente del campo; es aquí donde quiero pedir disculpas si este estudio no fué todo lo que debió ser, y espero seguir desarrollando pasos cada vez más sistemáticos y profundos en éste renglón.

LITERATURA CONSULTADA

Herrera, T. y Guzmán, G. 1961. Taxonomía y Ecología de los principales hongos comestibles de diversos lugares de México. An.Inst.Biol. UNAM., XXXII(1y2): 33-135

Guzmán, G. 1975. La utilidad de los Herbarios en los estudios tendientes a encontrar nuevas fuentes alimenticias. Bol.Soc.Bot.Mex., (34): 97-102

_____. 1969. Identificación de Algunos Hongos Mexicanos. Bios, 2 (3): 10-20

_____. 1976. Claves para identificar Hongos (macromicetos). tercera edición, México, D.F. (en mimeógrafo).

Vázquez-Torres, M. 1975. Excursión Xalapa a la zona Perote-Alchichica. EN: Guías Botánicas de Excursiones en México Vol. II. Soc.Bot.Mex. VI Congreso Mex. Bot. pp.57-67.

Martín del Campo, R. 1968. Contribución al conocimiento de la nomenclatura micológica Nahuatl. Bol.Soc.Mex.Mic. (2): 25-36

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICAGuatemala City,
January 5, 1978

Dr. Bernardo Lowy
Department of Botany, Art and Sciences
Louisiana State University
and Agricultural and Mechanical
College
Baton, Rouge Louisiana 70803
U. S. A.

Dear Bernardo:

I was very pleased to find your letter dated 5-XII-77, and the reprints of T. mayorgae in my desk after a month vacation for Christmas and New Year.

I would not be worry about the accent on "micólogo", usually in spanish if all the text is in big letters (mayúsculas) the accent is omitted, as in this case.

I expect that the ethnomycological seed that you planted among us is going to bloom in 1978. I have continued the investigations through new people and indians that I have met, specially in the department of Huehuetenango (north-west part of the country).

A friend that was doing his medical practice there found that some indians ingest small pieces of a thickmushroom with white stipith, and red cap with white spots (sounds like Amanita muscaria) literally it was said by one indian that "if you ingest a small piece of that fungi you play the guitar for three days, and then go to sleep". It also seems that several "curanderos" in Huehuetenango cure with fungi, maybe hallucinogenic, of course his practice is very secret, because it has been forbidden by the catholic church for many centuries.

I will visit during this year the place near Santiago Atitlán where the ancestral father of the tzutujiles received the divine inspiration from the mushrooms as I told you in my letter of October 17, 1977. We'll see what we can find out.

...../

REPRINTS- T. mayorgae

.....
 Familia Mayorga (20)
 Lic. Carlos Augusto Posadas V. (15)
 Secretario
 Fac. de CC. QQ. y Farmacia
 7ª Av. 2-84, Zona 1 - Guate.C.A. (10)
 Miguel Torres y Armando Cáceres (8)
 Lic. Mario Dary R. (3)
 Dra. Elfride Poll (1)
 (above sent: 2-XII-1977)

Guatemala, Dic. 1977

Dear Dr. Lowy:

I bought this card for
you, and I send it
with my best wishes
for this New Year.

Best regards, your friend

Higuel

Dr. Bernardo Lowy
USA.

-2-

5-1-78

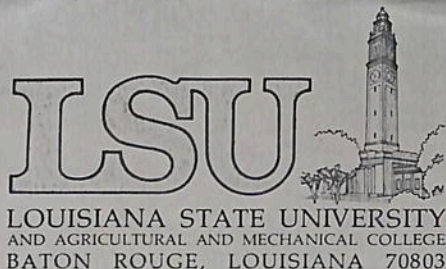
I would appreciate very much your advice in this respect, specially what to ask and how. Nevertheless that all this is preliminary information I would appreciate your comments.

Of course if I get mushroom that are use in ceremonial way I will dry and send them to you for identification.

With best regards, your friend,

Higuel

MFT:avb



College of Arts and Sciences
Department of Botany

17-I-1978

Dear Miguel:

I have been thinking about plans for the summer and it seems likely that I'll return to Chiapas for mycological work probably early in June. I think it would be extremely interesting to pursue the information you have received from your medical friend in Huehuetenango and try to verify the details, particularly regarding the possible use of hallucinogenic mushrooms by curanderos. I would gladly go to Huehue to follow up this lead. If you would let your friend know of my interest, perhaps the three of us could meet there and investigate together. I also have friends there who are linguists and who are quite knowledgeable in several native languages. I consulted them in Antigua at the Rancho Nimajay, but they had to move to Xelajú after the earthquake. I also have known the Director of the Casa de Cultura de Occidente, Victor Salvador de Leon Toledo, for some years.

Regarding the ~~t~~zutujiles near Santiago Atitlán, perhaps the most important thing to begin with is to establish a friendly relationship with one or more of the people there. Of course you must not appear to be searching for secrets, but once you have a good rapport with a potential informant, get the conversation around to hongos, one or more of which you just happen to have collected nearby. This is the reason I was so eager to collect the Auricularia before we visited the talkative curandero, although as it turned out, he showed a greater interest in his army exploits than in fungi. Patience and persistence are great virtues under these circumstances.

I hope you will keep me informed of your progress and let me know what you think of the possibility of our meeting in Huehue.

Con los cordiales saludos de siempre,

Bernardo
B. Lowy

Thank you for the very imaginative card by
Geri McCamp!

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

ESCUELA DE BIOLOGIA
MUSEO DE HISTORIA NATURAL
JARDIN BOTANICO

Av. de la Reforma 0-43, Zona 10
GUATEMALA, CENTROAMERICA
J. B. 530-77

Guatemala,
diciembre 8 de 1977.

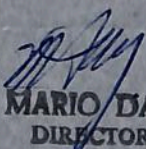
Doctor
Bernard Lowy.
Department of Botany.
Louisiana State University.
Baton Rouge, Louisiana 70803.
U. S. A.

Apreciable Doctor Lowy:

Tengo muchísimo agrado en acusar recibo de tres ejemplares de la publicación titulada "A NEW TREMELLA WITH DECIDUOUS STERIGMATA", en memoria de nuestro común amigo Dr. Rubén Mayorga Peralta.

Agradecido por la fineza de su atención, aprovecho la oportunidad para felicitarlo, suscribiéndome como su muy atento y seguro servidor.

"ID Y ENSEÑAD A TODOS"


Lic. MARIO DARY R.
DIRECTOR

Universidad de San Carlos de Guatemala
FACULTAD DE CC. QQ. Y FARMACIA
ESCUELA DE BIOLOGIA

c.c. Archivo.

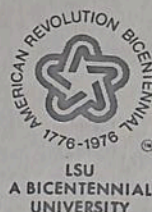
MDR/rs.

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY



5-XII-1977

Querida Elena,

Mandarte este memorial me llena de tristeza. Vd. y su familia han perdido un tesoro incalculable; yo, un hermano; la ciencia, un sabio. A la vez todos somos los herederos de la bondad, generosidad y conocimiento de Chilo. Aprovechémosnos de esta herencia como él mismo seguramente lo hubiera deseado.

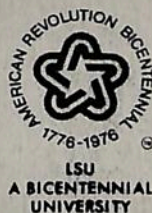
Con los aperturosos saludos de

Bernardo

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences



DEPARTMENT OF BOTANY

3 - XII - 1977

Dear Miguel,

After sending you the reprints, I was shocked when I noticed that the accent on the word "miscólogo" had been incorrectly placed by the printer! I can only apologize for this stupid error. Please be sure to also send my regards to Lic. Carlos Posadas to whom I also sent reprints to be given to the members of the Junta Directiva of the university. I am correcting all others by hand before sending them out. It is of course, my fault for not having noticed it sooner. —Ow' barbaridad!

2 de diciembre de 1977.

Lic. Carlos Augusto Posadas V., Secretario
Universidad de San Carlos de Guatemala
Facultad de CC. QQ. y Farmacia
7^a Avenida 2-84, Zona 1
Guatemala, C.A.

Estimado Lic. Posadas:

Le agradezco mucho su cortesía en haberme mandado su carta del 19 de septiembre, en que Vd. cita el inciso 4.1 del punto CUARTO del acta número 32-77, de la sesión celebrada por la Junta Directiva de la Facultad, el primer día de septiembre de 1977.

Le envío con estas líneas unas separatas de la publicación en que dedico una especie nueva de un hongo a la memoria de nuestro muy apreciado colega Dr. Rubén Mayorga Peralta, ex-catedrático e investigador micológico de la Universidad. Son un obsequio para los distinguidos miembros de la Junta Directiva de la Universidad.

Sin otro particular, me suscribo de Vd. con muestras de mi alta consideración.

Bernard Lowy

Profesor de Botánica

10 separatas

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICA

Guatemala, 19 de septiembre de 1977

No. S. 835-77

Dr. Bernardo Lowy
Department of Botany
Louisiana State University
Baton Rouge - Louisiana
70803, U. S. A.

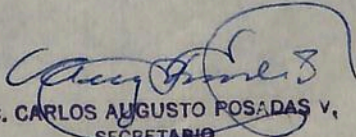
Estimado Dr. Lowy:

Atentamente me dirijo a usted para transcribirle el inciso 4.1 del punto CUARTO, del acta número 32-77, de la sesión celebrada por la Junta Directiva de la Facultad, el día 1o. del mes en curso, que literalmente dice:

"CUARTO - 4.1 - Se conoce la nota de fecha 19 de agosto del presente año, que se refiere a la disposición del Dr. Bernardo Lowy, del Departamento de Botánica, de la Universidad del Estado de Louisiana, de dedicarle el nombre científico de un nuevo hongo silvestre, a la memoria del Lic. Rubén Mayorga P.. - La publicación de esta nueva especie aparecerá en la revista "Mycotaxon", la nueva especie se llamará "Tremella mayorgae". - La Junta Directiva acuerda, expresar su reconocimiento al Profesor Bernardo Lowy, por haber dedicado a la memoria del Lic. Rubén Mayorga, apreciado ex-catedrático é investigador de esta casa de estudios, el nombre científico de un nuevo hongo silvestre "Tremella mayorgae". - "

Sin otro particular me suscribo de usted muy atentamente.

"ID Y ENSEÑAD A TODOS"


LIC. CARLOS AUGUSTO POSADAS V.
SECRETARIO



UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICAGuatemala City
October 17, 1977

Dr. Bernardo Lowy
Department of Botany
Louisiana State University
Baton Rouge, Louisiana 70803
USA

Dear Bernardo:

I just returned from a meeting in Costa Rica, and was quite a surprise to find your letter. Thanks for examine the collection so quick.

I am pleased because the identification of P. cubensis from several sites in Guatemala was correct. I have to recognize with humility that I did it only following the keys and descriptions in the books cited. The finding and description of this other species of hallucinogenic mushroom in our country, is an information that I put entirely to your disposition for publication or other ethno-mycological purposes.

Now I am working with the tzutuhiles of Santiago Atitlán, and have found through the zajorines (hechiceros o curanderos) of the village, that there is an ancient legend, related with the fungi. It seems that the mushrooms (possibly hallucinogenic?) gave to an ancestral father the divine inspiration to carve MAXIMON from the "pito" tree, and this fact is actually of capital importance among the tzutuhiles. This illumination was given from the mushrooms at a secret place, where they grow. I will visit this place when the zajorines will take me there, I hope soon.

The is also a remote possibility that the hallucinogenic fungi, or its extracts are still used in ceremonial way in Santiago Atitlán, but of course if is true, it is very secret. For this reason, please keep this preliminary information just among us.

I will try to collect for you some more data on this subject, and will send more specimens so mayby more species of psychotropic fungi can be described.

...../

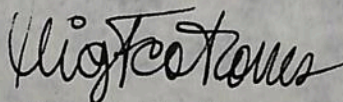
Dr. Bernardo Lowy
USA.

-2-

17-Oct-77

Thanks for your help dear friend, and please forgive me if due to my lack of experience, and excess of enthusiasm I make mistakes in a field where you are the expert, and I am just a student, willing to continue a work, that I am sure if Chilo were alive, he would be involved in it.

Sincerely yours,



Dr. Miguel F. Torres
Department of Microbiology

MFT:AVB.-

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE . LOUISIANA . 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

12-X-1977

Prof. Miguel F. Torres
Universidad de San Carlos de Guatemala
Facultad de CC.QQ. y Farmacia
7^a Avenida 2-84, Zona 1
Guatemala, C.A.

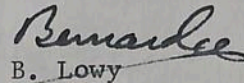
Dear Miguel:

The collections that you sent via air mail arrived in good condition and I have just examined them with the following results:

- 1) Psilocybe cubensis from Sta. Elena Barillas. 1977. OK.
- 2) " " " Finca Anabella. Escuintla. km 89. 1977. OK.
- 3) " " " Zona 16, Guatemala. OK. NOTE: This is on the small end of the spectrum for size, which varies greatly. I examined the spores, which measure $\pm 13-15.5 \times 8-10\mu\text{m}$, about the same as for 1) & 2).
- 4) Psilocybe mexicana from Sta. Elena Barillas. Está bien, pero una colección un poco raquítica. Es que están ya vigilando en el barrio más que nunca?
- 5) Morchella conica from Toluca, Mexico. 1977. This is almost certainly Morchella esculenta, decidedly not M. conica. It is always best not to cut off the stipe, because this too may be useful taxonomically, although not to the extent that the "sombbrero" is. Spore size is not very helpful here, but the size and shape of the cap are generally diagnostic.

I expect to have reprints of my Tremella mayorgae paper some time this month and when they arrive I shall send you some copies.

Cordially yours,


B. Lowy

19/12/77

Queridos Bernard y Sara, deseo que
se encuentren bien. me contó María
Elena que Sara está malita de puar-
fritis, ¿que tal ha seguido? ¿no
fueron venirse a recibir el pal del
frío unos cuantos días por
aquí? Recibí la carta de Sara y
no la pude contestar, fue pena
me da, pero en esos días se
enfermó María Isabel y mi
hermana salió de viaje y me
dejó a las dos niñas, esta
casa era una verdadera locura.

Como los días pasaron y yo
no contestaba llamé a Helen
y María Elena por teléfono y
les pedí que hablaran con sus
padres, me disculparan y les con-
faran lo que me pasaba, estoy
segura que no lo hicieron; luego
que se fueron para St. Orleans les
publiqué de nuevo y ahora que
regresan dicen que se les olvi-
dó. En fin fui por los jóvenes
de inconvientes.

Queridos amigos, muchas gracias por
sus finezas con los niños, están haciendo
dos de su casa y sus atenciones, lastimada
que no pudiesen estar más tiempo con
ustedes.

Estoy realmente apenada por las talle-
zas de rezalas que nos mandaron, que
pena me da, que vestido más lindo el
de María Isabel y el libro de Fabien, estoy
segura que lo para utilizamos en el futuro.

Mrs. Elene y Mrs. Mercedes fascinadas con
sus colgantes, solo el regalo de Palle
no hemos abierto pues anda foderia
por Costa Rica, es que viene hasta el
22 o 23. Gracias Bernardo por los re-
prints, no he tenido tiempo de pensar-
me a leerlos detenidamente, por los
trajes.

Espero que los niños no hagan de-
do problema, pero los hacen dado en
poco de compañía agradable.

Tengo la pena que no conseguí el
luzo de Sara porque no han reitido
en la tienda, pero ya lo encargué
y al llegar me avisarán. Con frente a
Cruz de los niños y de María Elene

Aueidos Bernard y Sara:

Muy Felices Pascuas y

Próspero Año Nuevo

Les desean,

mañá. Elena de Mayorga é hijos

Maria Elena Mayorga S.

*Te invita a su fiesta de 15 Años, el viernes
7 de octubre, a las 20:00 horas,
(8 de la noche).*

20 Avenida "A" 3-25, Zona 15.

Traje Formal.

Rubén Mayorga Sagastume

El Colegio Americano de Guatemala

atentamente invita a usted al Acto de Graduación

de la Promoción 1977,

que tendrá lugar en el patio central del establecimiento,

el sábado 22 del corriente, a las 12:30 horas.

Guatemala, octubre de 1977.

Nota: Si hay mal tiempo, el acto se efectuará en el salón 24 P.

Guatemala, 2/ agosto 1977

Queridos amigos Bernardo y Sara:

Heuss pensado mucho en ustedes y ahora al recibir la carta que nos mandó Bernard, nos hemos sentido muy emocionados y agradecidos por el recuerdo de nuestro querido ausente y por el honor póstumo que nuestro buen amigo le ha tributado.

Ya había yo tenido noticias de Tremella mayorae por Miguel Torres y había pensado ya en escribirles y que agradable sorpresa! fue para mí recibir la carta de Bernard. Gracias, mil gracias, estoy segura que éste es el mejor homenaje para Fubén.

El 15 de agosto fuimos al Cementerio, ya le pusimos su nombre en una lápida muy bonita, por la

faide, a las 7 fuimos una mi-
pa, que fué preciosa, en pequeños
cors del esposo de una ex alumna
de Rubén puntó en una forma precio-
pa. Este viernes 19 hubo un ho-
menaje de la A. G. M. (Asociación
Guatemalteca de Microbiología)
en donde el Dr. Nauid Dellamessa ha-
bló unas palabras de homenaje,
luego Armando Cáceres presentó
el trabajo póstumo de Rubén: La
esporotricosis en la Laguna de
Ayarza, luego Miguel dió la res-
ficia de la Teremella que fué muy
bien recibida y por último le-
yeron un acuerdo de la A. G. M.
por medio del cual se funda una
Beca con el nombre de Rubén Mayorga
Bernalta. Por supuesto que no crisis

2/ Ten fondos, pero se piensa conse-
guir de las casas farmacéuticas,
ellos pretenden \$5000.00 al a-
ño, vamos a ver que tal nos
va, yo no soy muy optimista,
lo que yo he pensado es que si me
se consigue mucho dinero, tal vez
se consiga que los cursos sean im-
partidos por costo, veremos que
dice el futuro.

Buenos queridos amigos ya dejó
esta pues la pienso mandar con
un amigo que para mañana tem-
prano a N. Orleans.

Respecto a lo que Bernard me pide:
Rubén Mayorga Bernalta, nació en la
ciudad de Zacapa, Guatemala, C.A.
el día 10 de agosto de 1924
y falleció el 15 de agosto de 1976

22/8/77

a la edad de 52 años.

Esperó en octubre las reparaciones que Bernard nos va a mandar.

Actualmente hay un amigo que está viajando a N. Orleans con frecuencia, así es que si se los ofreciera algo, con él se los podríamos mandar.

Maria Elena pasará en diciembre a verlos, ya les avisaremos la fecha.

Desee para ustedes mucha salud y bienestar

Maria Elena



Queridos Bernardo y Sara

Hola, como están!? Nosotros muy contentos por haber recibido su carta, y por saber que hay un hongo que llevara el apellido de Papi. Ojalá que yo los pueda ver en el viaje que voy a hacer a Memphis y al regreso paso por New Orleans. Yo pienso quedarme allí con mis primos y ir a la casa de ustedes y a la casa de una mi amiga que también vive en Baton Rouge. Bueno espero verlos en New Orleans muy pronto

Besos.

Maria Elena (Neca)

Queridos Sara y Bernardo:

Es realmente un gran honor el que se le hace a mi padre al nombrar una especie de hongo con su apellido. Siempre recordaremos esto y los recordaremos a ustedes como personas muy especiales. Espero verlos pronto.

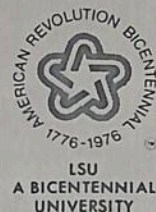
Abrazos,

Rubén Mayorga S.

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences



DEPARTMENT OF BOTANY

26-VIII-1977

Dear Miguel,

I am writing in haste because I am preparing to leave for Tampa and the II IMC tomorrow. I return on 3-IX.

Thank you for the announcement which you made in "homenaje" of our dear friend Chilo. I also felt that he would be pleased to have a fungus named in his honor. Lo dedico con cariño a su memoria. As it happens, the new species was found in Mexico by Gastón Guzmán and he sent it to me for identification.

It is not terribly important, but just to keep the record straight, I have found 16 spp. of Tremella in various countries of Central and South America. Of this number, 5 occur in Guatemala, including 3 spp. first described by me: T. clavisterigma, T. rubromaculata and T. volcanagua. You will find the details in my Monograph No.6 of Flora Neotropica. 1971. p.94-107).

Your question about Mayan knowledge of nasal myiasis, I cannot answer offhand. I'll try to get some information for you when I return from Tampa. Meanwhile, it might be useful for you to consult Ralph Roy's Ethnobotany of The Maya. 1931. Although I find nothing specifically about nasal myiasis, several entries are listed under "Complaints of the Nose" including: Nosebleed, Gangrene of the Nostril, Enlargement of the Nose and Excessive Sneezing. Remedies are given.

Cordiales saludos,

B. Lowy

P.S. - Of course, when reprints of the paper are ready, I shall send copies to you and Armandø and María Elena. Thanks for the telegram. I have sent the data to the editor of Mycotaxon. You must try to do something about your recurring laryngitis! Is it psychosomatic? Keep well!

reprint of Flora Neotropica
incl.

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICAGuatemala City
August 18, 1977

Dr. Bernardo Lowy
Department of Botany
Louisiana State University
BATON ROUGE, LOUISIANA
USA.

Dear Bernardo:

I really hope that RUBEN's birthday date arrived on time (August 10th, 1924). The reason for the delay on sending you this urgent information was that I had again acute laryngitis, and did not went to work for one week, then a three day holiday came, so finally I saw you letter the same day I sent you an urgent radiogram.

Thank you very much for dedicating Tremella mayorgae to Ruben's memory. Everybody here thinks that he would like very much to see his name in the scientific name of a fungi. Is T. mayorgae one of the fungi colleted in Guatemala? It was colleted in the company of Rubén? Tomorrow we will have a commemorative act in his memory, and I will inform your "dedicatio" to the audience.

Please send me some reprints of this publication in Mycotaxon.

The rain has been very scarce this season, for this reason P. mexicana has been also very scarce. We have had no other hallucinogenic sesion since the one htat you mist. Nevertheless, I will tray to get, dry and send some specimens to you in the following weeks, if rain comes.

I was very sorry that your trip to Guatemala this year was not to fruitfull as others. In the next opportunity please let us know it in advance so that we can do our best in helping you.

I would like to make you one consult. We are preparing a paper on "nasal myiasis" (infestation caused by muscoid larvae or "worms").

We have found in two guatemalan publications that the precolumbian inhabitants of our country did not knew about this relatively common disease. They say this because "there is no written word for this illnes".

...../

Dr. Bernardo Lowy
USA.

-2-

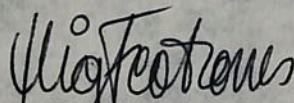
August 10th, 1977

We really doubt this. During the course of your investigations, have you seen any representation of worms coming out of the nose, or any other anatomical site? any word for this kind of illness, or his cure? Where or whom would you recommend us to ask for this subject?

Thank you very much for your attention to this letter.

Sincerely yours.

Your friend,



Dr. Miguel F. Torres
Department of Microbiology

MT:AVB.-

- P.D.
- 1) Please find enclosed copy of the short speech that I will give at the commemorative act.
 - 2) Do you know if the edible (very good) fungi Morchella conica grows in Guatemala?
I will send some samples of this species collected at Toluca (Mexico) together with the P. mexicana.
M. conica can be grown experimentally?

A NEW TREMELLA WITH DECIDUOUS STERIGMATA

B. LOWY

EN MEMORIA DE MI QUERIDO AMIGO Y COLEGA
EL EMINENTE MICÓLOGO MÉDICO
DR. RUBÉN MAYORGA PERALTA
10-VIII-1924 - 15-VIII-1976

Reprinted from MYCOTAXON 6(2): 371-374. 1977

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



Agosto 19 de 1977

FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICAHOMENAJE DE ANIVERSARIO POR EL FALLECIMIENTO DELLICENCIADO RUBEN MAYORGA PERALTAAsociación Guatemalteca de Microbiología

ESTIMADA CONCURRENCIA:

Es para mí un especial gusto contarles que he recibido comunicación escrita del PROFESOR BERNARDO LOWY, del Departamento de Botánica, Universidad del Estado de Louisiana, en donde me notifica que ha dedicado el nombre científico de un nuevo hongo silvestre a la memoria de RUBEN MAYORGA.

La publicación de esta nueva especie aparecerá muy pronto en la revista periódica "MYCOTAXON", especializada en taxonomía micológica. La nueva especie se llamará Tremella mayorgae, y pertenece al orden Tremellales, familia Tremellaceae. Es la séptima de las seis especies ya conocidas de este género que son:

- 1) Tremella compacta (fibulifera)
- 2) Tremella fimbriata
- 3) Tremella fuciformis
- 4) Tremella lutescens
- 5) Tremella dumontii y
- 6) Tremella volcanagua

Esta última especie guatemalteca, también fue descrita por el Profesor LOWY en 1964.

Estoy seguro que a CHILO le hubiera gustado ver su nombre immortalizado en el de una especie fúngica. Considero que esta merecida dedicatoria es un tributo más al amor que él sintiera por los hongos de Guatemala.

MUCHAS GRACIAS

MIGUEL F. TORRES

cc: Dr. Bernardo Lowy
Licda. María Elena S. de Mayorga
Lic. Leonel Carrillo R.
Arch.-

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICAGuatemala City
August 18, 1977

Dr. Bernardo Lowy
Department of Botany
Louisiana State University
BATON ROUGE, LOUISIANA 70803
USA

Dear Bernardo:

I really hope that RUBEN'S birthday date arrived on time (August 10th, 1924). The reason for the delay on sending you this urgent information was that I had again acute laryngitis, and did not went to work for one week, then a three day holiday came, so finally I saw you letter the same day I sent you an urgent radiogram.

Thank you very much for dedicating Tremella mayorgae to RUBEN'S memory. Everybody here thinks that he would like very much to see his name in the scientific name of a fungi. Is T. mayorgae one of the fungi colleted in Guatemala? It was collected in the company of Rubén? Tomorrow we will have a commemorative act in his memory, and I will inform your "dedicatorio" to the audience.

Please send me some reprints of this publication in Mycotaxon, and of the one were P. mexicana from Guatemala is informed.

The rain has been very scarce this season, for this reason P. mexicana has been also very scarce. We have had no other hallucinogenic sesion since the one that you mist. Nevertheless, I will try to get, dry and send some specimens to you in the following weeks, if rain comes.

I was very sorry that your trip to Guatemala this year was not to fruitfull as others. In the next opportunity please let us know it in advance so that we can do our best in helping you.

I would like to make you one consult: We are preparing a paper on "Nasal myiasis" (infestation caused by muscoid larvae or "worms"). We have found in two guatemalan publications that the precolombian inhabitants of our country did not knew about this relatively common

...../

Dr. Bernardo Lowy
USA.

-2-

18-VIII-77

disease. They say this because "there is no written word for this illness". We really doubt this. During the course of your investigations, have you seen any representation of worms coming out of the nose, or any other anatomical site?, any word for this kind of illness, or his cure? Where or whom would you recommend us to ask for this subject?

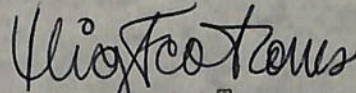
Please find enclosed copy of the information that I am going to give during the commemorative act tomorrow.

Do you know if the edible fungi Morchella conica grows in Guatemala? It is excellent. Do you know if it can be grown artificially? I will send to you some dry specimens of Morchella conica from Toluca, México, together with the P. mexicana, and some other species of unknown taxonomy of hallucinogenic fungi collected here (Psilocybe cubensis?, it grows in Guatemala?).

Thank you very much for your attention to this letter.

Your friend,

Sincerely yours,



Dr. Miguel F. Torres
Department of Microbiology

P.D: Another copy of this letter was sent to you without zip code.

MFT:avb.-

Western Union Telegram Western Union

LSU

Z828A AUG 17

0-047(1830)(2-1874550228) PD 08/18/77 1829

108 IPALHA 1195
SUSPECTED DUPLICATE

1155 P M TRI 16 1829

PHO BATONROUGE LA

INBO28 H00744

UTRA NL 0060 037

GUATEMALA VIA GUADEL TRI 37-18 1829

LT

DR BERNARDO LOWY

DEPARTMENT OF BOTANY LOUISIANA STATE UNIVERSITY

BATONROUGE LOUISIANA 70803 USA

RUBEN MAYORGA BIRTHDAY: 10TH AUGUST 1924; SACAPA GUATEMALA

WILL WRITE SOON

MIGUEL TORRES

7A AVENIDA 2-84 ZONA 1
FACULTAD DE CIENCIAS QUIMICAS Y FARMACIA USAC

COL 10800

10TH 1924

NRN

NRN

\$	No.	8485	TO	C.S.
S	BY	J.M. 1050	NO	X
E				

15 de Agosto de 1977

Querida Elena,

En este día de triste memoria estoy con Vds. acordándome de mi querido amigo Rubén. Es digno que lo hago porque pensé en él más como si fuera hermano que amigo.

Es apropiado también que hago lo único que puedo hacer en mi capacidad de micólogo, que es dedicar a su memoria una especie nueva que recién descubrí. Ya está en prensa y lleva el nombre de Tremella mayorgae. Cuando recibo las separatas (probablemente en Octubre) te lo voy a mandar unas copias para tu familia. Solo falta un detalle que quiero incluir y esto es la fecha exacta - día, mes y año - del nacimiento de Rubén. Te ruego que me lo mandes lo más pronto posible.

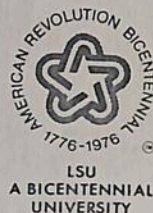
Con un abrazo fuerte a todos,
Bernardo

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY



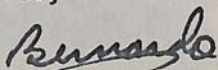
1-VIII-1977

Dear Miguel,

There is a matter that I would like to ask you to look into immediately for me, if possible. I have a paper in press (in MYCOTAXON) on a new species which I am dedicating to the memory of Rubén Mayorga. It will be called Tremella mayorgae. I plan to have a brief "dedicatorio" printed on the cover of the separates and want to include Ruben's birthday, but do not have the data. (ie day, month and year) Please be good enough to send me this information by return mail so that I may forward it in time to the editor.

Details for the Ethnomycological Symposium of the II IMC are just about in order and I'll be going to Tampa on 27-VIII. Meanwhile, I'll be remembering 15-VIII-1976 in sadness.

With best regards, as ever,


R. Lowy

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

ESCUELA DE BIOLOGIA
MUSEO DE HISTORIA NATURAL
JARDIN BOTANICO

Av. de la Reforma 0-43, Zona 10
GUATEMALA, CENTROAMERICA

E.B./151/77.

Guatemala,
14 de julio de 1977.

Señor
Dr. Bernard Lowy
Department of Botany
Louisiana State University
Baton Rouge, Louisiana 70803.

Estimado Doctor Lowy:

La presente es para agradecer a usted su fina atención al enviarme una magnífica serie de separatas de sus trabajos micológicos; ellos son una magnífica contribución para nuestra Biblioteca y no sólo representan una inestimable fuente de referencia, sino que también se le adiciona el valor afectivo que representan y especialmente incrementada por su fina dedicación.

Lamenté no haberle podido ver nuevamente durante el curso de su reciente estancia en Guatemala, aunque espero que haya obtenido algún fruto en sus investigaciones en Santa Elena Barillas y Guanagazapa; el poblado de indígenas al cual me referí, y cuyo nombre había olvidado, es Pasaco, recientemente, se acaban de descubrir extensos campos de tumbas correspondientes a esta región; creo que de ahí provienen algunos ejemplares de hongos de piedra, - aunque espero confirmarle en el futuro esta información.

Quedo a la espera de sus gratas noticias, en tanto tengo la suerte de volverle a ver por esta tierra que le aprecia, le ruego no olvidar las posibilidades de cooperación que tuve la honra de exponerle.

Sírvase presentar mis respetos a su señora esposa y usted reciba el afecto y gratitud de su atento y deferente servidor,

"ID Y ENSEÑAD A TODOS"


Lic. MARIO DARIÓ R.
DIRECTOR

Universidad de San Carlos de Guatemala
FACULTAD DE CC. QQ. Y FARMACIA
ESCUELA DE BIOLOGIA

c.c. Archivo.
MDR/lcl/rs.

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICA

Guatemala City, September 2, 1977

Dr. Bernardo Lowy
Department of Botany
Louisiana State University
BATON ROUGE, LOUISIANA, 70803
USA

Dear Bernardo:

Thanks for your letter dated August 26, 1977. I am sure that you will read this lines after your returning from Tampa. I hope that everything came out quite well at the II IMC. Did you present there any information about Guatemala, or P. mexicana ?

Finally, I did not mentioned anything in the "homenaje" about all the species described of Tremella. (Because I am not an expert). Nevertheless I mentioned about T. volcanagua and your description. About your question of who else would be interested in receiving a reprint of the description of Tremella mayorgae, I think many people will. You can send me some, and I promise you that I will give them away only to the really interested persons.

My sincere thanks for including me in your publication "Hallucinogenic Mushrooms in Guatemala". I think I do not deserve the honor of being with Chilo's name in a publication after his death. Anyway thanks again. There are also many persons interested in a reprint of this article. Is there a possibility of getting some more?

I have three species of dry mushrooms for you: Morchella conica commonly called "morilla" from Toluca, México; Psilocybe mexicana from Santa Elena Barillas; and another hallucinogenic fungi that I think is Psilocybe cubensis, from Escuintla. Sometime I heard from Chilo that a special envelope with shipping instructions must be provided by you in order that the dry fungi arrive to your laboratory. Is this true? As soon as I receive your shipping instructions, I will send them to you. Any way I will take this opportunity to include the criteria why I think this unclassified (in Guatemala that I know) hallucinogenic species is possible Psilocybe cubensis. I tried a tea



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICA

Dr. Bernardo Lowy
USA.

2.IX.77
Page No.2

made of this mushrooms, and had a strong hallucinogenic reaction, in a way similar to the one induced by P. mexicana. Could you please complete, confirm, verify or discard this findings. I hope that this will contribute to your interesting studies on the hallucinogenic mushrooms of Guatemala. It is curious, but I think that the dome shaped caps of the possible P. cubensis are similar to the mushrooms stones found in Guatemala (by the way, I own one, its authenticity has been confirmed by several archeologists). At least I think this caps are more similar to the stones than the ones of P. mexicana, don't you agree?

Observed data of the possible Psilocybe cubensis (Stropharia cubensis Earle, or "Champignon de Saint Isidore", according to Heim, 1953):

- *1) Stem= 3-5" high.
- *2) Cap= 1.5 -3.5", cone shaped that becomes flat.
- *3) Gills= Black and close, with small white edge.
- *4) Habitat= meadows rich in cow dung.
- *5) Taste= "metal like", similar to P. mexicana (less strong).
- ✓*6) Color= Yellowish-brown, darker in center of cap.
- *7) Veil= small, black.
- *8) Hallucinogenic reactions= strong, similar to P. mexicana (Ingested by Heim in 1956)
- *9) Collected in= Finca "Anabella", Escuintla Km. 89, Road to Puerto San José, Guatemala.
- ✓*10) Common name in Guatemala= "San Isidro" (Saint Isidore in French).
- *11) Blueing reaction= positive, specially in the stem.
- *12) Central mammiform structure in the center of the cap= presente but not always conspicuous.



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICA

Dr. Bernardo Lowy
USA

2.IX.77
Page. No.3

- *13) Basidiospore= ovoide, aprox. 13.3 X 9.3 microns, thick wall with a truncate germ pore, conspicuous and lateral small spine, color black-purple, content purple (observed from dry specimens)
- 14) Used in ceremonial way in=Huautla de Jiménez, México (Heim, 1963).
- 15) Hallucinogenic substances=psilocybin and psilocin (Heim, 1963).
- 16) First described by= Earle, 1906. From British Honduras (Belice= Guatemala), Cuba and Puerto Rico (Heim, 1963).
- 17) The name of Psilocybe cubensis= given by Singer (Heim, 1963).
- 18) Synonyms= Stropharia cyanescens from Florida, Murrill. Nematoloma caeruleascens from Tonkin, Pat. (Heim, 1963).
- *= Personal observations in the fresh specimens.

Literature consulted:

- A) Heim, Roger. Champignons toxiques et hallucinogenes. Éditions N. Boubée & Cie. Paris, 1963.
- B) The complete psilocybin mushroom cultivator's bible. Hongero Press. Miami, Florida, 1976.

Sincerely yours,

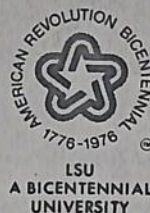
Dr. Miguel F. Torres
Department of Microbiology

MFT/mmmg.

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences



DEPARTMENT OF BOTANY

15-IX-177

Dear Miguel,

Concerning the sending of specimens, only make sure that they are absolutely dry and packed in such a way that they will not break during handling in the mail - especially agarics or other large fungi. You may be referring to something I mentioned to Chilo about my use of a special label issued to me by the USDA for sending specimens to be processed by U.S. quarantine. I don't think you will have any problem mailing collections to me via regular post as long as you indicate on the package: BOTANICAL SPECIMENS - NO COMMERCIAL VALUE. Also the equivalent message in Spanish. I believe that the Jardín Botánico does the same thing.

Regarding the similarity of specific hallucinogenic mushrooms to the configuration of mushroom stone caps, I think we must not draw conclusions that are too broad. From such collateral evidence that we have, I believe it is correct to say that generally speaking, hallucinogenic mushrooms are suggested by the artifacts, but to indicate one species in preference to another solely on the basis of the shape of the stone caps (which are themselves quite variable) seems to me at present unwarranted.

Your description sounds like Psilocybe cubensis and there is no reason why it should not be found in Guatemala in its usual ecological habitat. If you wish, send me some good, dried material for identification. Also, I'll be glad to receive a few kilos (broma) of P. mexicana, properly dried and packed.

Saludos cordiales,

Bernardo

B. Lowy

PS - The ethnomycological section of the Congress went off quite well. We had about 6 hours of meetings in 2 sessions with a capacity audience each time.

This semester I am teaching a course in General Biology, 3 times a week (lectures only). Over 240 students are in the class.



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICA

Carbon copy received with 7383
air mail shipment of 5 collections

9 fungi: Psilocybe mexicana (1)
P. cubensis (3)
Morchella conica (1)

11-X-1977

Guatemala City, September 2, 1977

Dr. Bernardo Lowy
Department of Botany
Louisiana State University
BATON ROUGE, LOUISIANA, 70803
USA

Dear Bernardo:

Thanks for your letter dated August 26, 1977. I am sure that you will read this lines after your returning from Tampa. I hope that everything came out quite well at the II IMC. Did you present there any information about Guatemala, or P. mexicana ?

Finally, I did not mentioned anything in the "homenaje" about all the species described of Tremella. (Because I am not an expert). Nevertheless I mentioned about T. volcanagua and your description. About your question of who else would be interested in receiving a reprint of the description of Tremella mayorgae, I think many people will. You can send me some, and I promise you that I will give them away only to the really interested persons.

My sincere thanks for including me in your publication "Hallucinogenic Mushrooms in Guatemala". I think I do not deserve the honor of being with Chilo's name in a publication after his death. Anyway thanks again. There are also many persons interested in a reprint of this article. Is there a possibility of getting some more?

I have three species of dry mushrooms for you: Morchella conica commonly called "morilla" from Toluca, México; Psilocybe mexicana from Santa Elena Barillas; and another hallucinogenic fungi that I think is Psilocybe cubensis, from Escuintla. Sometime I heard from Chilo that a special envelope with shipping instructions must be provided by you in order that the dry fungi arrive to your laboratory. Is this true? As soon as I receive your shipping instructions, I will send them to you. Any way I will take this opportunity to include the criteria why I think this unclassified (in Guatemala that I know) hallucinogenic species is possible Psilocybe cubensis. I tried a tea



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICA

Dr. Bernardo Lowy
USA.

2.IX.77
Page No.2

made of this mushrooms, and had a strong hallucinogenic reaction, in a way similar to the one induced by P. mexicana. Could you please complete confirm, verify or discard this findings. I hope that this will contribute to your interesting studies on the hallucinogenic mushrooms of Guatemala. It is curious, but I think that the dome shaped caps of the possible P. cubensis are similar to the mushrooms stones found in Guatemala (by the way, I own one, its authenticity has been confirmed by several archeologists). At least I think this caps are more similar to the stones than the ones of P. mexicana, don't you agree?

Observed data of the possible Psilocybe cubensis (Stropharia cubensis Earle, or "Champignon de Saint Isidore", according to Heim, 1953):

- *1) Stem= 3-5" high.
- *2) Cap= 1.5 -3.5", cone shaped that becomes flat.
- *3) Gills= Black and close, with small white edge.
- *4) Habitat= meadows rich in cow dung.
- *5) Taste= "metal like", similar to P. mexicana (less strong).
- *6) Color= Yellowish-brown, darker in center of cap.
- *7) Veil= small, black.
- *8) Hallucinogenic reactions= strong, similar to P. mexicana (Ingested by Heim in 1956)
- *9) Collected in= Finca "Anabella", Escuintla Km. 89, Road to Puerto San José, Guatemala.
- *10) Common name in Guatemala= "San Isidro" (Saint Isidore in French).
- *11) Blueing reaction= positive, specially in the stem.
- *12) Central mammiform structure in the center of the cap= presente but not always conspicuous.



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICA

Dr. Bernardo Lowy
USA

2.IX.77
Page. No. 3

- *13) Basidiospore= ovoide, aprox. 13.3 X 9.3 microns, thick wall with a truncate germ pore, conspicuous and lateral small spine, color black-purple, content purple (observed from dry specimens)
 - 14) Used in ceremonial way in=Huautla de Jiménez, México (Heim, 63).
 - 15) Hallucinogenic substances=psilocybin and psilocin (Heim, 196).
 - 16) First described by= Earle, 1906. From British Honduras (Belice= Guatemala), Cuba and Puerto Rico (Heim, 1963).
 - 17) The name of Psilocybe cubensis= given by Singer (Heim, 1963)
 - 18) Synonyms= Stropharia cyanescens from Florida, Murrill. Nemabma caeruleascens from Tonkin, Pat. (Heim, 1963).
- *= Personal observations in the fresh specimens.

Literature consulted:

- A) Heim, Roger. Champignons toxiques et hallucinogenes. Editions M Boubée & Cie. Paris, 1963.
- B) The complete psilocybin mushroom cultivator's bible. Hongerø Press. Miami, Florida, 1976.

Sincerely yours,

Dr. Miguel F. Torres
Department of Microbiology

Correo Certificado

DR. MIGUEL F. TORRES
UNIVERSIDAD DE SAN CARLOS DE GUATEMALA

AIR MAIL
REGISTERED MAIL

VIA AEREA



R 6264

FACULTAD DE CC. QQ. Y FARMACIA

7^a Avenida 2-84, Zona 1
GUATEMALA, CENTROAMERICA

Dr. Bernardo Lowy
Department of Botany
Louisiana State University
and Agricultural and Mechanical
College
Baton Rouge Louisiana, 70803
USA.

BOTANICAL SPECIMENS
NO COMMERCIAL VALUE

Especímenes botánicos sin
valor comercial.



VIA AEREA

POSTAGE FREE

VIA AEREA

First Notice 1971

Registered mail

RECEIVED AIR MAIL

Received 11-x-77

Hotel Residencial Reforma

"La Casa Grande"

Schuvia, S. A.
Avenida Reforma 7-67, Zona 10
Teléfonos 65723 - 67900 - 310907
Guatemala, C. A.

June / 20 / 1977

• Dean Bernardo:

I am sorry I couldn't be with you last week,
because I had acute laryngitis.

I am free all the afternoons of this week
and we can plan any field trip that you
wish.

Please call me { morning ^(lab.) = 64832 / 310455
afternoon (my house) = ~~64832~~
64453

Best regards,

Liquel Fco. Torres

[Mercedes 11:30 - Pensión Reforma]
27

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

ESCUELA DE BIOLOGIA
MUSEO DE HISTORIA NATURAL
JARDIN BOTANICO

Av. de la Reforma 0-43, Zona 10
GUATEMALA, CENTROAMERICA

Guatemala,
agosto 31 de 1977.

Doctor
Bernard Lowi.
Institute of Botany.
Louisiana State University.
Baton Rouge, Louisiana, 70803.
U. S. A.

Apreciable Doctor Lowi:

Tengo el agrado de acusar recibo de las siguientes publicaciones:

- a) Amanita Muscaria and the Thunderbolt Legend in Guatemala and Mexico.
- b) Additional Neotropical Tremellales.
- c) A New Discoverde Copy of a Maya Codex.

Al agradecer la fineza de su atención, me complace suscribirme como su atenta y segura servidora,

"ID Y ENSEÑAD A TODOS"

Elfriede de Poll
Dra. Elfriede de Poll
BOTANICA

c.c. Archivo,

EdeP/rs.

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QO. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICAGuatemala, City
April 27, 1977

Dr. Bernard Lowy
Louisiana State University
Department of Botany
Baton Rouge, Louisiana 70803
USA

Dear Bernardo:

It was a pleasant surprise to receive your letter, and I am giving answer to them as soon as possible. In first place let me tell you that it will be a honor and a pleasure for me to collaborate in any possible way with your investigations, not only because ethnomycology is a fascinating subjet, but also because my help will represent the one of Rubén Mayorga, our friend.

I went to Santa Elena Barillas last week, and everything is dry, nobody is still selling Psilocybe mexicana. Mushrooms will come with rain. I think it will be very interesting to know if hallucinogenic fungi are used in Guatemala by "curanderos" in a ceremonial way.

During the past months I have been in contact with persons and associations that I am sure will do our task more easy.

I am member of the "Patronato del Instituto Indigenista de Guatemala", and the "Museo Ixchel del Traje Indígena". Also I have been collaborating with CEMAT (Centro Meso-Americano de Tecnología Apropia-da), where Armando Cáceres is one of the 5 chiefs. CEMAT has been doing a survey among "curanderos" to find out which plants are used to cure, and to study them. I am going to include in the sheet of questions (one attached) the question if they use mushrooms to cure. Of course this will be only preliminary information that will give us only basis to further studies, because it will be done first in the villages around the Atitlán lake.

...../

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1
GUATEMALA, CENTRO AMERICA

-2-

April 27, 1977

Dr. Bernard Lowy
USA.

Armando, that is now in Mexico City (in the Colloquium on the Evolution of Traditional Medicine in Modern Society), will collect some information, and asked me to tell you that according to your recommendations, CEMAT is developing a program to save the lake of Atitlán. This program includes the use of "letrinas digestoras" and integral rural development.

As soon as the rain come, I will go to Santa Elena Barillas and will ask for preliminary information. Please let me know if I can do something else.

I am looking forward to have a hallucinogenic workshop with you in my family's finca in Antigua.

With best regards, your friend,

Riguel

MFT:avb.-

Nombre del curandero: _____ . Edad _____ .

Dirección: _____ .

EXPERIENCIA

número de años: _____ . Como aprendió: _____ .

Cuantos pacientes atiende semanalmente: _____ . Cuantos pagan: _____ .

Que otras formas de pago recibe: _____ .

FORMA DE TRABAJO

Que formas de curar usa: _____ .

Usa aprendices _____ , ayudantes _____ . Recomienda el temascal: _____ .

Cuando: _____ .

Cuando es inconveniente su uso: _____ .

En que forma atiende los siguientes males:

Dolor de cabeza, _____ :
(diagnóstico en lengua)

Plantas:

Dieta:

Otras recomendaciones:

Mal de orin, dolor de espalda/riñones, ardor al orinar, _____ :
(diagnóstico en lengua)

Plantas:

Dieta:

Otras recomendaciones:

Diarrea, dolor de estómago, _____ :
(diagnóstico en lengua)

Plantas:

Dieta:

Otras recomendaciones:

Infección de los ojos, _____ :
(diagnóstico en lengua)

Plantas:

Dieta:

Otras recomendaciones:

Enfermedad de pulmones o vías respiratorias, _____ :
(diagnóstico en lengua)

Plantas:

Dieta:

Otras recomendaciones:

Fracturas o quebraduras, _____ :
(diagnóstico en lengua)

Plantas:

Otras recomendaciones:

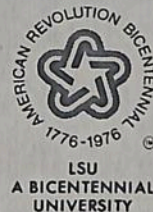
Observaciones:

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY



16-IV-1977

Dr. Miguel Torres
Universidad de San Carlos de Guatemala
Facultad de CC.QQ. y Farmacia
7^a Avenida 2-84, Zona 1
Guatemala, C.A.

Dear Miguel:

The time is almost at hand when once again I plan to continue my mycological and ethnomycological work in Guatemala. The finding and identification of Psilocybe mexicana Heim in Sta. Elena Barillas last year was an important first step. Now I think it is necessary to follow this up by trying to discover whether these or other hallucinogenic mushrooms are being used by curanderos in a ceremonial way. I am very much interested in looking into this intriguing but delicate question and I wonder whether you would be willing to collaborate with me in investigating it. Santa Elena would be the logical place to begin to make discrete inquiries of the vendors of Psilocybe mexicana and perhaps we might be lucky enough to get some leads as to one or more curanderos whom we might contact either in Sta. Elena or elsewhere.

This would be the main purpose of my trip to Guatemala this year and I am eager to know whether you have any interest in pursuing the question so that we may plan to work together. I expect to have available most of June and part of July. As you know, the II International Mycological Congress meets at the end of August. I would like to make some additional collections of P. mexicana and perhaps this time, to eat some of them too.

With best regards,

B. Lowy
B. Lowy

UNIVERSIDAD DE SAN CARLOS DE GUATEMALA



FACULTAD DE CC. QQ. Y FARMACIA

7ª Avenida 2-84, Zona 1

GUATEMALA, CENTRO AMERICA

January 6, 1977

Dr. Bernard Lowy
Department of Botany
College of Arts and Sciences
Louisiana State University
and Agricultural and Mechanical College
Baton Rouge, Louisiana 70803
U.S.A.

Dear Dr. Lowy:

I am reading your note dated 30-XI-76, one month later because the University has closed for vacations the whole month of December. Besides that I have been out of town in a Meeting of Microbiology in San José, Costa Rica.

I am very sorry that it is impossible to get some Psilocybe mexicana for you, because the rainy season is over. About the middle of November I went to Santa Elena Barillas to get some more of these mushrooms, but they were not growing any more. We will have to wait until the next rainy season to get some more.

I have been informed by a psychiatrist friend, that fungi morphologically identical to the species of Psilocybe collected in Santa Elena Barillas grow in one of the islands of Hawaii, in similar habitats (sunny fields with cow manure).

Probably you remember that I told you in my last letter about a stone mushroom found in the street of the city. It has been examined by two experts one of them thinks that is an excellent copy, and the other thinks that it is an original from the pre-clasic mayan period. I hope that this last one is right.

MERRY CHRISTMAS AND HAPPY NEW YEAR.

Your friend,

Miguel

MFT:avb.-