

Beautiful Maya Sculpture Found Among Debris in Chiapas

It isn't every day that one encounters an ancient Maya sculpture while clearing out debris on your land, but that is exactly what happened to a private land owner in Chiapas, Mexico.

Researchers say the head sculpture depicts Yum Kaax, the Maya god of abundance. After realizing the importance of the artifact, the land owner notified the local authorities and the piece was taken to the Chiapas offices of Mexico's National Institute of Anthropology and History (INAH).

The archaeologist in charge of the registration of the piece, points out that it is a stucco head – a mixture of lime with clays.

Faced with a finding of this kind, INAH would usually keep the sculpture in the Regional Museum of Chiapas; however, in this case, INAH granted custody to the inhabitants of the community of Suchiapa, (the largest town near where the piece was found). It will now be under the legal guardianship of the owner of the land who



The stucco sculpture of Yax Kaax is now housed in Suchiapa near where it was located. Photo courtesy of: sie7edechiapas.com



This closeup detail is courtesy of the Prensa Libre: gacetamexicana.com

must obey certain conditional guidelines pertaining to its safety and conservation. The monolith is 30 cm wide, 63 cm long and 25 cm deep (approximately 12 x 25 x 10 inches) and it weighs nearly 14 kilos (31 lbs.). It was registered by INAH as piece #2974 PF.

"The authenticity of the piece, which belongs to the Late Classic period between 600 and 900 CE, was verified by the Chiapas INAH Center and they later made an iconographic study of the piece," explained Fanny López, director of the Regional Museum of the INAH in Chiapas.

Source: Submitted by our new field reporter in Suchiapa, Jorge Alberto Jose Fuentes, from a local news report in Spanish. 🏠

Upcoming Events at the IMS:

Oct. 17 • 7:30 pm: *IMS Special Presentation Salt in the Classic Maya Economy* – with **Heather McKillop**, Thomas and Lillian Landrum Alumni Professor, Dept. of Geography and Anthropology, Louisiana State University Baton Rouge. Heather is Director of LSU's DIVA Lab (Digital Imaging and Visualization in Archaeology) that was created in 2008 to provide a way to preserve and study the waterlogged wood and pottery from the underwater Maya sites. A team of DIVA Lab scientists, consisting of undergraduate student workers, graduate students, and the DIVA Lab Director have scanned thousands of artifacts and wooden posts in the DIVA Lab.

IMS Program Note:

This year, in alignment with MDC, we offer eight IMS presentations during the calendar year: January – June and September – October. For more information, contact our Hotline at: 305-279-8110; or by email at: info@instituteofmayastudies.org

Upcoming Events and Announcements:

Oct. 5-6: *Dumbarton Oaks Symposium Reconsidering the Chavín Phenomenon in the Twenty-First Century* – with **Richard L. Burger** and **Jason Nesbitt**, Symposiarchs. Chavín de Huántar has long been considered crucial to understanding the emergence of ancient Andean civilization during the late Initial Period (1100–800 BCE) and Early Horizon (800–400 BCE). The site is perhaps best known as a ceremonial center that consisted of a temple core with monumental platforms, interior galleries, and plaza spaces, as well as finely carved stone sculpture. At the Dumbarton Oaks Music Room, Washington D.C. Search the event on: <https://www.doaks.org/research/pre-columbian/scholarly-activities>

November 2-3: 10:00 am to 5:00 pm. **Seminole American Indian Arts Celebration** – The Ah-Tah-Thi-Ki Seminole Indian Museum on the Seminole Indian Big Cypress Reservation hosts this annual event focusing on the traditional

and contemporary arts, dance and music of the Seminole, Southeastern and other Indian tribes from across the country. A film viewing and panel discussion with the directors for *More Than A Word* will take place on Saturday from 5-7 pm. For more information, go to: <https://www.ahthathiki.com/events/>

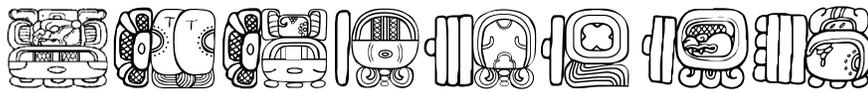
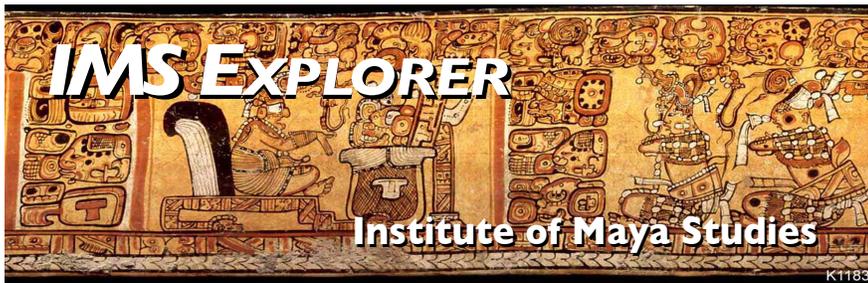
Editor's Tip: *Online all the time Ancient Americas Events* – Get in the know with Mike Ruggeri's "better-than-ever!" comprehensive list of upcoming Ancient Americas Lectures, Conferences and Exhibits: Go to: <https://mikeruggerisevents.tumblr.com/>

Check out and get in on the fun on our IMS Facebook page: Get in on all the action! IMS members post interesting links, as well as photos from their recent adventures. Join the **Explorer**-ation! at: <https://www.facebook.com/groups/MiamiIMS/>



IMS EXPLORER

Join the **Explorer**-ation! Scholar or not, we welcome submissions from IMS members and other Maya enthusiasts. Share what interests you with others. All articles and news items for the **IMS Explorer** should be forwarded to the newsletter editor at: mayaman@bellsouth.net



October 17, 2018 • Maya Ceremonial Era Long Count: 0.0.5.16.6 • 11 Kimi 19 Yax • G2

A monthly newsletter published by the Institute of Maya Studies

Maya enthusiasts providing public education for 46+ years

A Community Partner of Miami Dade College – Kendall Campus, Miami, FL, USA

Volume 46, Issue 10
October 2018
ISSN: 1524-9387



Inside this issue:

- Ancient Belizean Salt Works Focus of a 3-Year National Science Fund Grant, featuring Heather McKillop 2,6
- Zapote de Mico, *Pouteria* Torta, with Dr. Nicholas Hellmuth, (cont. from page 1) 3,4
- Unbundling the Past: October, by Zach Lindsey 4
- In Memoriam: Dr. Guillermo Mata Amado 5,6
- IMS Special Presentation; Membership Application 7
- Beautiful Maya Sculpture Found Among Debris in Chiapas; Upcoming Events 8



Zapote de Mico, *Pouteria torta*

Underutilized, forgotten, yet edible native fruit for Maya food resources

by Dr. Nicholas Hellmuth, FLAAR Mesoamérica

If LiDAR aerial mapping has found “millions more Maya people than previously known” then how did these people live? What did they eat?

At the ICA 2018 Congress at the Universidad of Salamanca, Spain, several presentations were focused on all of the new Maya settlements found by LiDAR. Then in late July, at the impressive Maya-focused symposium in Guatemala’s Museo Nacional de Arqueología y Etnología, more than 25% of the presentations were based on new discoveries by LiDAR.



Zapote de Mico on the tree. Nikon D810, 50mm Lens, f/9.0, 1/10, ISO 640, Westcott Lighting, FLAAR Studio, Guatemala, Nicholas Hellmuth, FLAAR Mesoamérica.

We at FLAAR are working to contribute documentation of exactly which plants were available to the Maya 2000 years ago, especially what kinds of edible plants were available and in which eco-system. For example, the Highland Maya have various species of fruits, edible leaves and edible flowers; whereas the Lowland Maya have many other species. Another part of the equation is the fact that some fruits are “soft” and considered only for local consumption, as they get squished (or rot) if you try to transport them.

Year after year, the teams of FLAAR (USA) and FLAAR Mesoamérica (Guatemala) travel into remote areas of Guatemala to investigate the edible plants cultivated in the home gardens (also called kitchen gardens), and what edible plants are in the forests surrounding the village.

The article today is about finding an edible fruit that I was not aware of



Hand-picked Zapote de Mico. Nikon D810, 50mm Lens, f/9.0, 1/10, ISO 640, Westcott Lighting, FLAAR Studio, GUA, Nicholas Hellmuth, FLAAR Mesoamérica.

October 17, 7:30 pm
IMS Presentation:



Heather and grad student Tamara Spann at lab in lagoon.

Salt in the Classic Maya Economy
with
Heather McKillop,
Thomas and Lillian Landrum Alumni Professor, Dept. of Geography and Anthropology, Louisiana State University, Baton Rouge, LA

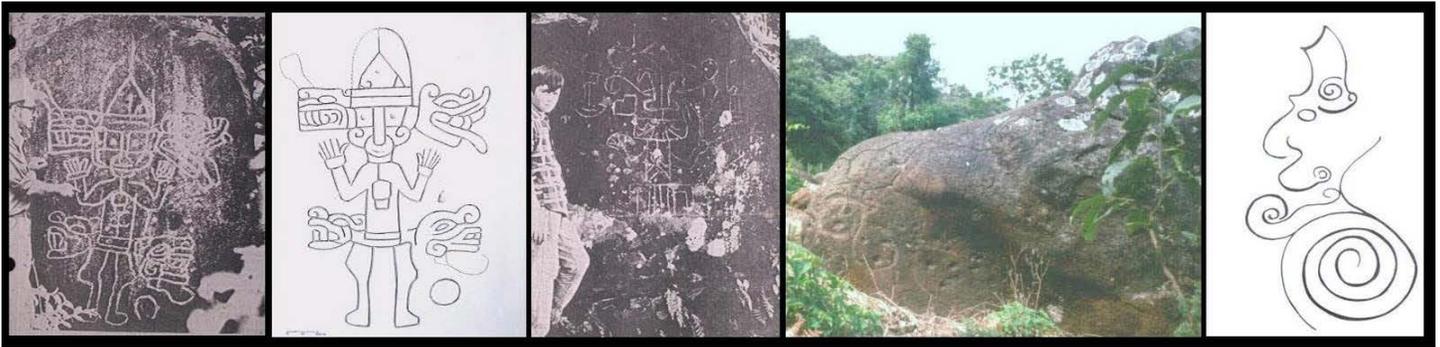
even after 54+ years in Mesoamerica. Much to my surprise, this edible fruit was missing from close to 100% of the monographs and

continued on page 3

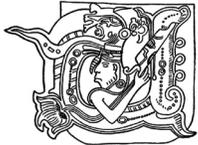


Jim Reed, Editor

©2018 I.M.S. Inc. The IMS Explorer newsletter is published 12 times a year by The Institute of Maya Studies, Inc. The Institute is a 501(c)3 non-profit organization. As a member you receive the monthly newsletter and personal access to the Member’s Only pages on our website, access to IMS program videos, photo archives, past issues, and more. Get your password by contacting our Webmaster at: webmaster@instituteofmayastudies.org. Membership and renewal application on our website.



Mata Amado had many other interests including searching for ancient petroglyphs. As reported in the La Hora newspaper (May 26, 1973), in an article by Mata Amado, who along with his son and a friend, toured the slopes of the Suchitán volcano. The Suchitán volcano is located in the Department of Santa Rosa, Guatemala. They encountered many petroglyphs in the area corresponding to the Xinka ethnic group.



Pioneer in Maya Studies: Dr. Guillermo (Billy) Mata Amado

In Memoriam composed by Jim Reed continued from page 5

from Lake Amatitlan (this is many years before the Museo Popol Vuh opened, a result of Dr. Mata encouraging Jorge Castillo). See *Editor's note* below*.

Billy Mata is best known for his work on incensarios of Lake Amatitlan. Billy was a scuba diver. This is decades before I knew him. But it is Billy who introduced me to the Teotihuacan aspects of many of these Lake Amatitlan incensarios. Other incensarios that were from other time periods and other styles were also discovered.

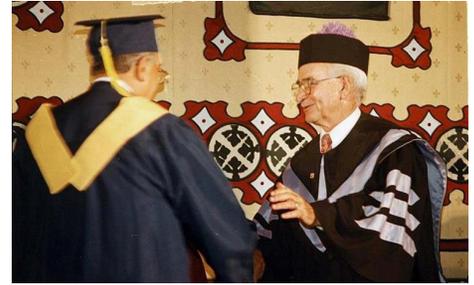
The articles and publications of Dr. Mata on Lake Amatitlan and other underwater discoveries are crucial and essential for understanding the interaction between Teotihuacan and the people of the Highlands (and the Costa Sur to one side and Peten on the north).

Billy Mata was a kind and considerate human, a family-focused person, and an accomplished scholar and lecturer. He is truly missed by his family and colleagues. – Dr. Nicholas Hellmuth



Meet one of the most mysterious and ancient monuments that is housed at the University of San Carlos de Guatemala – the giant head of Gucumatz. This Prehispanic monument is also known as the Quetzalcoatl nahoa. It is a carved stone sculpture that was found in Chimaltenango, on lands of the ancient Kaqchikel civilization, at the beginning of the 20th century. Source: Photo from 1926, submitted by Guillermo Mata Amado.

**Editor's note:* Jorge Castillo, was a very important Guatemalan businessman, president of the Banco Continental and the Cervecería Centroamericana, makers of Gallo beer. I have visited him with Diego Molina at his offices in both locations, and used to design the bank's annual report. My 5-1/2 years while living in Guatemala were the best years of my life! 🏔️



Dr. Guillermo Mata Amado received the prestigious Order of the Quetzal from the Popol Vuh Museum in 1998, and the Crabtree Award in 2003.

Our good friend Karl Herbert Mayer (Order of the Quetzal, 2014) knew Billy and was also one of his dental patients. Karl supplied many of the sources I used to compile this tribute, including: National notice of his passing at: < <https://www.prensalibre.com/vidal/escenario/muere-el-investigador-guillermo-mata-amado> > The Gucumatz giant head of USAC at: < <https://aprende.guatemala.com/cultura-guatemalteca/patrimonios/cabeza-gigante-de-gucumatz-usac/> > and Guatemala's submerged heritage at: < <http://www.deguate.com/artman/publish/cultura-actualidad-guatemala/patrimonio-sumergido.shtml> > Thank you, Karl, for your contributions.

Ancient Belizean Salt Works Focus of a 3-Year National Science Fund Grant

continued from page 2

The researchers will evaluate the production and distribution of salt, a staple good, by study of abandoned salt works where wooden buildings have preserved a record of production untouched from 1500 to 1000 years ago in a coastal lagoon in southern Belize.

In addition, excavations will be carried out at smaller sites in five different areas of the salt works. Species identification and radiocarbon dating of wooden posts as well as column samples of the earth

beside posts will evaluate the ancient landscape and timing of building construction.

Check out all of the program's extensive coverage on the LSU web page at: www.underwatermaya.com 🏔️

**October 17 • 7:30 pm • Special IMS presentation:
Salt in the Classic Maya Economy with Heather McKillop**

Zapote de Mico, *Pouteria torta*

Underutilized, forgotten, yet edible native fruit for Maya food resources *continued from page 1*

by Dr. Nicholas Hellmuth, FLAAR Mesoamérica

articles on edible plants of the Maya. We found it only in monographs of plant lists (so not in discussions of Maya agro-forestry or plants available for food for the ancient Maya).

Our goal is to make lists of all utilitarian plants and make these lists available to all archaeologists: one plant at a time, so we can present bibliography, photos, etc. So today, we reintroduce a lost, forgotten, ignored and definitely underutilized zapote fruit: zapote de mico.

Was *Pouteria torta* available to the Classic Maya?

We've been working on our list of Maya edible plants for years now, So I was pleasantly surprised when Dwight Carter of *Frutas del Mundo*, Izabal, Guatemala, showed me a tree filled with several hundred fruits that I had never ever seen before.

Not only had I never seen this fruit, I had not noticed it in any recent monograph on edible fruits of the Maya areas of Mesoamerica. So, I sat down at my desk and did library research day-after-day. Gradually, I found that indeed this fruit tree is present in Guatemala and was not likely introduced by the Spaniards from South America.

The old name is *Pouteria torta* (Mart.) Radlk, family *Sapotaceae*. The new name is *Pouteria torta*

subsp. *Gallifruta* (Cronquist T.D. Penn). This is clearly listed as occurring from Guatemala to Costa Rica. Ironically, this species is not in Pennington and Sarukhan 1968, nor 1998, nor 2005. But clearly Pennington knows this species, (just that in a normal book, there is not space to publish every species.)

Is *Pouteria torta* present in the Lacandon areas of Chiapas?

Suzanne Cook's excellent coverage has *Pouteria mammosa* (2016: 142-143). But no *Pouteria torta*. Surely a student of botany can find a recent publication that includes this plant for Chiapas (unless it is only found in Veracruz and Oaxaca?).

Should *Pouteria torta* be added to edible foods of Belize?

The helpful book of Balick and Arvigo lists: *Pouteria amygdalina* (Standl.) *Bachni*, sap used for glue *Pouteria belizensis* (Standl.) Cronquist, to adulterate chicle *Pouteria campechiana*, edible and medicinal *Pouteria sapota* (Jacq.) H.E. Moore & Stearn, (Balick and Arvigo 2015: 478). But, unless one of these is a synonym, then *Pouteria torta* is missing. Yet *Flora*

Mesoamericana lists one location for Mexico, one for Belize, one for Guatemala, one for Honduras and down south, see:

www.tropicos.org/NamePage.aspx?nameid=28700560&projectid=3

Finally, on my fourth day of research, I found *Pouteria torta* in a book by Balick, Nee, and Atha (2000: 78). But there was no mention of whether or not it was edible. My next step would be to search



Zapote de Chico inside and out. Nikon D810, 50mm Lens, f/9.0, 1/10, ISO 640, Westcott Lighting, FLAAR Studio, Guatemala, Nicholas Hellmuth, FLAAR Mesoamérica.

all books on the botany of Veracruz, Oaxaca, and Tabasco, to see if this *zapote de mico* has been found in these areas. Then I searched all books and articles on trees of Peten, Alta Verapaz, Baja Verapaz, Izabal, etc., to learn where the tree is native to Guatemala.

In summary, *Pouteria torta* is missing from most recent monographs.

- *Pouteria torta* is missing from recent monographs on edible fruits, agro-forestry, and medicinal plants of Belize. I only found it in one single book on plants of Belize in general: but no photos and no discussion of use, nor mention of where in Belize you can find this tree.
- *Pouteria torta* is missing from botanical books on edible fruits and medicinal plants of Peten. I have lots more books to check but it is missing from everything I have looked at so far.
- *Pouteria torta* was also missing from the first edition of my edible and utilitarian plants! But, thanks to Dwight Carter of *Frutas del Mundo*, Izabal, Guatemala, I learned a lot about *Pouteria torta* in late July.

And here it is: "Guatemala, CA; Izabal, Guatemala, CA; Petén, Guatemala, CA; Belize, CA; Toledo, Belize, CA" sic, Pennington 1990: 481, as reported on the website: <http://sweetgum.nybg.org/science/world-flora/details.php?irn=12535>

Our style at FLAAR is to make lists of edible and useful plants as
continued on page 4



Nicholas and Dwight Carter of *Frutas del Mundo* holding *Pouteria torta*, (by Erick Flores, July 22, 2018).





FLAAR
MESOAMÉRICA

Most botanists and ethnobotanists like to provide lists of lots of species of the subject on which they write. But, we are fully dedicated to making lists in more detail than available elsewhere. Our goal is to make a list of at least 98% of all the edible native plants of Guatemala. Why 98%? Because a lot more plants have edible parts than are eaten today and even professional botanists have not found people eating every plant today that the ancient Maya ate 2000 years ago. So, even when our FLAAR lists are longer than elsewhere, we encourage students and the local Maya, Xinca, and Garifuna people of Guatemala to add still more edible and useful native plants of Guatemala.

Even at only 98%, our lists are more complete than 99% of botanical or ethnobotanical monograph or peer-reviewed journal articles that we have yet found. Our “peers” are

Zapote de Mico, *Pouteria torta*

Underutilized, forgotten, yet edible native fruit for Maya food resources *continued from page 3*

by **Dr. Nicholas Hellmuth, FLAAR Mesoamérica**

complete as possible.

the quarter of a million people who access our website every year. at:

www.maya-ethnobotany.org

We write for professors, students, and interested lay people, and we focus on providing bibliographies to help everyone have access to more information.

We are especially interested in finding “forgotton fruit trees” that produce lots and lots of fruits.

What if an individual tree produces 400 to 500 fruits in one single month? And, what if this tree lives for decades? You and your family could have fresh, healthy fruit for many weeks every year.”

What if you have one species of fruit tree bearing fruit every month? What if you have 15 or 20 fruit trees planted around your house? Then, you have healthy food alternatives throughout the year.

So, we are searching for productive trees: *mamey zapote* is the #1 we have found so far (*Pouteria sapote*, *mamey sapote* in

English, *mamey zapote* in Spanish. It may be good to document that the *Pouteria torta* tree had scores of fruits. When you are raising fruit trees commercially, one tends to keep them from growing too high (since if they are too high it’s not realistic to harvest all the fruit). But, the point is that this *Pouteria torta* was literally filled with edible fruit the last week of each July.

And, if you have a *Pouteria torta* tree around your house, in an appropriate eco-system, you will have free fresh fruit much of July and August, every year, for decades.

This report was initiated July 24, 2018, after seeing *Pouteria torta* for the first time in the 54+ years I have been doing research in Mesoamerica.

Note: This manuscript was created especially for the IMS. The complete Bibliography of this summary for the *IMS Explorer* newsletter is in the more indepth PDF edition on the IMS website. 🏠

This report may be cited as:
Hellmuth, Nicholas
2018 *Zapote de Mico, Pouteria torta, Underutilized, forgotten, yet edible native fruit for Maya food resources.*
FLAAR Mesoamérica.

Unbundling the Past: Events in Ancient and Contemporary Maya History for October by Zach Lindsey

On 26 October 709 CE

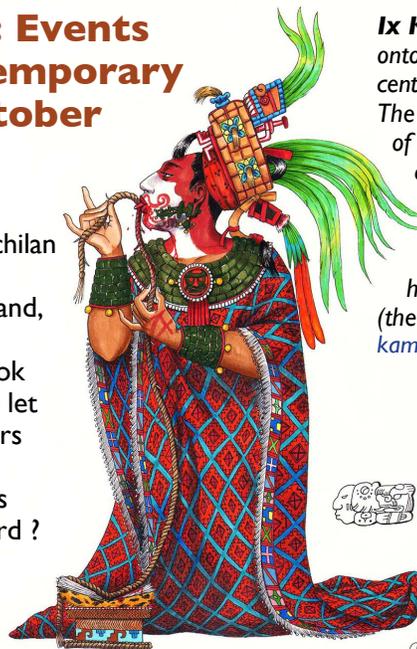
(9.13.17.15.12 5 Eb 15 Mak G6), Yaxchilan rulers Itzamnaaj B'aalam II and Lady K'ab'al Xook entered a dark room and, with only the light of her husband's torch to guide her, Lady K'ab'al Xook drew a rope through her tongue to let blood for the gods. This date appears on the famous Yaxchilan Lintel 24.

There were a lot of rituals this time of year, and Piedras Negras lord ? Chaak Itzamn K'an Aak I donned a Teotihuacan-style war helmet on 22 October 658 CE (9.11.6.2.1 3 Imix 19 Keh G5). But few rival Lady K'ab'al Xook's autosacrifice in intensity, so I wanted to mention a different type of date.

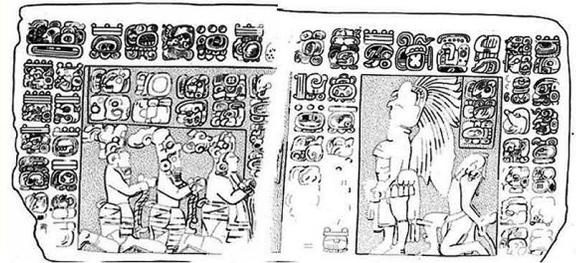
On 17 October 517 CE

(9.4.3.0.17 5 Kaban 0 Sak G8)...

●●●● something happened,



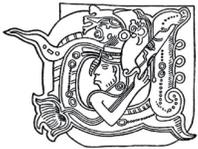
Ix K'ab'al Xook by Kamazotz. Lady Sharkfin bloodletting onto a book. Maya Queen of Yaxchilan (during the 7th and 8th centuries) and one of the most powerful figures in Maya history. The drawing is based on a Lintel from her city. The act of bloodletting in this context was a way for her to gain access and seek help/advice from her ancestors. A barbed rope would pass through her tongue to let the blood drop onto the book. The blood on the pages is then read by a skilled diviner. Metaphorically, it was also a way to bring her word (blood of the mouth) into the material world (the pages of the book). Check out: <https://www.deviantart.com/kamazotz/art/Lady-Xook-426207622>



Piedras Negras Panel 12. Courtesy of: <http://www.latinamericanstudies.org/maya/Piedras-Negras-Panel-12.jpg>

but we don't know what. Eroded inscriptions are unfortunately common. Panel 12 at Piedras Negras was shattered by the ancient Maya and used as construction fill, and key glyphs

are eroded. Mark Pitts believes it may be the date warriors were captured, but we'll only know if archaeologists find the same date on other inscriptions. 🏠



**Pioneer in Maya Studies:
Dr. Guillermo (Billy) Mata Amado**

In Memoriam composed by Jim Reed

Dr. Guillermo Mata Amado was a well-known Guatemalan teacher, dentist, and archaeological researcher. He was born in 1928, to parents who were dentists. Following in their footsteps, he also assumed this profession, although the great dream of his youth was to study archaeology. He could not do that because, in those years, there was no viable career in archaeology in Guatemala, and he had to leave the country to be able to further his studies.

From his childhood, he was awakened by a great curiosity into the various ancient cultures that had thrived in Guatemala. He made the underwater discovery of ceramic vessels and various artifacts in Lake Amatitlan. From 1952, he dared to dive in those waters, as well as those of Lake Atitlan, from where he rescued valuable ancient Maya artifacts and pottery – continuing over three decades.

Mata Amado had a healthy dental practice; he taught at the University of San Carlos; and endeavored to do archaeological research work. His original field of study was Mesoamerican dentistry, his specialty was ancient Maya teeth characterized by incrustations, in most cases, jadeite.

He always said that Prehispanic dental work was extraordinary, and “that even with the modern technology, the same results could not be reproduced oday, despite the fact that we have high-speed drills and diamond drill bits”.

Mata insisted on recreating the possible instruments used by the ancients to implant incrustations in the teeth. According to the scientist, Mesoamerican cultures practiced two dental techniques: selective wear and incrustation, and these were only practiced by Mesoamerican Prehispanic cultures.

Among the documentary work of Mata, it is worth mentioning his, and his wife Maria Luisa’s, love of underwater archeology. He had a passion for diving, which he practiced in a professional manner. His youthful photographs show him as an aquatic explorer in search of Prehispanic art pieces.

Tribute by Dr. Nicholas Hellmuth

Umpteen decades ago, as an archaeology student, I was taught about site maps, artifacts, time phases, settlement patterns, and scholarly theories.

Then, Billy Mata introduced me to the designs on artifacts. This was a second impetus for getting into iconography (the first



Stela 11 at Yaxha, is a well-preserved Early Classic monument on the east side of Plaza B, at the base of Structure 218, in the East Acropolis. The style of the stela is that of Teotihuacan, with the sculpted figure of a warrior with the attributes of Tlaloc, the central Mexican rain deity. The monument is very similar to Stela 32 from Tikal and is associated with the intervention of Teotihuacan in the Peten region during the Early Classic period. Courtesy of: http://www.galenfrysinger.com/guatemala_yaxha.htm

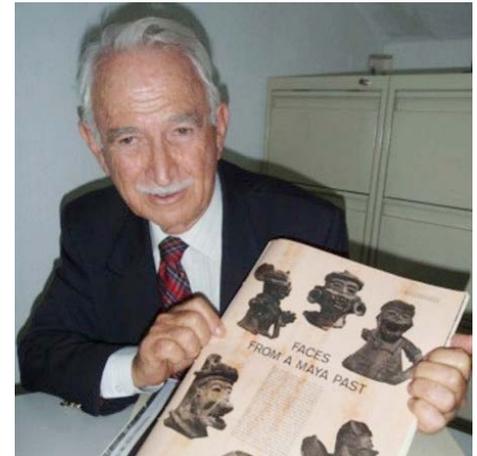
being all the symbols on the bowls, plates, and vases in the Tomb of the Jade Jaguar that I discovered at Tikal). I had spent weeks in the tomb, mapping their position as offerings (as artifacts). It was decades later that I desired to understand the symbols on these vases.

The fact that the Lake Amatitlan artifacts he let me study had Early Classic Teotihuacan-related features, eventually led to my MA thesis at Brown University on Teotihuacan symbols in Late Classic Maya art. After Teotihuacan itself was gone, so much had been implanted into Peten culture that in many areas the Teo-Maya clique continued.

That was why I mapped Yaxha. The site’s full front Early Classic Tlaloc Stela (Stela 11), was the largest Teotihuacan stone sculpture of a single



Guillermo Mata Amado, dentist and archaeological researcher. Photo: Prensa Libre: Álvaro Interiano.



Here, Dr. Mata Armado shares a page from his book: “Faces from a Maya Past”.



Numerous ancient Maya teeth with dental incrustations have been discovered over the years. Many feature incrustations of jadeite, or “Yaxiltun” (precious green stone).

“Tlaloc” military figure discovered anywhere in Peten.

Dr. Guillermo Mata Amado was my dentist in the 1970s-1990s. Dr. Estuardo Mata, his son, and colleagues in his dental clinic, now help take care of my teeth.

The son, Dr. Estuardo Mata is now head of the Museo Popol Vuh, as was Billy Mata after the museum was founded (they are related to the Jorge Castillo family through the wife of Billy Mata).

Dr. Guillermo Mata helped me learn about art, iconography, and archaeology by inviting me to his house, which at that time was located next door to his dental office. At both locations I could study material

continued on page 6

Ancient Belizean Salt Works Focus of a 3-Year National Science Fund Grant



**2018
IMS Board
of Directors:**

**Eric T. Slazyk, AIA,
NCARB, LEED AP BD+C**
President/Membership/Website
arcwerks@bellsouth.net

Marta Barber
Executive Vice President/
Programming
imsmiami@yahoo.com

Joaquín J. Rodríguez III, P.E.
Administrative Vice President/
Director of Research
rod44@comcast.net
954-786-8084

Janet Miess, MLS
Secretary/Treasurer/
Library Chair/Website
jmiess@gmail.com

Keith Merwin
Website Chair • webmaster@
instituteofmayastudies.org

Jim Reed
Newsletter Editor
mayaman@bellsouth.net

Dr. Heather McKillop of Louisiana State University (LSU) and Dr. E. Cory Sills of The University of Texas at Tyler (LSU PhD Geog 2013, MA Anth 2007) have been awarded a 3-year NSF grant from the Archaeology Program entitled “Labor organization in a traditional complex society”.

Along with undergraduate and graduate students, the interdisciplinary research will investigate how staple goods and resources are produced and distributed in complex economies, in particular by examining how food staples are produced for marketplace trade.

The researchers will examine what factors make small enterprises successful, including the organization and composition of labor and the identification of markets, as well as factors that contribute to failure.

The research is important to the United States economy, which includes both large corporations, as well as small businesses, including family-run enterprises.

Students, many of whom are first-generation college students, will be trained in the use of technologies such as Global Positioning Systems (GPS), Geographic Information Systems (GIS), and 3D digital imaging, all marketable skills in addition to participating in interdisciplinary research in archaeology.

Descendant communities as well as other interested people will be involved in workshops



Replica of Maya Canoe Paddle. Here is a DIVA Lab visitor, Cher Foster, holding a 3D print of the Maya canoe paddle. Waterlogged wood and salt-saturated pottery from the Paynes Creek Salt Works decay on exposure to the air, so we keep them in bags of water until the finds can be studied at our base camp or at a temporary “Lagoon Lab” set up near an underwater site.



Canoe Model from Clay. This canoe model made from clay discovered at PCSW 74 resembles other canoe models we found at other Paynes Creek sites, as well as examples carved from manatee rib bones from Moho Cay. We photographed the canoe model and then put it in a zip-lock bag full of water. We found that the pottery from the underwater sites was saturated with salt water. If we let the ceramics dry, the salt moved to the surface, expanded, and cracked the surface of the artifacts, destroying them.

Explore more images on: www.underwatermaya.com



Heather (second on left) and students explore displays of 3D-printed replicas from the Underwater Maya Project, in the DIVA Lab on the LSU campus.

to share findings from the project as well as 3D printed replicas for exhibits. Additionally, the knowledge obtained from this study will be available to interested students, professional, and the public, through an online public repository, web page, and digital updates featuring 3D technology.

continued on page 6

**October 17 • 7:30 pm • Special IMS presentation:
Salt in the Classic Maya Economy with Heather McKillop**

October 17 • 7:30 pm • IMS Feature Presentation

Salt in the Classic Maya Economy

with **Heather McKillop**, Thomas and Lillian Landrum Alumni Professor,
Dept. of Geography and Anthropology, Louisiana State University Baton Rouge

The Paynes Creek Salt Works in a shallow coastal lagoon in southern Belize were once the setting of a massive salt industry, where this commodity was produced in wooden salt kitchens for transport by canoe to inland marketplaces during the Classic period (300-900 CE). The basic unit of production at the salt works was surplus household production. In addition to being a biological necessity and flavor enhancer, salt was



3D-printed replicas and salt.

Check out: www.underwatermaya.com



Cut ends of ancient building posts with archaeologists snorkeling behind. See more images on: www.underwatermaya.com

valuable as a storable commodity in the form of salt cakes. Salt cakes were made in standard sizes for marketplace trade as currency equivalences as occurred historically at salt springs in the Maya highlands of Guatemala and Mexico, and elsewhere. The use of salt cakes was similar to the use of standardized lengths of woven cloth, copper bells, and cacao beans.

To be explained are two methods of salt production that were used in the Maya area, including solar evaporation and evaporation in pots over fires. The preservation of wooden salt kitchens at the Paynes Creek Salt Works provide a model for salt production elsewhere along the coast of Belize and Guatemala using the brine boiling method. Estimates of salt production at the Paynes Creek Salt Works and overall in the Maya world are compared with population estimates.

The IMS is a Community Partner with Miami Dade College – Kendall Campus, Miami, FL

This program will take place at MDC at 7:30 pm in R402-403

IMS Hotline: 305-279-8110

Go to the college website at: www.mdc.edu for directions and campus map.

2018 New Membership and Renewal Application

Name: _____

Address: _____

City, State, Zip: _____

E-mail: _____

Phone: _____

The IMS has gone Green! Join today

You can also become a member by using PayPal and the on-line application form on our website at: <http://instituteofmayastudies.org>

New Renewal

Benefactor: \$350

Patron: \$150

Century: \$100

Member: \$50



Membership in the IMS includes attending one lecture a month; a year's subscription to our downloadable monthly **IMS Explorer** newsletter; and access to all features on our website: past newsletters, videos of IMS lectures, upcoming program announcements, IMS photo archives, and more!

Institute of Maya Studies

The Institute of Maya Studies is totally member-supported! If you are not a member, please take a moment and join us. Membership brings benefits and helps the IMS offer educational programs to the public. If you are already a member, please encourage your friends to join. If you need any assistance, call our Maya Hotline at: 305-279-8110

Members: Be sure to get your password by contacting our Webmaster Keith Merwin at: webmaster@instituteofmayastudies.org

Mail payment to: The Institute of Maya Studies, Inc. • c/o Miami Dade College – Kendall Campus • 11011 SW 104 Street, Miami, FL 33176

The Institute of Maya Studies is a 501(c)3 non-profit organization. Membership dues and contributions are tax-deductible to the fullest extent allowed by the I.R.S.

