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Institute of Maya Studies



A monthly newsletter published by the **Institute of Maya Studies**

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Volume 49, Issue 4
April 2021
ISSN: 1524-9387



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Airing on PBS starting in April

Sometimes you have to look back to move ahead

Land and Water Revisited

with Director Kirk D. French

The Pyramid of the Sun at Teotihuacan with agave cactus in the foreground. (Courtesy of www.teotihuacanenbici.com.mx)

Land and Water Revisited, an ambitious recreation of the anthropological classic Land and Water (1962), makes its television premiere on PBS in April. The documentary was filmed in Mexico's Teotihuacán Valley and reframes many of the scenes in the original film to showcase environmental changes wrought by unchecked urban development and global climate change.

In 1961, Penn State University archaeologist Bill Sanders traveled to the Teotihuacán Valley to film a documentary based on his 1957 Harvard dissertation, "Tierra y Agua". His film captured an invaluable snapshot of land-use practices in the area just prior to the urban expansion of Mexico City – one of the most explosive in human history. Cultural conservation was not the intention of the original film, but it is a sobering reminder of how quickly traditional landscapes and cultural adaptations vanish when sustainability is ignored.

In the spring of 2018, the original film was remastered and translated/narrated in Spanish. This was an important step because the people of the Teotihuacán Valley had never seen the film.



The red line shows the boundary of the Teotihuacán archeological park, including parking lots, museums, and numerous vendor booths. The structures outside the boundary are urban encroachment built over the ancient residential areas of the Teotihuacanos. (Map created by Janice Van Cleve incorporating recent Google satellite photography.)

By setting up public viewings in the communities throughout the valley, the film crew was able to connect with many residents and interview them about the changes that have taken place over the last 60 years. They even met family members of the participants in the 1962 film. These were often emotionally powerful moments. Scholars were also interviewed to try and better understand the role humans have played in altering the environment, both past and present.

IMS Streaming: April 21, 8 pm ET



Ancient Maya Geometry – The Shapes of Sacred Space with Ed Barnhart

continued on page 4



Jim Reed,
Editor

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Fig 1: Image of a turtle in the Late Post-classic Codex Madrid. (Taladoire 2012:51)

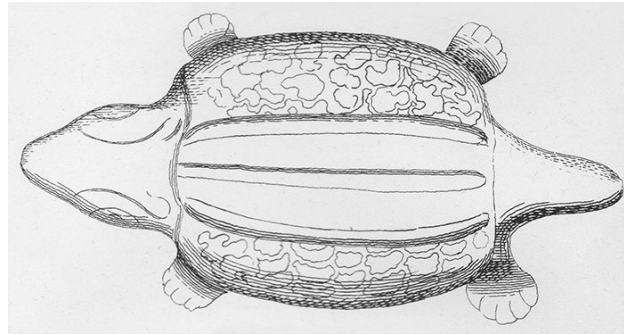


Fig 2: Drawing of a guao figurine. (Norman 1843)

An Ancient Maya Turtle Image Identified by Karl Herbert Mayer

There are a multitude of representations of zoomorphic images in Pre-Colonial Maya artwork, however, most of the surviving visual examples do not exhibit distinct features that enable us to identify the correct animal species. The representations are primarily created in a very superficial, somewhat generalized, and schematic style, which does not allow the exact recognition of particular animals.

Several zoomorphic representations are rather easy to identify as to the particular species, like the rattlesnake with the proper rattle on the end of the tail. In relation to felines, for example, it is not simple to recognize if it is actually a jaguar, ocelot, margey, or puma.

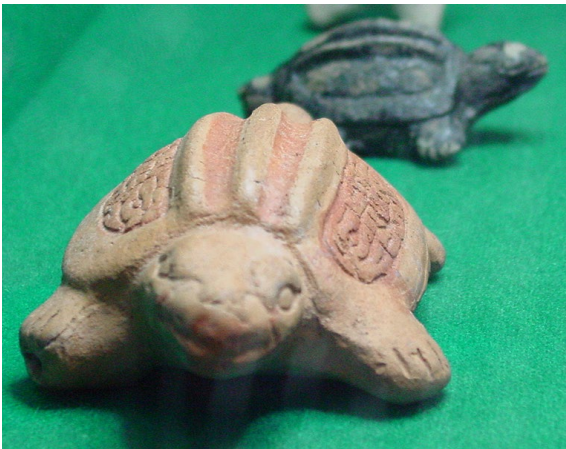


Fig 3: Two Jaina clay turtles. (Photo by Antonio Benavides Castillo, INAH Campeche)



Fig 4: A Late Classic clay turtle from the island of Jaina. (Maya 2016:168)

Concerning turtle images, they are predominantly not naturally depicted, but rather generalized, like the painted turtles seen in the detail from the Late Postclassic codex *Madrid Codex* (**Fig. 1**). One of the first recognizable clay

sculptured turtles was attributed to the island of Jaina, on the coast of Campeche, illustrated very early on by Benjamin Moore Norman (1843) (**Fig. 2**). It is definitely a realistic zoological specimen, doubtlessly representing the Mexican Giant Musk Turtle with the identifying three distinctive longitudinal keels on the carapace.

The scientific name of this turtle is *Staurotypus triporcatus* (Wiegman, 1828), the largest of the Kinosternidae family. Locally, in Mexico, the aquatic reptile is commonly known as *Guao*, or in Spanish *Tres Lomos* and *Tres Quillas*. The grey to dark-brown colored turtle has a maximum length of 40 cm and weights to 10 kg. The current geographic distribution is proved in the Mexican states of Veracruz, Tamaulipas, Oaxaca, Tabasco, and Chiapas, and also in Guatemala.

The English designation is erroneous and misleading, because the freshwater turtle occurs not only in Mexico, but also in other areas of Central America, including Guatemala, Belize, and Honduras (Legler and Vogel 2013). Pre-Colonial ceramic turtle figurines are mainly known from the Campeche coast and particularly from the island of Jaina (Benavides Castillo 2012:82, Fig. 2.14) (**Figs. 3-5**).

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Fig 5: A clay turtle from Jaina. (Anonymous photo)

Figurines from the Western Campeche Coast continued from the March IMS Explorer

by **Antonio Benavides C.** INAH Campeche

In the northern foothills of the Chiapas mountain range the Palenque region also developed a tradition of ceramic figurines (Sharer 1983: 381; Flores 2000, 2002) with both, molded and modeled representations (**Fig. 4**).

Other well-identified examples are those corresponding to figurines manufactured at central and southern Veracruz locations and found at Jaina's archaeological records. Many of those figurines are rattles and some of them have movable legs and arms (**Fig. 5**) (Benavides 2012b).

On the other side of the Yucatan peninsula, in southern Belize, there existed another Classic figurine tradition. Lubaantun researchers have reported representations of ballplayers, men on thrones, litter transportation, hunters, musicians, and women using grinding stones (Cfr. Butler 1935; Hammond 1982).

In the mid-1960s, Robert and Barbara Rands (1965) indicated there were eight contemporaneous Maya figurine traditions. They designated a specific tradition for the Puuc region based in whistle vestiges, most of them molded and inferred in a good number of fragmented human and animal heads reported from sites like Labna, Sayil, Uxmal and Xcalumkin that had been studied by Brainerd (1958). The other seven traditions refer to complete objects and were called Jaina-Campeche Coast, Jonuta-Bajo Usumacinta; Palenque; Higher and Medium Usumacinta; Alta Verapaz-Nebaj; Petén and Lubaantún. Let's continue with other figurine examples.

Around 150 km south of Palenque, near Comitan, at the site of Lagartero researchers like Susanna Ekholm (1979) and Sonia Rivero (2002) report an abundant use of molds, animal figurines (specially dogs) and many seated women with profusely decorated garments. Many ladies wear necklaces, chest ornaments and bracelets and today some are exhibited at the Museo Nacional



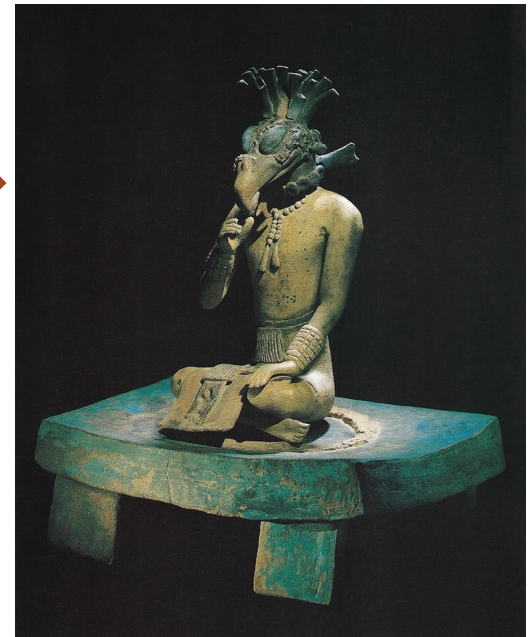
▲ **Fig 5:** An articulated figurine from Veracruz found at Jaina.

▶ **Fig 6:** Two figurines from Lagartero, Chiapas, now at the MNA.

de Antropología (MNA) in Mexico City (**Fig. 6**).

As previously commented, the Peten region also has figurine traditions and in recent years archaeologists have discovered a number of new examples at Calakmul, Tikal and El Peru (Ruiz 1998; Ruiz et al 1999; Navarro-Farr y Rich 2014).

An unusual finding in northern Peten at El Peru or Waka is a burial containing a group of around 20 figurines representing a renaissance scene of the maize god in which participate the governors (he and she) and members of the royal court including several dwarfs (Freidel et al 2010). Farther south, in Alta Verapaz, there are other examples of figurines that expand their diversity (Pérez Galindo 2007). Most of them are molded and some have applications. On the other hand, southern Guatemala Maya communities also manufactured human and animal images, on the Pacific coast, the Tiquisate and Escuintla zones, and



▶ **Fig 4:** Example of a Palenque figurine.



at the Copan region (Fash 1994), this last one in Honduran territory.

In this way, more than half a century later after the Rands (1965) contribution, at least more than ten figurine pottery traditions have been recognized. If we enter the previous information on a map, we will find that there are molded and modeled pieces representing women, men, animals, and fantastic entities. An interesting example is a 3.5 cm high mini figurine found in 2001 on the western side of Jaina's structure VI (**Fig. 7**, page 6). As usual, they used regional clays, but there are also exchange products. But, what happens with the images coming from Veracruz?

With the scarce information we have, the problem is also a complex one. Clay artisans manufactured figurines in different regions like Apachital, El Faisán, Zapotal and Dicha Tuerta. But we also find molded and modeled terracotas at sites like Nopiloa (Medellín 1987), Remojadas and San Andrés Tuxtla (Cfr. Medellín 1958). *continued on page 6*





Screen captures from the Land and Water Revisited documentary of Bill Sanders working in the valley in 1962. (Courtesy of Kirk D. French)

Land and Water Revisited

with Director Kirk D. French *continued from page 1*

Writer, Executive Producer and Director, Kirk French says, “We hope that everyone who sees this film understands the perils of unregulated urban growth in the face of a warming planet.” Perla Martínez, whose great-grandfather was in the original film noted, “This film passes to us the responsibility of having to do something, to try and save what we are quickly losing.” Three-time Emmy winner and Co-Producer, Neal Hutcheson, said of his decision to join the project, “It’s such a compelling story that I wanted to do anything in my power to make this film a success.”

As we become more populous the resources upon which we depend are frequently mismanaged and thus become scarcer. This cycle is one that anthropologists have seen time and again throughout the world. The phenomenon of explosive growth followed by decline is at the forefront of Land and Water Revisited.

The program was funded largely through The Pennsylvania State University and highly successful crowdfunding campaigns. The documentary would not have been possible without the extensive collaboration and participation of families featured in the original film.

To find out more and view the documentary trailer:

Kirk welcomes you to view the official [trailer](#), view the original [Land and Water film](#), and visit the [Land and Water Revisited website](#) where there is also merchandise available under the “Store” tab. You can also get notices and updates by following the film’s [Facebook page](#).

Editor’s note: When you view the credits rolling at the end, note that our live streaming presenter this month, Ed Barnhart, is a sponsor and also known as a “Kickstarter”. An honorable contribution on behalf of the Maya Exploration Center, Ed!

Be sure to tune in to view Land and Water Revisited on PBS! 🏠

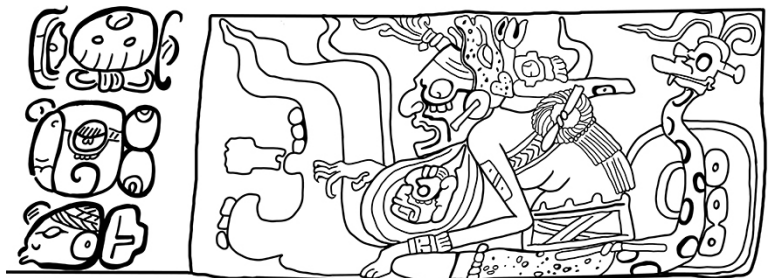
Unbundling the Past: Events in Ancient and Contemporary Maya History for April by Zach Lindsey

13 April 639 CE: On 9.10.6.5.9 8 Muluk 2 Sip G1, Chaahk Itzam K'an Ahk took the throne of Piedras Negras at twelve years old. It’s hard not to feel bad for a twelve-year-old, still reeling from his father’s death and stuffed into uncomfortable regalia to perform long, bloody accession rituals. It must have been scary, and it probably forced him into adulthood in a way that was more than symbolic.

Chaahk grew into a competent military leader and master diplomat, but Flora Clancy argues that, through it all, he showed a strong sense of concern for his children. His son seems to have shared this concern for his own daughter.

On this detail of K954, the glyphs tell us the shaman is impersonating a god, probably

the wind god. But the picture paints a more dramatic story – the god seems to be entering the shaman near his throat, while the shaman’s mouth gapes and his hands twist into claws from the shock of the experience. Original artwork by Zach Lindsey.



It makes me wonder if maybe he was doing his best to keep his kids from seeing their childhood end the way his did.

17 April 699 CE: On 9.13.7.3.8 9 Lamat I Sots' G5, the ever-impressive Lady 6 Sky impersonated the moon goddess, an event she memorialized on Naranjo Stela 24. These sort of impersonation events are hard for Westerners to understand: Were they acting?

Did they believe they really were the god? The best way I’ve heard it described is that the god fills the person the way liquid fills a cup. The person is still there; so is the god. K954 in the Kerr Maya Vase Database shows a shaman impersonating the wind god. The god seems to be entering his body near the throat, and based on the shaman’s open mouth and twisting face, it is far from a pleasant experience. 🏠

An Ancient Maya Turtle Image Identified by Karl Herbert Mayer

Another example of a clay sculpted turtle was found at Chichicapa in Tabasco (Fig. 6). Some are of unknown provenance (Fig. 7). All known archaeological finds obviously date to Late Classic times. A live guao was described and pictured by Miguel Alvarez del Toro (1972) (Fig. 8).

A carapace in my collection (Fig. 9) measures 35 x 22 x 12 cm and was obtained from a fisherman at Cayo Quemado, Livingston, in the Department of Izabal, Guatemala. The freshwater turtle flesh is very savory and popular in southeastern Mexico and northeastern Guatemala and accordingly heavily hunted.

In conclusion, it can be stated that several ancient Maya ceramic turtles can be definitely identified as the representation of a known zoological species.

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Fig 7: A clay turtle in the Schokoladenmuseum, Cologne, Germany. (Photo by Guido Krempel)

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Fig 6: Fragment of a clay turtle from Chichicapa, Tabasco, MX. (Photo by Miriam Judith Gallegos Gómora)

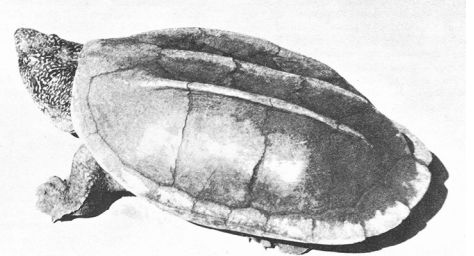


Fig 8: A live guao from Chiapas, MX. (Toro 1972:24)



Fig 9: A turtle carapace from Guatemala. (Photo by Karl Herbert Mayer)

Pioneer in Maya Studies: Karl Herbert Mayer

As a writer and explorer, Karl Herbert Mayer is synonymous with Maya studies. For decades, he was a contributor to the prestigious MEXICON publication, and for the past two decades, he has been a contributor to the *IMS Explorer* newsletter. Whether it is describing ancient Maya artifacts in museum collections that he has visited, revealing what is known about sometimes obscure and barely researched (or heard of) ancient Maya sites that he has macheted his way back into, or composing an

Karl posed recently with his new book on his back patio in Graz, Austria.

interesting and informative article about turtles, Karl has carved a special place for himself, and is well known among Mayanists and Mesoamericanists.

Karl has now published his own little book about a most interesting subject: *Amor Maya: Ancient Maya Erotica*.

Stephan Merk notes: "This book is the first monograph on this theme. It is an extensive catalog about what the ancient Maya understood as the depiction of eroticism and sexuality that



opens a deeply human chapter in Maya history." ▶ We'll let you know all about it in the *May IMS Explorer*!

Figurines from the Western Campeche Coast

continued from page 3

by **Antonio Benavides C.** INAH Campeche

Returning to the figurines' typology, several authors have classified them using different approaches: manufacture technique, represented motif, gender, form, etc. In the 1930s, Mary Butler (1935) analyzed objects from sites like Chamá, Isla del Carmen, Jaina, Jonuta, Labná, Lubaantún, Palenque, Piedras Negras and Uaxactún. She differentiated almost 20 types of character, two general styles and five local styles. However, today her classification is difficult to apply.

During the 1950s Heinrich Berlin (1956: 125-126) studied Jonuta figurines emphasizing head details, but that approach is not helpful and insufficient for many sites.

Román Piña Chán analyzed the Jaina pieces and tried to create a typology considering clay and the manufacturing technique, complementing the approach with gender and represented topic. He posed five types; the first four developed between 300 and 650 AD, the last one used from 650 to 1000 AD. Nevertheless, Piña Chán recognized there was not an exact correlation between figurines and the associated ceramics (Piña 1968: 66).

Some years later Christopher Corson (1976) returned to that topic considering more details and found four figurine clusters at Jaina, each one with several subgroups differentiated by letters. He begins a wider vision showing the participation of other ceramic traditions as those indicated his Campeche and Jonuta groups (Op. Cit.: 175). The next decade Marilyn Goldstein (1980) also studied Jaina figurines and found clear relationships with Palenque.

As we have seen, some figurines were manufactured on the western Campeche coast, but many others came from several regions of the Maya territory, specially from Tabasco, but also from different Veracruz regions (Cfr. Von Winning 1958, 1961, 1967).

● We need more neutron
activation figurine paste

analysis to define exact procedence. At the same time, we still lack a general typology valid for the different regions. Also, the specific archaeological contexts will have to be considered, as well as the merchant trade of Precolumbian figurines. We have also not addressed here other multiple examples within the study of Postclassic figurines, like those reported at Mayapan, Santa Rita Corozal, Becan, or Jaina (Fig. 8).

Final comments

These figurines are probably the most well-known examples of Maya art manufactured in clay and in small scale. Originally from archaeological contexts, many of them can be found in numerous museums (Foncerrada y Cardós 1988; Schele 1997), as well as in private collections (Von Winning, op. cit.) and in different places of the world.

Most of the time, their function must have been ritual, used as funerary companions and also for ceremonial occasions at temples, altars, and in processions. Their quality as beautiful representations of warriors, ballplayers, women, priests, dwarfs, or enigmatic beings, also had a musical aspect as whistles and rattles. These features must have reinforced their ideology influencing in their care and in the activities celebrated. It appears that sometimes, they were also used as toys and later discarded when broken.

Interestingly, terracotta pieces present to us a rich and varied society not restricted to use by only the royals and associated elite. We can also see people from other social spheres, like mothers or grandmothers taking care of a child, sick persons, monsters, or deities, etc., and this

Fig 7:
A fantastic being
found at Jaina.



▲ **Fig 8:** A small Jaina crocodile used as a container.

helps us to better understand their ancient social network.

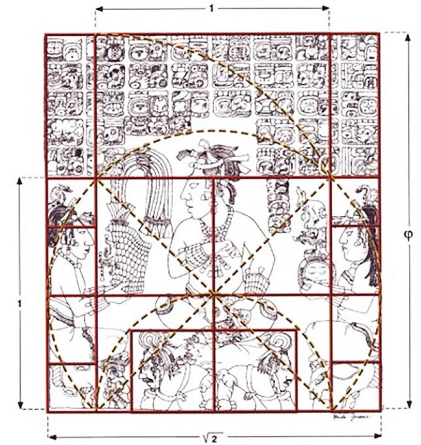
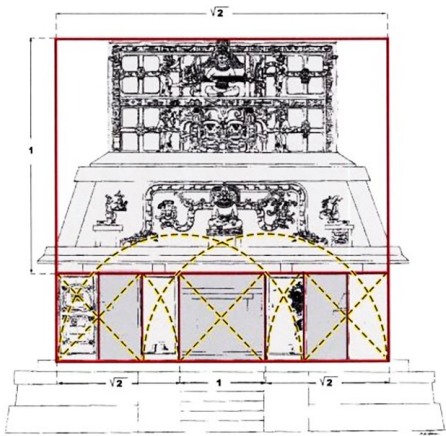
We should also remember that the regional divisions we use today with pedagogic goals are just that; general divisions to better understand the ubication of societies that formed the ancient territories of what today we call Mexico, Belize, and Guatemala. Communication existed between the various regions since the earliest of times. We need only remember the Teotihuacan elements evident in the Maya world, or the Zapotec and Maya barrios in that city during the Early Classic.

The Gulf coast maintained several trade routes uniting central Mexico with different regions, but also with Maya settlements from Tabasco, Campeche, and Yucatán. During the Late Classic, no regional limits clearly defined seem to have existed in Mesoamerica, but pluri cultural societies thrived exchanging many objects, but also ideas and religious concepts. 🏰

References cited appear in a Word doc attached to the email letter that includes the April PDF version of the IMS Explorer. Postal subscribers, please contact the editor to be emailed the Word doc.

IMS Live Streaming
4.21.2021 • 8 pm ET

Ancient Maya Geometry – The Shapes of Sacred Space by Ed Barnhart Maya Exploration Center



This lecture will present evidence of an underappreciated aspect of ancient Maya knowledge – geometry. The ancient Maya repeatedly used a set of geometric proportions to build their homes, temples, and sculptural works of art. Those proportions were derived through a careful observation of geometry in nature, often referred to in other ancient civilizations as “sacred geometry”. Beginning with a review of what those natural proportions are, evidence of their existence in the designs of ancient Maya buildings and art will be presented. Further, ethnographic studies will demonstrate that certain modern Maya communities continue to use those same proportions in the construction of their homes today.



Dr. Edwin Barnhart is a renowned Latin American archaeologist who has appeared on History Channel, Discovery Channel, Canada’s Religion Channel, and Japanese Public Television. He is the Director of Maya Exploration Center, a Fellow of the Explorer Club, and a widely recognized authority on ancient astronomy, mathematics, and calendar systems. During his over 20 years in Latin American archaeology, he has discovered the ancient city of Ma’ax Na in Belize, mapped over 4,000 ancient buildings, and published over a dozen articles and books. His research on ancient sciences has taken him to over a dozen countries, including Cambodia, Indonesia, Peru, Bolivia and Chile. Through the Teaching Company’s Great Courses he’s produced four video courses including 104 30-minute lectures on subjects within the topic of ancient American civilizations.

His most recent projects are an 8-part travel show for Great Courses named

Exploring the Mayan World and a podcast series called *ArchaeoEd*.

Wednesday, April 21, 2021 • 8 pm ET • Be there with us!

Access and save this live streaming hyperlink to join the event:

<https://us02web.zoom.us/j/83115681180>

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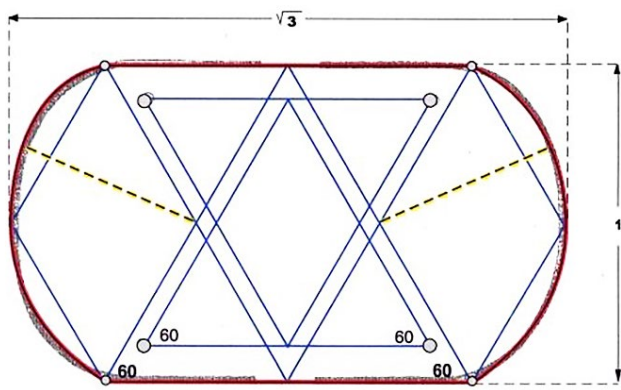
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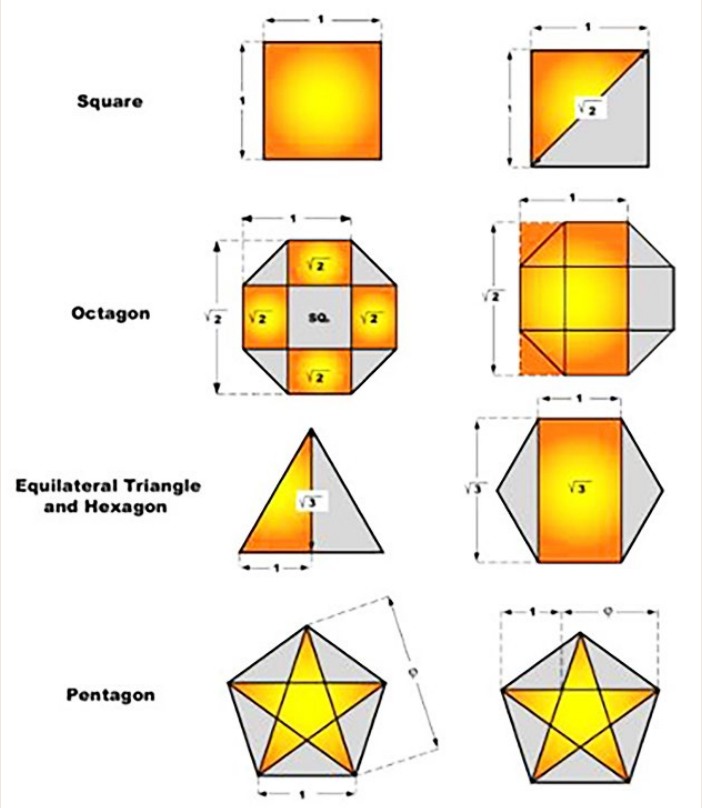


Maya Vernacular House: Plan View: Yucatan.

Ancient Maya Geometry: The Shapes of Sacred Space

by Ed Barnhart From MEC research:

According to Christopher Powell, the flowers and shells depicted so often in Maya religious art represented perfect examples of nature's geometry. Within the petals of flowers, the Maya found natural triangles, squares, pentagons, and octagons. Within seashells and the human form, they found the golden mean proportion of 1:1.618. ▶ These images are a part of Ed's presentation that he'll present 4.21.2021! Be there!



Square Root, Golden Mean Proportions, and Regular Polygons. ▲

IMS Streaming 2021

Join in the Exploration!

Every third
Wednesday of
a month, at
8 pm EST



April 21, 2021 • Ed Barnhart

◀ **Ancient Maya Geometry –
The Shapes of Sacred Space**

May 18, 2021 • Kenneth Seligson

**Burning Rings of Fire: Early Maya Burnt
Lime Production in the Northern Lowlands** ▶

June 16, 2021 • Laura Harrison

◀ **Digital Approaches to the Past, Present,
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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