

Iconography and Ethnozoology
of the Crocodiles and Caiman of Mesoamerica
and their relation with the Cosmology of the Underworld and the Heavens



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Foundation for Latin American Anthropological Research

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VI Seminario Internacional de Epigrafía Maya en Guatemala
Museo Popol Vuh, Universidad Francisco Marroquin

Organized by Camilo Luin

Iconografía y etnozoología de los cocodrilos de Mesoamérica y su relación con la cosmología del inframundo y el cielo

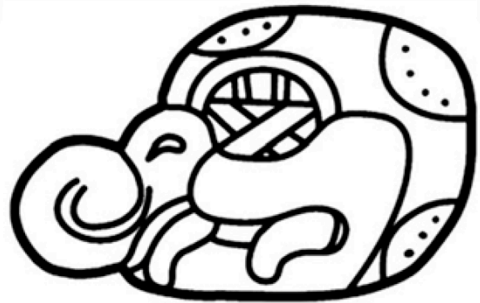


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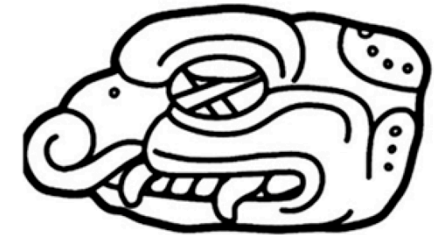
b



c



d



e

Epigraphy is an essential area of study for Maya hieroglyphs. The hieroglyphs for crocodiles are best left to epigraphers and linguists to study. As an iconographer and ethnozoologist, I prefer to study the animal at full body length so you can see more details. Also for both iconographers and epigraphers, every aspect deserves to be studied, for example the crossed bands in the eyes of three of these. The teeth of "e" are more naturalistic; the teeth of "d" are traditionally stylized by painters and sculptures. Rice 2017: Fig. 5.

One goal of this presentation at the Museo Popol Vuh is to show the full-figured crocodiles (or at least their entire head) so you can see all the variations. Then all this material can be available to epigraphers and linguists to study the hieroglyphs.

Contents of this presentation

1. Crocodiles are obviously associated with Water, So in Maya Art, Crocodiles as associated with water Symbolism
2. Maya portraits of Crocodiles as 3-dimensional ceramic figurines and deep-relief renditions
3. Full-bodied Crocodiles as roof of Throne Rooms
4. Crocodiles in Bas-relief Sculptures at Copan, Honduras
5. Crocodile Trees, Izapa, Early Classic Maya, Late Classic (Codex Style vases)
6. Crocodile and Composite Deer-Crocodile as Bicephalic Cosmic Monster

Chapter I
Crocodiles
are
obviously
associated
with Water



We find (and photograph) wild crocodiles year after year because the focus of our 5-year project for CONAP is “wetlands” ecosystems.

Here is a *Crocodylus moreletii* heading our way, nicely posing for a photograph by Nicholas.

It helps to photograph in RAW mode; then you can remove the film of surface water and see all the crocodile beneath the surface (not visible in a JPG format).

I saw my first crocodiles while living and working at Tikal as a student intern for 12 months in 1965.

I saw lots more crocodiles while living and mapping Yaxha in the 1970's.

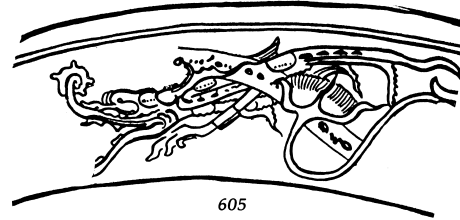
By the 1980's I published my first iconographic analysis of crocodiles in my 1986 PhD dissertation (Hellmuth 1987).



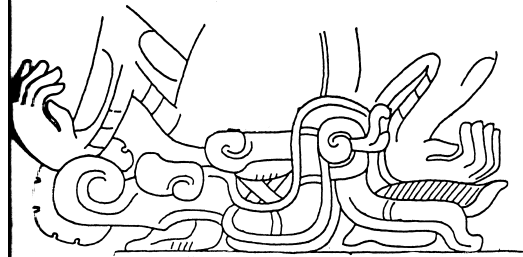
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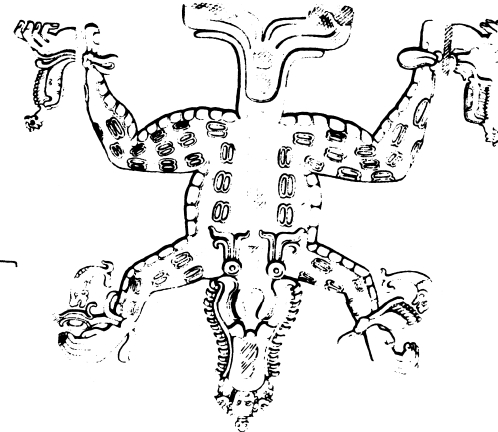
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605



600



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603



604

There are two species of crocodiles and one species of caiman in the Maya regions of Guatemala, Belize, Honduras and Mexico.

It is not a good idea to use the word alligator, even for the caiman. Call it a caiman not an alligator.

At the left are two crocodiles, probably both *Crocodylis moreletii*.

To get a good angle I am standing up on a ladder so I can photograph from above.





Caiman crocodilus is a caiman, but considered an alligator (not a crocodile) despite its name “crocodilus.” The pattern of scales on this creature is very distinctive: no spikes or sharp spines but lots of raised bumps in a regular parallel pattern. The caiman has more color on its body than other crocodilians in Mesoamerica.

Caiman are primarily found in mangrove swamps inland from the Pacific Ocean. So artists of Izapa, Chiapas and Costa Sur of Guatemala would have known this reptile. Courtesy of CECON, Monterrico, we had access to photograph caiman babies up-close and in-person.



Crocodylus acutus can be found from the USA south through Mexico and Guatemala, so they would have been known to many Meso-american cultures on the Caribbean side.

This is clearly one of the creatures that is less likely the model for the crocodile tree since 90% of crocodile trees are inland from the Pacific Ocean or in the Peten (where *Crocodylus moreletii* is common). Photo by Nicholas Hellmuth.

Crocodylus acutus prefers brackish water, so near the Caribbean coast, Amatique Bay (Izabal area), etc.

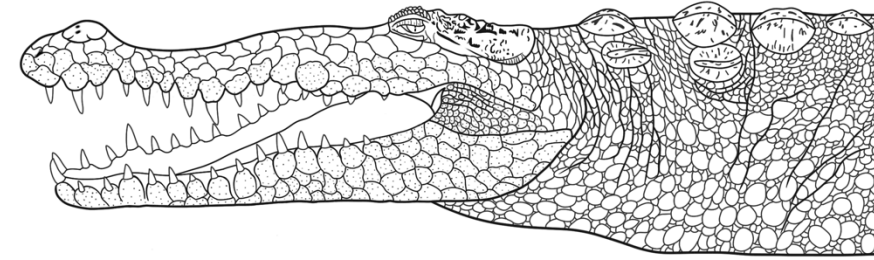
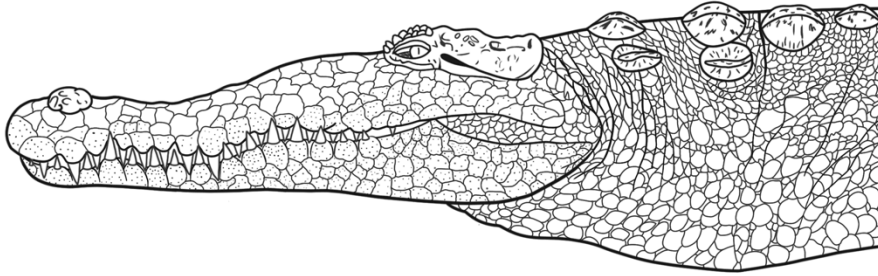


Crocodylus moreletii is only in Mexico, Belize and Guatemala.

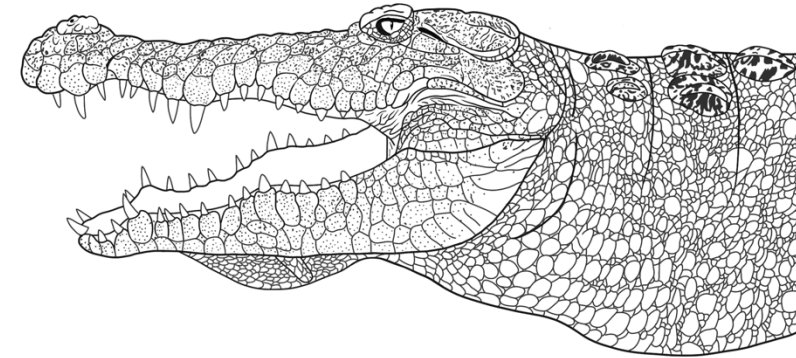
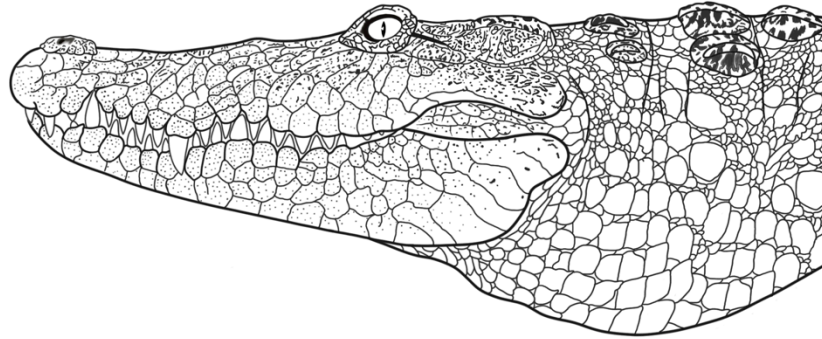
As an iconographer I prefer to study each and every reptile, mammal, bird, insect, arachnid up-close and in-person.

Photo by Nicholas Hellmuth, FLAAR Photo Archive.

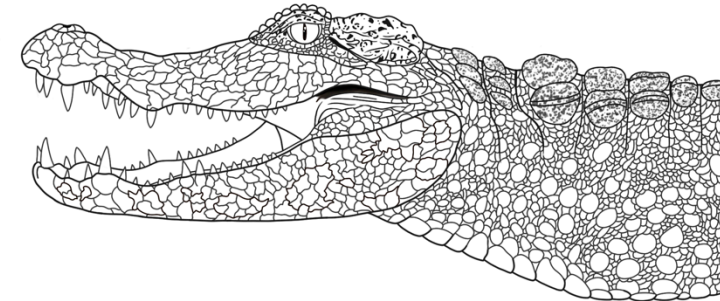
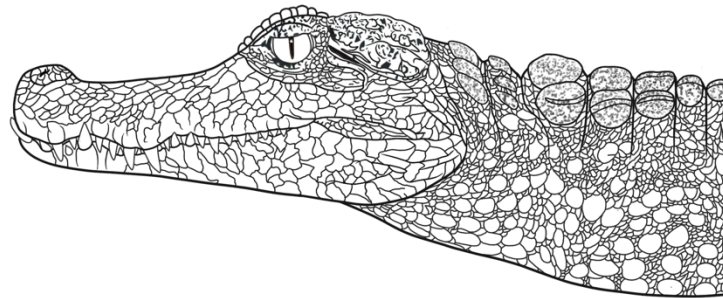
Acutus



Moreletii

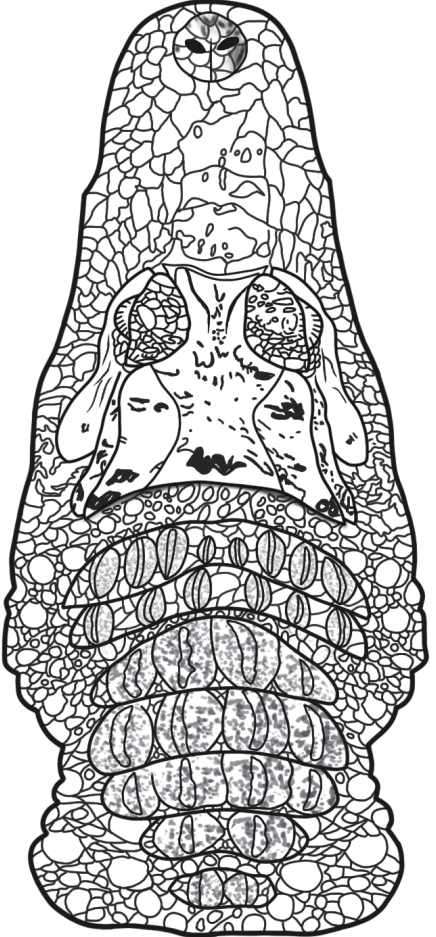
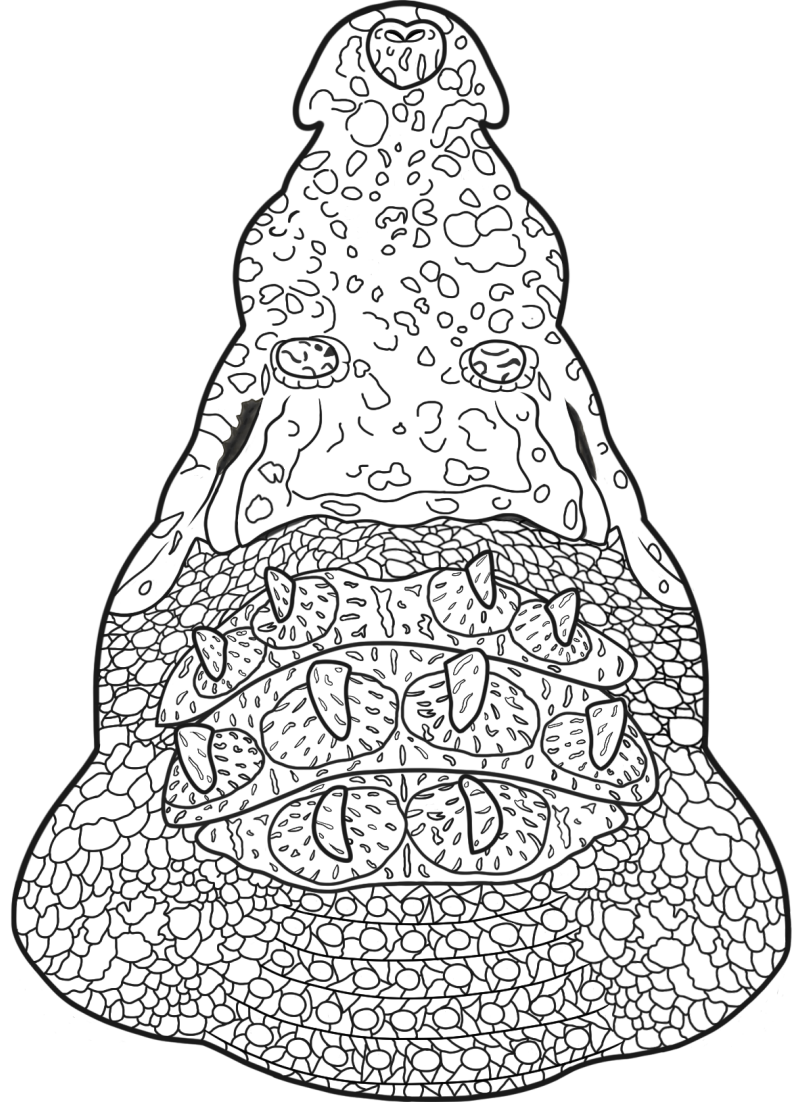
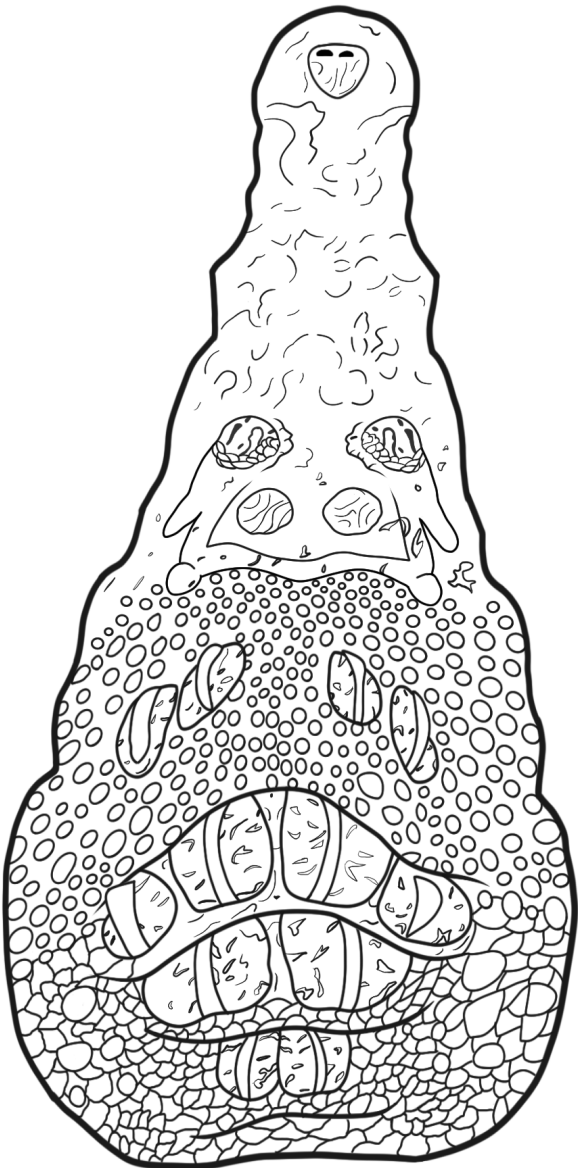


Caiman



Drawings prepared by Josefina Sequen (FLAAR Mesoamerica) for FLAAR research on crocodiles and caiman. FLAAR has photographers and illustrators all in-house.

To study the iconography, epigraphy, zoology and ethnozoology of crocodiles and caiman of Mesoamerica, it helps to have accurate line drawings.



Acutus

Moreletii

Caiman

These drawings were prepared for the long-range Maya ethnozoology research of FLAAR. Josefina Sequin, FLAAR Mesoamerica is the illustrator.

At first I estimated this was a *C. acutus* because no conical spines, but you can tell it's actually a *C. moreletii* because of the shapes on back of the head and more crucially the indent in its upper jaw profile (behind where the fangs stick up).

Photograph by Nicholas Hellmuth, at CECON, Monterrico. FLAAR Photo Archive.



In the drawing of the three crocodilians by Josefina Sequen, you notice that the head of one species is longer and more narrow. Width depends on whether fed in a zoo (where the crocs get quite fat because they don't swim or hike to catch prey), or out in the wild (where the crocs are thin and agile).

In this photo by Erick Flores, on a field trip for FLAAR in Costa Rica, you see the narrow aspect of a *Crocodylus acutus*.



Crocodiles are obviously related with water, here is an awesome work of art showing a “crocodile canoe” heading to Xibalba.

We know this is a Surface of the Underwaterworld canoe because of the mythical canoe scenes on incised bone from Tikal Burial 116, Temple I.

Frankly the bottom looks like what I would see on a centipede. And the “antlers” on the head of the toothy reptilian creature.

Dallas Museum of Art, museum photograph, on-line.

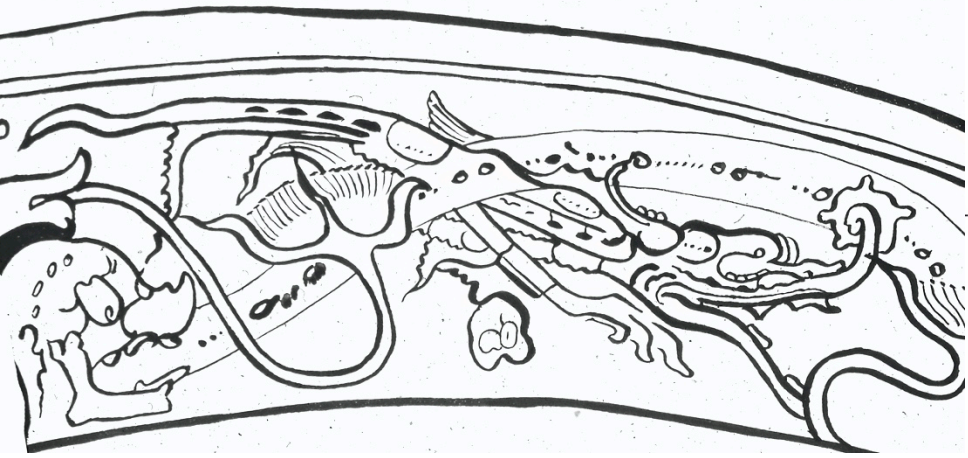




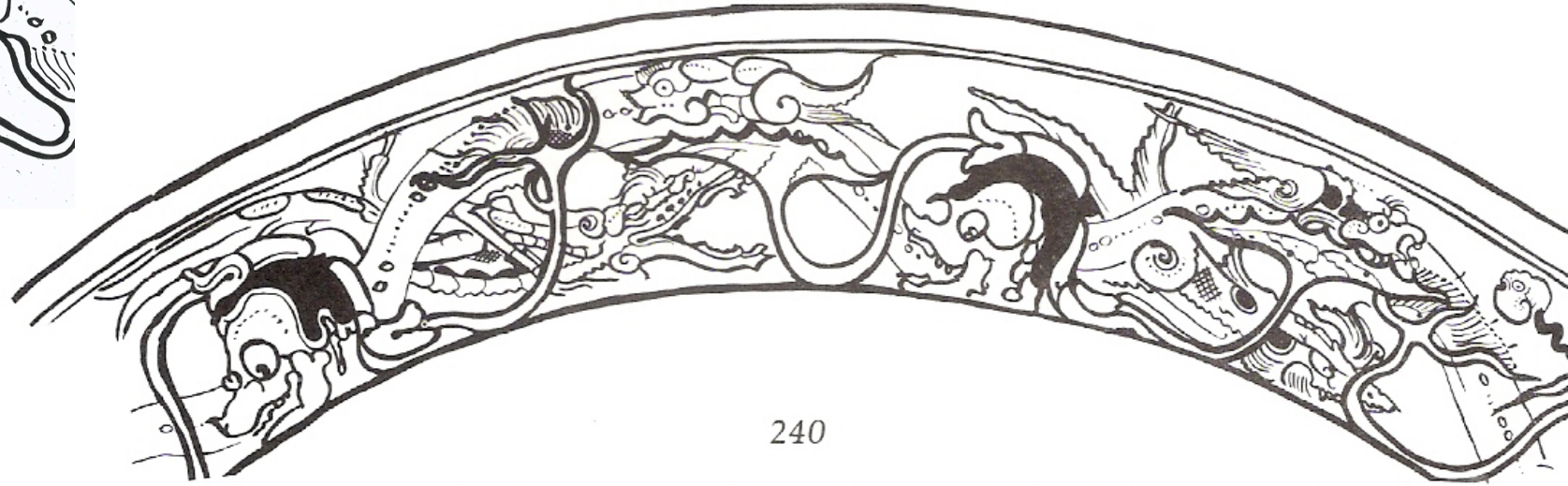
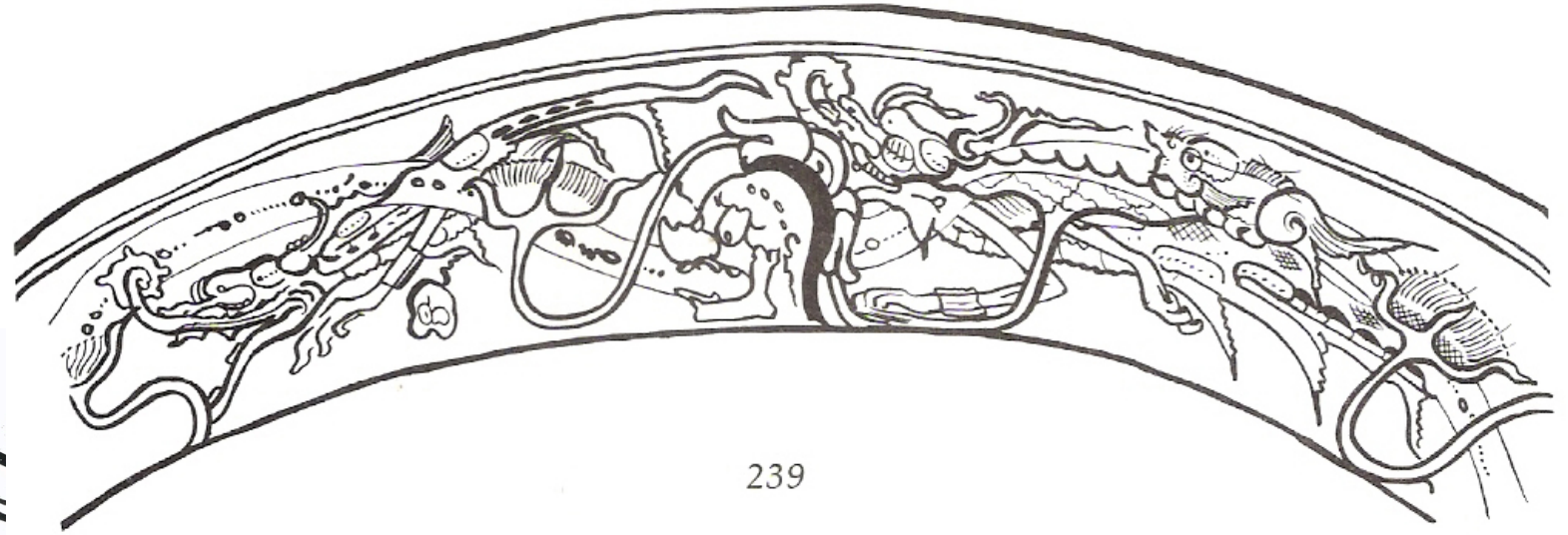
Now you can focus on the water symbolism, especially the fish and crocodiles around the inside rim.



Lots of water symbolism in the middle; the horizontal row of dots that I designated as the Surface of the Underwaterworld. The water lily coming out of the head. Drawing by Eileen Star in Hellmuth 1987b: page 105.



Typical composite monster: legs tell you that this is a crocodile; tail tells you that it is fish-like.



Illustrations are essential in epigraphy and iconography (as are photographs). Many different illustrators were working several years for my PhD dissertation.¹⁶



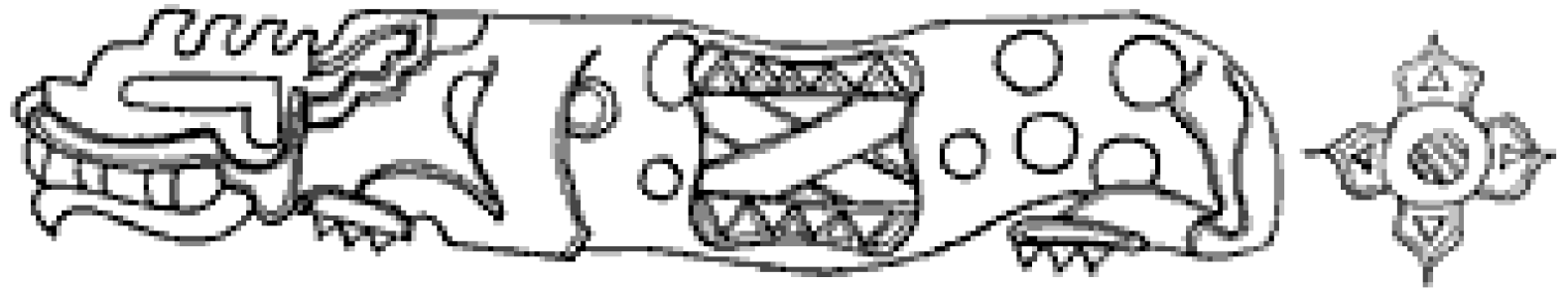
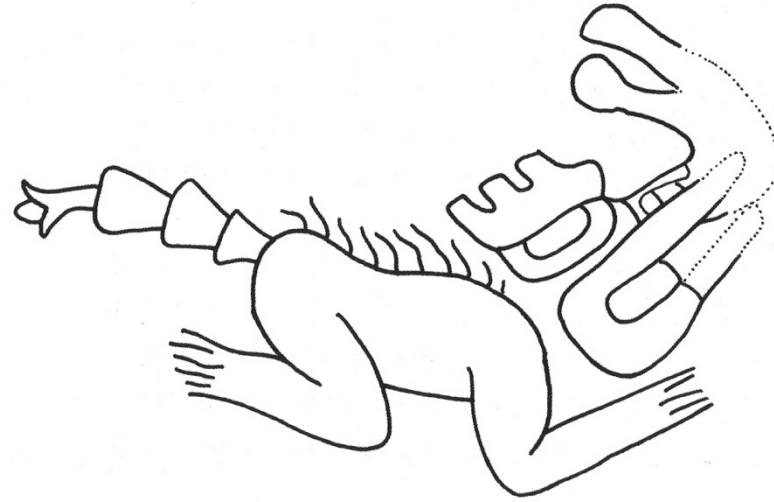
Crocodile sculptures along the Rio Usumacinta: Piedras Negras and Yaxchilan

At Piedras Negras, the natural rock outcrop that overlooks the Rio Usumacinta is in the form of a large saurian creature. But so far I have not found any drawings.

At Yaxchilan you can also find representations of crocodiles or caimans, not surprising since Yaxchilan also fronts the Rio Usumacinta, a river filled with aquatic reptiles. I greatly appreciate this snapshot sent to me from Mexico. If I remember correctly there are two of these sculptures. So far I have not found any drawing of either one???

If you have drawings or photos of the diagonal sloping rock outcrop of the crocodile facing the Rio Usumacinta at Piedras Negras, a photo or line drawing would help greatly.

Same for Yaxchilan. Surely someone must have done a drawing of the TWO long 3-dimensional stone crocodiles there.



Reilly 1999: Fig. 22

The Olmec were inland from the Caribbean Sea and knew crocodiles from there and rivers, lakes and aguadas. The Olmecs were already featuring crocodiles and sharks before the start of Classic Maya civilization. Olmec “dragons” are well documented by Joralemon in 1976. Then in 1991 F. Kent Reilly, III, produced an excellent iconographic analysis of Olmec crocodile creatures.

Dozens of symbols, concepts, and deities of Izapa and the Maya are clearly inspired by Olmec beliefs (cache offerings at Seibal (Ceibal), Peten are a good example. But since Olmec iconography has been well studied by other archaeologists and iconographers, in the present discussion I will focus on crocodile images of the Classic Maya.

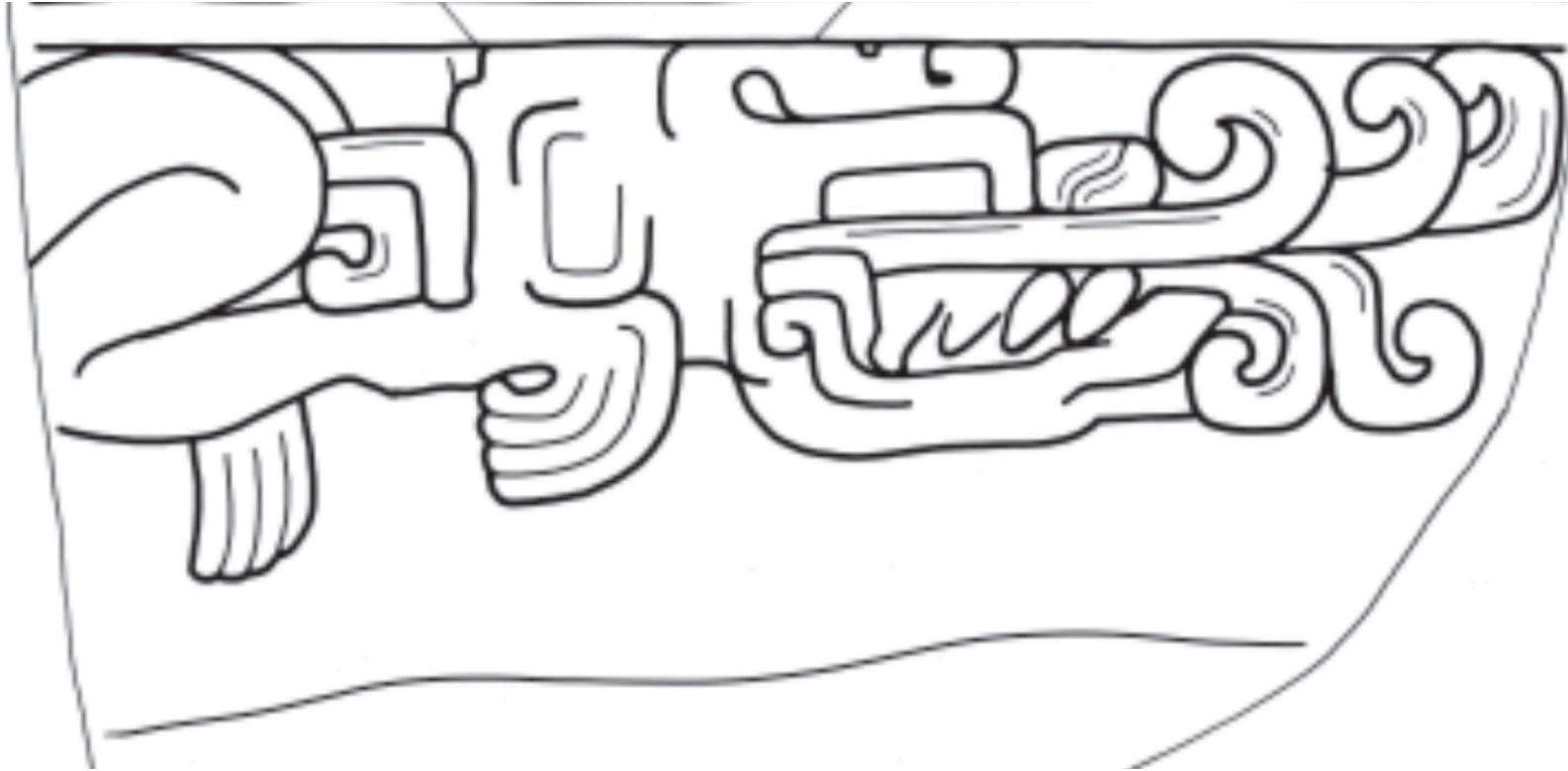
The New World Archaeological Foundation (NAAF) accomplished decades of excellent archaeological studies and publications on Izapa, Chiapas, Mexico.

The international trade route from Mexico down to Costa Rica went through this part of Chiapas and then through the adjacent Boca Costa area of Guatemala. So lots of Olmec influence in both areas (Izapa in Chiapas and Takalik Abaj in Guatemala).

There are more (stylized) crocodiles on this Izapa Stela 22 than in any other Mesoamerican art that I am aware of. Across the bottom are two fish.

Helpful drawing by Moreno in Moreno and Clark 2007: Fig. 13.21.





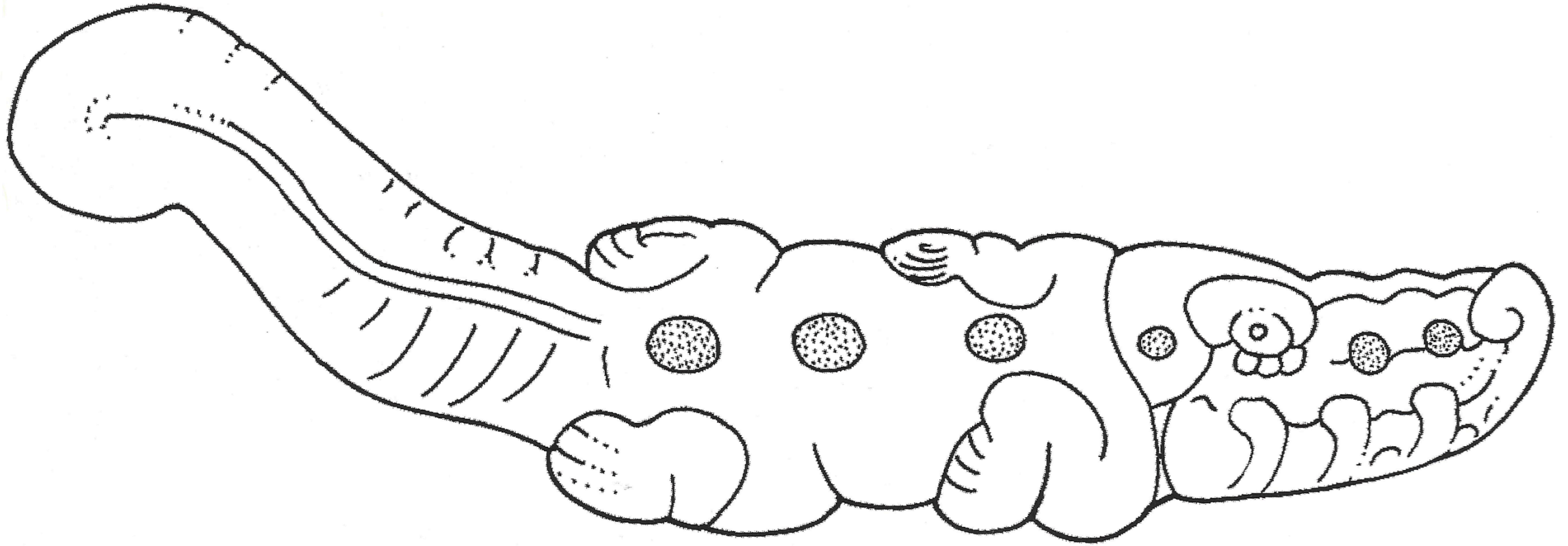
In addition to vertical Crocodile Trees at Izapa there are also horizontal stylizations, Izapa Stela 27, drawing by Moreno in Moreno and Clark 2007: Fig. 13.26.

I show Crocodile Trees in a separate chapter of this presentation.



In addition to Crocodile Trees at Izapa there were also portraits of crocodiles in 3-dimensional stone sculptures at Takalik Abaj, on the Guatemalan side of the border with Chiapas, Mexico (where Izapa is located).

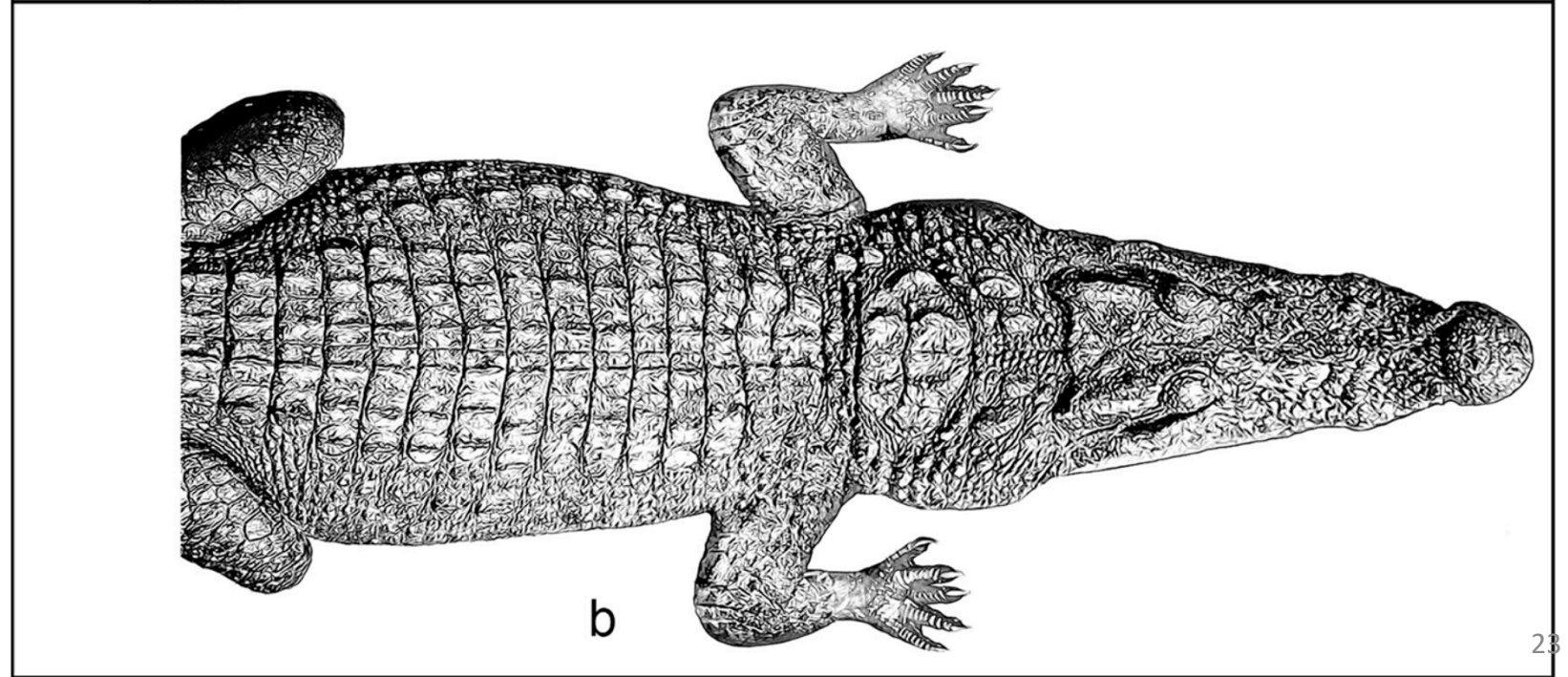
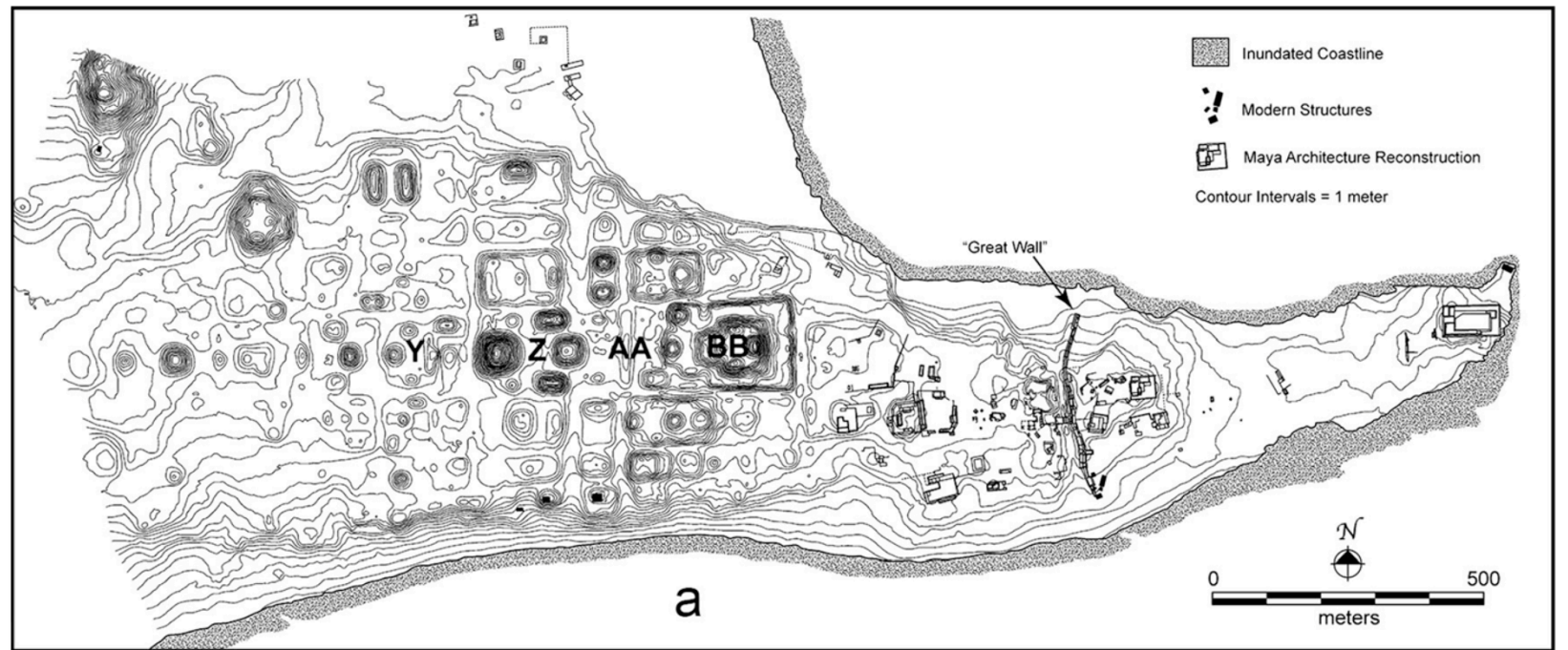
Photo from GuatemalaBellaCom.

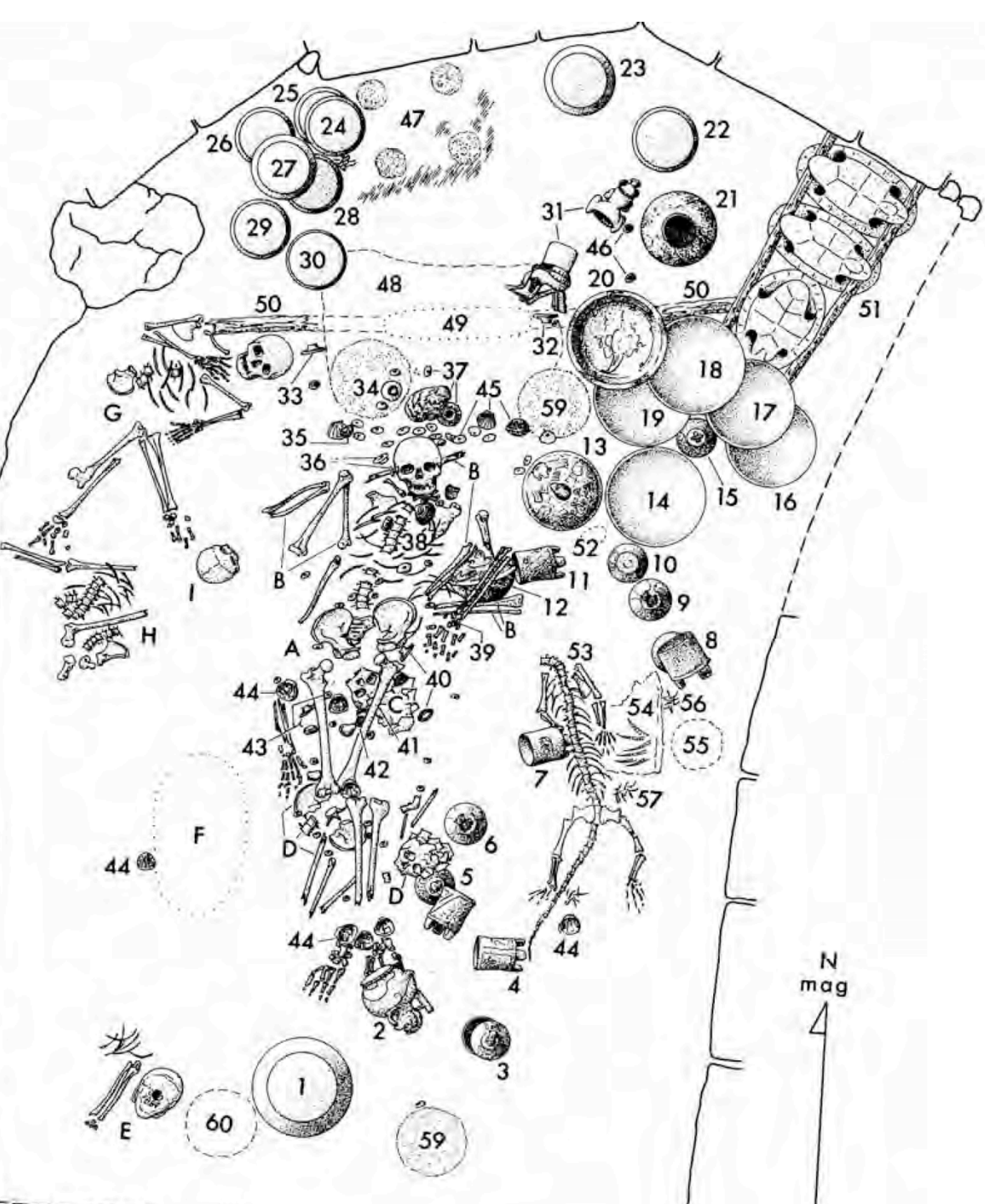


The teeth are stylized but the larger teeth allow for space between for the shorter teeth. Feet are in almost a swimming position. Stylized curl goes from mouth up to nose. Tail has different details than other crocodile renditions. This drawing is from Houston in Fiery Pool museum exhibit, page 70, Fig. 4. PMAE, Harvard, shell.

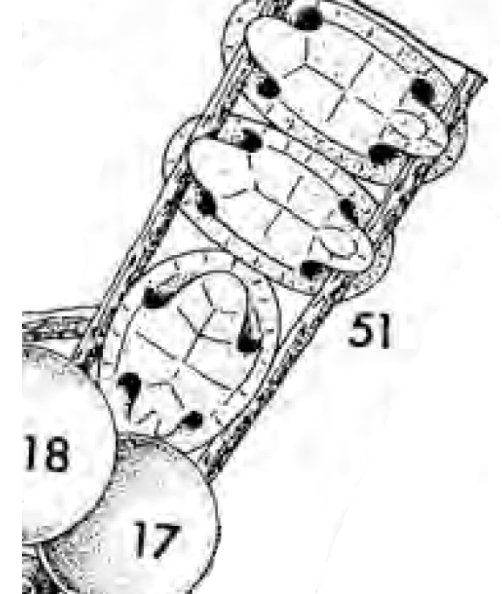
Crocodiles were already so important in the PreClassic Peten that an entire Maya site was arranged by Maya architects to mimic the rectangular pattern of the back of a crocodile and the same of a crocodile's head.

Nixtun-Chi'ich', drawing by Rice and team, Figure 8 in article by Prudence Rice 2017.





The wood holding the marimba of turtle shells together was still preserved.



The 4th century conqueror of Tikal was buried with a mid-sized crocodile and a marimba made of turtle shells.

Tikal Burial 10, William Coe 1990: Figure 160.



Crocodiles are pictured associated with the sacred water lily. While hiking through PNLT Savanna #13 we found lots of baby crocodiles floating next to lily pads of *Nymphaea ampla*.

Many grassland savannas have aguadas year round; others have lagoons. Other grassland savannas or tasistal palm savannas have water only in a wet month of a wet year.

Photos by Edwin Solares, April 1, 2022, during our project of cooperation and coordination with CONAP.

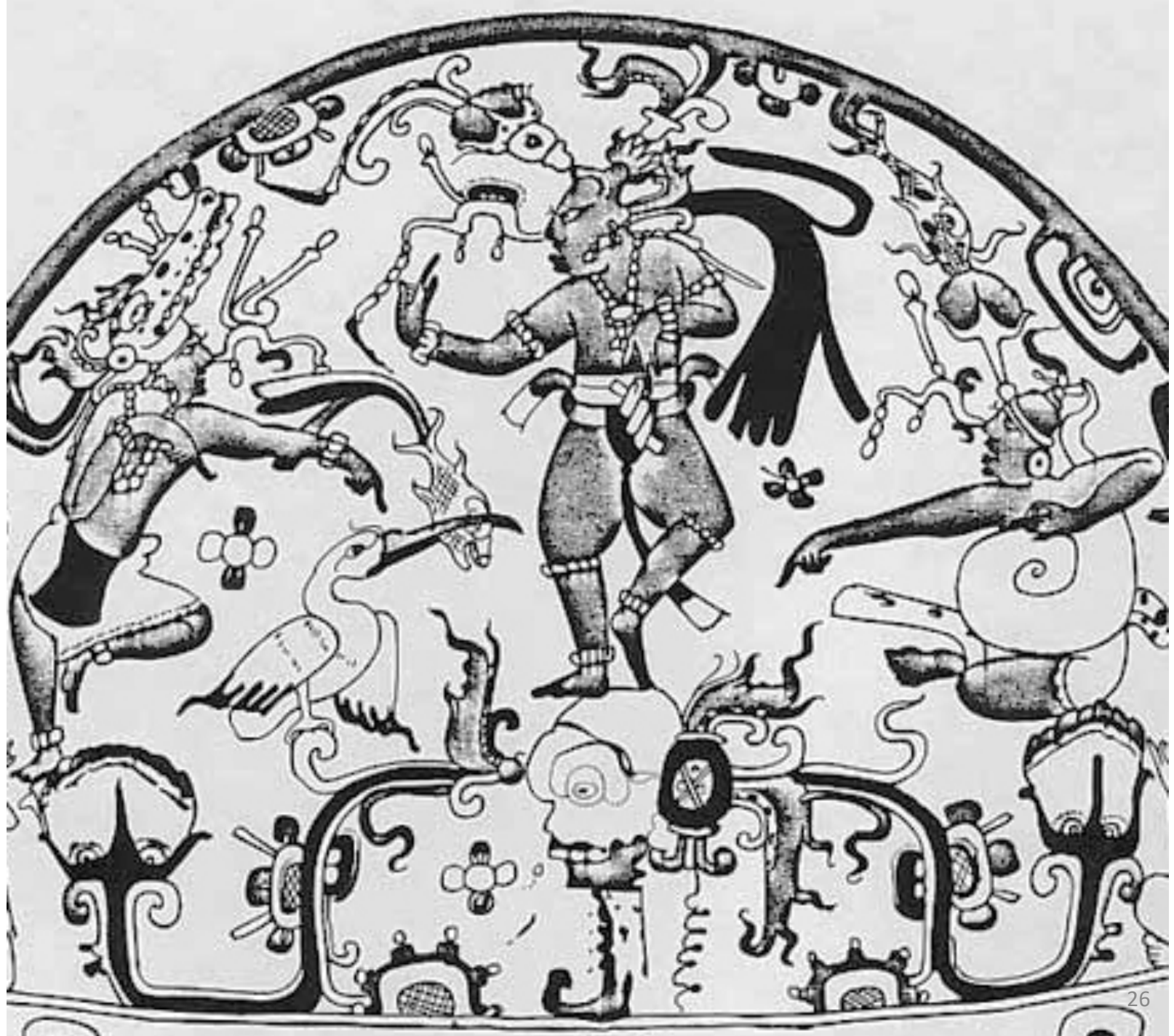
Waterbird with fish in its beak.

Water lilies below.

Water lilies as headdress for the main personage and the young man in the shell.

So here the crocodile headdress is clearly in a water related habitat.

Drawing by Laura Gornto, Hellmuth 1976.



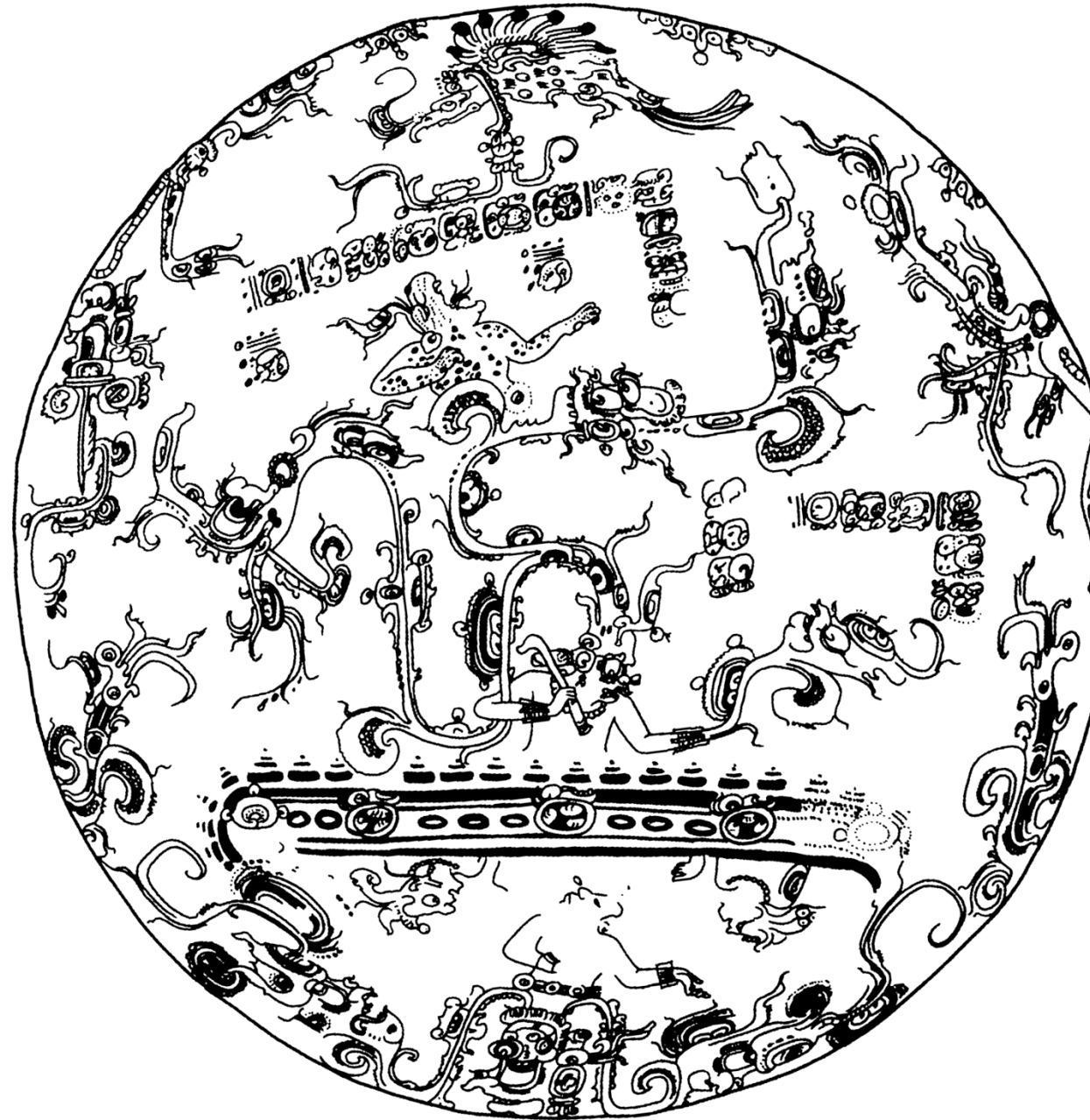
Here is the entire scene. Original drawing by FLAAR illustrator many decades ago, Laura Gornto. This is not a copy “after” another illustrator.

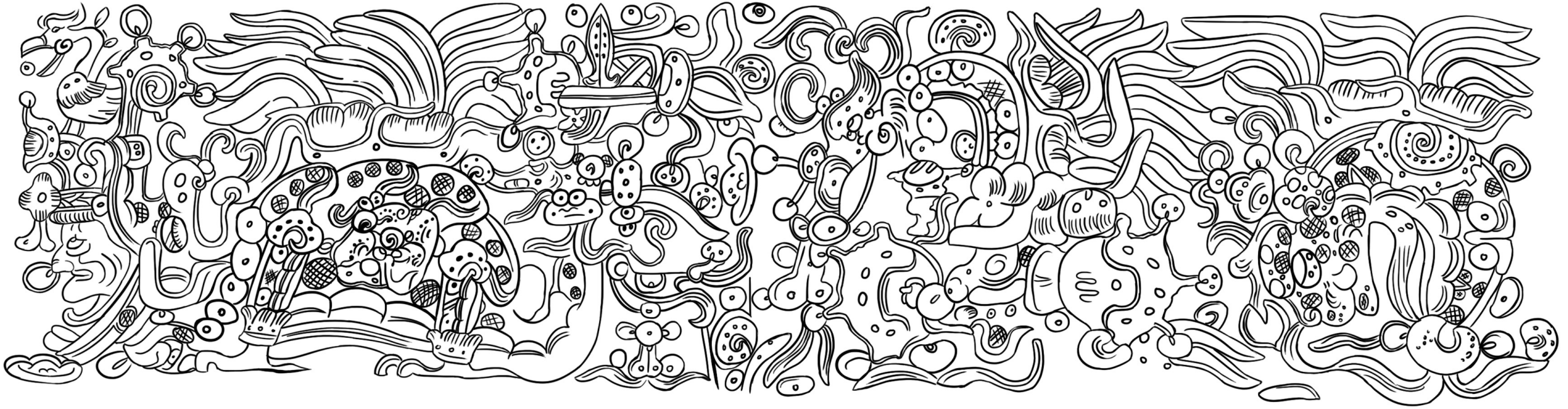




Cosmic Monster we show in a separate chapter. But here (in chapter on crocodiles related to water) we show that the Cosmic Monster Crocodile is high-in-the-sky and the Surface of the Underworld is far at the bottom.

Original drawing by illustrators of FLAAR team many decades ago. This is not the also helpful Linda Schele drawing from the FAMSI database. There is also a drawing of the same plate by Matthew Looer, but I do not have a high-resolution digital image of that.





Normally the bicephalic Cosmic Monster is high in the sky.

Yet here the Cosmic Monster is “underwater.”

Yet here the Cosmic Monster has a giant water lily flower ON TOP OF IT

Yet here the Cosmic monster has a Shell Wing Dragon and a Fish behind it

And this Cosmic Monster has God N coming out the front. God N is water related.

We show and discuss the “celestial” Cosmic Monster in a separate chapter.

Drawing by Luis Molina, FLAAR Mesoamerica from rollout photo by Justin Kerr, K6626.

The teams at FLAAR and FLAAR Mesoamerica accomplish field work throughout Guatemala to study flora, fauna, and ecosystems close-up and in person. I am within 3 meters of this *Crocodylus moreletii*, but if I want a high-resolution view of the dentition of this species, gotta get close. Photo by Nicholas Hellmuth, PANAT, Jan. 2013.



Is there a relationship between God N and Crocodiles?

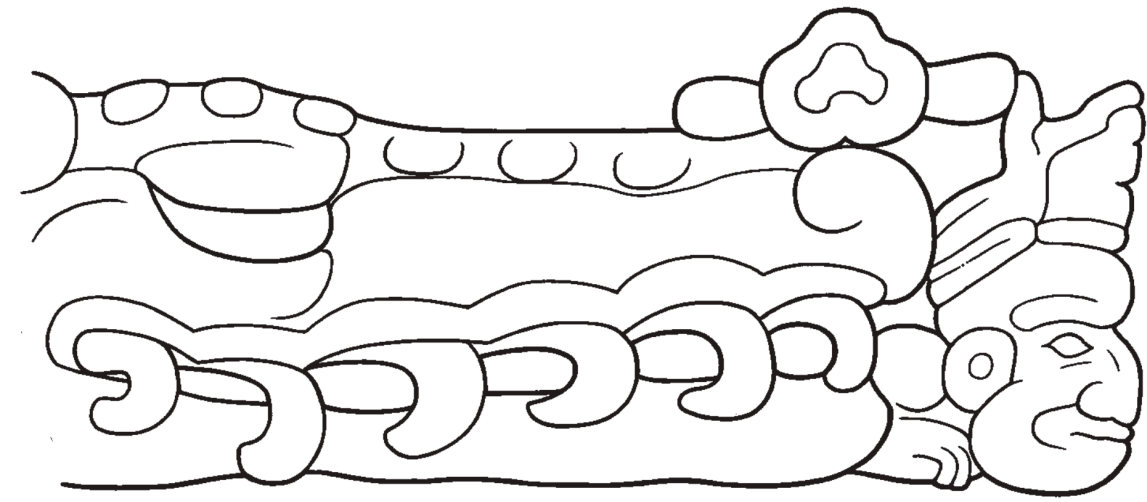


We know that God N occasionally resides in a turtle shell. These are turtles related to water.

Elsewhere God N is associated with several types of shells, freshwater or conch shells from the Caribbean reefs.

But here the head (or headdress of God N) has features we would not expect on a normal turtle.

Denver Art Museum.

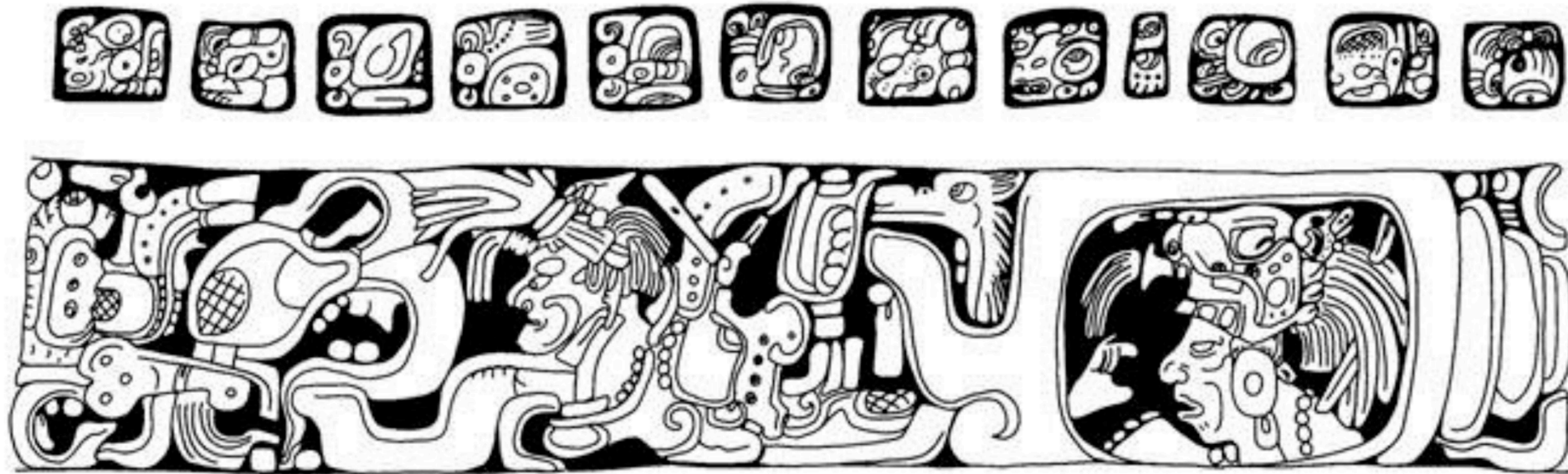


The God N here is coming out of a clearly identifiable crocodile. Martin 2015: Fig. 16b. Simon Martin has an excellent report on this iconography.



God N issuing out of the mouth of a crocodile, the front of a Cosmic Monster. Copan Str. 9N-82, drawing by Schele SD-7667. Unfortunately these illustrations are low-resolution so not usable to show details; the image here is fuzzy.

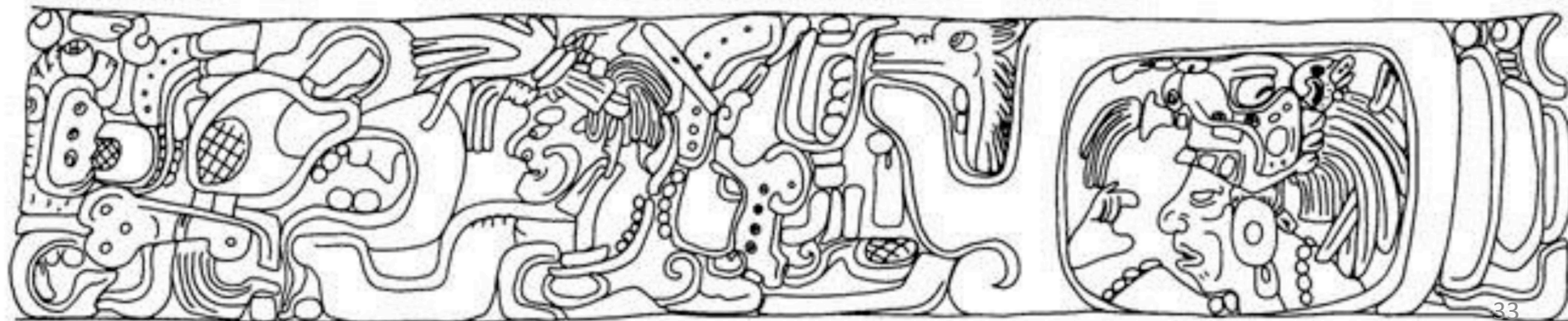
Very helpful scene, since the deity is potentially acceptable as God N. The reptile is seen only as the head but has no crocodile teeth nor snake fangs. The crest over the eye reminds me of a crocodile. The stylized fish is, as usually, “nibbling” on a (not very naturalistic) water lily seed pod.

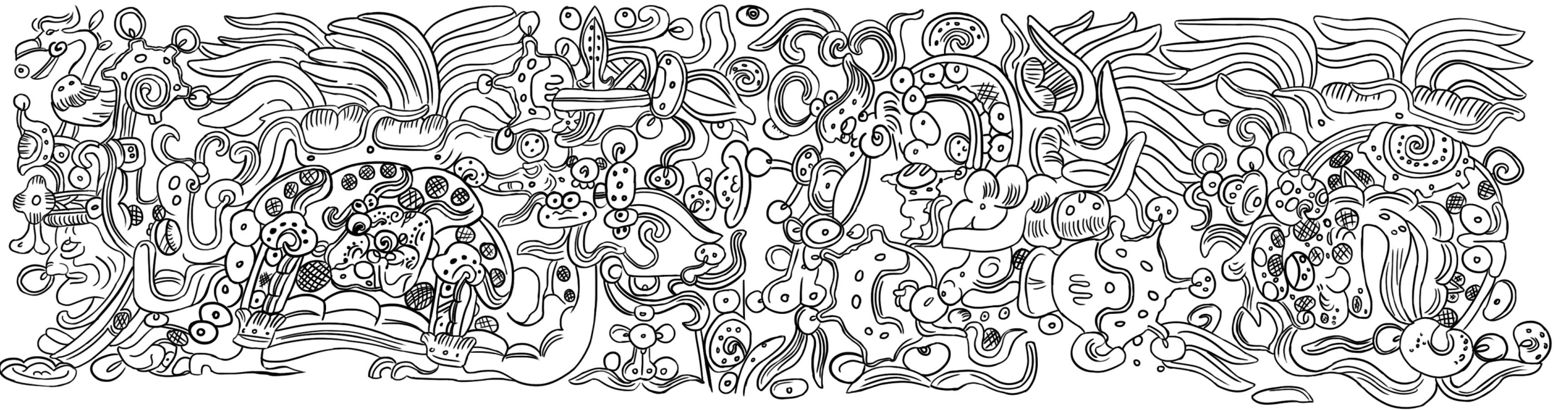


Aged God N is issuing from a reptile with no legs whatsoever; is this a snake? Or does the large eyebrow crest suggest a crocodile?



The creature at the left is a different snake with a totally unexpected individual coming out, definitely not God N. Kerr Rollout K2774 (Carroll 2013: Fig. 51). The drawings by Carroll are helpful because one style has black background.





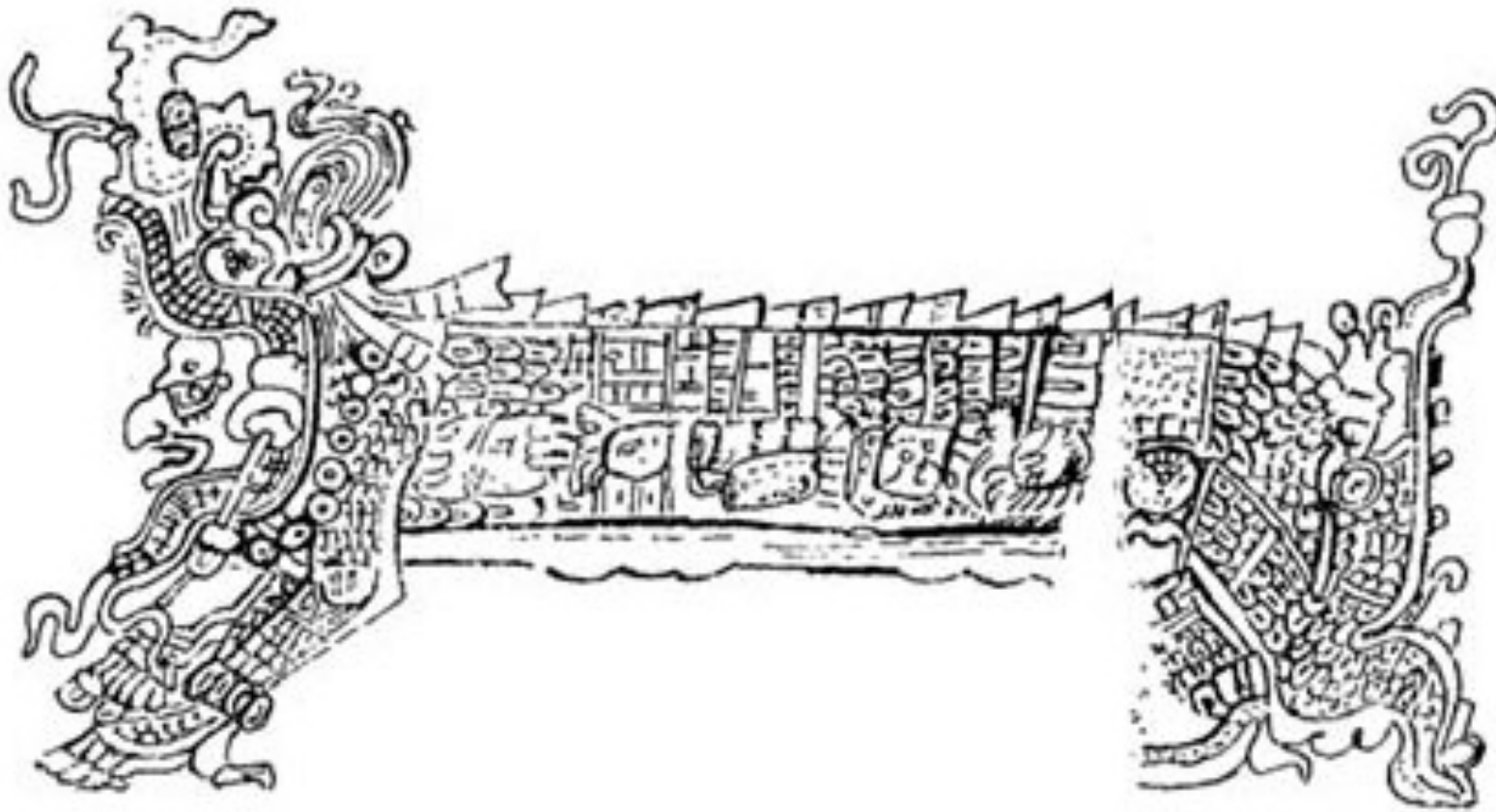
Aged God N in the mouth of the crocodile at the front of Cosmic Monster but in Underwaterworld, not up in the sky (except for the Maya, the "sky" can also be "below").

Shell Wing Dragon, a mythical creature that I featured, pictured and discussed in my 1986 PhD dissertation, published by ADEVA in 1987.

Curved fish with water lily above.

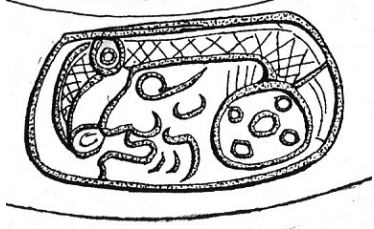


Helpful Kerr rollout, K6626, sharpened by Hellmuth so you can see details better. Luis Molina achieves excellent line drawings. Frankly often it really helps to have a drawing in addition to the rollouts.



Even in the Post Classic codices deities are inside giant mythical crocodile monsters. Codex Dresden Tro-Cortesiano, Villacorta. Itzamna? Or best to consider it God N since in other crocodiles it is usually definitely God N.

Most of this crocodile monster is on one page; the rest is on an adjacent page, so we joined the two segments together.



God N



Who and Why?

But this early Classic example is not as easy to say is God N since this deity is not the same as the obvious God N glyph sideways in front of him. Helpful drawing by Donald Hales and John Hales 1976, revised 2000; we appreciate permission.





Simon Martin has accomplished excellent research and published a fully illustrated report on the Old God and its relationship with crocodiles and other aspects.

When a deity is clearly God N I prefer to use that designation though often it's unclear whether the aged deity is God N or God D, so then the term Old God is very helpful.

Quirigua Zoomorph P, Panels C and D, drawing by Simon Martin after Maudslay 1989-1902, 2: Plate 63 c and d; Martin 2015: Fig. 15c.

I estimate that at least 80% of the published images of crocodiles in Maya art or in databases on-line have been included in previous articles on crocodiles. I would like to conclude this chapter of the presentation at the Museo Popol Vuh, UFM by showing a remarkable Tepeu 1 bowl with a reptile with legs (hence a crocodile) with God N coming out of the crocodile's mouth. The legs have feline-like pelage pattern but may have other origin and meaning. One leg is down, the other leg comes from behind the head and points up. This bowl has a gorgeous PSSequences. No repainting to fake the scene. So this bowl and the glyphs are authentic.



We are trying to find enough photos of each side of this Tepeu 1 bowl to make a rollout drawing.

If this bowl is in the Kerr rollout archive? please let us know.

If this bowl is in a museum database on line?, please let us know.





We hope you have enjoyed our field work photos on crocodiles and iconography of crocodiles in this first chapter (more in the subsequent chapters). I estimate this is *Crocodylus acutus* since there are not many conical shapes; mostly are oblong.

Photo by Nicholas Hellmuth, February 2023.

The purpose of issuing this in an open PowerPoint format is so that teachers and professors can use this material in their own lectures.

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Note: the references cited and list of additional suggested reading is in a separate PDF since it is too long to include in the PowerPoint. If you notice that we are missing an article, thesis, dissertation, peer-reviewed journal article or web page please let us know so we can update that bibliographic FLAAR Report.

The primary reason for the format for the six chapters is to make lots of illustrations available so that colleagues and students don't have to spend the months searching for each illustration. Obviously each individual Maya scholar and student will find additional examples.