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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

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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.

MUSHROOMIC SYMBOLS IN CODICES DRESDEN AND MADRID

DRESDEN: pp. 15b, 25a, 26a, 26c, 27a, 27c, 28a, 28c
30c, 33c. (compare 34a= rattle)

MADRID: pp. 24a, 25a, 40c, 51b, 95b, 108b, 109b.
(?? 21c, 22a, 22d, 23a.)

Vindobonensis, p. 24. See: A. Caso 1963 v R. Heim 1967.
Mexicanus I. (Pl. 1 in color)

NATIONAL
GEOGRAPHIC

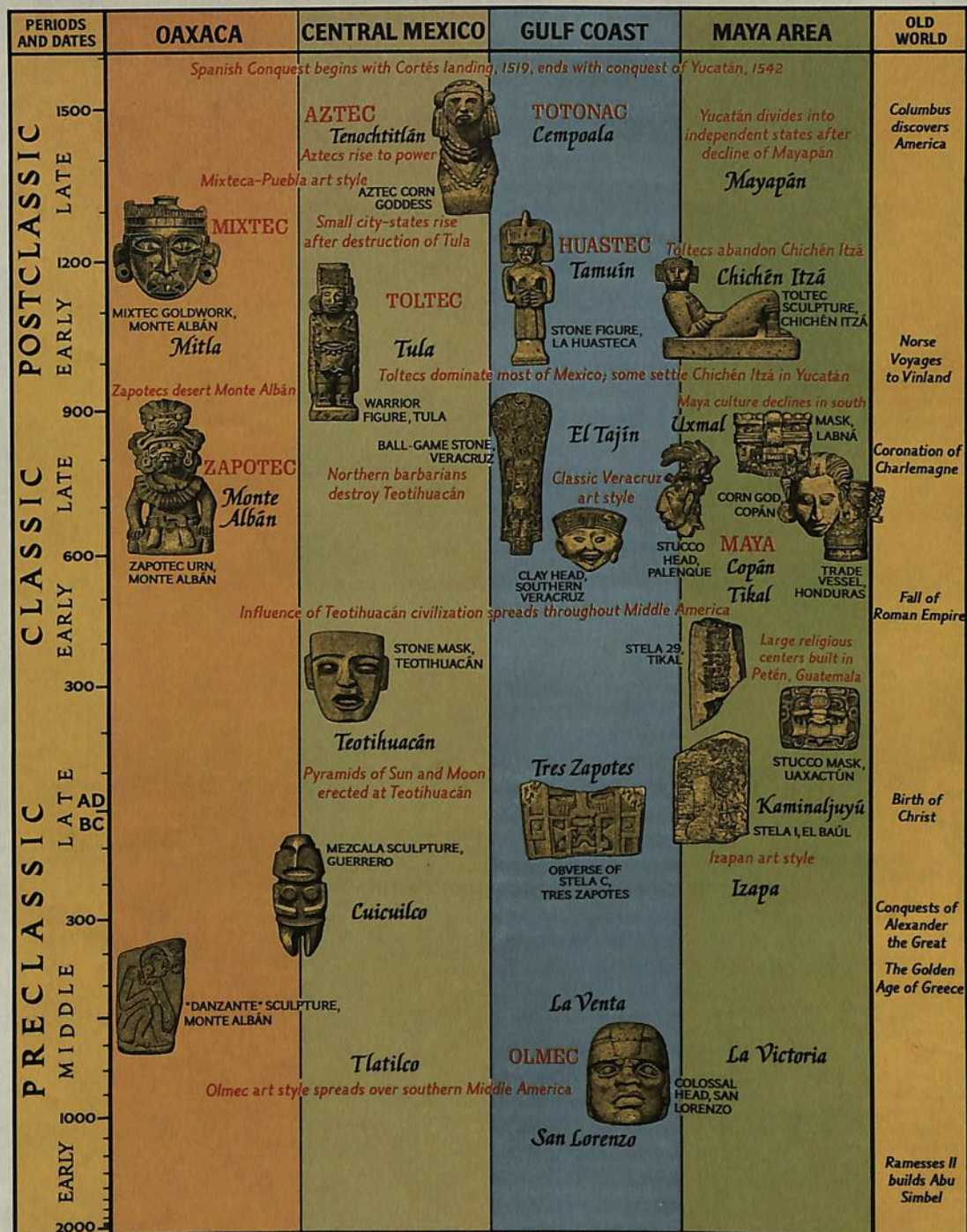
Dr. B. Lowy
Mycological Herbarium
Louisiana State University
Baton Rouge, La. 70803

ARCHEOLOGICAL MAP OF
MIDDLE AMERICA



LAND OF THE FEATHERED SERPENT

THE YARDSTICK OF TIME IN MIDDLE AMERICA



Archeologists usually divide the history of Middle America from 2000 B.C. to the Spanish Conquest into three major time periods—the Preclassic, Classic, and Postclassic. This chart shows these periods and their subdivisions from earliest, bottom, to latest, top.

Vertical bands of color, keyed to the small map, right, designate four major Middle American culture areas. The drawings show typical examples of key cultures, and identical drawings on the front-side map show the localities where these cultures developed. Names of sites, in black italic type, and known names of tribes, capitalized in red, appear at points on the time scale that more or less correspond to their cultural peak.

The column at far right shows selected events of Old World history.



Long Hay
Treligga

Long Hay
Treligga

Delabole, Cornwall

14 December 1974

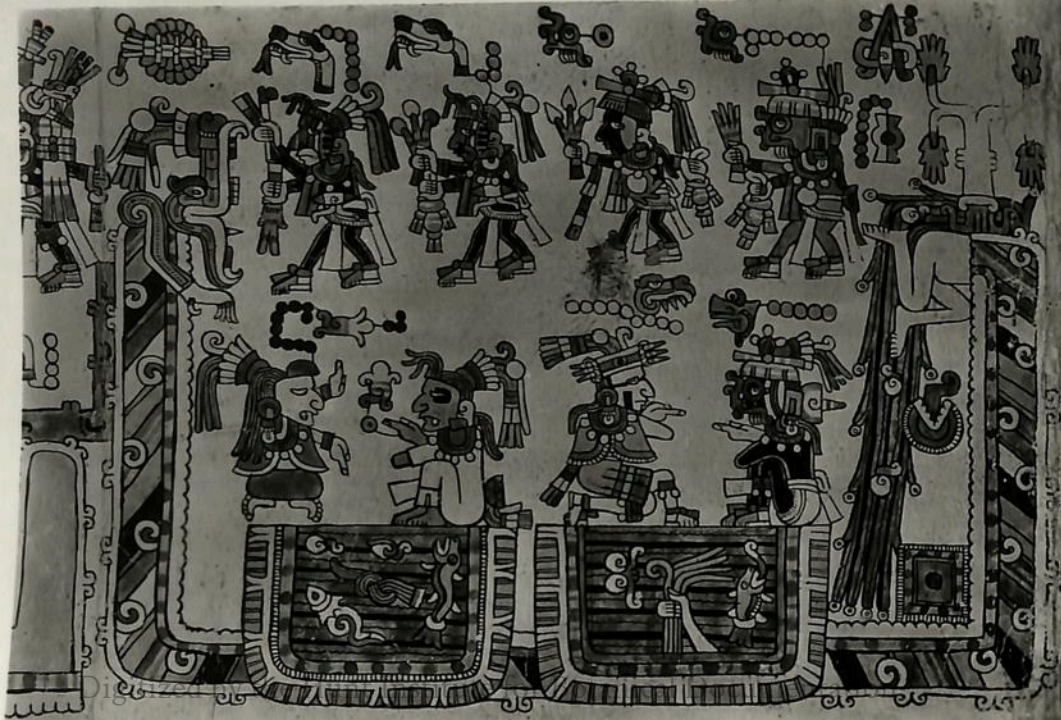
Dear Dr Lwy,

Last week when in London
I looked in at The Ethnography Dept
of the British Museum (6 Burlington Gardens,
London W1X 2EX) when I saw the
enclosed p.p.c. and thought you might
like a copy. I hadnt time to
investigate further.

With best wishes for Christmas
The New Year.

} Sincerely

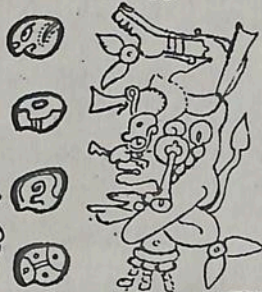
G.C. Anisworth



130

Mayan hieroglyphs at the top of the page.

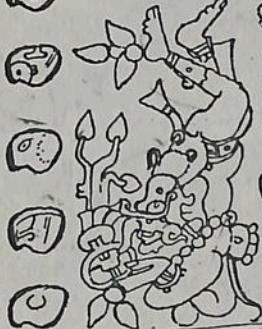
Decorative horizontal line with geometric patterns.



Mayan hieroglyphs in the second section.

Mayan hieroglyphs in the second section.

Decorative horizontal line with geometric patterns.



Mayan hieroglyphs in the third section.

Mayan hieroglyphs in the third section.

Decorative horizontal line with geometric patterns.



see pl. 25:60. Thompson
xvii: p. 65. S. Brundage

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

26-XII-1974

Dear Dr. Ainsworth,

I appreciate your kindness in sending me the post card showing a page of the Codex Zouche-Nuttall, which I have not previously seen. In this photograph, the third priestly figure from the left (above) holds in his hand a cluster of 3 objects which may represent mushrooms. I have found identical symbols on several pages of the Dresden and Madrid codices both of which are of course Mayan whereas the Nuttall is Mixtec. As it happens, I am presently concerned with a reinterpretation of some provocative figures in the Codex Dresdensis (p. 15 of that document) intimately associated with these very symbols. I enclose a copy of this page on which there are vividly depicted 4 personages apparently floating in space, head downward. To my knowledge, the only interpretation of these figures in the Dresdensis was made by E. Förstemann who commented as follows: (in part) "The two pictures [top panel] represent D and A, the latter probably as feminine. Both are falling headfirst and both have leaves about them as if they were falling from a tree and a cry is issuing from A's mouth.As on page 15a, the pair at the left [central panel] are falling down and also have leaves about them. They are god B, who holds a Kan sign in his hand, and a woman, whose eyes are closed and who holds the sign of death before her breast." If the "leaves" represent instead hallucinogenic mushrooms, the "falling" gods become more comprehensible.

Because new ethnobotanical-mycological data have been acquired in the Americas during the past decade or more, mayanists, art historians and a few botanists and mycologists have attempted to reinterpret sections of various codices which still present more enigmas, however, than scholars have thus far been able to resolve. A recent example may be found in R. Heim's 1967 "Nouvelles investigations sur les champignons hallucinogènes," with which you are undoubtedly familiar. In color plate 1 of that work, a page of the Codex Vindobonensis Mexicanus I shows the same objects (in part) as those represented in your page of the Zouche-Nuttall, both of which are Mixtec documents. Heim identifies these as Psilocybe mexicana, shown in the upper part of that plate as if in diagrammatic longitudinal section and in the lower left the cluster of 3 are tentatively identified as the same, with Stresser-Péan dissenting (p. 117, footnote 2, op. cit.). Other codices also need to be critically examined.

With best wishes for your success in the New Year,

Sincerely yours,

B. Lowy
B. Lowy

'LONG HAY', TRELIGGA, DELABOLE, CORNWALL

Tel. Camelford 2506

15 November 1974

Dear Dr Lowy,

I am working on the last stages of a history of mycology which is to be published by the Cambridge University Press and I am seeking illustrations. I am treating ethnomycology very lightly but I should be most grateful for your permission to reproduce either Fig. 2 or Fig 3 from your paper in Mycologia 64(4):816-821, 1972.

I wondered whether you could supply me with a photograph of either of these figures or alternatively a reprint which I could send to the printers.

I shall also be writing to Mycologia to get copyright clearance (if they do hold the copyright) as there are one or two other things I hope to take from Mycologia.

I have been much interested in your recent ethnomycological papers. It is a fascinating subject but I am having to restrict myself to an account of 'significant change' in the development of mycology. Ethnomycology will soon merit an independent book.

With kin regards,

Yours sincerely,

G.C. Ainsworth

G.C. Ainsworth

Dr Bernard Lowy,
Mycological Herbarium,
Louisiana State University,
Baton Rouge, La 70803,
U.S.A.

BY AIR MAIL
PAR AVION

WILSON LTD

NATURAL COLOUR PHOTOGRAPHURE - Printed in Great Britain

Helioga, Delabole, Cornwall
4 December 1974

Many thanks for your
letter, photographs, reports,
and permission. I am
most grateful.

Sincerely,

G.C. Ainsworth

Botany Science
Life

Dr. B. Lowy
Louisiana State Univ.
~~College of Arts & Sci.~~
Dept of Botany

Baton Rouge

Lo. 70803 U.S.A.

The Cornish Seas

A study of the waves breaking on the rocks. There
is nothing but the open Atlantic between the Cornish
coast and America

A Natural Colour Photograph

Cornwall 7322

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

26-XI-1974

Dr. G. C. Ainsworth
'Long Hay', Treligga, Delabole, Cornwall
England

Dear Dr. Ainsworth,

I am glad to know that your work on the history of mycology is close to the publication stage and that you intend to include in it some information on the rapidly growing field of ethnomycology. As yet, few mycologists seem to have been attracted to it but I find it a challenging as well as a fascinating subject of investigation and have been encouraged by the response and collaboration of some anthropologists, linguists and archeologists in these studies.

You may of course reproduce any illustration of mine that you find suitable. Of the two figures that you mention, figure 3 is sufficiently clear so that there will be no problem in reproducing it. Figure 2 is somewhat murky, so I am sending you a color print of it, one of my 24 original closeups of the Galindo Codex. You may use this, or not, as you see fit. It corresponds to fig. LIb of the Madrid Codex, shown in fig. 1 (p. 818) of my paper, a reprint of which is enclosed along with two others.

With all best wishes,

Cordially yours,

B. Lowy
B. Lowy



The University of Sheffield

Department of Botany

A J Willis, PhD, DSc, Professor of Botany and Head of Department

D A Walker, PhD, DSc, Professor of Biology

Sheffield S10 2TN

Tel: Sheffield 78555

STD code: 0742

30th July, 1974

Professor B. Lowy
Botany Department
Louisiana State University
Baton Rouge
Louisiana 70803
U.S.A.

Dear Professor Lowy,

I am currently completing a book on fungi for David & Charles which contains a short chapter on hallucinogenic drugs. I have read your papers on mushroom lore with a great deal of interest and have found them of invaluable help.

I would be most grateful if you would give me permission to use two illustrations from one of them. These are Figures 1 and 3 from your paper in Mycologia, 1972 on the Maya Codices. I would only wish to reproduce the central parts of these that show the fruit body. I would of course give full acknowledgement to you for the use of this material. I look forward to reading your future publications on this topic.

Yours sincerely,

B.J. Jeffcock

PP. Dr. R.C. Cooke

August 9, 1974

Dr. R. C. Cooke
The University of Sheffield
Department of Botany
Sheffield, England S102TN

Dear Dr. Cooke:

I have just returned from a study tour in Central America and have at hand your letter of July 30 in which you request permission to reproduce for your book figures 1 and 3. from my 1972 paper in Mycologia on "Mushroom symbolism in Maya Codices."

Enclosed is a reprint of the paper which you may use as you see fit, together with a few others, both mycological and ethnomycological.

With all best wishes,

B. Lowy
Professor of Botany

Enclosure



The University of Sheffield

Department of Botany

A J Willis, PhD, DSc, Professor of Botany and Head of Department

D A Walker, PhD, DSc, Professor of Biology

Sheffield S10 2TN

Tel: Sheffield 78555

STD code: 0742

Professor B. Lowy,
Department of Botany,
Louisiana State University,
Baton Rouge,
Louisiana 70803,
U. S. A.

27 August 1974

Dear Professor Lowy,

Thank you very much for the reprints and for your
kind permission to use your illustrations from Mycologia,
1972.

Yours sincerely,

Dr. R.C. Cooke,
Senior Lecturer.

BAHAGIAN PERTANIAN
KEMENTERIAN PERTANIAN DAN PERIKANAN
MALAYSIA

Talipon No.: 03-26683/5

Kawat: "AGRICOLA"

Bil. surat tuan:

Bil. surat ini: B.89/17.01/(169).

(Sila catitkan bil. surat
ini dalam surat jawapan
tuan)

IBU PEJABAT
PERKHIDMATAN PEMELIHARAAN TANAMAN
(CROP PROTECTION SERVICES HQ)
JALAN GALLAGHER,
KUALA LUMPUR 10-02

2nd December, 1974.

AIR MAIL

Dr. B. Lowy,
Department of Botany and Plant Pathology,
Louisiana State University, Baton Rouge,
Louisiana 70803,
U.S.A.

Dear Sir,

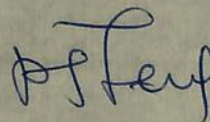
Reprint Request

With regard to the above, please send me a reprint of your article entitled "Amanita muscaria and the thunderbolt legend in Guatemala and Mexico" published in Mycologia 66 : 188-190.

I was a student of the late Dr. R.F.R. McNabb at Lincoln College, New Zealand and am looking into the Phragmobasidiomycete flora in Peninsular Malaysia. I have managed to collect several species of Auricularia and wonder if you could confirm their identity for me. The study of non-pathogenic fungi has been very neglected in this country and we are only beginning to do something to rectify the situation.

Thank you.

Yours sincerely,



(P.S. Teng)
Pegawai Pertanian.

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE . LOUISIANA . 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

13-XII-1974

Dr. P.S.Teng
Crop Protection Branch
Department of Agriculture
Kuala Lumpur
Peninsular Malaysia

Dear Dr. Teng:

I enclose the reprint you requested together with a few others that may interest you.

Dr. McNabb's death was a great loss to mycology and I am among the many who are grateful for his important contributions.

Regarding Auricularia, I should think that at least four species are likely to be fairly common in your area: A. delicata, A. fuscosuccinea, A. mesenterica and A. polytricha. In my 1952 paper (Mycologia 44: 656-692) I gave the distributional data known for Auricularia spp. at that time. I do not doubt that they are far more common throughout Malaysia than the few collecting records indicate. It would be of considerable interest to investigate the folklore that may be associated with these and other fungi. Common names for Auricularia spp. include expressions such as "ghost ear," "rat's ear," "dog's ear," "bat's wing" and others. Since 3 of the species I mention above (excluding A. mesenterica) are edible, I wonder by what common names they are known. The ethnomycological implications should not be overlooked.

I shall gladly examine any tremellaceous fungus you care to send me.

Sincerely yours,

B. Lowy

Bernard Lowy
Professor of Botany

May 2, 1974

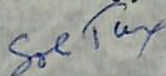
Dr. Bernard Lowy
Dept. of Botany
Louisiana State University
Baton Rouge, Louisiana 70803

Dear Dr. Lowy:

Thank you for your letter of March 1st and the enclosed reprints; please forgive my delay in responding. The Dobkin de Rios article with comment will appear in the June issue of CA which will be mailed within the next few weeks. May I suggest you write the author requesting a pre-publication copy.

With best wishes,

Sincerely,



Sol Tax
Editor

ST:sm



NEWS



from

Expeditions Extraordinary

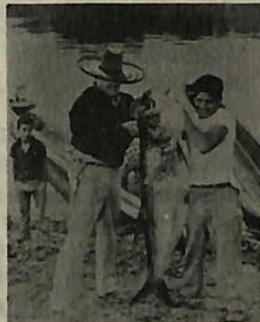


Apartado Postal 63
Guatemala, C. A.



Our Jungle Camp (above right) is ready for the 1974-75 season. It is located on Lake Petexbatún, two hours by dugout canoe south of Sayaxché, in the Peten. The capacity has been increased to 12 persons, with new guest rooms, new beds, a new shower building and a new dining area.

We offer our guests fabulous game fishing in the lake and nearby Rio Pasion and Usumacinta River basins where Tarpon, Snook, Blancos and more than a hundred varieties of smaller fish are biting now. (A recent catch is shown, right).



Bird watching is a major activity at the camp, with hundreds of varieties in residence and on migratory flights to and from the north.

Nature walks in the jungle surrounding the camp, on cleared paths, give access to nesting areas, and sights of the small animals and insect life of the area.

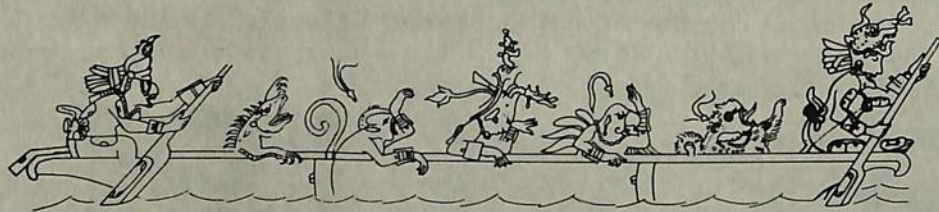
The Camp is located in the center of some of the most interesting Maya archaeological sites in Guatemala and Mexico. Tikal is a short drive away. Yaxchilan, Bonampak, and many others famous but little visited, are accessible by boat.





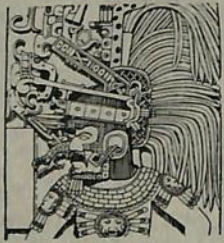
One of the most popular activities is just plain loafing. Hammocks are swung all around so you can enjoy the quiet, the breeze, and see and hear the birds, watch the fish jump, and lose the tensions of your everyday existence.

There are no fixed schedules at the camp. There are many opportunities to see and enjoy everything in the area. The personal service will delight you.



Guatemala's new government has been installed and will continue the high interest in Tourism which marked the previous administration. The Quetzal is still on par with the U. S. Dollar and the even exchange makes it easy to bargain without the need for a computer. The Quetzal still buys much more here than the Dollar in the States.

The Tourist Commission has announced that there will be a new airport built at Flores, Peten, which will have customs and immigration facilities, permitting direct flights from abroad to this area. It will accommodate jets up to 707 size.



Archaeological work on the restoration of structure E-VII-sub, at the important Maya site of Uaxactun, is virtually completed. The new project for the development of the main plaza area at Quirigua has started. This five year project will enlarge the visible area and make this site even more beautiful.

Several new sites have been reported recently, increasing the known sites to more than a thousand.

The Fall Migration of birds from the Northern Hemisphere will soon be upon us. We are looking forward to their visit and the chance to check reports of several rare species seen last year for the first time. The Peten area is one of the richest in Guatemala, with 303 resident species.

Sixty-three of the 74 families recorded in the nation occur here. These, plus the migratory birds make the area a bird-watcher's and photographer's paradise.



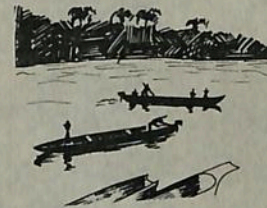
We have made several exploratory trips into Honduras so that we can offer Expeditions into that beautiful and little-known country. Continuing our dedication to nature study and conservation, the first offering will be for bird-watching and fishing on the Caribbean coast. Based on the fabulous beaches near Tela, it will include visits to a Carib village, boat trips on a jungle river and salt water lagoon to see tropical birds and animals, and to fish for both fresh and salt water varieties. You can also dig for opals, nearby. It will terminate with a visit to the Bay Islands for swimming and snorkeling from beautiful beaches and coral reef fishing and exploration.



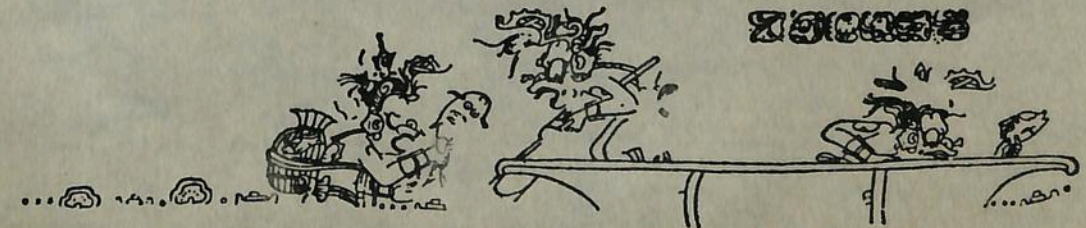
Another trip, just for the adventurous, is a trip on the Patuca River in the almost unvisited heart of the jungle in Honduras. There will be some white water running. You will explore several tributaries of this river, and there will be unusual opportunities to photograph birds and animals. Fishing and camping enroute. We hope to visit Sumo, Paya and Misquito Indians in their unspoiled settlements in the jungle.

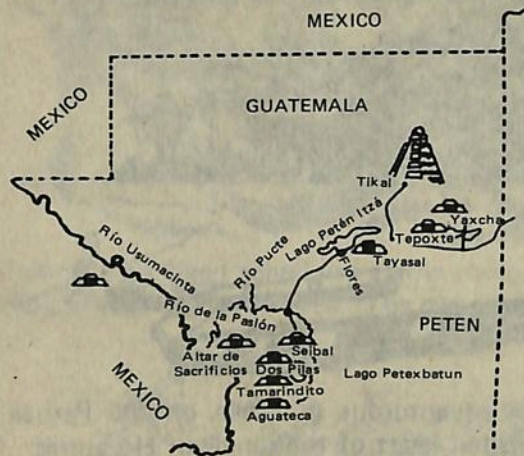


The controversy regarding the proper bait for the fish in the Usumacinta-Rio Pasion basin continues. Local fishermen prefer live bait, "sardinas" netted in the rivers, but sport fishermen prefer artificial lures - plugs, flies and others. Depending on conditions, each one works for some fish, but the big TARPON prefer spoons, trolled at low speed.



The depth of the rivers, lakes and lagoons is increasing with the rains, but the fishing for the larger fish is good now and will improve as they slack off. The smaller fish leave the rivers and swim off into the flooded brush, but the big ones stay in the channels and are hungry!





River trips on the Usumacinta River, the Salinas, the Río Pasión and the Lacantun, offer many opportunities for great fishing, magnificent photography, visits to usually inaccessible Maya sites, and for camping along crystal clear streams in the tropical jungle. These are escapism in its finest form.

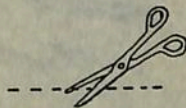
We can also provide groups, clubs and individuals with professional photographic services ranging from color slides and prints through 16 and 35 mm. sound and color motion picture records of your trip. These are, of course, at extra charge, but available to those who wish to have such records.

A special Expedition, "The Highlands in Depth", more like a conventional tour, with hotels to serve as bases, has been developed for those who are interested in people and their life-styles rather than outdoor life. This trip into the scenic mountains of western Guatemala features visits to native villages, markets, festivals, weaving centers, colonial churches, thermal baths, and a live volcano.

For specific information on the various Expeditions, dates and prices, send the attached coupon by AIR MAIL for a prompt, personal reply to;

Expeditions Extraordinary

Apartado Postal 63
Guatemala, C. A.



I am interested in more information about: Fishing _____; Bird Watching _____;
Archaeological Sites _____; River Trips _____; Other _____

Name: _____

Address: _____, City: _____

State: _____, Zip _____

PLFM
Ando 237
Antigua, Guatemala
October 2, 1974

Dear Bernie:

All the micélogos and I were happy to get the copies of the picture you took -- it was really a nice one. You have ~~been~~ well-remembered around here ever since you came.

The enclosed list was dittoed off the first of September, but I didn't get a chance to get all the translations until after coming back from the Americanists meeting -- sorry for the delay, but I hope that the data will be of help to you. We now have a way to code italicized type for scientific names into our computer cards and the mushroom names will be the first examples.

I hope that you enjoyed a vacation in Mexico -- real vacations seem like a good idea. My best to Sara. I hope all is going well for Maxine and Derts in their scattered studying. Take care. Thanks again for your help. The students really enjoyed the treat.

Best,

Karen

José Juan from San Miguel just gave me their word for Ramaria - which I've included. It's yellow, but otherwise the same and edible. species

EXPEDITIONS EXTRAORDINARY

Apartado 63 Guatemala C.A.

September 19, 1974

Dear Bernard,

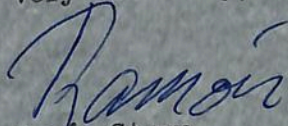
Your letter arrived with the monographs. They are most interesting and a welcome addition to my library.

We have had some experience with Hellmuth. We made a trip with him (and 25 tourists) through Guatemala, Mexico, Belize and Honduras and you're right; he's an impossible guy. We dropped him at the end of the trip and have not seen him since. He's no longer at Yaxhá. The government scratched his project there after he insulted the director of archaeology (in the newspaper yet!).

I'm enclosing more newsletters and would appreciate it if you would spread the good word around.

Be sure to look us up when you get back to Guatemala.

Very sincerely,


Ramón Starr

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE • LOUISIANA • 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

18-IX-1979

Dear Karen,

Enclosed are prints for the 10 participants
in the July 17th mushroom hunt. Would
you please be good enough to give one to each
of the stalwarts whose name appears on the
reverse of the print? I have also included
for you a print of the more select group that
went up the hill, then down again, on June 10th.

with kindest regards

as ever,

Bernie

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE • LOUISIANA • 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

May 29, 1974

Dr. Marlene Dobkin de Rios
Department of Anthropology
California State College
Fullerton, California

Dear Dr. Rios:

Mr. Nicholas Hellmuth earlier let me know that your paper would appear in Current Anthropology but I have just now seen it and have read it with great interest. Further evidence to support your thesis is accumulating and interdisciplinary studies along these lines may eventually have a considerable impact in strengthening the interpretation that you make.

Within a few days I am leaving for Guatemala again for additional ethnomycological work and expect to be at Yaxha for at least 2 weeks as resident mycologist-ethnomycologist.

I would greatly appreciate receiving a reprint of your paper. Two recent papers of mine are enclosed.

Sincerely yours,

B. Lowy
Bernard Lowy
Professor of Botany
and
Curator, Mycological Herbarium

PS - You might be interested in Alleyro's article "The cult of the sacred mushroom in the ancient Near East and Middle America." It is in Revista Interamericana Revisio 3(2): 252-257. 1973.

PLFM
Apdo 237
Antigua, Guatemala
May 26, 1974

Dear Bernie:

Thanks for your letter, ^{article,} and for the reprints, which I passed on. Will and Jo Froman have both been out of town, but Tony Jackson said to please tell you that he was quite happy to get it. I also mailed one to Nora England.

I hope we will see you this summer. My students are interested in the mushroom collecting, although I might have to send an informant with you instead. In any case, we will get you someone who can help -- and I am happy about having the identifications for the dictionary.

My parents are coming on Thursday. I hope that they will enjoy their visit. They should be in Ex Yucatán right now.

Let us know when you arrive. It would be nice if both you and Sara get to Antigua. I hope that your course for Hellmuth goes well.

Take care. Best to all.

Best,

Karen



educational programs in archaeology and the natural sciences
foundation for latin american anthropological research, incorporated in the state of rhode island (non-profit)
apartado postal 1838, guatemala city, guatemala, central america

May 28, 1974

TO ALL STAFF:

Just a short note requesting that you bring one city-type
outfit, as jacket and tie for introductions to government
officials, etc.

Thank you and we are looking forward to seeing you at Yaxha.

Sincerely,

Joan Louise Brownell
Joan Louise Brownell



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APARTADO 1838

03 May, 1974

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

Dear Dr. Lowy:

I've just returned from a visit with the Vankurts. The negatives which you want are now in the possession of Mr. Richard M. Rose. Mr. Rose's address is: P.O. Box 62
Hardwick, Mass.
01037.

I hope this helps you in your search for the prints.

If you have any more requests, please let me know. This one resulted in a most pleasant morning and a great deal of information on the care and feeding of a young owl I am trying to raise.

Sincerely,

Carol Hester

Carol Hester
Assistant to the Director



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apartado postal 1838, guatemala city, guatemala, central america

April 25, 1974

Dr. B. Lowy
Department of Botany
Louisiana State University
Batón Rouge, La.
EE.UU. 70803

Dear Dr. Lowy:

Jaques Van Kurt is an elusive man. He is a friend of Nicholas Hellmuth's and was seen by him the day before your letter arrived so his existance has been verified. Unfortunately phone calls to him for the past week have been unanswered. I am tomorrow sending someone out to his place to look for him. As the cook lives in that direction it should be no trouble.

Nicholas Hellmuth is again away. This time braving New York, instead of the Peten. Before he left he asked that I write you to see if you would be able to obtain some information for him on a few plants. One which he is especially interested in is the Xate palm (pronounced Shate). It is shipped from here to be used in flora decorations as the fronds never wilt. The natives who gather it tell you it is used for drugs in the States as they can't believe that any other use would cause people to pay for it. Other trees (plants) on which he would like articles are the Pimento (all spice not pepper), the Chiclo, and the Sopote. He will pay Xerox costs on the article setting about a \$20 limit.

He has suggested that you bring with you a copy of Lundell's The Vegetation of the Peten. We have a copy of it but as everybody is constantly asking what's this plant, the more around the better.

I am frankly confused as to what booklet Mr. Hellmuth was refering in his letter. I am presently mailing you a copy of two bibliographies (one to which I'm sure you can add a lot) and a copy of the medical information on Yaxha. We have at this writing 3 M.D.'s and an R. N. If the camp is as healthy as last years the doctors will end up clearing brush.

I will let you know about the pictures as soon as I get the information.

Sincerely,

Carol Hester

Carol Hester

Assistant to the Director



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DEPARTMENT OF BOTANY

April 16, 1974

Carol Hester
F.L.A.A.R.
Apartado 1838
Guatemala, C.A.

Dear Miss Hester:

In Prof. Hellmuth's last letter, he mentioned a 20-page booklet of information on the Yaxha project, which I would like to have in order to keep my records as complete as possible. Would you please send me a copy of this?

I would also like to ask a favor of you. I am planning an exhibit on ethnomycology here at the university, featuring mushroom stones and their possible importance in Maya civilization. I understand that a photographer in Guatemala City, Jaques Vankurt of "Filmtrek," has some prints, copies of which I have ^{been} unsuccessful in obtaining because I was unable to contact him when I was in the city last summer. Would you be good enough to phone his office and inquire about the availability of these elusive prints? They were made in connection with an exhibit on "Hongos y Sapos" at IGA by Richard Rose in 1973. I would like to purchase several of them, if they are reasonably priced. I would very much appreciate your kindness in making this inquiry for me. Incidentally, as part of the orientation program for students, if they are taken on a tour of the Museo de Antropología, they will see several mushroom stones on permanent display there, among the more imposing pieces. I'll have more to say about these to the students.

Best regards,

Cordially,

B. Lowy
B. Lowy



FOUNDATION FOR LATIN AMERICAN ANTHROPOLOGICAL RESEARCH, INC.

7th floor, 4th Avenida 8-72, Zona 1, Guatemala City, Guatemala, Central America

Mailing Address: Apartado Postal 1838, Guatemala City, Guatemala, C. A. Telephone 25266

April 5, 1974

Bernard Lowy
Dept. of Botany
Louisiana State Univ.
Baton Rouge, LA 70803

Dear Dr. Lowy:

Thank you for the abundant material which you sent. We appreciate the gift of the Webster textbook. I will make sure that all gets to the students who have applied.

I do not know one fungus from another but there sure are lots in the Yaxha region, especially during June-August when it rains a bit. I expect you will have fun collecting.

The dates for the Guatemala City sessions are June 9 to June 23, with the last week traveling to El Peten by way of Copan. We arrive at Yaxha on Monday, June 24. This schedule is on the last page of the Application Information booklet. If you do not have this 20 page booklet, please let Miss Hester know and she will send you one immediately.

The schedule of what sites we visit on which days is tentative and will certainly change; hence the June 16 date for Utatlan is not fixed at all; I must admit that these dates will not be established until mid-May. You might consider joining us directly at Yaxha on or shortly after June 24th. At most we would spend only about 1 hour at Utatlan. It is a small and unimportant site.

Yes, we will gladly offer you room and board at Yaxha, and you would need pay no fees. We only have about 3 private cottages which will tend to go to couples who elect to chose this added cost extra. The "cottages" have no walls or floor but offer the opportunity to get away from the mob. It costs about \$50-100 to build a new cottage. I must admit that at this point our budget is strained and the project is in debt to a bank in the U.S.

We have a good staff lined up, and the students accepted so far look like a potentially good lot. We look forward to having you join us this summer.

Sincerely,

Nicholas M. Hellmuth
Nicholas M. Hellmuth

U.S. Forwarding
address

5 Conway Lane
St. Louis, MO 63124
Telephone 314-994-9194

Registered Office
(not for correspondence)

61 East Manning St.
Providence, R.I. 02906

Field Camp
Address

Proyecto Yaxha
Flores, El Petén
Guatemala.



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apartado postal 1838, guatemala city, guatemala, central america

March 26, 1974

Bernard Lowy
Dept. of Botany
LSU
Baton Rouge, LA 70803

Apartado 1838
Guatemala, City
Guatemala C. A.

Dear Dr. Lowy:

In reply to your letter of 20 March to Ms. Hester. As you can suspect, our camp is in the middle of the jungle and was built largely from poles and thatch.

We have a 300 watt portable electric generator which can run when gasoline is available. We have a carpenter who can build whatever you need when you arrive.

This limited amount of electricity would not power most slide projectors, but we could have a weekend of lectures in the nearby town of Flores which has all the electricity you need. We have 35mm. slide projectors.

We were once equiped with a microscope donated by a medical student. I personally have never used it, and must admit that I do not even know if it is still with the camp equipment. As a mapping project we do not normally use one.

We expect from between 10 and 30 students. If you could possibly send a list of suggested reading (to Ms. Hester) she can mimeo it and sent it to students, hopefully to arrive in time for the students to get their own xerox copies. Xerox here in the city is 10¢ a page.

We could use any printed material which you could obtain and would be most greatful.

Enclosed is a brief bibliography which each student will be receiving. Your recommendations for additions would be welcomed. Also, if you have time, if you could send perhaps one legal sheet with information which we could send to the students, starting with a paragraph about yourself; then your lecture outline, then the list of suggested reading. We will mimeo this and send out. I am sure applicants would love to receive something of this nature.

Sincerely,

Nicholas M. Hellmuth
Nicholas M. Hellmuth



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DEPARTMENT OF BOTANY

April 2, 1974

Nicholas M. Hellmuth
F.L.A.A.R.
Apartado 1838
Guatemala City
Guatemala, C.A.

Dear Prof. Hellmuth:

Enclosed is my outline of the proposed work in mycology and a bibliography. As for the paragraph about myself, perhaps you could use the blurb I already sent you - just cutting off the photo. Whether you want to add my current status as editorial board member of Mycologia and Consulting Editor of Revista Interamericana Review, I leave to you. You already know that my chief interest this summer in Guatemala and Mexico will be in further ethnomycological investigation.

By separate post I am sending as a gift for the library, a textbook of mycology (Webster - on my list) together with a lab manual and some reprints.

The schedule of dates that I received is for 1973, so I presume this year arrival will be on June 8-9. If I am in the city on the appropriate date(s), might I join you for the trip to Utatlan (June 16 ?)? At one time or another I have been to almost all the other archaeological sites listed in your outline. Another question: Will a "private cottage" be available at Yaxha ?

I assume that our correspondence makes it clear that I am ready to accept the responsibilities as given under the heading "Instructor in Natural Science," and that you in turn offer the "waiver of tuition" etc., a proper commensal relationship.

Sincerely,

B. Lowy
Bernard Lowy
Professor of Botany

P.S. - Participants should be asked to supply themselves with a good hand lens, \pm 15X of the folding type that can be attached by cord or chain to the belt. Bausch & Lomb has one for \pm \$9.00

MYCOLOGICAL ORIENTATION - INSTRUCTOR B. LOWY PROF. BOTANY LSU
TIME AVAILABLE: APPROXIMATELY 2 WEEKS

- I - Introduction: chlorophyllous vs achlorophyllous world.
- II - "Lower organisms"
- III- Survey of the fungi.
- IV- Myxomycetes - Protostelids
- V- Phycomycetes
- VI- Ascomycetes & Fungi Imperfecti
- VII- Basidiomycetes
- VIII- Study of special biological associations; ecological implications
 including: fungi & algae; fungi & ants, ^{termites,} beetles; fungi & higher plants.
- IX- Ethnomycology - Ethnobotany

} Some aspects of morphology,
 taxonomy, physiology, genetics;
 emphasis on field work

Field work will include collection, identification, preservation of specimens within limits of facilities available at Yaxha.

Special Project: Finding, excavating, observing fungus "gardens" of leafcutter ants. (Not previously investigated in Guatemala).

Tentative: Slide - lecture in Guatemala City or Flores: General mycological-ethnomycological orientation.

A selected bibliography in mycology, ethnomycology and ethnobotany
for F.L.A.A.R. participants

MYCOLOGY TEXTBOOKS

- Alexopoulos, C.J. 1962. 2nd ed. Introductory mycology. John Wiley & Sons, Inc., New York.
- Moore-Landecker, E. 1972. Fundamentals of the fungi. Prentice-Hall, Inc., New Jersey.
- Singer, R. 1962. 2nd ed. The Agaricales in modern taxonomy. J. Cramer, Weinheim.
- Talbot, P.H.B. 1971. Principles of fungal taxonomy. St. Martin Press, Inc., New York.
- Webster, J. 1970. Introduction to fungi. Cambridge University Press, New York.

MUSHROOM IDENTIFICATION

- Hesler, L.R. 1960. Mushrooms of the Great Smokies. University of Tennessee Press.
- Krieger, L.C.C. 1967 reprint ed. The mushroom handbook. Dover Publications, Inc., New York.
- McIlvaine, C. & R.K. Macadam. 1973 reprint ed. One thousand American fungi. Dover Publications, Inc., New York.
- Miller, O.K. 1973. Mushrooms of North America. E.P. Dutton & Co., Inc., New York.
- Smith, A.H. 1963. rev. ed. The mushroom hunter's field guide. University of Michigan Press, Ann Arbor.

FUNGI - SIGNIFICANCE, HISTORY-LORE: Non-Taxonomic

- Gray, W.D. 1959. The relation of fungi to human affairs. Henry Holt & Co., Inc., New York.
- Gray, W.D. 1973. The use of fungi as food and in food processing. CRC Press, Cleveland, Ohio. 2 vols.
- Large, E.C. 1962 reprint ed. The advance of the fungi. Dover Publications, Inc., New York.
- Ramsbottom, J. 1954. Mushrooms and toadstools. Collins, London.
- Rolfe, R.T. & F.W. Rolfe. 1926. The romance of the fungus world. Lippincott, Philadelphia.
- Singer, R. 1961. Mushrooms and truffles. Leonard Hill Books, London.
- also: Kreig, M.B. 1964. Green medicine. Rand McNally & Co., New York.

ETHNOMYCOLOGY

Early sources.

- Anonymous. El memorial de Tecpán Atitlán o Anales de los Cakchiqueles. Various editions. See: Translation from the Cakchiquel Maya by A. Recinos & D. Goetz. University of Oklahoma Press, Norman. 1953.
- Anonymous. Manuscrito de Chichicastenango. Popol Buj (= Popol Vuh). Various editions. See: Translation from the Quiche by J.A. Villacorta & F. Rodas N. (in Spanish). Guatemala. 1927. also: English version by D. Goetz & S.G. Morley. University of Oklahoma Press, Norman. 1950.
- Benavente, Toribio de (Motolinía). circa 1560. Ritos antiguos, sacrificios e idolatrías de los Indios de Nueva España... English translation by F.B. Steck. Washington Academy of American Franciscan History. 1951.
- Hernández, Francisco. circa 1576. Historia Natural de Nueva España. Universidad Nacional de México. 1959.

- Landa, Diego De. circa 1566. Relación de las cosas de Nueva España. See: English translation by A.M. Tozzer. Peabody Museum of American Archeology and Ethnology, Harvard University. Vol 18. 1941. also: Spanish ed. Editorial Porrúa, S.A. Mexico. 1959.
- Sahagún, Bernardino De. circa 1590. Historia general de las cosas de Nueva España. 5 vols. Mexico. 1938.

PLANT HALLUCINOGENS - MOSTLY WESTERN HEMISPHERE

- Emboden, W.A. Jr. 1972. Narcotic plants. Macmillan Co., New York.
- Efron, D.H. ed. et al. 1967. Ethnopharmacologic search for psychoactive drugs. U.S. Dep't. Health, Education & Welfare.
- Furst, P.T. ed. 1972. Flesh of the Gods. Praeger Publishers, New York.
- Schultes, R.E. & A. Hofmann. 1973. The botany and chemistry of hallucinogens. Charles C. Thomas Publisher, Springfield, Illinois.
- Wasson, V.P. and R.G. Wasson. 1957. Mushrooms, Russia and history. Pantheon Books, New York.

OTHER BOOKS & PAPERS ON HALLUCINOGENIC MUSHROOMS & ETHNOMYCOLOGY

- Allegro, J.M. 1971. The sacred mushroom and the cross. Doubleday & Co., Inc., New York
- Borhegyi, S. 1961. Miniature mushroom stones from Guatemala. American Antiquity 26: 498-504.
- Castaneda, C. 1968. The teachings of Don Juan: A Yaqui way of knowledge. Ballentine Books, New York. (also: A separate reality. 1971; Journey to Ixtlan. 1972.)
- Guzmán, G. 1959. Sinopsis de los conocimientos sobre los hongos alucinógenos mexicanos. Bol. Soc. Bot. Mex. 24: 14-34.
- Hofmann, A. 1960. Psychotomimetica. Chemische, pharmakologische und medizinische Aspekte. Svensk Kem. Tidskr. 72: 723-747.
- LaBarre, W. 1964. the narcotic complex of the New World. Diogenes 48: 125-138.
- Lewin, L. 1927. (1964). Phantastica- Narcotic and stimulating drugs-Their use and abuse. Routledge & Kegan Paul, London. (English translation)
- Lowy, B. 1971. New records of mushroom stones from Guatemala. Mycologia 63: 983-993.
- Lowy, B. 1972. Mushroom symbolism in Maya codices. Mycologia 64: 816-821.
- Lowy, B. 1972. A newly discovered copy of a Maya codex. Revista Interamer. Rev. 2: 405-407.
- Lowy, B. 1974. Amanita muscaria and the thunderbolt legend in Guatemala and Mexico. Mycologia 66: 188-191.
- Schultes, R. A new narcotic snuff from the northwest Amazon. Bot. Mus. Leaflet. Harvard U. 16: 241-260. (1954)
- Schultes, R. 1963. Botanical sources of the New World narcotics. Psyched. Rev. 1: 145-166.
- Schultes, R. 1969. Hallucinogens of plant origin. Science 163: 245-254.
- Singer, R. 1958. Mycological investigations on teonanácatl, the Mexican hallucinogenic mushroom. Pt. I. Pt. II with A.H. Smith. Mycologia 50: 239-303.
- Wasson, R.G. 1971. Soma: Divine mushroom of immortality. Harcourt Brace Jovanovich, Inc., New York.
- also: Puharich, A. 1959. The sacred mushroom. Key to the door of eternity. Doubleday & Co., Inc., New York.
- and: Heim, R. 1967. Nouvelles investigations sur les champignons hallucinogènes. Mus. Hist. Nat. ser. 7, vol. 9, 115-218.

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DEPARTMENT OF BOTANY

March 20, 1974

Miss Carol Hester
F.L.A.A.R.
4 Av. 8-72, Zona 1
Guatemala, C.A.

Dear Miss Hester:

I have received the additional information you recently sent and concerning the nature of the work that I am prepared to offer at Yaxha, this would be determined at least part by the lab facilities available there. I use "lab" in a loose sense, not meaning the fully equipped kind we usually associate with the privileged situation at a university. I try to be as flexible as possible. For example, if there is no microscope at Yaxha, emphasis would shift accordingly. In any case, I would expect to make my presentations suitable to the background of the participants. Field work would be most important: collecting, identifying, preserving specimens (by drying - no chemicals needed). But it would be useful to have a small, portable plant press and/or a simple, screened open box fitted with light bulbs for drying collections. These could easily be rigged up on the premises, if there is electricity (for the latter). Field work is to be supplemented by lectures on mycological and ethnomycological topics including: hallucinogenic fungi and their uses in diverse societies; western hemisphere flowering plant hallucinogens; Soma; Datura, Banisteriopsis etc. and the pertinent works of LaBarre, Schultes, Furst, Emboden, Wasson etc. If there is electricity at Yaxha, a 2X2 slide projector would be fine, but if not, some of this might be presented in Guatemala City. Approximately how many students do you expect? I could xerox some things for them to bring with me or better yet, mail them to you beforehand. If you could use a good, recent textbook in General Mycology for the library, I'll send one.

As to my date of arrival, I expect to be in Guatemala during the first week of June (I am stopping briefly in Mexico first) at which time we could meet to discuss details. How did you like the botanic garden?

Cordially yours,

B. Lowy
Bernard Lowy



educational programs in archaeology and the natural sciences
foundation for latin american anthropological research, incorporated in the state of rhode island (non-profit)
apartado postal 1838, guatemala city, guatemala, central america

February 26, 1974

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

Dear Dr. Lowy:

Your letter to Mr. Hellmuth arrived today. He is presently on a trip to the Yucatan and will not return until March 14. While I cannot help you with the more technical aspects of your letter, I will be sending you the information on the applications for Yaxha. These should be reaching you within a week.

You will notice that the staff policy section lists the duration of stay for the instructors in natural sciences as longer than two weeks. In your case, due to your high qualifications and the specialized knowledge which you can give, I feel sure that Mr. Hellmuth will be able to make an exception in this area.

The application booklet will give you the dates of the project and travel information on getting from Guatemala and Flores to Yaxha are given in the "What to Expect" which is still at the printers but expected shortly. We will need to know the exact date which you will arrive in Flores in order to arrange for one of the camp trucks to meet you. Once the group has arrived at Yaxha communications become primitive.

Thank you for your information about the Botanical Gardens. It sounds good not only for the students but also for me this weekend.

Your lectures on fungi sound fascinating to me. I have always been fascinated by their many forms and colors and know that the students will enjoy learning about their use to the Maya. Having graduated from LSU, I have a personal interest in your coming to Yaxha as one sometimes gets lonesome for hometown gossip.

If after receiving and reading the material you have any further questions about the program or the area, please write.

Sincerely,

Carol Hester
Carol Hester

Assistant to the Director



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FOUNDATION FOR LATIN AMERICAN ANTHROPOLOGICAL RESEARCH, INC.

7th floor, 4th Avenida 8-72, Zona 1, Guatemala City, Guatemala, Central America
Mailing Address: Apartado Postal 1838, Guatemala City, Guatemala, C. A. Telephone 25266

February 17, 1974

Dr. Bernard Lowy
Dept. of Botany
Louisiana State University
Baton Rouge, LA 70803

Dear Dr. Lowy:

I enjoyed reading your articles. You will enjoy reading an article in the February or subsequent issue of CURRENT ANTHROPOLOGY on Maya use of mushrooms and toads, by Dobkin de Rios. I wrote a review of the article.

Richard Rose is writing his PhD thesis on mushrooms and toads in the Guatemalan highlands. You can write him at:

Peabody Museum
11 Divinity Ave.
Cambridge, Mass. 02138

He has done lots of field work and has gathered some good information. I presume you are familiar with the modern use of mushrooms at Palenque, and with the work of Dr. Peter Furst. Michael Coe of Yale has evidently investigated mushrooms at one time.

The Galindo Codex I regret is simply a modern forgery. I have been called upon to authenticate about three codices, and all were recent fakes. The owners will swear the thing has been "in the family" for generations, or was dug up in a cave. Publishing photographs of these manuscripts is a useful contribution though.

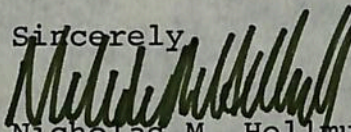
I am not familiar with any botanical study of the fungi of the Central Peten Maya heartland. You could score quite a scoop in archaeological circles at least. The uo frog or toad is quite common, as are others. You ought to write Dr. Sol Tax, editor, CURRENT ANTHROPOLOGY, Dept. of Anthro, Univ. of Chicago and explain your work, and ask for a pre-publication copy of the Dobkin de Rios article.

For the summer at Lake Yaxha we seek a botanist who can stay a minimum of two weeks, since it takes a while to get adjusted to the local flora, particularly where around the lake different things grow.

Our program runs for 2 weeks in Guatemala City then 6 weeks at Yaxha. You are the most qualified of the botanists who have written, since you have already been to Guatemala. We receive no grants (two NSF grants have expired and been spent long ago), and would be able to provide room, board, and a local workman to go with you when needed into the forest.

After you have read the material on our summer program please let us know at your earliest convenience whether you would definitely be able to serve as a botanist for two weeks. We would like to expose the students to a little basic botany so they will go home knowing something about the flora which is all around them the 6 weeks they are at Yaxha. You would be welcome to stay our whole season if you could.

Sincerely,



Nicholas M. Hellmuth

Director, Yaxha Archaeological Expedition

NMH:nb

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DEPARTMENT OF BOTANY

February 13, 1974

Mr. Carlos Bocanegra
7o. Piso
4a. Avenida 8-72, Zona 1
Guatemala, C.A.

Dear Mr. Bocanegra:

I have worked in Guatemala for several years past on mycological and ethnomycological problems and expect to continue further investigations there this summer. My interest at present is in tracing through language, custom and mythology, the significance of mushrooms both hallucinogenic and others, in indigenous Guatemalan cultures.

I have not been to Yaxha but it might be of some interest to make a brief survey of the local fungi and their uses, if any, by the people who inhabit that region. If I could use the camp facilities there for a week or so perhaps I might also be able to contribute something useful to this year's project.

Tentatively, I expect to leave for Guatemala about the first week in June and would like to know when you plan to get under way at Yaxha. My check for \$5. is enclosed for the printed information you are offering regarding the summer program. Of course, your personal comments will be welcome.

To acquaint you with my professional interests I have enclosed a biography which appeared in a recent publication, together with two reprints.

Sincerely yours,

B. Lowy

Bernard Lowy
Professor of Botany

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

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College of Arts and Sciences

DEPARTMENT OF BOTANY

February 22, 1974

Dr. Nicholas M. Hellmuth
F.L.A.A.R.
4 Av. 8-72, Zona 1
Guatemala, C.A.

Dear Dr. Hellmuth:

Thank you for your letter and the enclosures. As I explained in my earlier letter, I am deeply interested in ethnomycological matters and am a mycologist with special competence in some groups of tropical American fungi. At present I am a member of the editorial board of Mycologia, the national journal of the Mycological Society of America and also serve as a Consulting Editor for the Revista Interamericana Review which is published in Puerto Rico. I am of course qualified by training to work with the fungi but I cannot claim to have more competence with the flowering plants of the tropics than most phanerogamic botanists have with the fungi. From my standpoint, therefore, I think that about 2 weeks in the Yaxha region would be most useful and I would willingly share such mycological and/or ethnomycological knowledge as I have with interested students and colleagues.

Regarding the Galindo Codex, since I had not previously come across any of these fakes, I was fascinated with it and went to considerable trouble to document its illegitimacy. It turned out to be a good exercise for me because in the course of tracking down the possible source of the pictures I became far better acquainted with the facsimilies of the 3 Mayan codices than I had been until that time. Incidentally, the original owner (Sr. M. Galindo y Jiménez, now deceased) offered to sell it to me (no surprise). After Sr. Galindo's death, the document passed to his son Mario who operates the "Puerto Libre" at 186 6Av. 9-49, Z.1. It was in his possession when I photographed it in the summer of 1971. I understand that it was acquired eventually by the Nottebohm family (surprising if so, since they are most discerning) but have not been able to confirm this.

Under the heading "Tropical Botany" in the folder you sent me, there are listed 14 "lecture topics," none touching on the fungi, although many trees and other higher plants including orchids are known to be mycorrhizal, ie roots having an intimate, sometimes obligatory relationship with the mycelium of a number of fungi. Possibly I could offer a few introductory lectures on fungi in this series if it is to be given, or separately if the flexibility of the program so allows. In any case, please let me know what you think of the possibility of my participating somewhat along these lines. I would also like to know some approximate dates and particulars on transportation to Yaxha from the city. It occurs to me that students could get a fairly good introduction to the Peten flora by visiting the Botanic Garden which is well maintained at Av. 26, Z. 14, right off La Reforma. I know Dr. Elfriede Pöll there and think she would be willing to give students a conducted tour of the place, pointing out some pertinent trees and shrubs of Peten.

Thanks for calling my attention to Dobkin de Rios's paper which I shall look up or write to Dr. Tax. I have not met Richard Rose but we have corresponded. I know about the mushrooms being used in Palenque from Coe who wrote to me in January 1972 mentioning it, but to my knowledge no identifications have been made. For some years I have corresponded with LaBarre, Wasson, Schultes, Merle Greene, the late S. Borhegyi and others concerning ethnomycological problems.

Sincerely yours,

B. Lowy
Bernard Lowy

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

May 6, 1977.

Dear Father Mendelsohn,

Last July 11 I was fortunate enough to find you at the Marysmall Mission in Guatemala City, where we talked briefly about some aspects of indigenous mythology-ethnology.

The enclosed papers summarize some of my recent interests. I plan to return to Guatemala in June and would very much like to see you again. Do you expect to be in the city any time in June? I don't know when this will reach you, but if I don't hear from you before I leave the university on May 28, I'll inquire about you at the Mission. My address in the city will be: Pension Reforma, Reforma 3-92, 2.9 (Tel. 63212), where messages may be held for me - if I'm lucky,
With all best wishes,
B. Henry
Prof. of Botany

PLFM
Apdo. 237
Antigua, Guatemala
April 20, 1974

Dear Bernie:

I've slowly collected names for amanita muscaria from the students for the 8 languages we are working with in addition to Cakchiquel and Quiché. We just showed them the pictures -- but did no prodding, so maybe there are additional terms related to lightning, but they didn't show up.

My students also thought up all the kinds of mushrooms -- rather they tried to remember as many mushroom names as they could, but with no identification. I hope we can get that going eventually. Much as I would like to get into the plant identification, we have been bogged down for the present with just basic vocabulary and getting some linguistics done. I do plan to get to it all though, and have requested references. I tried to see P. O'Connell once, but he was sick. However, he is well now, and I hope to get over there.

In case you haven't seen it, Nick Hopkins and Breedlove (I think) did a study of plant names in Chuj (San Mateo Ixtatan). It was published in the *Wasmann Journal of Biology*, v. 28 (1970). You probably are already familiar with it.

I just came back from a week in Huehuetenango, Sta. Eulalia, and Soledad. I didn't get to the hot country of San Miguel Acatán but have heard that they 'know a lot about herbs'. My student from there is young, but I hope eventually he can work with some other people in the town. Anyway, it was a good change to get to the campo.

Please give my best to Sara and Doris. I hope all is going well for Maxine too. Maybe you can get to Guatemala this summer, if no more edotic diseases have struck.

Take care.

Best,

Karen Dakin

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

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College of Arts and Sciences

DEPARTMENT OF BOTANY

April 27, 1974

Dear Karen:

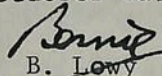
Many thanks for your welcome letter. Your imposing list of Kanjobal mushroom names is no doubt the first of its kind assembled and with this at hand the next important step would be identification of the specimens to which they correspond. Do you think one of your informants could be prevailed upon to accompany me on a field trip or two for this purpose? If not, I might just bring in what I find. Anyway, I am interested in pursuing this further and in getting as much reliable information as possible on the subject.

I'll definitely be in Guatemala this summer since I've been invited by the FLAAR (Foundation for Latin American Archeological Research - Nicholas Hellmuth, Director) to be the resident mycologist-ethnomycologist at Yaxha for at least 2 weeks beginning about the middle of June. I expect to be in the country somewhat before that. Tentatively, Sara and I will probably do some sightseeing in a few places north of Mexico City (Guadalajara, Guanajuato etc) and we may spend a week making the rounds there before I leave for Guate. She might also accompany me there for a quick tour, in which case we'll probably be seeing you together in Antigua, but no dates are fixed.

If you get up to Cobán (Alta Verapaz) during the next couple of weeks, be sure to go on to San Juan Chamelco and see Padre Esteban Haeserijn (originally from Belgium but for about the past 20 years in Guate.) who lives upstairs at the back of the cathedral. He is a Kekchi specialist with whom I spent a day last July. He is a knowledgeable linguist. In Cobán stay at "La Posada" which is run by a gringa from New York -- not especially simpática, but her place is attractive.

Enclosed are reprints of the thunderbolt-Amanita muscaria paper for you, Will, Nora, Tony and Jo, with my thanks to you all. Also included are xeroxes of an article by Allegro and a letter from LaBarre which encouraged me.

Afectuosos saludos,


B. Lowy

PS- Yes, I have the paper by Breedlove & Hopkins, with several entries on Chuj names for mushrooms. Although he has not identified any of them, from his brief descriptions I think I know at least three.
Latest news: Doris begins at Brandeis this fall. Maxine will possibly be back from Argentina late in May.

LOUISIANA STATE UNIVERSITY
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College of Arts and Sciences

DEPARTMENT OF BOTANY

April 23, 1974

Dear Mr. Vergeer:

I recently returned to the university following our Spring Recess and have at hand your letter of ~~M~~March 28.

The illustration from the Codex Florentino in Vaillant's book came to my attention some time ago. The mushroomic device in the hands of the seated attendants seems obvious, but I suppose that every such interpretation should be taken cum grano salis.

I regret that I have no duplicate slides to offer you, but you may want to do what I have done myself. Excellent copies of illustrations can be made with a 35mm camera using either color or black & white film. For the hallucinogenic mushrooms, perhaps the best single source is Heim's "Nouvelles investigations sur les champignons hallucinogenes" in Mus. Hist. Nat. Ser.7, vol 9. 1967. For mushroom stones there are various sources, including my 1971 paper in Mycologia 63: 983-993.

Sincerely yours,

B. Lowry
B. Lowry

*Thank you for putting me on
the "Myone News" mailing list.*

Dr Bernard Lowy
Department of Botany
Louisiana State University

Richmond March 28 1974

Dear Dr. Lowy:

Thank you for your letter of March 22nd. I have read your article in the Mexican Journal with great interest; thank you for bringing it to my attention. I hasten to reply to your request for further information on some of my statements in Mycena News article.

I mentioned the Bolivia mushroom stone, since it was the first mushroom ceremony-related artifact from South America to come to my attention. My reference is the Borhegyi article: Miniature Mushroom Stones from Guatemala (Amer. Antiquity, 26:4, April 1961). It contains the revised Borhegyi chart, and is listed on page 500 as a type C stone (#34). Unfortunately I have no further information on this stone. However, it seems unlikely to me that mushrooms were not used by some of the South American Indians, considering their knowledge of narcotic plants.

My statement that these mushroom stones have been excavated in great numbers might be too optimistic. It was based on statements I had read, made by Puharich in 1959 (see enclosed article) and Schultes (The Botany and Chemistry of Hallucinogens, Charles C Thomas , Springfield 1973).

As far as the frescoes are concerned, I am presently still searching for additional and more factual information. I have the feeling that most writers rely on data gathered by Mr Wasson, who was the first to mention these frescoes in his Life magazine article of May 13, 1957. Without going into details or location, he states:

-We think we have discovered it in certain frescoes in the Valley of Mexico that date back to about 400 A.D.- page 114.

The most detailed account in the popular press comes to us from Robert Graves, who locates the fresco as being from the Teotihuacan zone. Tepantitla is mentioned in Marquina's Arquitectura Prehispánica, Mexico 1951. It should be easy to find on a zone map of the area, however, I have not done this yet. Graves writes:

-In the Aztec city of Tepantitla there is a fresco dated between the 4th and 7th Centuries A.D. It shows a soul visiting Tlalocan, or Paradise. The expected elements are there: a river (stocked with fish), bordered with flowers and bejeweled trees, ... This river is shaped like a mushroom and, at its source-the center of the mushroom head- lurks Tlaloc, god of mysteries, in toad shape, water issuing from his mouth. The name Tlaloc means "pulp of earth", presumably mushrooms; and Tlaloc, like his mushrooms, was engendered by lightning.

(This is an interesting remark in view of your latest article in Mycologia) He used a seashell as another emblem and owned an underwater grotto. This grotto appears at the bottom of the fresco, marked with a cross, the four heads of which are mushrooms-

(from A Journey to Paradise, Holiday Mag. Aug 1962).

Schultes also mentions the frescoes briefly in his above mentioned book, as does W. Emboden in Narcotic Plants, Macmillan Co. 1972. Page 59 reads:

-Wasson described frescoes depicting mushroom worship dating to A.D. 300-

On page 57 of the same book Emboden, describing seeds of *Rhynchosia* sp., writes:

-there is considerable antiquity in the practice of using this seed as a narcotic, for it figures prominently in some Aztec paintings together with hallucinogenic mushrooms-

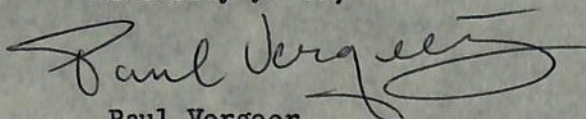
Footnote at bottom of page referring to this quote reads: *Rhynchosia* seed falls from the hand of rain god Tlaloc in the Tepantitla fresco, c. A.D. 300-400.

I have not had a chance to check Wasson's Mushrooms, Russia and History, but one may find additional information on these frescoes.

Hopefully the above information answers your questions pertaining to my article. I would like to mention something I discovered a couple of days ago, while reading the Pelican edition of Aztecs of Mexico by George Vaillant. Plate 60 (see enclosure) depicts a scene from the Codex Florentino. This Codex deals in part with edible and poisonous mushrooms (see Celia Dubovoy's article in Bol. Soc. Mex. Micol. 2 p.22). It looks to me that the two men at left of picture are holding mushrooms, there is also a mushroom shaped design at base in center of picture. The mushrooms resemble species of Ps. mexicana Heim, based on their general shape, striated pileus and papilla. I have never before seen any reference of this fact, and would very much like to get your opinion on this.

Before finishing this letter I would like to make one last request. I would very much like to give a lecture for our society on the hallucinogenic mushrooms of Mexico. However, a lecture without any slides of the mushrooms you talk about is not a very good idea. I wonder if you could tell me where I could get copies of slides of the various Mexican hallucinogenic fungi? I would of course be more than eager to pay for these copies. I would also appreciate very much getting one or two slides of mushroom stones. Please let me know and thank you very much,

Sincerely yours,



Paul Vergeer
5706 Carlos Avenue
Richmond, Ca 94804

G. V. VALLANT.

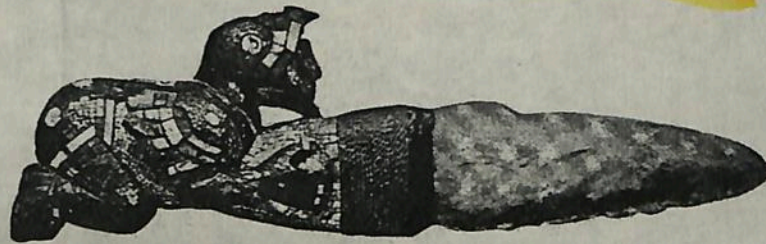
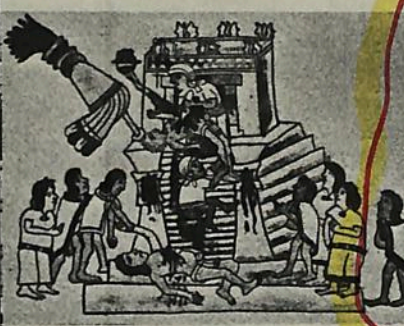


Plate 60. AZTEC RELIGION
TOP, Left: Priests and laymen sacrifice two victims in honour of the War God. Right: War captive on sacrificial stone defends himself against members of the warrior orders. MIDDLE: Sacrificial knife with mosaic handle representing an Eagle Knight, in the British Museum. These pictures from the Codex Florentino reveal the technique of using a stone knife to make a deep enough incision to reach the heart and tear it out. BOTTOM: Sacrifice to the sun



Plate 61. AZTEC RITUAL
TOP, Left: Dressing a victim and equipping him with a proper headdress, shield, and magical mirror to play the part of Tezcatlipoca. Right: Sacrifice of the victim after a year. Note the flutes discarded by him as he ascended the stair. MIDDLE, Left: Dressing a priest in the costume of Xipe, the Flayed God, who wears a human skin. Right: Musicians with rattle and skin-covered drum, huehueltl. BOTTOM: Ceremonial cannibalism. The Codex Florentino artist had obviously never taken part in such a feast, fairly common before the Conquest



MAR 30 1974

Dear Dr Lowy

Just a quick note to let you know that I have discovered fresco in question. See Ignatio Bernal's little book: Mexico before Cortez. There is an illustration (not too good) included. It is the famed "Tlalocan", plate X. I will go to UC, Berkeley; they must have better illustration there. However, from what I can see now, one has to really stretch imagination to come up with "mushroom-interpretation". It's possible but certainly questionable. It strengthens my belief that all writers have copied the Wasson interpretation. I would be most interested to know if anyone has ever dissented???

Paul Sergeev

P.S. We'll put you on *Hycoma News* mailing list -

HISTORICAL NOTES ON HALLUCINOGENIC FUNGI by Paul Vergeer
Hallucinogenic properties of various plants have been known to man for thousands of years. Harvard Prof. Richard Evans Schultes estimates that approximately sixty to seventy plant species out of some 600,000 have been or are being used today for religious and ceremonial uses by natives around the world, especially in South America. Of these plants certain fungi, belonging to the Basidiomycetes, subclasses Homobasidiomycetes and Gasteromycetes are utilized for their psychotropic substances. A. muscaria and certain species of Psilocybe are now known to most of us. Lesser known are certain puffballs and species of Gymnopilus which are also suspected of causing hallucinations. I have mentioned L. marginatum and L. mixtecorum, the hallucinogenic puffballs in my book report on the Schultes book: "The Botany and Chemistry of Hallucinogens" in the Sept. 1973 issue of Mycena News. G. spectabilis became known for its psychotropic effects after a family of three consumed what they thought to be Honey mushrooms. Within several minutes, 2 experienced dizziness and were subject to hallucinations. The third merely felt "giggly". Additional symptoms were hindered muscular activity, nausea and abdominal stress. All recovered within a few hours. Chemical analysis indicated the presence of bis-noryangonin, a styrylpyrone with kava-like effects, no psilocin or psilocybin was evident. (see Buck, Robert W. 1967: PSYCHEDELIC EFFECT OF PHOLIOTA SPECTABILIS. New England J of Med. 276 (7):391-392)

R. Gordon Wasson has written extensively on A. muscaria and the "Sacred Mushrooms" of Mexico. His book SOMA: DIVINE MUSHROOM OF IMMORTALITY, available in paperback, covers history and uses of A. muscaria. He links the use of this mushroom to the ancient soma-cult of India, some 3500 years ago.

Soma, holy inebriant, an extract of plant origin appears in 120 of the Rg. Veda Hymns. Identification of soma has been the greatest ethnobotanical enigma of the past century (Schultes). Its origin lost some 2000 years ago when the cult died out. Wasson further documents A. muscaria use among the Ostyak and Vogul tribes of western and the Chukchi, Koryak and Kamchadal tribes of north-eastern Siberia. A peculiar feature found among these Siberian tribes (also mentioned in some of the Veda hymns) is the drinking of the urine of a person having eaten the fungus. It appears that the hallucinogenic compounds (e.g. muscimol) are passed in the urine, not those substances causing the unpleasant side effects such as gastrointestinal upset, diarrhea and vomiting.

It has been suggested by Andrija Puharich that A. muscaria was once used in ancient Egypt (in THE SACRED MUSHROOM), and by the Chatino Indians of Southern Mexico (in BEYOND TELEPATHY). The Egyptian theory is based on Puharich's observation of Harry Stone, a young sculptor and sensitive, who in trance states assumed the personality of the Egyptian Ra Ho Tep, and as such wrote, talked and once performed the mushroom ceremony for Puharich.

Wasson, who explored the various regions of Mexico for many years in his research on the hallucinogenic fungi, disagrees strongly with the claim that A. muscaria is used by the Indians. In a footnote to his article NOTES ON THE PRESENT STATUS OF OLOLIUHQUI AND THE OTHER HALLUCINOGENS OF MEXICO (in Psychodelic Review 3, 1964) he writes:

...Puharich does not identify the spot where he met his brujos, though it seems probable that he did not get beyond the mestizo town of Juquila. He does not explain how he put his question to them, how he explained over a double linguistic barrier what A. muscaria

looked like. He does not explain what precautions he took to avoid a leading question that would almost certainly produce his desired answer...

In 1971, Dr Bernard Lowy of Louisiana State U. discovered a Maya Codex (probable copy of the famed Madrid Codex) in Guatemala, showing a seated figure, holding what appears to be a mushroom. It is adorned with wart-like designs which Dr Lowy interprets as representing A. muscaria. (Mycologia 64 (4):816-21, 1972).

Teonanacatl, Flesh of the Gods, was the name given to their sacred mushrooms by Indians of the Americas. In 1502 at the coconation of Montezuma, they were given to captured Tlascapan princes, enemies of the Aztecs. Ten written accounts of the ceremonies survived (documented by Wasson). As could be expected, these rites were viewed as manifestations of the powers of evil and darkness by the Spanish. Wherever possible they tried to suppress use of these strange fungi. How strongly these early settlers felt can be seen from the following quote of the writings of a monk, Toribio de Benavente (HISTORIA DE LOS INDIOS DE LA NUEVA ESPAÑA):

...They had another drunkenness which made them more cruel: which was of some small mushrooms... and after a while they were seeing a thousand visions, especially of snakes, and as they went completely out of their minds, it seemed to them that their legs and bodies were full of worms which were eating them alive and thus, half raving, they went out of the house, wishing that somebody would kill them, and with that bestial drunkenness and the trouble they felt, it would happen sometimes that they hanged themselves. They called these mushrooms teonanacatl, which means flesh of the God (the Demon they adored), and in that manner, with that bitter food, their cruel god held communion with them...

Thus it should come as no surprise that the mushroom ceremony disappeared from the occupied lands, to survive only in the rugged interior mountains, inaccessible to their foes. Despite the many detailed and descriptive Spanish reports, the identity of Teonanacatl as a mushroom was questioned some fifty years ago by William Safford, an economic botanist, who in 1915 proclaimed that it was the Peyote cactus rather than a mushroom. A detailed rebuttal of the Safford theory can be found in Weston La Barre's book THE PEYOTE CULT, Appendix # 3, "Peyote and Teonanacatl," for those interested in further reading.

The story of the rediscovery of the mushroom cult can perhaps best be shown by quoting an excerpt from NOTE ON THE DISCOVERY OF TEONANACATL, by Jean Bassett Johnson (American Anthropologist # 42, p 549, 1940).

...during Easter week, 1936, Mr R J Weitlaner of Mexico City spent four days in Huautla de Jimenez, Oaxaca, where he obtained for the first time the full Mazatec calendar. Mr Weitlaner learned from Sr Jose Dorantes, a Mazatec merchant, of the existence and use of the mushrooms in curative witchcraft and divination. Sr Dorantes also described his own reactions

upon eating three of the mushrooms, recognizing the mushrooms as *teonanacatl*, Mr Weitlaner communicated the news of his discovery to Dr B P Reco, who sent the specimens to botanists for identification. In July 1938, the writer, accompanying Misses Louise Lacaud, Irmgard Weitlaner and Mr Bernard Bevan spent some weeks in Huautla de Jimenez, charged with continuing the investigations commenced by Mr Weitlaner, who generously placed his data at our disposal. We were able to collect a considerable amount of data on witchcraft and the use of the mushrooms...

While in Huautla, we met Mr Schultes and Dr Reco, who were collecting ethno-botanical data and specimens. At the time, and later, when he was preparing his identification of the mushrooms, Mr Schultes had access to our data, for which he generously gave me credit. Mr Schultes did not know of the previous discovery by Mr Weitlaner, and for this reason failed to mention him in his first paper on *teonanacatl*...

The paper mentioned by Johnson was Schultes article in the Botanical Museum Leaflets (Vol 7:3, Feb 21 1939, pp 37-54 "The identification of *Teonanacatl*, a Narcotic Basidiomycete of the Aztecs".)

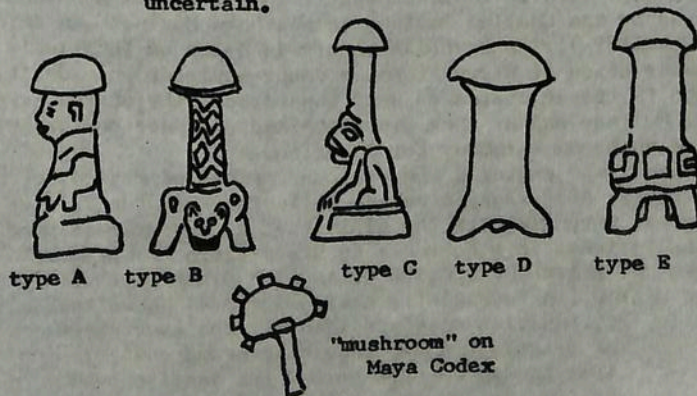
Wasson believes this paper to be the foundation of all further serious scientific research in the field. I have gone into some detail to show the chain of events, leading up to the rediscovery of the mushroom cult since few books mention or elaborate on this subject. Yet it seems to me an important link in that chain. Schultes paper created considerable interest among scientific circles, nevertheless it would take another eighteen years before the mushrooms to become generally known. That occurrence was the Life magazine article of R Gordon Wasson entitled: "Seeking the magic Mushroom," May 13 1957 issue. It was well illustrated with drawings made by the French mycologist Roger Heim. The article describes the experiences of the Wassons in Oaxaca, where they were participants at a ceremony at the home of the curandera Eva Mendez in the remote Mixteco Mountains. Whereas Schultes in his early paper had identified the sacred mushroom as *Panaeolus campanulatus* var. *sphinctrinus*, one of the lesser important ones, Wasson listed seven species identified by Heim: *P. aztecorum* from the slopes of Popocatepetl, *P. mexicana* growing in pastures, *P. caeruleus* growing near Juquila, *P. caeruleus* var. *maztecorum* on sugar cane residue, *P. zapotecorum* on marshy grounds, *Conocybe siligineoides* on dead tree trunks and *Stropharia cubensis* which grows on cow dung.

Continued research by the Wasson-Heim team in the next couple of years led to the discovery of additional species. In an appendix to Wasson's article THE HALLUCINOGENIC FUNGI OF MEXICO: AN INQUIRY INTO THE ORIGINS OF THE RELIGIOUS IDEA AMONG PRIMITIVE PEOPLES, Botanical Museum Leaflets, Vol 19:7, Feb 17 1961, pp 137-62, he lists what he believes to be the fungi used by Indians of Mexico as of 1960 - nineteen species of *Psilocybe*, two *Panaeolus* species, and one specie each of the genera *Psathyrella*, *Conocybe* and *Stropharia*, a total of 24 mushrooms. Wasson and his wife Valentina Pavlovna published their combined efforts on mushroom research, a week after the Life magazine article appeared.

Their now famous two volume work MUSHROOMS RUSSIA AND HISTORY, printed with a limited edition has been out of print now for a long time. It was quite an expensive book, and few libraries have copies of it. Those that do, keep the works in locked cases. I can only hope that one day Mr Wasson will decide to have it reprinted, as he has done with his book SOMA. A comprehensive book on hallucinogenic fungi is badly needed.

Finally, I would like to point out some of the archaeological findings supporting the evidence of a mushroom cult in the Americas. I have already mentioned the Lowy find of the Maya Codex. In addition to that we have discovered Frescoes from central America, dating back to 300 A.D., which would suggest a mushroom cult as far back as 1700 years. More remarkable yet are the findings of the so-called mushroom stones, artifacts excavated in large numbers from the South of Mexico to El Salvador, one stone has been found in Bolivia (Inca-Uyu, Chucuito). The stones are approx. 30 cm high and picture animal or manlike figures crowned with an upright stipe and umbrella shaped top. For a long time they were thought to represent phallic symbols. This view is no longer popular, thanks in part to the work of the late Dr Stephan F. de Borhegyi, who devised a chart based on types and chronology:

- Type A Anthropomorphic sculptures with plain or circularly grooved caps. Chronological position uncertain.
- Type B Effigy mushroom stones, circularly grooved on square or tripod bases. Early and Late Preclassic. 1000 B.C. - A.D. 200
- Type C Effigy or plain with square or round bases, no grooved caps. Late Preclassic 500 B.C. - A.D. 200. Early Classic A.D. 200 - 600
- Type D Tripod stones, plain or carved stems, with clubby or sharp angled feet. Late Classic A.D. 600 - 900
- Type E Miscellaneous and possibly related stone and pottery objects. Chronological position uncertain.



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

Richmond, March 18 1974

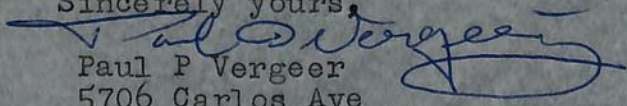
Dear Dr Lowy:

Thank you very much for the two reprints you mailed. I have mentioned your discovery and possible relationship with mushroom cult in the enclosed article. This article was written for the Mycena News, the newsletter of the Mycological Society of San Francisco of which I am an officer. Unfortunately I noted the date of the Galindo Codex as 1971. In the reprint you sent me, you list the year 1970. I will correct this in future writings. I'm looking forward to reading your article in the Jan issue of Mycologia, I'll try to get that issue ~~tomorrow~~. The enclosed article is a shortened version of the historical chapter of my research project on the hallucinogenic fungi. I'm presently working on the chapters on mycology and taxonomy of Psilocybe, section Gaerulescentes.

I would like to ask your permission to reproduce the drawing # 3, p 820 (Page XCVb of the Madrid Codex) in my final paper.

Thank you very much,

Sincerely yours,


Paul P Vergeer
5706 Carlos Ave
Richmond, Ca 94804

Dr Bernard Lowy
534 Highland Park Drive
Baton Rouge, La 70808

Richmond, March 3 1974

Dear Dr Lowy:

For the past couple of years I have become increasingly aware of the need for a comprehensive study on hallucinogenic fungi. The literature available is quite large, yet few books have been written for the general reader giving him an overview of the historical, mycological and pharmacological aspects with a broad bibliography for further specific research.

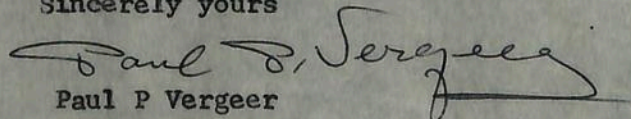
As an officer of the Mycological Society of San Francisco, I am constantly asked about these mushrooms. While many questions come from members of the Drug Culture, other individuals are genuinely interested yet unable to satisfy their curiosity. I have found most available books mediocre, often containing errors and omissions. A book such as the Wassons - Mushrooms, Russia and History - is unfortunately not available.

In my research I came across two articles you wrote for Mycologia (New records of Mushroom Stones from Guatemala and Mushroom symbolism in Maya Codices), which I read with great interest. I wonder if it would be possible for me to get reprints of these articles.

I would also be very interested in knowing whether you have discovered additional evidence regarding the use of A. muscaria among the indigenous inhabitants of the Americas.

Thank you very much,

Sincerely yours



Paul P Vergeer
5706 Carlos Ave
Richmond, Ca 94804

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE • LOUISIANA • 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

12-III-1974

Dear Mr. Vergeer:

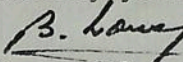
Thanks for the copy of your article in Mycena News which I would have missed, since I do not receive the newsletter. Two references that you mention are of special interest to me: the "Frescoes from Central America dating back to 300 A.D." and the mushroom stone "found in Bolivia (Inca-Uyu, Chucuito)." Would you be good enough to let me have further information on these?

Your reference to mushroom stones having been "excavated in large numbers" may be somewhat misleading. Borhegyi (in Wasson 1957) deals with about 50, all that came to his attention at that time. It was not until 1961 that he published on the 9 miniatures. Since then I have found in private collections (Nottebohm and others), in the Museum of Anthropology & History and elsewhere in Guatemala, El Salvador and Mexico, some 50-60 more, all of which I have photographed. These are for the most part still unpublished although I plan to publish on them in the future. I also included some historical notes in my 1971 paper (Mycologia 63: 983-993.)

In 1968, following some correspondence with Borhegyi, I suggested a slight modification of his Type B mushroom stone classification, based on a stone I came across from Mixco Viejo in 1963. This was published in Bol. Soc. Mex. Micol. 2:9-15. Regarding this stone, the enclosed copy of a letter from Borhegyi dated January 28, 1965, gives his commentary on it.

The following references may interest you if you have not already seen them: Wm. D.Gray. 1973. The use of fungi in food and in food processing. Pt. II. CRC Press. (esp.pp. 181-192); John Allegro. 1973. The cult of the sacred mushroom in the ancient Near East and Middle America. Revista Interamericana Review III(3):252-257.

Sincerely yours,


Bernard Lowy

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE • LOUISIANA • 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

March 4, 1974

Dr. Ethel Dunn
Department of Anthropology
University of California
Berkeley, Calif., 94720

Dear Dr. Dunn:

I have just read with great interest your ".footnote to Wasson's Soma" in the October 1973 number of Current Anthropology. For several years ethnomycological studies have occupied my attention to some degree and currently I am compiling a list of words in various indigenous languages of Guatemala and southern Mexico which refer to specific fungi and their uses. Amanita muscaria is of course well known throughout these regions and the enclosed note (in press) may interest you in view of your investigation of some aspects of Soma.

There are few professional mycologists who have seriously concerned themselves with the importance of fungi in diverse cultures and I believe there is a common misunderstanding about Wasson in this regard. In spite of his varied and significant contributions to ethnomycology, I do not think he has ever made claim to being a mycologist and describing him as a "mycologist of some standing" attributes to him a broad competence in mycology which I think that he himself would surely deny. In mycological matters, he has depended largely on the resources of Dr. Roger Heim of Paris, who is an outstanding mycologist and who has, as you probably know, accompanied Mr. Wasson on several of his forays. Incidentally, I have corresponded with Wasson for several years and also recently sent him a copy of the enclosed note.

If a reprint of your article is available, I would very much appreciate receiving a copy.

Sincerely yours,

B. Lowy
Bernard Lowy
Professor of Botany

University of California Berkeley
Directory Service -

REASON FOR RETURN:

Not in University Directory

Insufficient address. (Must be addressed to proper department)

Refused

Illegible

Deceased

Date 3-7-74

Initials SL



LOUISIANA STATE UNIVERSITY
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BATON ROUGE • LOUISIANA • 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

March 1, 1974

Dr. Sol Tax, Editor
University of Chicago
1126 East 59th Street
Chicago, Illinois 60634

Dear Dr. Tax:

For some years I have been interested in ethnobotanical work, especially in the American tropics where I have studied the fungi at first hand and have a familiarity with their uses among some indigenous people of the region.

Dr. Nicholas M. Hellmuth has invited me to join the staff at Yaxha this summer and he suggested that I write to you concerning a paper which he tells me is in press in Current Anthropology. It is on the Maya use of mushrooms and toads by Dobkin de Rios. Since it may be some months before this is published or at least before it reaches our library, I wonder whether you would be kind enough to let me have a pre-publication copy of the article.

I have enclosed 2 reprints and a xerox copy of a note to be published shortly, all dealing with ethnomycological matters.

Sincerely yours,

B. Lowy

Bernard Lowy
Professor of Botany

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE • LOUISIANA • 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

January 28, 1974

Dorothy P. Monsanto
Instituto Guatemalteco Americano
Ruta 1, Via 4, Zona 4
Guatemala, C.A.

Dear Mrs. Monsanto:

During my brief visit to the Instituto last June, you kindly referred me to the photographer Jacques Vankurt of "Filmtrek", but because of some difficulties in phone connections, I was unable to contact him to ask about his photos of mushroom stones, a few of which I saw in your office.

I am planning a small exhibit on ethnomycology here at the university and one or more of Vankurt's photos would be very nice to have. I wonder whether you would be good enough to phone his office and inquire whether any of his mushroom stone prints are available? If so, he could write to me directly to let me know what he has and at what cost.

I would deeply appreciate your help in making this inquiry for me.

With thanks and best regards,

Cordially yours,

B. Lowy
Bernard Lowy
Professor of Botany



WRIGHT STATE UNIVERSITY

DAYTON, OHIO 45431

513-426-6650

February 4, 1974

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

Dear Dr. Lowy:

I apologize for being so late in thanking you for your kindness in sending me off-prints of your articles "Mushroom Symbolism in Maya Codices" and "A Newly Discovered Copy of a Maya Codex."

Perhaps my tardiness may be forgiven by the fact that I have been in the hospital for quite a period of time and have just returned to work.

I have found your articles very informative and at the same time that on the newly discovered Codex quite disturbing as I have spent considerable time in Guatemala and knew nothing of the existence of that Codex. In fact, our paths must have crossed several times as I was also in Guatemala in 1970.

I do thank you and if I may be of any assistance to you I hope you will feel free to ask.

Most sincerely,

Eugene R. Craine
Eugene R. Craine

ERC/ed

10 January 1974
Apartado 69-636
Mexico 21, D.F.
Mexico

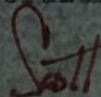
Prof. Bernard Lowy
Department of Botany
Louisiana State University
Baton Rouge, Louisiana 70803

Dear Prof. Lowy:

Thank you belatedly for your reprints of two articles regarding the Galindo Codex and the importance of mushrooms therein. As a social anthropologist I find your work relevant to my own concern about mesoamerican shamanism. At present John Ingham of the University of Minnesota and myself are in the midst of a study of Nahuatl shamanism as it persists in the 'altos de Morelos' State, Mexico.

I would always welcome any more of your material pertinent to shamanism and of course a personal visit should you come this way. I live in Tlayacapan, Morelos, Barrio Altica, Morelos-2.

Cordially,



Scott S. Robinson

Jan. 1974

Dear Dr. Lowy,

Felices Pascuas

y

Venturoso Año Nuevo

Very best wishes for Christmas & the
New Year from all of us at the
Proyecto Lingüístico Francisco Marroquín.
We hope you'll be able to return to
Guatemala soon.

Tony Jackson.

LOUISIANA STATE UNIVERSITY
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College of Arts and Sciences

DEPARTMENT OF BOTANY

December 7, 1973

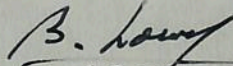
Professor John Brough
Department of Sanskrit Studies
University of Cambridge
Cambridge, England

Dear Professor Brough:

Although I am a mycologist, I have for some years had more than a passing interest in ethnomycological matters. Recently, I read Mr. Wasson's rejoinder to your 1971 review of his work "Soma," but I do not have at hand a copy of your paper. The Soma controversy is of great interest to me and I would deeply appreciate your kindness in allowing me to have a reprint of your essay, if this is available.

I have enclosed a copy of my brief 1969 review of Mr. Wasson's book, written for our national journal "Mycologia," as well as two reprints dealing with still another aspect of the significance of Amanita muscaria in Mesoamerica. I recently found linguistic evidence of the existence among the Quiche of Guatemala and the Tzotzil of Chiapas, Mexico, of the thunder-bolt-Amanita muscaria legend.

Sincerely yours,


Bernard Lowy
Professor of Botany

No reply

NORTHWESTERN LOUISIANA CRIMINALISTICS LABORATORY

POST OFFICE BOX 4 SHREVEPORT, LOUISIANA 71102

—SERVING THE FOLLOWING PARISHES—
BIENVILLE, BOSSIER, CADDO, CLAIBORNE, DESOTO,
LINCOLN, NATCHITOCHEs, RED RIVER, SABINE, WEBSTER

November 27, 1973

Dr. Bernard Lowy
Botany Department
Louisiana State University
Baton Rouge, La.

Dear Dr. Lowy,

Dr. Speairs at LSU-Shreveport called you in regard to mushroom identification for the Northwest Louisiana Crime Lab several weeks ago. He stated you would need fresh samples or spore prints along with dry samples.

We related your requirements to local law enforcement agencies. Last week fresh samples of mushrooms were seized and submitted for analyses. They were supposed to have come from cow pastures.

Spore prints were made from several mushrooms, and the mushrooms were allowed to dry. One print did not come out very good. The mushrooms and spore prints are enclosed.

Your identification of these mushrooms would be greatly appreciated. I would also appreciate any information on the identification of mushrooms of the genus Psilocybe.

Yours very truly,

Gretchen Fowler
Gretchen Fowler

GF/msd

Enclosure

Northwest La. Crime Lab
Caddo Parish Courthouse
Shreveport, La. 71101

Throphosia sp. (*sterwanaria*)?
Lactaria sp.

LOUISIANA STATE UNIVERSITY
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College of Arts and Sciences

DEPARTMENT OF BOTANY

December 6, 1973

Gretchen Fowler
Northwestern Louisiana Criminalistics Laboratory
Caddo Parish Courthouse
Shreveport, La. 71101

Dear Miss Fowler:

I have examined the 4 specimens of mushrooms you sent to me recently, with the following results.


Numbers 1, 2 and 4 are in my judgment, different stages of the same fungus and are in all probability a species of Stropharia, probably close to stercoraria. This is closely related to Psilocybe from which it differs principally in certain microscopic features. Some Stropharia species are also known to be hallucinogenic; consequently, they have been confused with species of Psilocybe. In any case, the genera are difficult to separate taxonomically even in the fresh condition and identification is still more uncertain when working with dried material. A basic paper that you should consult is the following: Singer, R. and A. H. Smith. A taxonomic monograph of Psilocybe, section Caerulescentes. Mycologia 50:262-303. 1958. There are 18 species described and their identification is a highly technical problem.

Specimen No. 3 is unrelated to the other three and belongs to the family Russulaceae. It is a species of Russula or Lactarius, the chief difference between them being the production, in fresh specimens, of a milky juice where bruised or broken and the absence of "milk" in Russula species. Both genera are very common, numerous and taxonomically complex. Some species of Russula are known to be toxic, but none in the U. S. have been found to be hallucinogenic. There are many good edible species in both genera.

Lactarius

Whenever possible, entire specimens should be collected, including the stalk, since some diagnostic characteristics are frequently associated with it.

Sincerely yours,



Bernard Lowy
Professor of Botany

Karl-Herbert Mayer
Raffaltweg 11
A-8010 GRAZ
Austria, Europe

Dr.B.Lowy
Louisiana State University
Baton Rouge, Louisiana 70803
U.S.A.

November 14, 1973

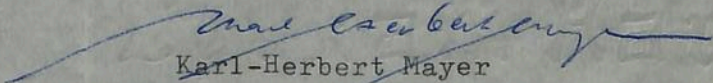
Dear Sir:

I just returned from Mexico and found your nice letter of October 5, 1973 with the enclosed xerox copy of the reprint on the mushroom stones in Guatemala.

I am very glad to have this copy. Unfortunately I had not much time in Mexico but was successful to locate additional mushroom stones. When I have finished my notes I will send you a copy of it. I hope you found also new data on the hallucinogenic mushroom complex during your latest trip to Middle America. Whenever you will publish something on the topic please be so kind to inform me about.

Once more I would like to express my gratitude for your nice help.

Yours very cordially,


Karl-Herbert Mayer

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

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College of Arts and Sciences

DEPARTMENT OF BOTANY

5-X-1973

Mr. Karl-Herbert Mayer
8010 Graz, Raffaltweg 11
Austria

Dear Mr. Mayer:

I only recently returned from Central America and together with your letter I found a copy of the bibliography which you kindly sent to me.

I have made a xerox copy of the reprint you requested since no other originals are left.

With best regards,


B. Lowy

PRE-COLUMBIAN ART RESEARCH PROJECT

THE ROBERT LOUIS STEVENSON SCHOOL • PEBBLE BEACH, CALIFORNIA 93953

MERLE GREENE ROBERTSON • LAWRENCE W. ROBERTSON

October 30, 1973

Professor Bernard Lowy
Botany Department
Louisiana State University
Baton Rouge, Louisiana 70803

Dear Bernard:

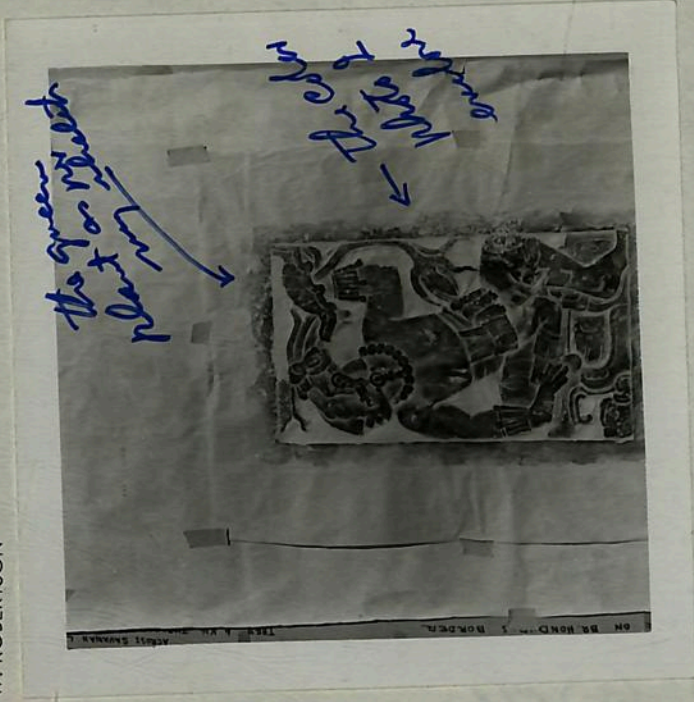
I remember your interest and help when I was working on the mushrooms for my Yaxchilan paper, and indeed it was a great help, especially codex paintings. I used you in a quotation in my paper. They are all in press now at Univ. of Oklahoma, but I understand being held up on some material that has not arrived from one or two from South America.

I have been wondering how your work went during your year there.

Right now I am working on some identification of floral elements that are used in Maya iconography, namely the *dorstenia contrayerba* (or so it seems to be called) and a plant which grows on a tree at Palenque , which I am enclosing pictures of when it was in bloom last summer. I think that this is the plant shown so often on Maya sculpture (example , the 2 figures on either side of the central fig. on the tablet of the slaves, Palenque, and from the same site, emerging from the headdress of the left figure on the Palace tablet). These are plates 12, 14, and 20 in this little booklet that I do not know if you have. They are shown many other places in Maya art as well. The plant in the picture seems to be called (*patailla* sp ?) by people at Palenque, but I can find nothing like that. It blooms very rarely and happened to be blooming last August, and everyone made a big thing of it. The flower was about 10 feet off the ground on the tree, so I got a ladder to photograph it. Everything in Maya literature refers to the lily or water lily of Maya art, but many of the depictions on monuments do not look much like water lilies to me, but more like this flower. Do you have any way of identifying it, or some scientific drawings that one could compare to its Maya depiction ?



DOS PILOS



Also there is another plant that grows at the ruins at Palenque and I have never seen it any place else. It is called *dorstenia contrayerba*. I looked it up at the Stanford botany library, and found some material on it, in Las Plantas Medicinales de Mexico, Maximino Martinez, 1959. There is only a poor drawing of it, but it does look as if this is what it is. It is used medicinally and I also found that this plant has intoxicating properties.

It grows low, about a foot high. The flowers are green, with little bumps all over the surface, and have a long slender stem. The flower part is thick like a succulent. I am quite sure that this is what is illustrated in the Palenque throne leg (the so-called Madrid stela) and is plate 5 in my Maya Sculpture book. I have enclosed a small photo print also. This is a sketch of the plant. It is a bright deep green.

I am doing this paper of which this plays an important part, to be given at the Mesa Redonda de Palenque in December. I will be leaving here the first of December, so I really do not have much time and have been rather unsuccessful in finding any identifications of these two plants.

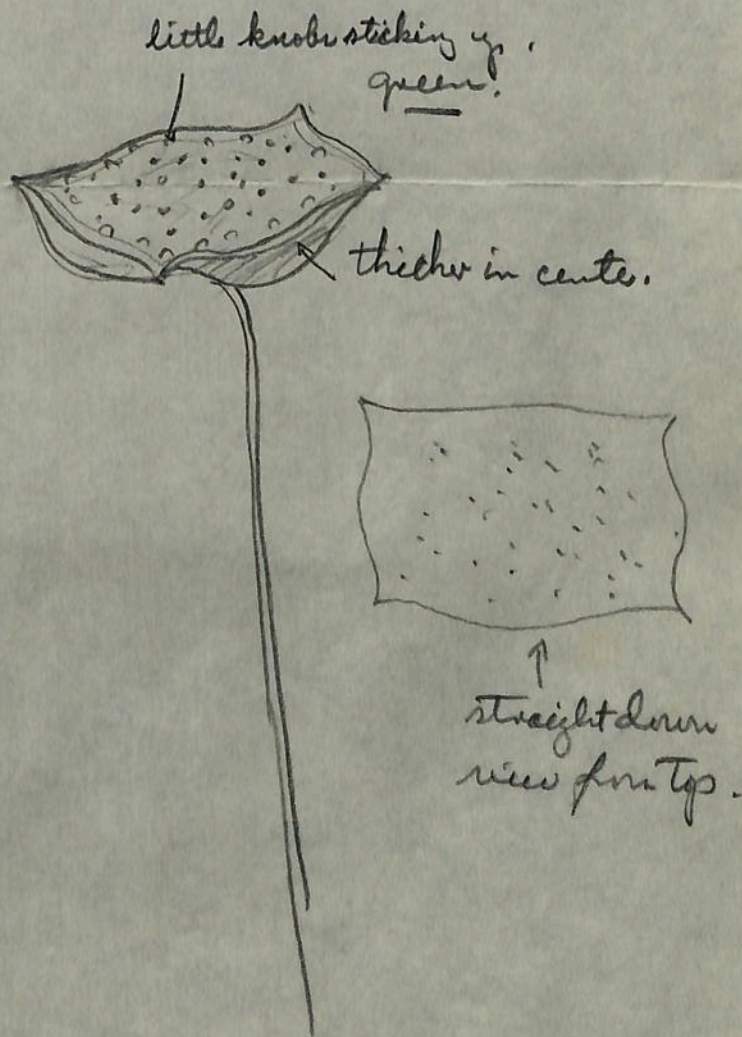
I would surely be grateful if you have time to answer and let me know if you have any material on them/.

Thank you so very much,

Most sincerely,

Merle

Merle Greene Robertson



Merle Greene Robertson
Robert Louis Stevenson School
Pebble Beach, Calif. 93953



Hylocereus sp.

from Merle
Crane B.

30-X-1973



LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE
BATON ROUGE · LOUISIANA · 70803
College of Arts and Sciences

DEPARTMENT OF BOTANY

Merle Greene Robertson
Robert Louis Stevenson School
Pebble Beach, Calif., 93953

Nov. 5, 1973

Dear Merle:

The two color photos you sent leave no doubt that the plant is a member of the Cactaceae and in all probability of the genus Hylocereus. A cactus specialist could probably name the species, but it appears to be close to H. monacanthus cited by Stanley (see enclosure). This is a partially epiphytic climber, so it is not surprising that you had to climb a ladder to reach it. To be on the safe side, it might be cited as Hylocereus sp. until you can get it completely confirmed. It may not really be "rare", but only rarely observed, since the flower generally lasts for a very short time, perhaps only for a single opening in some, and besides this is one of the night-bloomers. Many are very fragrant when open. Do you remember?

Yes, the "lily of Maya art" has come to be traditionally accepted, but tradition in this area as elsewhere should be carefully scrutinized. Your reinterpretation is a case in point. From what we already know about psychotropic plants and their influence in certain societies, contemporary as well as ancient, this knowledge might serve as a clue to the identification of at least some of the plants depicted in codices and on stelae. There are numerous cacti that have hallucinogenic alkaloids. Last year in Peru I obtained specimens of one of them, the "San Pedro" cactus (Trichocereus pachanoi) which is used by curanderos today as an important part of their "materia medica."

I showed a colleague your sketch and he agrees that Dorstenia is a likely guess. In this regard, Roy's remarks (enclosed) are also of interest, in the event that you have not already consulted his "Ethnobotany of the Maya."

I was in Peru for only 6 months, most of the time teaching at a university in the northern "coastal" town of Piura. But I managed to get away to Amazonas, Yurimaguas, Urubamba, Río Madre de Dios etc, so it was not a total loss. I have exciting news from Guatemala where I spent part of the summer ('73) I have found (for the first time in the Americas) the thunderbolt-Amanita muscaria myth among the Quiche and also among the Tzotzil-speaking natives of Chiapas. A short paper is in press.

Thanks for your handsome catalog of rubbings. I also have your beautiful "Maya Sculpture". When and where will the "Maya Redonda" take place I hope some of this is useful to you. Good luck

Saludos cordiales,
Bernard Lowy

B - In Merle's, Peter Furst wrote to me and mentioned that he had seen your paper on Yaxchilan stelae in which you indicate that Pitourhe arborea was used among the curanderos. Do you have more specific information on this?

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DEPARTMENT OF BOTANY

12-III-1974

Dear Merle:

This June I plan to return to Guatemala and Mexico and for at least part of the time I shall probably be at Yaxha. I don't think that anyone has yet paid the slightest attention to the fungi in that region and since Nicholas Hellmuth has invited me to join the staff there, it would be a fine opportunity to gather mycological/ethnomycological information in an area I have not previously visited.

I would like to ask your help in a seminar that I am conducting this semester on the impact (historical, cultural, artistic etc) of hallucinogenic plants on people of the Western hemisphere, past and present. Your interpretation of some iconography on Maya stelae is due to come up for comment and I would appreciate any new information along these lines that you may have published (or not) since our communication last November. I have your print of the "Madrid Stela" from Palenque which you sent me then. Has this been published? Would you be good enough to bring me up to date on this?

With best regards,

Cordially,

Bernard
B. Lowy

Karl-Herbert Mayer
8010 Graz, Raffaltweg 11
Austria — Europe

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

June 13, 1973

Dear Sir:

I just read your article in Mycologia, vol 64, 1972 "Mushroom Symbolism in Maya Codices", which was very interesting.

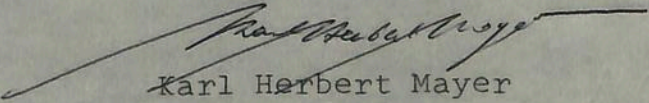
The device you suggest to be an "amanita muscaria" is shown not only in the Maya MS. It is frequently to be seen in the Mixtec Codices. I sent you a sheet with a picture of the CODEX VATICANUS B 3773, which appeared now in Graz as a facsimile edition. It shows the death/wind god (mictlantecuhctli/ehecatl) a form of Quetzalcoatl, who has the curious object attached to his body.

I have by now the three articles which appeared in MYCOLOGIA, but unfortunately lack the one "Un hongo de piedra", 1968, Bol. Soc. Mex. Micol. vol. 2, p. 9-15.

I was unable to get this paper from Mexico City and ask you now to be so kind to inform me, if you could supply the article or a Xerox copy of it. For your expenses I would send you the money right away, of course.

I hope that you can do me this favour and thank you already in advance for your kind help and reply.

Yours very cordially,


Karl Herbert Mayer

1 enclosure

BOTANICAL MUSEUM OF HARVARD UNIVERSITY

*Oxford Street
Cambridge, Massachusetts 02138*

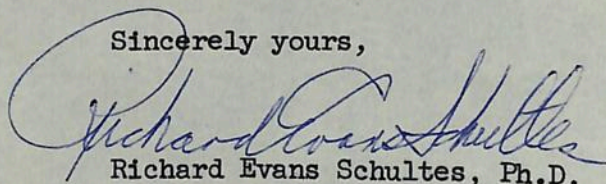
October 5, 1973

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

Dear Bernard:

Thanks for the pre-publication copy of
your article on Amanita muscaria. Please
do not forget us with a reprint.

Sincerely yours,



Richard Evans Schultes, Ph.D.
Professor of Biology
Director, Botanical Museum

RES:dw

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

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College of Arts and Sciences

DEPARTMENT OF BOTANY

27-IX-1973

Dear Dick,

The enclosed pre-publication copy may
be of interest to you. I have also sent
one to Wesson.

Sincerely,

Bernard Long

GUATEMALAN INDIGENOUS LANGUAGES

CANJOBAL
JAQUALTECO
ACATECO

HUEHUETENANGO REGION

KAREN DAKIN STUDYING CANJOBAL IN
ANTIGUA, GUATE. DEC. 1973.

PLFM
Apartado 237
Antigua, Guatemala, C.A.
August 4, 1973

Dear Bernie:

The enclosed are excerpts from Judith Friedlander's this on Hueyapan, Morelos, which she refers to as Cualpan for anonymity. I thought you might be interested because mushrooms are eaten by the 'graniceros' who ask for rain. If this ties up with your research, you might write her:

215 W. 91st St.
New York, New York 10024

Also Scott Robinson and John Ingham are working on the graniceros all around the volcanoes, and might have additional information:

Scott Robinson
Apdo. 69-636
Mexico 21, D.F.

Maybe these tie-ins are too distant from what you found in Guatemala, but they sounded like there might be some connection.

I met the people from the PLFM. They said that they had really enjoyed the time spent with you. I hope your summer's work went well and that Sara's trip was enjoyable in spite of Peron. I'm looking forward to getting to Antigua.

Greetings to Sara, Maxine, and Doris.

Best,
Karen

LOUISIANA STATE UNIVERSITY
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BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

8 August, 1973

Karen Dakin
PLFM
Apartado 237
Antigua, Guatemala, C.A.

Dear Karen:

Many thanks for your letter and the most interesting enclosures. Scott Robinson wrote to me in July 1972 to tell me about his study of the "graniceros" who inhabit the slopes of Popo and Ixta and I suggested that he get in touch with a colleague of mine at the Politécnico in Mexico City for orientation on hallucinogenic mushrooms (from a taxonomic and geographical point of view) but I have not heard from him since.

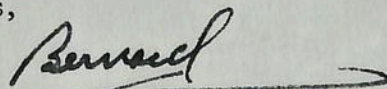
In Judith Friedlander's ms, I wonder whether anyone has identified the "hongos de agua" that she mentions. It is of great interest to know that the "rain petitioners eat hallucinogenic mushrooms as part of their ritual." In all likelihood these are species of Psilocybe but without voucher specimens there is no proof. I'll write to J.F. about this.

Your colleagues Will Norman, Nora England, Tony Jackson and Jo Froman were all most cordial and helpful and I am indebted to you for your kindness in letting me know about their work. As Will and Nora may have told you, I was able to get some vital information, especially from the Quiché group which establishes beyond doubt what I had earlier suspected, that among the Quiché the Amanita muscaria-thunderbolt legend is an integral part of their folklore. Later, in Chiapas, I also discovered that among the Zinacantecos there is an expression exactly equivalent to the Quiché's "kaquljá:" and this is "yuy chauk" = yuyo de rayo = Amanita muscaria!

I am now writing this up for publication in a brief note and will send you pre-publication copies when I have it ready.

Many thanks to you all,

With kindest regards,


B. Lowy

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

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College of Arts and Sciences

DEPARTMENT OF BOTANY

8 August, 1973

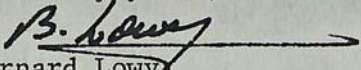
Judith Friedlander
215 W. 91st Street
New York, N.Y. 10024

Dear Miss Friedlander:

Karen Dakin, a good friend and colleague of mine recently sent me a copy of a few pages of your thesis relating to the rain petitioners of Cualpán (Hueapán, Morelos). I have been pursuing ethnomycological studies in Mexico and Central America for the past few years and the reference that you make to the "rain petitioners who eat hallucinogenic mushrooms as part of their ritual," (p. 96) interests me greatly. On l. 3-4 of your Spanish translation of the Nahuatl text, you say that "...el guiador busca los hongos de agua ...". I wonder whether these mushrooms have been identified and if not, whether it would be possible to obtain specimens for identification. These might be among the species used in the ceremony in Huautla and its environs but in any case verification would be significant. At least one difference is apparent in the rituals followed in Huautla and in Hueapán: ie in Huautla the "caldo de los hongos" (l. 5-7, p. 96) is not taken ceremonially. Incidentally, the translation of María Sabina's chant in Mazatec (to English) by Sarah C. Gudschinsky and Eunice V. Pike, of the Huautla mushroom ceremony, might interest you if you don't already know about it. It may be found in Folkways Records album No. FR 8975 entitled "Mushroom ceremony of the Mazatec Indians of Mexico."

If you have any additional references to the ceremonial use of mushrooms in Mexico (or elsewhere), I would be grateful to hear about them. I enclose a few reprints that you may not have seen.

Sincerely yours,


Bernard Lowy
Professor of Botany

I am going to quote from the Cualnan textual material published in 1949 in the Mexican journal TLALOCAN on the subject of how one becomes a rain petitioner (pedidor de agua) and how one prays for rain. Although rain petitioners who eat hallucinogenic mushrooms as part of their ritual, practice some of the ostensibly indigenous customs in the pueblo, even these people have been so influenced by the church that the archispanic content of their rituals is dominated by Catholic themes. What is more, the present-day Catholic priest continues to support the rain petitioners by holding an official mass on the sacred hill of the petitioners at the beginning of the rainy season to pray for a good year.

It should be noted that the term for "water spirits" in the Nahuatl text is in Spanish, however the "air spirits" is in Nahuatl-- text. "ehekatsintih." I have underlined all Spanish loan words in the Nahuatl / The Spanish words which might not be easily recognized are "orannan" meaning "horas" and "artal" meaning "altar."

COMO SE HACEN LOS PEDIDORES DE AGUA
(Relato de la señora María de los Santos)

1. "...se kiohtlaski mochiwa ihkwak se tlaneltoka chikawak
2. ipan inon tekitsintle. akin tlayekana, nochipa tlanltani kox
3. ipan kiohtlasyotl tlaneltoka, tia se kihtoa kema tlaneltoka, in
4. teyekanki kintemoah ananakameh, moitokayotiah espiritos de agua
5. iwan se kikwaltiah xoxowik, noso se kiposoniliah iwan kiiltakitiah
6. in nanakaayotl. ihkwak se yokinkwah noso yokiltek in nanakaavotl,
7. se walkochwetsi; ihtek inin kochistle se kimmita miak piltonkokoneh,
8. yehwan espiritos de agua (aguadaores y regadores, trabajadores
9. y cultivadores); kemanian se kita miak mille, miak avonkokoneh,
10. miak xochitl iwan miak tlamantih, nochi tloxoxowixtok; nochi inon
11. kihtosneki in tlamochiwaltisken in ixtlawatlakah; noikhi kihtosneki
12. yehwa inon se wikas keh tlakalakille noso tlamanaile, ompa kanin
13. moihtlanis in kiohtsintle; yehwa inon motemaka intlan ehkatsitsintih.
14. ihkwak ihtek in kochistle ammo tlen mota, inon kihtosneki ammo
15. se ixtlawatlakatl tlamochiwaltis. yomihto achto kenin se tlatekipanoa;
16. axan mihtoa kenin se mochiwa kiohtlaski. ok nikaxiltis; akin
17. kinekis yes kiohtlaski, aik momohtis ihkwak tlatewinis, tlapetlanis
18. iwan tlatoponis."

1. "...un pedidor de agua se hace cuando cree fuertemente sobre
2. ese trabajo. El que guía, siempre pregunta que si acaso cree
3. sobre la pedida de agua; si uno dice que sí cree, el guiador busca
4. los hongos de agua, llamados espíritus del agua y se le da de
5. comer crudos, o también le hierven a uno y le hacen tomar el caldo
6. de los hongos. Cuando ya comió uno o ya bebió el caldo de los
7. hongos, uno cae dormido; dentro de este sueño ve uno muchos niños,
8. esos son los espíritus del agua, (aguadaores y regadores, trabajadores,
9. y cultivadores); algunas veces ve uno mucha milpa, muchas calabacitas,
10. muchas flores y muchas cosas todo reverdecido; todo eso quiere
11. decir, que van a producir los campesinos; también quiere decir, que
12. eso se debe llevar como ofrenda u obsequio, allá donde se pedirá
13. la lluvia; eso es lo que se da con los señores aires. Cuando
14. dentro del sueño no se ve nada, eso quiere decir que ningún
15. campesino hará producir. Ya se dijo antes, cómo debe trabajar
16. uno; ahora se dice cómo se hace un pedidor de agua. Aún voy a
17. agregar: quien quiera ser pedidor de agua, nunca debe espantarse
18. cuando truene (el cielo), cuando relampaguee."

FOOTNOTE FROM PREVIOUS PAGE

* I am frankly suspicious of the authenticity of the term "ehkatsintih." According to my information, "airs" or "winds" are called "yihvitzitzintih" in Cuicuilco. Clearly this is the same word, but the variation in transcription is most significant considering the fact that the published version is the Classical Nahuatl word. I suggest that the Cuicuilco responsible for the publication of this text was probably influenced by members of the urban elite who were interested in indigenous survivals. As a teacher of Nahuatl in Mexico City, the Cuicuilco could not have helped but come into contact with such cultural romantics--stories I heard about the man from another villager who knew him in Mexico City confirms this assertion. I therefore propose that perhaps the Cuicuilco school teacher wanted to please his urban friends by introducing a little prehispanic terminology into a text which otherwise exhibited considerable interference from Spanish and Catholic symbolism. Even if I am wrong, and all that the Cuicuilco did was to correct the village Nahuatl to conform to Classical phonology, even then the significance of the term as evidence of prehispanic culture is minimal. We must take into consideration two things: first the context in which the "air spirits" aid is solicited; and secondly the fact that the Spaniards of the sixteenth and seventeenth centuries also attributed great powers to winds and airs as I have already noted. From such a perspective then, I would conclude that the term is primarily interesting because it reflects how Spanish colonial culture successfully transformed and incorporated a ~~acceptable~~ compatible prehispanic ritual into their version of Catholicism, not that it testifies to the preservation of indigenous tradition in any meaningful way.

KIOHTLASYOTL

Relato de la pedidora de agua María de los Santos

1. TLON MONEKI IPAN ININ TEMITL:

2. "in se tlamantle, moneki ammo se tlakwas teotlahkan,
3. san moteochiwaskkeh nochi yowalle in nochtin tlen yaskeh;
4. mostlatika noihki ammo se almasalos; se tlakwa satepan, ihwak
5. yotlatekitlan ika in atl iwan ihwak yoasik sempoalle iwan nawi
6. orahpan in tlahiyowilistle, ihwak inon tlakwah.
7. ika ome tlamantle, se tlamantle, se tlamawistlahpalos, in
8. tla ammo se kichiwa kiehekamotlan in yolehekameh: ihkwak se
9. kikokoah, kwalle se mopahtia ika sasan tlen xiwitl.
10. ika yeyi tlamantle, se kihtlanis tlahko chipinalle atl,
11. chika san kwaltsin kiowis; tla se kihtlanis nochi se chipinalle
12. atl, ihkwak inon tlapachiwis, tlapohpolewis ika in miltih
13. iwan nochi tlen motokas; ihwak se kihtlani akoatl, moxochtia se
14. tekoatl; inin mochiwa ihkwak se kineki tlaamokwalchivas; tla
15. se kineki tesiwis, se kasi in tamasoli iwan se kixochtia iwan
16. moihtlani tesihkiowitl.
17. ika nawi tlamantle, ihkwak pewa se yankwik xiwitl, se yoh
18. tlatlahpalotin, san moteochiwatin, san monemachtitin. satepan
19. se tekiti ipan juebestika, sabadohtika, iwan domingohtika ipan
20. inon tonaltih tekitiwan ehekatsitsintih.
21. ika makwille tlamantle, se kibias chikawak in tlaneltokalistle
22. ipan inin tekittl; tla inin ammo onka, amitla kwalle se kichiwas.
23. TETLAHPALWILISTLE:
24. "aguadores y serafines: ;ave maria purisima! otasikoh
25. nikan ipan inin kiawaktle. artal sacrado iwan templo; tiktlahtlani
26. se tetlahpalwilstle ika tlen tikwalikah xitechwainanilihtsinokan
27. ika miak pakilistle, ika miak tlanekilistle; xitechwalmotlapohpol-
28. wilitsinokan in otiwalpanotahkeh ika in ammonawaksinko ipampa
29. se tetlahpalolistle tikwalchiwah." tammechanilihtsinoskeh ika
30. miak pakilistle in tlon antechwalmakiliskeh tlen ika tipanokeh,
31. tlen ika tinemiskeh. tla in dios oksepa techwalmomakilis
32. chikawalistle, oksepa tiwalpanoskeh ika okse tetlahpalolistle."
33. TLAHALAKILLE:
34. "san niman motlalia xochitl ipan sempoalle iwan nawi
35. kohtepanoltih, ompan moetsikateh ipan ketsaltepetsintle; nochi
36. in ikiawak moxihpohpoa iwan mochpana. satepan totlankwaketsah,
37. titlankwanehnemih, tikihtlanih tlapohpolwilstle ika teochiwalle;
38. toteochiwah ika in letania mayor, siñor mio jesukristo, kreo en
39. dios padre, yo pecador; inimneh mihtoah nochi ika kastiya. san
40. niman tiktekpaha nochi in xochikwalle tikwikah: tlakwalle,
41. piowiksik, kafen tsopelik, nantsin, gayetas, platonex, tlalkakawatl,
42. arañas, melon, nochi tlen kwalle se wikah. ammo kwalle mowikas
43. awakatl, kapoli iwan texokotl, ipampa ammo kimmomawisotiliah in
44. ehekatsitsintih. in piomolle motlalia ipan kakaxtih tlen yompa
45. tikimoiah."
46. TLAIHTLANILISTLE IWAN TSINKIXTILISTLE:
47. "ehkatsitsintih, chichiltikeh, istakeh, kostikeh, nextikeh,
48. kanotsikeh iwan nochi kolores: xitechmotlawililitsinokan tlahko
49. chipinalle atl ik ipan nochi tonawak inin tlaltekpakte
50. para in rikos iwan pobres. ;ave maria purisima! tiktlahtlanih
51. lesensia, man tipanotakan, xitechmomakilihtsinokan se kwalle
52. ohtle. ;ave maria purisima! madre santisima! man kiowi, man
53. kiowi, man tlaxiloti, man tlayeloti; tlen ammehwantsitsin
54. ammotlanawatiliskeh." Institute for Botanical Documentation

PETICION PARA EL AGUA

Relato de la pedidora de agua María de los Santos

1. LO QUE SE QUIERE PARA ESTE TRABAJO:

2. "En primer lugar. se necista no cenar en la noche, nomás deben
3. rezar toda la noche tds los que van a ir; al día siguiente
4. también no se debe almorzar; se come después, cuando ya se
5. pidió el agua y cuando ya se cumplió veintecuatro horas de ayuno,
6. entonces se come.

7. En segundo lugar, debe saludar uno con reverencia porque si
8. lo hace uno, lo enferman de aire los espíritus del aire. Cuando
9. enferman a uno, puede curarse uno con cualquier hierba.

10. En tercer lugar, se debe pedir media gota de agua, con la
11. cual nomás llueva pausamente; si uno pide toda la gota de agua,
12. entonces habrá inundación, se perderá con las milpas y con todo
13. lo que se siembre; cuando se pide culebra de agua, se adorna
14. con flores una serpiente de piedra; esto se hace cuando se

→ ||

15. quiere hacer maldades; si uno quiere que granice, coze uno un
16. sapo y se le adorna con flores y se pide lluvia de granizo.

17. En cuarto lugar, cuando comienza un nuevo año, va uno a
18. visitar, nomás a orar, nomás a anticiparse. Después trabaja uno
19. en los días jueves, en sábados, y domingos. En esos días trabajan
20. los señores aires.

21. En quinto lugar, debe tener uno fuertemente la creencia
22. sobre este trabajo; si esto no hay, nada puede hacer uno.

23. SALUTACION:

24. "Aguadores y serafines: ¡Ave María purísima! Llegamos aquí
25. en este patio, altar sagrado y templo; pedimos un saludo con lo
26. que traemos. Recíbanons con mucho gusto, con mucha atención,
27. perdónesenos por haber venido pasando ante ustedes por un saludo
28. que venimos a hacer." "Le recibiremos a ustedes con mucho gusto
29. lo que nos brinden par sobrevivir, con lo que debemos vivir. Si
30. Dios otra vez nos vuelve a dar fuerzas, nuevamente pasaremos
31. con otra visita."

32. OFRENDA.

33. "Inmediatamente se colocan las flores sobre las veinticuatro
34. cruces que están sobre el cerro Quetzaltepec; todo el patio se
35. se deshierba y se barre. Después nos hincamos, andamos de
36. rodillas, pedimos perdón con oraciones; rezamos con la letanía
37. mayor, señor mío Jesucristo, creo en Dios padre, yo pecador; esto
38. se dice todo en castellao. Después alineamos toda la fruta que
39. llevamos; tortillas, pollo cocido, cafe endulzado, pan, galletas,
40. plátanos, cachuates, naranjas, melón, y todo lo que se puede
41. llevar. No es bueno llevar aguacates, capulín¹, y el tejocote,²
42. porque no les agrada a los señores aires. Los pollos en mole
43. se ponen en las cazuelas que ya tenemos allá."*

44. PETICION Y DESPEDIDA

45. "Señores aires, colorados, blancos, amarillos, azules,
46. negros y de todos colores; tengan el favor de regalarnos media

* It is interesting to note that almost everything that is taken as an offering is hispanic, not indigenous food and that furthermore the three fruits that are not recommended are all local prehispanic fruits.

47. rota de agua para todos nuestros alrededores de este mundo: para
48. ricos y para pobres. ¡Ave María purísima! Pedimos permiso, que
49. ya vayamos pasando, sírvanse darnos un buen camino. ¡Ave María
50. purísima! ¡Madre Santísima! Que llueva, que haya jilotes, que
51. se hagan elotes; lo que ustedes dispongan."

- ① DAVIS - FIELD GUIDE TO THE BIRDS OF MEXICO & CENTRAL AMERICA
- ② GOLDEN NATURE GUIDES - { MAMMALS
TREES
- ③ DAIMON GUIDE - PESCA
- ④ STANEK - PICTORIAL ENCYCLOPEDIA OF THE ANIMAL KINGDOM
- ⑤ " - PICTORIAL " " OF INSECTS
- ⑥ ENGLISH-SPANISH MEDICAL GUIDE
- ⑦ PLANTAS MEDICINALES - MARTÍNEZ
- ⑧ PLANTAS CURATIVAS DE MEXICO -
German name (it's out + we
have no catalogue)

PROYECTO LINGÜÍSTICO FRANCISCO MARROQUIN

October 7, 1973

HXXLA K. Dakin
PLFM
Apto. 237
Antigua, Guatemala
Central America

Bernard Lowy
Department of Botany
Louisiana State University
Baton Rouge, Louisiana 70802

Dear Bernie:

Thanks for your letter of August 8. We also enjoyed reading the copy of your article you sent Will.

I'm writing to ask for help in finding sources we can use for plant identification -- and also animal identification, if you know of them. It would help a great deal in doing dictionaries if we had some means of concretely identifying ~~many~~ flora and fauna. I will enclose a list of the sources we do have. If you can think of any additional ones, I would really appreciate knowing about them. We have also thought about making a file with plant samples and pictures. I hope that we can get it organized.

So far, working here has been generally pleasant, although my group hasn't really begun its teaching. I am sharing a house with Nora England and Will Norman and a fourth linguist, and enjoying their company.

I hope that the fall is going well for all of you. Please give my 'saludos cariñosos' to Sara and Doris.

All the best,

K. Dakin
K. Dakin

Will Norman, Nora England, Tony Jackson, + Jo Froman send greetings —

P.S. The Mam students never found a name for *Arnanitis m.*

"El Rancho Nimajay", 6a. Calle Poniente Final, Teléfono: 022-622

Apartado 237, Antigua, Guatemala, C. A.

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

22-X-1973

Dear Karen:

The best Flora of Guatemala was written by Paul C. Standley in collaboration with one or more colleagues at different intervals beginning in 1958 and continuing through the present. It is organized according to plant families each volume dealing with one or more families. It may be of limited use to you because it is designed for the professional botanist. The keys and line drawings however, might be good to have as a reference. You might inspect a volume then decide whether you want to invest in the others. The latest installment appeared this year. For a copy, write to the Field Museum of Natural History, Chicago, Illinois 60605 and ask for:

Fieldiana. Flora of Guatemala. v. 24, pt 9, No.3-4. 1973. Publication number 1163. I don't have a price, but possibly around 8-10 dollars.

(authors: P.C. Standley, L.O. Williams, D.N. Gibson)

You might make an inquiry at the Popenoe house. Wilson Popenoe (now probably in his 80's if still living) had a great interest in tropical botany and there might be a personal library there that you could get permission to use.

I can recommend to you two colleagues in Chiapas, a botanist and a zoologist, who I think could help you a lot with identifications from your area: Dr. Miguel Angel Palacios Rincón, Instituto de Botánica de Chiapas, A.P. 245, Tuxtla Gutiérrez; Dr. Miguel Alvarez del Toro, Instituto Zoológico de Chiapas, Tuxtla Gutiérrez. I have known them for some years and believe they would cooperate with you. The museum is worth visiting to see what Alvarez del Toro has done singlehanded. His exhibits are arranged as Lowery's are here at LSU and are no less professional. The botany and zoology buildings are separated by about 1/4 mile, just outside the botanical garden area, also worthy of a visit if you don't already know it.

Do you have Ralph Roys's "The ethnobotany of the Maya"? I don't know how reliable it is but should be of interest to you linguists. It was published by the Middle American Research Institute, Tulane University. 1931. It may be hard to get a copy, but an inquiry will tell you. It includes an annotated list of Maya plant names.

Incidentally, Alvarez del Toro specializes in birds and reptiles and his Aves de Mexico appeared this year (or it might be Aves de Chiapas). He also published a paperback on Los Reptiles de Chiapas in 1960 and you might still get this in Tuxtla.

Another good man to know in Tuxtla G. is Dr. Thomas A. Lee with the New World Archeological Foundation of Brigham Young University. He has published extensively on the archeology of the area and has a deep interest in many aspects of Mayan civilization. His lab is at the top of the Monumento which you can reach by walking up the steep "stairs" from street level.

Have you seen Robert M. Carmack's new book? "Quichean Civilization." (ethnohistoric, ethnographic and archeological sources) Univ. Calif. Press. 1973.

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE . LOUISIANA . 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

2 August, 1973

Dear John:

I have just returned from Honduras, Guatemala and Mexico with some exciting new data (ethnomycological) that I am preparing for publication.

The enclosed copy of a letter from Prof. John Allegro which I have just received is the reason for this note. I have not seen his "offending article" but am frankly disconcerted by Hall's statement to the effect (in part, as quoted in Allegro's letter) that Allegro's article does not meet the "standards of scholarship" required by the "Revista". Whether one agrees or not with Allegro's conclusions, I believe that his reputation for scholarship of a high order was long ago established and rests on a solid foundation, as virtually everyone who knows his contribution to the interpretation of the "Dead Sea Scrolls" has testified. The article he wrote may perhaps be unsuitable on other grounds, but I think it unlikely that it should be rejected because of faulty scholarship. Since it was my idea to invite Allegro to write the piece (in view of the timeliness of the subject and the stature of the contributor, I thought it would be a coup for the journal) I am eager to know more about the reasons for its rejection. Could you please brief me on this ?

With all best wishes,

como de siempre,

s.s.s.

Bernard
B. Lowy

INTER AMERICAN UNIVERSITY
OF PUERTO RICO



UNIVERSITY PRESS

P. O. Box 1293
Hato Rey, Puerto Rico 00919

August 14, 1973

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

Dear Professor Lowy:

John Zebrowski left on sabbatical June 1; he will be back on January 1. In his absence, I am filling in. A word about my background. My undergraduate work was done at Harvard (English, honors); my graduate work at New York University. I have taught at Inter American University and have published both popular books and textbooks. I spent twelve years as the editor of a publishing house (Alumni Publications, New York City). I have published in many periodicals, both popular and learned.

I am sorry to report that the name of John Allegro was not familiar to me. He included no biographical or background data when he sent in the article. Nor did he make clear his association with you; he merely said that he was submitting the article at your suggestion. I had no idea whether he was a student of yours, an acquaintance or (as it turned out) a highly respected colleague. I am not familiar with his book, *THE SACRED MUSHROOM AND THE CROSS*.

The article itself seemed to brim with fascinating ideas, presented as conclusions. Little of the research or evidence that had led the author to these conclusions was given. It struck me as a review or summary of ideas that had been treated in full by the author elsewhere, probably in his book that was footnoted several times. Since these and other footnotes were given, the article seemed to be scholarly in intent, since such apparatus is usually left out of popular articles.

That it was the author's intention to summarize the thesis of his book was confirmed by his letter to you. However, this raises the following questions:

1. Should a journal provide space for the summary of a book currently in print and available?
2. Would not the book be better given attention in the form of a book review written by a qualified and friendly critic?
3. Would an excerpt from the book, with special attention to Latin American matters, be more satisfying to our particular readers, especially if the subject were treated in depth?

4. Would it be better for a journal, obviously eager to present new research, to offer the author its pages for a report on later investigations than those previously published? (This was the case in your own important article "A Newly Discoverd Copy of a Maya Codex.")

Since I seem to have offended Professor Allegro (for which I am most apologetic) I think it might be easier all around if he held his article until John Zebrowski returns and then submits it again. I am sure John will take extra pains to give the article every consideration. I know he values your own opinion in these matters very highly and counts on your continued interest and support. I hope this fuller explanation will make some amends to both of you.

With regrets,

Richard Hall
Richard Hall
Acting Director-Editor

RH:cln

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

August 16, 1973

Mr. Richard Hall
Acting Director-Editor
University Press
Inter American University of Puerto Rico
P. O. Box 1293
Hato Rey, Puerto Rico 00919

Dear Mr. Hall:

Thank you for your thoughtful, considerate letter. I have not yet written to Allegro but I think I owe him an answer. I regret that John did not inform you about him. Enclosed is the pertinent correspondence (Feb. 26, March 2, March 5) we had concerning (in part) Allegro's article. The question of his competence or scholarship was of course never an issue and I felt that virtually anything that he had to say would probably be pertinent and of interest to "Revista" readers. The questions you raise are certainly valid ones and I am not so audacious as to pretend to dictate editorial policy. In fact, I do not want to make this a cause célèbre but would like to take your suggestion and ask Allegro to resubmit his article. If it is all right with you, I shall ask him to send me his piece (which I have not seen) and perhaps suggest some changes if these seem necessary, then I shall either send it to you or John for further consideration or return it to Allegro with my comments. Please let me know whether this course of action would be satisfactory.

Sincerely yours,

B. Lowy
Bernard Lowy

P.S. The copy of my Jan. 12 letter to John refers to an article I asked Dr. Eduardo F. Indacochea to submit to the "Revista" when I was in Lima last year. He is Director of the Fulbright Program of Peru. I wonder whether he has written to you.

Olmecs of those times left no writing, we must rely on other lines of inquiry to answer these questions. But first let us consider the magnitude of the Olmec achievement at San Lorenzo three thousand years ago.

The site itself represents hundreds of thousands of tons of material—gravel, soil, sand, and rock—carried in by basketloads on men's backs. Similarly, the monuments must have required an army of laborers. Geological analysis has shown that the source of the basalt used in almost all the San Lorenzo monuments is the Cerro Cintepec, an extinct volcano some fifty miles north-northwest of San Lorenzo. The Colossal Heads average about eighteen tons, and one of the so-called altars weighs even more than that.

The Olmecs must have selected boulders of a suitable shape from the slopes of the volcano, somehow transporting them to the nearest navigable stream (no small distance) and then floating them to the mouth of the Coatzacoalcos River on balsa rafts. From there they would have been poled and pulled up the river to a point near San Lorenzo. Finally, each boulder would have been hauled up 150 feet, probably with ropes and simple rollers, to their final destination. We ourselves had some experience using simple materials and methods to move the monuments, and I can attest to the enormous effort required to move a ten-ton stone just one foot! It took fifty men with ropes and poles to set one Colossal Head upright. Thus, moving the larger monuments must have involved using more than a thousand workmen at a time.

Then there is the testimony of the persons represented by the stones. Scholars seem to agree that the Colossal Heads are portraits of Olmec rulers. Likewise, the seated figures in the niches of the "altars," shown either

The clay figure opposite depicts a baby with the pathological features of a Mongoloid idiot. Its special symbolism, if any, remains one of the mysteries of the Olmec civilization.



The rain god appears as a werejaguar, part human, part snarling beast. Concave at the back, the statue probably belonged to a system of water drains found at San Lorenzo.

with ropes holding captives or carrying the characteristic werejaguar infants, seem to depict real men. Great leaders, or their descendants, must have ordered the carving and setting up of these monuments—at what cost can only be imagined. Surely, then, we can postulate the existence of a polity that was more powerful than a mere tribal state.

But there is more. The existence of a political state implies a government with territorial jurisdiction not over a single tribe but over many. Whether an Olmec state can be postulated under this definition can never be fully determined, any more than it can be for any of the later civilizations of Mexico, other than the documented civilization of the Aztecs. Nevertheless, there is good reason to believe that the San Lorenzo Olmecs exerted an influence, political or otherwise, upon regions

as distant as the highlands of central and western Mexico, where Olmec pottery and even Olmec rock paintings have been discovered during the past few years.

But the most compelling evidence for San Lorenzo's high cultural and political status under the Olmecs comes from what at first glance might be thought an unlikely line of inquiry: ecology. Working within a sample area of about thirty square miles, centering on San Lorenzo, we are now trying to arrive at some idea of what the upper limit of human population may have been three thousand years ago. The extent of the sample area is probably that which would have been controlled by an agricultural tribe. If our population figure turns out to be much lower than the number of persons presumably involved in the construction and maintenance of the Olmec center, then San Lorenzo would have to have drawn labor and tribute from an area far greater than that of our sample.

Our calculation is based on the number of mouths that native systems of cultivation could have fed. It is not an easy one to make. Our preliminary studies strongly suggest, however, that the local population could never have constructed the artificial plateau and set up the monuments unaided. We may assume, then, that the Olmec rulers held sway over more than one tribe, and that they may, indeed, have exercised authority over much of southern Mexico.

One significant outgrowth of our study has been the work of Dr. Elizabeth S. Wing of the Florida State Museum, who has managed to identify scraps of bone contained in our Olmec rubbish heaps. The Olmecs were more finicky in their culinary habits than the present-day natives, who eat almost any kind of fish or game they can get their hands on. Olmec preferences, however, are curious, since the most common animals represented are snook (a large and good-tasting fish), man, marine toad, and turtle! We are not particularly bothered by the human re-

mains, since cannibalism is well attested for the rest of Mesoamerica, but the toads are a puzzle, as they cannot be skinned without an extremely dangerous poison getting into the meat. We are now looking into the possibility that the Olmecs used them for a hallucinogenic substance called bufotenine, which is one of the active ingredients of the poison.

Far more significant, however, has been our research into local farming practices. The Olmecs, like all Mexican Indians, were basically corn eaters. Here we think that we may have hit upon the secret of the very early rise of native civilization in the San Lorenzo area. As in most of the world's tropical lands, the basic system of agriculture is of the shifting, or slash-and-burn, type, which means that a farmer will fell the trees or bush on a plot of land, burn them when dry, and continue to plant and harvest on the plot until declining yields or other factors force him to abandon it and search for another patch of forest.

One must also remember that there is a dry season and a rainy one. Most Mesoamerican farmers have only one major crop, planted with the first rains and harvested in the fall. On the gently rolling upland soils of the San Lorenzo area, however, there are *two* major crops, thanks to the winter northers, which keep the soil moist. Furthermore, in summer, when the rainstorms sweep daily across southwest Mexico, the winding, sluggish Coatzacoalcos River rises rapidly and covers all of the low-lying land with great sheets of water. San Lorenzo becomes a world afloat. As the rains taper off and the floods recede, the gift of the river is revealed: fresh mud and silt, deposited along the broad natural levees that flank the river.

These levees are classed by the natives as "prime land." While the upland areas tend to be communally owned, the levees are pretty much in private hands. Even though it is possible to cultivate only one crop on them, during the dry season, their pro-

duction is incredibly high for indigenous corn farming. As might be expected, those who bid for economic—and political—power in the village must gain effective control of the levee lands.

Was this, then, how the Olmecs rose to power and civilization more than three millennia ago? We are reminded of ancient Egypt, so obviously tied to the rise and fall of its one great river. It is hardly a coincidence that most of the world's early civilizations have arisen in major river basins, and our Olmecs of San Lorenzo seem to have been no exception.

Every story has an end, or at least an epilogue. Olmec civilization did not come to a close after the massive destruction of San Lorenzo around 900 B.C. Curiously enough, La Venta seems to have reached the summit of its achievement immediately *after* this brutal event, and it may be that the overthrow of San Lorenzo's rulers was instigated by the leaders of that island citadel. Thereafter, the Olmec character of San Lorenzo was lost, for the pre-Classic reoccupations that continued until the beginning of the Christian Era lack the art style that is the Olmec hallmark.

Eventually, even La Venta was destroyed, and perhaps its successor, Tres Zapotes. But Olmec civilization became transformed into some of the other brilliant civilizations of Mesoamerica's Classic period. The farther back we trace the Classic cultures of Mexico and Central America, the more characteristic of the Olmecs they seem to become.

The most clear-cut case for an Olmec heritage is presented by the famous Mayan civilization of the Classic period. It may seem a far cry from the earth or adobe constructions of the Olmecs to the towering pyramid-temples of the Mayas, but a closer look at Mayan art and learning reveals much in common. Take the day-to-day calendar system called the Long Count. Although for many decades scientists

A brooding male figure here cradles the symbolic werejaguar. This statue was recently stolen from a Mexican museum by art thieves.

considered this a Mayan invention, Stirling and others have shown that it had far earlier roots in Olmec country. There is now good reason to believe that the well-known writing system of the Mayas may be of Olmec origin as well. Based on what we know of the earliest Classic Mayan art and culture, the Mayas themselves may, indeed, once have been Olmec, moving in the centuries before the Christian Era eastward into the jungles of Yucatán and Guatemala.

Strong Olmec influence may also be detected in the Oaxaca highlands of Mexico, where the Zapotec people held sway. Kent Flannery of the University of Michigan has recently identified a local Oaxaca culture that was either importing Olmec products or making very good imitations of them, and Olmec artistic traits are to be found in the well-known Danzante reliefs, the strange stone carvings of slain men erected at the great Zapotec site of Monte Albán.

The list could be expanded to encompass most early civilizations of Mexico and Central America. The Olmecs seem to be behind all of them—an ancient, shadowy, "mother culture" whose own origins remain shrouded in mystery even to this day.

Professor of anthropology at Yale, Michael D. Coe is the author of several books on pre-Columbian civilizations and has made a number of important archaeological discoveries in the field as well.



LEDERER, STREET & ZEUS COMPANY
2121 ALLSTON WAY, BERKELEY, CALIF. 94704

Merle Greene Robertson
Robert Louis Stevenson Sch.
Pebble Beach, Cal. 93953

2 JAN. '73

Dear Dr. Lowy,
Thought you might be interested
in my new book. I recently have enjoyed
your paper on the mushroom & have
used some of your material (with credits to
you) in the revised paper to be published by
U. Texas Press. on the Yafelala Antel
Merle Greene Robertson

TELEPHONE 408-624-7881

15-16-1V-72
DELBADO MUS.
NEW ORLEANS

PRE-COLUMBIAN ART RESEARCH PROJECT
ROBERT LOUIS STEVENSON SCHOOL
PEBBLE BEACH, CALIF. 93953

MERLE GREENE ROBERTSON

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National Geographic Society

WASHINGTON, D. C. 20036

April 27, 1973

Dr. Bernard Lowy
College of Arts and Sciences
Department of Botany
Louisiana State University
Baton Rouge, Louisiana 70803

Dear Dr. Lowy:

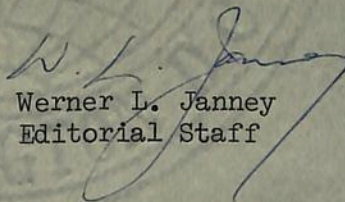
Thank you for your recent letter inquiring about our interest in publishing the Galindo codex in its entirety.

I have consulted our staff expert in American archeology concerning the new-found Galindo Codex, and your suggestion that it be published by the National Geographic Society.

I am sorry to have to write to you that he reports that there is no way in which we could use this codex, which you have so kindly called to our attention, since our schedule of American archeological topics is so crowded.

It must be frustrating to be sitting on a find like this! In any event, we appreciate your thought of the National Geographic.

Sincerely yours,



Werner L. Janney
Editorial Staff

WLJ:cc

Enc: 1 color print
2 reprints



This is to acknowledge receipt of your material, which is now under consideration by members of our staff. As soon as a decision has been reached concerning it, we will communicate with you.

We appreciate your active interest in The National Geographic Society and its Magazine.

Sincerely yours,
The Editor

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FROM

Dr Lowry
Bat

BR La 70803

TO

Melville Bell
Nat Soc Sci Hist M

Washington DC 20002

★ G.P.O.: 1970-406-950

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

March 19, 1973

Mr. Melville Bell Grosvenor
National Geographic Society
17th and M Streets N.W.
Washington, D.C., 20036

Dear Mr. Grosvenor:

In 1970, when I was engaged in an ethnomycological research project in Guatemala, I came by chance upon a document held in a private collection, which to all appearances was a Maya codex. Only three such genuine codices are known to exist and these priceless documents are now held in libraries in Madrid, Paris and Dresden. My subsequent detailed study of the Guatemalan codex based on my closeup color photographs which I compared with facsimilies of the three original codices, enabled me to trace it to the Codex Madrid which I believe undoubtedly served as its model. Consequently, although the Guatemalan codex is a copy, it is nevertheless of great interest. It contains glyphs not found in the original and in other important respects as well, it does not bear a one to one correspondence to its presumed model.

In the two enclosed recently published reprints I present some basic information on the Guatemalan codex which I have named the "Galindo" for the individual in whose possession I found it in 1970. Both the codex and my interpretation of part of it as a representation of highly significant mushroomic symbolism has rather widely been commented on in academia and because of the infrequency with which such copies have been discovered and studied, I believe that the publication of the entire codex which consists of 24 pages, each the size of the color print of the single frame (and 2 adjoining ones) that I am including with this letter, would not only allow Mayanists to study it with care but to present your readers with an example of the rare kind of treasure that was destroyed by ecclesiastic fanaticism in the decades following the conquest of Mexico.

It is apparent from the foregoing that my reason for writing to you is to inquire whether the "National Geographic" would consider publishing the Galindo codex in its entirety, together with an account of its discovery, subsequent identification and partial interpretation. Because of the great expense of color plates few journals could undertake such a project. As a Consulting Editor of the "Interamerican Review" (published by the Inter American University of Puerto Rico) which published a single color plate (reprint enclosed) and as a member of the Editorial Board of "Mycologia," the national journal of the Mycological Society of America, I am keenly aware of the financial problem that this project presents to any journal in academia.

Since I cannot expect that you will be familiar with my professional work, I include a curriculum vitae and a bibliography for your reference. Should you desire further information pertinent to the codex, my professional qualifications or other related matters, I invite your inquiries. I believe it would be quite possible to present the codex together with an appropriate commentary in accordance with the format of the "National Geographic." I would greatly appreciate your consideration of this proposal.

Sincerely yours,

B. Lowy
Bernard Lowy
Professor of Botany

UPPSALA UNIVERSITETS INSTITUTION
FÖR SYSTEMATISK BOTANIK
Box 541, 751 21 UPPSALA 1

April 25, 1973

INSTITUTE OF SYSTEMATIC BOTANY
OF THE UNIVERSITY OF UPPSALA
Box 541, S-751 21 UPPSALA (SWEDEN)

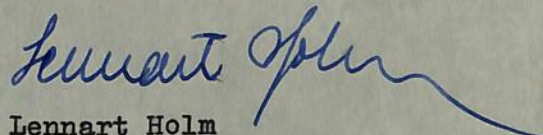
Professor Bernard Lowy
Dept of Botany
Louisiana State University
Baton Rouge, L-a 70803
USA.

Dear Dr. Lowy:

Thank you so very much for your prompt letter and the determination of Dacryopinax spathularia - I am glad to have made this interesting fungal acquaintance! Many thanks also for your kindness to send me the reprints - the story of the Maya codex and the holy mushroom is highly entertaining. Amanita muscaria must indeed be a remarkable fungus; has not Wasson suggested that it was the holy "soma" of the ancient Aryans?

With grateful regards

Sincerely yours


Lennart Holm

OFFICE OF THE DIRECTOR



March 7, 1973

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

Dear Bernard:

Thank you for your letter of February 15, and for the interesting reprint that it contained.

I perhaps should tell you that the book by Schultes & Hofmann "The Botany and Chemistry of Hallucinogens (Charles C Thomas, Publishers, Springfield, Illinois) will be out on March 15th.

Most sincerely yours,

Dick

Richard Evans Schultes

RESchultes, Director
BOTANICAL MUSEUM
HARVARD UNIVERSITY
OXFORD STREET
CAMBRIDGE, MASS. 02138, U.S.A.

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

28 February 1973

Dr. Nicholas A. Hopkins
Department of Anthropology
University of Texas
Austin, Texas 78712

Dear Dr. Hopkins:

I appreciate your kindness in sending me a mimeographed copy of your study on Chuj plant names. I must say immediately that without being able to examine voucher specimens that correspond to the fungus names you have recorded, any diagnosis would be extremely hazardous or virtually impossible to make. Nevertheless, your list is of great interest because fungus names used by indigenous populations throughout the Americas have been generally neglected and the collection of specimens to which they refer, even more so. I wonder whether this may not be the reflection of a subconscious mycophobia.

Of the seventeen names in your list as published in the Wasmann Journal, I would comment briefly on the following.

No. 54. hókoš. A word similar or identical to this is used among the Quiché. Phonetically, it is approximately "okósh" and is a generic term for edible mushrooms.

No. 57. hów kán cúh. The only "poisonous mushroom" in your list which you say in your mimeographed version "is red above, white beneath" and "growing among pines" (p. 287 Wasmann Journal). It is not impossible that this may be Amanita muscaria, but of course, needs confirmation.

No. 71. kán cúh. No. 72. kán súl. In Comitán, Mexico, I found that the word "kantú" refers to the edible mushroom Cantharellus cibarius. In Guatemala City, Panajachel and Solola, "kantzú" refers to Amanita caesaria, an eminently edible mushroom highly prized there and elsewhere.

No. 153. sák kán cúh. In Tikal I found that "Siquinché" is used for the edible mushroom Schizophyllum commune. Could this not be an eroded form of your No. 153? Evon Z. Vogt in his book "Zinacantan" refers to a Tzotzil name "Ysim Chih" (an unidentified mushroom) which would also appear to be another form of "siquinché". He says that "at least sixteen types of mushrooms have Tzotzil names and are collected for food," but none are identified.

I plan to publish all twenty-four pages of the Galindo Codex together with the corresponding pages of the Madrid Codex from which it was originally copied. But color plates are costly and I do not know whether or not I can get the necessary financial support.

I have enclosed a color print for you of Galindo XI which I have interpreted as a mushroom offering (Amanita muscaria in all likelihood) in my "Mycologia" paper.

Sincerely,

B. Lowy
Professor of Botany

BL/lb



THE UNIVERSITY OF TEXAS AT AUSTIN

AUSTIN, TEXAS 78712

Department of Anthropology

16 February, 1973

Professor Bernard Lowy
Botany Department
Louisiana State University
Baton Rouge, Louisiana 70803

Dear Prof. Lowy,

Thank you for your reprint of the mushroom symbolism article in Mycologia. I am not sure what sort of reception this article will receive among Mayan epigraphers--an unpredictable lot at best--but there is certainly good reason to suspect a mushroom cult in Classic Maya times if you are willing to think about such things.

I was very interested to find that you managed to get hold of the Galindo Codex. When I was working in Huehuetenango in 1964-65 I visited the Galindo boy--then in high school--to see his excellent collection of artifacts from Zaculeu. He had on his bookcase what looked like a crude copy of a Mayan codex on parchment which I assumed at the time was one of his own projects. I was told later by his mother that it was a copy made by an Indian employee of theirs from a document that had been in the family for some time--but she assumed me that the original had been sold years before. So much for my naivete; I'm glad someone was able to see and copy the original. I assume you have plans to publish the Codex in its entirety, and I look forward to seeing it. I imagine you have been besieged by requests for copies, but if there is any possibility of getting a photographic copy of the codex I would certainly like to get my hands on one.

Having just read Wasson on Soma I am intrigued to find that there is Amanita muscaria in the Mayan area. I checked back over my list of Chuj (northern Huehuetenango) plant names, some 16 of which are mushrooms (see Dennis E. Breedlove and Nicholas A. Hopkins, "A study of Chuj (Mayan) plants, with notes on their uses", The Wasmann Journal of Biology, vol. 28, no. 2; vol. 29, nos. 1 and 2, 1970-71; unfortunately I don't have reprints to send). Some of the mushrooms described may be Amanita.

When I was compiling the list of plant names my principal goal was to elicit as much vocabulary as possible to establish linguistic patterns (formation of compound words, etc.). I was not specifically investigating ethnobotany, but Chuj grammar. We made no attempt to collect fungi on the various collecting trips I made with Breedlove, since he leans to the "if it doesn't flower it isn't worth collecting" direction, but I

did collect from my informant (a Chuj Indian from San Mateo Ixtatan) Chuj names for a number of mushrooms. All I know about these plants is what my informant told me, and that information is passed on more or less intact in the preliminary version of our Chuj plant name paper, which I enclose (the version published in The Wasmann Journal of Biology eliminates many of my rather inept attempts to describe uncollected plants--my descriptions of plants being about as useful for a botanist as most botanists' attempts to describe native names are for a linguist). The Chuj classification system puts mushrooms in the 7aN class--more or less everything that is neither woody-stemmed, a vine, or maize--within which there are many subdivisions which we did not investigate. I suspect, but am not sure, that the mushrooms form a subclass of 7aN, although it is apparently not a named subclass; there is apparently no name for mushrooms or fungi as a group. At any rate there are in turn several terminologically distinguished groups of mushrooms as well as some groupings which are recognized but not named. One of these groups includes the following names:

(1) k'an cuh (from k'an yellow and cuh bottle gourd, literally yellow gourd):

An edible mushroom which grows in grasslands and among pines. The largest have tops about 6" across; when young, the top is blood red above, yellow beneath. At maturity, the top is yellowish above, yellow beneath.

(2) sak k'an cuh (from sak white and k'an cuh, literally white k'an cuh):
An edible mushroom, the same as k'ik' k'an cuh.

(3) k'ik' k'an cuh (from k'ik' black and k'an cuh, literally black k'an cuh):

An edible mushroom, conical, about 3-4" high, white above and black beneath. Same as sak k'an cuh.

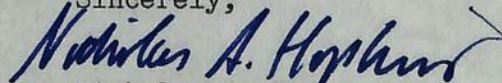
(4) how k'an cuh (from how angry, mean, or--in plant names--poisonous, literally, poisonous k'an cuh):

A poisonous mushroom which resembles the edible mushroom k'an cuh. This mushroom, which grows among pines, is red above, white beneath.

With the exception of how k'an cuh and the inedible but harmless yatut Nap' (rain's house or rain's scabbard) all the mushroom names I attested are for edible mushrooms. K'an cuh and how k'an cuh are the only red mushrooms, and they grow among pines. It strikes me that they may well be Amanita.

I don't know how much you can make out of my descriptions, but I would be grateful for any guesses you can make about the species involved.

Sincerely,



Nicholas A. Hopkins
Asst. Professor

OFFICE OF THE DIRECTOR



Feb. 11, 1973.

Dear Bernard -

Thank you for sending me your occasional reprints. I am very happy to have them for our Economic Botany Library. The "Mushroom symbolism in Maya codices" was especially interesting. Congratulations.

Sincerely,

Dick Schultes

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

15-II-1973

Dear Dick,

Thanks for your kind note. Allegro and Wasson have responded with some enthusiasm; Allegro supporting my interpretation of the mushroom and Wasson excited about the word "shtantalok", which I told him I found means "relampago" = lightning!

Cordially,

Bernard Lowy

I don't think you have the enclosed report.

NEXUS

RESEARCH FOUNDATION

February 12, 1973

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

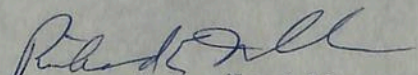
Dear Dr. Lowy:

Dr. Nicholas Hopkins of the University of Texas showed me a copy of your recent article in MYCOLOGIA. In the course of my work at the University, I became interested in the evidences for a mushroom cult in the Maya region. However, the ceramic "mushrooms" at least, seemed to be ceramic molds for pottery-making rather than cult objects.

I am interested in doing detailed analyses of the material from the codices, including glyphic analysis, in an attempt to delineate some of the parameters of such a cult.

If possible, I would appreciate photographic copies of the pertinent sections of the Galindo codex, identified by page number. These would not be used for publication. I would also appreciate any references to the mushrooms of the Maya area, especially the lowland areas.

Sincerely,


Richard E. Neville
Research Co-Ordinator

P. O. BOX 612 AUSTIN, TEXAS 78767 (512) 472-2239

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE · LOUISIANA · 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

28 March, 1973

Mr. Karl E. Meyer
The New Yorker
25 West 43rd Street
New York, N.Y., 10036

Dear Mr. Meyer:

I enjoyed your fine article, "The plundered past," in the March 24th issue of The New Yorker. While on an ethnomycological mission in Tikal in the summer of 1970, Ing. Ismael Tercero who was the Director there at that time, told me something of the illicit traffic in stelae. In some of those operations, he said, helicopters were used to remove the treasure and this could apparently be done with impunity because it is virtually impossible to police an area as large and as inaccessible as the Petén.

Enclosed are two reprints that may be of interest to you.

Sincerely yours,

B. Lowy
Bernard Lowy
Professor of Botany

The Cherry Orchard
96 Eleven O'Clock Road
Weston, Connecticut 06880

15 April 1973

Dr. Bernard W. Lowy
Professor of Botany
Department of Botany
Louisiana State University
Baton Rouge, Louisiana

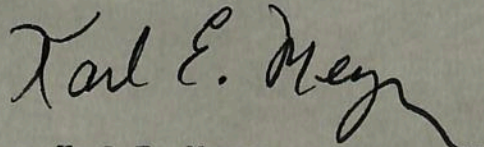
Dear Dr. Lowy:

Thank you so much for your kind letter and its enclosures.
I am, of course, aware of the use of helicopters in tealing stelae.

I am sure you are already aware of the book, edited by
Peter Faust which I believe is called THE FLESH OF THE GODS, about
the mushroom in pre-Columbian culture.

Thank you again for writing.

Sincerely,

A handwritten signature in cursive script that reads "Karl E. Meyer". The signature is written in dark ink and has a fluid, connected style.

Karl E. Meyer.

Interdepartmental Correspondence

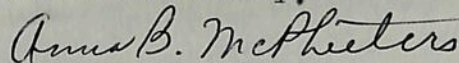
TULANE UNIVERSITY

1/19/73

Dr. Prof. Lowy:

My husband and I appreciate receiving a reprint of your article "Mushroom Symbolism in Maya Codices" very much. We find it very interesting. He asked me to turn it over to Prof. Donald Robertson of the Department of Art. I am replacing Mrs. Smither in the Department of Art this academic year while she accompanies her husband to Spain, where Prof. Smither will spend his sabbatical year. I have done so, and am writing this note in appreciation for your thoughtfulness in sending the article. Prof. Robertson will find it quite informative.

Yours sincerely,



Anna B. McPheeters
Administrative Asst.

abm/

Duke University
DURHAM
NORTH CAROLINA

DEPARTMENT OF SOCIOLOGY
AND ANTHROPOLOGY

25 March 1973
Mt. Sinai Road

POSTAL CODE 27706

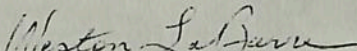
Dear Dr. Lowy,

Thank you for the Xerox of your fine review for ECONOMIC BOTANY; I do not read it regularly and would have missed it.

And have really missed your most generous and appreciated remarks, both about my essay and about The Ghost Dance.

Because of its hard-nosed agnostic tone, perhaps, this book seems to have been rather studiously neglected; there has been no review of any edition (three) of it in the New York Times, the New York Review of Books, or even the American Anthropologist. You will understand, then, the great "psychic income" that your discerning and elegant review constitutes. I am really pleased that you liked the book. And said so.

Sincerely yours,


James B. Duke Professor
of Anthropology

UNIVERSITY OF OXFORD

DEPARTMENT OF FORESTRY

TELEPHONE

57891 : DEPARTMENT

55757 : PROFESSOR OF FOREST SCIENCE

J. L. HARLEY, M.A., D.PHIL., F.R.S.

COMMONWEALTH FORESTRY INSTITUTE

SOUTH PARKS ROAD

OXFORD

OX1 3RB

12th January 1973

Dear Professor Lowy,

Thank you very much for the reprints of your articles from *Mycologia* and the copy of *Nova Hedwigia*. It is very kind of you to remember me and I find your suggestions regarding the Mayan mushroom cult fascinating.

I was in C. America in late November and early December this year for the first time at that season and found a number of fruitifications that I take to be Boletus spp. One interest of course is in the possible mycorrhizal association with pine roots. I took colour photos of several and if you are interested should be very pleased to send you copies and have your comments. I have not yet seen them myself as I only got back on 22nd December.

With thanks again and best wishes

Yours sincerely,
Ron Kemp.

LOUISIANA STATE UNIVERSITY
AND AGRICULTURAL AND MECHANICAL COLLEGE

BATON ROUGE • LOUISIANA • 70803

College of Arts and Sciences

DEPARTMENT OF BOTANY

January 30, 1973

Dr. Ronald Kemp
University of Oxford
Department of Forestry
Commonwealth Forestry Institute
South Parks Road
Oxford, OX1 3RB, England

Dear Dr. Kemp:

It was good to hear from you and I thank you for your generosity in offering to send me color photos of boletes that you collected in Central America last year. But if I accepted, I am afraid I would be doing so under false pretenses. I am far from being sufficiently expert to identify boletes from photographs, and I would not be surprised if some experts would also be reluctant to do so.

Dr. Rolf Singer, a colleague of mine who is presently at the Field Museum of Natural History in Chicago, Illinois, is one of the most knowledgeable mycologists who has studied the ~~agarics~~ agarics and boletes of tropical America, including, I believe, the mycorrhizal relationships of these fungi. If you have specimens and field notes perhaps Dr. Singer would be willing to make some identifications.

My six months in Peru were partly spent in routine teaching, but I had about seven weeks in such memorable places as Iquitos, which I used as a point of departure for numerous trips up and down the Amazon, Puerto Moldenado on the Madre de Dios river and the Urubamba valley region not far from Cuzco. My collections from these areas have not yet reached me, but I am hopeful that they will eventually get here. Some interesting ethnomycological data was also gathered.

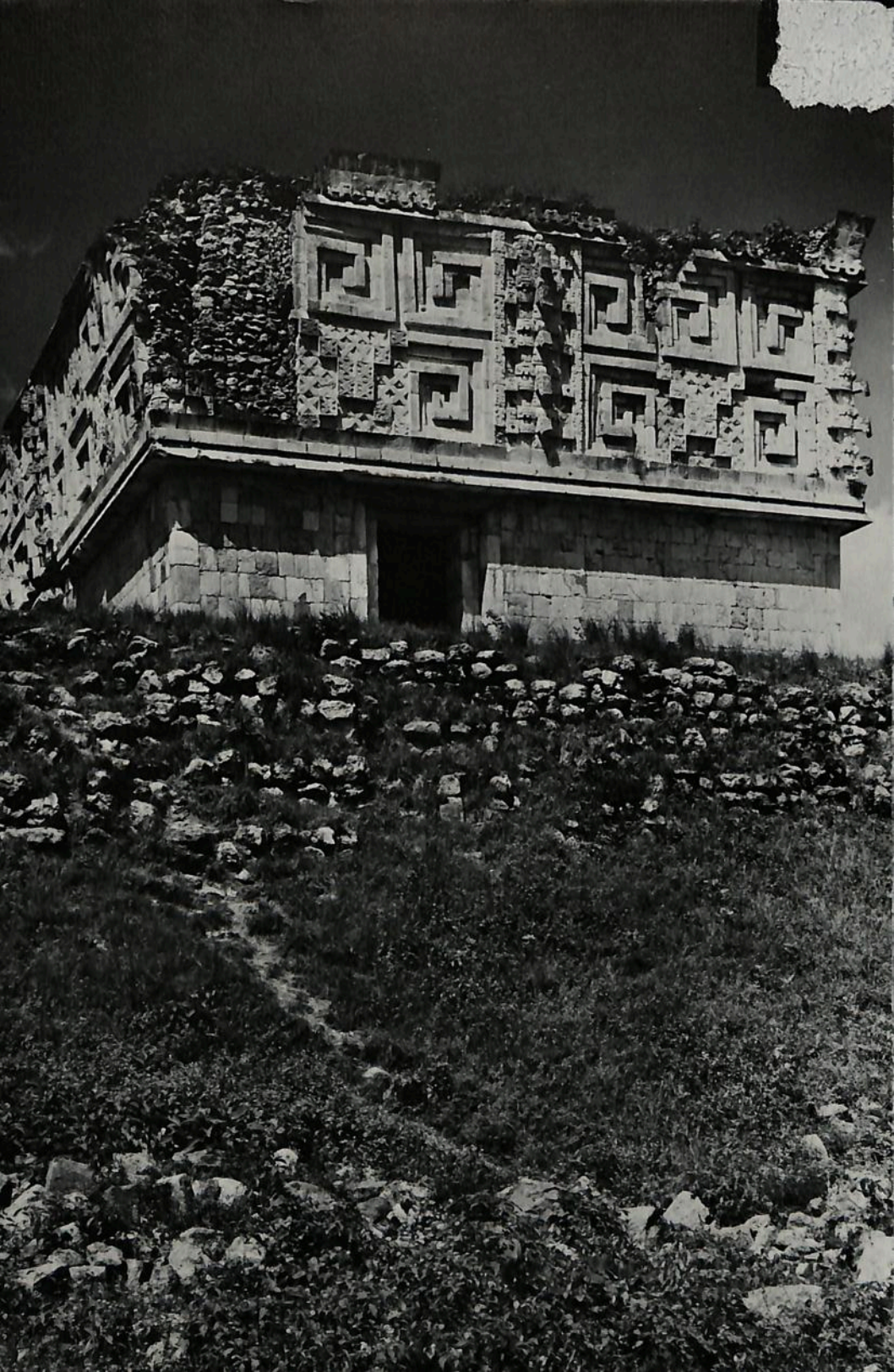
With all best wishes.

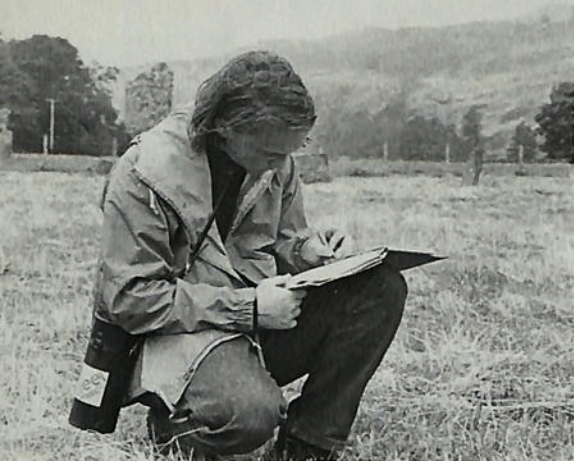
Cordially yours,

B. Lowy

UNIVERSITY OF OKLAHOMA PRESS
BOOKS FOR SPRING & SUMMER, 1974







What participants have said about EEI expeditions

"For a 55-year old businessman joining a diving expedition mostly in the company of much younger men, I found the experience a very rewarding one. In reflecting on the overall pleasure of this expedition, the highlight in my memory will be the pleasure of the association with the kinds of men and intellects that were drawn to this particular adventure. I have had the good fortune in my time to travel a good deal and have had many similar experiences, but I can put none ahead of this one."

*Businessman, 55, Carrie Bow Key
(British Honduras, marine ecology)*



"I would recommend an expedition to those who are open and willing to become personally involved in a new living experience. . . I particularly liked the way conventional social barriers disappeared, people developed friendships easily. The person himself, and not the trappings of society, became important. . . It was an internal as well as external experience."

*Interior designer, female, 38 ;
Gatecliff (Nevada, archaeology)*

"I learned an old lesson again. That the ordinary citizen has a stake and a keen interest — and gobs of ability to function in strange areas of professional expertise. Somehow, after working 20 hours a day and paying for it, I came back refreshed and alive to face my own life. I'd gladly do it again."

*Research psychologist, male, 37 ;
Megalithic Britain (astro-archaeology)*



EXPEDITION:**Total Solar Eclipse**

COUNTRY:

Australia

DISCIPLINE:

Astronomy

CHIEF SCIENTIST:

Dr. Donald H. Menzel

AFFILIATION:

Paine Professor of Practical Astronomy, Emeritus,
Harvard University; and research scientist, Smith-
sonian Institution Astrophysical Observatory

DATES:

June 11 to 22, 1974

STAGING AREA:

Perth, Western Australia

PARTICIPATION FEE: \$725 (plus airfare)

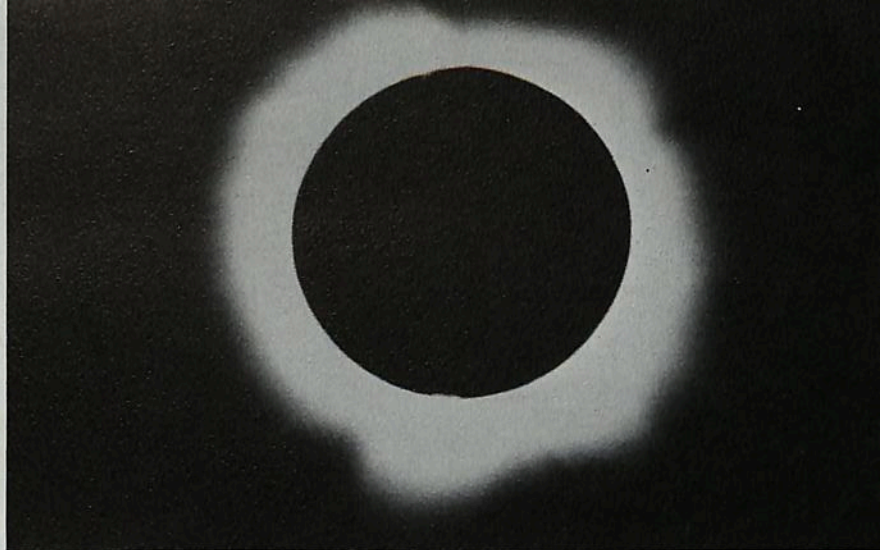
An astronomical and photographic expedition to document and observe a total solar eclipse over the southwestern tip of Australia

On June 20th a path of darkness will cut across the Indian Ocean from Madagascar to Tasmania, touching land only on the southwest corner of Australia. Dr. Donald Menzel will lead his sixteenth total solar eclipse team, taking the 1974 participants "down under," where they will set up field equipment and instrumentation for coronal photography, polarization studies, and possible intra-Mercurial object search. Team members will be encouraged to conduct their own personal research projects in addition to being instructed in astronomical methodology necessary to prepare them to assist in the research to be carried out by Dr. Menzel and his staff. Totality at the site, located near the Point d'Entrecasteaux peninsula, will last about 4 minutes. It will be winter in Australia, with mean temperatures between 45° and 55° F. The weather is expected to be cloudy, but not enough to deter those dedicated to this discipline.

WORK SCHEDULE: Much of the preparatory work will be done before the day of totality. This includes setting up cameras and telescopes, building housing and instrument shelters, preparing for coronal spectroscopy experiments, and rehearsing equipment synchronization for split-second timing during the actual eclipse. Campers and outdoor enthusiasts will have ample opportunity to contribute their skills.

Preparation activities will be diverse and should be of special interest to amateur astronomers, photographers, carpenters, construction engineers, optics enthusiasts, and the mechanically minded.

IT3QF11096



"About a month after the expedition, I returned to the Marsabit area and felt a strong sense of homecoming. I saw familiar faces and greeted a few old friends. The people were no longer just the 'locals' to me, but real individuals, and I knew where they went for water, what they would cook in their huts that night, where the cattle market was, which blacksmith made the women's jewelry. This insight into the culture was the most exciting and rewarding aspect of the expedition to me."

*Writer, female, 26; Borana
(Kenya/Ethiopia, anthropology)*

"For the first time I felt part of the archaeological scene and that is a satisfaction that is beyond description. There are certain opportunities which occur during the life of an individual which, if acted upon, profoundly influence the life of that individual. Gatecliff was such an experience for me."

*Student, male, 17; Gatecliff
(Nevada, archaeology)*

"This was total immersion, all circuits constantly overload both intellectually and physically. I suspect no full semester course could have taught as much about astro-archaeology and megalithic Britain. The experience in field archaeology has encouraged me to take an advanced degree in the related field of mythography.

*Writer, female, 31; Megalithic Britain
(astro-archaeology)*

"My experience I consider ineffable in its beauty and personal impact. . . The people, the views, the psychological flow of that miraculous time in Nepal all merge in my memory and heart, existing as a living entity outside the realm of articulation."

*Student, male, 22; Arun Valley
(Nepal, ecology)*



"Everyone should have the opportunity to contribute to the science of his choice in ways other than monetary. It has been well proven that people with backgrounds well removed from science can provide needed perspective and valuable data toward the final results of any research design. In many ways the expedition has completely changed my life. I plan more actively to pursue my goals in archaeology and eventually concentrate completely in that field."

*Electronic Engineer, male, 36;
Megalithic Britain (astro-archaeology)*

"As one reaches middle age and has spent the last 20 years in the same position such as I have, I have recently questioned how I would fit into the scheme of things if suddenly transplanted into a new environment. EEL has made it possible to have this question answered. For 3 weeks I was placed in a situation in which the environment was new and physically challenging and in close contact with strangers both younger and older than I. I learned to adapt to harsh living conditions and to tolerate personalities of all types and, above all, to contribute in achieving the objectives of the group. The experience has given me a new feeling of confidence, plus a greater sense of tolerance toward people."

*Mechanical Engineer, male, 52;
Solar Eclipse (Mauritania)*

"My experiences on the expedition have greatly affected my future plans. After working in the field with scientists for two weeks I am fairly sure that I would like to pursue something similar as a career. The expedition, besides reinforcing what I have learned, made me know now how much more I want to learn."

Student, female, 16, Iceland (geology)

EXPEDITION: Ancient Bolivian Lines

COUNTRY: Bolivia
DISCIPLINE: Prehistoric Astronomy
CHIEF SCIENTIST: Jon Patrick
AFFILIATION: Lecturer, Dublin College of Technology, Eire
DATES: June 1 to 22, 1974
STAGING AREA: Cuzco, Peru
PARTICIPATION FEE: \$1190 (plus airfare)

An archaeological study of Inca and pre-Inca culture in Machu Picchu and Cuzco, and an astro-archaeological investigation of the man-made linear patterns in the Bolivian Altiplano

The Incas and their ancestors have left us an intriguing legacy of mammoth stone structures and lines which stretch for miles across the desert. At Cuzco stands a huge wall so constructed that a knife blade cannot fit between its stones. Near Nazca pre-Inca line complexes and figures exist which cannot be explained. Recent reports indicate that similar line patterns exist at 14,000 feet on the plateaux of the Bolivian desert south of La Paz and that the indigenous population still use them for ritual ceremonies. The EEL team will investigate the astronomical and geometric characteristics of the Bolivian sites and will attempt to tie the line sites to standard geographic references. The team will also observe and record rituals, if possible, and document any mythology or history concerning the origin and purposes of these lines.

WORK SCHEDULE: The team will acclimatize in Cuzco and Machu Picchu, where members will be briefed on land surveying, the use of electronic distance measuring equipment and theodolites, ancient astronomy, archaeology, and anthropology. At the sites one group will carry out detailed measurements of the size, shape, and astronomical orientation of the lines, while another investigates their cultural import by making contact with the people of the area.

Those with an interest in archaeology, surveying, astronomy, mathematics, celestial navigation, or South American prehistory are encouraged to apply. Because of the altitude and living conditions in the desert, a vigorous constitution is a necessity.



EXPEDITION: Uaxactun Temple Restoration
COUNTRY: Guatemala
DISCIPLINE: Archaeology and Art
CHIEF SCIENTIST: Edwin M. Shook
AFFILIATION: Archaeologist, Miami Museum of Science
DATES: Team I: June 2 to 15, 1974
 Team II: June 16 to 29, 1974
 Team III: June 30 to July 13, 1974
 Team IV: July 14 to 27, 1974

STAGING AREA: Tikal, Guatemala
PARTICIPATION FEE: \$690 (plus airfare)

The recovery and restoration of a unique Maya pyramid deep in the Pétén forest region of Guatemala

Unlike other great civilizations in the New World, such as the Inca and Aztec, the Maya left history little evidence of their everyday life, their community plans, dwellings or workshops. All that is known of this great people has been learned from what survived the ravages of time: splendid works of art and monumental architecture, ceremonial centers, temples and public buildings. The Mayan empire was known to have flourished in the fourth century around Lake Pétén, where this ornate white 27 ft. pyramid was found in the early part of this century. Since its last major visit by archaeologists in 1929, this temple has been lost from view in the dense jungle underbrush that now reclaims the site. The objective of this expedition is to clear and reconstruct this Mayan edifice, restoring it as a permanent monument for the people of Guatemala.

WORK SCHEDULE: Team members will be based in Tikal, traveling daily to the site. Much of the rain forest around the pyramid must be cleared with axe and machete before the restoration work can begin. Teams will be split into small groups to work on all phases of the reconstruction with visiting scientists and Indian and Guatemalan masons. Mr. Shook, a resident archaeologist who has worked in this area for over a decade, will be assisted on the project by Dr. Dwight R. Milne, Dean of the New York North Country Community College, and members of his staff.

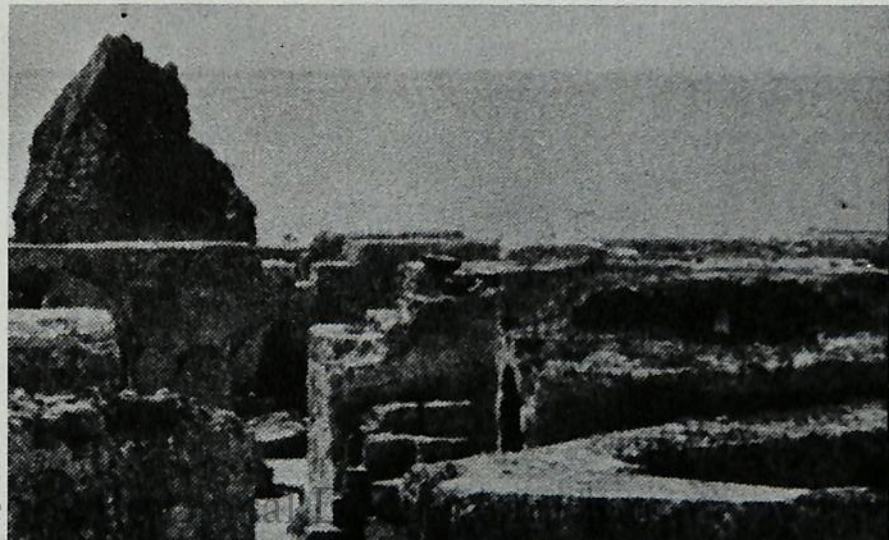
Archaeologists, architects, artists, engineers, surveyors, masons, and landscapers are urged to join, but enthusiasm and a good back are the only prerequisites.



1974, at the invitation of UNESCO and the Tunisian government, British, French, Italian, and American teams will begin a five-year project to excavate and preserve this important site. Professor Lengyel, selected to lead the American portion of the project, will direct the excavation of a Punic site, with excavations of subsequent Roman and Byzantine sites to follow. The emphasis of the search will be for Phoenician cultural artifacts, although the Byzantine and Roman influences will be apparent at various levels, too. There will be daily staff meetings and discussions among the national groups, so that the American teams will learn of the discoveries made throughout the area.

WORK SCHEDULE: Team members will live in a villa close to the excavation sites they will be working on: the ancient Punic burial ground, the Phoenician cultural center, and possibly the Roman water supply system. A Tunisian palace has been provided to the teams for lectures, meetings, and study, and where a library, research laboratories, and workshops will be available for all participating groups. The American teams will alternate duties, which will include measurement, stratigraphy, registration of artifacts, trench work, and library research.

Persons with architectural, engineering, artistic, or draftsman's skills will be welcomed, as will those with a keen interest in the project.





EXPEDITION :

Bison Kill

Nebraska, United States

COUNTRY:

Archaeology

DISCIPLINE:

Dr. Larry Agenbroad

CHIEF SCIENTIST:

Professor of Earth Sciences, Chadron State College, Nebraska

AFFILIATION:

Team I: July 7 to 24, 1974; also 1975

DATES:

Team II: July 27 to August 12, 1974; also 1975

STAGING AREA:

Chadron, Nebraska

PARTICIPATION FEE:

\$590 (plus transportation)

A survey and excavation of an early Indian bison kill site

This site, called Hudson-Meng, has been dated back 9,000 years. It is unique for two reasons: it contains remains of animal species from the Rocky Mountains, the Great Plains, and the southeastern and southwestern parts of the United States. Also, it has been dated, and dated paleo-Indian sites are quite rare, so excavations conducted here are of particular importance to the study of early man on the High Plains. Since 1971 more than 200 animals of both extinct and modern species of bison have been recovered. Most skulls recovered were minus their skull caps, leading Dr. Agenbroad to theorize that the missing caps are located in the actual kill area where the initial butchering took place. The primary goals of this summer's research will be to locate and sample the kill area and to determine the species of previously excavated animals by means of skull and core comparisons. An analysis of the fossil pollen, soils, sediments and stratigraphy at the site will provide data on the environmental conditions at the time of the kill, the history of soil erosion and deposition, and the climatic changes and geologic history from the time of the kill to the present.

WORK SCHEDULE : Participants will join the ongoing research activities and field school of Chadron State College. They will be housed at a tent camp established near the site and will be exposed to a full range of excavation experiences.

Participants with an educational background in archaeology, veterinary sciences, fossil pollen, botany, mapping and drawing, photography, or paleontology will be of special value. Medical certification of fitness for excavation activities in temperatures as high as 100° F. is required.

EXPEDITION: Cinteopa
COUNTRY: Mexico
DISCIPLINE: Archaeology
CHIEF SCIENTIST: Carmen Cook de Leonard
AFFILIATION: Centro de Investigaciones Antropológicas de Mexico
DATES: September 1 to 17, 1974; also September 1975
STAGING AREA: Mexico City, Mexico
PARTICIPATION FEE: \$690 (plus airfare)

An excavation at Cinteopa, the Temple of the Corn God, a center of Teotihuacan culture and birthplace of the great and legendary king, Quetzalcoatl

Historic information on Mexico's Classic Period, from 300 to 600 A.D., is mostly legendary, with no written remains. Cinteopa, in the state of Morelos, is of special importance, as there are few Classical sites in this area and this particular one closes a gap in the attempt to delineate the sphere of influence of these sites. The area of cultural domination during this period covered a great area, extending into Central America. Previous work at the Temple has led to the reconstruction of the Precolumbian agricultural calendar and the recovery of unique sculptures. The EEI team will attempt to discover more examples of this artistic style, as well as conduct a search for burial grounds, and carry out cave surveys and searches for other new sites in the area. The research is interdisciplinary, encompassing archaeology, geology, botany, and history.

WORK SCHEDULE: From Mexico City team members will travel by bus to Amatlan, a town with an old history and traditional life style, whose 400 inhabitants have appointed Dr. Leonard their "godmother." Cinteopa is one hour further, by foot or on horseback. The landscape is spectacular, with deep gorges and high cliffs, abundant and interesting flora, and much tropical vegetation. Participants will be involved in all aspects of the excavation, surveys, and searches to be carried out, as well as the lab studies to be conducted on location. Of particular interest to those with an interest in botany will be the opportunity to undertake a study of local medicinal plants, a list of which was last compiled in the sixteenth century.

This expedition will involve many disciplines: archaeology, botany, geology, mineralogy, history and ethnography.



What is EEI ?

Educational Expeditions International (EEI) is a non-profit organization that coordinates and sponsors field research projects for scientists from all over the world. The funds and staff assistance to support the research come from amateurs and professionals who apply for places on expedition teams.

In its first three years, EEI has sponsored 38 research expeditions in 18 countries, supporting the work of some 70 scientists from more than 40 institutions.

Essentially, EEI is a clearing-house. Scientists apply for research grants for many disciplines — archaeology, anthropology, astronomy, biology, ecology, geology, medicine, and marine sciences. Those adjudged most worthy by an advisory board of scientists and educators are selected for support. The personnel requirements, logistical arrangements, and timetable are set. Then EEI looks for that mixture of individuals whose collective contributions, enterprise, and enthusiasm can be put to constructive use in the field.

The expedition experience

A field expedition, like an individual, has its own personality. No two are alike. Each expedition has specific objectives and a scheduled approach to its research problems. Yet there is an unpredictable spontaneity about field research. Scientists often take advantage of day to day discoveries by shifting goals, adjusting schedules, and undertaking additional projects to make full use of opportunities uncovered in the field. So team members must be adaptable.

Participants are taught what they need to know to be productive. The Chief Scientist and his colleagues provide the historical and scientific background to put the research goals in perspective. Many of the staff are faculty scientists at leading institutions. Under their personal guidance, team mem-

bers are instructed in field methodology, including the use of instruments, tools, and equipment, surveying and mapping techniques, collecting and sampling, observation, excavation, photography, and other relevant activities.

It is important to remember that a *field expedition* is exactly that. The environments are remote, often untamed. Extremes of climate, rugged topography, and isolation are not uncommon. As companions in the field, participants share the life-style of the professional scientist. This includes the chores connected with the research as well as those associated with bivouac living.

Field research offers a challenge — physically, culturally, and intellectually. Therein lies the potential for meaningful individual achievement and, for many, self-renewal.

An expedition is not for tourists

EEI expeditions are not tours or educational outings. They are working experiences designed to fulfill the needs and requirements of professional scientists.

The expeditions are open to men and women of all ages. No professional qualifications are required.

Past participants have ranged in age from 16 to 72. About one-third are teachers and students. The others come from a wide variety of professions and life experiences. Their common denominators have been curiosity, imagination, and a genuine desire to learn more about themselves and the world around them.

If you are willing to work, ready to learn, tolerant of others, and have a sense of humor, please apply. We need your help in the field.

EEL expedition directors

Dr. Larry Agenbroad, *Professor of Earth Sciences, Chadron State College, Nebraska*

Dr. Ofer Bar-Yosef, *Director, Laboratory of Prehistory, Institute of Archaeology, Hebrew University, Israel*

Miss Jean Brown, *Head, Material Culture Research Project, Institute of African Studies, University of Nairobi; and Ethnographer, National Museum of Kenya*

Dr. H. Aubrey W. Burl, *Head, Department of Evolution and Prehistory, Kingston-on-Hull College of Education, England*

Dr. Richard Chesher, *Vice President, Marine Research Foundation, Florida*

Mr. Edward Cronin, Jr., *Ornithologist, Association for the Conservation of Wildlife, Thailand*

Dr. Frances Dakin, *Department of Geology and Geophysics, Haile Selassie I University, Ethiopia*

Dr. James Deetz, *Professor of Anthropology, Brown University; and Assistant Director, Plimoth Plantation, Massachusetts*

Dr. Ian Gibson, *Department of Geology, University of London*

Dr. R. Miles Gilbert, *Department of Anthropology, University of Missouri-Columbia*

Dr. Gerald Hawkins, *Astronomer, Smithsonian Institution Astrophysical Observatory, Massachusetts*

Dr. Alfonz Lengyel, *Professor of Archaeology, Northern Kentucky State College; and Director, American Team, UNESCO Carthage Project*

Dr. Carmen Cook de Leonard, *Anthropologist, Center for Anthropological Research, Mexico*

Dr. Igor Loupekine, *Head, Department of Geology, University of Nairobi; and Director, Nairobi Seismological Station*

Mr. Jeffrey McNeely, *Mammalogist, Association for the Conservation of Wildlife, Thailand*

Dr. Donald Menzel, *Paine Professor of Practical Astronomy, Emeritus, Harvard University; and Research Scientist, Smithsonian Institution Astrophysical Observatory, Massachusetts*

Mr. Jon Patrick, *Lecturer, Dublin College of Technology, Eire*

Mr. David Price-Williams, *Institute of Archaeology, University of London*

Dr. Klaus Rohde, *Lecturer, University of Queensland, Australia; and Head, Heron Island Research Station*

Bro. S. Dominic Ruegg, F.S.C., Ph.D., *Department of Archaeology; St. Mary's College, California*

Dr. Hans-Ulrich Schmincke, *Professor of Geology, Institut für Mineralogie, Ruhr University, Germany*

Dr. Peter Shinnie, *Head, Department of Archaeology, University of Calgary, Canada*

Mr. Edwin Shook, Resident Archaeologist, Uaxactun Project, Guatemala

Mr. Gary Wheeler Stone, *Archaeologist, St. Mary's City Commission, Maryland*

Lord William Taylour, M.A. (Cantab), Ph.D., F.S.A., *Faculty of Archaeology, Cambridge University, England*

Dr. David Thomas, *Assistant Curator, North American Archaeology, American Museum of Natural History, New York*

Mr. William Waldren, *Head, Deya Archaeological Museum and Research Center, Mallorca, Balearic Islands*

Dr. Richard Zingmark, *Department of Biology, University of South Carolina*

More Policy Statements on the Acquisition of Art and Antiquities

Policies on the acquisition of art and antiquities have recently been announced by California State University, Long Beach, and the University of California, Berkeley.

The statement approved by the Academic Senate of California State University, Long Beach, on December 8, 1972, and by the University President on January 3, 1973, is as follows:

The following general principles are to govern the University with respect to the acquisition (whether by gift, bequest, or purchase, or through the activities of scientific or archaeological expeditions) of works of art and antiquities:

1. The faculty member, museum director, librarian, curator, or other University officer responsible for making an acquisition or who will have custody of the acquisition should assure himself that the University can acquire valid title to the object in question. This means that the circumstances of the transaction must be such as to give adequate assurance that the seller or donor has valid title to convey.

2. In making a significant acquisition, there should be reasonable assurance under the circumstances that the object has not, within a recent time, been exported from its country of origin (and/or the country where it was last legally owned) in violation of that country's laws.

3. In any event, there should be reasonable assurance under the circumstances that the object was not exported after the date this policy was approved in violation of the laws of the country of origin and/or the country where it was last legally owned.

4. The University will refuse to acquire objects in any case where there is reasonable cause to believe that the circumstances of their recovery involved the recent unscientific or intentional destruction of sites or monuments, or which have otherwise been acquired illegally; these restrictions shall also apply to archaeological objects excavated or collected in the United States.

5. If there is doubt about the relevant determinations under paragraphs 1-4, consultation should be as wide as possible. Particular care should be taken to consult colleagues in other parts of the University whose collecting, research, or other activities may be affected by a decision to acquire an object. Where appropriate, the legal counsel to the University should be consulted, and where helpful, a special panel should be created to help pass on the questions raised.

6. The University will not acquire (by purchase, bequest, or gift) objects that do not meet the foregoing tests. If appropriate and feasible, the same tests should be taken into account in determining whether to accept loans for exhibition or other purposes.

7. Those making or having custody of acquisitions will be responsible to the President for the observance of these rules. All information obtained about the provenience of an acquisition must be preserved, and unless, in the opinion

of the relevant official and the legal counsel to the University, special circumstances exist in a specific instance, all such information shall be available as a public record. Prospective vendors and donors should be informed of this policy.

8. If the University should in the future come into the possession of an object that can be demonstrated to have been exported or acquired in violation of the principles expressed in Rules 1-4 above, the University should, if legally free to do so, seek to return the object to the donor or vendor, or to the proper owner or nation, as found appropriate.

The statement issued by the Chancellor of the University of California, Berkeley, March 1, 1973, is as follows:

Preamble: For the past several years, reputable museums throughout the world have been concerned with the scientific, legal, ethical, and diplomatic problems involved in the acquisition of art, antiquities, and archaeological materials. Large quantities of primitive and ancient artifacts, as well as occasional old-master paintings and prints, are being stolen, illegally excavated, or smuggled out of their countries of origin and illegally imported into the United States. This is particularly shocking in the area of archaeological materials, which are being clandestinely excavated in direct contravention of the laws of the countries of their origin, to such an extent that resentment against this illicit trade is running high in many countries, threatening to disrupt the legitimate and highly desirable research of American archaeologists abroad. If this market were to continue at its present systematic rate, it could obliterate large segments of the cultural heritage and national treasures of many countries.

Hence, we believe that the museums of the University of California, Berkeley must join other museums throughout the world in formulating a policy which will regulate, reduce, and control the illicit traffic in art and antiquities.

Policy: Therefore, on behalf of the Lowie Museum of Anthropology and the University Art Museum, the University of California, Berkeley, will use its best efforts to ensure that any object to be accessioned to their respective collections has not been (1) excavated without permit, where such permits are required, whether in the United States or abroad; (2) stolen from a private collection, a dealer in art and/or antiquities, a museum, or a nationally designated monument; or (3) exported from its country of origin in violation of the laws of that country and/or the country where it was last legally owned.

Moreover, should either of these museums of the University of California, Berkeley, come into possession of any object in violation of these principles, the University will, if practicable, return it to the rightful owner.

CA readers are strongly urged to submit for adoption by their own institutions some similar policy statement. Among ourselves, we know that most professionals already adhere to the ethical position, but the adoption of a formal policy helps to make this fact known to others and also serves an important educational purpose.

Reported by KEITH A. DIXON

problems directly related to the development of population policies. It is especially concerned to make work agreements with individuals or small groups of investigators who are new to the population field and also able to apply the concepts and methods of their own disciplines to population problems.

Applicants need not be affiliated with institutions, associations, or universities, but may submit applications through organizations with which they are associated if such a procedure is required by local practice. The program will provide no financial support to studies conducted by organizations. Under the terms of the work agreements, investigators do not become mere grant recipients; rather, they enter into a continuing professional interaction with the staff and panelists associated with the Interdisciplinary Communications Program. This relationship involves the exchange of information and ideas as well as participation in a limited number of small workshop/seminars attended by international colleagues with related population concerns. Workshop/seminars are held in different parts of the world, including Third World countries. Participants invited to these conferences are expected to bring fresh viewpoints to the meetings, which are also designed to nurture lasting professional associations.

Investigators must possess sound research credentials, as well as knowledge of and rapport with local customs. They receive professional assistance and financial support for a period ranging from three months to one year. The maximum funding is U.S. \$50,000.

Further information may be obtained from the trilingual publication TP-100 (in English, French, and Spanish), available from the Interdisciplinary Communications Program, Smithsonian Institution, 1717 Massachusetts Ave., N.W., Washington, D.C. 20036, U.S.A.

■ The INTERNATIONAL SOCIETY FOR RESEARCH ON AGGRESSION, founded January 1, 1973, invites applications for membership from scientists doing active research in problems related to aggression in both its positive and negative aspects. Membership is open to scientists from all nations working in any of the biological, social, or psychological sciences. Officers of the Society are Saul Rosenzweig (U.S.A.), Founding President; J. P. Scott (U.S.A.), President; S. A. Barnett (Australia), President-elect; Ross D. Parke (U.S.A.), Executive Secretary; and Katsuzo Hayashi (Japan), Kirsti Lagerspetz (Finland), Neal E. Miller (U.S.A.), Karl H. Pribram (U.S.A.), W. H. Thorpe (Great Britain), and Oleg K. Tikhomirov (U.S.S.R.), Councilors. For information, write: Ross D. Parke, The Fels Institute, Yellow Springs, Ohio 45387, U.S.A.

■ The FOUNDATION FOR LATIN AMERICAN ANTHROPOLOGICAL RESEARCH was incorporated in the state of Rhode Island in September 1969 to provide support for the excavation of the Maya ruins at Yaxhá, Guatemala. Its long-range objectives are library and field research on all aspects of Latin American anthropology, including ethnography, ethnology, ethnohistory, linguistics, archaeology, and applied anthropology; and the publication and application of the results thereof for the instruction and benefit of the public on a nondiscriminatory basis. The Foundation maintains summer archaeological research at the Yaxhá ruins and supports archival studies in Spain and in Guatemala on the 16th-17th-century Peten Ytza, Mopan, Chol, and Lacandon Maya and research on the influence of Teotihuacán art on that of the rest of 4th-8th century-A.D. Mesoamerica.

Explorations at Yaxhá during 1970 and 1971 were aided by 50% funding from National Science Foundation grant

GS-3043. The 1972 and 1973 seasons have been financed and sponsored solely by the Foundation. Yaxhá is a 1st-to-10th century-A.D. Maya site consisting of 500 structures along a ridge overlooking a 15-mile-long string of lakes. It is best known for Stela 11, which depicts a circle-eyed warrior sculpted in a local imitation of Teotihuacano style. The most important discovery to date has been a system of six streets which run straight north-south or east-west and intersect with one another at right angles. Flanking these unexpected streets are rectangular, almost modern blocklike building complexes situated one right after the other. These streets and an unusually high density of structures make Yaxhá an excellent site for research on possible urbanism within a supposedly nonurban Southern Lowland Classic Maya civilization.

In order to foster multidisciplinary research in the Lake Yaxhá region, the Foundation hopes to build by 1975 a series of laboratories and living accommodations for anthropologists and natural scientists. Researchers in the fields of botany, zoology, and geology are sought to answer questions about ancient Maya ecology which still elude the archaeologist.

Research in the Archivo General de Centro America (Guatemala City) and in the Archivo General de Indias (Seville, Spain), the latter aided by a grant from the American Philosophical Society to Nicholas Hellmuth, has uncovered fresh facts on population density, settlement permanency and distribution, trade, agriculture, hunting, fishing, and gathering by the vigorous 16th-17th-century populations of the Ytza, Covoh, and Mopan Maya of El Petén, the Toquegua and Verapaz (Manche) Chol Maya of Verapaz and Izabal, and the Cholti-Lacandon and later Yucateco-Lacandon Maya of Chiapas. Hellmuth has found thousands of folios of old Spanish relaciones previously untouched by anthropologists, containing accurate first-hand descriptions of sizeable populations, often living in semipermanent villages, subsisting on a varied diet of cultivated root crops, tree fruits and nuts (but not ramon), maize, beans, and dozens of other vegetables and grains supplemented by the products of considerable hunting, fishing, and gathering. Many portions of the Southern Maya Lowlands were well populated before Spanish-introduced disease and warfare decimated their numbers. Further archival research both in Spain and Guatemala is planned by Hellmuth for 1973-74 in collaboration with Lic. Agustín Estrada and Dr. Lawrence Feldman.

The Foundation's funds come from corporations and individuals who are interested in aiding active, innovative, and productive research in Latin America. The officers and directors all serve without pay, as does the full-time director of the Yaxhá Project.

Guatemalan government agencies and private organizations have rendered considerable help to the fledgling foundation. Lic. Luis Lujan, Director of the Instituto de Antropología e Historia, has granted the Foundation excavation rights for the ruins of Yaxhá, Topoxte Island, Nakum, and their surrounding sustaining areas. Coronel Óliverio Casasola, head of the government development agency for the Department of El Petén, had a highway built to Lake Yaxhá, a jeep trail to both Yaxhá ruins and Nakum, and an airfield between Lakes Yaxhá and Sacnab. The President of Guatemala, General Carlos Arana, directed that special housing be built at government expense for the U.S. college students working at Yaxhá to express appreciation for the research being undertaken. The Asociación Tikal de Guatemala (a group of private citizens interested in the pre-Columbian heritage of Guatemala) has given considerable aid to the Yaxhá investigations.

The current director of research is Nicholas M. Hellmuth. He can be reached by mail at Apartado Postal 1838,

THE FOUNDATION FOR LATIN AMERICAN ANTHROPOLOGICAL RESEARCH, INC.

Atentamente invita a Ud. a un cocktail

Sábado 15 de Junio de 1,974.

18:00 a 20:00 horas



4a. Avenida 8-72, Zona 1
7o. Piso - Penthouse
Edificio Horizontal.

We cordially invite you also to attend a lecture given by Nicholas M. Hellmuth on the archaeology of Guatemala which will be offered in English from 17:00 to 18:00 PM. at the auditorium of the Chamber of Commerce (10a. Calle 3-80, Zona 1). Following the presentation cocktails will be served.

On display will be the photographic archives of ceramic art of Escuintla, El Quiché and El Petén.

Cordialmente les invitamos para asistir a la conferencia que ofrecerá el Lic. Nicolás M. Hellmuth sobre la arqueología de Guatemala (la misma en español), de las 20:00 a las 21:00 horas, en el auditorium de la Cámara de Comercio (10a. Calle 3-80, Zona 1).

Serán expuestas reproducciones fotográficas de las artísticas y bellas piezas de cerámica procedentes de Escuintla, El Quiché y El Petén.

Guatemala, Junio de 1,974.





David H. Kelley
Dept. of Archaeology
Univ. of Calgary
Calgary, Alberta, Canada

2432 Sovereign Cr. S.W.
Calgary
T3C 2M2

MAY A GLYPHS