

A monthly newsletter published by the Institute of Maya Studies

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February 17, 2021 • Modern K'iche' Maya Long Count: 0.0.8.5.0 • 7 Ahau 3 Kayab • G1



How many kinds of latex were edible for the Maya?

growing list of what the Classic Maya smoked in addition to tobacco; don't worry, it is often medicinal or for flavoring; not all was hallucinogenic). The second

drinkable milk-like latex is from Brosimum utile, a relative of ramon nut

Makin g a list of plants that are edible that surrounded Maya cities and houses is a never-ending project. This month I have found mention of three trees native to Guatemala that produce a white latex that you drink like milk. Seriously, each tree is called something like *arbol de leche*, or *leche de vaca*.

Keep in mind that most white latex is venomous, toxic, or causes blindness if it hits you in the eye (*Hura polyandra*). The best known white latex is of course from the Maya rubber tree, *Castilla elastica*, which is not toxic and yes, it was eaten (that would be a separate report). Now, we have found three other trees that have an edible white latex: one is *Couma guatemalensis*. It is named *palo de vaca*. In 1938, Lundell stated "yields a sweet palatable latex similar to milk; it may have been utilized by the earlier inhabitants of the region."

If you have visited Peten or read books about the Carnegie Institution of Washington research there, you have learned about the use of *chico zapote* latex to make chewing gum from *Manilkara* zapota tree. There are also several other latexes that are used as adulterants, such as from *Tabernaemontana alba*.

The latex of Stemmadenia donnell-smithii is used (at least in El Salvador) for fastening cigarette wrappers (we have a tree. Wikipedia cites Eric Toensmeier who says "The milk, which contains 5 to 7% protein, can be used for cheese, ice cream, and other products." Sounds yummy.

The third completely edible latex is from *Lacmellea standleyi*. This is considered so tasty that in some parts of Mesoamerica it is called *lechemiel* (milk honey, which I would translate as honey milk). Palo de vaca means cow tree, or cow milk tree. Not only is the latex edible, the fruits are also edible. In August, they were still ripening; so were probably edible in September.

One of our goals is to find each individual edible or useful plant of the Classic Maya, and photograph it. Then to let botanists, Mayanists, and people interested in visiting Guatemala know where they can find each tree. So within a week of my learning about the honey-milk tree, our team was standing in front of *Lacmellea standleyi* in a remote part of the Municipio de Livingston, Izabal, courtesy of helpful local guides. *continued on page 2*  Volume 49, Issue 2 February 2021 ISSN: 1524-9387



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Unwashed Late Preclassic cache vessel from Yaxnohcah.

Making a Home in the Maya Lowlands: Lifestyles of the Early Middle Preclassic Period with Debra S. Walker



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## **Edible and Drinkable** Latex for the Maya continued from page I by Nicholas Hellmuth FLAAR Mesoamerica

Now, we need to find Couma macrocarba and Brosimum species. But at least I have learned that you don't need cows or goats to have yogurt-like milk. We normally do not taste test these latex exudates and technically we have to advise that no one should taste test without medical consultation. But, in the half century that I have been curious about what the



Lacmellea edulis (Honey Milk, Lechemiel). Tapon Creek Reserve. Photo by Nicholas Hellmuth, FLAAR Mesoamerica.

Classic Maya had available to eat, I learn something new every month.

We understandably assume that many of the vases and bowls in palace scenes and in burials contained cacao drink (the careful and helpful epigraphic research by hieroglyphic experts and linguists deserves praise). However, should we not now raise the question of whether the elite also drank milk? (or, as a joke, "Milk" chocolate?)

Although cacao is my favorite subject in ethnobotany, I would not be surprised if the elite burials and PSS glyphs don't mention "milk". But, the question should still be raised. One of the vases I uncovered in Burial 196, Tomb of the lade laguar, at Tikal in 1965, still had preserved remains of cacao seeds inside. I was only 19 years old at the time, and I assumed they were frijol beans, since I had never seen a cacao seed.

Even if there is no epigraphic description in any ceramic inscription of any white latex being in these ceramic bowls, the trees are still all over the Maya Lowlands of Izabal and the local people did have them available to drink from calabash tree bowls (jicara or morro). Chemists have found chemical traces of cacao in ceramic bowls. Let's now make a list of what other liquids may have been in other bowls so chemists (and epigraphers) can look for them also. The hardworking Maya farmers and everyone else needed food. Cacao was a prestige drink of the elite; let's also study what the rest of the Maya had available to drink - milk, from trees, not from mammals.

PS: I have a project rule not to "taste test" any of the edible plants that we study. This is because some require cooking to remove harmful chemicals. Other plants have chemicals you really should avoid even if cooked. When I am standing in front of a tree named lechemiel, honey milk tree, I realize that no latex would get this name unless it tasted like honey-flavored milk. So, I put my finger under the area where the white latex was

dripping out. I then sipped the creamy white latex. Yum yummy yum; the most pleasant taste of my life: beats any milk shake.

No chemical high; just sheer

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honey-milk taste treat. Since I

need to use my fingers to tap my iPhone camera controls, I rubbed my fingers together to wipe off the remaining latex. In less than I second both fingers were, literally, totally glued to each other. Not stuck, but glued! What if my esophagus had been glued together as the latex went down my throat? !

FLAAR Mesoamerica (Foundation for Latin American Anthropological Research) is a nonprofit Guatemalan institution founded under the direction and enthusiasm of experienced Biologist Eduardo Sacayon and Dr. Nicholas Hellmuth, a specialist of Classic Maya iconography and temple-pyramid, palace and ballcourt architecture who then evolved his research to focus on edible and utilitarian plants of the biodiverse ecosystems of Guatemala that were available to the Maya of part and present.

#### A few FLAAR publications of the Fauna of Guatemala:



See more on the Fauna of Guatemala: www.maya-ethnozoology.org A few FLAAR publications of the Flora of Guatemala:



See more on the Flora of Guatemala: www.maya-ethnobotany.org



L) Temple of the Seven Dolls at Dzibilchaltun during Equinox solar alignments (Google Images). R) Structure 1-sub. Photo by ©georgefery.com.

What makes Dzibilchaltun so perplexing are the seven small figurines made of clayfound by archaeologists in the "Temple of the Seven Dolls." They are dated from the Decadent Period's Chechem Phase (1200-1500 CE). Both the figurines and the eccentric location of the temple are puzzling. Dzibilchaltun is among the oldest human occupation on the Yucatan peninsula. Earlier recorded dates are from the Early Formative pre-Nabanché-I phase, 900 BCE. The site was continually occupied, with high and low periods, up to the arrival of the Europeans.

For the purpose of this article, we will focus on the Temple of the Seven Dolls, designated as Structure I-sub (Str. I-sub) by archaeologists, the easternmost major structure, and the city's main spiritual portal where the sun rose. In the city,

most temples were painted with various bright colors, among which red was predominant. Str. I-sub, however, was painted white, as was Sacbe I ("white road") that leads to it. Traditionally, an east-west white road was associated with the path of the sun.

The Temple of the Seven Dolls was built on an east-west orientation, in direct line of sight of Structure 66, with a radially symmetrical footprint, at the western end of Sacbe 2.

"Str. I-sub is located on the eastern side of the city, at the end of Sacbe I, 1410 feet from the central plaza. The temple has four windows and two trapezoidal doors in both its east and west walls; while there are two identical doors, but no windows, in the north and south walls. Standing on top of Str. 66, the western-most structure at Dzibilchaltun, looking toward the Seven Dolls I.4 miles away in a straight line to the east, one can see through all four of its aligned doorways and windows to the eastern horizon beyond" (Coggins, 1983).



The Seven Dolls Group consists of a huge terrace that supports 11 vaulted buildings and a stela platform. The core of the group, defined by a stone wall, includes a pyramidal platform (Structure I-sub) with four stairways, leading to a square temple with four wide doorways and a continuous corridor surrounding a central chamber that supported a low, hollow tower. In front of the temple where the cache of Seven dolls was excavated, are three sets of range structures, that are theorized to be for viewing various astronomical alignments. Initiated around 700 CE, additions continued for about 100 years. Text courtesy of E. Wyllys Andrews V. Drawing by George F. Andrews and Lisa Boganzoli.



L) The actual cache of ceramic Seven Dolls excavated within Str. I-sub ©E. Wyllys Andrews IV @ MARI. R) Cut-away illustration of where the cache of Seven Dolls was excavated. Drawing by George E. Stuart.

As an agrarian based economy, Str. I-sub's function was to observe and confirm the cyclical seasonal rising and setting of the Sun and the Moon, the eternal timeclocks of agriculture. Observation of the unwavering repetition of the Sun and Moon cycles in their endless east-west repetition, correlate ritually with Str. I-sub as sun-fire-male-sunrise, and Str. 66 as moon-waterfemale-sunset.

The temple owes its name to seven crudely-made clay figurines found in Str.1-sub (Cache 3, M-182-A). The common denominators of rituals at the time were based on agrarian cycles under the auspices of their respective deities. The first sanctuaries were built for deities, mediators between the world at large (nature), and humankind (culture).

Priest-shamans had to ensure the accuracy of a sun that shall never fail to reappear at the exact same place, day-after-day, solstice-after-solstice, equinox-after-equinox,

continued on page 5



# Inspiring Adviewments of Visual Communicators



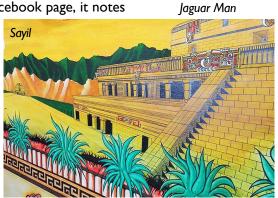
## An Artist with a Flair for the Maya Alejandro Moises Calderon

Editor's note: I don't have a lot of bio info for Alejandro. I met him on Facebook when he posted some old surfing photos. I notice that he also posted some very nice artwork, all with Maya themes.

Alejandro is from El Salvador and lives in San Salvador. On his Facebook page, it notes

that he works at the Universidad Andrés Bello as a teacher for three levels of students. He majored in TV and film production at Los Angeles Valley College, class of 1981. Beyond that, I

think his artistry speaks for itself. Enjoy!







A blast from the past! L) Alejandro when he was one of El Salvador's most famous surfers in the 1980s. R) Alejandro recently showing off the trophies that he's won during his career. But, I have the last word! When I lived in Guatemala in the 80s, I came in third place in one of Guatemala's International Surfing Championships. Alejandro came from El Salvador to compete, but, lo and behold, I beat him!





Ahab Bolon of Seibal.

## Dzibilchaltun's Seven Dolls Dolls O by George Fery

The Seven Dolls Complex as photographed by Edward B. Kurjack.

continued from page 3

helped in their tasks with conjuration rituals. Solstitial and equinoctial sightings were closely observed, however, as important was the sun's zenith event.

Caseres Contreras in his research paper offers an interesting and plausible hypothesis for monitoring this event. "The roof of Str. I-sub tower may have

been made of a lighter material to allow for temporary removal in order to let the sun rays at its zenith light up the floor of the tower" (2001). At spring solstice the sun is associated with the beginning of the rainy season and planting cycle. The Temple of the Seven Dolls, therefore, was created to be the ritual "anchor" of the sun.

In his 1980 archaeological report on Str. I-sub, E. Wyllys Andrews IV described the presumed re-enactment of the "seven dolls ceremony", that took place during the Decadent Period. "The figurines were dropped by priest-shamans down a twenty-four-inch deep hole dug into a cavity in the floor of the temple's altar (see cut-away illustration by George E. Stuart on page 3). The mouth of the hole, cut in the shape of a funnel, remained open, loosely capped with a small unworked flat stone that was found in place" (Andrews, 1980: 112-113, Figs. 126-127). Of note is the fact that the funnel was not sealed indicating, as found in other cases, intent to re-use.

Once again, the importance of monitoring the repetition of natural events, together with accompanying rituals, is associated with man-made deities and gods, masters of the community's subsistence. The seven dolls present physical deformations, which for the Maya represented divine favor. The seven male figurines found in Str. I-sub (Cache 3), show large genitals, with one displaying an erection as a show of the reproductive powers of the sun commonly associated, in ancient cultures with the male gender. An ancient ritual still practiced by farmers in the late nineteenth century in parts of the Americas, indicate that when a man discharged semen in his field, it was recognized as an offering of seeds from culture (man) to nature (earth). This ritual was believed to incite mother earth to produce human subsistence in times of acute needs. Is there a correlation between this ancient ritual and the figurines? Probably, because there is no rationale otherwise for priest-shamans to carefully preserve figurines reproducing human seeding. Furthermore, as found in ancient societies, this ritual reinforced the common law of the "right of blood" for land inherited from ancestors, as opposed to the "right of land" claimed by invaders.

The I410-foot Sacbe I (white road) runs in a straight line from the ancient city's central plaza to the Seven Dolls temple. I43 feet west of the temple are three structures with two rooms each, built astride the white road that controlled access to the temple, together with a high defensive stone wall in front (now gone). Access was limited through two narrow passageways, between the central pair of rooms, a reminder of the key role of the temple in the spiritual life of the city.



Check out George's beautiful photography, categorized all in one place, at www.georgefery.com



Structure 12 (platform) and Stela 3 are aligned with Str. I-sub (at rear) along Sacbe I. Photo by ©georgefery.com

Moreover, 135 feet west of the defensive wall on Sacbe I stands Structure 12 (Str. 12), a 4-stairway/ 6-step quadrangular platform with an eleven-ft-tall limestone monolith, Stela 3. It was covered with stucco and supposedly painted with figures of the Maya pantheon, now lost to time. It is one of about thirty such monuments on the site, and squarely faces the Seven Dolls' west side door. Its position relative to the temple, indicates that it was probably used as a sighting device in addition to those of Str. I-sub for the observation of heavenly bodies. Of interest is the fact that, from a ritual standpoint, structures were important, but no less important was the play of light and shadow at dedicated times which, even in opposition, had the same ritual value.

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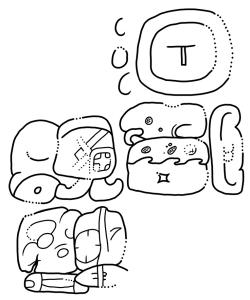
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## Unbundling the Past: Events in Ancient and Contemporary Maya History for February by Zach Lindsey

#### 9 February 726 CE: On

9.14.14.7.2 I Ik' 0 Pop G7, there was a "paw-and-pillow" event at Naranjo. "Paw and pillow" is the academic term for an untranslated glyph that may be related to investment with a new title. Though we don't know much about the event, we know a lot



Glyphs depicting the "paw-and-pillow" event. Original artwork by Zach Lindsey. about the day it happened. That this event happened on I lk' was likely no accident; it is the first day of the sacred calendar for that year. In other words, New Years. The mam or first day – of the 260-day calendar is important for many contemporary Maya daykeepers, but it was less commonly memorialized during

the Classic era. Maybe it wasn't as important outside Naranjo, as Tikal actually attacked Naranjo on a New Year's morning, presumably finding a lot of confused, hungover soldiers.

#### 20 February 1524 CE: On

11.15.4.0.16 2 Kib 4 Sak G7, K'iché leader Tecun Uman fell in battle to the Spaniards. It was a single moment in a longer campaign, but it has come to signify the fall of the K'iché at the hands of the Spaniards.

There are few Spanish historical



The legend of how the male quetzal got his red chest: "Accompanied by his spirit guide, Tecun Uman led his warriors into battle against the Spanish. When he was speared by conquistador Pedro Alvarado, the quetzal flew down and landed on his chest – and was instantly stained red." https://www.mexicolore. co.uk/maya/teachers/resource-how-the-male-quetzal-got-his-red-chest

records to support the existence of Tecun, which has led some scholars to debate his existence. But, I think faith in Tecun is faith in indigenous oral narratives. That's not so hard to do; these types of narratives have been proven to have bases in truth time-and-time again. So, there almost certainly was a Tecun-like figure who died in battle on that day, even if the Spaniards didn't bother to notice his importance to the people they were pillaging.

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Wednesday February 17 at 8 pm EST

## 2.17.2021 IMS Streaming Join in the Exploration!

## Making a Home in the **Maya Lowlands: Lifestyles of the Early Middle Preclassic Period** with Debra S. Walker, RPA

While people have been living on Mexico's Yucatan Peninsula for more than 10,000 years, three millennia ago they started settling down on smaller bits of the landscape, eventually committing to redefining "home" as a more permanent location. The presentation outlines some of the fascinating new evidence for these initial settlements documented during the Early Middle Preclassic (EMPC) period (1000-600 BCE). In this relatively short 400 year period, newly established communities maintained regional connections, and invented

El Zacatal Oxpemul Calakmul El Palmar YAXNOHCAH Balakhal El Mirador Dos Lagunas Nakbe El Tintal El Achiotal 🔺 El Pesquero

Map of Central Karstic Uplands locating Yaxnohcah by Kathryn Reese-Taylor. Property of PAY.

shared lifeways that have endured for millennia, what we call today "Maya" culture. Based on these new data, we have expanded our views about the earliest ceramic-using residents of the Maya Lowlands: they were both more widespread and more innovative than previously known.

In the heart of the Maya area lies the central karstic uplands (CKU) of southern Campeche, Mexico, and northern Peten, Guatemala. Several sites in the CKU have produced evidence for Early Middle Preclassic (EMPC) occupations; among them is Yaxnohcah, which serves as an example of EMPC lifeways. Ongoing excavations (2011-present) by Kathryn Reese-Taylor and Armando Anaya Hernández

red rim egular blac d Red-and-black-on-cream an

Zapote Bobal, relic ancient wetland environment at Yaxnohcah, framed by Early Middle Preclassic figurine fragment and incurved bowl rim fragment.

have documented an expansive ancient settlement encompassing up to 45 square kilometers. We now know this ancient, seasonally inundated landscape proved ideal for the beginnings of intensive maize



Debra S. Walker

agriculture, a lifeway that still anchors Maya culture today.

Dr. Debra Walker is a Registered Professional Archaeologist specializing in ancient Maya lifeways and pottery analysis. She has undertaken research in Belize (Cerro Maya 1993-1995; Aventura 2019-present), Guatemala (Naachtun 2004–2007), and Mexico (Yaxnohcah 2011-present). Currently she is a courtesy research curator at the Florida Museum of Natural History (Gainesville), where she consults on a large collection she brought to the museum from Cerro Maya, Belize. Her recent edited volume, Perspectives on the Ancient Maya of Chetumal Bay, was published in 2016 (University Press of Florida). Her second edited volume, Pre-Mamom Pottery Variation and the Preclassic Origins of the Lowland Maya, is in press (University Press of Colorado), this time focusing on the earliest pottery-making peoples of the lowland Maya region.

Wednesday, February 17, 2021 • 8 pm EST • Be there with us! Access and save this live streaming hyperlink to join the event: https://us02web.zoom.us/j/85123233730

http://instituteofmayastudies.org • Maya Hotline: 305-308-3814

## British Museum and Google Arts Ancient Maya VR Resource

The British Museum and Google Arts & Culture have finally officially launched their new digital collaboration, bringing ancient Maya heritage to life. Objects from the Museum's world-class collection, based on the pioneering 19th century work of Alfred Maudslay, are now available online alongside VR tours and experiences.

Get closer to the British Museum's collection and immerse yourself in two million years of history, across six continents.

Check out the updated resource at: https://www.britishmuseum.org/collection

The online collection has been completely redeveloped, making it much easier to find what you want. It allows access to almost four-anda-half-million objects in more than two million records. The search feature is more intuitive and now offers suggestions as you type.

lan Mursell of *Mexicolore*, who submitted this update notes: "We're looking forward to seeing this new Ancient Maya VR resource for

**IMS Explorer** 



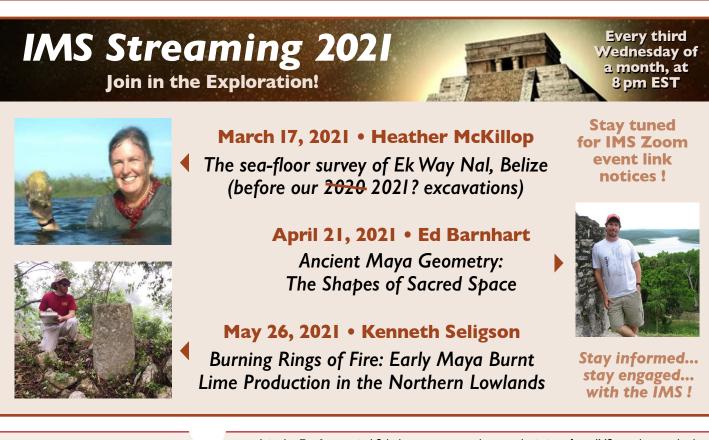
Bowl with a human faced attached; the face has appliquéed features including hair, eyes, one ear flare, teeth, and nose. Yaxchilan, Chiapas, Mexico: https://www.britishmuseum. org/collection/object/E\_Am1920-0607-3



Plaster cast of an architectural fragment: Yaxchilan: Stela 5; River Side; Upper part. Made by: Lorenzo Giuntini. (Yaxchilan, Structure 20, Stela 5). See Eth Doc I 979 for an extract from the Trustees' minutes confirming the transfer of the Maudslay collection from the V&A to the BM.

schools in the UK and across the planet. *Mexicolore* helped trial the resource for the BM a couple of years ago in a London primary school."

Muchos saludos, Ian, B.Sc., M.A. (Mexicolore.com)



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