

# Crocodiles in Classic Maya Art & Swamps of Guatemala



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Foundation for Latin American Anthropological Research

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*The Pre-Columbian Society*  
*at the University of Pennsylvania*  
*Museum of Archaeology and Anthropology*

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

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.



## 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
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5. Crocodile Trees, Izapa, Early Classic Maya, Late Classic (Codex Style vases)
6. Crocodile and Composite Deer-Crocodile as Bicephalic Cosmic Monster

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



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 Penn Museum 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.

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. There are more than a hundred crocodiles in Lake Yaxha and adjacent Lake Sacnab.

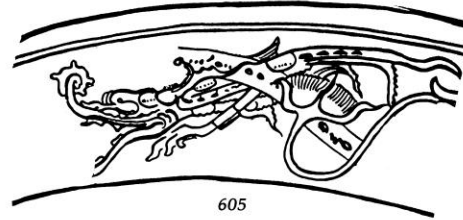
By the 1980's I published my first iconographic analysis of crocodiles in my 1986 PhD dissertation (Hellmuth 1987).



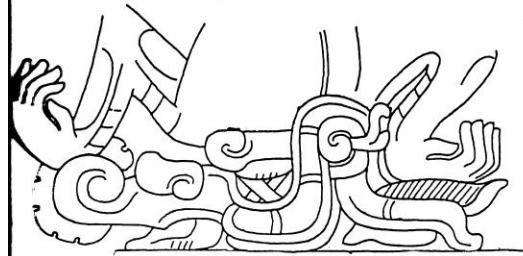
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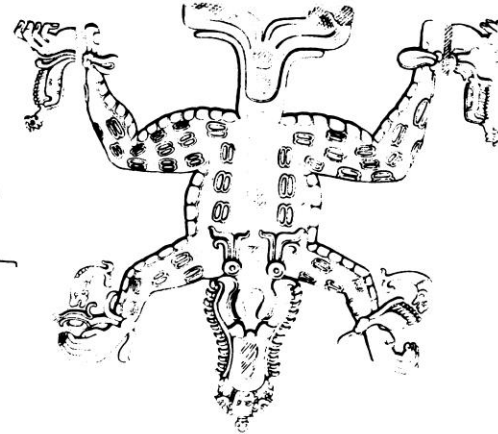
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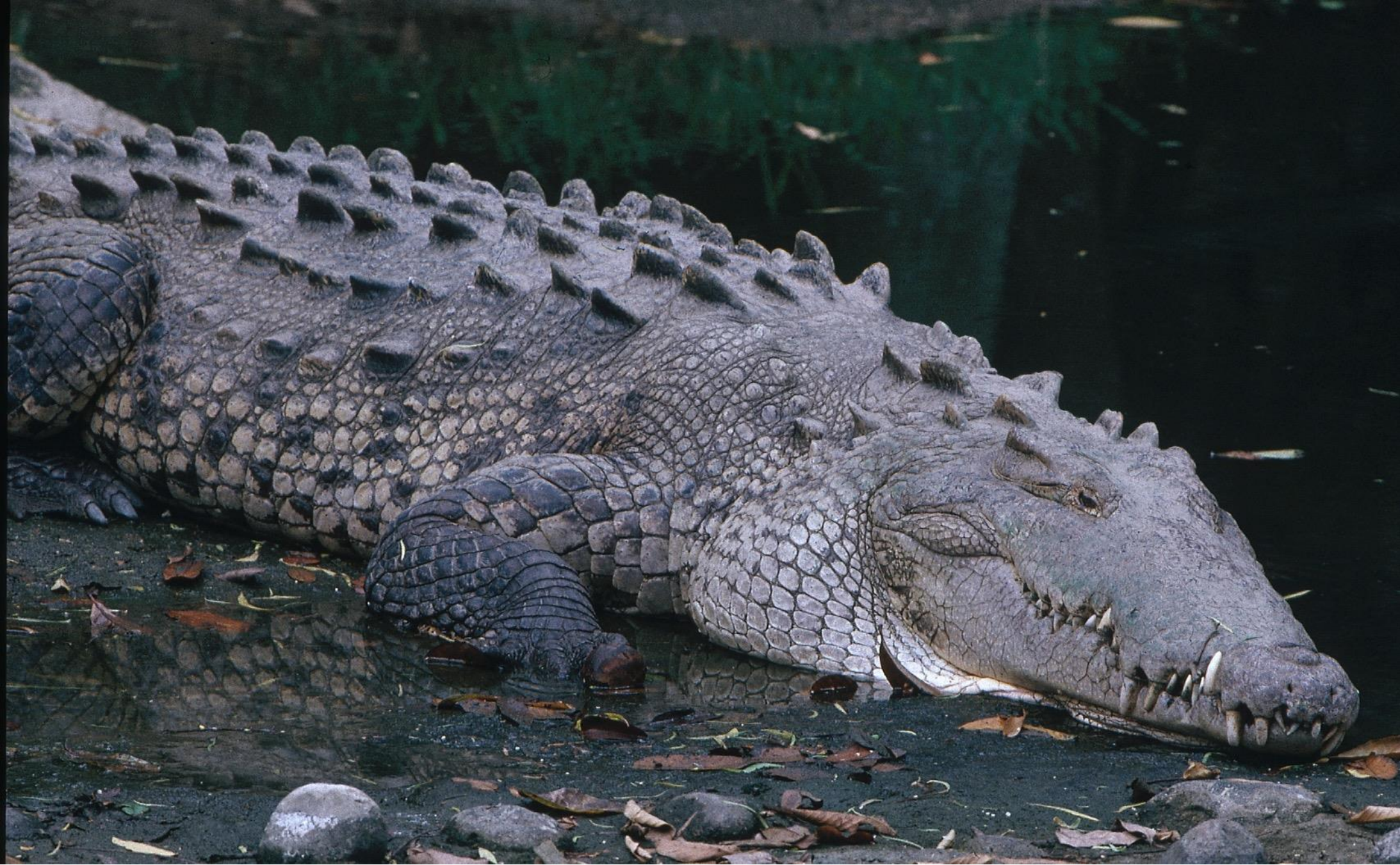


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*Caiman crocodilus* is a caiman, but considered an alligator (not a crocodile) despite its name “crocodilus.” The pattern of scales on this creature is very distinctive: no spikes or sharp spines but lots of raised bumps in a regular parallel pattern.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





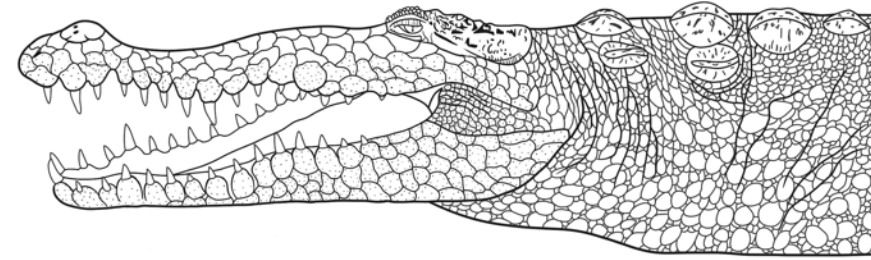
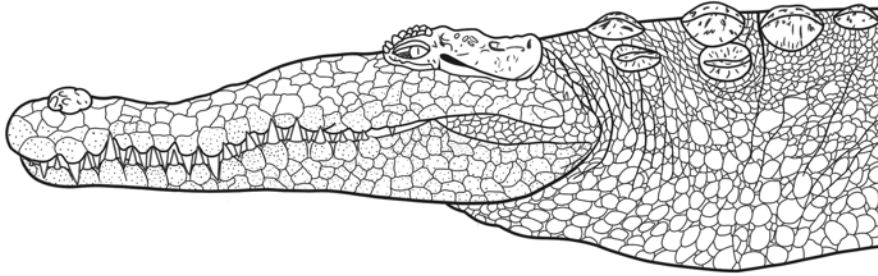
*Crocodylus moreletii* is only in Mexico, Belize and Guatemala.

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

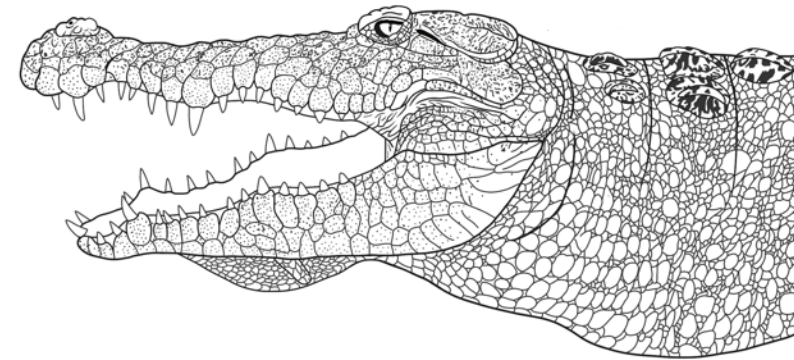
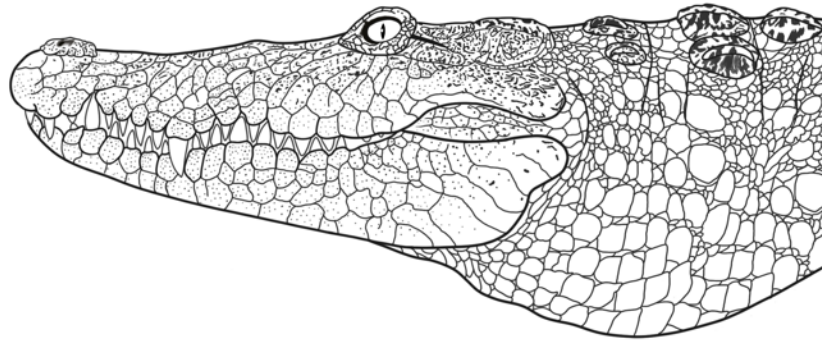
From this photo you can notice that I am quite close to these two crocodiles.

Photo by Nicholas Hellmuth, FLAAR Photo Archive.

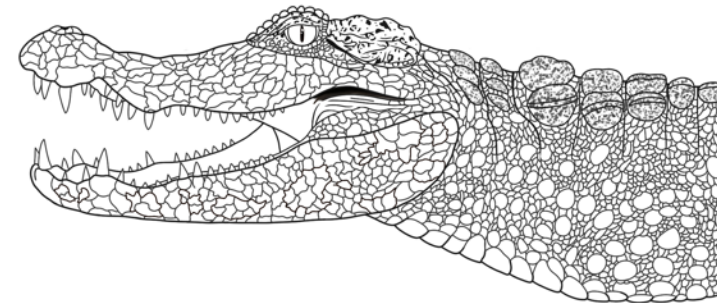
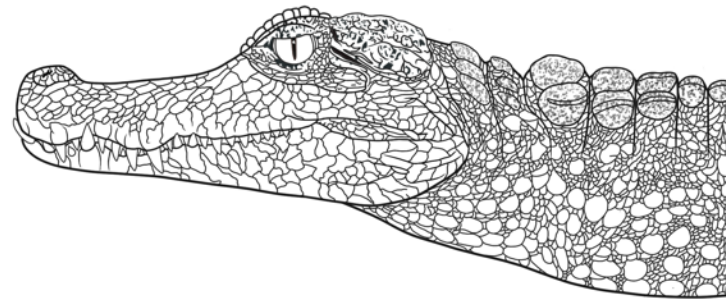
Acutus



Moreletii

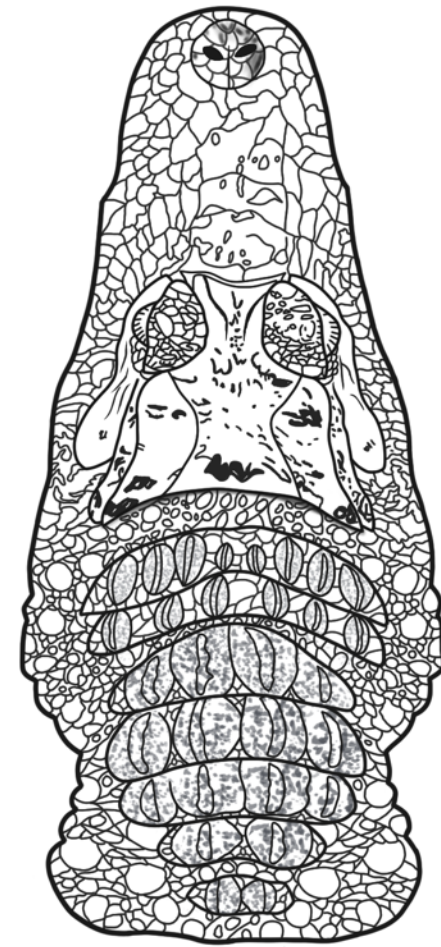
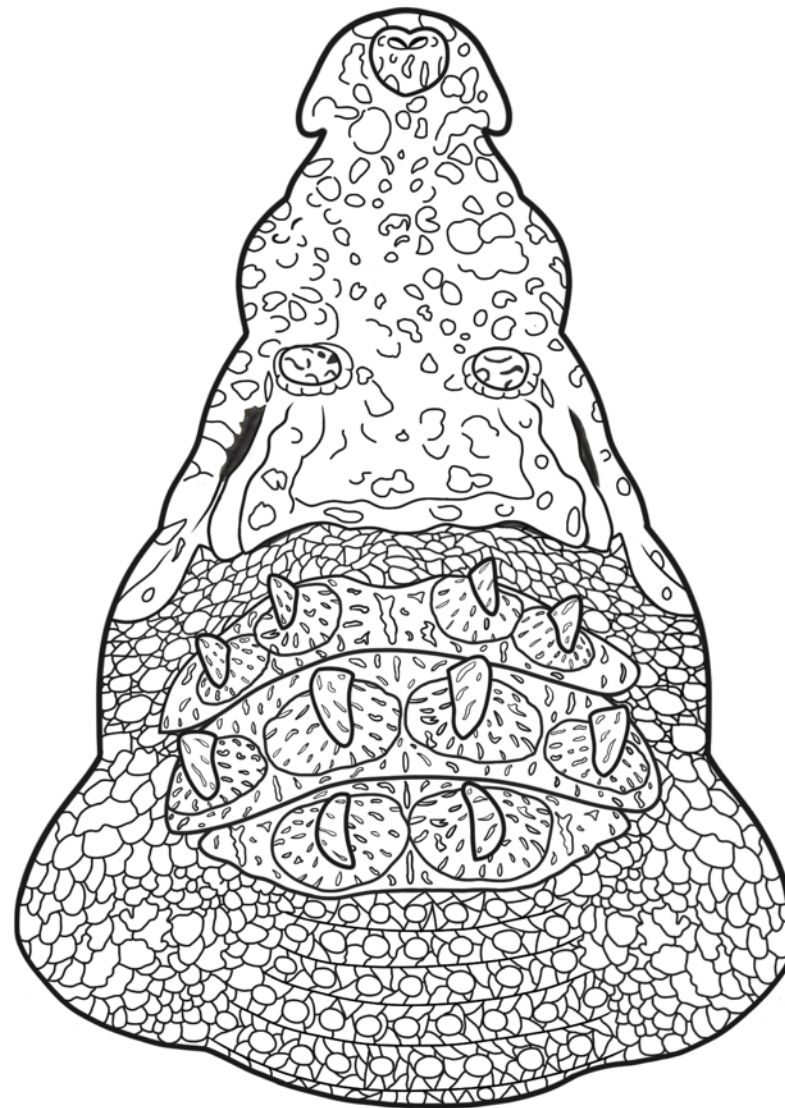
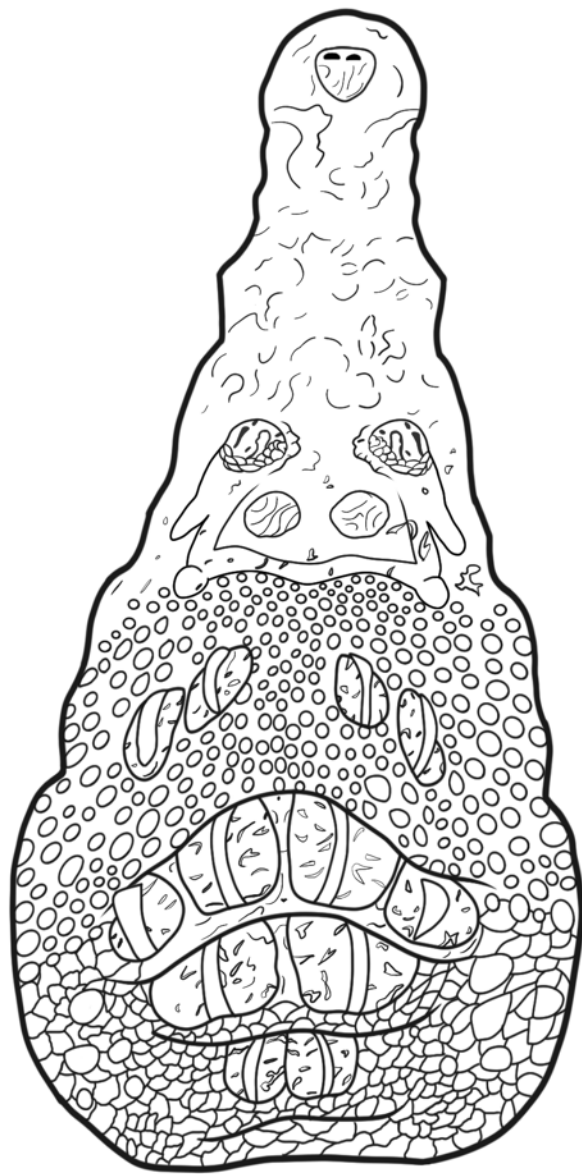


Caiman



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

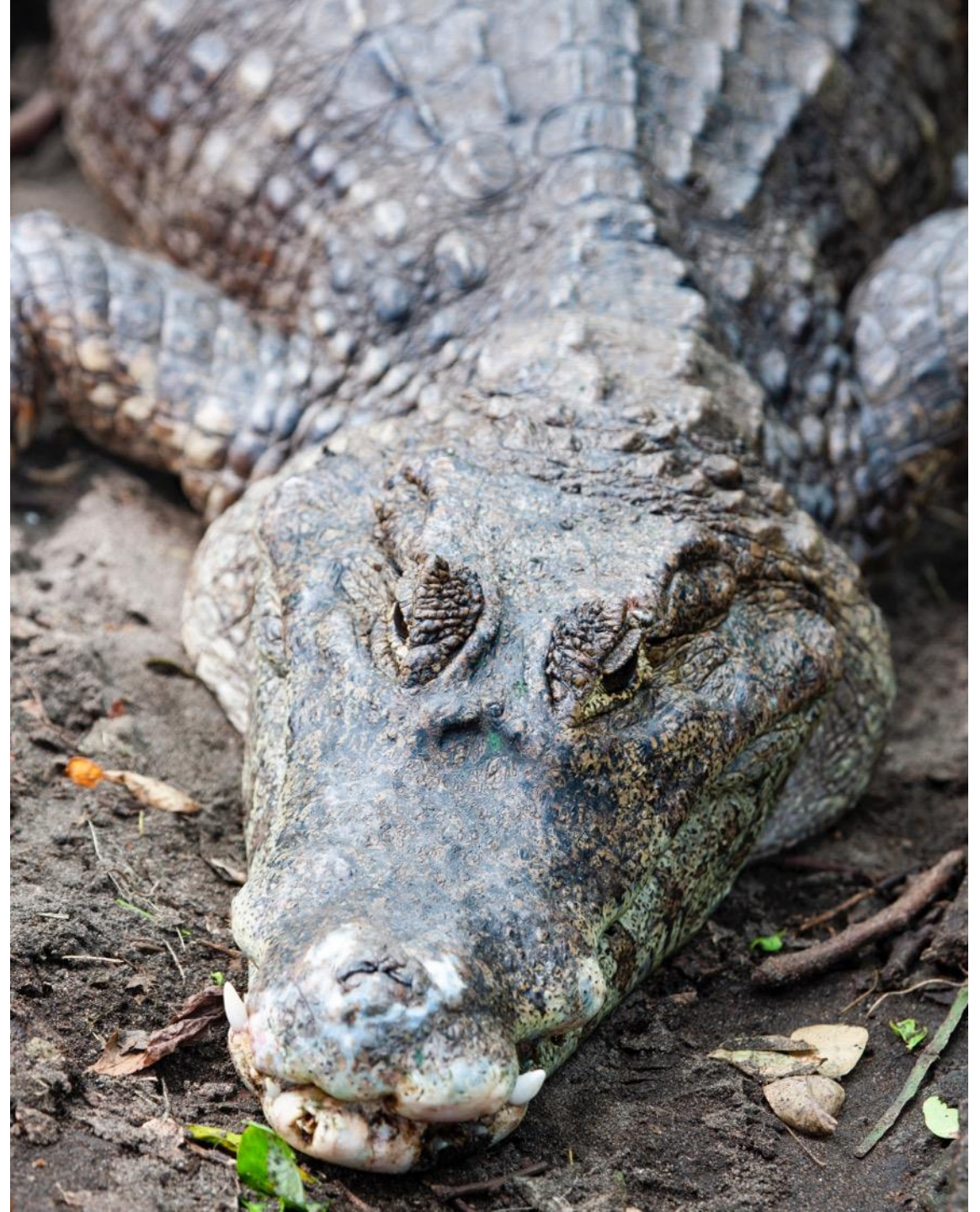
Moreletii

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.

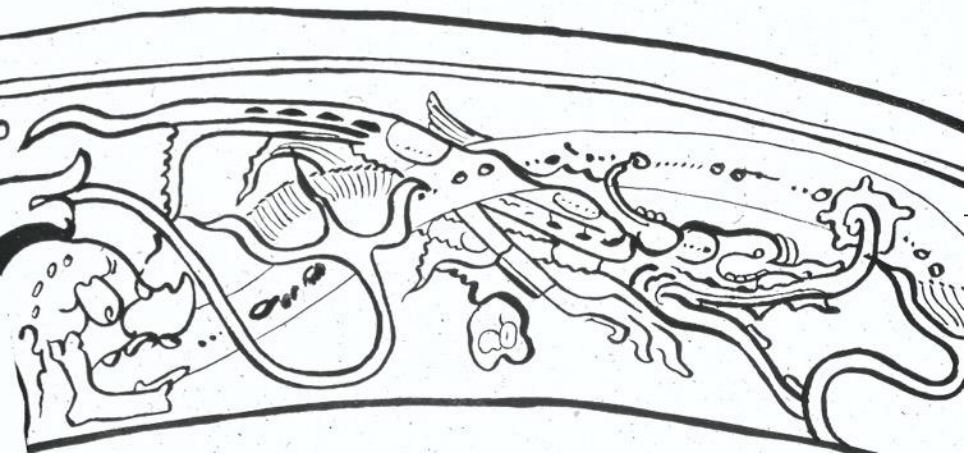




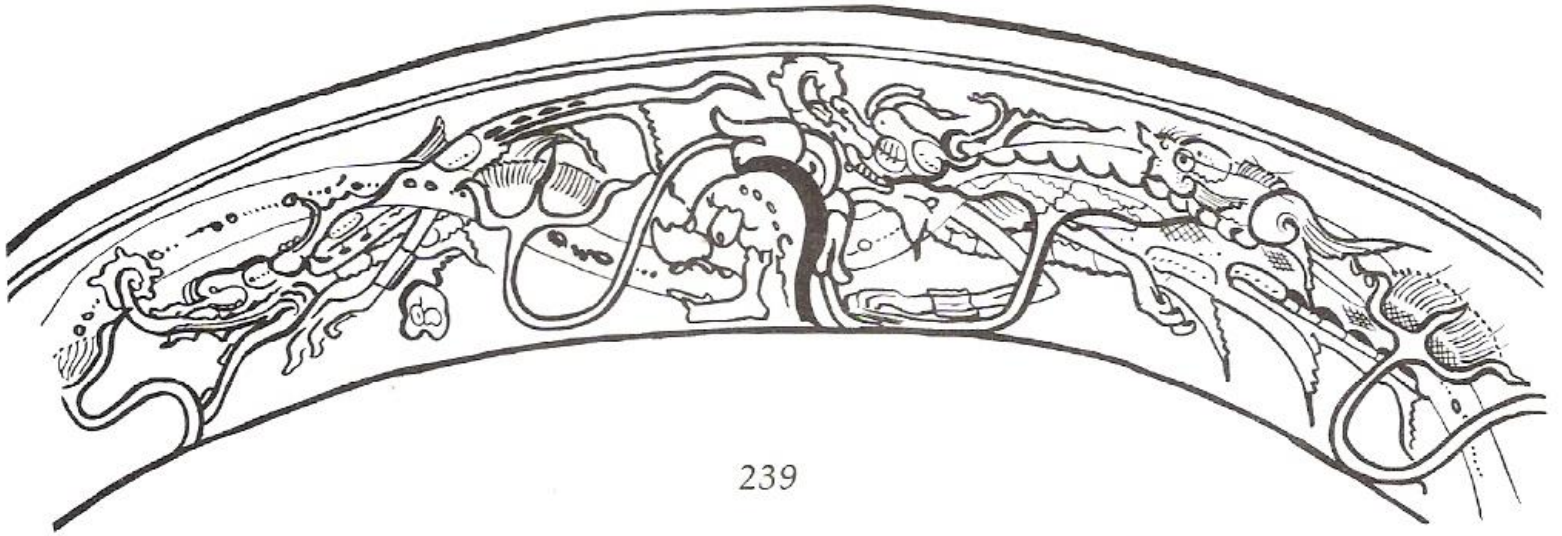
Now you can focus on the water symbolism, especially the fish and crocodiles around the inside rim.



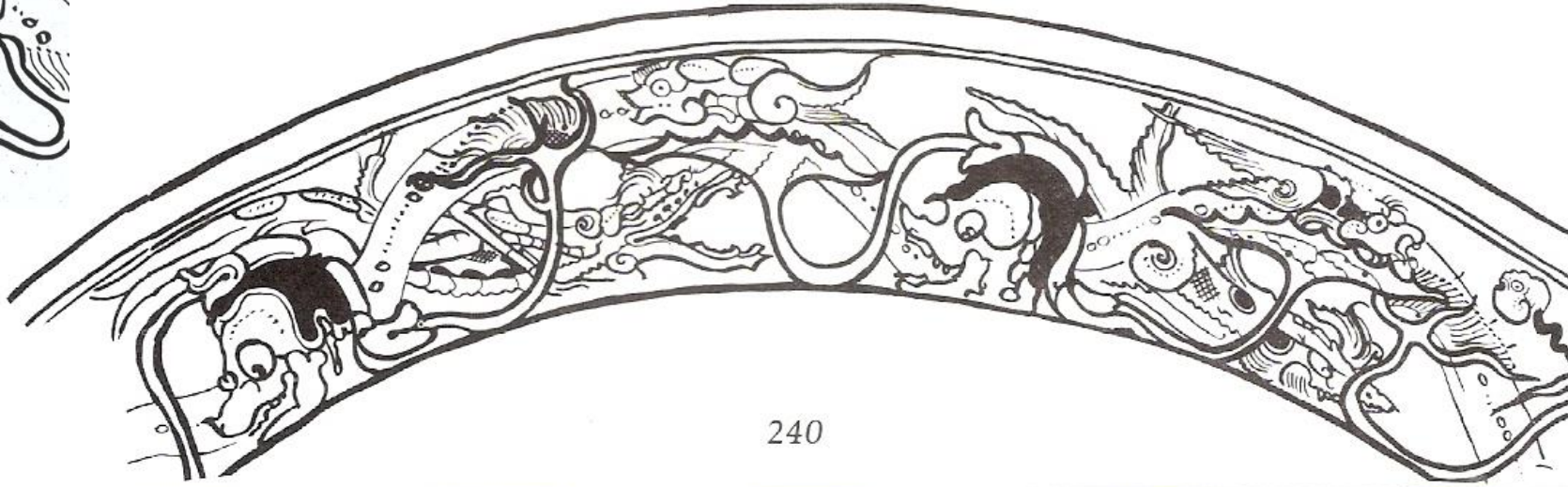
Lots of water symbolism in the middle; the horizontal row of dots that I designated as the Surface of the Underwaterworld. The water lily coming out of the head. Drawing by Eileen Star in Hellmuth PhD dissertation, 1987b: page 105.



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



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





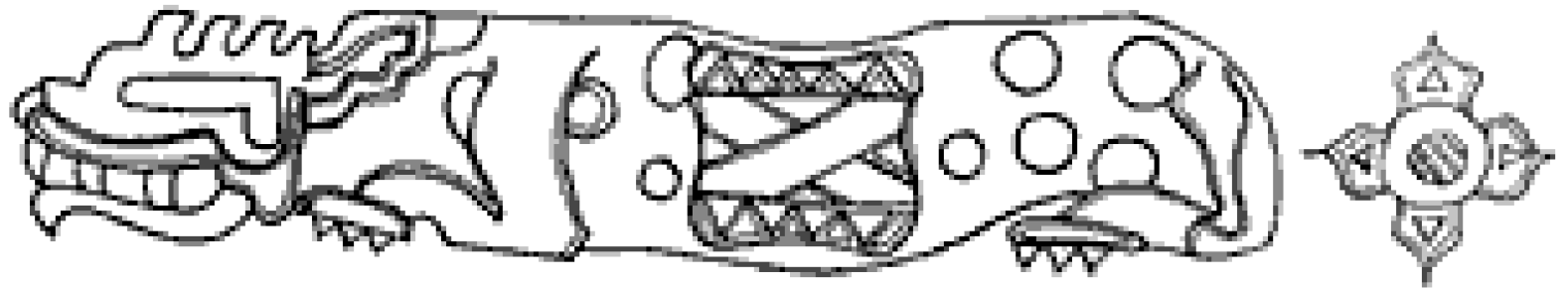
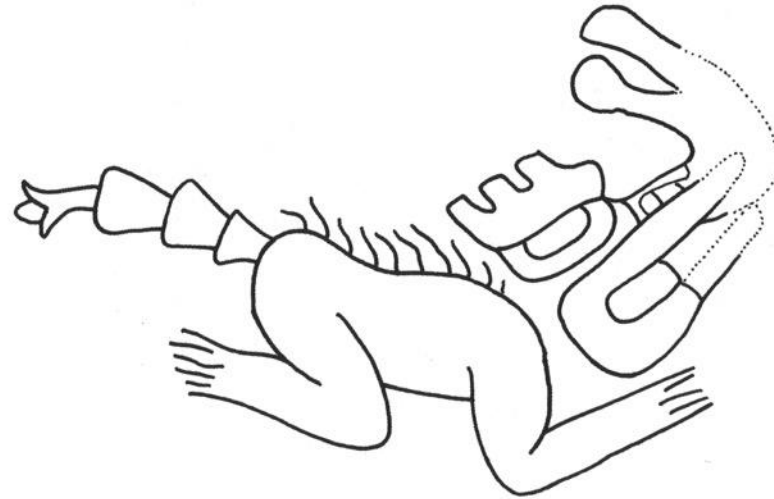
### **Crocodile sculptures along the Rio Usumacinta: Piedras Negras and Yaxchilan**

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 pre-Columbian 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.





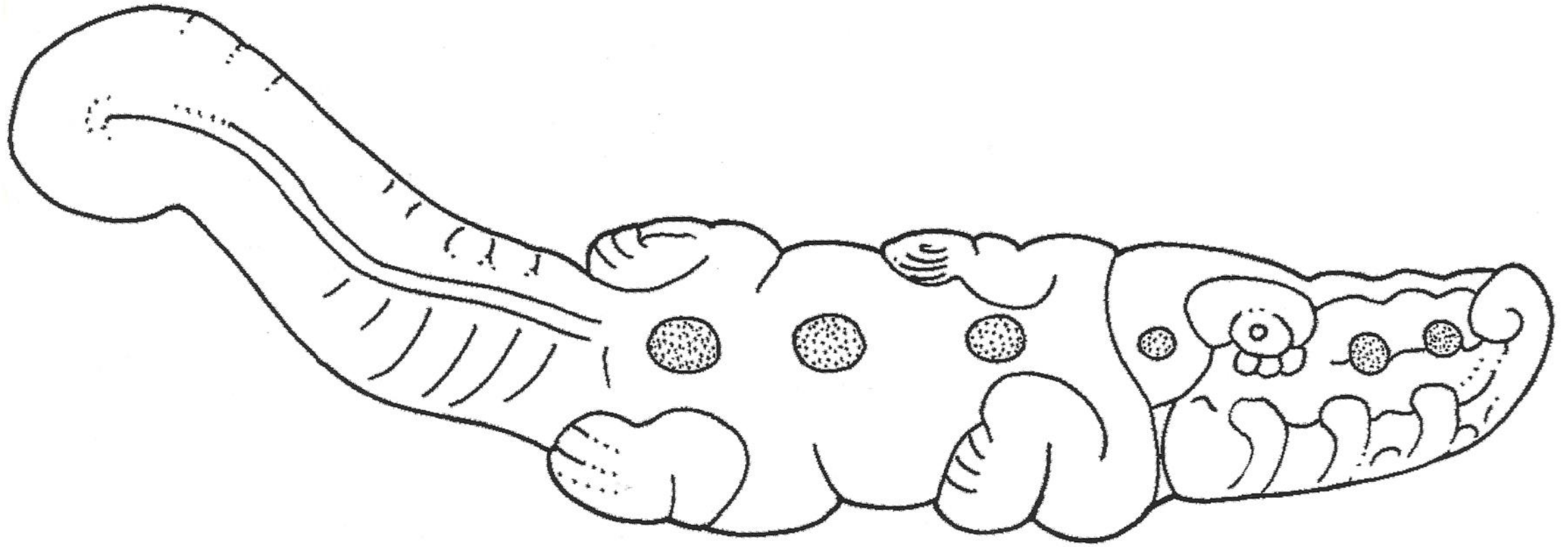
In addition to vertical Crocodile Trees at Izapa there are also horizontal stylizations, Izapa Stela 27, drawing by Moreno in Moreno and Clark 2007: Fig. 13.26.

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).

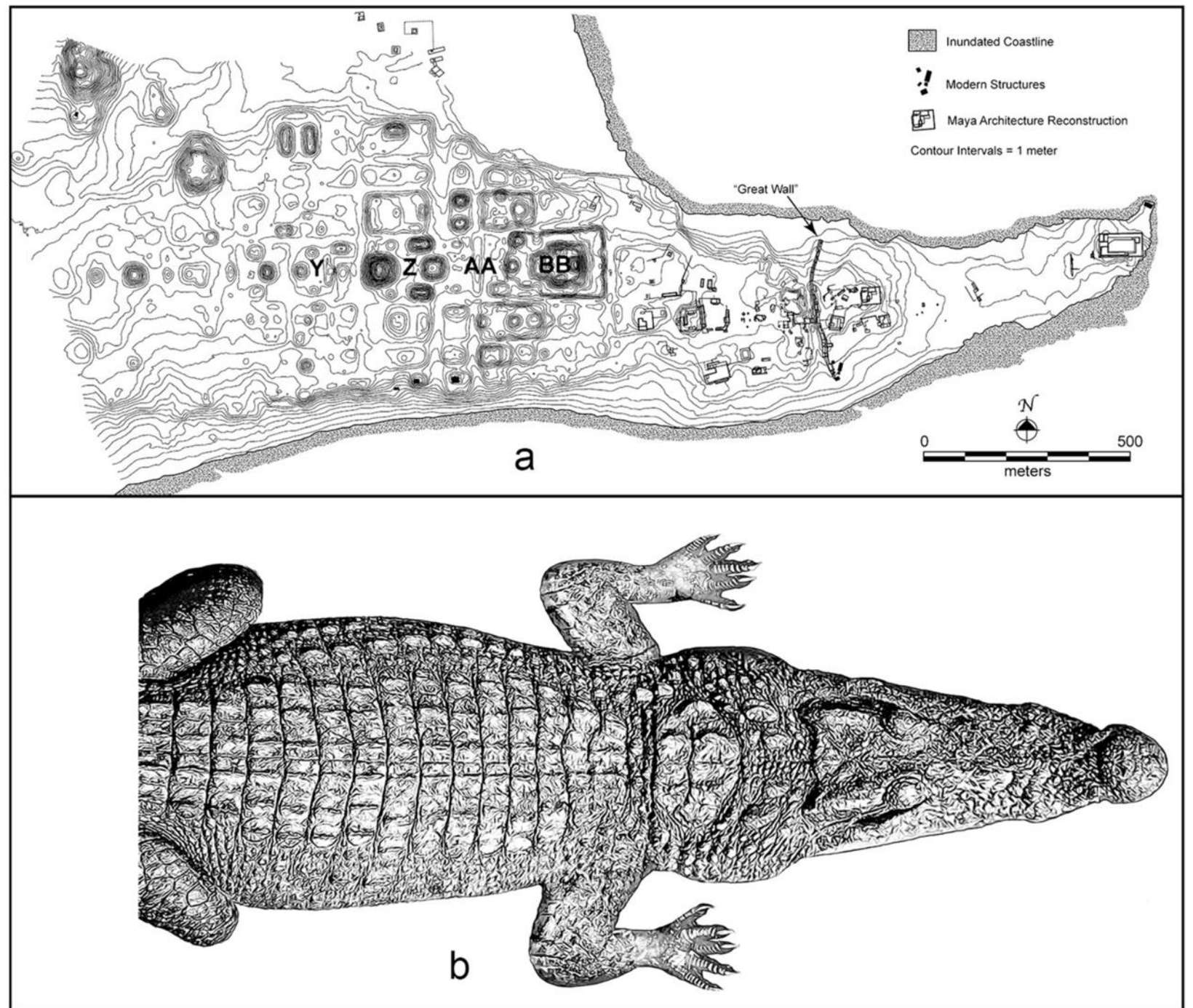
Photo from GuatemalaBellaCom.

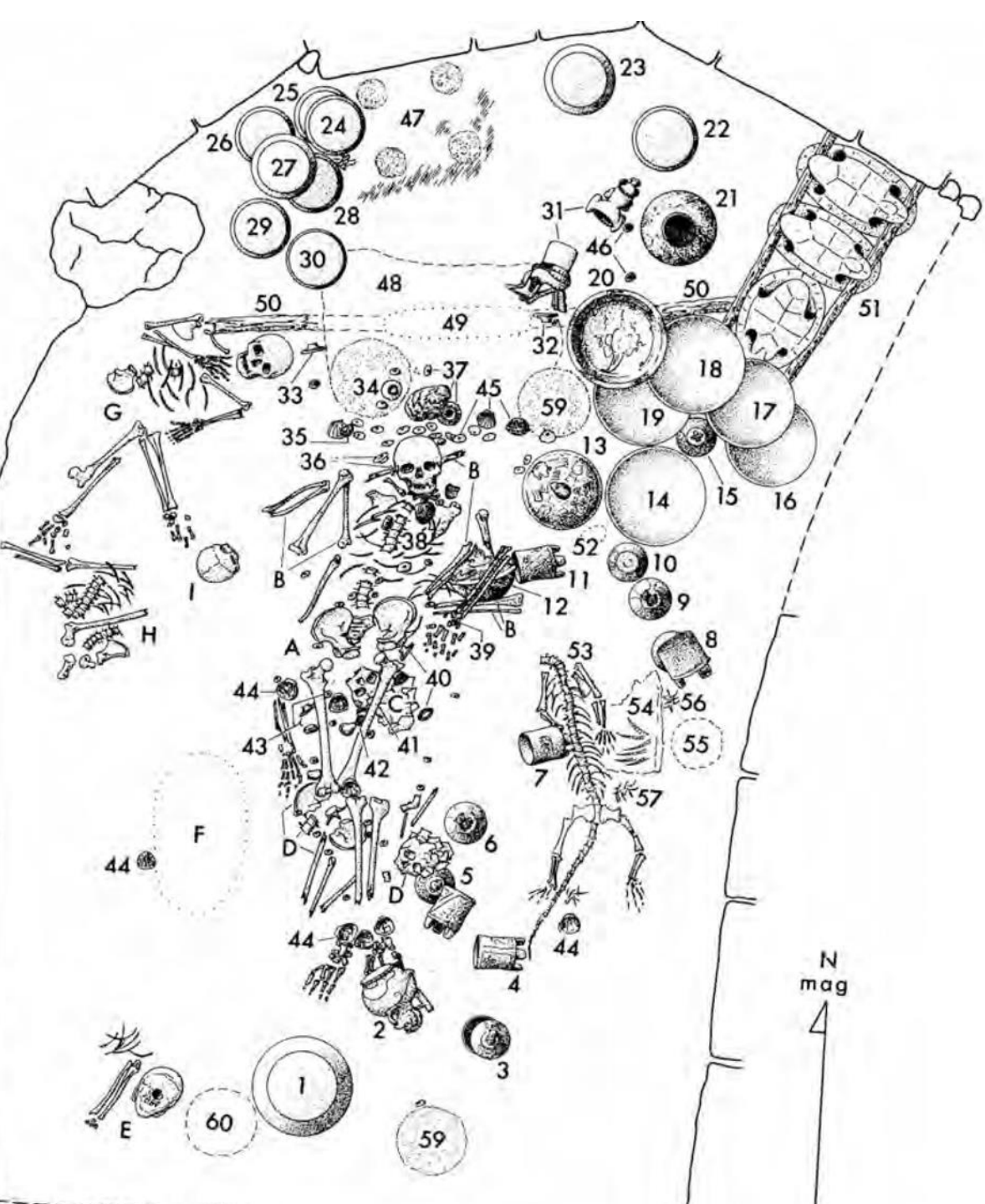


The teeth are stylized but the larger teeth allow for space between for the shorter teeth. Feet are in almost a swimming position. Stylized curl goes from mouth up to nose. Tail has different details than other crocodile renditions. This drawing is from Houston in Fiery Pool museum exhibit, page 70,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

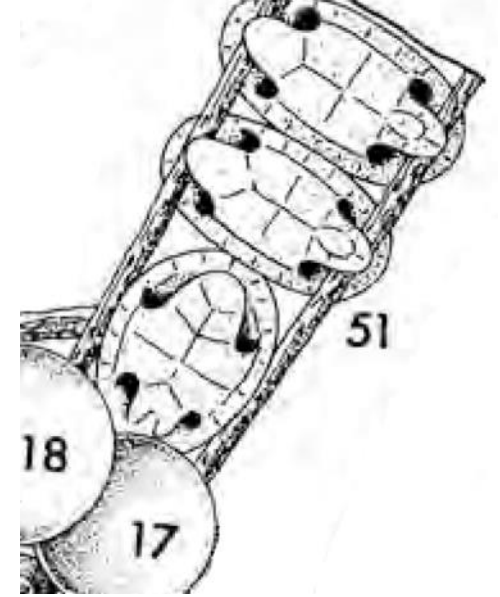
Crocodiles were already so important in the PreClassic Peten that an entire Maya site was arranged by Maya architects to mimic the rectangular pattern of the back of a crocodile and the same of a crocodile's head.

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 4<sup>th</sup> 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.

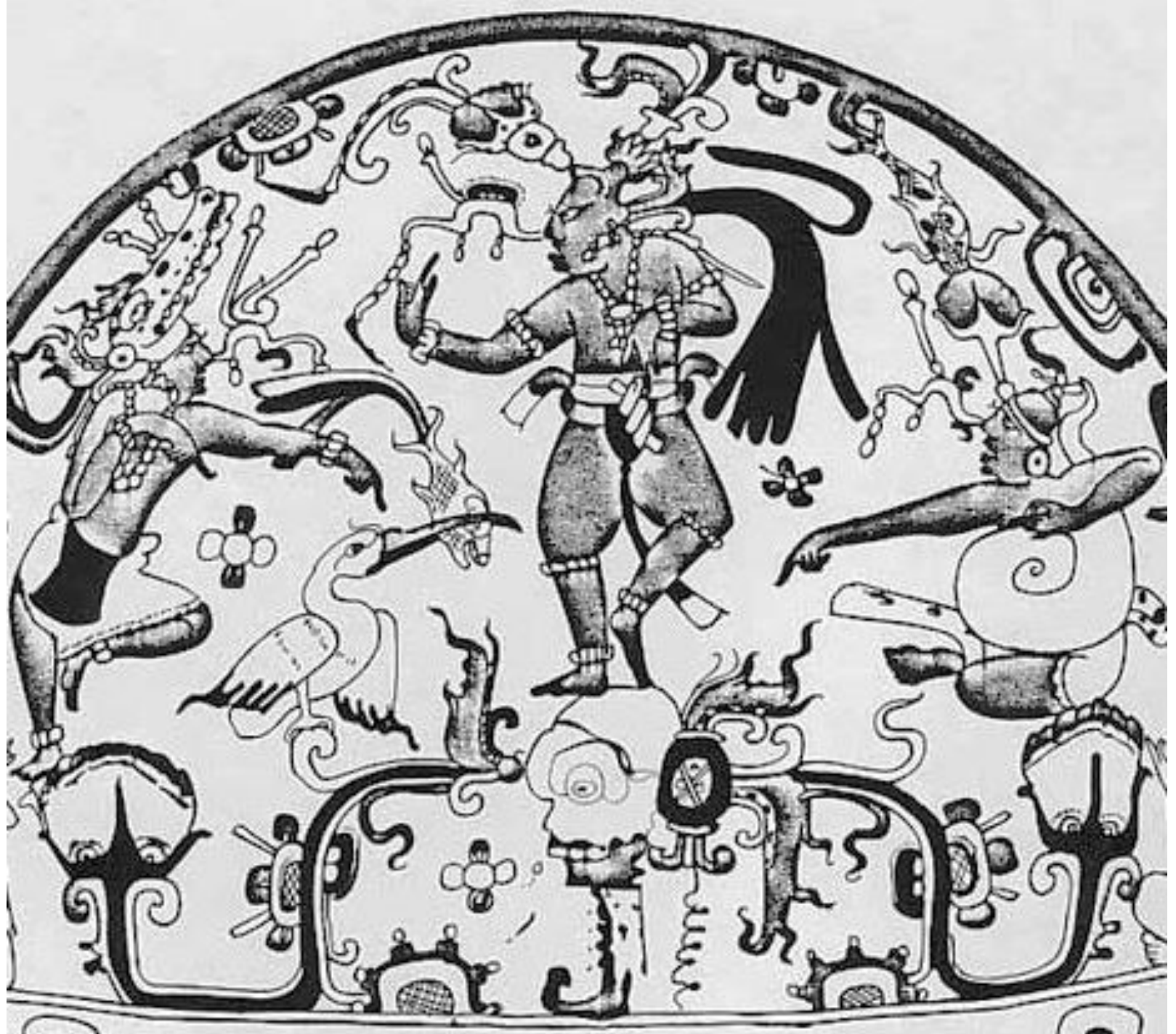
Waterbird with fish in its beak.

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, Tzakol and Tepeu, 1976.



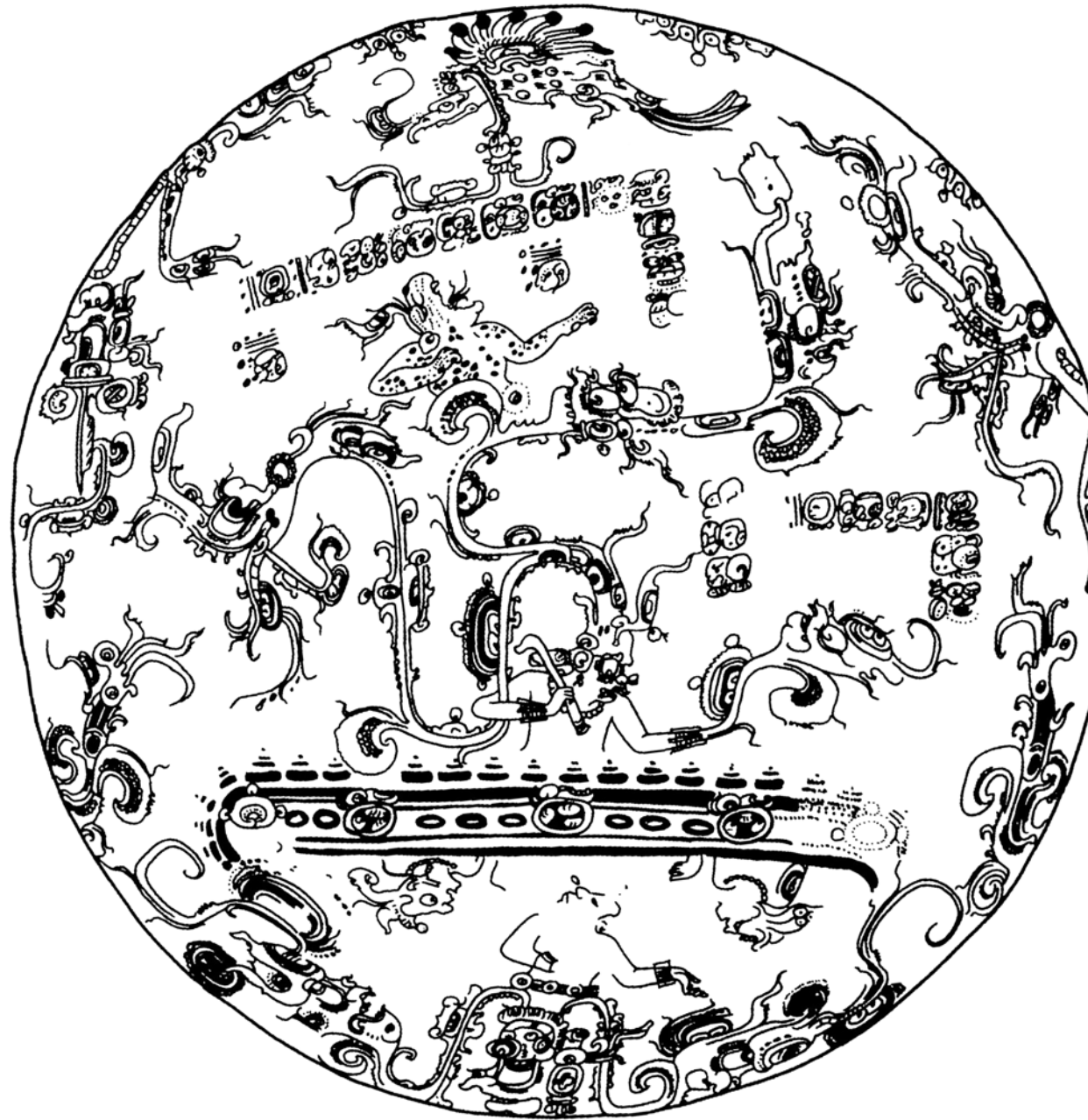
Here is the entire scene. Original drawing by FLAAR illustrator many decades ago, Laura Gornto. This is not a copy "after" another illustrator.

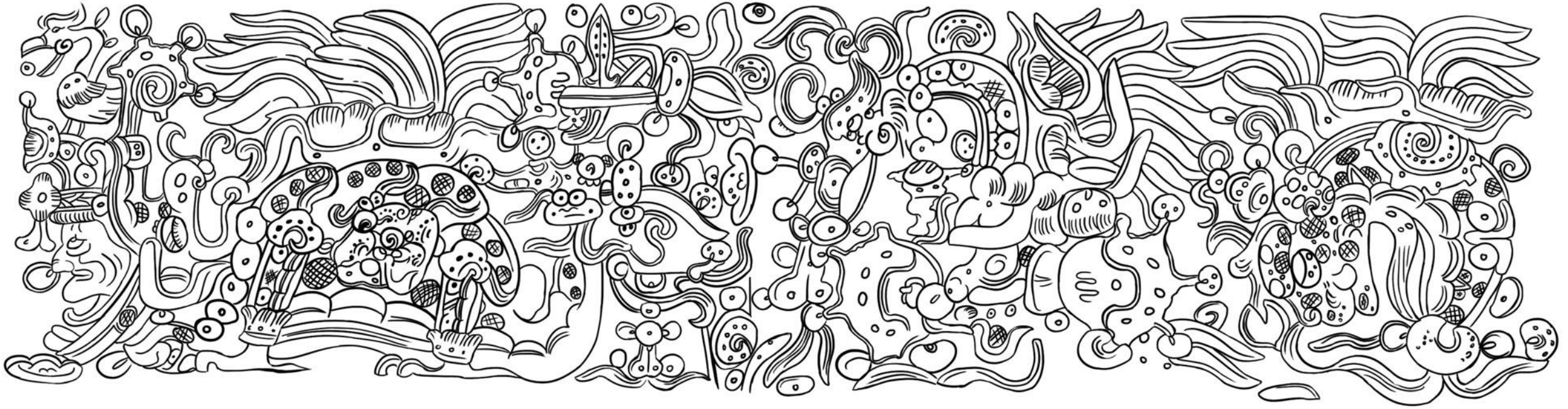




Cosmic Monster we show in a separate chapter. But here (in chapter on crocodiles related to water) we show that the Cosmic Monster Crocodile is high-in-the-sky and the Surface of the Underwaterworld is far at the bottom.

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 Looper, 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?

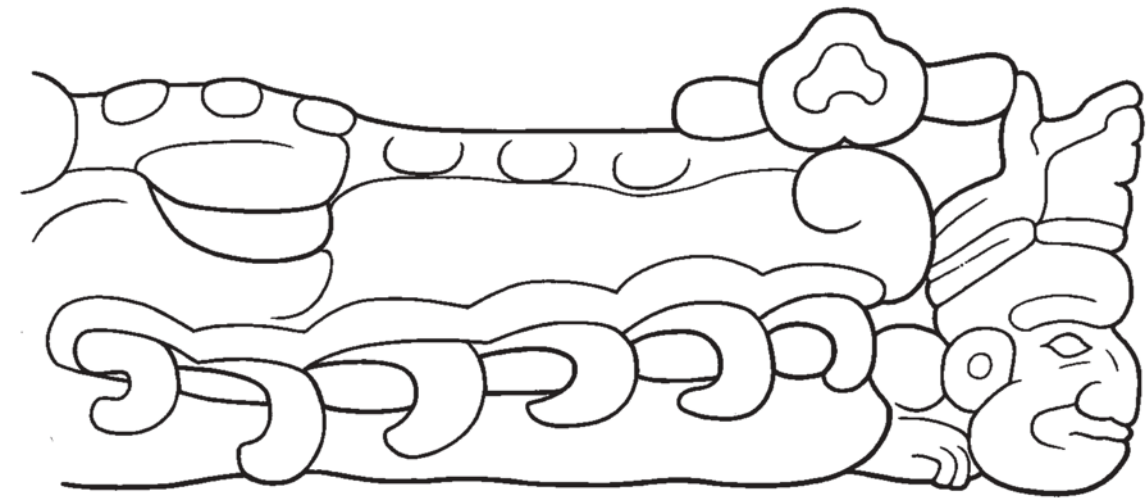


We know that God N occasionally resides in a turtle shell. These are turtles related to water.

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.



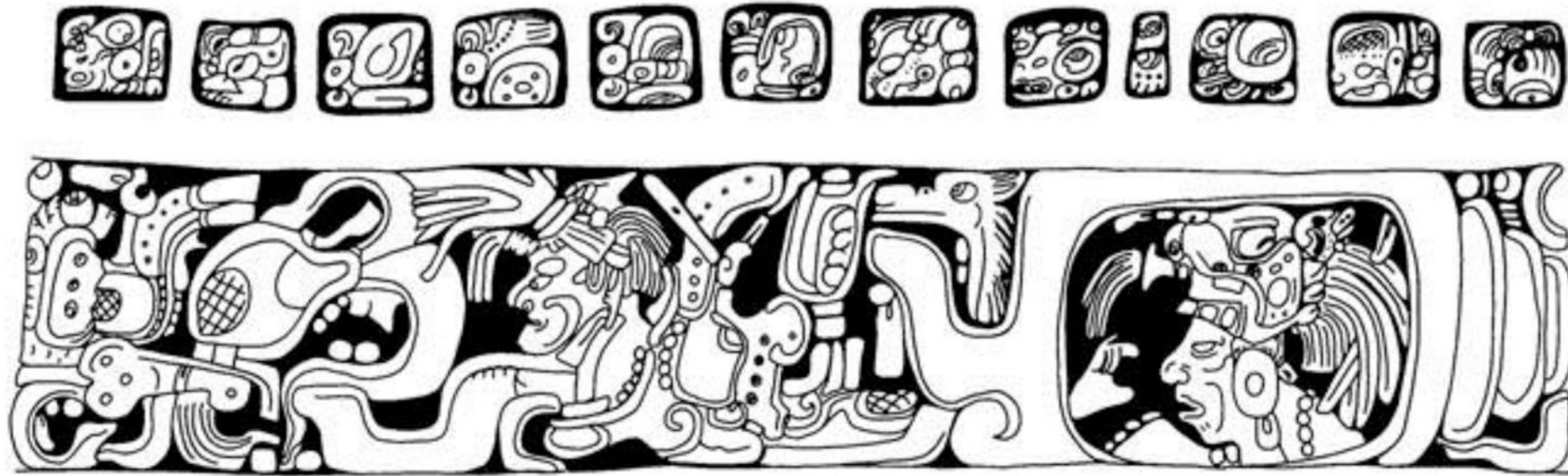
The God N here is coming out of a clearly identifiable crocodile. Martin 2015: Fig. 16b. Simon Martin has an excellent report on this iconography.



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, © David Schele. Drawing courtesy Ancient Americas at LACMA ([ancientamericas.org](http://ancientamericas.org)). Unfortunately these illustrations are low-resolution so not usable to show details; the image here is fuzzy.



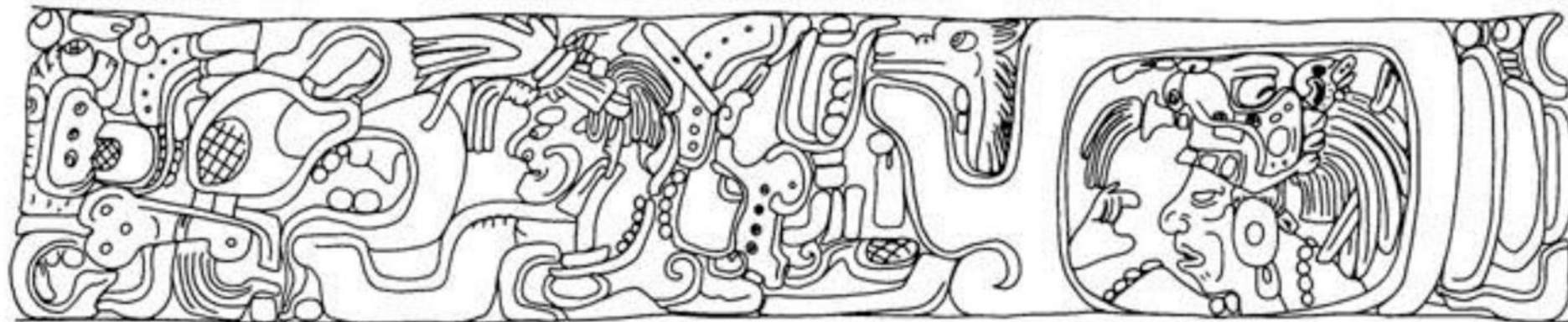
Very helpful scene, since the deity is potentially acceptable as God N. The reptile is seen only as the head but has no crocodile teeth nor snake fangs. The crest over the eye reminds me of a crocodile. The stylized fish is, as usually, “nibbling” on a (not very naturalistic) water lily seed pod.

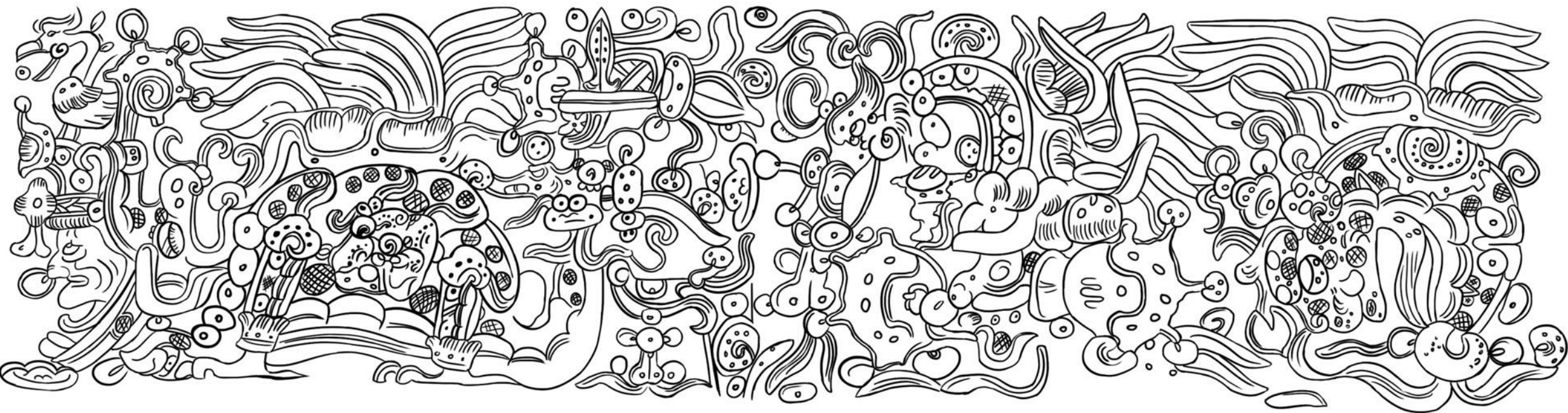


Aged God N is issuing from a reptile with no legs whatsoever; is this a snake? Or does the large eyebrow crest suggest a crocodile?



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").

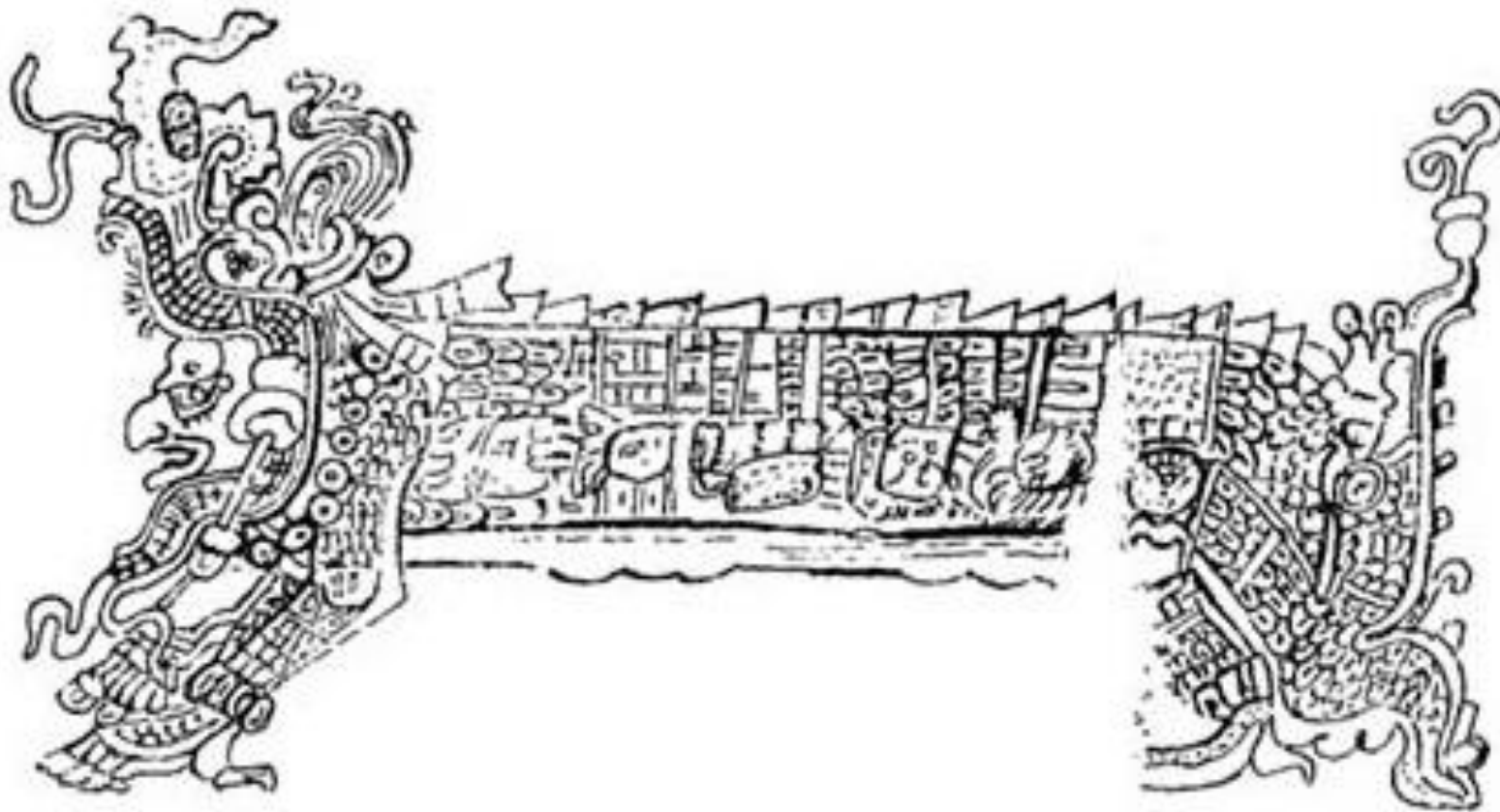
Shell Wing Dragon, a mythical creature that I featured, pictured and discussed in my 1986 PhD dissertation, published by ADEVA in 1987.

Curved fish with water lily above.

Line drawing by illustrator Luis Molina, FLAAR Mesoamerica from Kerr rollout, K6626.

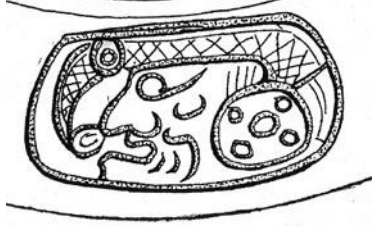


Helpful Kerr rollout, K6626, sharpened by Hellmuth so you can see details better. Luis Molina achieves excellent line drawings. Frankly often it really helps to have a drawing in addition to the rollouts.



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.



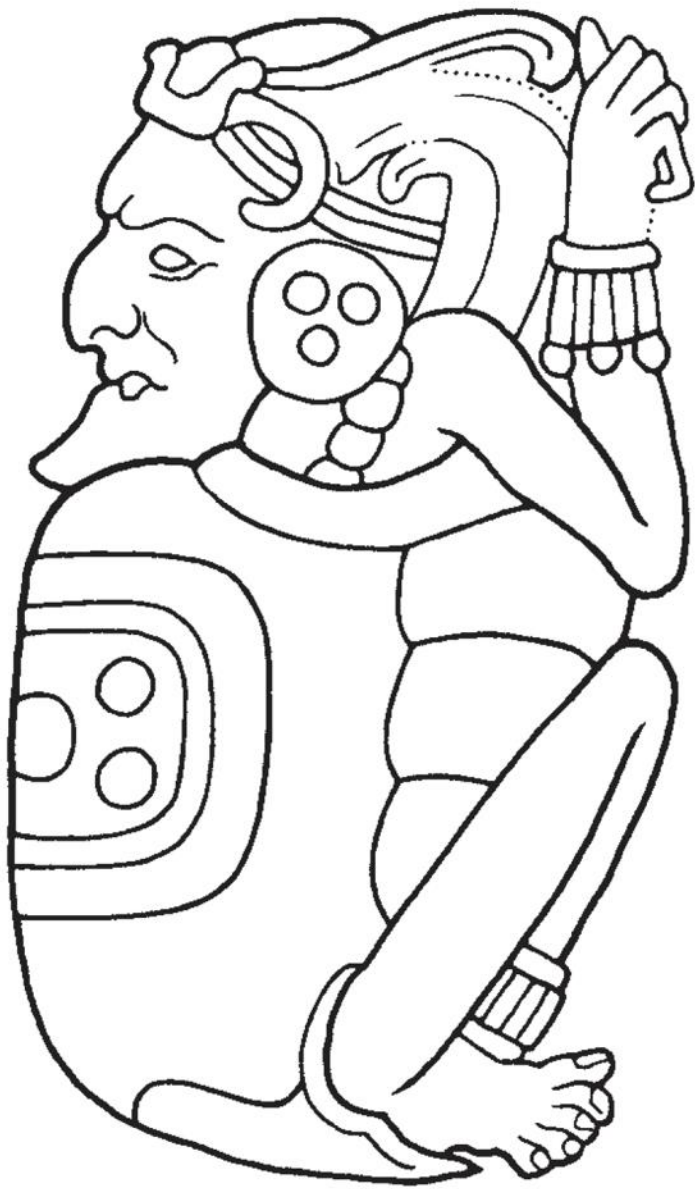
God N



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 The Pre-Columbian Society, Penn Museum, 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 PSSequence. No repainting to fake the scene. So this bowl and the glyphs are authentic.



Scanned from 35mm color slide taken over a quarter-century ago by Nicholas Hellmuth, FLAAR Photo Archive.

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.

The equal purpose is so that students can copy-and-paste drawings and photos of FLAAR Photo Archive for their own term papers, BA and MA theses, and PhD dissertations.

Professors can also use the drawings by the FLAAR team and the photos of FLAAR for peer-reviewed journal articles. We ask that these illustrations be cited in the caption below the illustration or photo (and not buried at the end in 6-point font). Illustrations by other scholars should be treated in the correct manner of scholarly citation and obtained from the original book, article or dissertation.

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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.



## Chapter 2

### **Classic Maya portraits of Crocodiles as 3-dimensional ceramic figurines or stone sculptures and deep-relief renditions**

In lecture presentation for The Pre-Columbian Society,  
Dec. 14, 2024

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

Nicholas Hellmuth

On exhibit in Museo Popol Vuh, Universidad Francisco Marroquin.

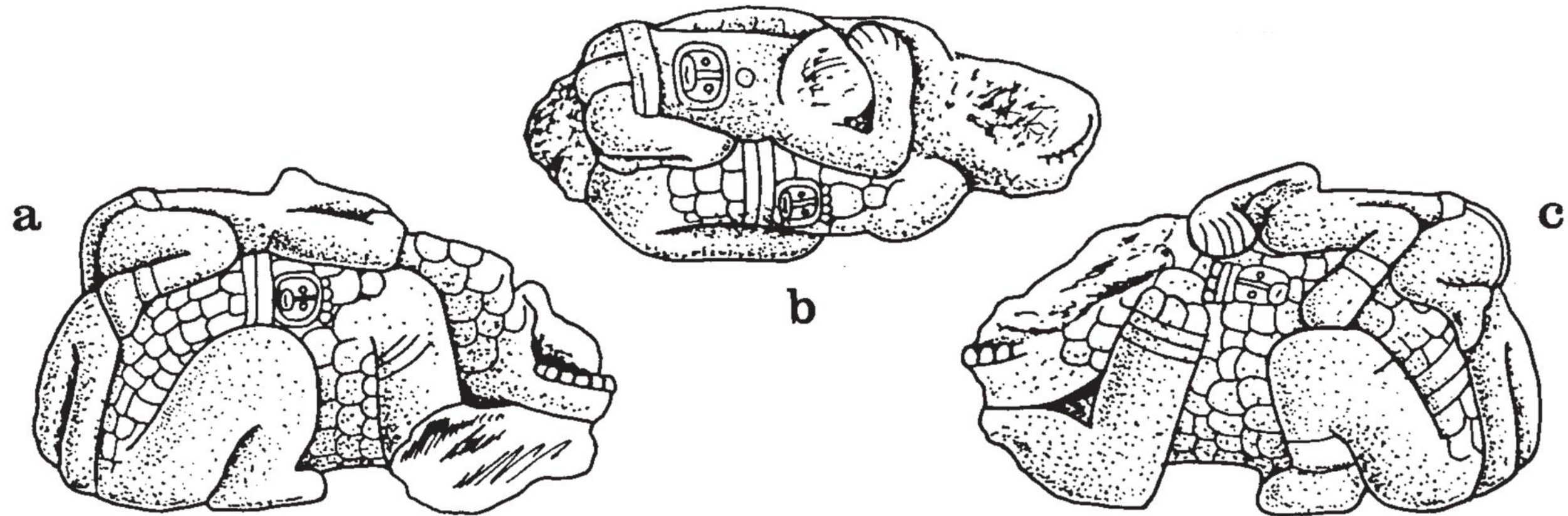


Ceramic bat  
with his  
buddy, Crocky,  
Museo Popol  
Vuh, UFM.

All smiles (to  
show their  
teeth and  
fangs).

Photos by  
Nicholas  
Hellmuth  
many decades  
ago.





Crocodile with a person on top. Even without its head, I doubt this is God N. Excellent drawing by Karl Taube (1989: Figura 3) citing photographs in Proskouriakoff Fig. 4,e).

Another example of a man holding a crocodile. This reminds me of Roman gladiators fighting tigers or lions. So is this individual a captive from war?

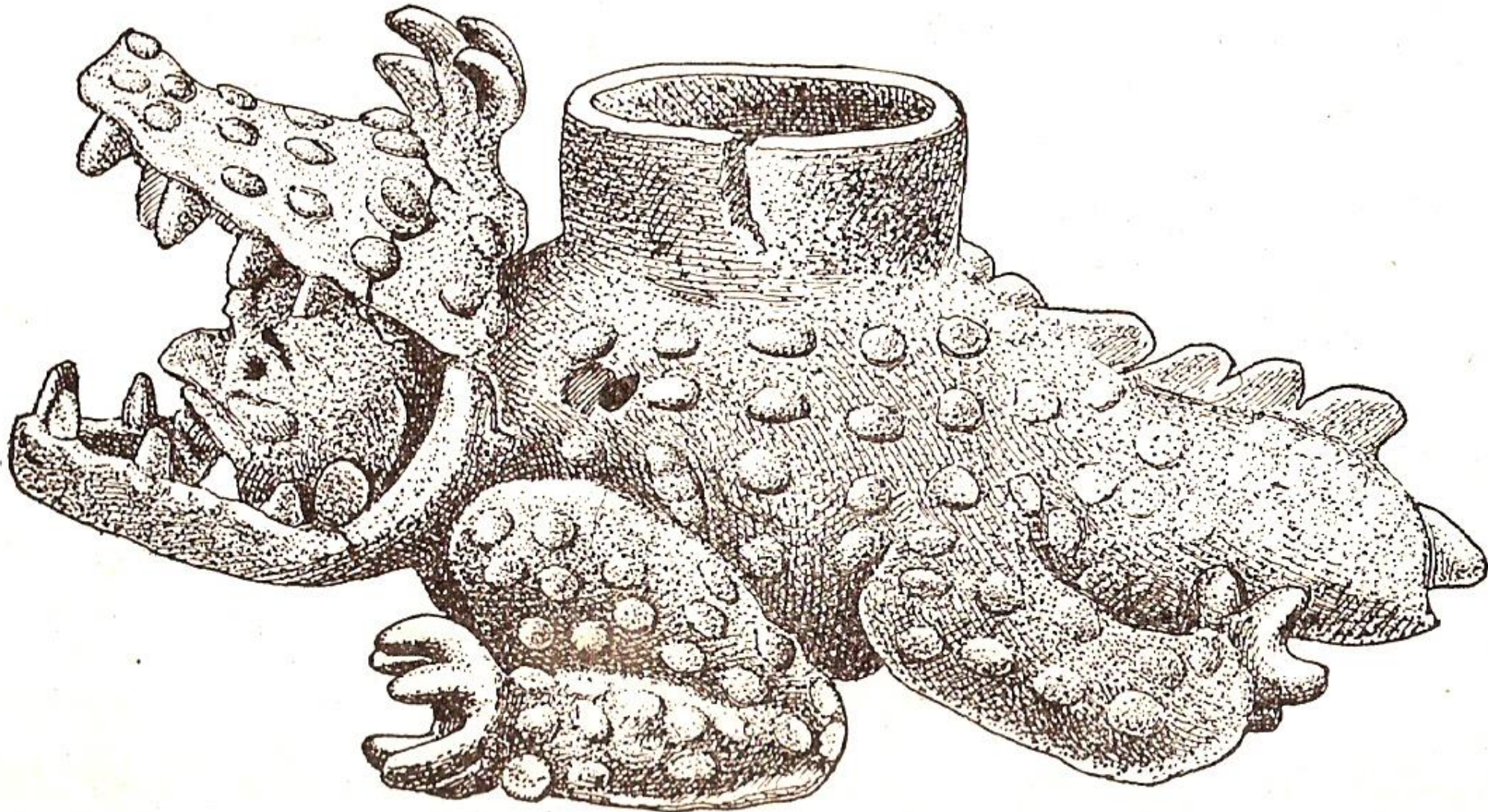
Both this scene and that of Taube are published by Garcia 2018: Fig. 7.

The tetrapod supports of this Tzakol lidded bowl are simplified peccary heads. There are dozens of examples where all the features of an actual peccary head are pictured, especially one from Calukmul that has the peccary features painted on stucco on the tetrapod support.

Photograph by Justin Kerr, K6216 at the Kislak collection.



Even Gann noticed the “claw-like horns”. Are these to suggest deer antlers? (since lots of Cosmic Monster crocodiles have deer ears and deer hooves)? Or is this literally a “claw”?

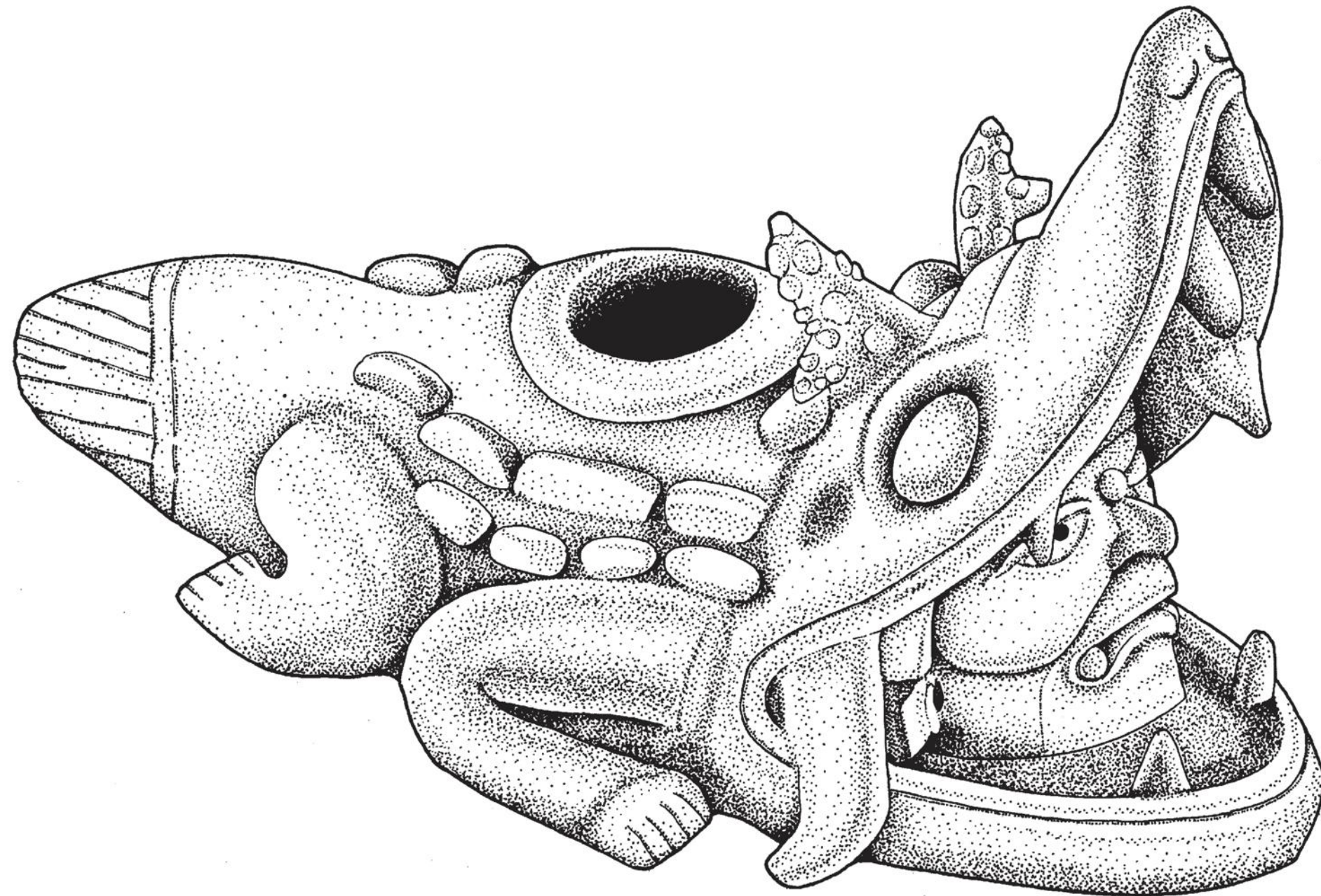


Ceramic, Santa Rita, Mound No. 2, Belize, Gann 1918: page 64, Fig. 18.

Another on-line photo of same ceramic artifact.







Crocodile has old god in its mouth. Usually this is God N but sometimes it's a challenge to distinguish God N from God D. But unlikely the other elderly deity, God L.

Ceramic crocodile, 3-dimensional, Lamanai, drawing by Louise Belanger (Martin 2015: Fig. 39,a).



This 3-dimensional crocodile is in the MET museum. Has snout that I would expect of a peccary but teeth are clearly if a crocodile. Ears are the most curious since crocodiles to not have ears that stick out like this. But once you see the Cosmic Monster, you will see lots of composite creatures that are part-deer and part-crocodile. I hope to see the exhibit catalog to see if the ear is commented on.





3-dimensional ceramic crocodile drinking vessel, LACMA, Los Angeles County Museum of Art. Purchased with funds provided by Camilla Chandler Frost (M.2010.115.584).

These look like cacao pods (not cacao seeds). But we have found lots of other plants of Guatemala whose seed pods are the same size and shape.

This stone ball game palma is authentic.

Photo by Nicholas Hellmuth decades ago.

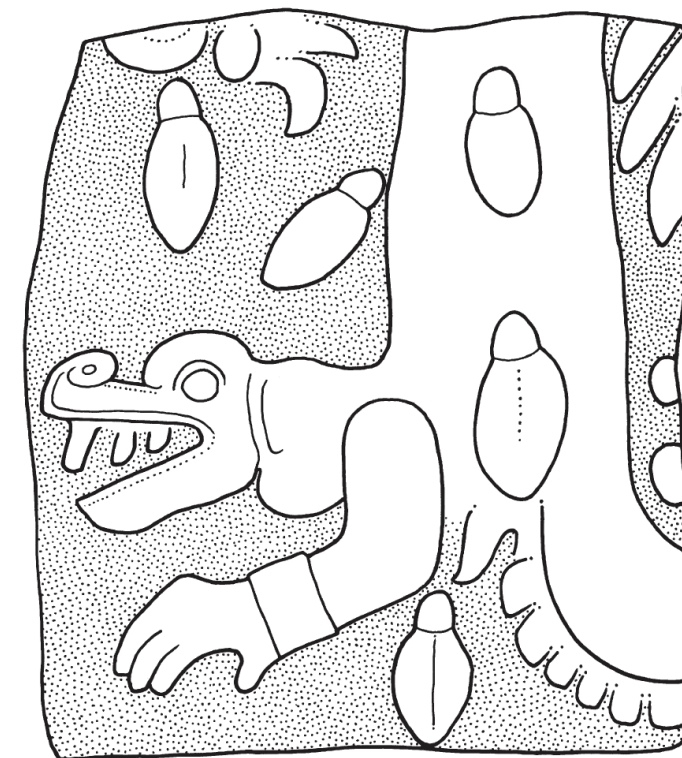
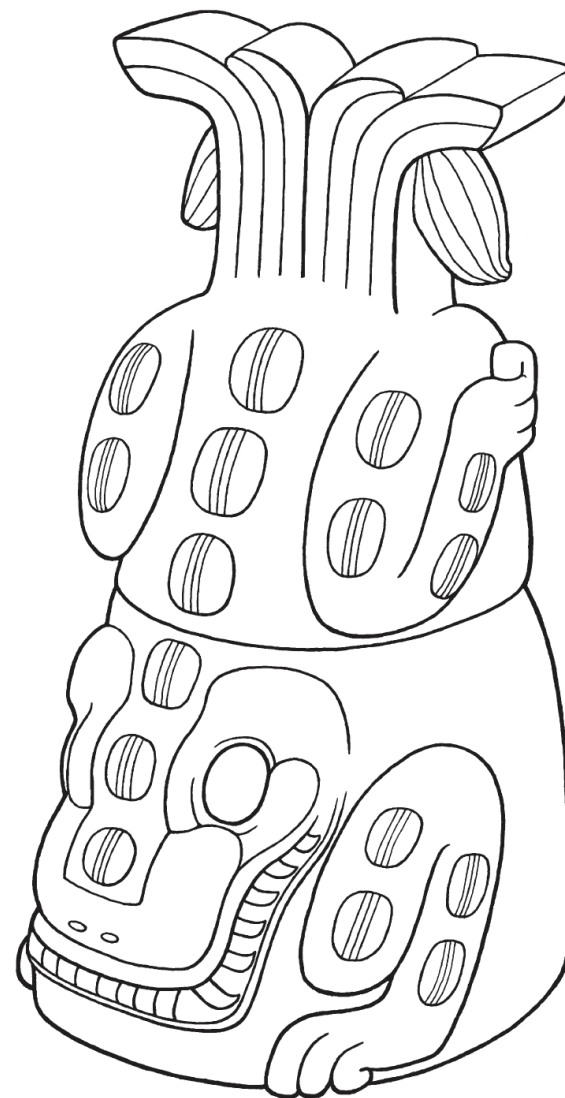


Figure 8.8. Crocodilian cacao trees. a. Reconstruction of a sculpted stone container. Late Classic period. Copan, Honduras. Drawing by Simon Martin. b. Panel fragment. Late Classic or Postclassic period. Osario Temple, Chichen Itza, Yucatan, Mexico. Drawing by Simon Martin after a field sketch by the Proyecto Arqueológico Chichen Itza, courtesy of Peter Schmidt.



Cacao seeds? Or cacao pods (since seeds are not that high)? Or some other concept?  
Same crocodile palma as before, but now turned sideways so you can see it more in normal crocodile position. Photo by Nicholas Hellmuth so many decades ago we don't yet have remaining notes of in what museum.



Late Classic Maya Clay brick, Comalcalco, Tabasco, Mexico.

Since this crocodile is in the aguada behind the Tikal visitor's center museum, it is surely a *Crocodylus moreletii*.



This is the first time I have noticed the slit-open oval shape on an actual crocodile back. This is the shape on the Veracruz-style ballgame yoke. Yet other *Crocodylus moreletii* have Ceiba-like, conical spines (this crocodile at Tikal has NO conical spines! Why?).



Now we can recognize aspects of this crocodile figurine that were not mentioned previously (the slit-oval designs that rise above the body of the Maya representations of a crocodile).

This photograph has been frequently published and is on many sites on the Internet. But best to cite National Gallery of Australia, illustration for the exhibit *Fiery Pool*. What has been correction identified is that the main personage is the Jaguar God of the Underworld (JGU).





There are reportedly two long 3-dimensional crocodile sculptures at Yaxchilan. What would help would be a 3-dimensional drawing so you could see the details of each. *Crocodylus moreletii* would be the species swimming in the Rio Usumacinta.



Bicephalic but but not a “Cosmic Monster” because no Quadripartite Badge Headdress at end. Kerr photograph, K8750.



Different artists in different parts of the Maya areas emphasized different aspects. These artists in Cueva 3, Cerro Naranjo, Chiapas, show triangular spines. Strecker, Fig. 14 citing Navarrete 1996: Fig. 27c.



We all tend to automatically name any conical spines in Maya art, such as on incense burners of Quiche and elsewhere, as spines of *Ceiba pentandra*. But during over half-a-century of field work throughout Mesoamerica, we have found LOTS of totally different trees with similar spines. I show only one (*Zanthoxylum* species) because our lecture has to cover more topics than the spines. Note our close-up photo of two crocs sunning themselves.

As we see in the chapter on Crocodiles in Late Classic Maya Sculpture of Copan, identifying the teeth of each species is helpful. Most Maya portraits of crocodile teeth are stylized, focusing on the larger teeth (to scare the viewer). But I am interested in studying all the teeth. *Crocodylus morletii*, aguada behind visitors' center / museum, PANAT.



This crocodile seems to sense that I would like to study its teeth. So it helpfully opens its jaws a bit so I can photograph the teeth.

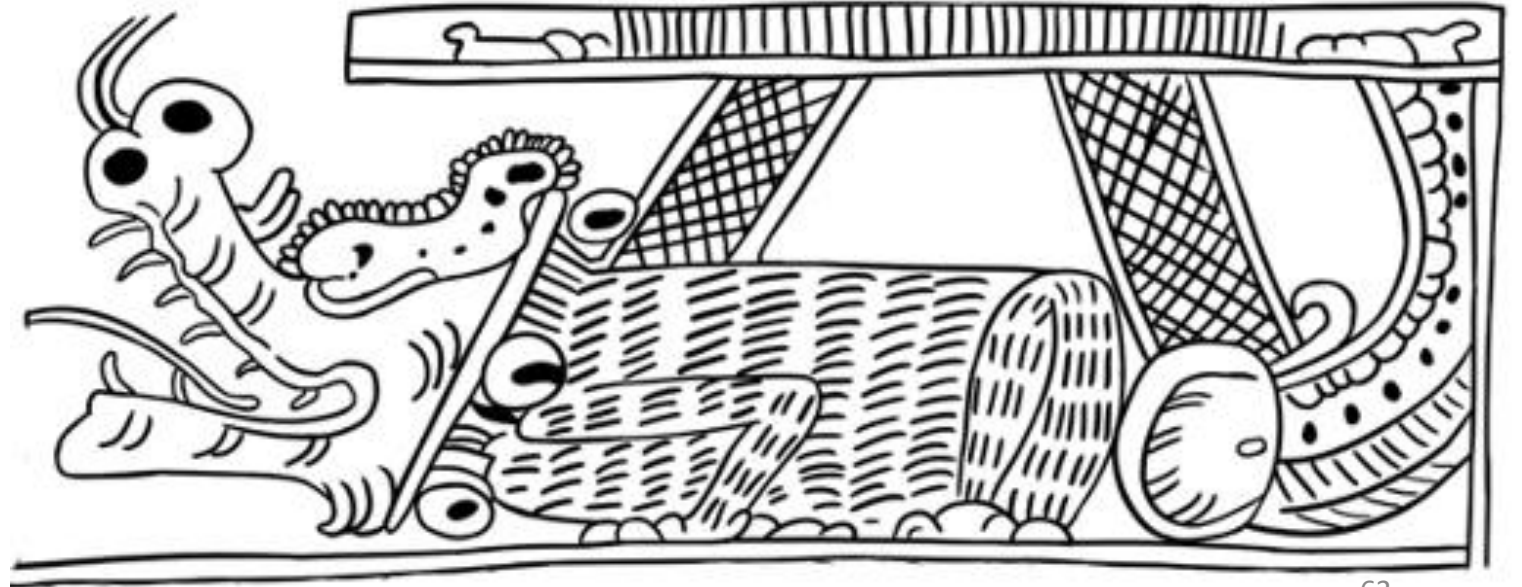
## Chapter 3

### Full-bodied Crocodiles as Roof of Throne Rooms

For the Pre-Columbian  
Society, Penn Museum



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

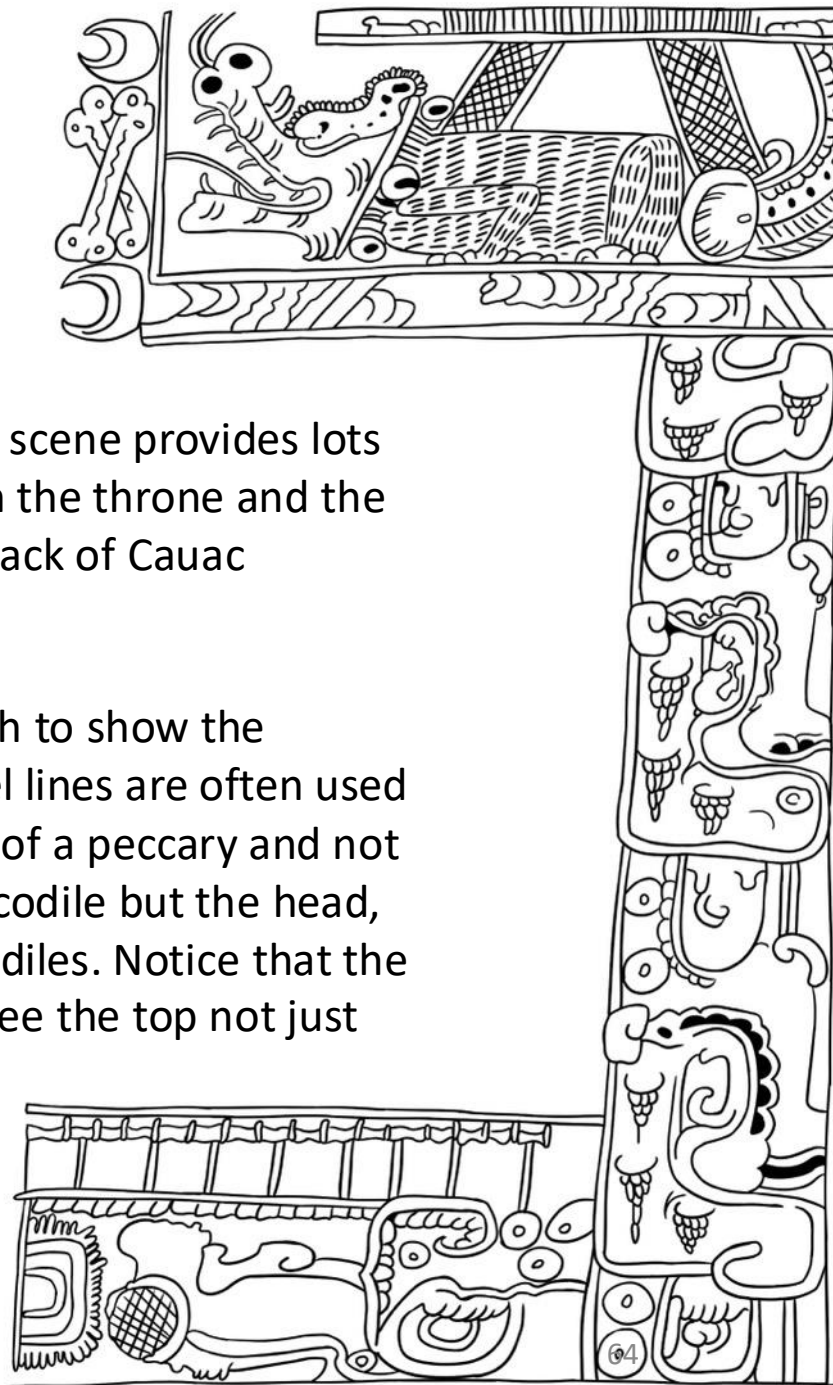




First published by Michael Coe, this scene provides lots of deities to study, such as God L on the throne and the corner of the throne room with a stack of Cauac Monsters.

But for the presentation today I wish to show the complete crocodile. Rows of parallel lines are often used to show the rough bristle-like “fur” of a peccary and not common to show the body of a crocodile but the head, body size and tail are obvious crocodiles. Notice that the snout is turned at an angle so you see the top not just the profile.

Excellent drawing by Luis Molina, FLAAR Mesoamerica. Rollout photo by Justin Kerr.



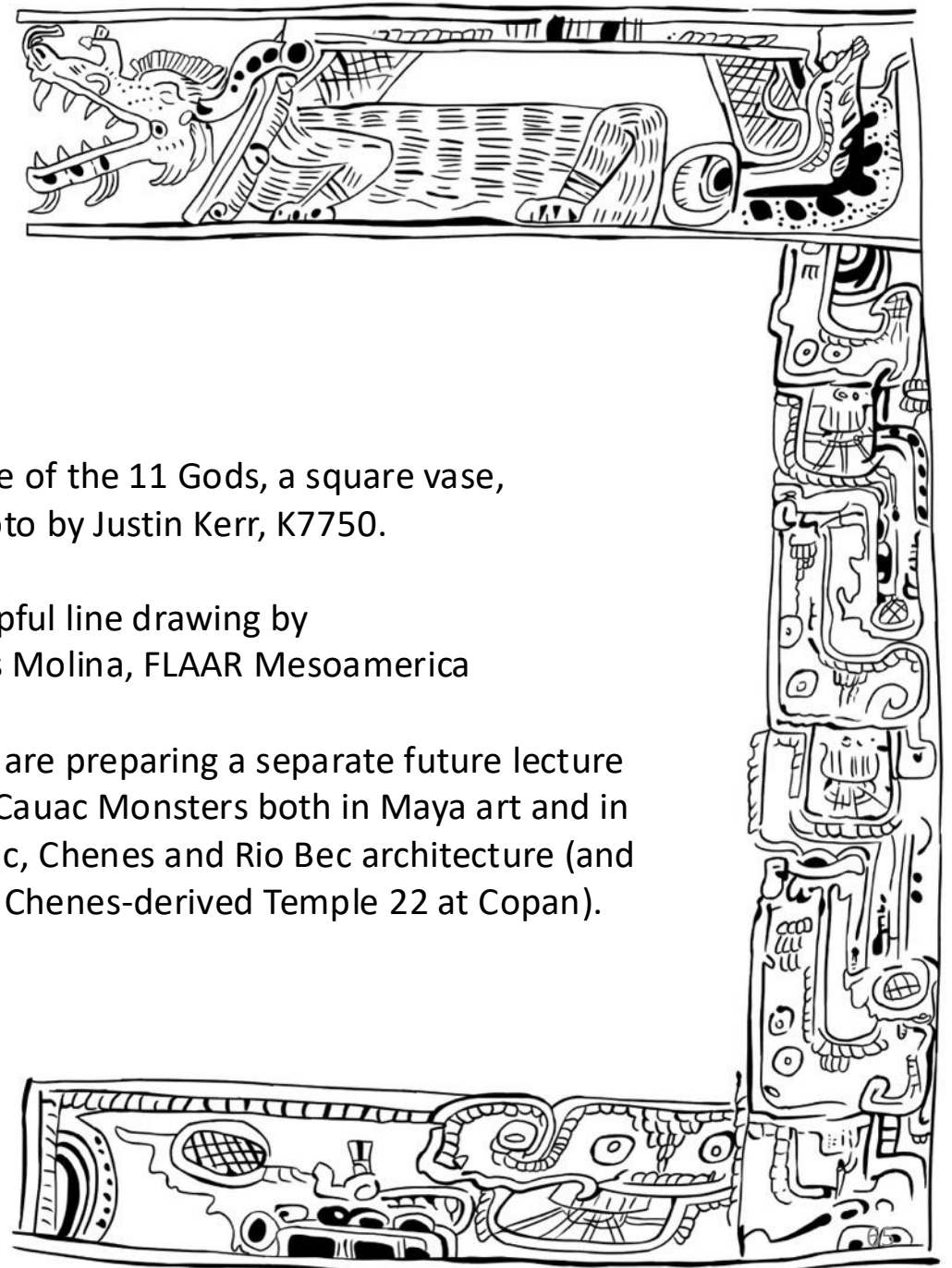


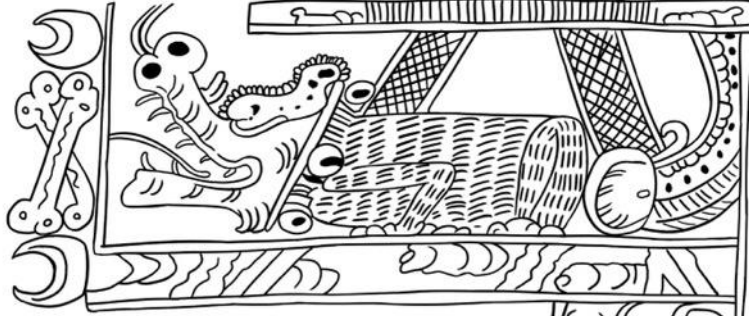


Vase of the 11 Gods, a square vase,  
Photo by Justin Kerr, K7750.

Helpful line drawing by  
Luis Molina, FLAAR Mesoamerica

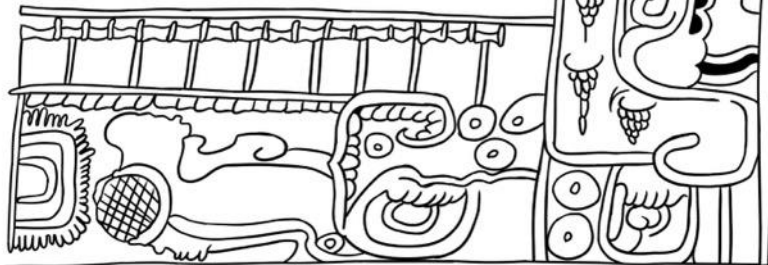
We are preparing a separate future lecture  
on Cauac Monsters both in Maya art and in  
Puuc, Chenes and Rio Bec architecture (and  
the Chenes-derived Temple 22 at Copan).





Vase of the 7 Gods.

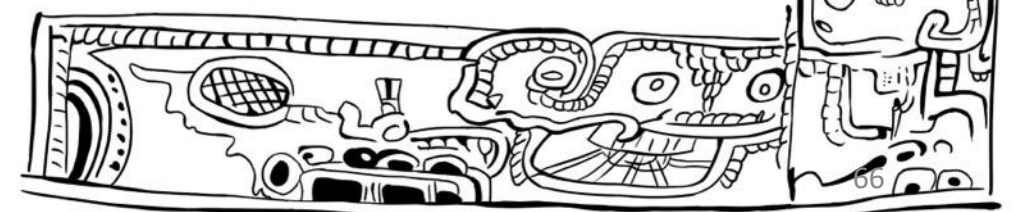
Drawing Luis Molina.



Similar concept but very different painters.

Vase of the 11 Gods, drawing by Luis Molina.

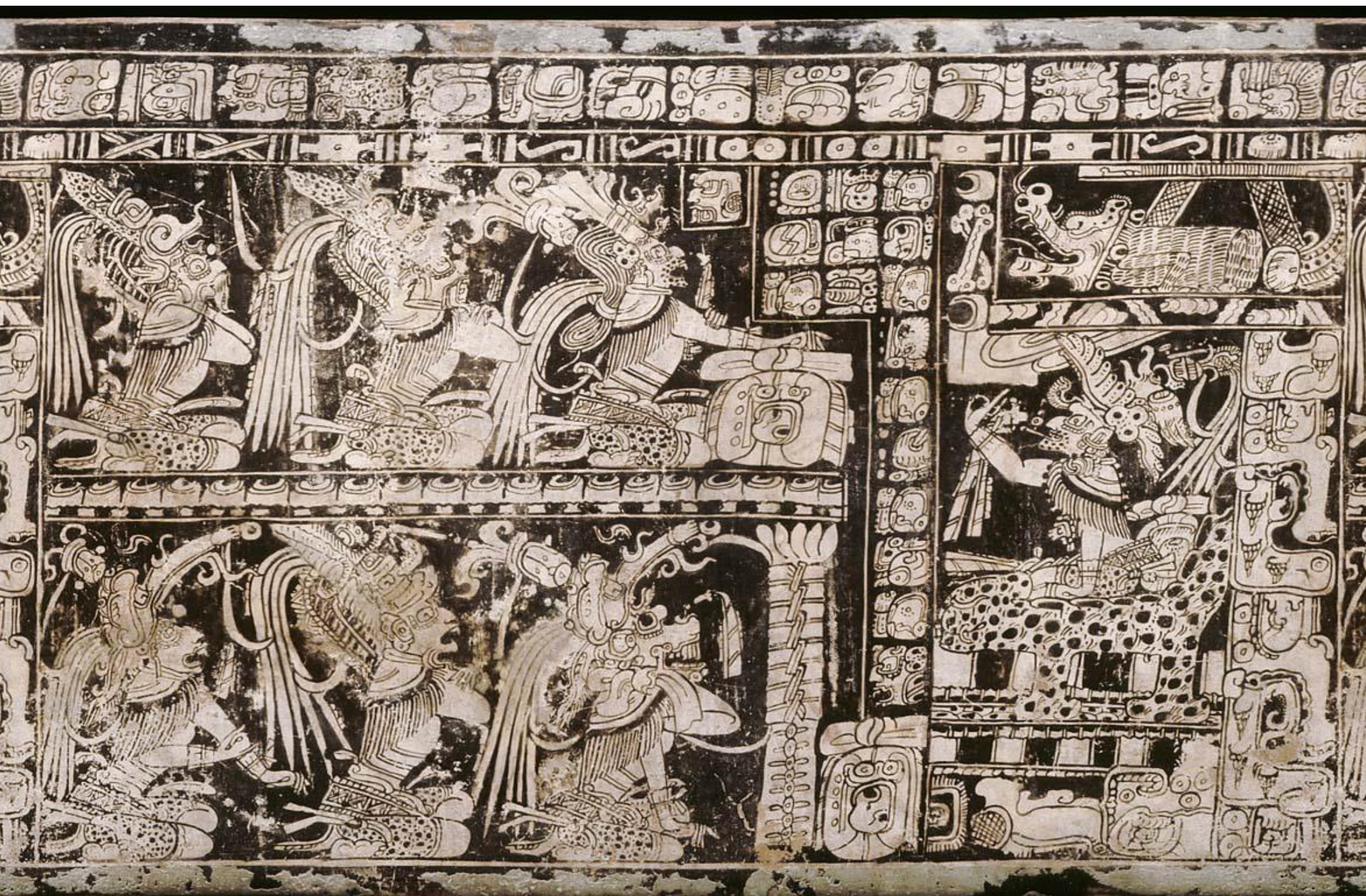
We wish that the drawings of the FLAAR team can be downloaded and used in your own lectures, your own theses, etc. Please cite: Drawing by Luis Molina, FLAAR, (Hellmuth 2023) from Kerr rollout K7750. If in a book, please be sure the citation is below the illustration, not buried in 6 pt. font in the back. If in a book there is no fee; but we would appreciate the book or at least a PDF of the book instead of a fee.





Each Maya artist has their own style. And each Maya patron had their own ego to require symbols to exaggerate their wealth and supernatural power.





This God L wants to show the demons, devils and deities of Xibalba that he, GOD L, is the super deity. He uses the crocodile above him as a reminder.

Notable how the six powerful demons in front are making subservient gesture with their arms and hands and fingers.

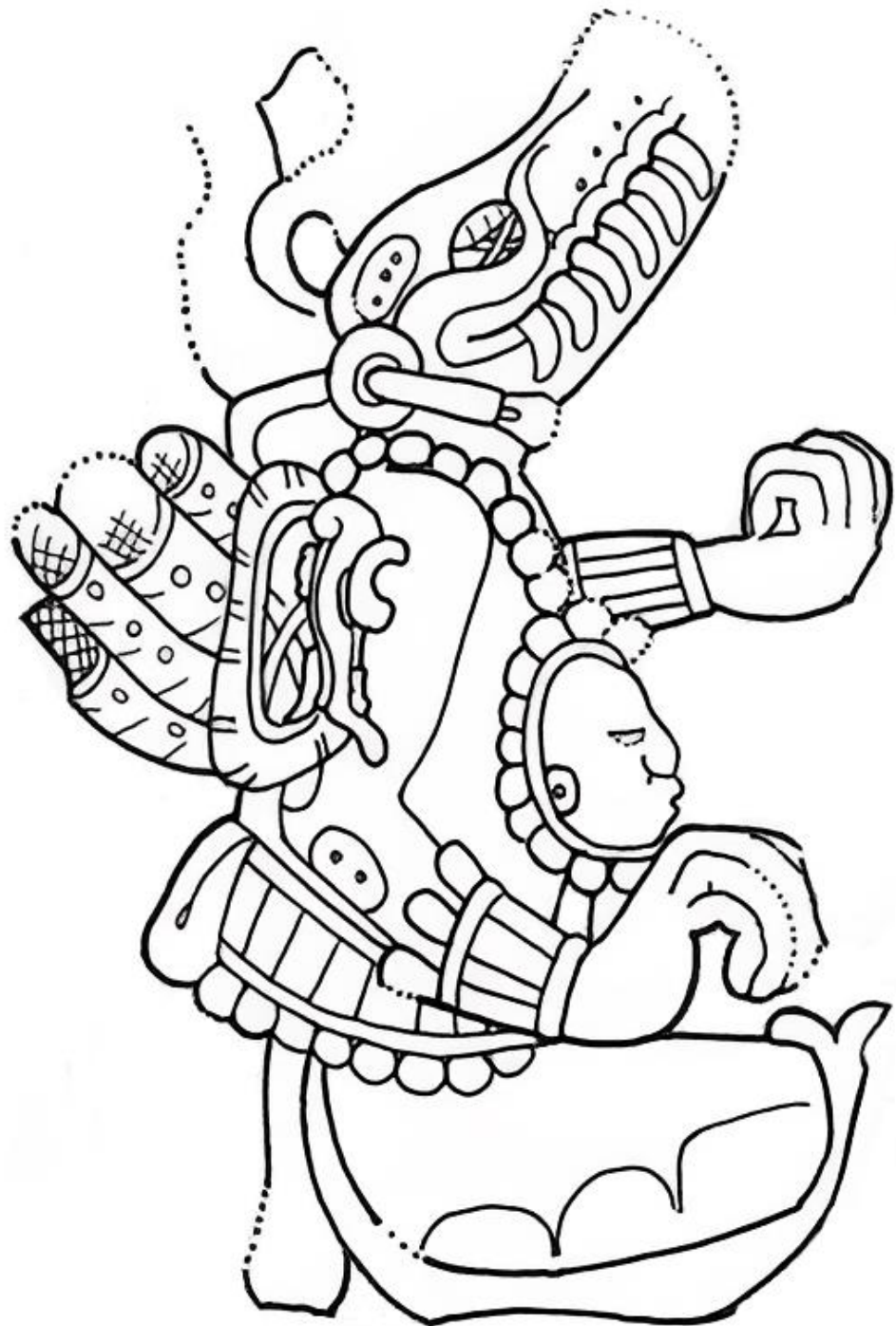
The stack of Cauac Monsters on the corner of the throne room architecture are a separate topic that we are working on.



Cropped from drawing by Marie Stadnik with corrections on the PSSequence glyphs by Yuriy Polyukhovych from digital rollout by Camilo Luin, Museo Popol Vuh, Universidad Francisco Marroquin of a vase on exhibit in MUNAE, Guatemala, published by Yuriy Polyukhovych, Camilo A. Luin and Marie Stadnik in mexicon XLV (6), 2023.

Cropped from drawing by Marie Stadnik from digital rollout by Camilo Luin, Museo Popol Vuh, Universidad Francisco Marroquin of a vase on exhibit in MUNAE, Guatemala, published by Yuriy Polyukhovych, Camilo A. Luin and Marie Stadnik in mexicon XLV (6), 2023.





# Crocodiles in Stone Sculptures at Copan, Honduras

Altar T, Stela C, CPN 25 (Altar of Stela M), Los Sapos

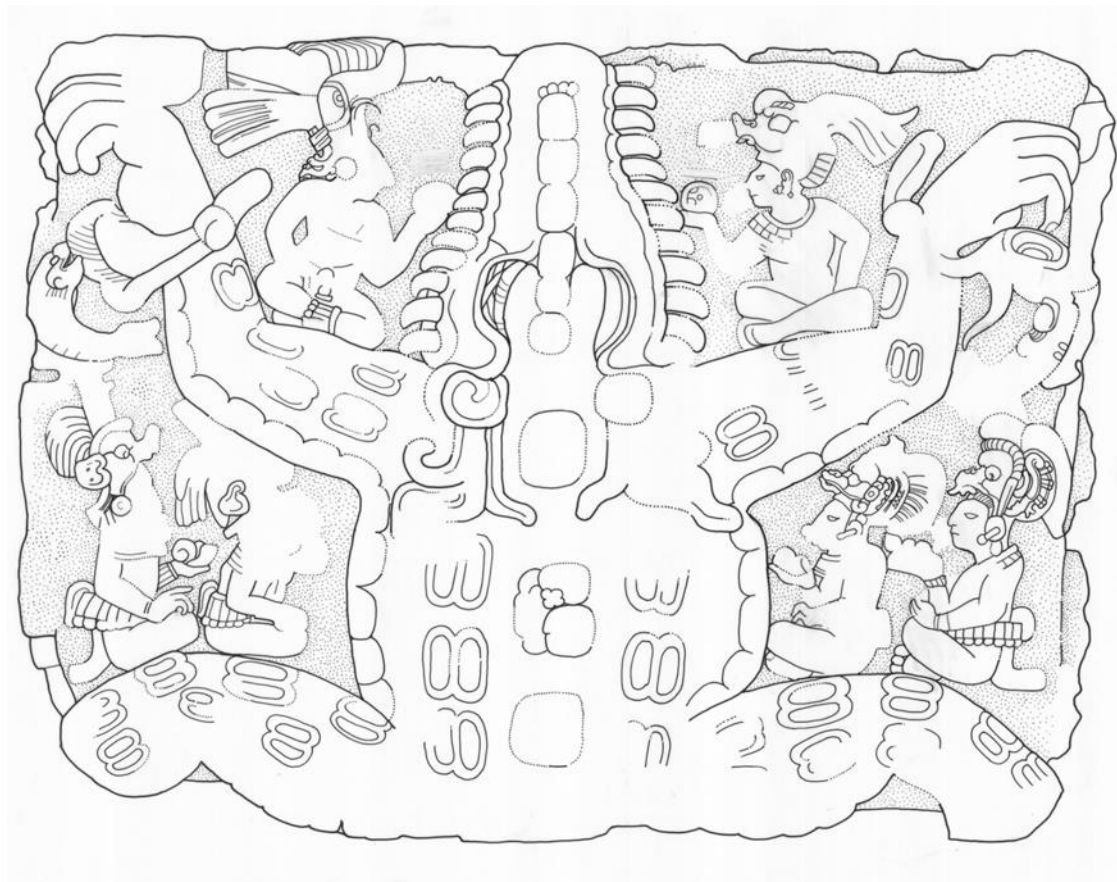
Chapter 4

For presentation to The Pre-Columbian Society, Dec. 14, 2024

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

Nicholas Hellmuth

# Crocodiles in Stone Sculptures at Copan, Honduras



Altar T, Stela C, CPN 25 (Altar of Stela M), Los Sapos



## **Acknowledgements**

We sincerely appreciate the permission from IHAH to photograph at night. You can get better photographs at night with a portable electric generator. We will donate these photos to IHAH. We also appreciate the access to photographing in both the village museum and the sculpture museum at the site.

We sincerely appreciate the assistance of the park rangers and local guides. Parque Arqueológico de Copán is a great place to visit; local people are hospitable and I have enjoyed visiting the park, the sculpture museum and the village museum in the town of Copan Ruinas in the late 1960's, 1970's, 1990's, and again when digital cameras became available, to return with higher resolution.

I thank the capable team of FLAAR Mesoamerica who assisted with setting up the portable photo studio, lighting, etc.

Helpful and capable bibliography assistant, Flor Morales Arroyo (FLAAR Mesoamerica), found and downloaded in PDF format several crucial articles. Byron Pacay and Norma Cho Cu (FLAAR Mesoamerica) accomplish the digital rendering to show details of the sculptures.

For further information on the iconographic aspects and epigraphic aspects of crocodiles and caimans of Mesoamerica, these have been covered by the capable iconographers, epigraphers and archaeologists that we include in the introductory bibliographies at the end of this report.

There are probably hundreds of photos of Copan Altar T and the crocodiles adjacent to the Bufo Toads at Los Sapos. I would estimate that the various Copan projects have plenty of photos, including 3-dimensional scans. But to study details it helps to have photographs at larger size and in good resolution. In a peer-reviewed journal article the images are often never in color and tend to be very small. I recently was reading a book on Maya iconography by two capable epigraphers / iconographers and the illustrations were so tiny you could not see details whatsoever. This is the fault of the publishers, not the authors. So we prefer not to publish in commercial books; our goal is to show the Maya sculptures in good details (which starts with using professional portable studio lighting and using a tripod so the camera is not vibrating). And publishing at full-page size in good resolution.

[www.digital-photography.org](http://www.digital-photography.org) shows our camera equipment over the years.

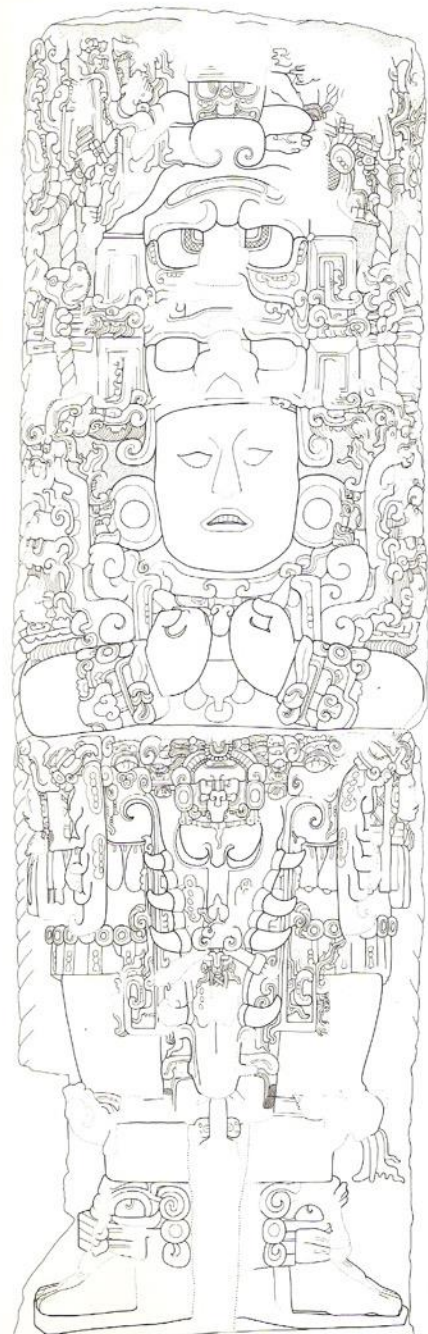


# Crocodile Sculptures at Copan, Honduras

I first visited Copan by the late 1960's and in subsequent years brought a complete photography team along with portable studio lighting and an electric generator, because the best way to document bas-relief sculptures is with portable studio lighting. IHAH kindly provided permits for photographing at night. In return we provided photos and during those past years our photos were used on posters to show visitors what they could see at Copan. The last time I went to Copan I noticed that our photos of Altar Q were still displayed in at least one of the museums.

The various projects at Copan of capable archaeologists have also resulted in their excellent photography including 3-dimensional [scans](#).

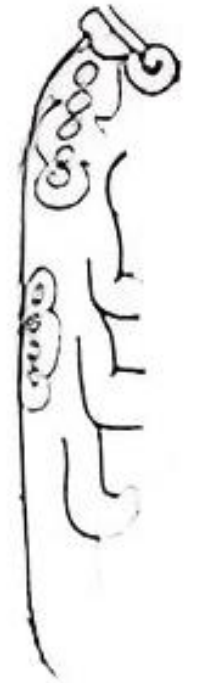
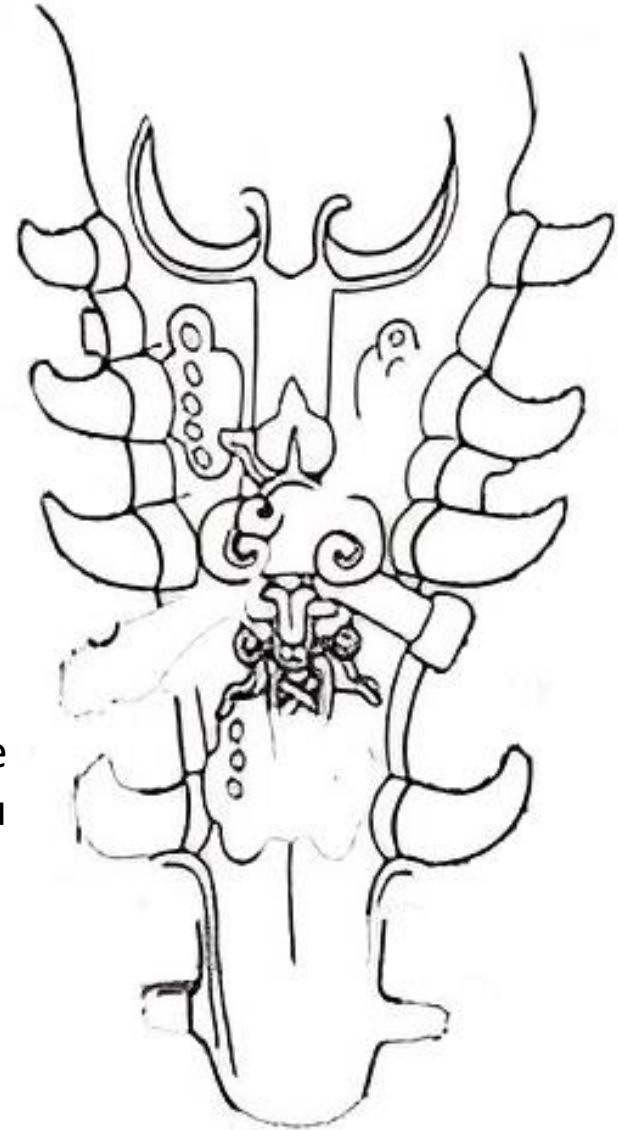
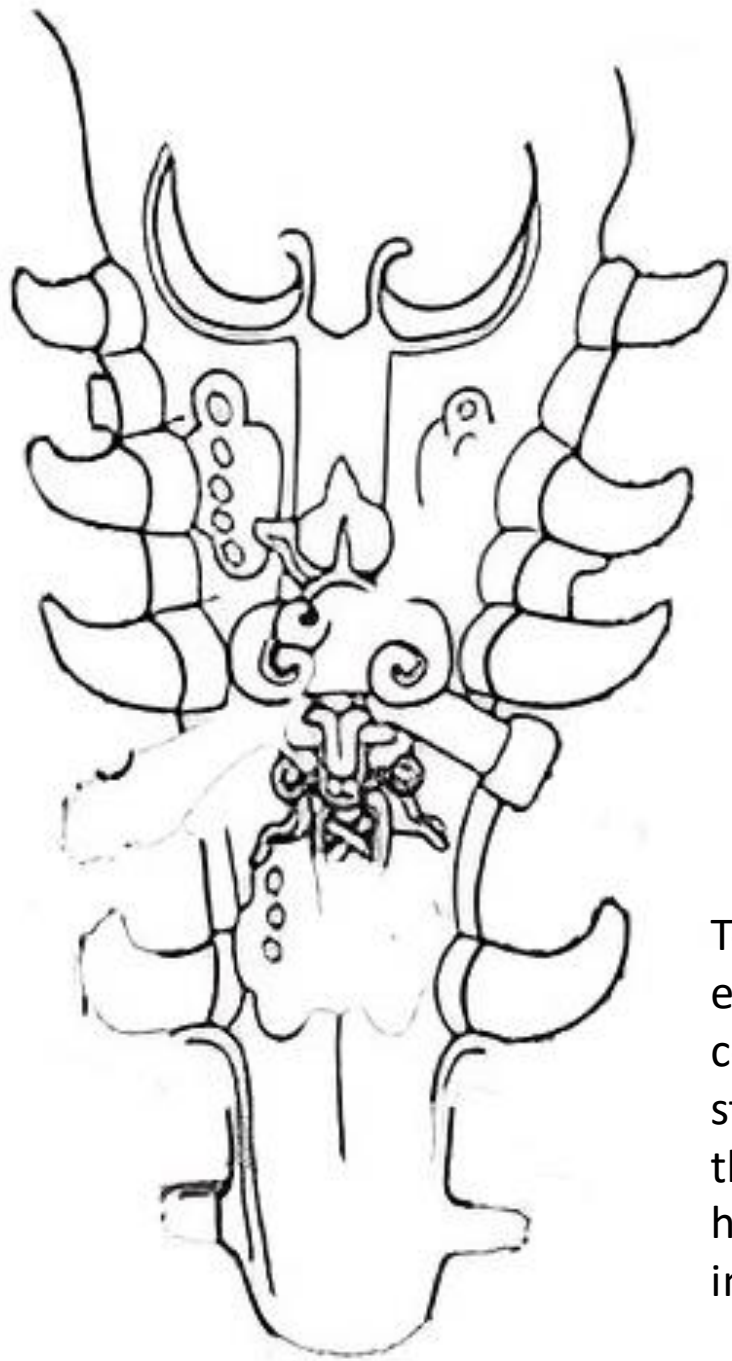
The present lecture chapter on crocodiles in stone sculpture at Copan Honduras shows several of our photos that bring out detail.



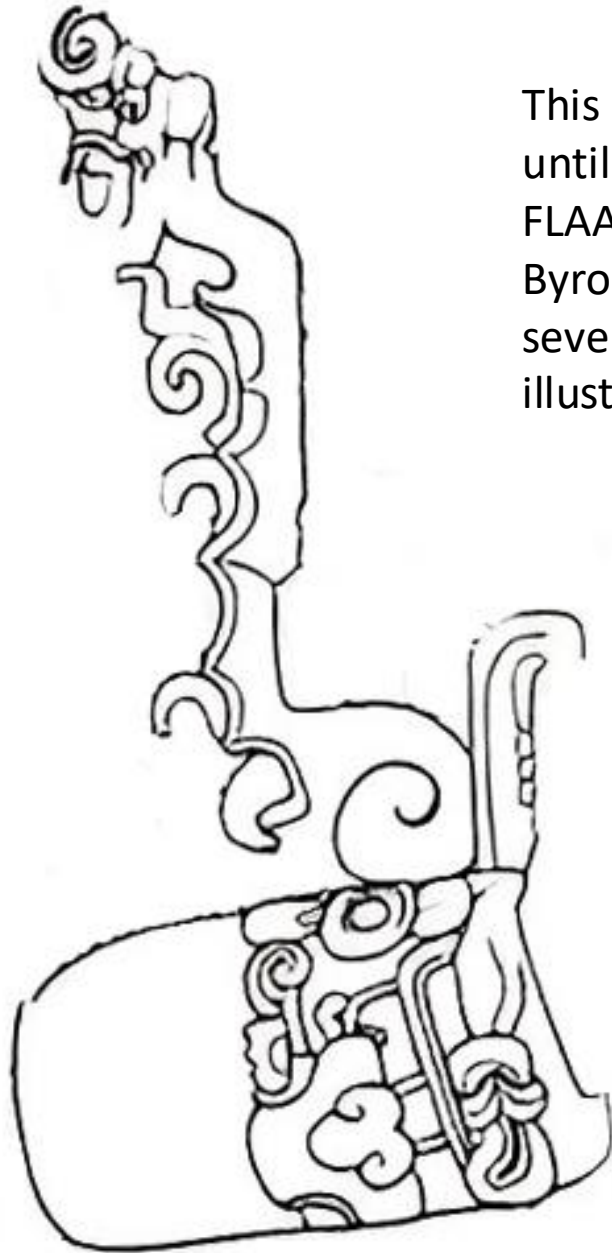
Copan Stela C, CPN 4  
Baudez 1994: Fig. 7.  
Excellent drawing by  
Barbara Fash.

Photo by Nicholas  
Hellmuth of  
crocodile part.

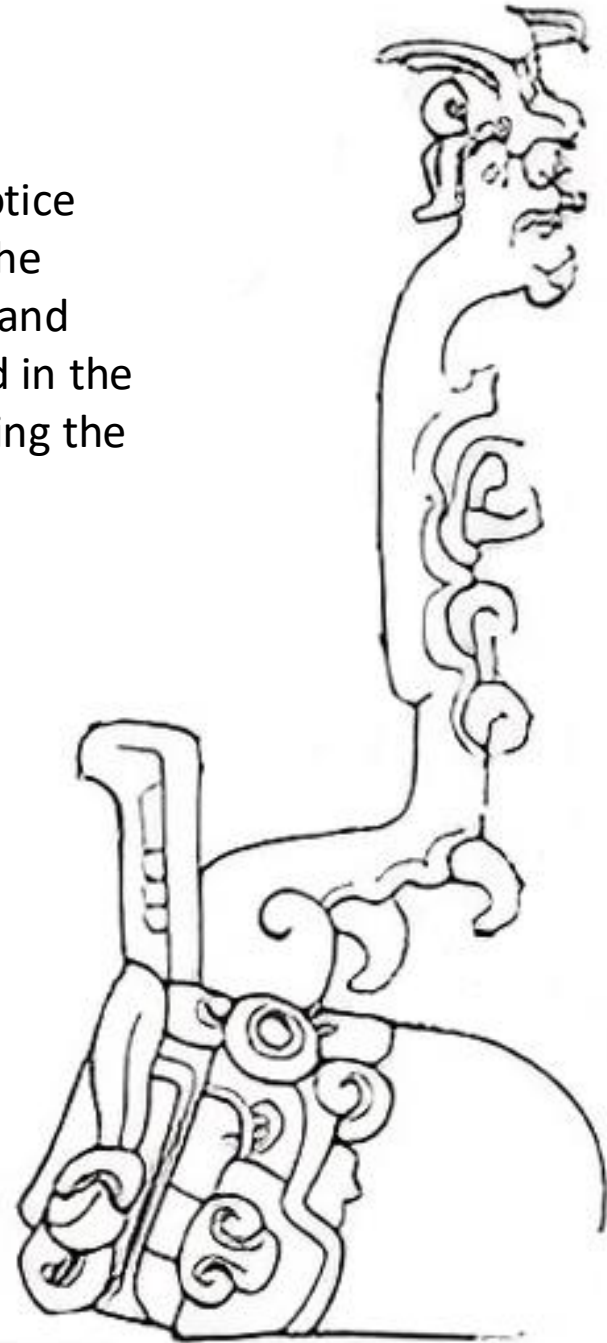


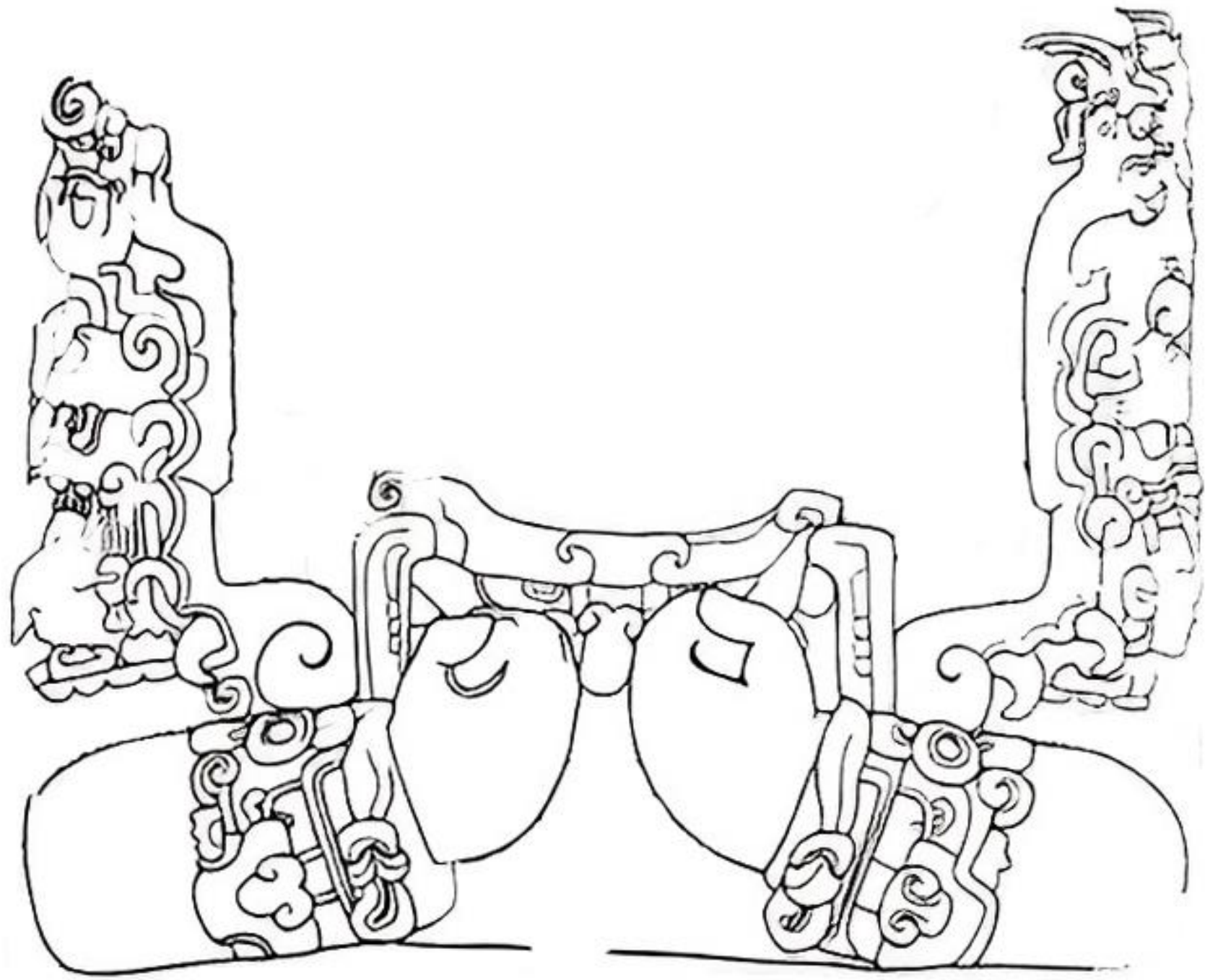


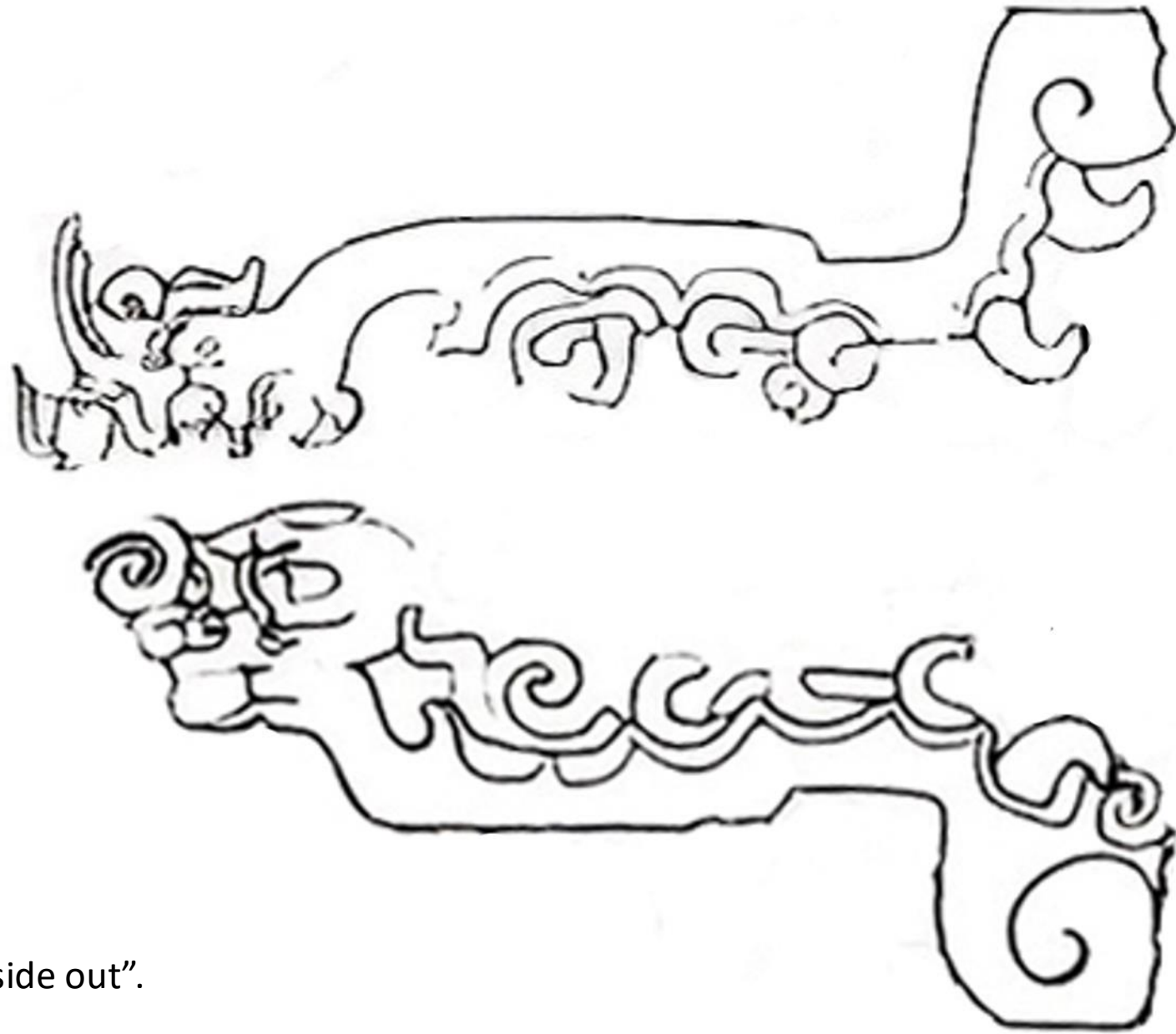
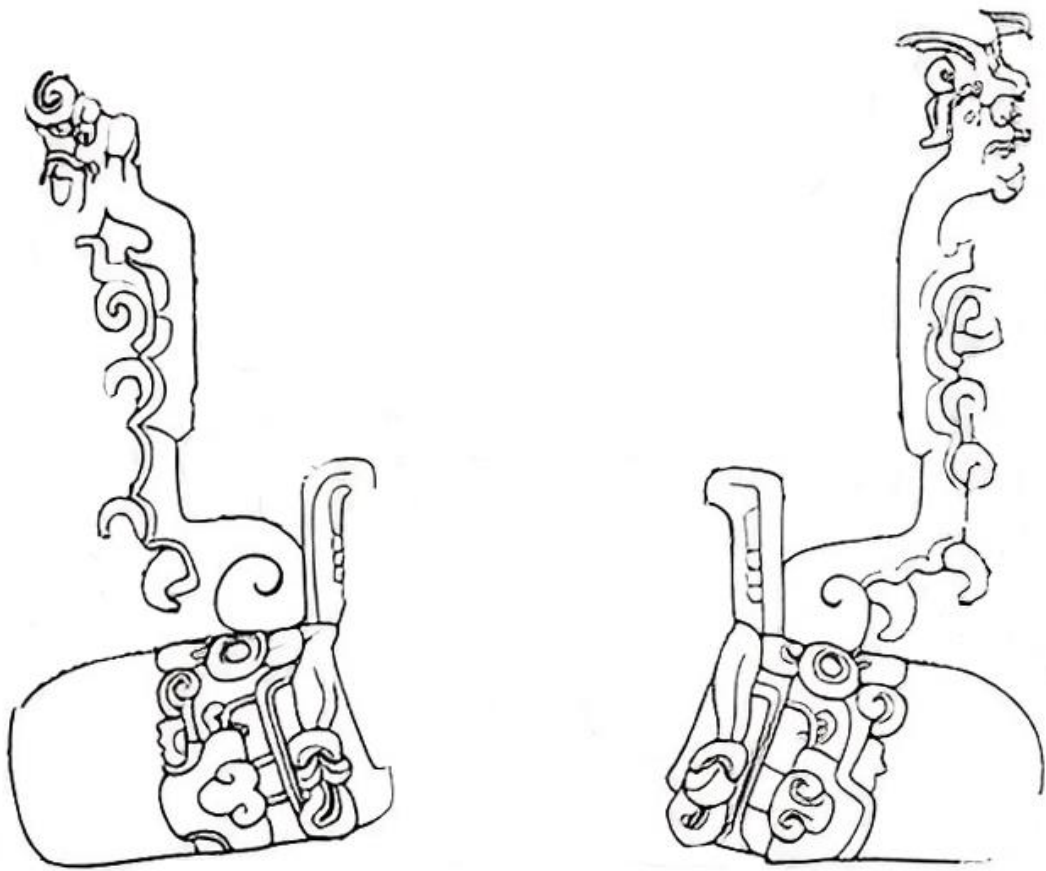
To see the details it helps to pull each individual creature out of the complex illustration. And once you start looking at details, you notice there are actually two crocodile heads (one frontal and the other in two separate profiles).



This crocodile I did not notice until I was working with the FLAAR team (Norma Cho and Byron Pacay) that assisted in the several months of preparing the illustrations.







This Classic Maya sculptor really “turned this crocodile inside out”.

Having a deity head at the end of a reptilian snout is common, but usually it is a variant of the Loincloth Apron Face. But here it's a different supernatural face.





This Copan sculpture has lots of teeth but all are of identical triangular shape and all the same size. No fangs, so not like a snake or crocodile. Some iguanas and Bufo Toads have identical dentition (triangular, and in a row) but this head is not a toad and not expected shape for an iguana. So we show this head but it's identification needs further research.

Photos by Nicholas Hellmuth in past decades.



A monster head on Copan CPN 26, Stela N, has the same triangular dentition (photo at the right). Both photos by Nicholas Hellmuth, FLAAR Photo Archive

Long mouth is obviously a crocodile.

Decoration atop end of the nose area is also a bit crocodile-like

Slight crest over the eye.

Eye itself not a celestial symbol but the row of teeth make this an obvious crocodile.

Copan, Honduras, photo by N. Hellmuth.



But this is more easily identifiable as an actual crocodile, albeit stylized as usual. Obviously the large teeth that are most visible are what are featured.



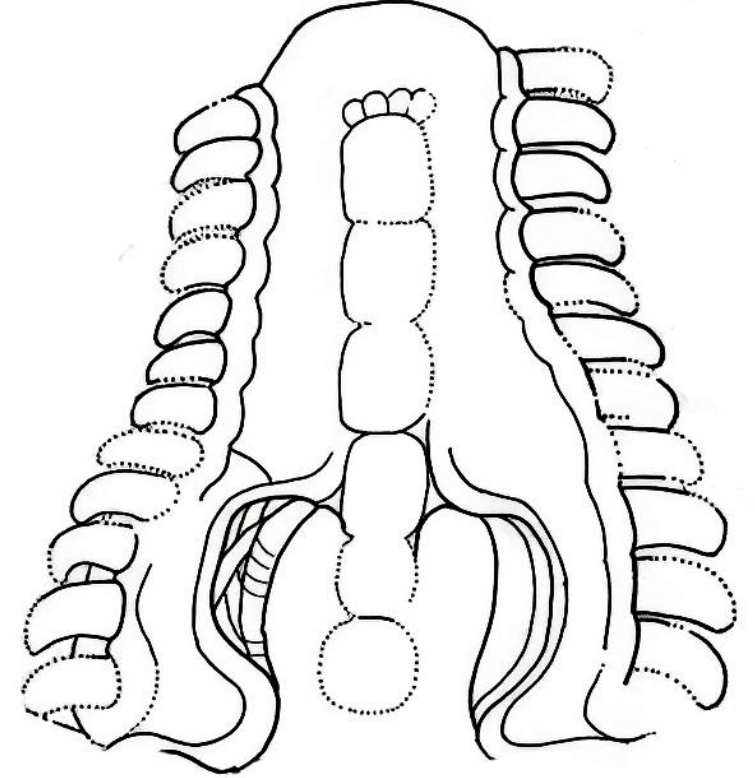
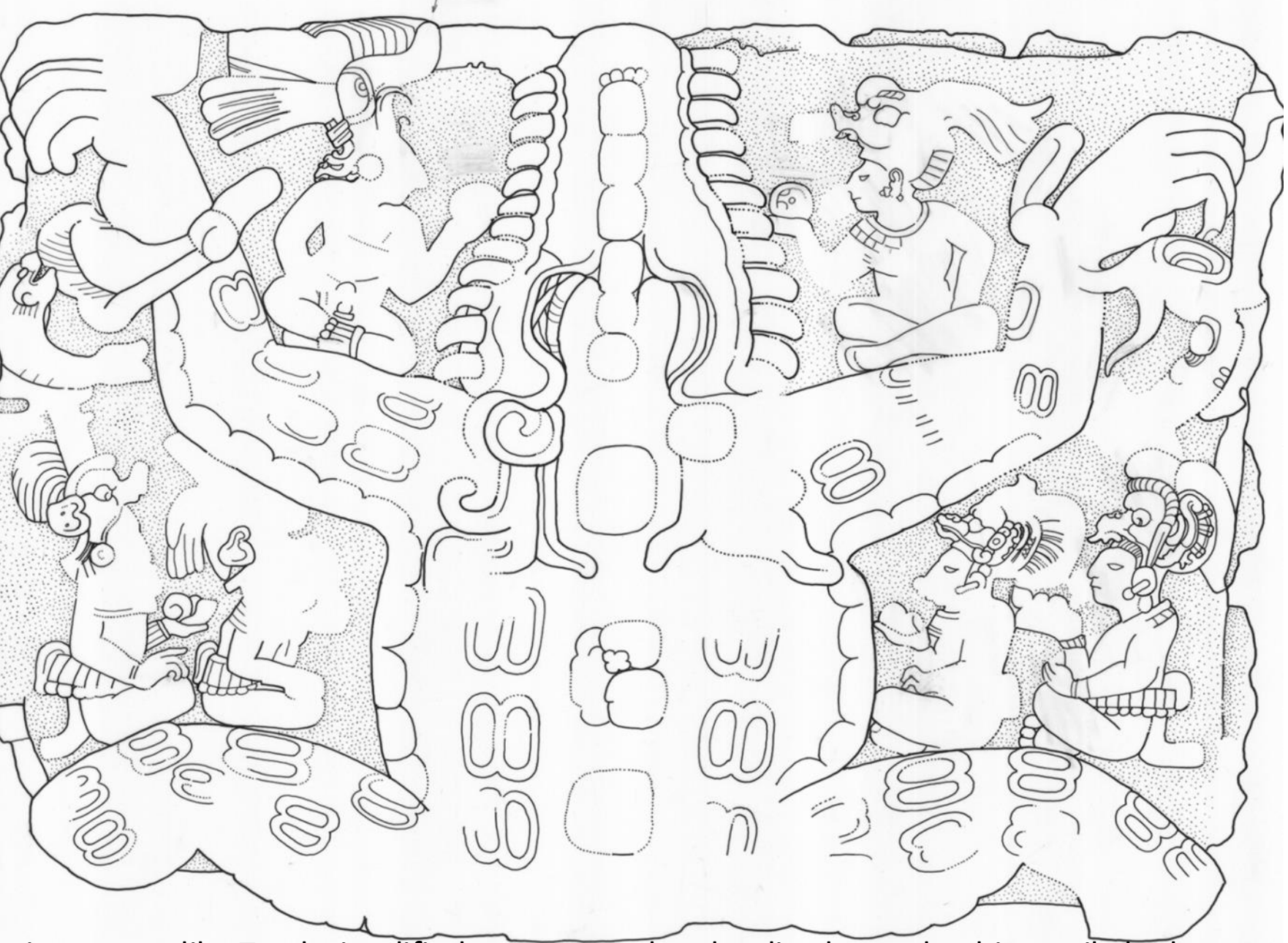
Here are the actual teeth of a *Crocodylus moreletii*, posing for me.

Los Sapos is best known for the impressive 3D sculpture of a Bufo Toad. But there are also crocodiles in this area of rock outcrop sculpture.

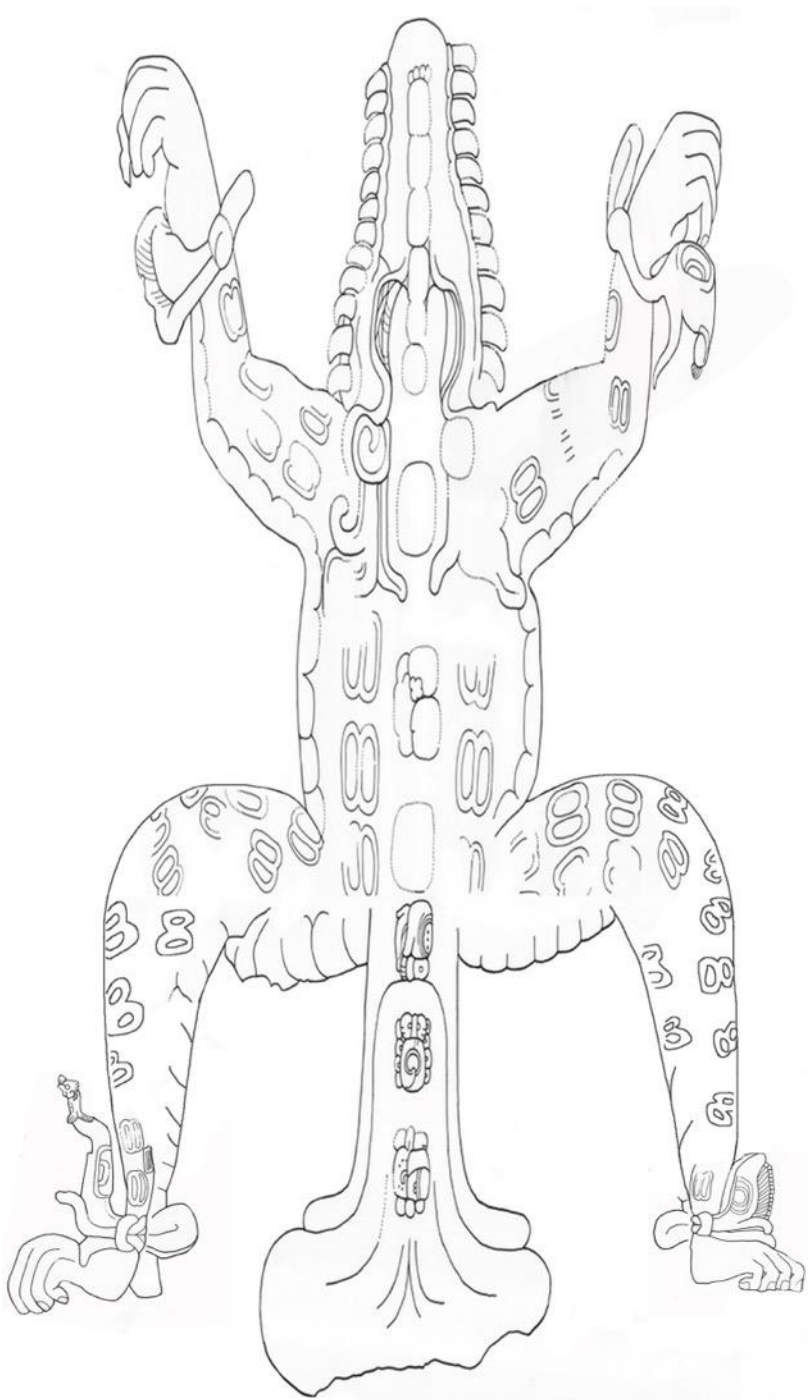
I have not yet found line drawings of these crocodiles. I would appreciate if someone knows these drawings and could send me a link.

This is on a hill overlooking the valley of Rio Copan. A nice hotel is nearby.





obvious crocodile. Teeth simplified, exaggerated and stylized to make this reptile look more dangerous. Pattern on hide also simplified. Copan Altar T, CPN 33. Drawing by Linda Schele, SD-1021, © David Schele. Drawing courtesy Ancient Americas at LACMA (ancientamericas.org).

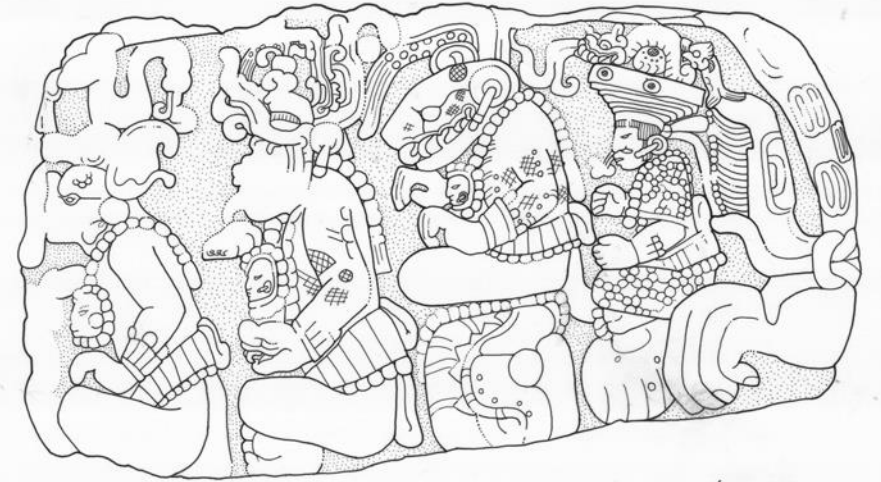
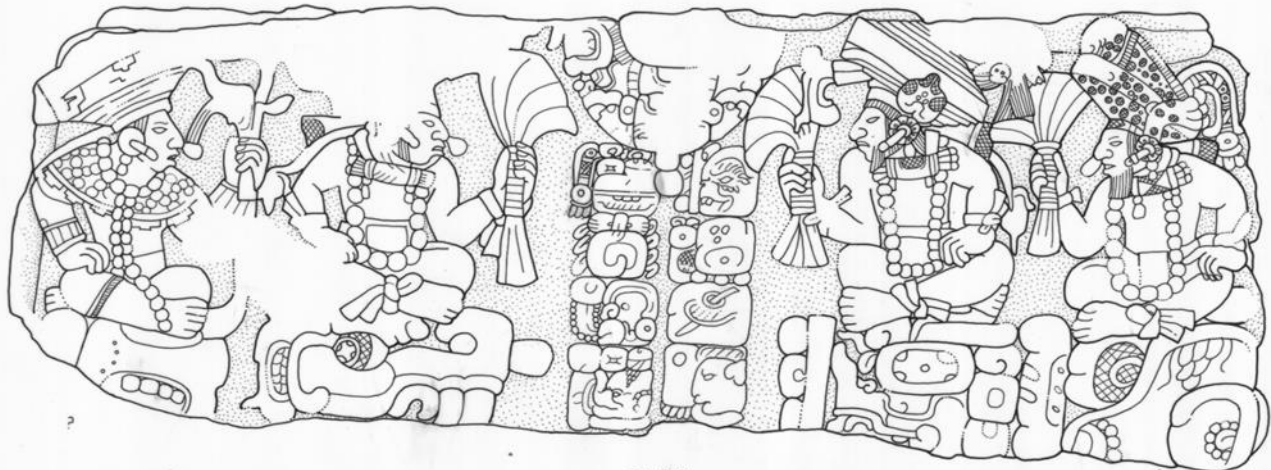
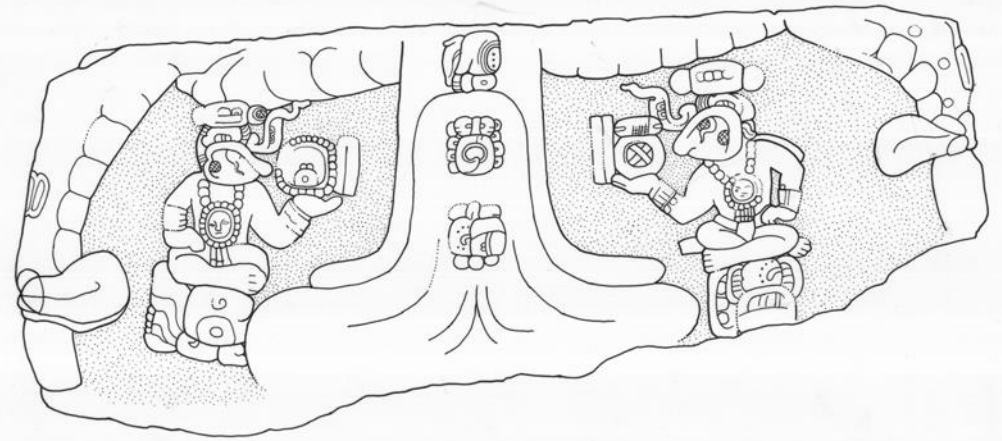
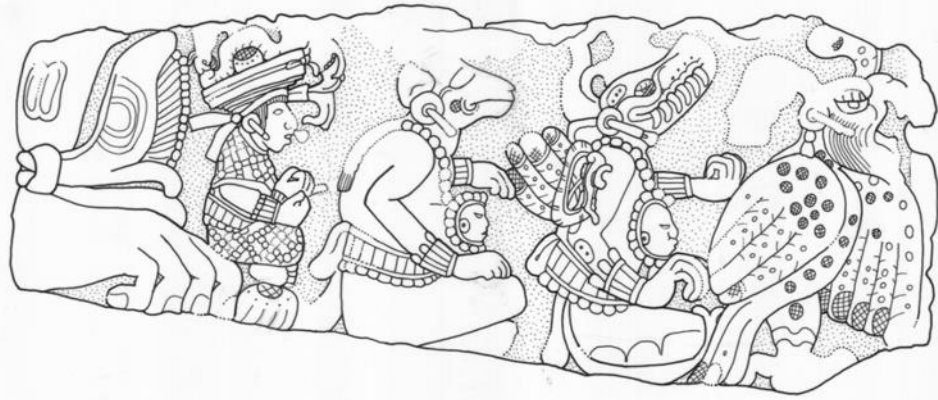


To show the hand-like claws and to show which aspect are stylized, it helps to digitally prepare a slightly more realistic body size and shape. Rendition by Byron Pacay, FLAAR Mesoamerica, based on Linda Schele drawing SD-1021. Copan Altar T, CPN 33.

As is common the arms and legs are slightly anthropomorphic, especially the front “hands and fingers”.

The water lily flower stems wrapped around the ankles and wrists are common in Maya art. But the spayed almost bird-like tail is unexpected. Tail was enhanced, modified. So this tail needs ethnozoological and iconographical research to learn what was its intention.

A team of several people help prepare each FLAAR PowerPoint presentation. Total time is about two to three months for a 1 hour lecture. But FLAAR is a research and educational institute, so we like to make our material available (it is easy to copy drawings from our unlocked PPTx file).



SD-1019

CPN 33/ ALTAR T / LSchde 51  
 corrected from 15 drawings of  
 B.M. casts. M. Van Stone 1977

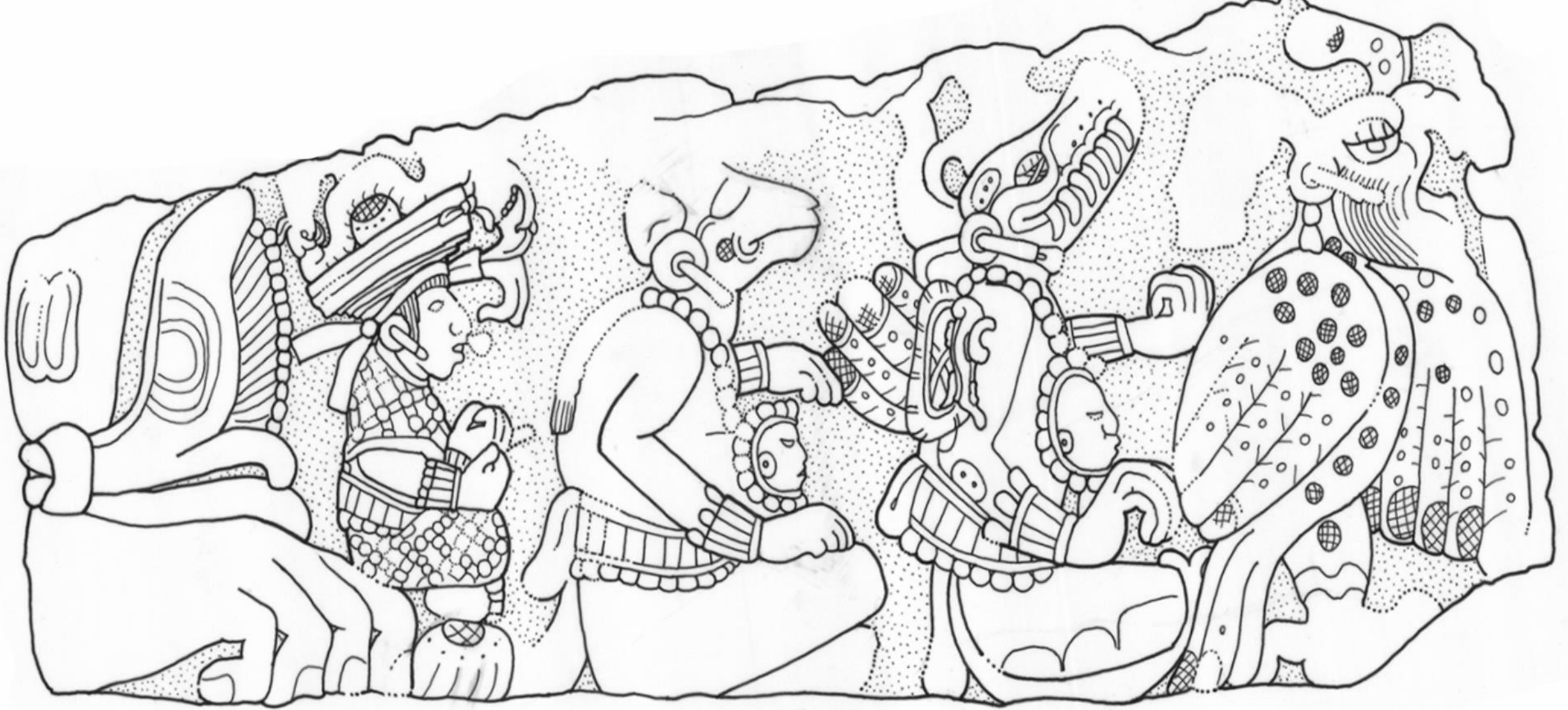
LEFT SIDE, T. BEHR

CPN-33/ALTAR T  
 L Schuder '87/'96  
 M. Van Stone inked  
 corrections from LS  
 drawing of casts in  
 British Museum of Man  
 18 Sept. 77

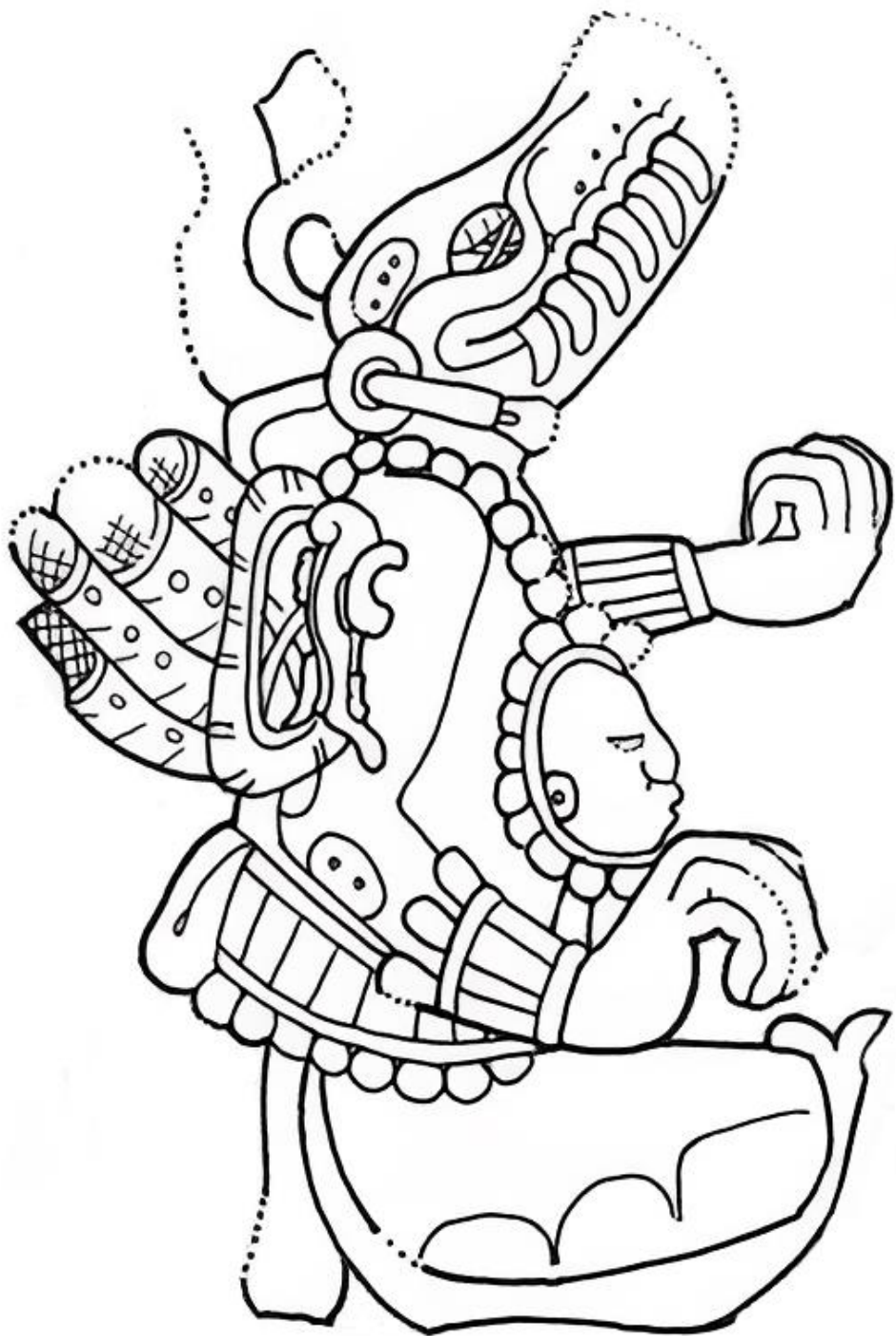
RIGHT SIDE, L. BEHR  
 SD-1020

The sides of Copan Altar T, CPN 33, also have an obvious crocodile (headdress) plus a second reptile. Drawings by Linda Schele, SD-1019 © David Schele. Drawing courtesy Ancient Americas at LACMA (ancientamericas.org).

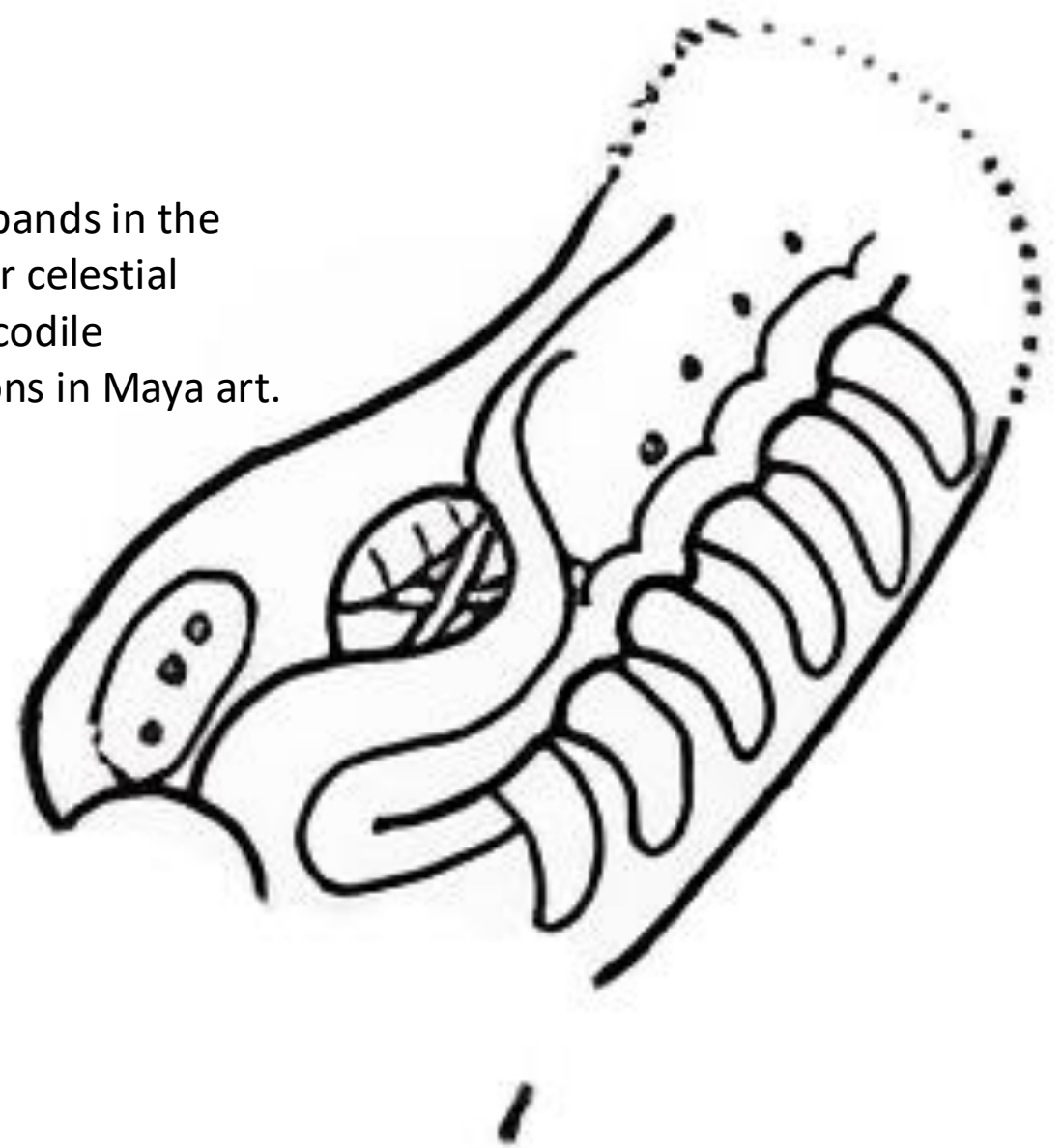




The giant “paw” of the crocodile (on top; one “paw” seen here at left) has human fingers and even fingernails. The headdress of the seated figure is an obvious crocodile. His hands have abnormal fingers and his thigh has reptile design. He has winged feathers on his back. Drawing by Schele updated by Van Stone, SD-1019 © David Schele. Drawing courtesy Ancient Americas at LACMA ([ancientamericas.org](http://ancientamericas.org)).



The crossed-bands in the eye is another celestial aspect of crocodile representations in Maya art.

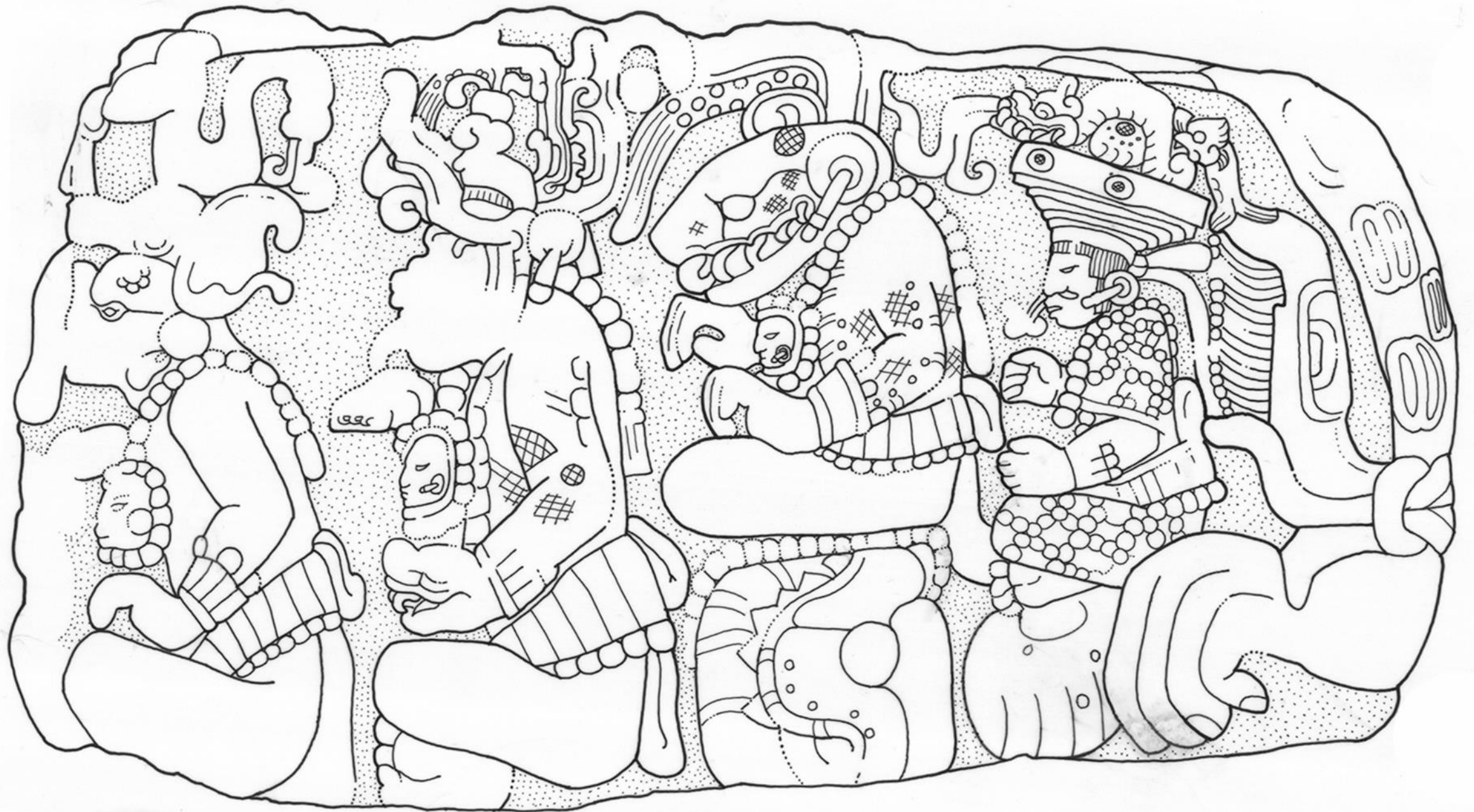


It helps to learn which symbols are in the eye, because some crocodiles are composite monsters with the Starry Eyed Deer, so it's eye is different.



To compare the stylized teeth it helps to see the actual teeth close-up. So whenever a crocodile poses for me, I get down on the ground so I can get a good view of the size, shape and arrangement of the teeth.

*Crocodylus moreletii* at Tikal, January 2013, photo by Nicholas Hellmuth.



Copan Altar T, CPN 33, Schele drawing SD-1020. © David Schele. Drawing courtesy Ancient Americas at LACMA (ancientamericas.org).

This face lacks any bump or curl at the end of its “snout”. So no “crocodile snout end.”

Teeth are stylized, as on the obvious crocodile across the top of this Altar T.

Cross-hachure on the body may help ethnozoologists, iconographers and epigraphers ID this as iguana or composite iguana-crocodile. No celestial symbol in the eye; no crest. So only the teeth are mas o menos “crocodile like”.

The teeth on the upturned animal head are found on Bufo Toad and on Iguana. But no Bufo ear or Bufo glands are shown.

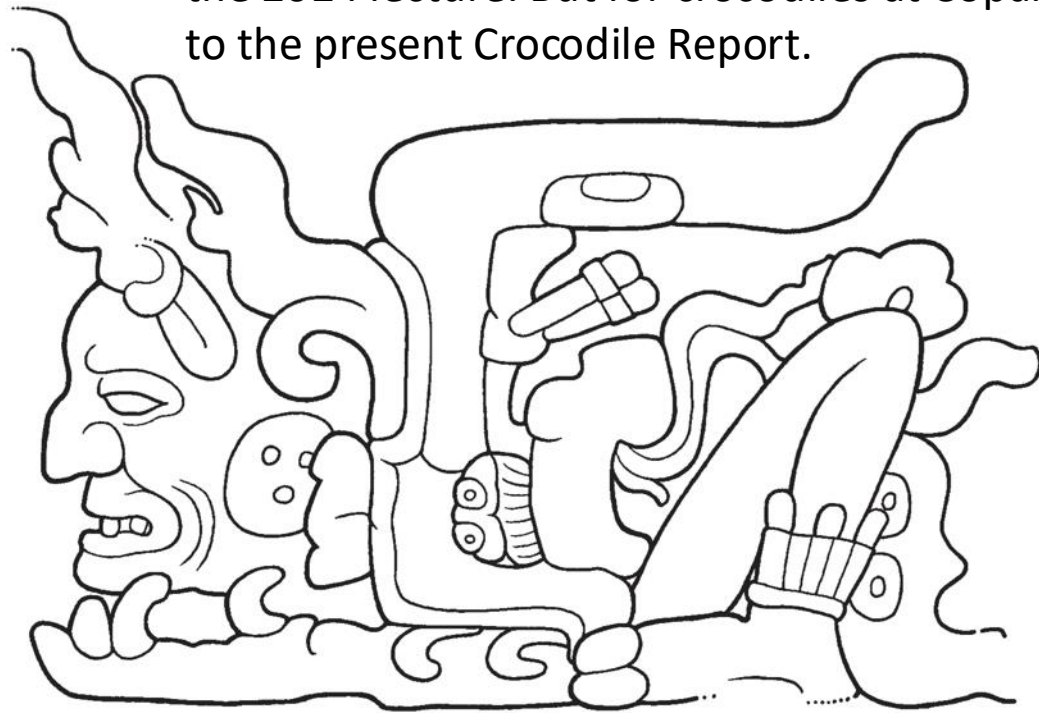




Each sculptor had their own style. The swirl as superorbital plate is not common. The dentition is not crocodile-like but size, shape of head is acceptable and the Crossed-Bands in eye is when the crocodile aspects are featured. This drawing is from half-a-century ago and needs to be found again on a more recent drawing of this Copan CPN 26, Stela N. This drawing is from my 1970's-1980's library research from Maudslay Volume I, Plate 82, in preparation for my PhD dissertation and is published in the Surface of the Underwaterworld, the English edition (Hellmuth 1987a: Fig. 166,d).

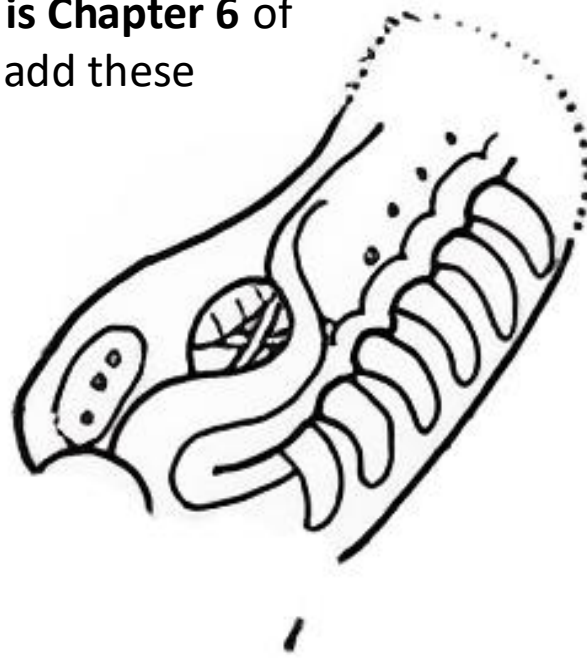
This crocodile and many other parts of the lower section of Stela N are no longer extant. Would help to do a new drawing of the lower part from cast's taken by Maudslay and stored in the UK to rescue this crocodile.

**Cosmic Monster Crocodiles & Starry Eye Deer** is Chapter 6 of the 2024 lecture. But for crocodiles at Copan I add these to the present Crocodile Report.

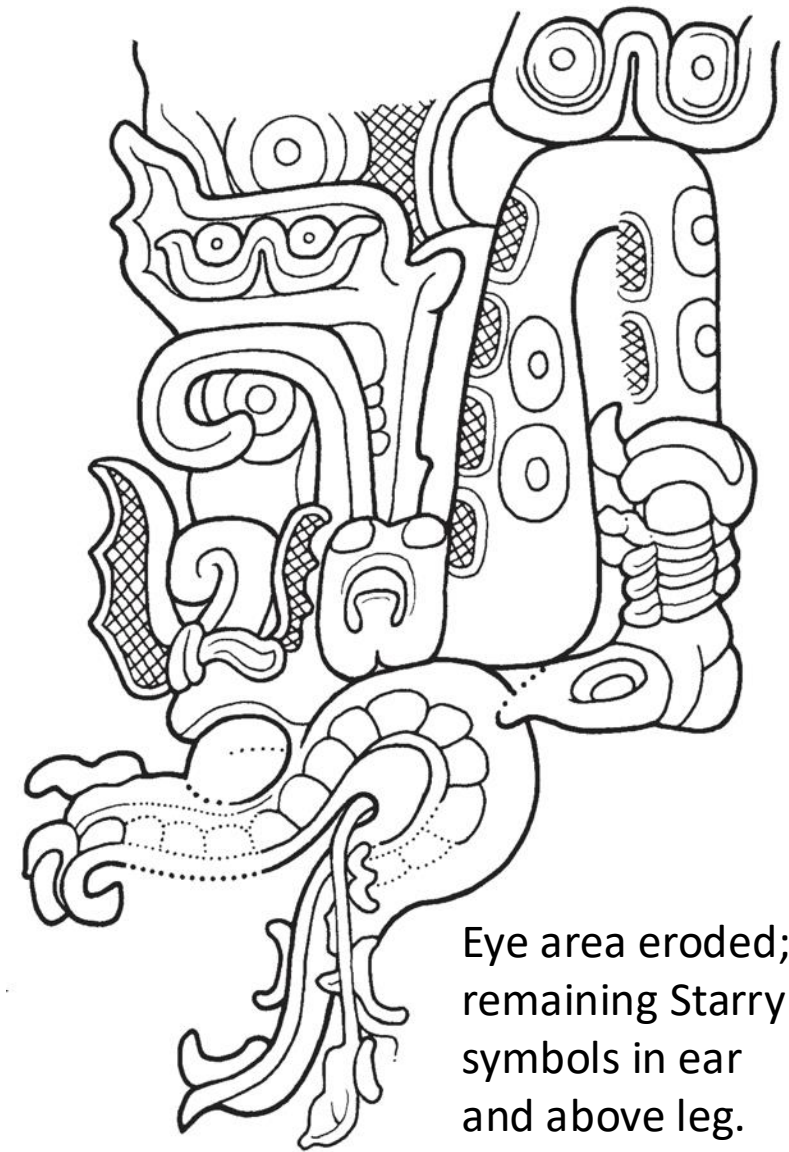


There are also crocodiles and Starry Eyed Deer Crocodiles of Cosmic Monsters at Copan. I show one above and the rest of these in the chapter on Cosmic Monsters.

Copan, Structure 9N-82, bench, far left side, drawing by Simon Martin (Martin 2015: Fig. 12a).



Crocodile with Crossed-Hands in its eye. Crossed-Bands are very common in Crocodiles not inside a Cosmic Monster (but exceptions do occur). Copan Altar



Eye area eroded; remaining Starry symbols in ear and above leg.

Starry Eyed Deer Crocodile, left end of Cosmic Monster Copan Str. 22, drawing by Simon Martin in Martin 2015: Fig. 12a.

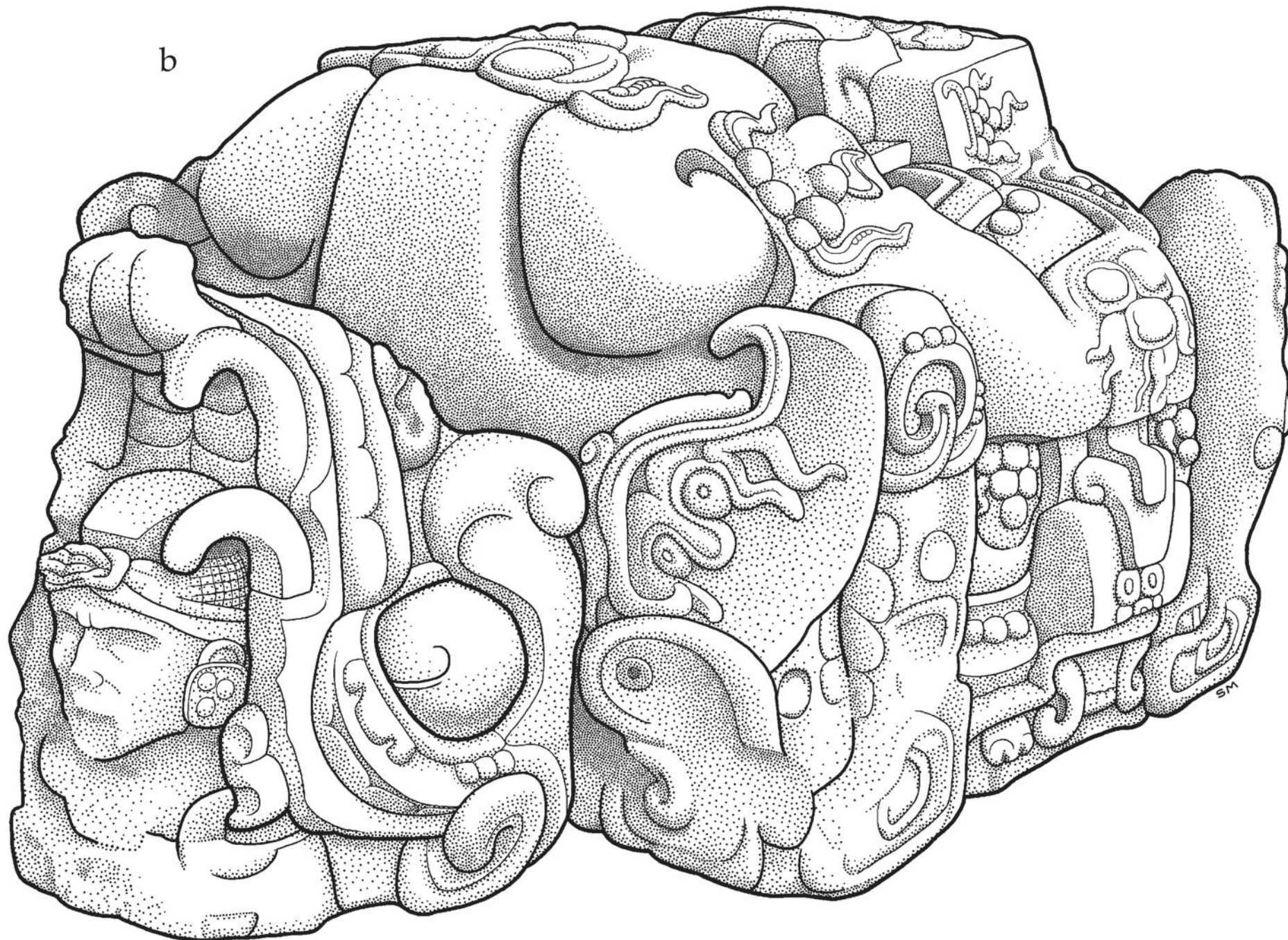
Crocodile, with clearly defined God N head coming out. CPN 25, Altar of Stela M, excellent drawing by Simon Martin in Martin 2015: Fig. 39,b.

There is a Quadripartite Badge Headdress deity at the other end, so this is a COMPLETE Cosmic Monster.

Deer symbol is on the ear, instead of the usual position in the eye. So this is a crocodile head with deer ears, with Cauac Monster on top and on both sides.

This Cosmic Monster image ends our presentation of crocodiles at Copan. There is a separate volume in our ongoing Copan FLAAR Reports specifically on this sculpture CPN 25, Altar of Stela M.

The style of illustration by Simon Martin is the best I have seen to show the 3-dimensional aspects of this altar. Hopefully someday he will do all the other sides in the same style.





## List of Suggested Reading on Sculptures of Copan

### **AGURCIA-Fasquelle, Ricardo and Vito VELIZ (editors)**

2010 Volumen I: Los Monumentos de la Plaza Principal – Peter Biro y Dorie Reents-Budet. Vol. I of Manual de los Monumentos de Copán, Honduras. Asociación Copán, Copan Ruinas, Honduras. 387 pages.

So far I have found on-line only this helpful Volumen I. I have not yet found:  
Volumen II: Monumentos de la Acropolis  
Volumen III: Monumentos del Valle

### **BAUDEZ, Claude-François**

1994 Maya Sculpture of Copán: The Iconography. University of Oklahoma Press. 300 pages.

### **FASH, Barbara W.**

2011 The Copan Sculpture Museum, Ancient Maya Artistry in Stucco and Stone. Peabody Museum Press. 216 pages.

### **FASH, Barbara W.**

2004 Early Classic Sculptural Development at Copan. Pages 248-264 in Understanding Early Copan, edited by Ellen E. Bell, Marcello A. Canuto & Robert J. Sharer. University of Pennsylvania Museum of Archaeology and Anthropology.

### **FASH, William L.**

1991 Scribes, Warriors, and Kings: The City of Copán and the Ancient Maya. Thames and Hudson. 192 pages.

There is now a year 2001 revised 2<sup>nd</sup> edition.

### **ROBICSEK, Francis**

1972 Copan: Home of the Mayan Gods. Heye Foundation. xvi + 168 pages.

Has helpful photographs of lots of sculptures and the enthusiasm of Francis Robicsek. But the books by Baudez and Fash are more recent and focus more on archaeology, epigraphy and iconography.

## List of suggested Reading on the Two Species of Crocodiles and one Species of Caiman in Mexico, Guatemala and Honduras

It is best never to use the word alligator when discussing the crocodylians of Mesoamerica. Yes, caiman is a relative of alligators, but call it a caiman. Besides, most of the reptiles pictured in Maya art are more likely crocodiles than caiman.

Many entries are annotated, to assist authors, book layout designers, and publishers to realize what can be improved in a second edition or a new book on another topic.

### **ALDERTON, David**

2004 Crocodiles & Alligators of the World. Facts on File. 190 pages.

I have not bought this since I have learned "...of the world" means the Nile crocodile and Africa, Asia, and Brazil and for alligators mainly Florida and nearby states. These "... of the world" books do not have much on the caiman and crocodiles of the Maya and Olmec areas of Mesoamerica.

### **ALVAREZ Del Toro, Miguel**

1974 Los Crocodylia de Mexico Estudio comparativo de los crocodylia de Mexico. Ed. Inst. Instituto Mexicano de Recursos Naturales Renovables, A.C. Mexico. 70 Pages.

Miguel Alvarez del Toro was the leading zoologist of the Chiapas area of Mexico in the 1970s. This 1974 monograph, *Los Crocodylia de Mexico* covers primarily the Mexican aspect of this reptile. Unfortunately, the photographs vary from bad to awful.

### **ALVAREZ Del Toro, Miguel and Luis SIGLER**

2001 Los crocodylia de Mexico. IMERNAR, PROFEPA, Mexico, D.F. 134 pages.

An update of the earlier edition with additional photographs, now all in color (though quality still varies from so-so to awful). However most of the text is the same as the original edition. The new material is at the back, by Sigler.

However despite the lack of quality in the photographs, the text has helpful information. No one else has accomplished anything better on crocodylians of Mexico, or even comparable, in the last fifteen years. Same with Guatemala: no monograph that I know of on all three species in Guatemala. Same issue with Honduras and El Salvador: no monograph on crocodylians.

**BEHLER, John.**

1998 Alligators & Crocodiles. Voyager Press, Montreal.

**CAMPBELL, Jonathan A.**

1998 Amphibians and Reptiles of Northern Guatemala, the Yucatan, and Belize. University of Oklahoma Press. 380 pages.

**GRECARD, Steve**

1991 Handbook of Alligators and Crocodiles. Krieger Publishing Company, Miami.

**KELLY, Lynne**

2006 *Crocodile: Evolution's Greatest Survivor*, by

**KÖHLER, Gunther, VESELY, Milan and Eli GREENBAUM**

2006 The Amphibians and Reptiles of El Salvador. Krieger Publishing Company, Malabar, Florida. 238 pages.

Helpful book but photographs are typical of professional biologists: not using adequate equipment and not using lighting (nor really anything to improve what are otherwise merely snapshots).

Even if they only made the effort to have a simple reflector. Or a flash (with a light modifier to keep down the overexposure). Plus you need to understand a polarizing filter.

Merely because a creature is important and you are taking a photo is no help to your reader that the photo will offer adequate visual documentation.

**LEE, Julian C.**

1996 The Amphibians and Reptiles of the Yucatan Peninsula. Comstock Publishing Associates.

**LEE, Julian C.**

2000 A Field Guide to the Amphibians and Reptiles of the Maya World: The Lowlands of Mexico, Northern Guatemala, and Belize. Cornell University Press, 416 pages.

**PRINGLE, Laurence** (author), **Meryl HENDERSON** (illustrator)

2009 Alligators and Crocodiles!: Strange and Wonderful. Boyds Mills Press. 32 pages.

**ROSS, Charles A.**, consulting editor

1989 Crocodiles and Alligators. Facts on File. New York and Oxford. 240 pages.

Although the publisher touts “including photographs from world-leading photographers” in fact the front cover is too low a resolution, as are too many other photos. Possible cause is scanning of ancient 35mm slides (with a low-end scanner), or simply old digital photographs when megabyte file size was in the Ice Age. However since the book was published in 1989, most of the photographs were from the 1970’s and 1980’s, and hence none were digital.

We scan our photographs with a Scitex or Creo Scitex or Kodak Creo Scitex scanner. These are of the highest flatbed technology (but no longer made since after Kodak bought Creo which had bought Scitex; Kodak failed totally to know how to market such a high-end scanner.

But the photograph on pages 12-13 is a wonderful example of taking an old color negative or old color slide, and scanning it on a crude scanner, and then enlarging it too much. It is amazing that publishers accept this low-end lack of quality. Too bad since the image itself was outstanding for showing the teeth in both jaws.

However, if your interest is in crocodiles of Africa, this book has plenty of photographs. And if you don’t look too closely (to see the low-resolution on a few of them) you will find over a hundred nice photographs.

Probably 90% of the book is on Nile crocodile, Africa and Asia in general. Hardly zip on crocodiles of Mesoamerica.

Fortunately, some of the photos were really nice: pages 5, 7, 8, 11.

**SIMON, Seymour**

2001 Crocodiles & Alligators. Harper Trophy, New York.

## **Books or Articles on Maya archaeology or iconography which discuss, show or include crocodilians**

In Maya art some crocodiles are clearly renderings of crocodiles. But often the monsters are composite: crocodile+snake, or a bicephalic Cosmic Monster which is a composite of crocodile+Starry Eye Deer. If you want to see 90% of the known representations of crocodiles in the art of proto-Classic Izapa and the Classic Maya, Hellmuth 2023 has 192 pages of photos, drawings and documentation for you.

Check also publications on figurines of Lamanai (Belize) and other sites not far from the coast.

Two items we have seen floating around the Internet, but have not yet found where they are housed or where they come from.

- Eccentric flint of “diving” crocodile as cosmic canoe.
- Incised shell of crocodile facing one direction with a different head at its tail end. Pinterest; no documentation.

### **BAUDEZ, Claude-Francois**

1994 Maya Sculpture of Copan: The Iconography. University of Oklahoma Press. 300 pages.

There are more crocodiles and crocodile-composite monsters in the monumental stone sculpture of Copan than at any other site. This is curious since Yaxchilan, Piedras Negras, El Peru, and dozens of other Classic Mayan sites are also on major rivers which were full of crocodiles. Plus there are *Crocodylus acutus* in coastal swamps in Belize and elsewhere. But Yaxchilan does have at least two long live-sized 3-dimensional stone sculptures of crocodiles.

**FINAMORE, Daniel** and **Stephen D. HOUSTON**, editors

2010 Fiery Pool: The Maya and the Mythic Sea. Peabody Essex Museum, Salem and New Haven.

There are a few of the crocodile artifacts in this book. Several illustrations in this book are from Hellmuth 1987b PhD dissertation; most are cited but many others are not.

**HARRISON, Peter**

2006 Animals as Royal Family Names at Tikal, Guatemala & Some Considerations at Kalakmul. Prepared for *Maya Hieroglyphs & History: An Archaeological Perspective* at International Congress of Americanists - Seville, Spain.

It is rare for a field archaeologist to recognize misidentifications in the work of other archaeologists and epigraphers. He correctly points out what is a deficiency in Maya studies: archaeologists, iconographers and epigraphers who are great at hieroglyphs or sculptures but don't know the difference between an alligator and a crocodile (or what a caiman is).

My personal feeling for the last decade is that archaeologists, epigraphers and iconographers could save themselves from repeatedly misidentifying flowers, insects, feline pelage spot patterns and all the other errors if they would co-author with a botanist or zoologist who knows the flora or fauna of the Maya areas or co-author with a Mayanist who knows plants and animals first-hand (a polite way to saying a Mayanist who has studied plants and animals in the Mayan areas (so more than just in books or zoos or herbariums)).

Peter Harrison's helpful article is a free download on

[www.academia.edu/4510445/Animals\\_as\\_Royal\\_Family\\_Names\\_at\\_Tikal\\_Guatemala\\_and\\_Some\\_Considerations\\_at\\_Kalakmul\\_prepared\\_for\\_Maya\\_Hieroglyphs\\_and\\_History\\_An\\_Archaeological\\_Perspective\\_at\\_International\\_Congress\\_of\\_Americanists\\_-\\_Seville\\_Spain](http://www.academia.edu/4510445/Animals_as_Royal_Family_Names_at_Tikal_Guatemala_and_Some_Considerations_at_Kalakmul_prepared_for_Maya_Hieroglyphs_and_History_An_Archaeological_Perspective_at_International_Congress_of_Americanists_-_Seville_Spain)

**HELLMUTH, Nicholas M.**

1987a The Surface of the Underwaterworld. Iconography of the Gods of Early Classic Maya Art in Peten, Guatemala. FLAAR 306 pages of text (Volume 1) and hundreds of pages of illustrations (Volume 2).

Revised English original of PhD dissertation (auf Deutsch) for Art History, Karl-Franzens-Universitaet, Graz, submitted and accepted 1986.

The actual PhD in the German translation (by Susanna Reisinger) was also updated and published the same year, as a hard-cover coffee-table book, *Monster und Menschen in der Maya Kunst*, by ADEVA.

**HELLMUTH, Nicholas M.**

1987b *Monsters und Menschen in der Maya-Kunst*. ADEVA, Graz.

This is the coffee-table book edition of my PhD dissertation at Karl-Franzens Universitaet, Graz, Austria, based on eight years research on iconography and cosmology.

Many representations of stylized crocodiles among the 727 illustrations (lots of photographs, but mostly line drawings).

We have original hardcover copies of this book, which are available to benefactors and corporations or foundations which are able to donate to continuing research. We would especially like to make the PhD both in English and auf Deutsch and en español available to the world.

**Hellmuth, Nicholas**

2023 *Iconography and Ethnozoology of the Crocodiles and Caiman of Mesoamerica and their relation with the Cosmology of the Underworld and the Heavens*. English edition updated August 2023 from lecture on 27 de julio del 2023 *VI Seminario Internacional de Epigrafía Maya en Guatemala Museo Popol Vuh, Universidad Francisco Marroquin*, Organized by Camilo Luin. This PowerPoint lecture is available as one file with all 192 pages or as six separate files, one-chapter-at-a-time. The bibliography is so complete that it is a separate file.

- Chapter 1: Crocodiles are obviously associated with Water
- Chapter 2: Classic Maya portraits of Crocodiles as 3-dimensional ceramic figurines or stone sculptures and deep-relief renditions
- Chapter 3: Full-bodied Crocodiles as Roof of Throne Rooms
- Chapter 4: Crocodiles in Bas-relief Sculptures at Copan, Honduras
- Chapter 5: Crocodile Trees, Jicara/Morro Trees, Loincloth Apron Face Trunk-base Trees
- Chapter 6: Crocodile and Composite Deer-Crocodile as Bicephalic Cosmic Monster
- Crocodile Iconography of the Olmec and of the Maya References Cited and other Suggested Reading

**LOOPER, Matthew**

2013 The Maya "Cosmic Monster" as a Political and Religious Symbol. In *The Ashgate Research Companion to Monster and the Monstrous*, Asa Simon Mittman and Peter J. Dendle, editors. Pp. 197ff.

This article focuses on the Starry Deer Crocodile, which is highly stylized (meaning that the crocodile is not shown naturalistically). Plus the creature's body are planetary band symbols.

**ORREGO Corzo, Miguel and Christa SCHIEBE de Lavarreda**

2001 Compendio de monumentos expuestos en Tak'alik Ab'aj. (versión digital). *XIV Simposio de Investigaciones Arqueológicas en Guatemala, 2000* (edited by J.P. Laporte, A.C. Suasnívar y B. Arroyo) (Guatemala: Museo Nacional de Arqueología y Etnología): 786-806. Retrieved 2009/02/01.

**PARSONS, Lee Allen**

1969 Bilbao, Guatemala: An Archaeological Study of the Pacific Coast Cotzumalhuapan Region, *Volume 2. Publications in Anthropology*, No.12, Milwaukee Public Museum, Milwaukee, Wisconsin.

**PARSONS, Lee Allen**

1986 Monumental Stone Sculpture of Kaminaljuyu, Guatemala, and the Southern Pacific Coast. *Studies in Pre-Columbian Art and Archaeology, Number 28*, Dumbarton Oaks Pre-Columbian Art and Archaeology Studies Series.

**QUIRARTE, Jacinto**

1973 Izapan-Style Art, A Study of its Form and Meaning. *Studies in Pre-Columbian Art and Archaeology, No. 10*. Dumbarton Oaks, Trustees for Harvard University, Washington, D.C.

**VARGAS Pacheco, Ernesto and Teri ARIAS Ortiz**

2005 The Crocodile and The Cosmos: Itzamkanac, The Place of the Alligator's House. In *XVIII Simposio de Investigaciones Arqueológicas en Guatemala, 2004*, edited by Laporte, Juan Pedro, Arroyo, Bárbara, and Mejía, Héctor, pp. 14–26. Museo Nacional de Arqueología y Etnología, Guatemala City.

Reprint on-line by FAMSI. [www.famsi.org/reports/03101/02vargas\\_arias/02vargas\\_arias.pdf](http://www.famsi.org/reports/03101/02vargas_arias/02vargas_arias.pdf)

The use of the word alligator is a typical result of Spanish language using informal terms such as lagarto. Itzamna is either a crocodile, or a caiman. Unless it is a composite he can't be both. And there is a 66% chance he is a crocodile and only 33% chance he is a caiman (which in theory would make it allowed perhaps to be called, informally, an alligator).



**WRIGHT, Lori E.**

2005 In Search of Yax Nuun Ayiin I: Revisiting the Tikal Project's Burial 10. In *Ancient Mesoamerica* 16. Cambridge University Press, pp. 89-100.

This burial had a complete skeleton of a crocodile but the head is not shown as that was excavated a year or so before by another archaeologist.

**Significant web sites on Crocodiles, Alligators or Caimans**

<http://agrigator.ifas.ufl.edu/gators>

Facts and tips from the University of Florida.

[www.Crocodilian.com](http://www.Crocodilian.com)

This web page has disappeared.

<http://crocodilian.com/cnhc/csl.html>

Helpful list of all 23 species of the crocodilian species around the world.

This web page has disappeared.

[www.msu.edu/user/urquhart/rainforest/Content/Spectacled-Caiman.html](http://www.msu.edu/user/urquhart/rainforest/Content/Spectacled-Caiman.html)

By Dr. Gerald Urquhart. Has good photos; basic text. But is missing *Crocodylus moreletii*.

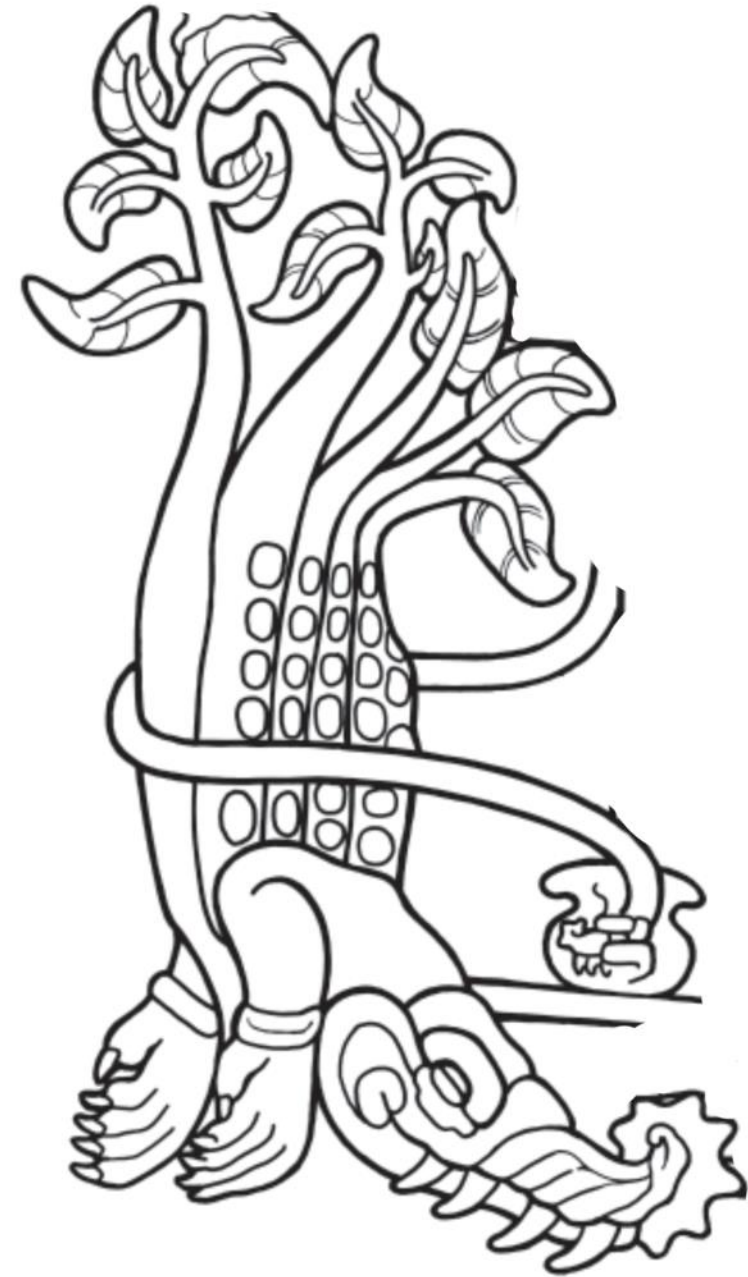
In the future we will update this research with a bibliography on the Crocodile Trees, especially of the pre- or proto-classic stelae of Izapa, Chiapas, Mexico. I worked on this iconography for my PhD dissertation and circa 2000-2010 I did field research all over Guatemala studying trees to learn which was “the” Crocodile Tree. FLAAR has indeed found the trees which inspired the Crocodile Tree (and it is more than just the spines of *Ceiba pentandra*).

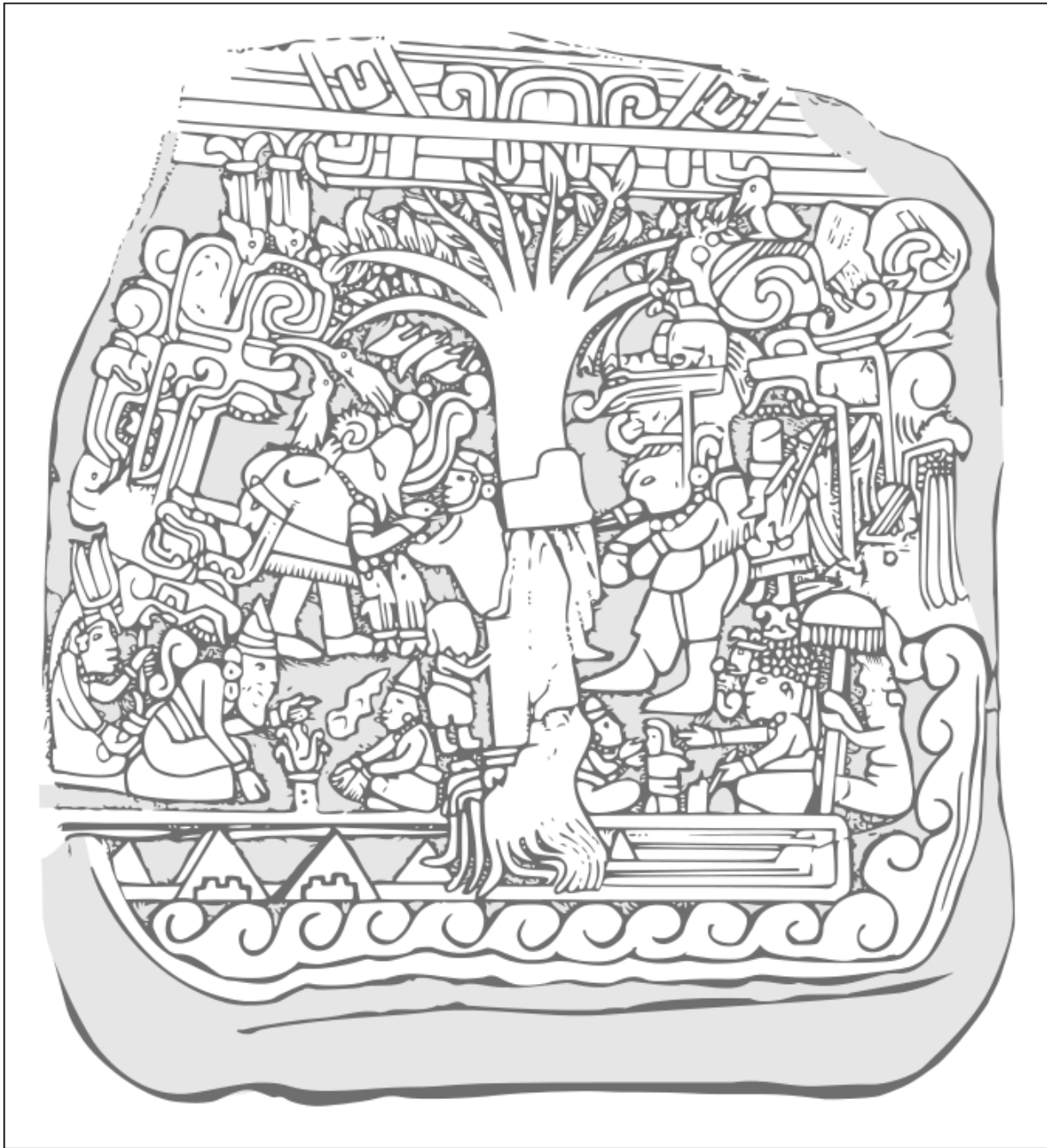
**Crocodile Trees,  
Jicara/Morro Trees,  
Loincloth Apron Face Trunk-base Trees**

for Dec. 14, 2024 lecture for The Pre-Columbian Society

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

Nicholas Hellmuth





Crocodile Tree, unidentified leaves, Izapa Stela 5, Chiapas, Mexico.



Crocodile Tree, stylized *Crescentia cujete* leaves and seed pods, Izapa Stela 2, Chiapas.



Crocodile tree, *Crescentia cujete*, Izapa Stela 5



Crocodile tree, Izapa-Stela-25, drawing by Moreno in Moreno and Clark 2007: Fig.13.24<sup>108</sup>

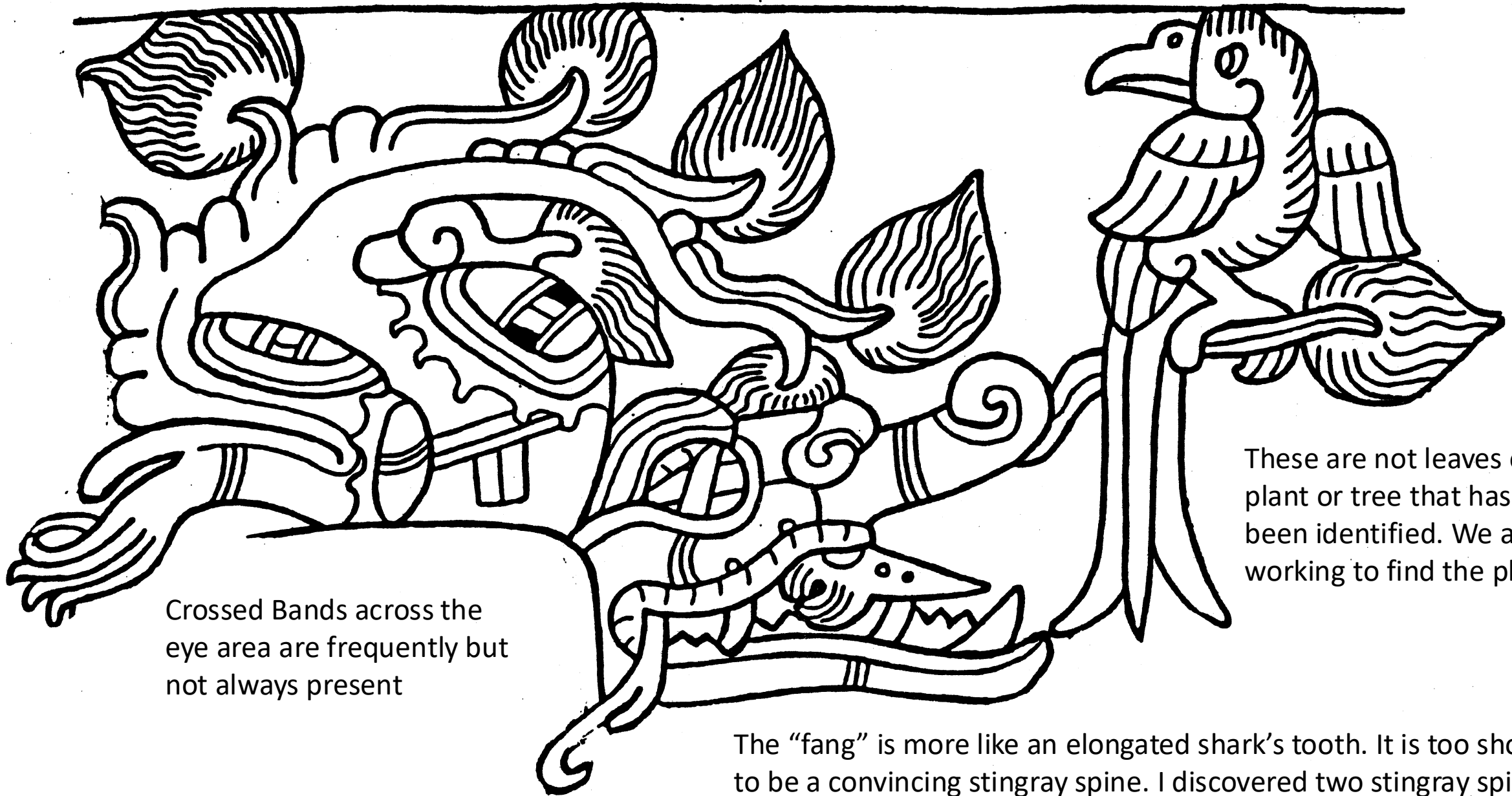
Izapa Stela 10,  
drawing by  
Moreno  
(Moreno and  
Clark 2007: Fig.  
13.12).



At far right,  
Izapa Stela 27,  
drawing by  
Moreno  
(Moreno and  
Clark 2007: Fig.  
13.26).



So far we have  
not been able to  
get original  
quality digital  
editions of  
these excellent  
drawings.

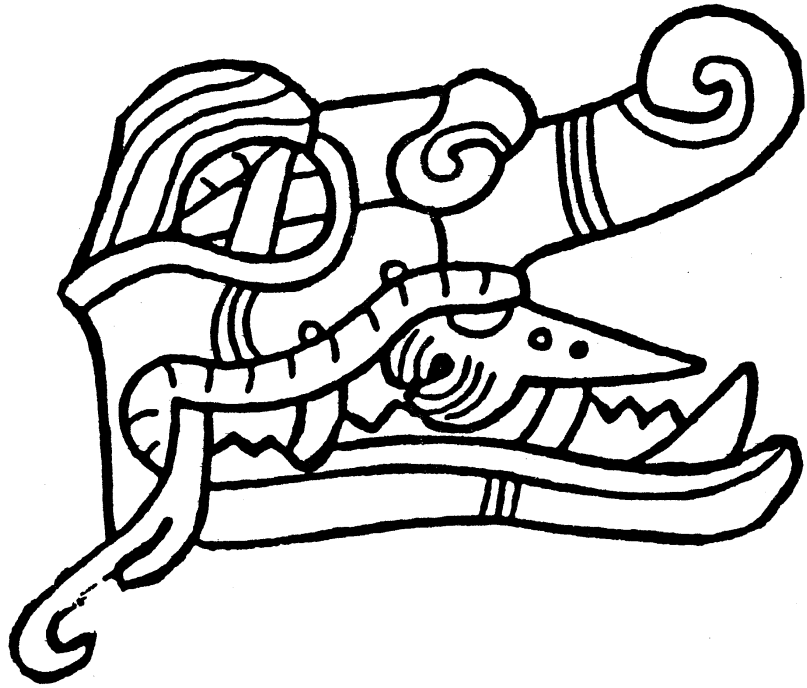


Crossed Bands across the eye area are frequently but not always present

These are not leaves of a plant or tree that has yet been identified. We are working to find the plant.

Crocodile Tree, Drawing by Lin Crocker of the large Early Classic Deletaille Cylindrical Tripod.

The “fang” is more like an elongated shark’s tooth. It is too short to be a convincing stingray spine. I discovered two stingray spines when I excavated the Tomb of the Jade Jaguar at Tikal, in 1965.



Cropped and cleaned by Hellmuth to show the shark's tooth in the crocodile jaws. From drawing by Lin Crocker. The image from Tikal is from the Penn project illustrators of Stela 31.



The front of Tikal Stela 31 has lots of aspects not often singled out (because most studies are of the "Teotihuacan" warriors on the two sides and on the hieroglyphic text on the back of this important monument. But I noticed and pulled out the crocodile head with a tooth very similar to that of the other illustration. No lower jaw visible on this stela.

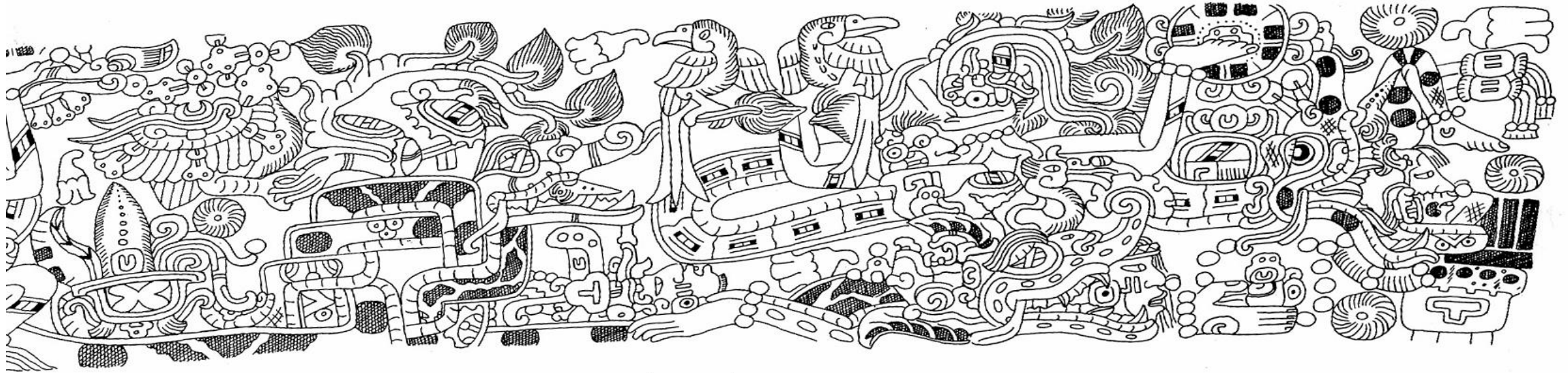
Would be interesting to find more reptile heads with "shark's teeth" featured. I would not be surprised if some are snakes or composite reptile monsters (snake + crocodile).



Surely there are a lot more “crocodile headdresses” on stelae. I hope to find a thesis, dissertation, or academic report where Tikal Stela 31 is pictured in many if any discussions of iconography of crocodiles. A helpful team of illustrators help me show the details after I find an image buried under other symbols. I thank Norma Cho Cu for her experience in this task.

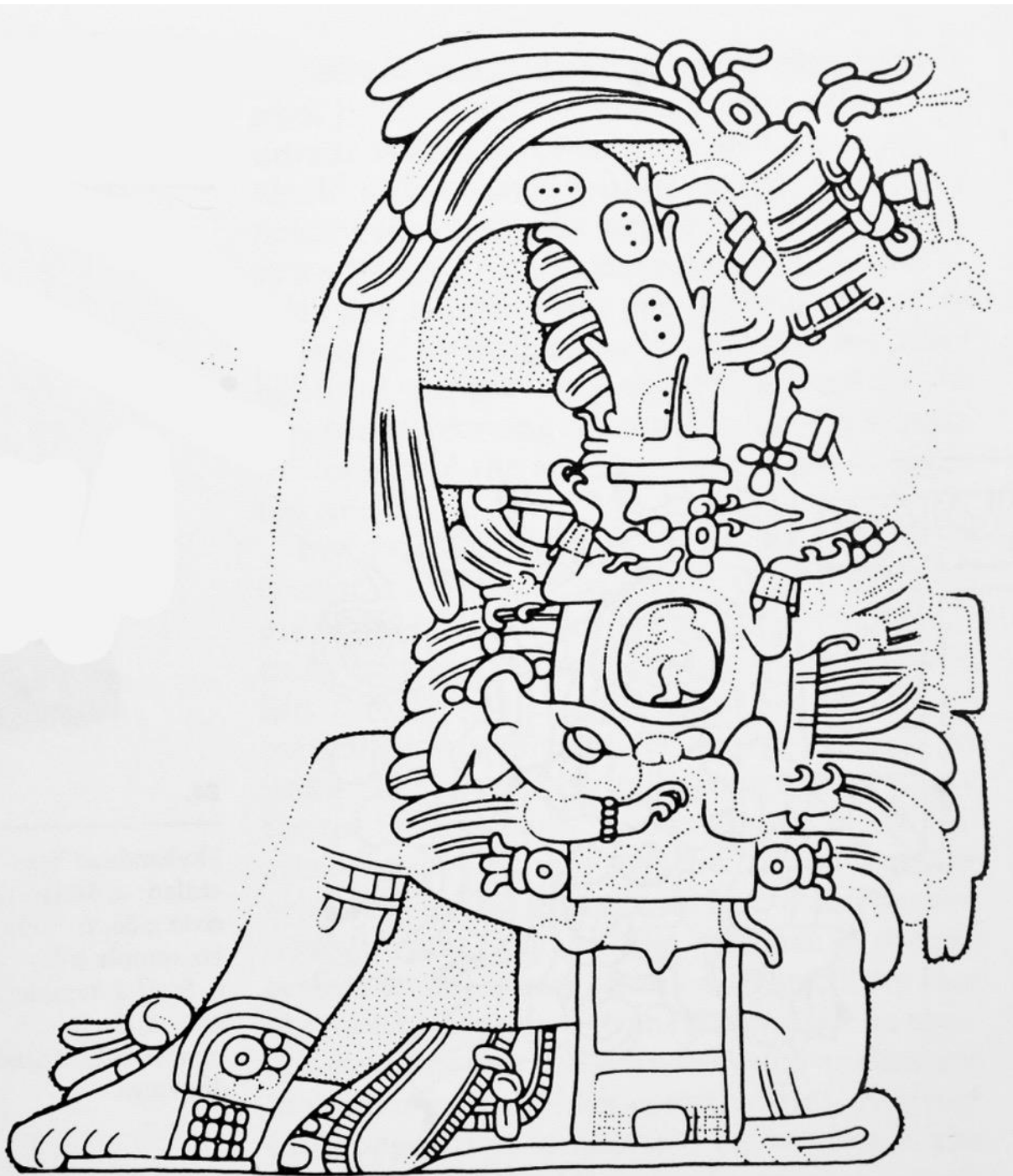




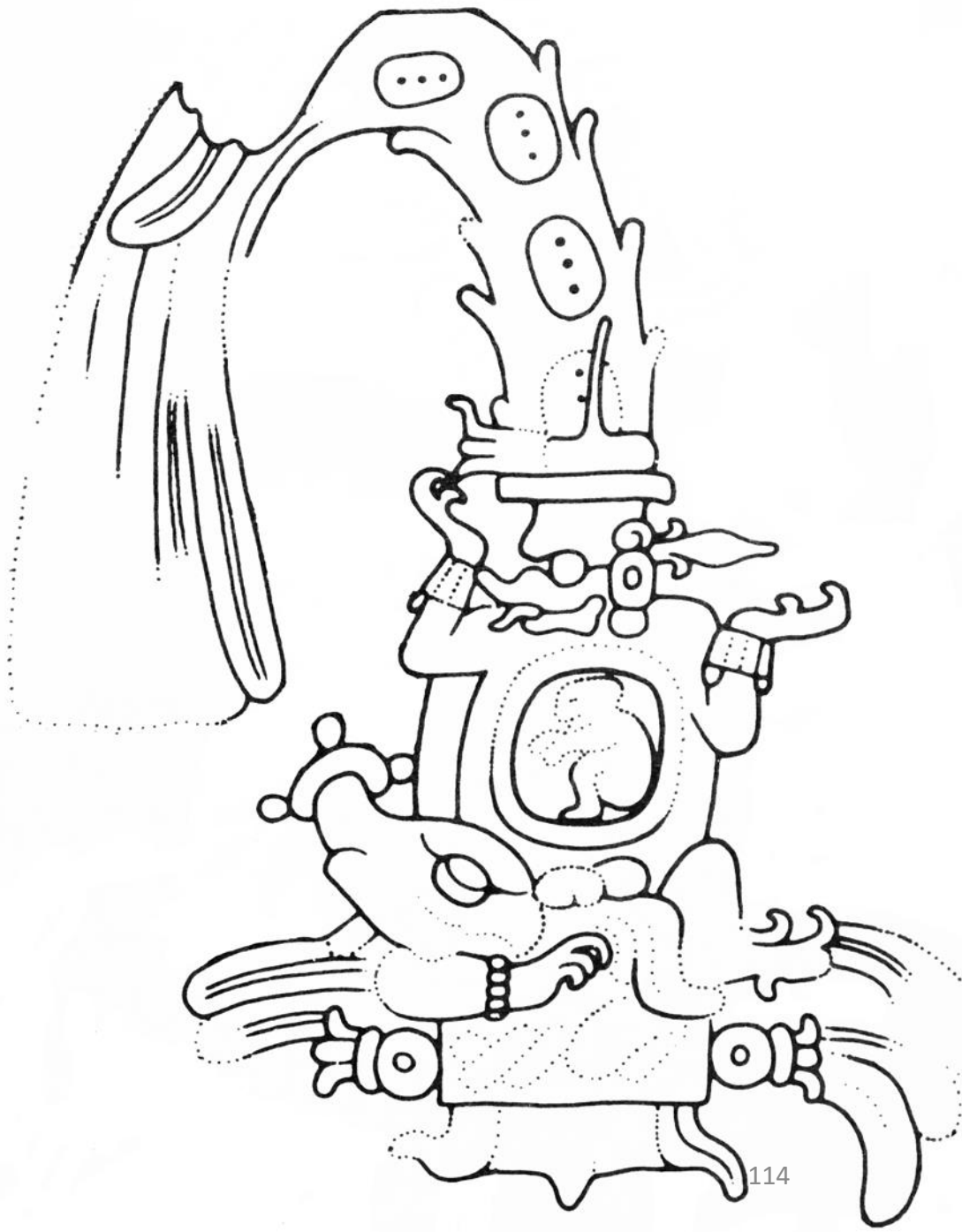


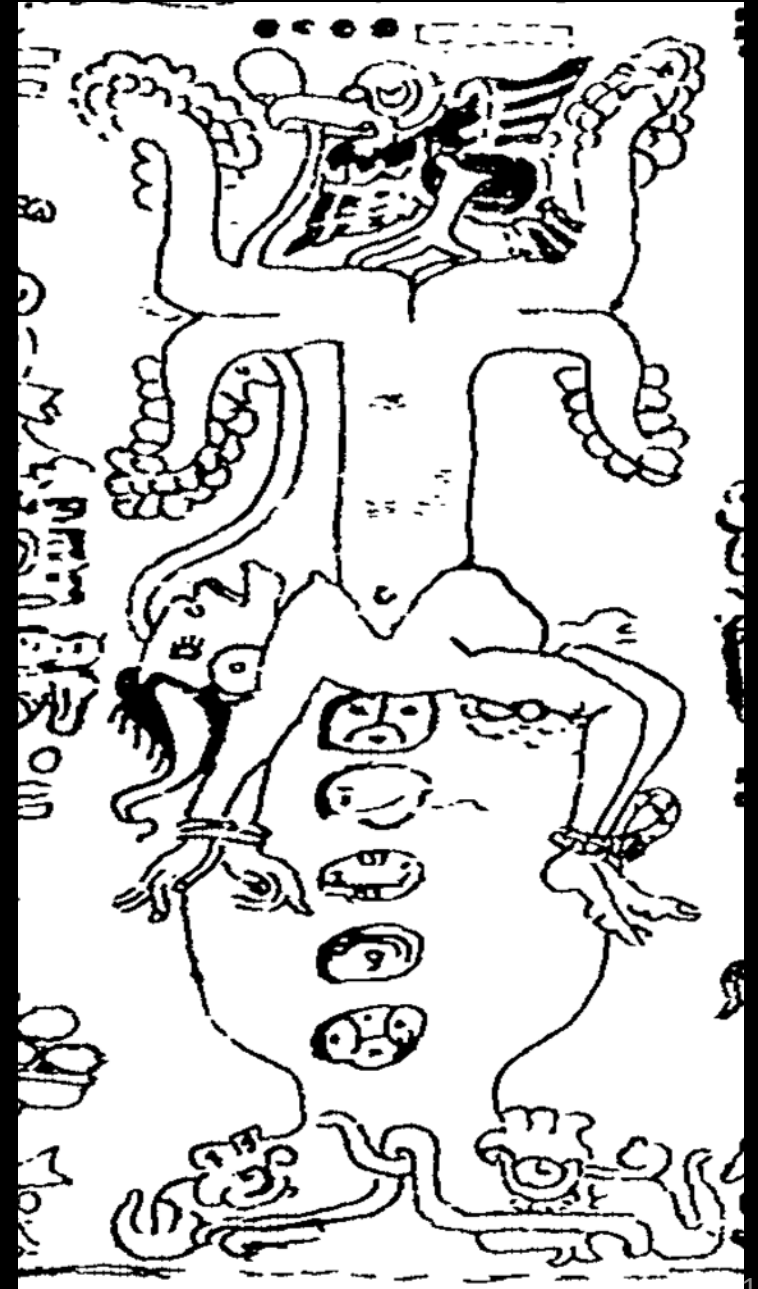
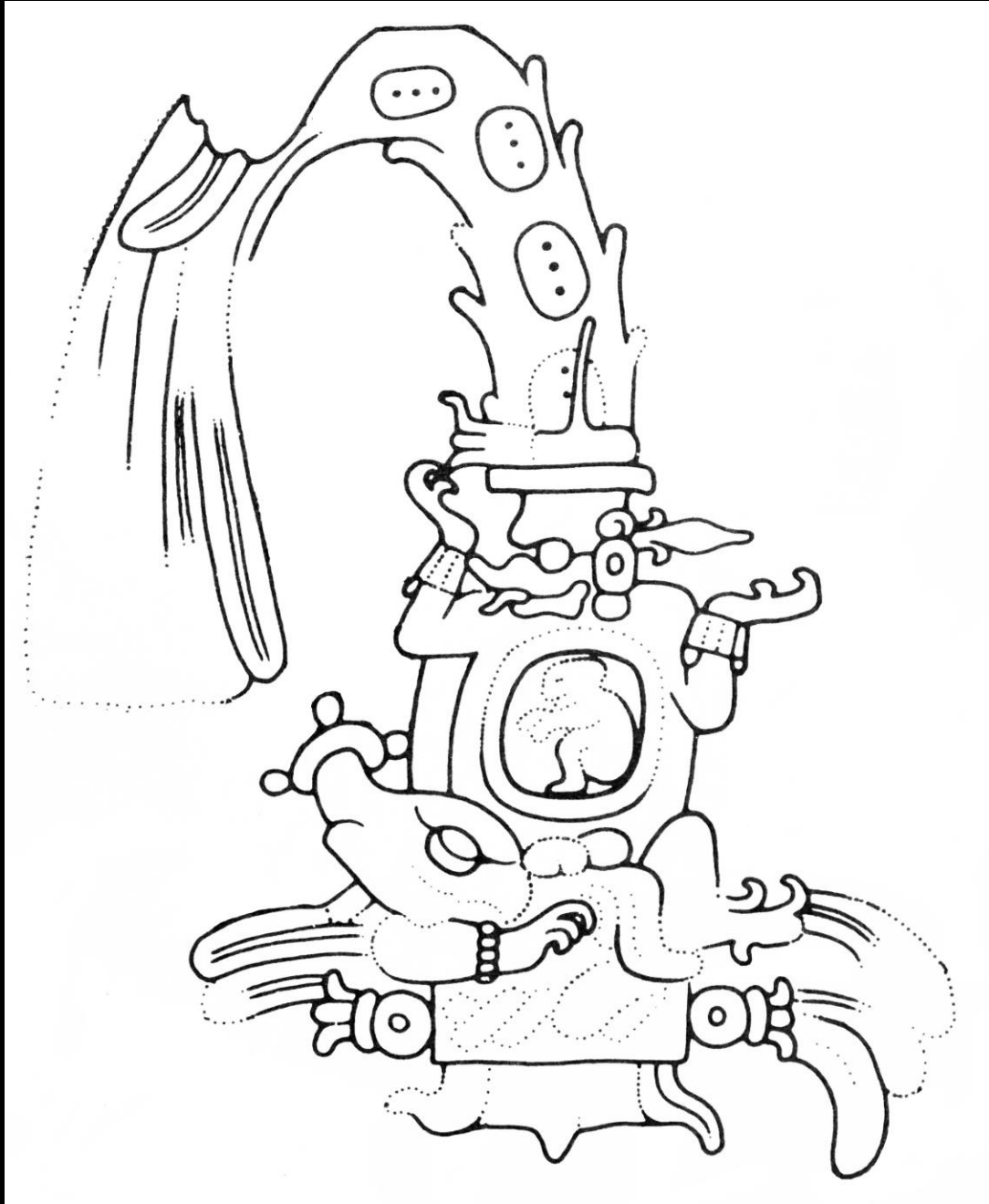
I first wrote about this scene decades ago. This is one of the most amazing ritual mythological scenes of an early Classic cylindrical tripod. The excellent, detailed, and accurate line drawing by Lin Crocker shows there is a lot still to study here.

Which are snakes? Which are crocodiles? Which are composite reptilian Monsters? How many “crocodile trees” or other sacred trees are pictured here?



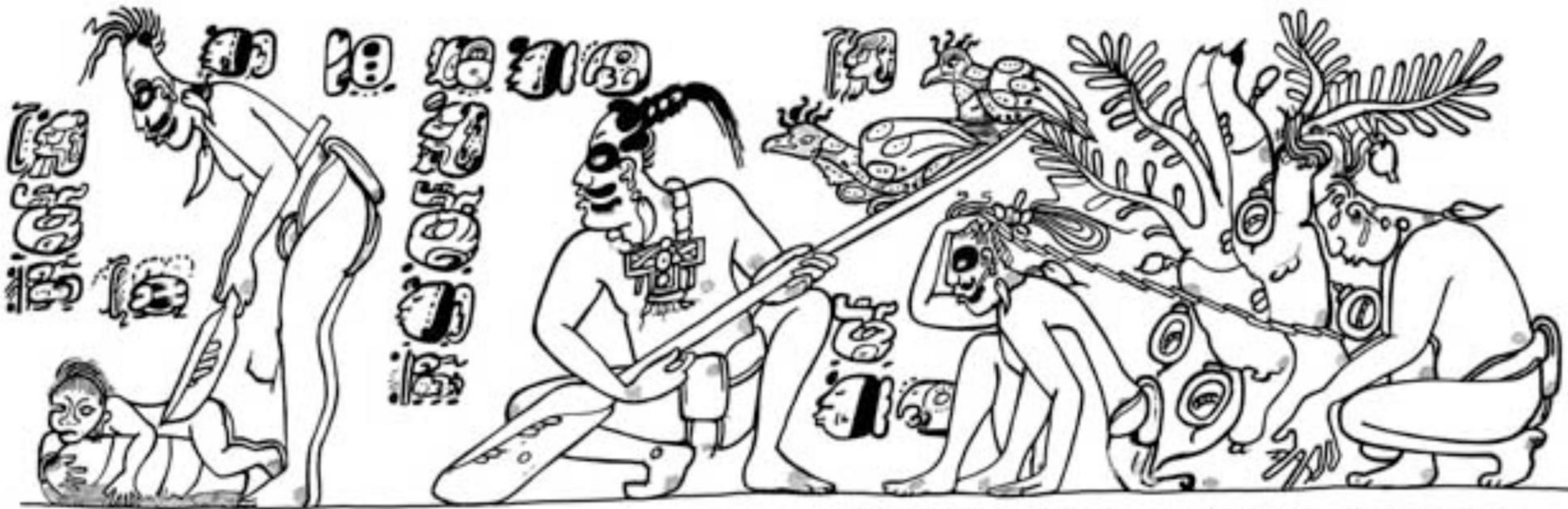
Crocodile  
Tree on  
chest of  
royal  
ballplayer  
at  
Yaxchilan,  
Chiapas,  
Mexico,  
illustrated  
in book by  
C. Tate.







The leaves are appropriate for *Crescentia cujete*, as are the fruits hanging from the trunk. Codex Style, no mention of degree of repainting. Kerr rollout, K1247.



K1247draw Drawing by Alexandre Tokovinine

This excellent drawing by Alexandre Tokovinine makes it easier to see that the tree seems to be carried by the now seated man, and the person behind is starting to plant it. The top of the tree reminds me of the stylized head of a deer. Even with two paddles, neither of these personages is a Paddler God.



Cauac Monster tree on steroids. Degree of repainting not mentioned. Kerr rollout, K1815. The leaves are *Crescentia*-like but the oval at the end I need to study.



Another crocodile tree rises from a bowl-like container. Codex Style. Hellmuth digital rollout, FLAAR Digital Photo Archive. This painting is authentic and was not “repainted” (pretending to “restore” but really just a clever way to create a glossy modern rendition (a fake)). This Codex Style is not faked not restored.

Since the digital rollout camera took a rollout that was several HUNDRED Megapixels in file size, we usually set the software to take at lower resolution, so this was at 37% of available resolution. This was a digital rollout camera from many decades ago. Today there is no computer OS that can handle it and no computer that can accept the size and shape of connector cords.

This crocodile tree is very different. First, it rises out of a bowl. Second, the sprout at the top and the “leaves” are not what you see on other Codex Style crocodile trees. Yet this painting is authentic.

A bat-man waves hello as an Old God points at the base of the tree.







Crocodile Tree rising out of some kind of a symbolic container. These flowers ticking out are not of any calabash tree species.

Codex Style, Kerr rollout photo, K1607.



Codex Style,  
Kerr rollout  
photo, K1607.

K1607



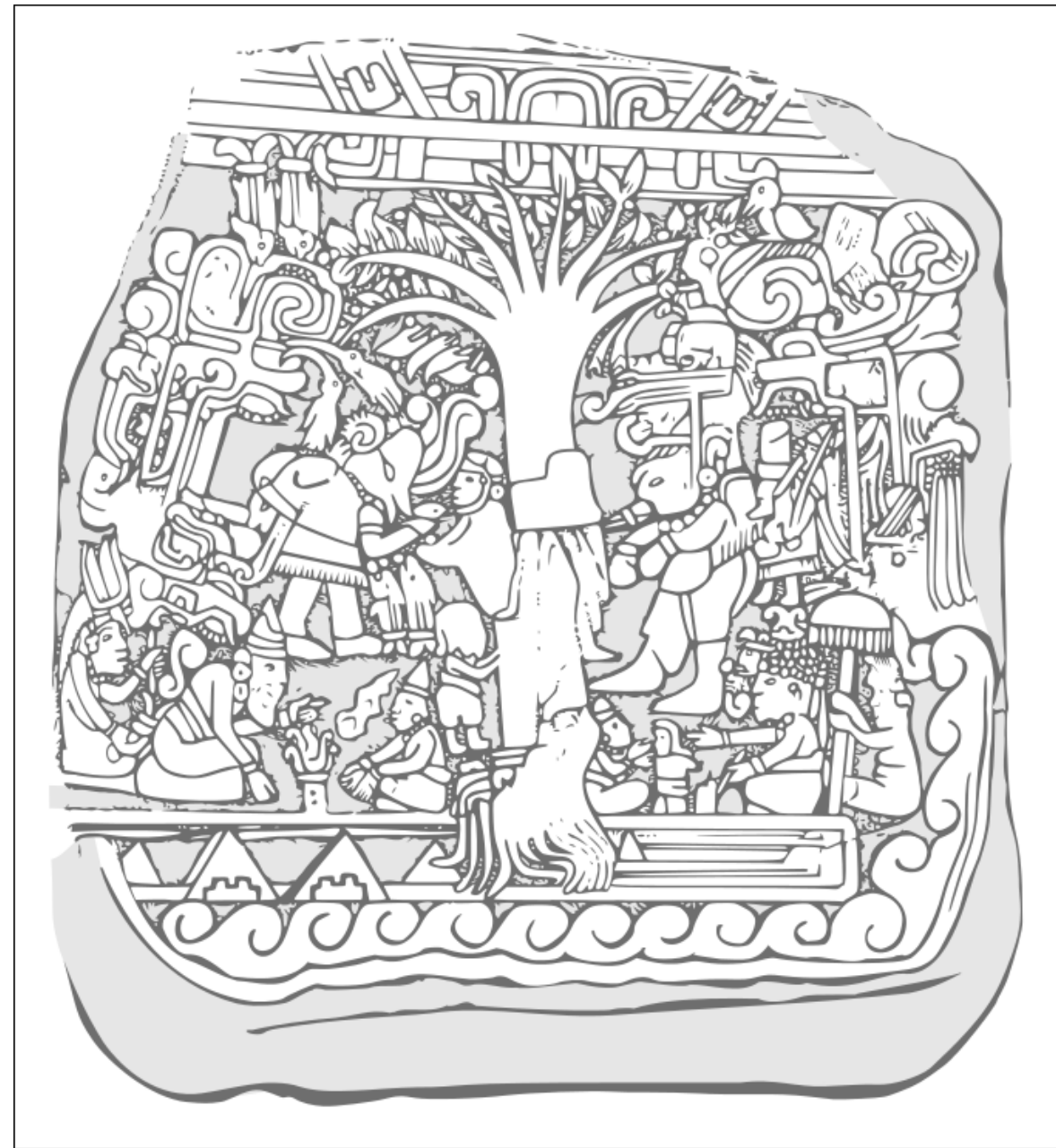
Leaves of this tree are *Crescentia* species. Fruits are gourds NOT cacao fruit. The Hero Twins or comparable are using their blowguns to shoot the Principal Bird Deity. Late Classic, Codex Style, Kerr rollout, K4546.



These leaves are neither *Crescentia alata* nor *Crescentia kujete*. These trees have no gourds on their limbs or trunk.

Nonetheless, the Izapa Stela 25 tree has a Principal Bird Deity nearby.

Simplified drawing of Izapa Stela 25, Schele, SD-6904.



Simplified drawing of Izapa Stela 5.



There are several different trees of the Maya Lowlands that are named Palo de Lagarto. Lagarto means crocodile in local slang; not lizard.

But most of these Palo de Lagarto trees have rough bark as here; so no conical spines.

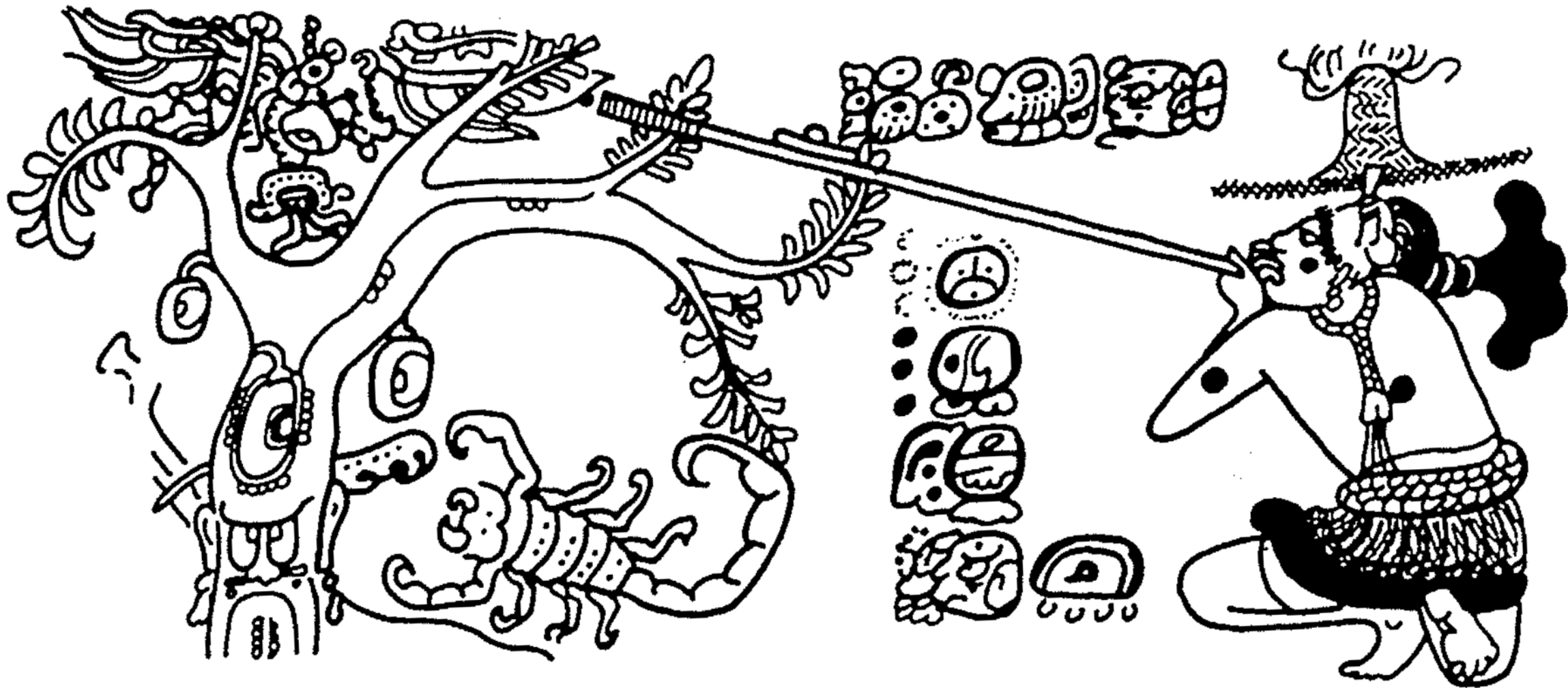
So a lot more study of trees are needed to identify those “Crocodile Trees” that are not *Crescentia*.





Anthropomorphic tree of different kind, with open deity face and open mouth instead of crocodile. The tree is clearly pictured as a jicara tree, *Crescentia cujete*. These grow in moist areas that are also seasonally dry. We have found crocodiles in Peten not far from *Crescentia cujete* trees (PNLT Savanna #13).

The Hero Twins are shooting their blowgun pellets at the Principal Bird Deity. Kerr rollout photo, K4546.



Here is this kind of a tree in front view (so you can see the tree trunk variant of the Loincloth Apron Face). Hunapu is shooting Seven Macaw (The Principal Bird Deity), atop a *Crescentia cujete* tree. The leaves and fruits are what we find in seasonally inundated savannas throughout the Reserva de la Biosfera Maya (RBM), Peten. Drawing by Karl Taube in Tedlock 1996: 78 edition of Popol Vuh. 127

Tree with deity head at base of trunk. This tree trunk deity head has more details than most others.

This is not a Crocodile Tree because it has no crocodile at its base, but nonetheless it has a Principal Bird Deity perched on its top.

No noticeable leaves and no noticeable fruits.

Drawing by Simon Martin, based on and cited to photograph of Hellmuth from FLAAR Photo Archive; Martin 2015: Fig. 37,a.

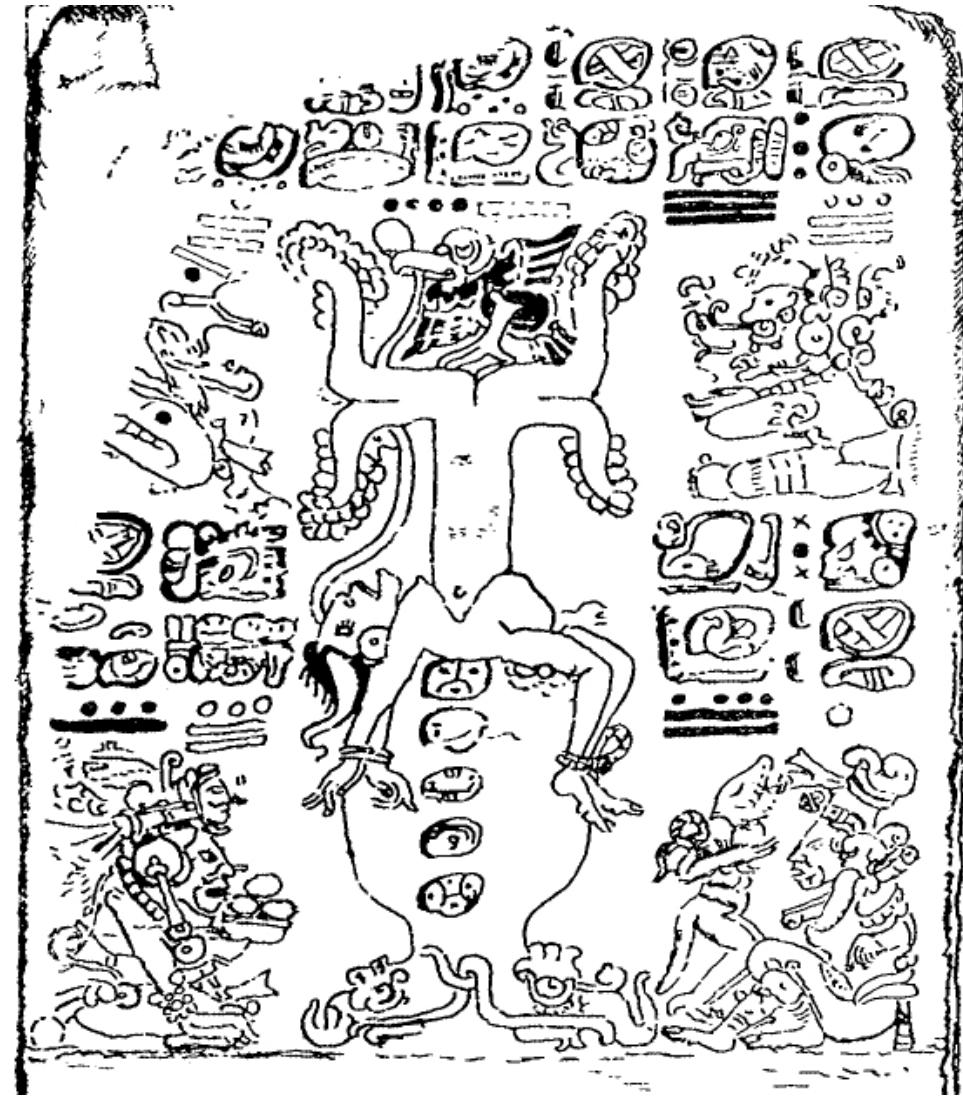
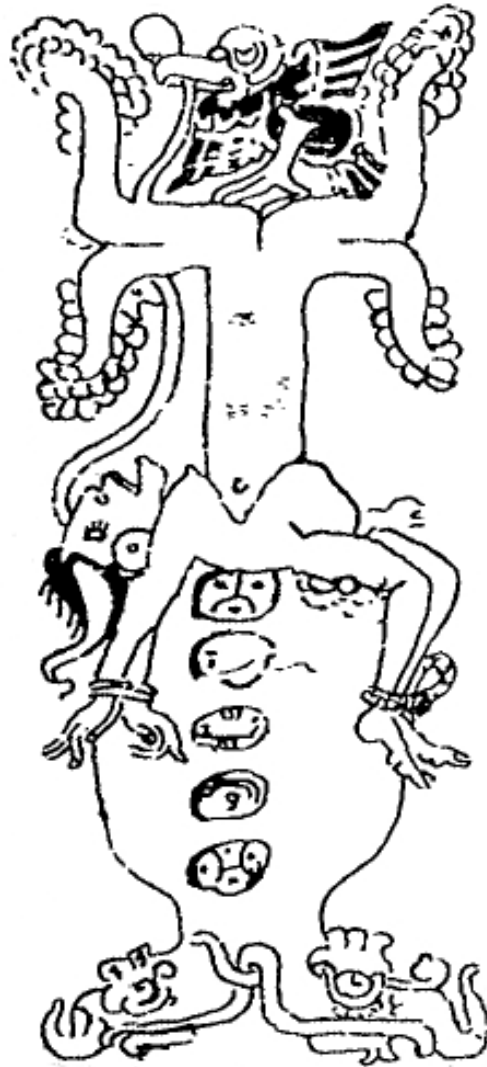
I estimate this is God D, since God N is more associated with wetlands.





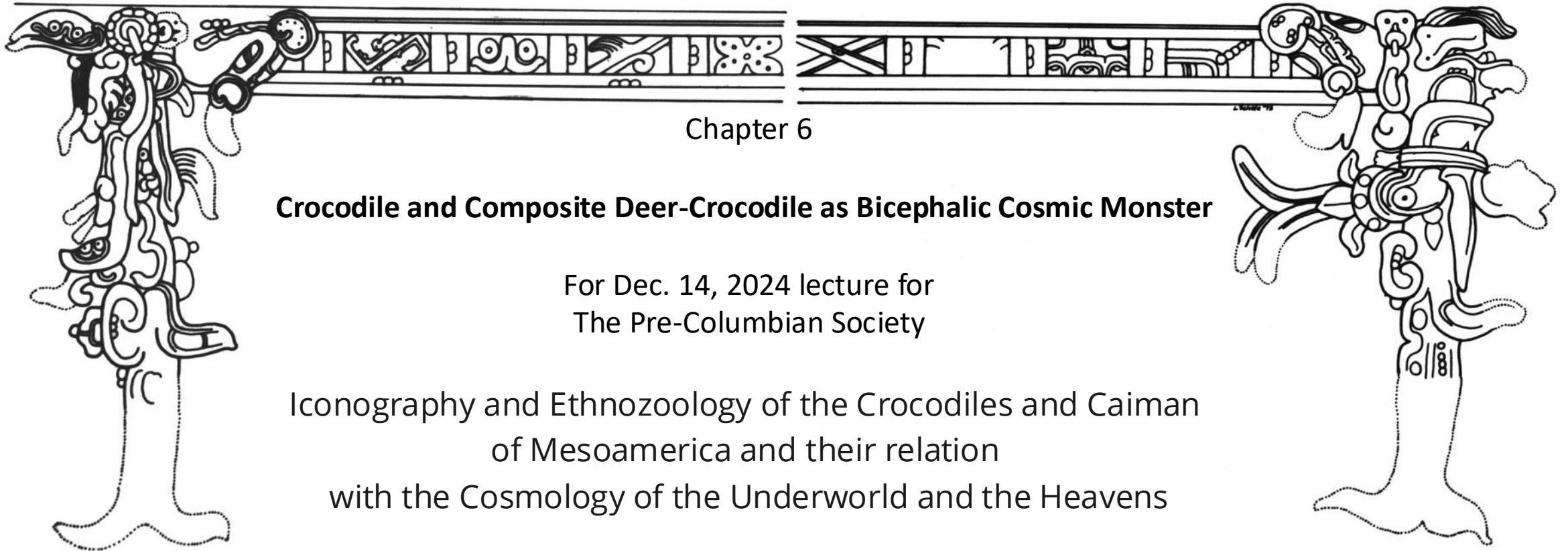


The crocodile trees of the codices are worth studying.



Dresden Codex, Page III, Villacorta and Villacorta page 16.

The swollen trunks are Ceiba-like; the triangular spines are Ceiba-like. But the cluster of leaves is not related to any Ceiba tree.

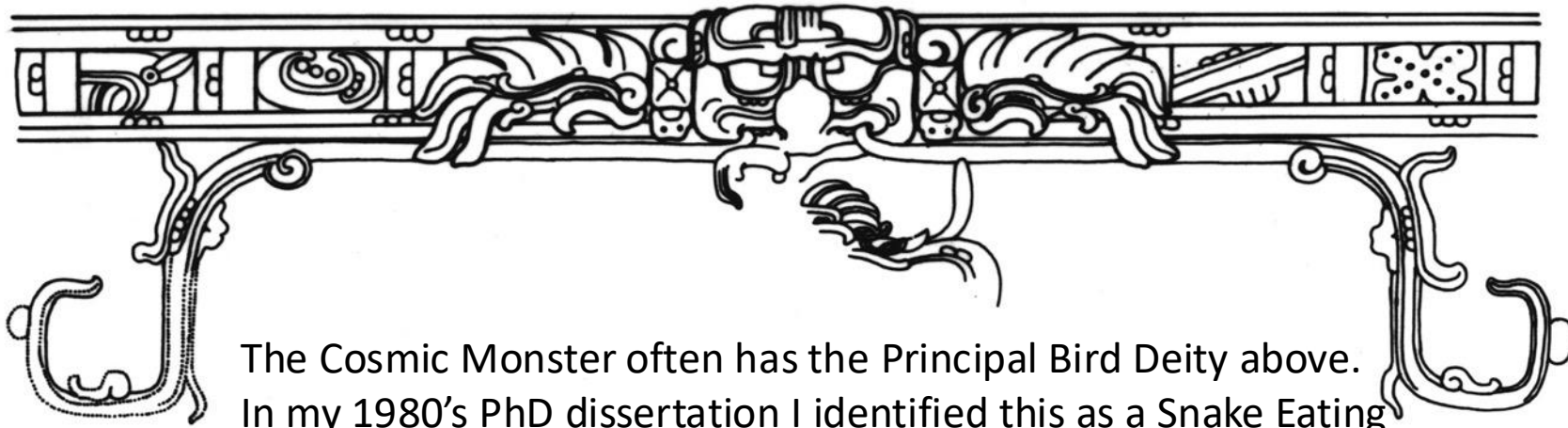


Chapter 6

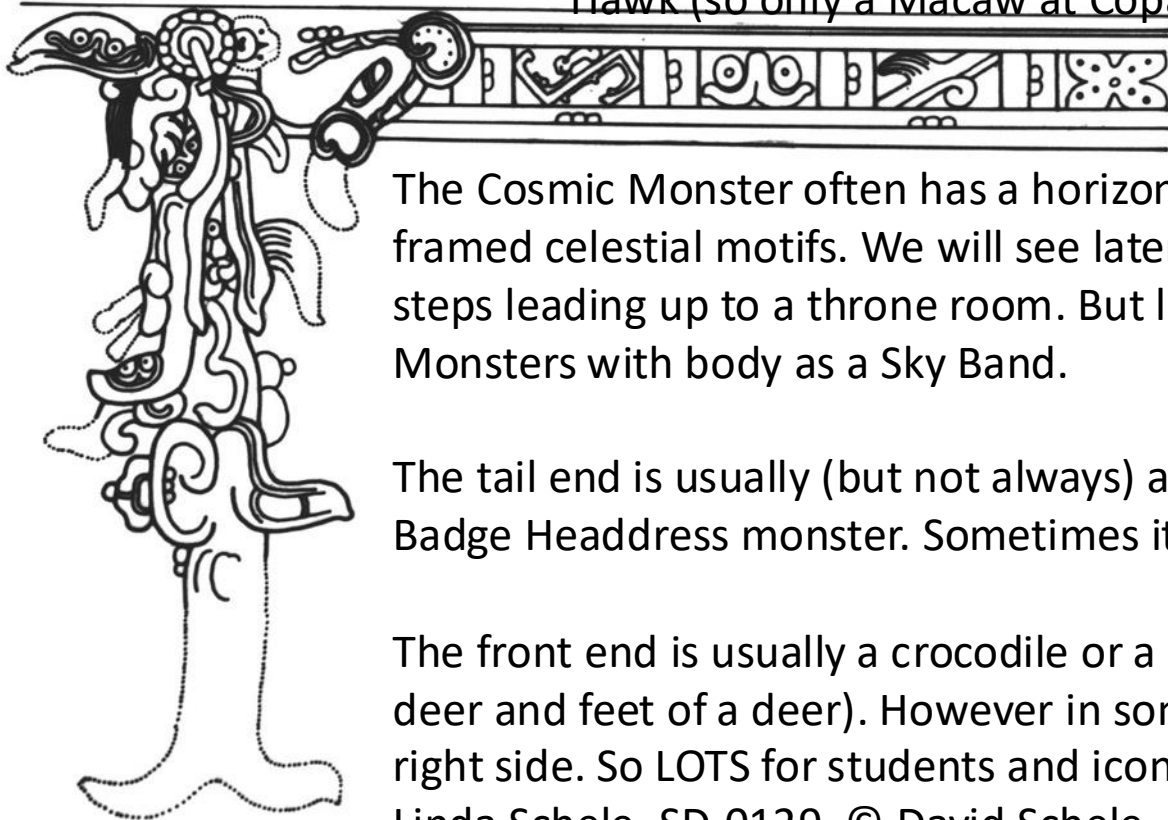
**Crocodile and Composite Deer-Crocodile as Bicephalic Cosmic Monster**

For Dec. 14, 2024 lecture for  
The Pre-Columbian Society

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



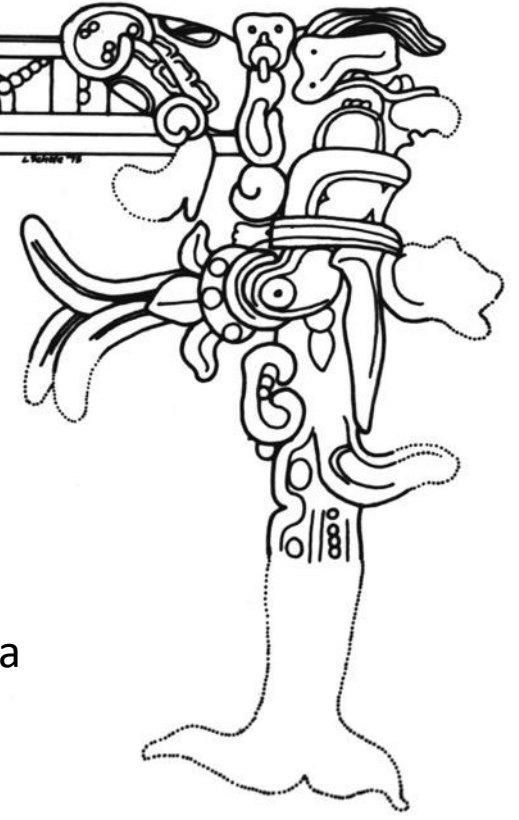
The Cosmic Monster often has the Principal Bird Deity above. In my 1980's PhD dissertation I identified this as a Snake Eating Hawk (so only a Macaw at Copan and in the Popol Vuh).

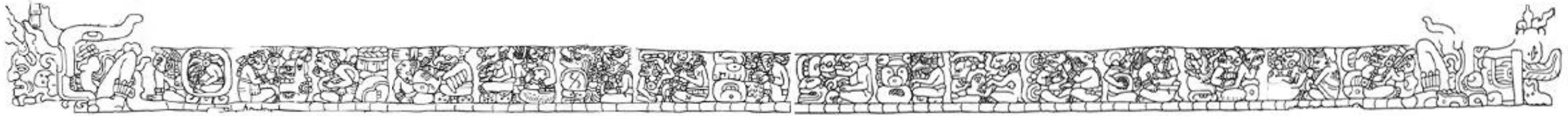


The Cosmic Monster often has a horizontal Sky Band of rectangular-framed celestial motifs. We will see later that the Sky Band can often be steps leading up to a throne room. But let's start with horizontal Cosmic Monsters with body as a Sky Band.

The tail end is usually (but not always) an upside-down Quadripartite Badge Headdress monster. Sometimes it faces up.

The front end is usually a crocodile or a composite crocodile-deer (ear of a deer and feet of a deer). However in some scenes the crocodile is at the right side. So LOTS for students and iconographers to study. Drawing by Linda Schele, SD-0129, © David Schele. Drawing courtesy Ancient Americas at LACMA (ancientamericas.org).

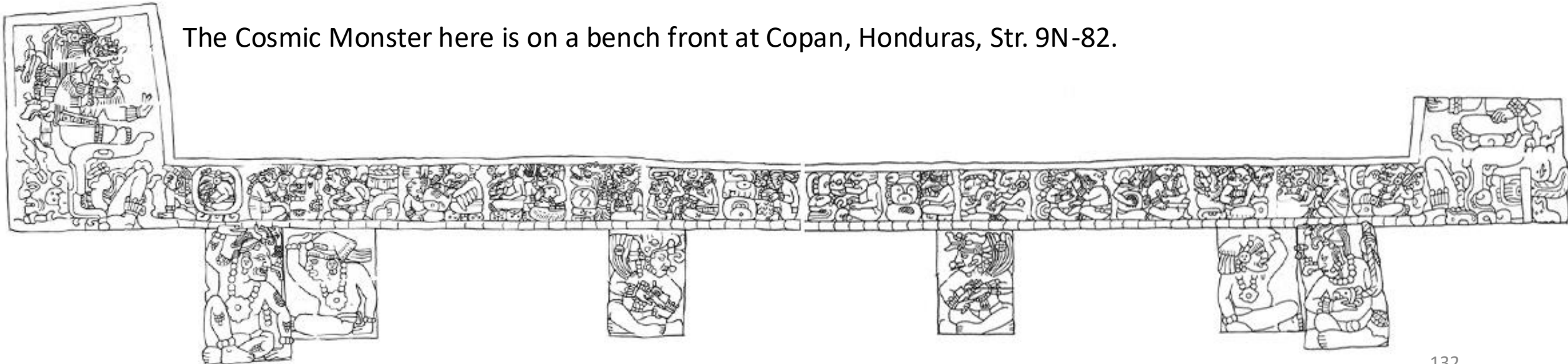




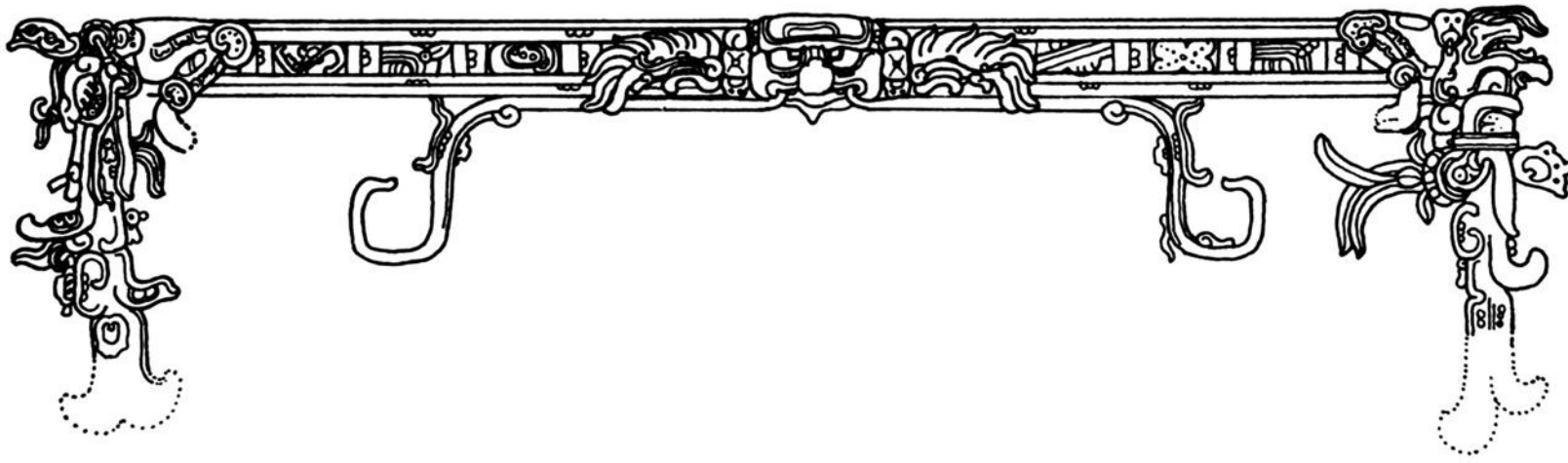
The Cosmic Monster has been studied and published by many capable iconographers. Originally it was named “Bicephalic” dragon (Two-Headed dragon). There is a Cosmic Monster featuring a crocodile at one end (shown here). There is also a Cosmic Serpent that is focused on Water Lilies (McDonald and Stross 2012). Often crocodiles and snakes are merged to create a variant composite monster.

There is also a Cosmic Shark (Christopher Layser). I have found a shark tooth featured in several Maya crocodile monsters. But now let’s look at the Cosmic Monster with crocodile aspects; Cosmic Monster with the body of a snake is also common (so no feet are shown, such as Tikal Temple IV, Lintel 3).

The Cosmic Monster here is on a bench front at Copan, Honduras, Str. 9N-82.

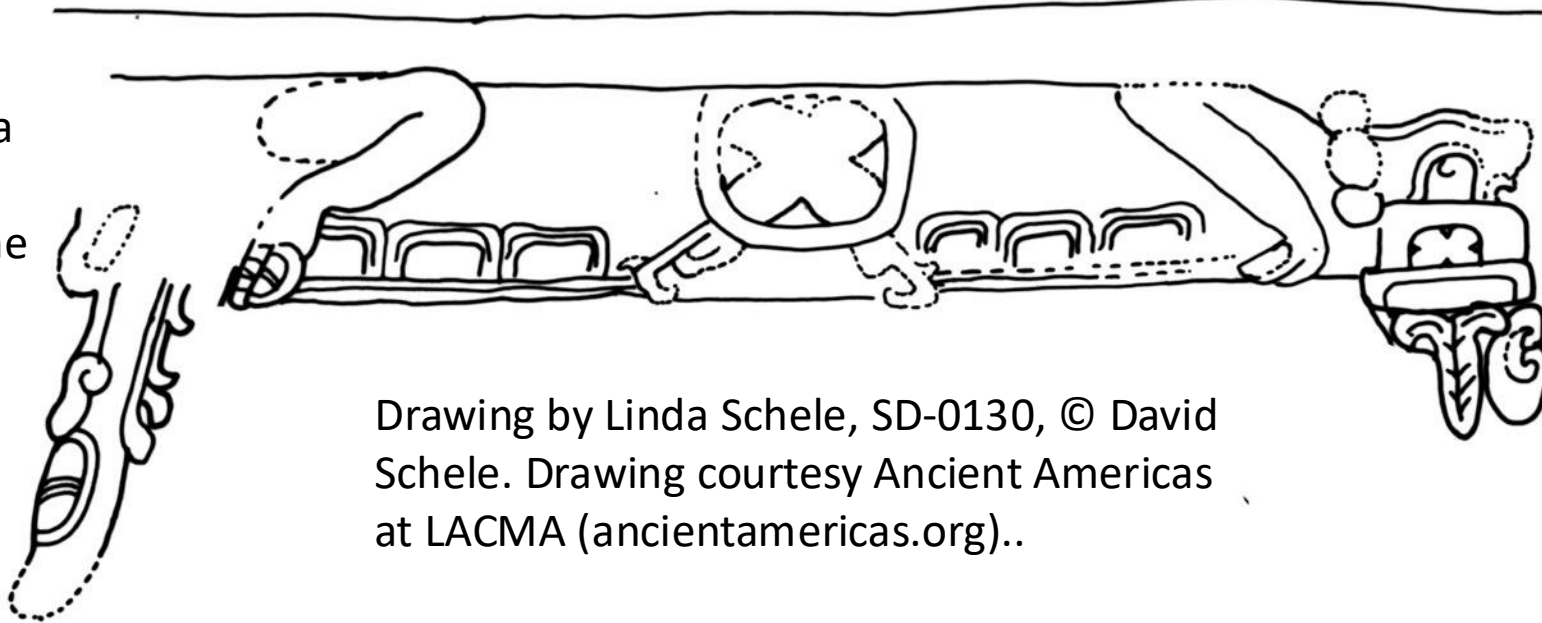


As traditional, the Quadripartite Badge Headdress is upside down. There are deer legs and hooves as well.



Drawing by Linda Schele, SD-1108, © David Schele. Drawing courtesy Ancient Americas at LACMA (ancientamericas.org).

Hoof of a deer, leg of a deer; deer ear broke off long ago. Across the base are reptile underbelly designs. And the face is a lot longer and with more large separated teeth than a deer would have.



Drawing by Linda Schele, SD-0130, © David Schele. Drawing courtesy Ancient Americas at LACMA (ancientamericas.org)..

The Quadripartite Badge Headdress is upside down and usually at the end of the Cosmic Monster (but in other scenes is at the front).

Let's now go focus on Late Classic Cosmic Monsters; Palenque has more than anywhere else.

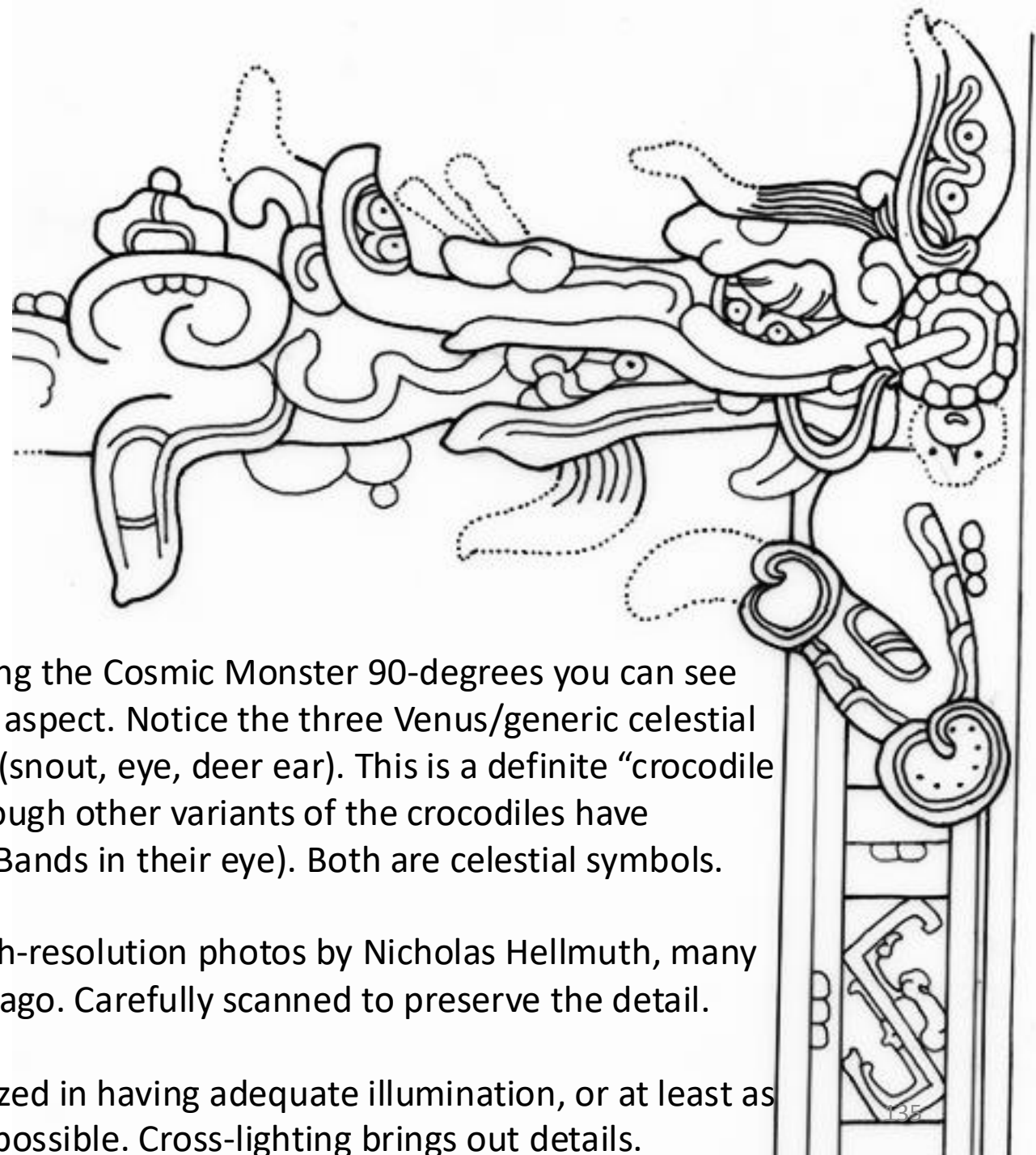
Here is the deer ear

The deer hoof  
broke off decades  
ago but the  
shoulder and elbow  
remain (we know  
it's a deer leg from  
lots of other  
examples).

But the jaws are a  
tad longer and the  
Palenque artist  
shows more fangs  
than a deer would  
have.

Stucco decoration  
photographed by  
Nicholas Hellmuth  
decades ago.





By rotating the Cosmic Monster 90-degrees you can see the deer aspect. Notice the three Venus/generic celestial symbols (snout, eye, deer ear). This is a definite “crocodile eye” (though other variants of the crocodiles have Crossed Bands in their eye). Both are celestial symbols.

Crisp high-resolution photos by Nicholas Hellmuth, many decades ago. Carefully scanned to preserve the detail.

I specialized in having adequate illumination, or at least as good as possible. Cross-lighting brings out details.

Crocodile front of Cosmic Monster at Copan. The back is Quadripartite Badge (not upside down). Cauac Monsters are on the top and both sides (rare for a Cosmic Monster). The generic celestial symbol is often in the eye of the Starry Eye Deer, and often also in the ear. Or here, Copan CPN 25, Altar of Stela M, is just featured on the ear.

There is a separate FLAAR Report on this Copan CPN 25 Cosmic Monster being issued late August or early September 2023. That report will show front, back and both sides in high-resolution photos taken at night.



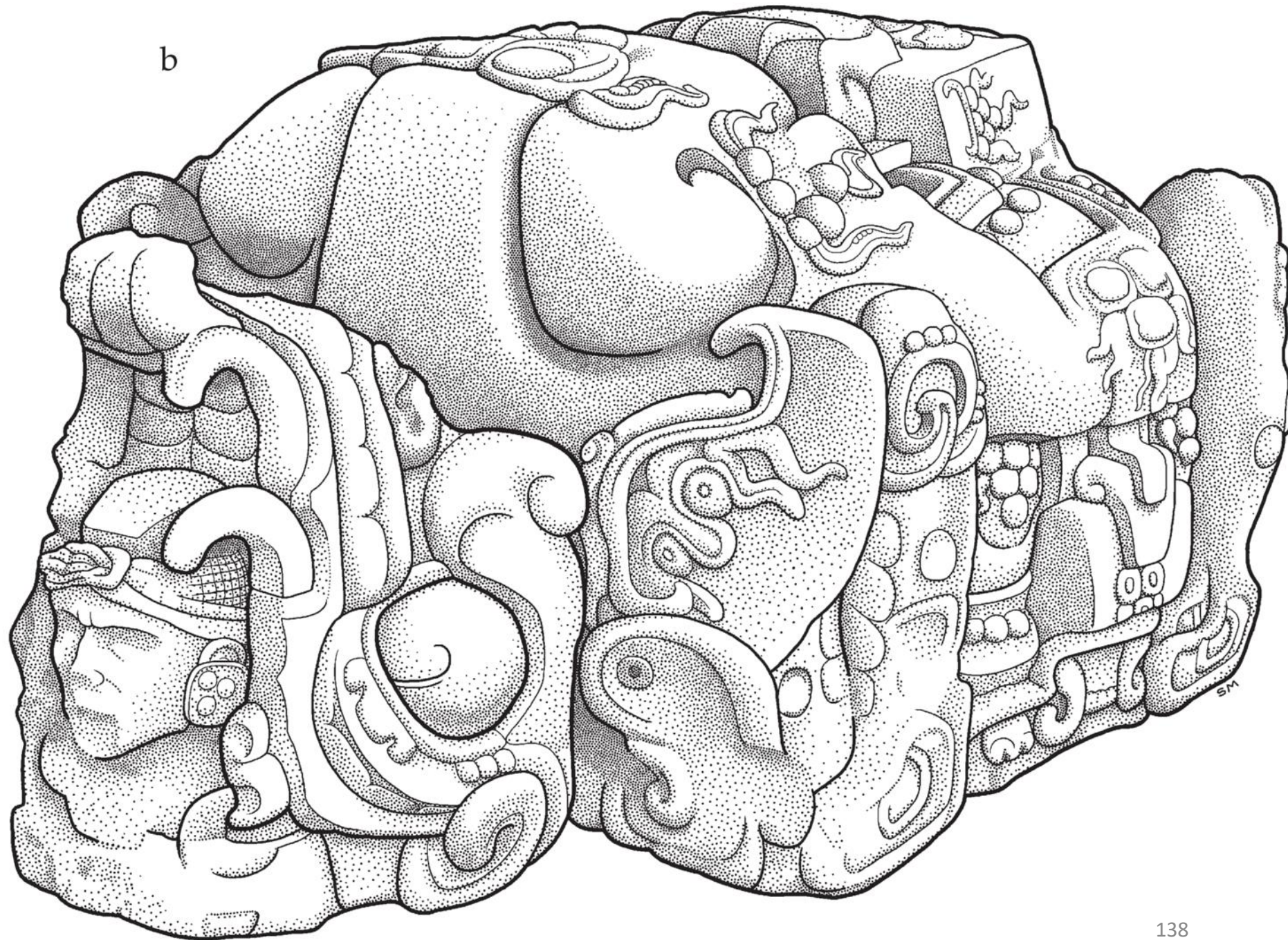




To assist recognizing the Starry Ear Deer aspect. The face is crocodile; legs and hooves are deer. We show the hooves in the separate upcoming FLAAR Report on this CPN 25, Altar of Copan Stela M.



This drawing by Simon Martin is the most helpful style of illustrating a deep-relief 3-dimensional zoomorphic altar. Each different style helps, but this image shows the Old Man God coming out of the open jaws of the crocodile; shows the Cauac Monster at top and right side. And especially, shows the deer ear with generic celestial symbol. Plus, this drawing documents that this crocodile's eye has neither Crossed-Bands nor the Starry Eye. Martin 2015: Fig. 39,b. That excellent article is worth reading.

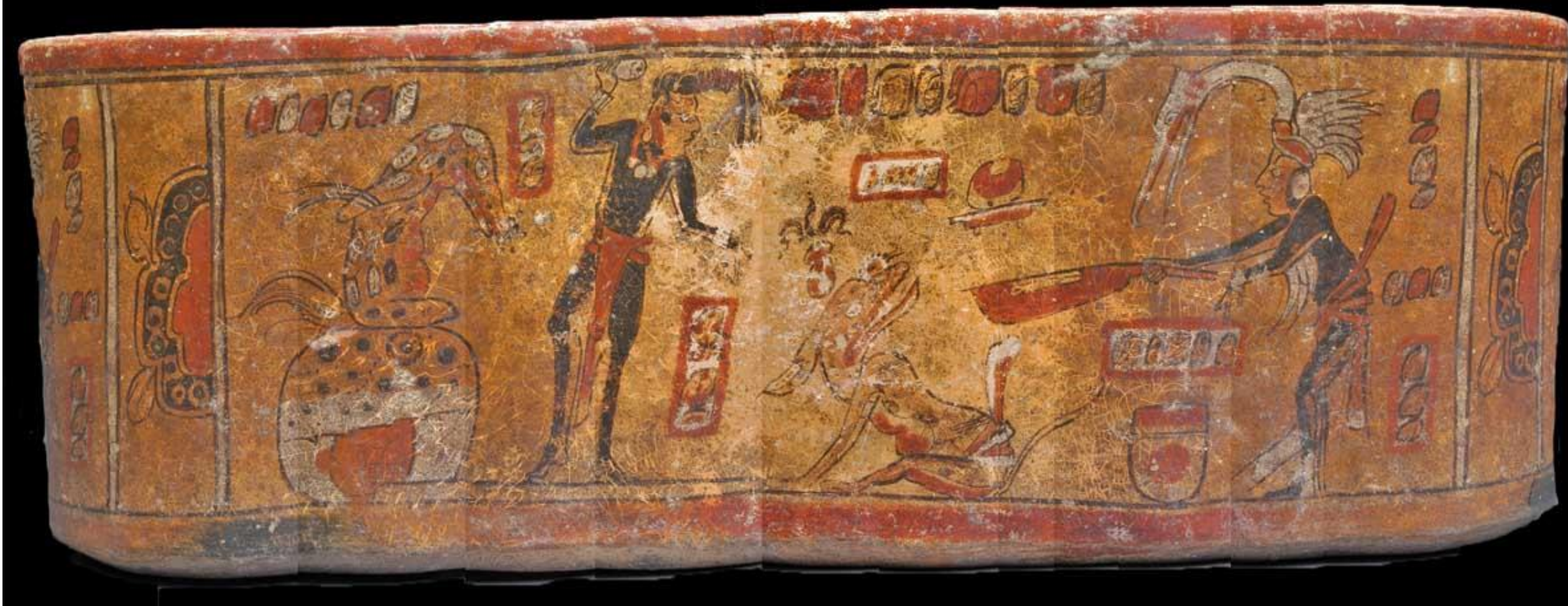


The deer aspect is clearly emphasized in this Palenque stucco. Above is the Cosmic monster with “crocodile” head at left (with deer feet).

Below is a “Deer Snake” (no crocodile), but fingers instead of hooves.

Drawing by Linda Schele, SD-130, © David Schele  
Drawing courtesy  
Ancient Americas at  
LACMA  
([ancientamericas.org](http://ancientamericas.org)).





Deer with oval designs on their bodies, that remind me of some stylized crocodiles. Deer with elongated mouths; the one seated in humanoid form has its mouth opened in a crocodile-like manner. Kerr manual rollout, K9149. I show these two deer in close-up view on the next page. I am curious whether the “crocodile-like” row of oval symbols on these deer has been commented on before?



Deer with oval designs on their bodies, that remind me of some stylized crocodiles. Deer with elongated mouths; the one seated in humanoid form has its mouth opened in a crocodile-like manner. Kerr manual rollout, K9149.

Cropped by Hellmuth so you can see the reptile scales, the iguana-like crest on its top middle, and its deer hooves on the front leg.

The face of the creature is not the length of a normal crocodile but I would need to check whether an iguana has three teeth in this position and size. Potentially a composite: deer, crocodile, iguana-sized head.

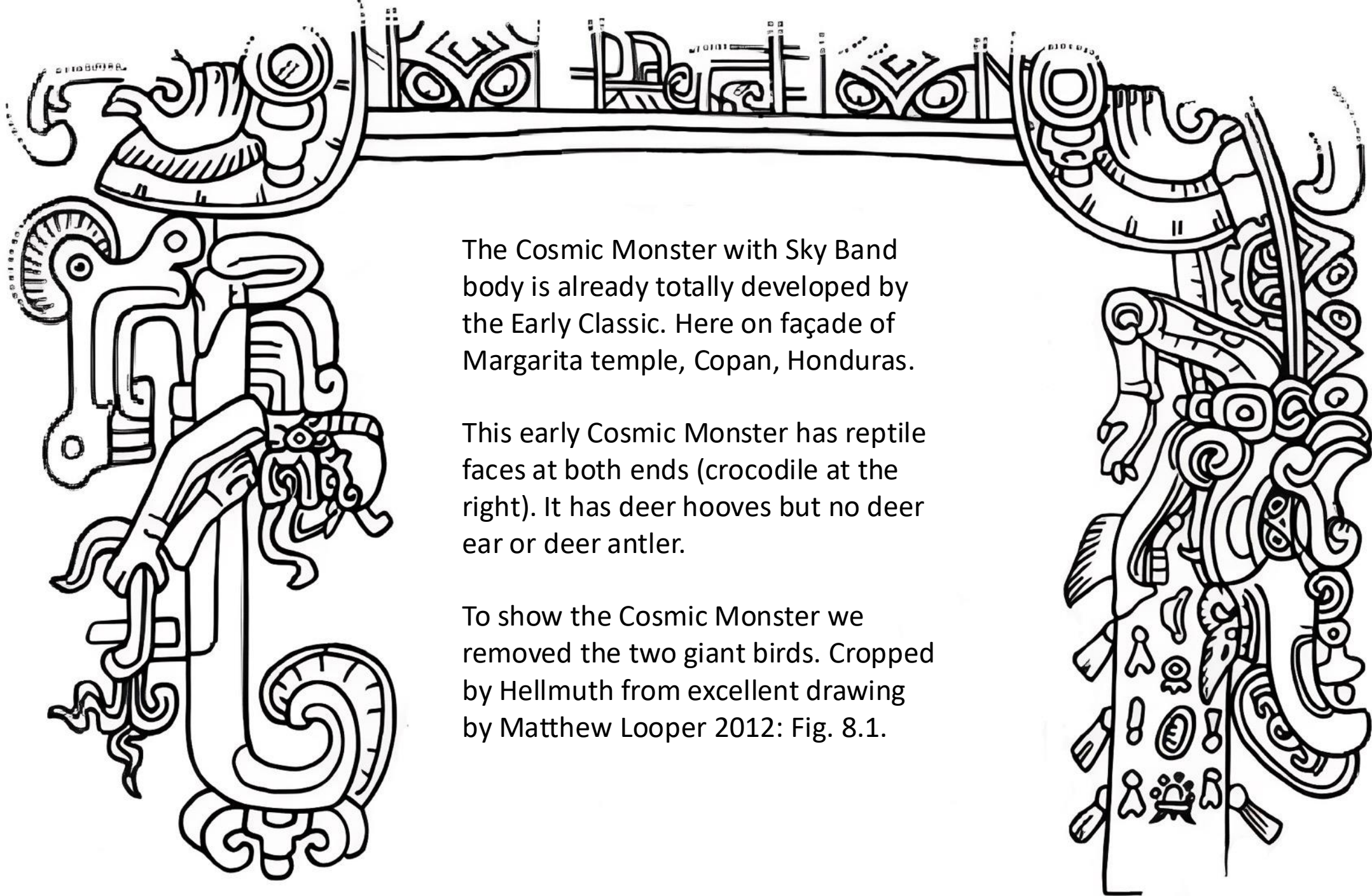
The body is a traditional Sky Band, but not many reptile belly scales are shown.

This Cosmic Monster is “up in the sky”.

This scene is in hundreds of articles and web pages and in many books.



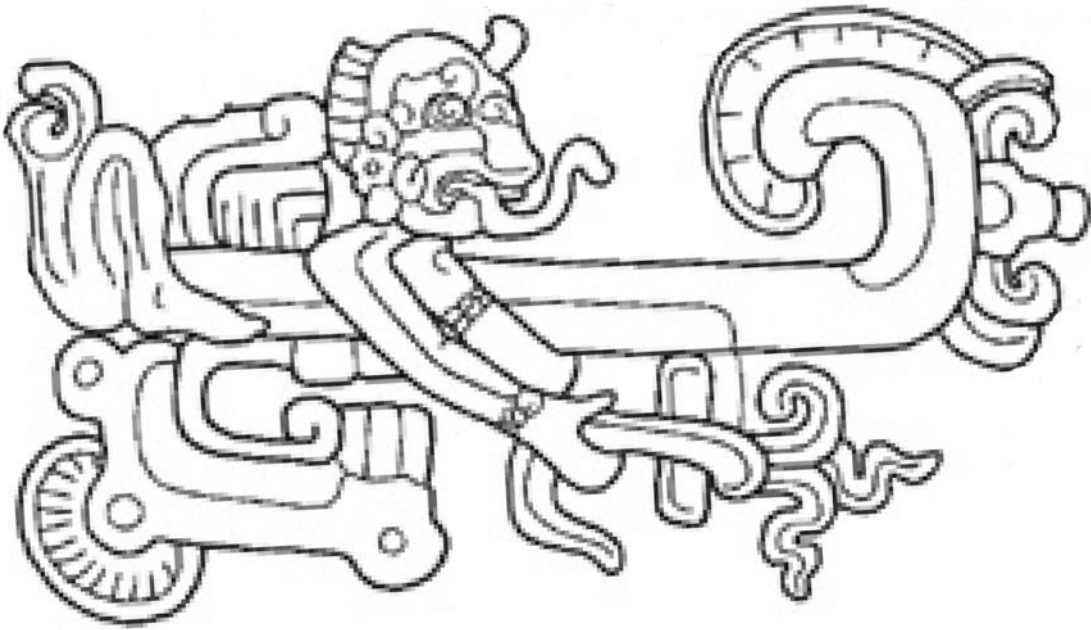
Codex  
Dresden  
page  
LXXIV,  
Villacorta  
and  
Villacorta  
page 158.



The Cosmic Monster with Sky Band body is already totally developed by the Early Classic. Here on façade of Margarita temple, Copan, Honduras.

This early Cosmic Monster has reptile faces at both ends (crocodile at the right). It has deer hooves but no deer ear or deer antler.

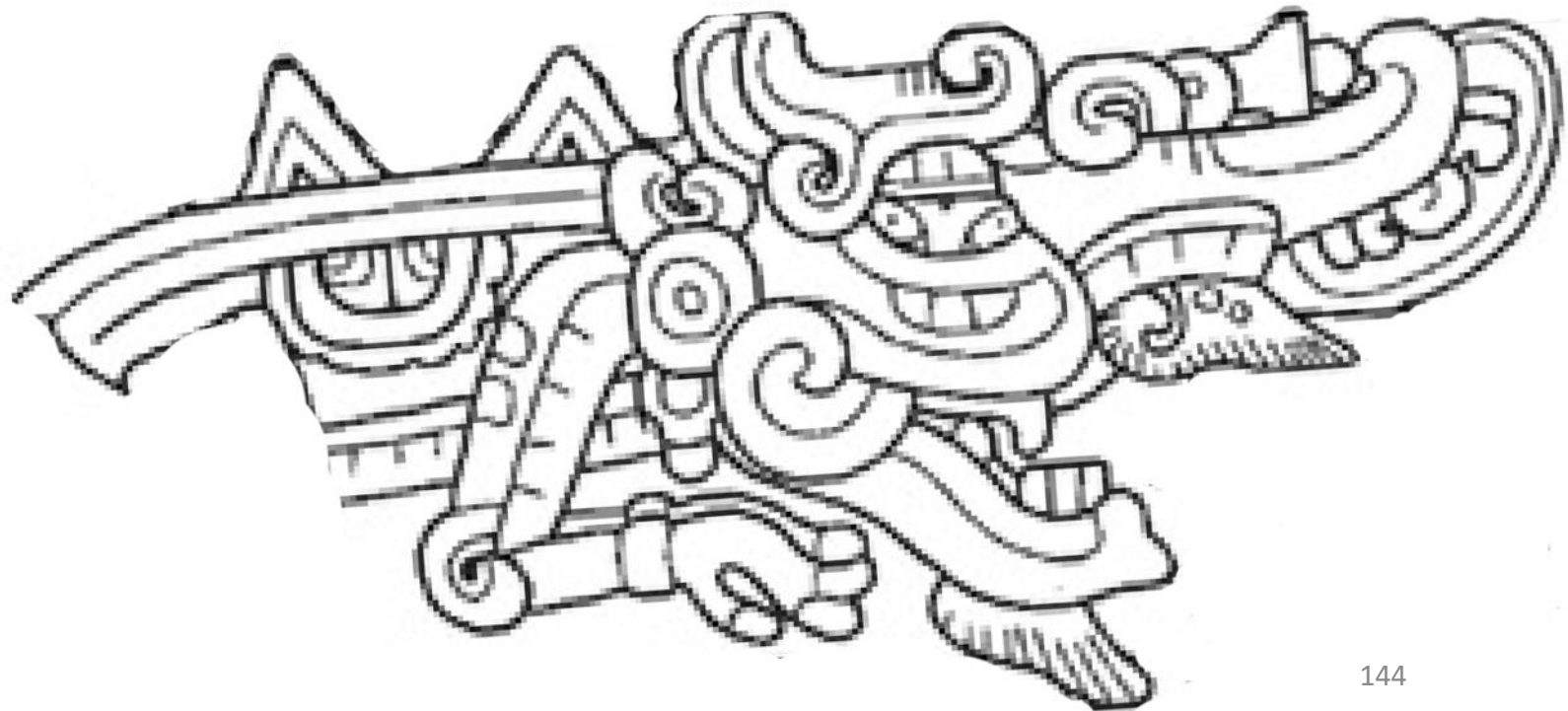
To show the Cosmic Monster we removed the two giant birds. Cropped by Hellmuth from excellent drawing by Matthew Looper 2012: Fig. 8.1.



Crocodile at right has human-fingers but the upper arm has reptile scale marks. Front fang is what I prefer to call a shark's tooth. Eye is of a Starry Eye Deer. No deer ear is present.

I enlarge each drawing on a 32" 4K monitor (5K is too expensive and 4K is enough, unless you win the Lottery). Once the drawing is enlarged I use Photoshop with a white brush to remove the areas so we can all focus on the aspects that I am working on.

Cropped by Hellmuth from excellent drawing by Matthew Looper 2012: Fig. 8.1. Copan, Margarita stucco.



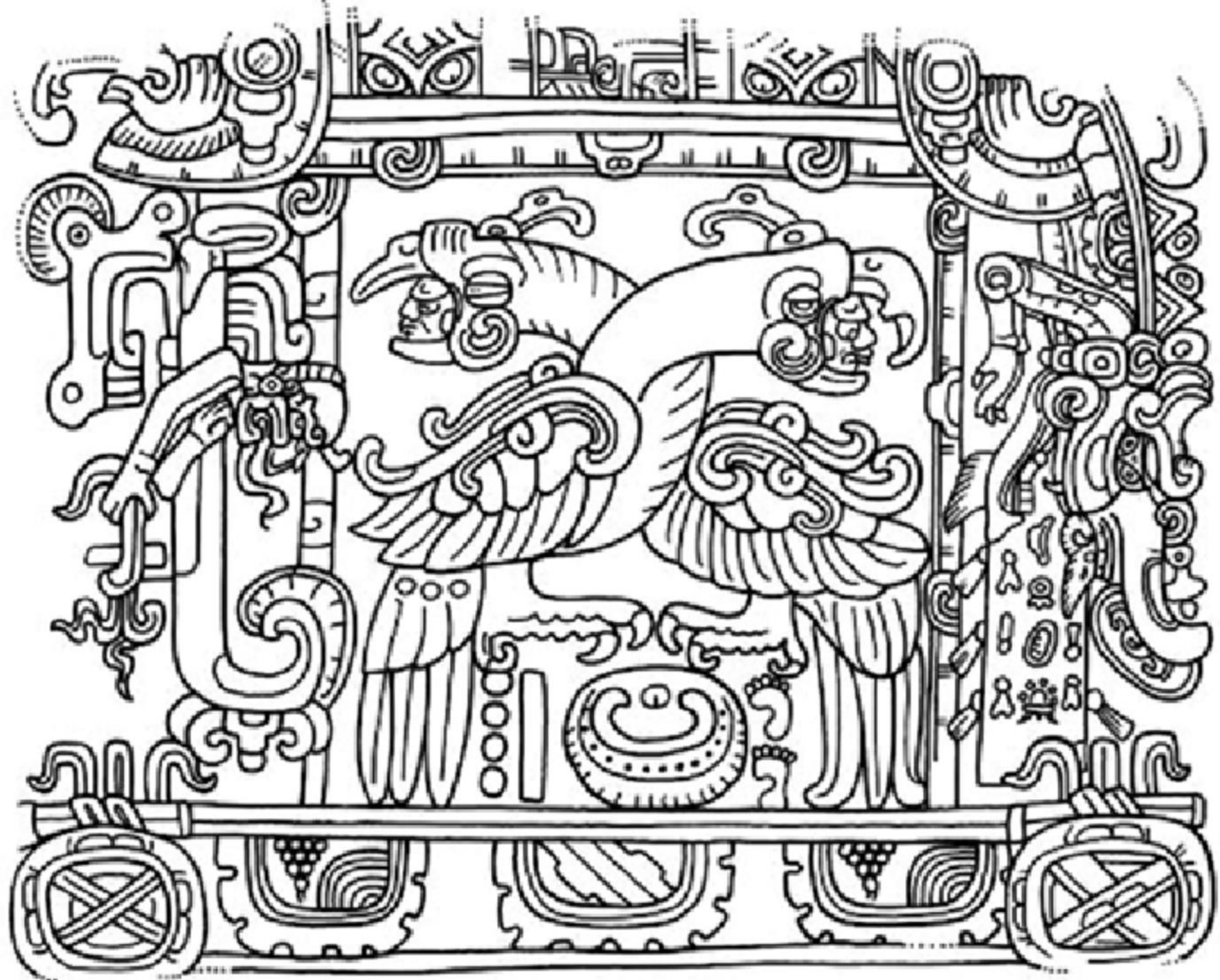


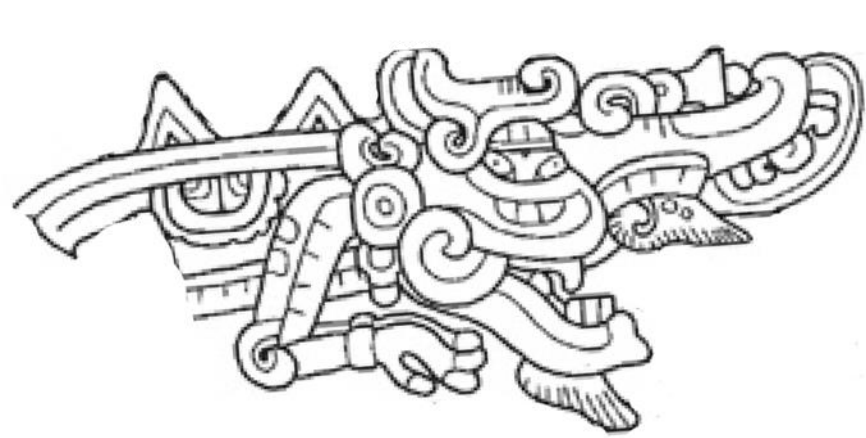
This is the whole scene.

Excellent line drawing by Matthew Looper (Looper 2012: Fig. 8.1).

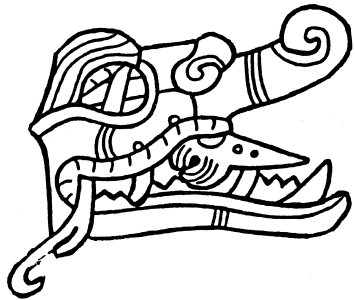
This Cosmic Monster is crossing the sky.

Birds crossing their necks are also found (in rare instances) on Tzakol basal flange polychrome painted ceramics (but not surrounded by a Cosmic Monster).





Cropped and rotated by Hellmuth from excellent drawing of Copan Margarita façade by Matthew Looper 2012: Fig. 8.1. The eye here is the Starry Eyed Deer version.



The Crossed-Bands eye is used by crocodiles that have either no deer features (as here) or few deer features. The shark's tooth on the base of the Crocodile Tree of the Deletaille Tripod is almost identical to that on the Margarita façade of Copan. Both are Early Classic. Cropped from excellent drawing by Lin Crocker.



It helps to pull out each aspect that you wish to study. Once pulled out, you can see the shark's tooth on Tikal Stela 31 is very similar to the Early Classic crocodile on Margarita façade and the Deletaille Tripod.

The incised cylindrical tripod and the Tikal crocodile have crossed bands in their eyes. The crocodile of Margarita has a generic celestial (Venus) symbol.

All three have the same shark's tooth.



Cropped and rotated by Hellmuth from drawing of Tikal Stela 31 by John Montgomery, JM00852.

I do not accept this "tooth" as a stingray spine whatsoever.



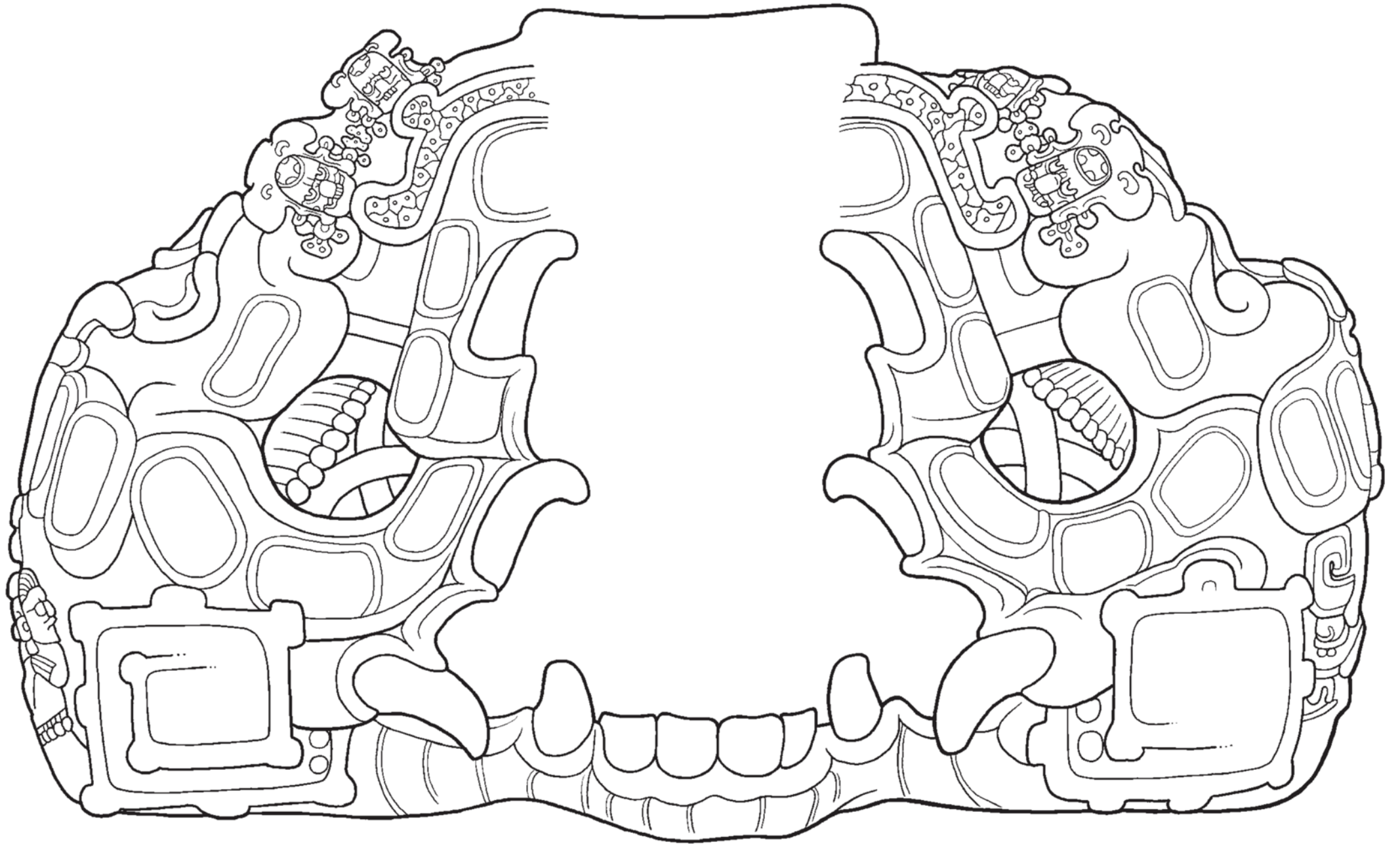
There will be a FLAAR Report on the central fang of Maya deities and monsters in the future. But since these same front fangs are on the Cosmic Monster.

Downloaded from fossil.fandom.com, [https://fossil.fandom.com/wiki/Shark\\_teeth?file=SHARKTEETHOVERVIEWWID.jpg](https://fossil.fandom.com/wiki/Shark_teeth?file=SHARKTEETHOVERVIEWWID.jpg)

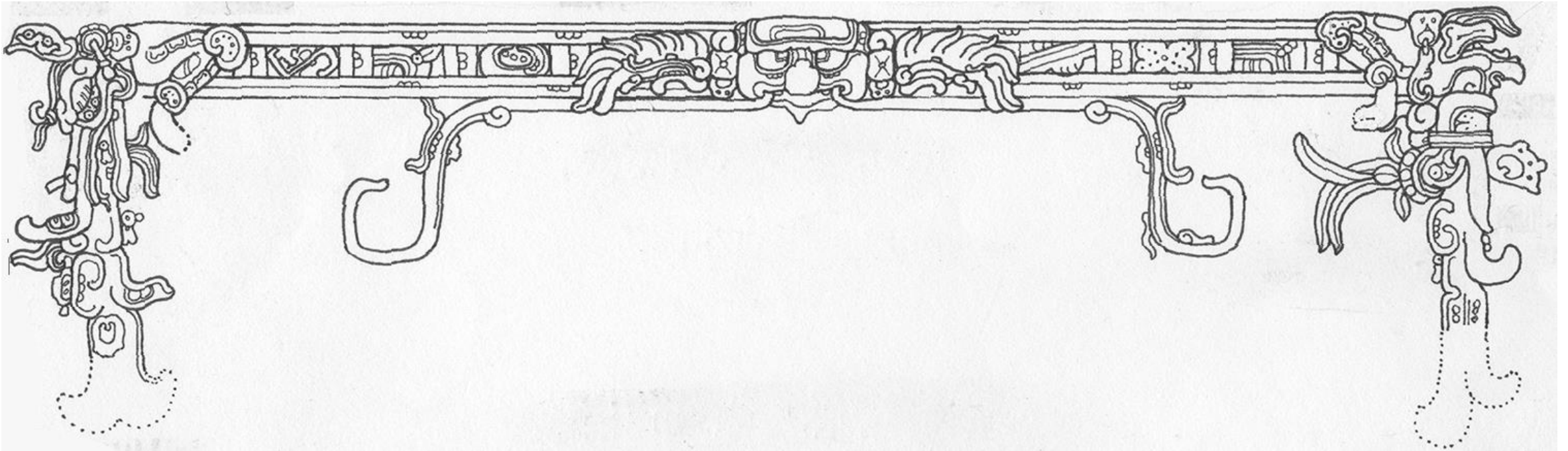
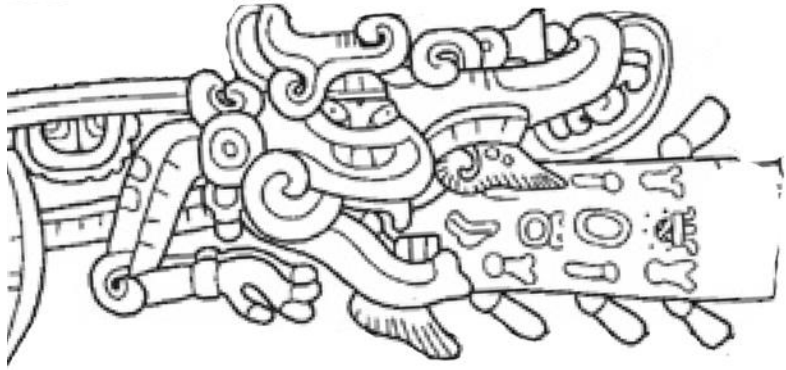


Crossed-Bands celestial symbol as the eye of a crocodile rendition is crucial to find and document.

This is one of the best and most helpful line drawings of this Quirigua monument



Quirigua, Zoomorph P, front, drawn by Simon Martin after Maudslay 1989-1902,2: Plate 558,c (Martin 2015: Fig. 15a).

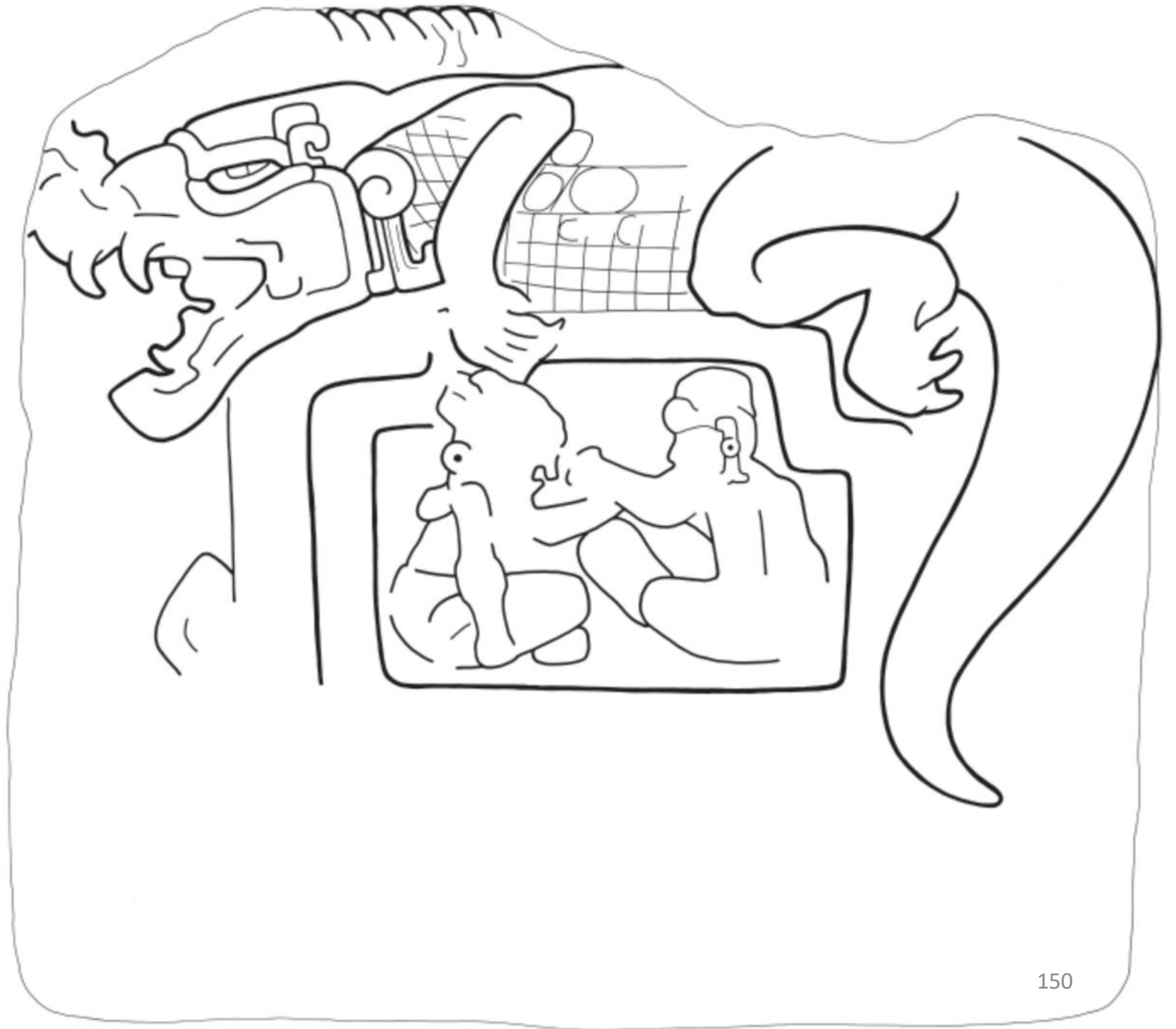


Some of the Crocodiles have Crossed Bands in their eyes. But when at the end of a Cosmic Monster, the deer-ish “crocodile” have generic sky (Venus) symbols. Cropped from various drawings. Simon Martin, Linda Schele (SD1106).

Crocodiles are found “up in the sky” and “down in Xibalba.” So here is a ferocious crocodile over the four-sided Cave Entrance to the Underworld, Izapa Stela 1.

Since crocodiles are rarely adjacent to the cave entrance, it is important to show this, but the main theme of the present chapter is the crocodile at the front of the Cosmic Monster.

Cropped for this lecture from excellent drawing by Moreno in Moreno and Clark 2007: Fig. 13.15.





Sky Band celestial symbols across the middle.

Humanized size deer arm and deer leg with deer hoof clearly visible. Bottom of the arm has reptile scales.

Reptile with open fanged mouth has deity head sticking out (but is not God N). Reptile jaws are not very long (no space).

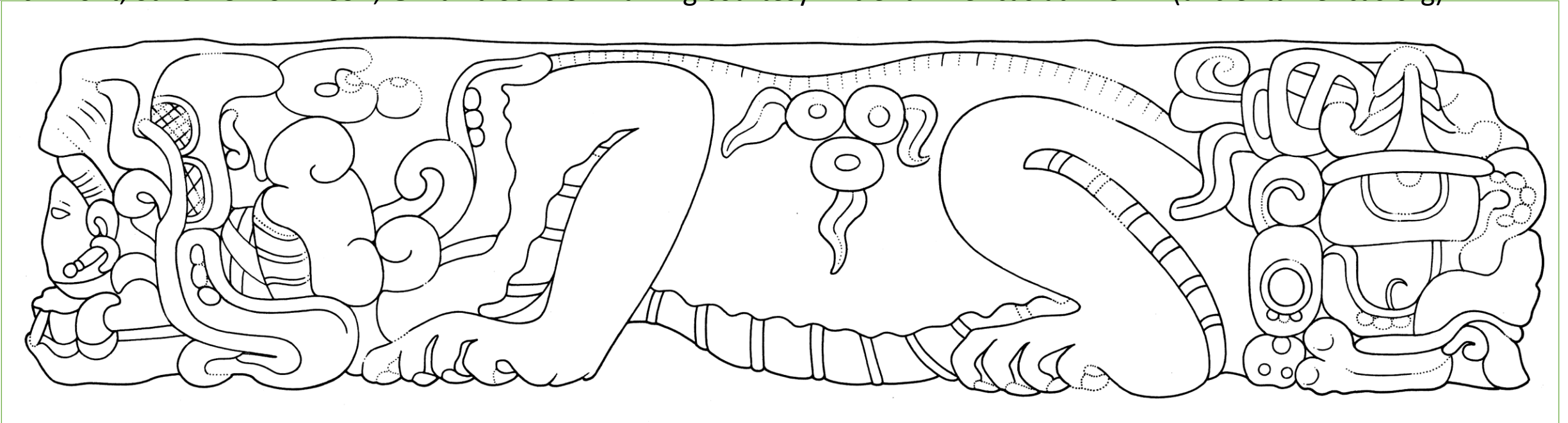
Venus celestial symbol is the eye of the reptile and in the ear of the deer.

Need to find a line drawing and to ID this fragment.

Photo by Nicholas Hellmuth many decades ago.



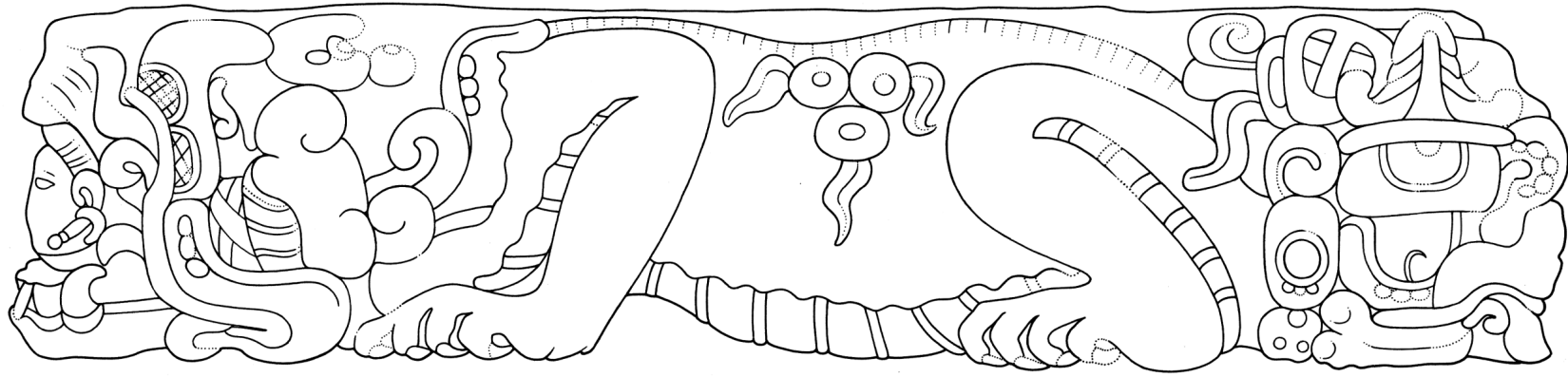
Most databases of drawings are not adequate for digital research; the files of Schele's great drawings are crudely pixellated for publication. This is because most web servers cannot handle the "weight" of heavy files. So all files are low-resolution (even when you Click to supposedly get better resolution; yes, its better than the wimpy web images but still not adequate). Copan, bench front, Str. 9n-82. SD-7857, © David Schele. Drawing courtesy Ancient Americas at LACMA ([ancientamericas.org](http://ancientamericas.org)).



But we were able to copy-and-paste this excellent resolution image from Baudez, Figure 67. Drawing by A. Blanck, Copan CPN82, Altar 41. We enlarge the image on a 32" 4K monitor (so it has larger file size) then reduce it to page size with great resolution.



It really helps to have a line drawing by an illustrator who knows and respects Maya iconography.



Drawing by A. Blanck, Baudez Fig. 67.

CPN 82, Altar 41.

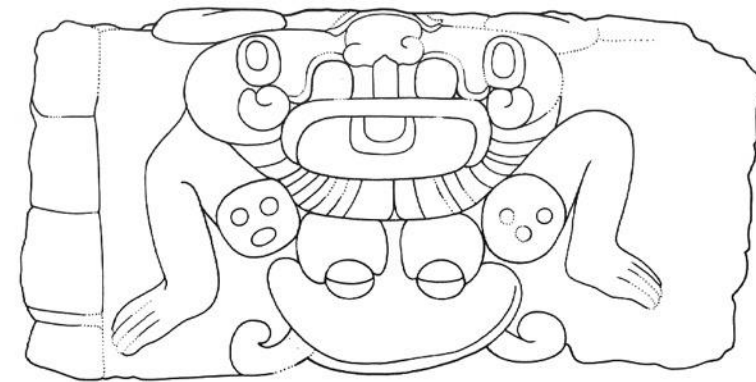
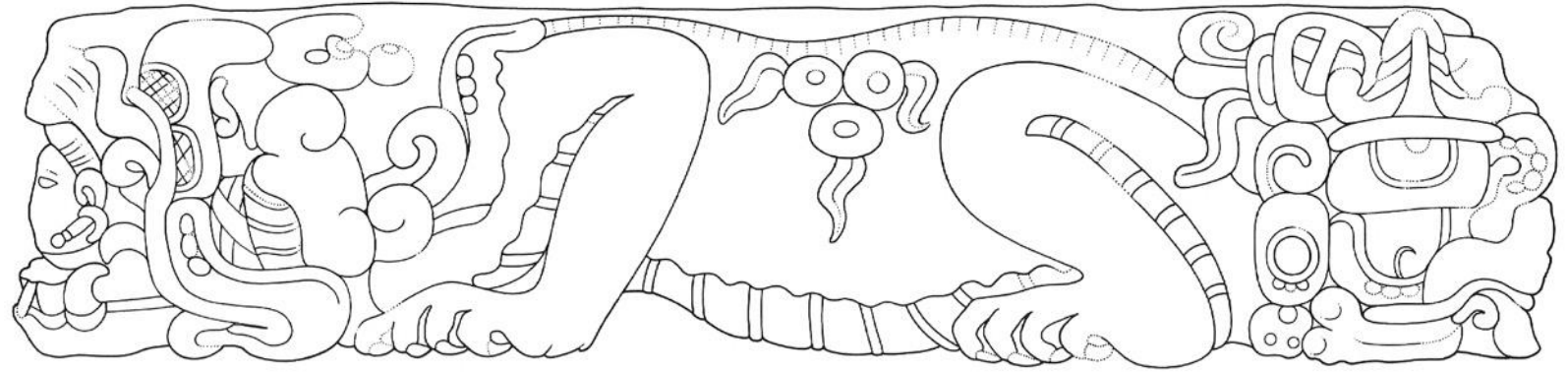
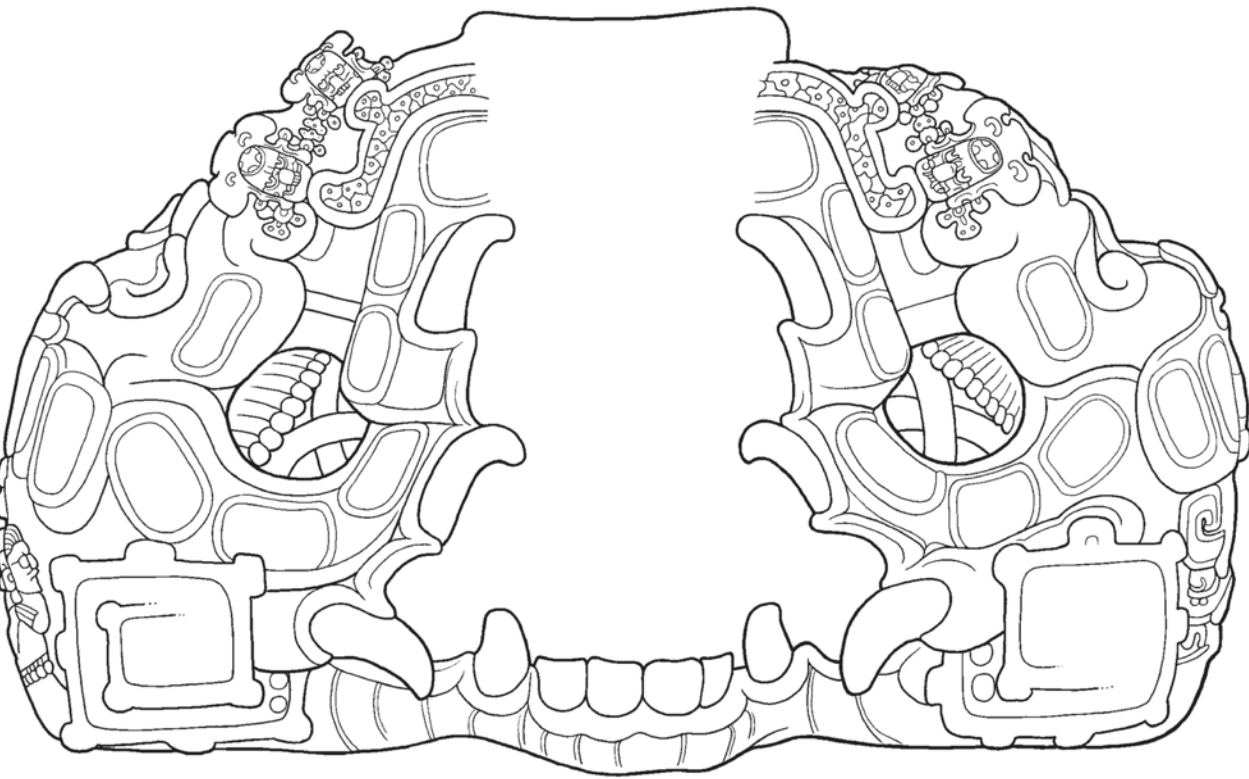


Crocodile head is at the left. Eye has crossed bands (typical for many but not all crocodiles).

Quadripartite Badge Head is at the right, but is not upside down.

Body is crocodile, with slightly humanized shape of legs. No Sky Band across the body.

Baudez, Figure 67. Drawing by A. Blanck, Copan CPN82, Altar 41.

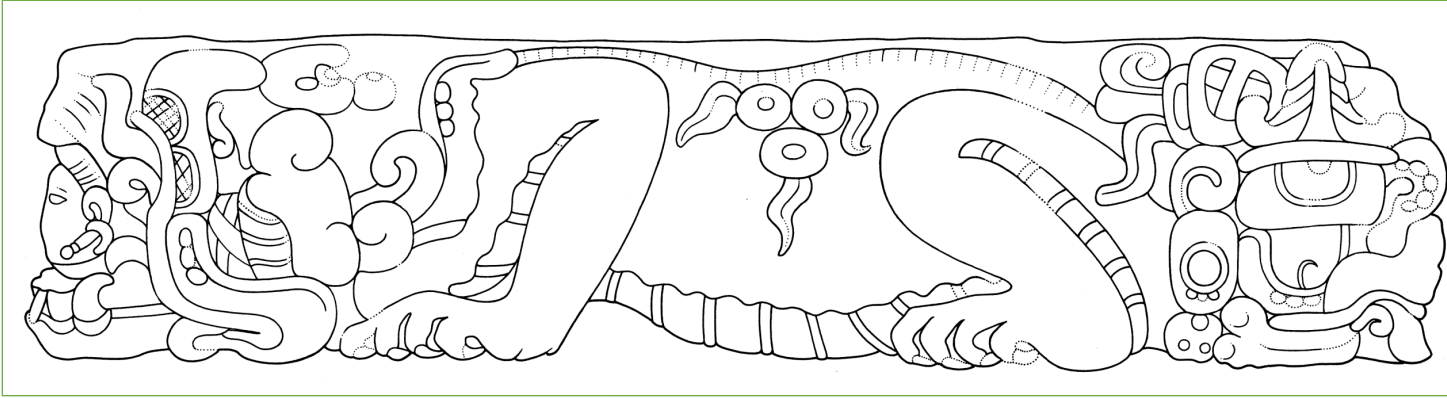


B

FIG. 67 CPN 82: (a) east side; (b) north side. Drawings by A. Blanck.

This Cosmic Monster has a “Bufo Toad” on north side of CPN 82, with other features that we are working on for a separate upcoming lecture on Bufo Toads (occasionally composite with iguana). Drawing by A. Blanck.

Most Crocodile heads on Cosmic Monster have deer features and the eyes have Generic celestial/Venus sign. Here at Quirigua Zoomorph P the crocodile has Crossed Bands. Drawing by Simon Martin after Maudslay; Martin 2015: Fig.15,a.

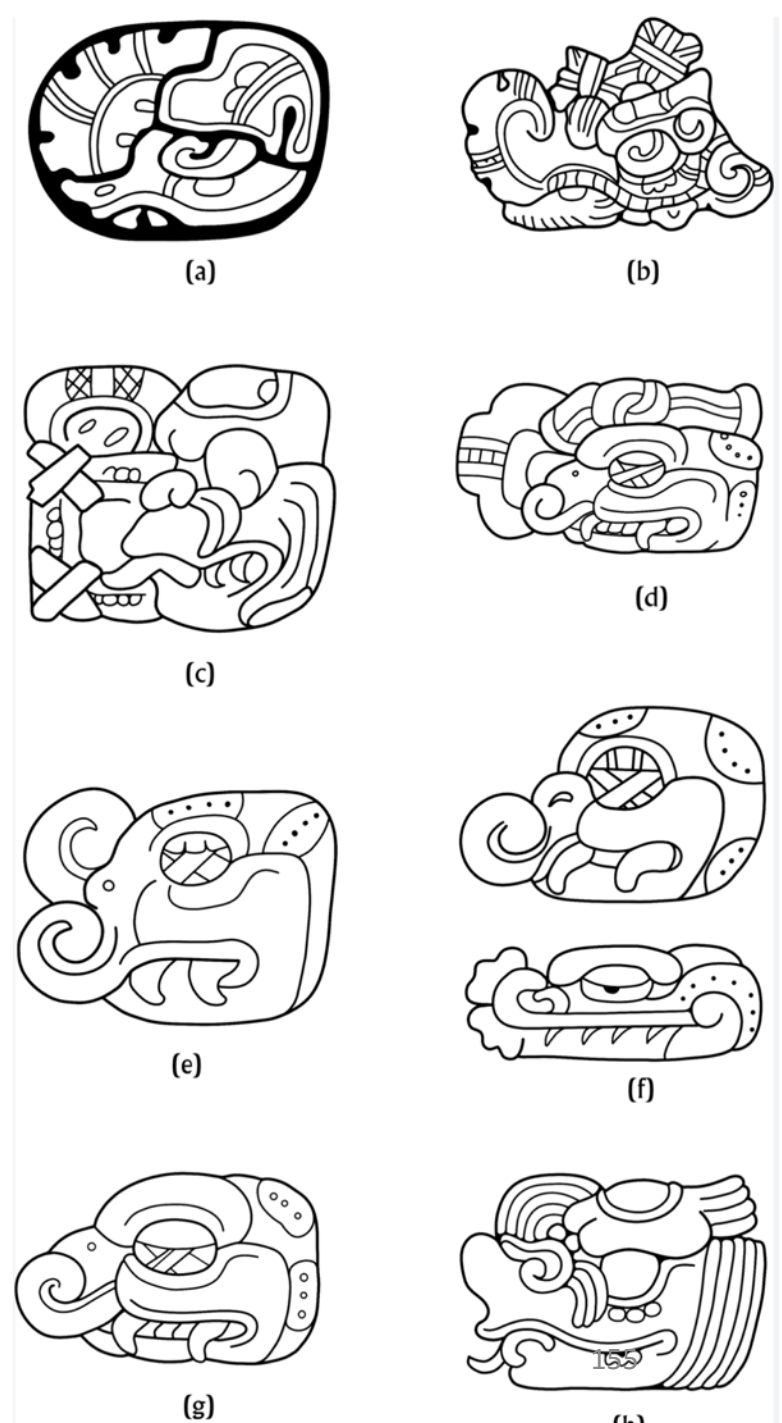


The Crossed Bands in the eye of 3-dimensional crocodile renditions adds support for recognizing crocodiles in hieroglyphic inscriptions (but not all eyes even of actual crocodiles will be Crossed-Bands...).

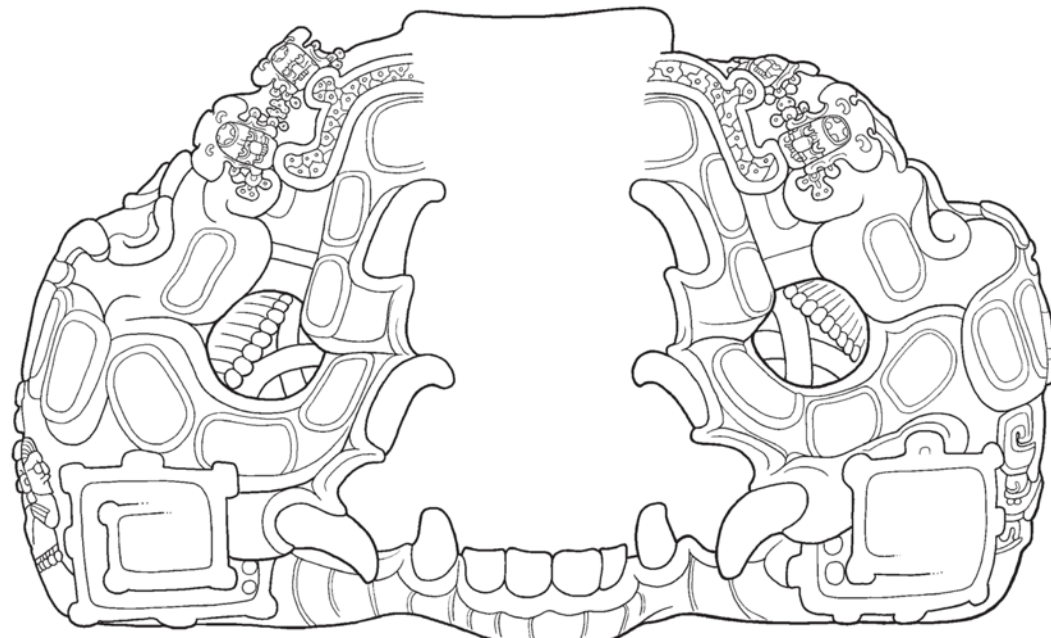
The “Starry Eyed Deer-Crocodile” have a different eye (generic celestial/Venus “Starry” sign).

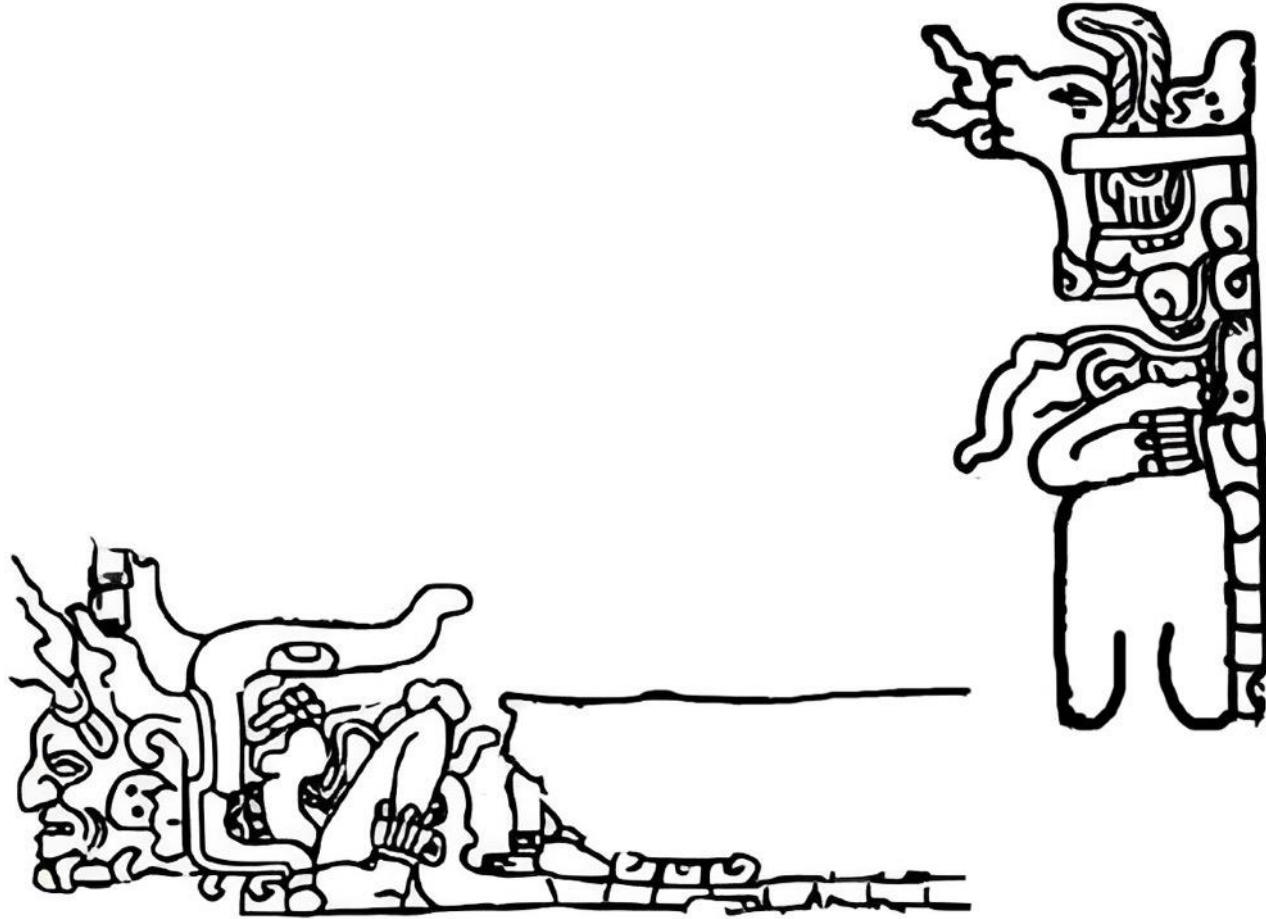
Would be very helpful for an epigrapher or student to publish the hieroglyph for that variant since most of the crocodile hieroglyphs have Crossed Bands or a simple eye-curl (no generic celestial symbol). So why do some have the celestial symbol and others not???

The glyphs at the right are from the excellent research and publications by Prudence Rice on the Maya site in Peten that is, literally, modeled after a crocodile pattern. Her b, d, e, f, and g are obvious crocodiles, albeit shortened since there is not space in a hieroglyph for the complete length of a crocodile jaw.



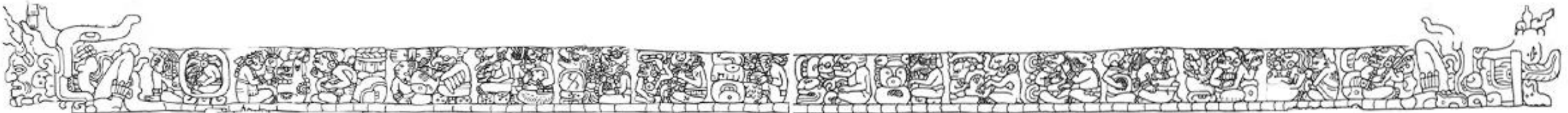
Quirigua Zoomorph P crocodile has Crossed Bands in its eye. Drawing by Simon Martin after Maudslay; Martin 2015: Fig.15,a.



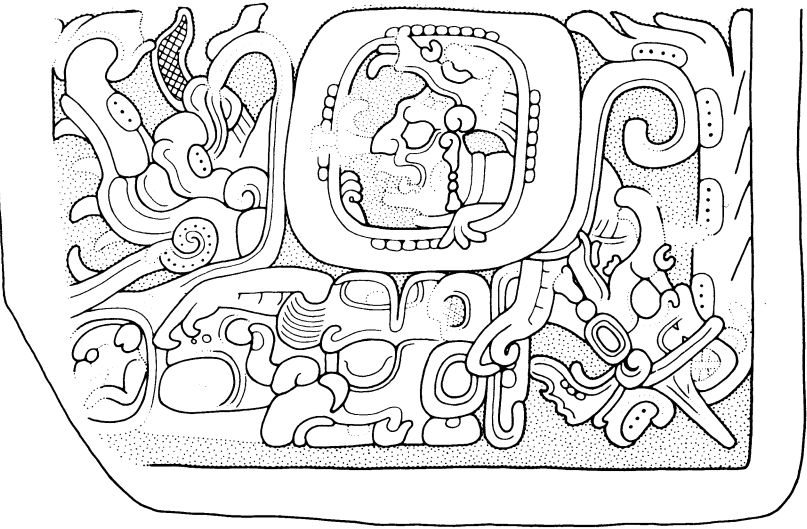


You can see the  
Quadripartite Badge  
Headdress Deity best if  
you turn it upwards. 90%  
of these Quadriparte  
Badge Headdress long-  
snouted monsters are  
just the face (though you  
can consider the  
attached reptile as its  
body).

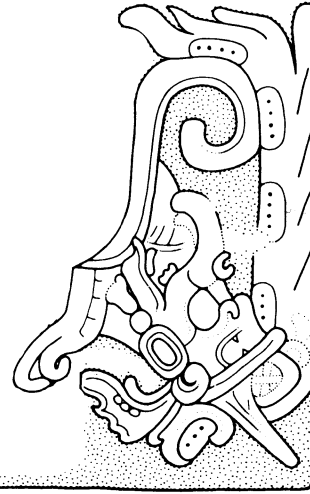
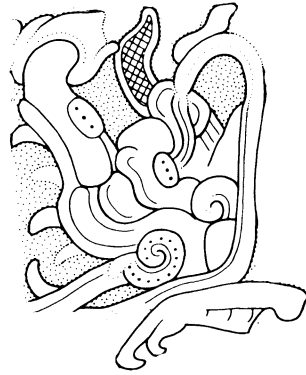
Cosmic Monster, Copan  
Str. 9N-82, cropped by  
Hellmuth from drawing  
by Linda Schele, SD-7657.



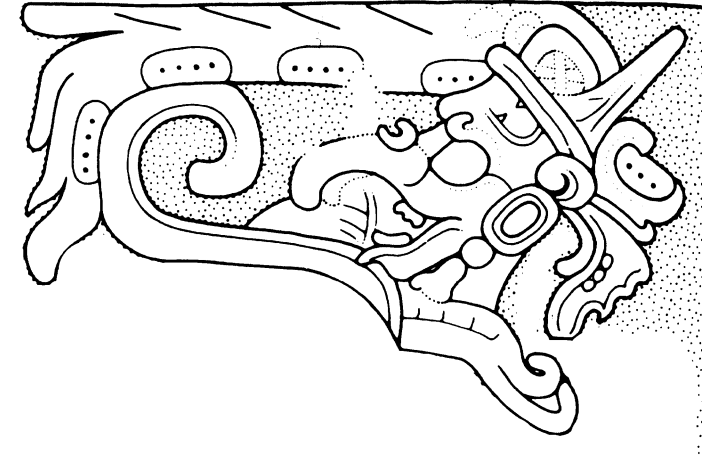
© David Schele. Drawing courtesy Ancient Americas at LACMA ([ancientamericas.org](http://ancientamericas.org)).



Cosmic Monster but other than two heads, two limbs, and tail, does not have space for the usual body.

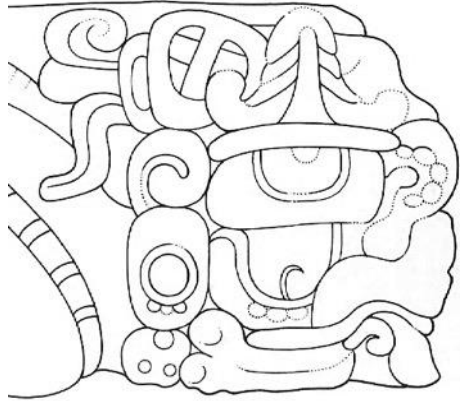


This Cosmic Monster has no Starry Eye, no deer hooves. Plus a total crocodile tail rises straight up. Yet this Cosmic Monster has a complete “upside down” Quadripartite Badge Headdress Monster at the end of the body before the tail starts.



Quadripartite Badge Headdress rotated to make it easier to see.

You can digitally separate each feature of each complex scene. Separated by Karla Cho from helpful drawing by Tate 1992: Fig. 25b, Yaxchilan Structure 44, Step III.

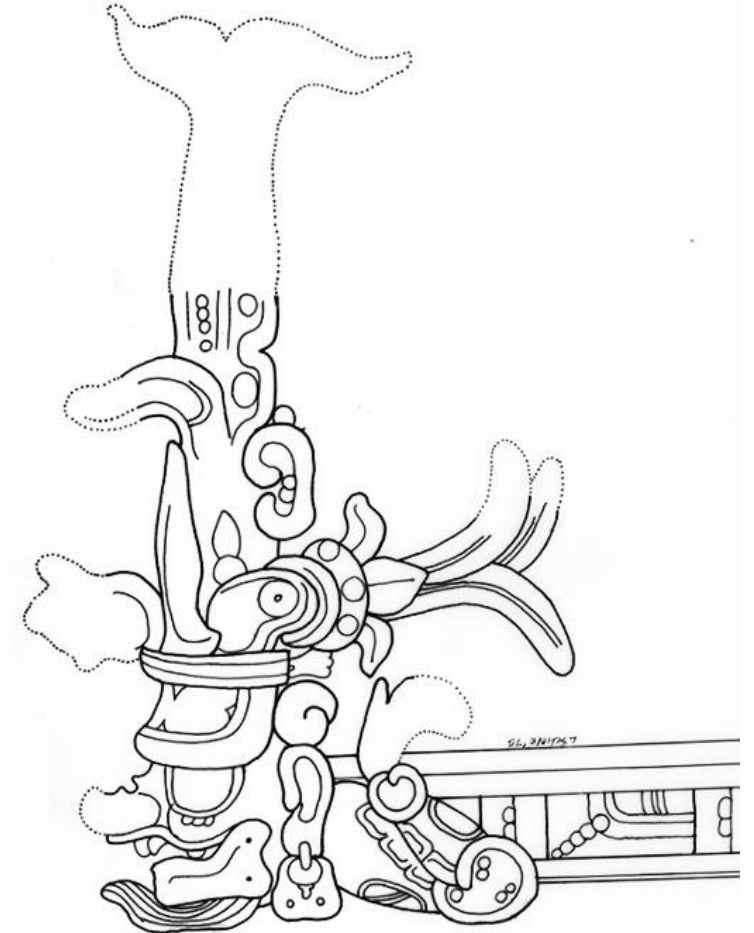
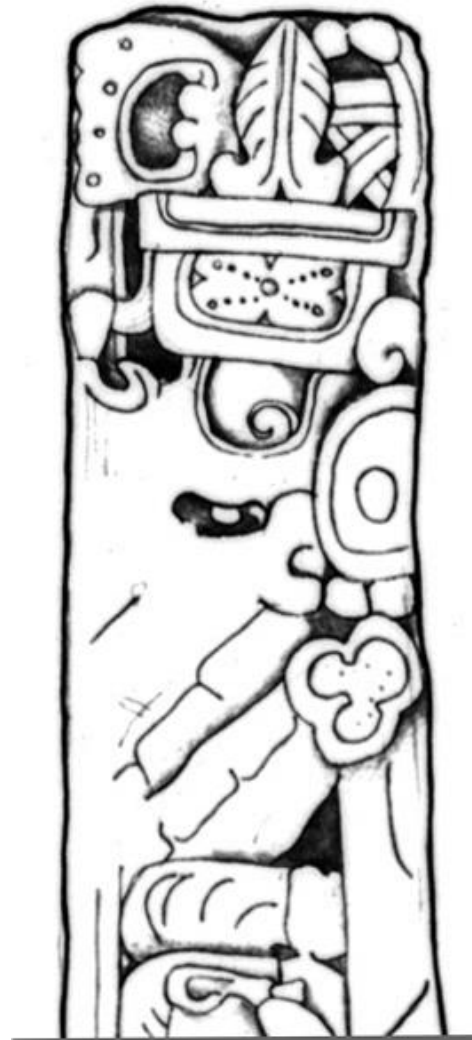


Kin is missing  
from forehead area.

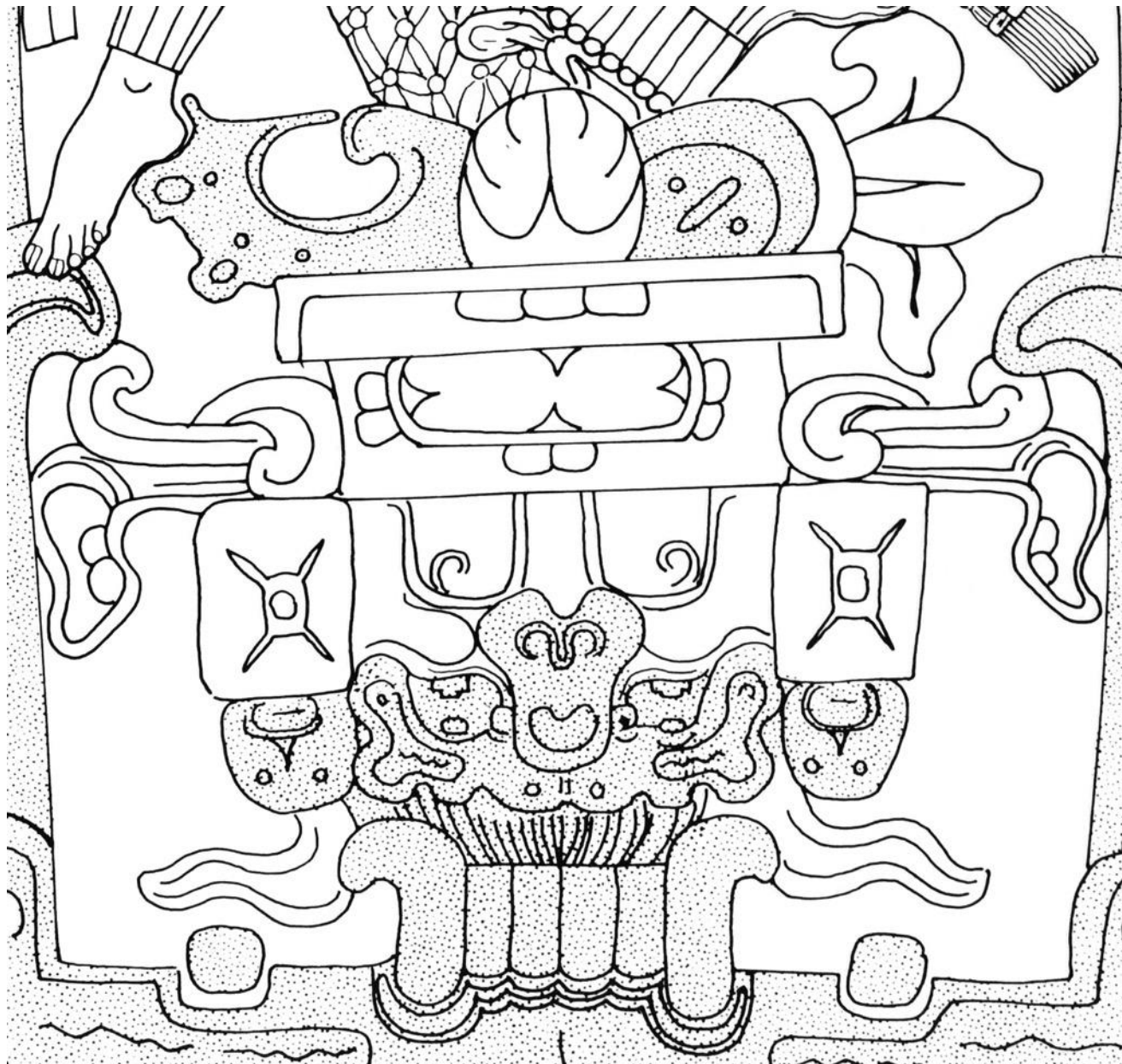
Quadripartite Badge Headdress has four aspects:

1. 4-petalled Kin-like glyph over the forehead.
2. Raised exaggerated stingray spine standing up.
3. Bivalve shell on left (usually, can be on right)
4. Crossed Bands in cartouche on the right (or left)

Note that all three have a bone for the lower jaw.



Frontal  
Quadripartite  
Badge,  
cropped from  
Palenque  
Sarcophagus  
cover.



Three  
Divisions of  
Maya World,  
Robertson,  
Vol I, Fig.145.

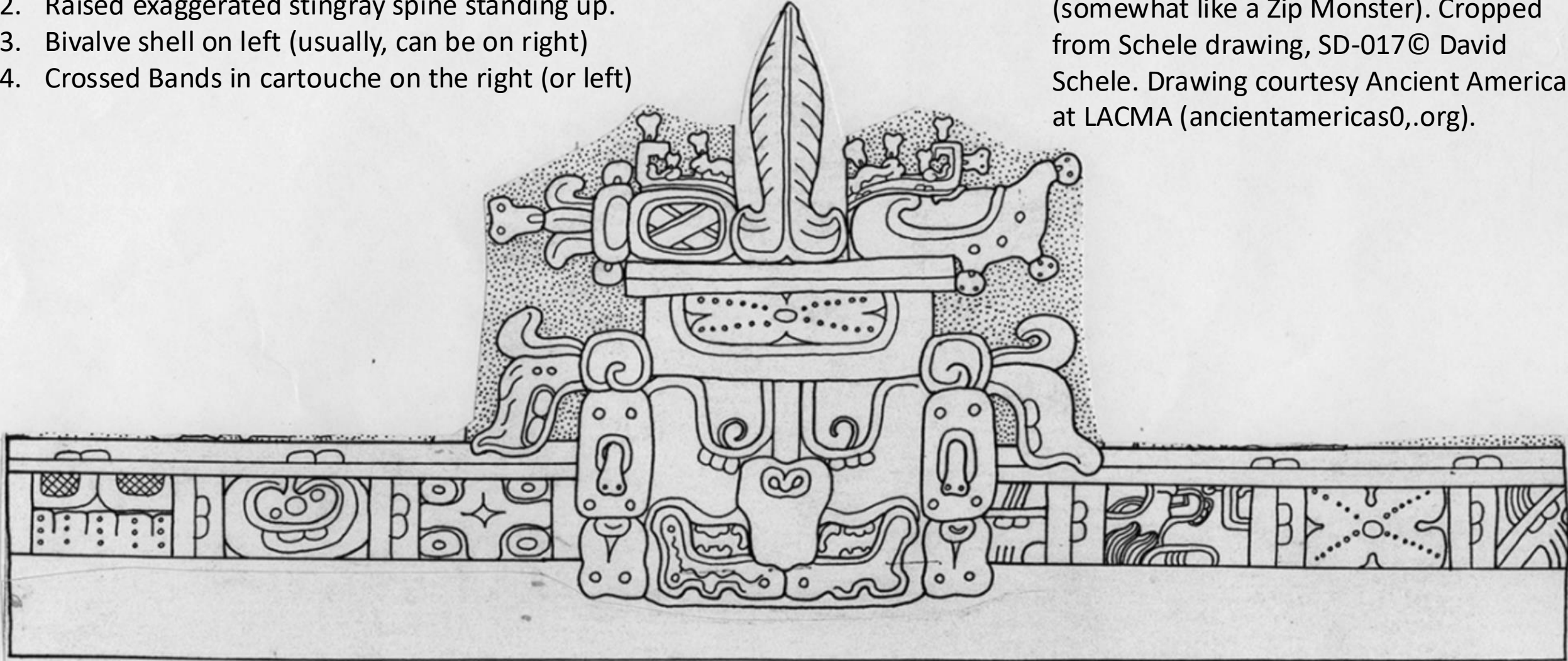


Shell is at the left; other symbol at  
the right. Kin-sign is flattened so not  
easy to see, but it is there. Copan  
CPN 25, Altar of Stela M, photo by  
Nicholas Hellmuth

Quadripartite Badge Headdress has four aspects:

1. 4-petalled Kin-like glyph over the forehead.
2. Raised exaggerated stingray spine standing up.
3. Bivalve shell on left (usually, can be on right)
4. Crossed Bands in cartouche on the right (or left)

The left (Crossed Bands) and the right (sea shell) have a reptilian upper jaw over them (somewhat like a Zip Monster). Cropped from Schele drawing, SD-017© David Schele. Drawing courtesy Ancient Americas at LACMA (ancientamericas0,.org).



Probably because of its length, the raised element in the headdress is called a Stingray Spine. But need to study which species because the two stingray spines that I discovered inside Tikal Bu. 196 (Tomb of the Jade Jaguar) were straight and not wide. And the curved aspect is that I expect from a shark's tooth (which of course is nowhere near this long). So a lot more to study.



Here is a complete Quadripartite Badge  
Deity head/headress, but the Sky Band  
encircles it and with no crocodile.

This rectangular-oblong shaped bowl has  
been published by archaeologists,  
epigraphers and iconographers (Houston  
as one of several examples). I will check if  
the mismatch with Cosmic Monster has  
been mentioned before.

Dos Pilas, Burial-30, Structure L5-1 (Calvin  
Fig. 67).



Figure 67 Photograph of MNAE 15357, a Palmar Orange Polychrome tripod

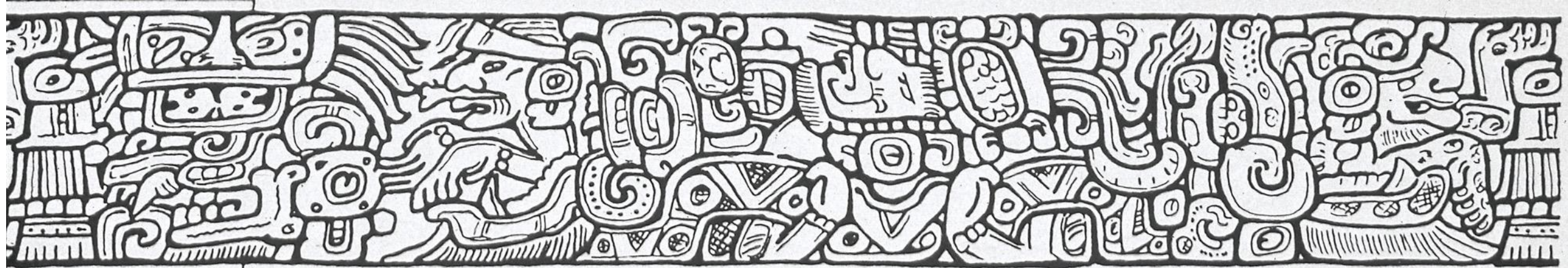


Fig. 53. Tikal, blackware vessel with fitted lid from Central Acropolis, Early Classic (after Coe, 1965, 30)



Quadripartite  
Badge  
Headdress on  
profile face on  
oft-published  
blackware Tikal  
cache vessel.  
Same shark's  
tooth as on  
crocodiles.



This scene has two Quadripartite Badge Headdress monsters, one "flowering".

Kerr K501 (also labeled K0501).



K501

163

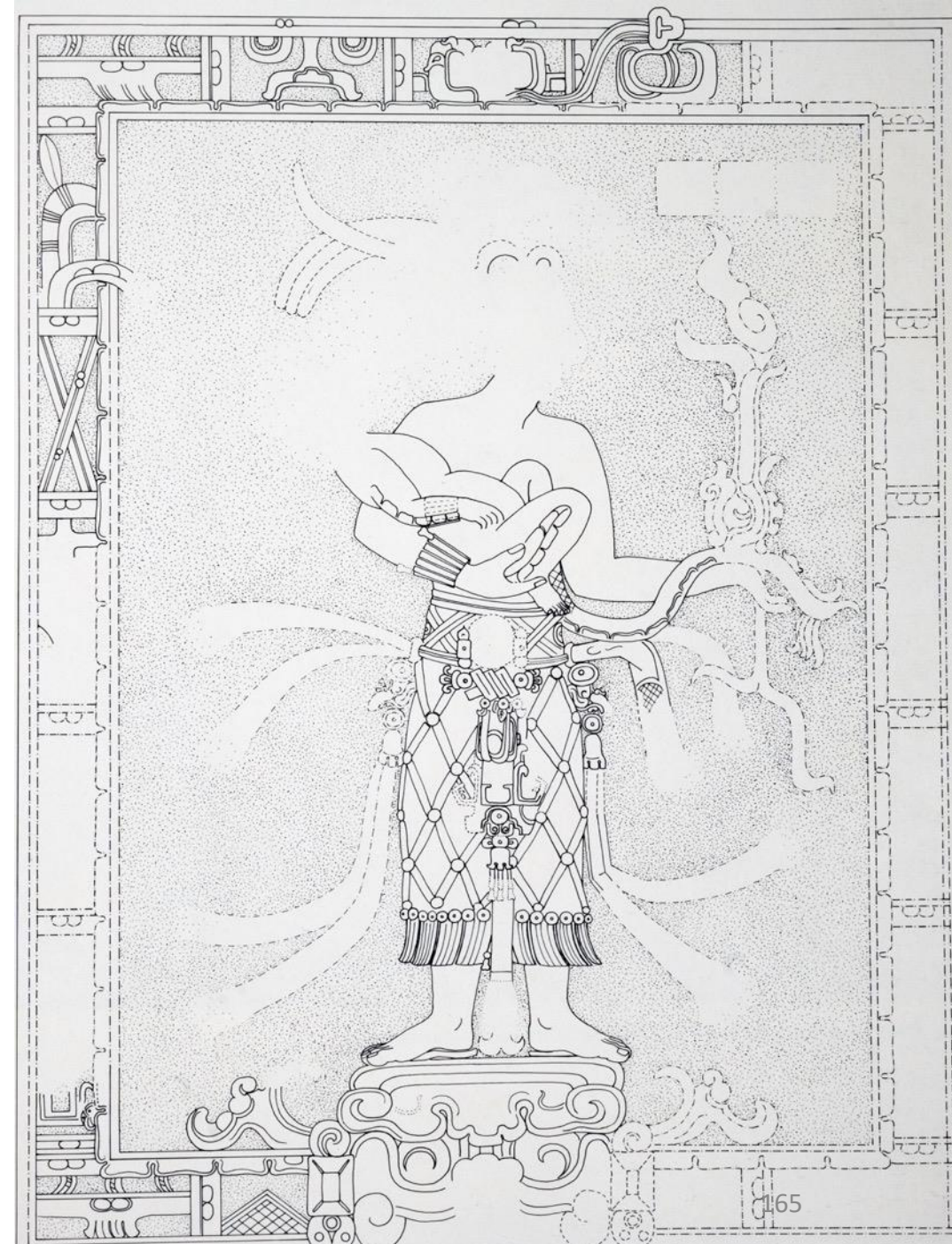
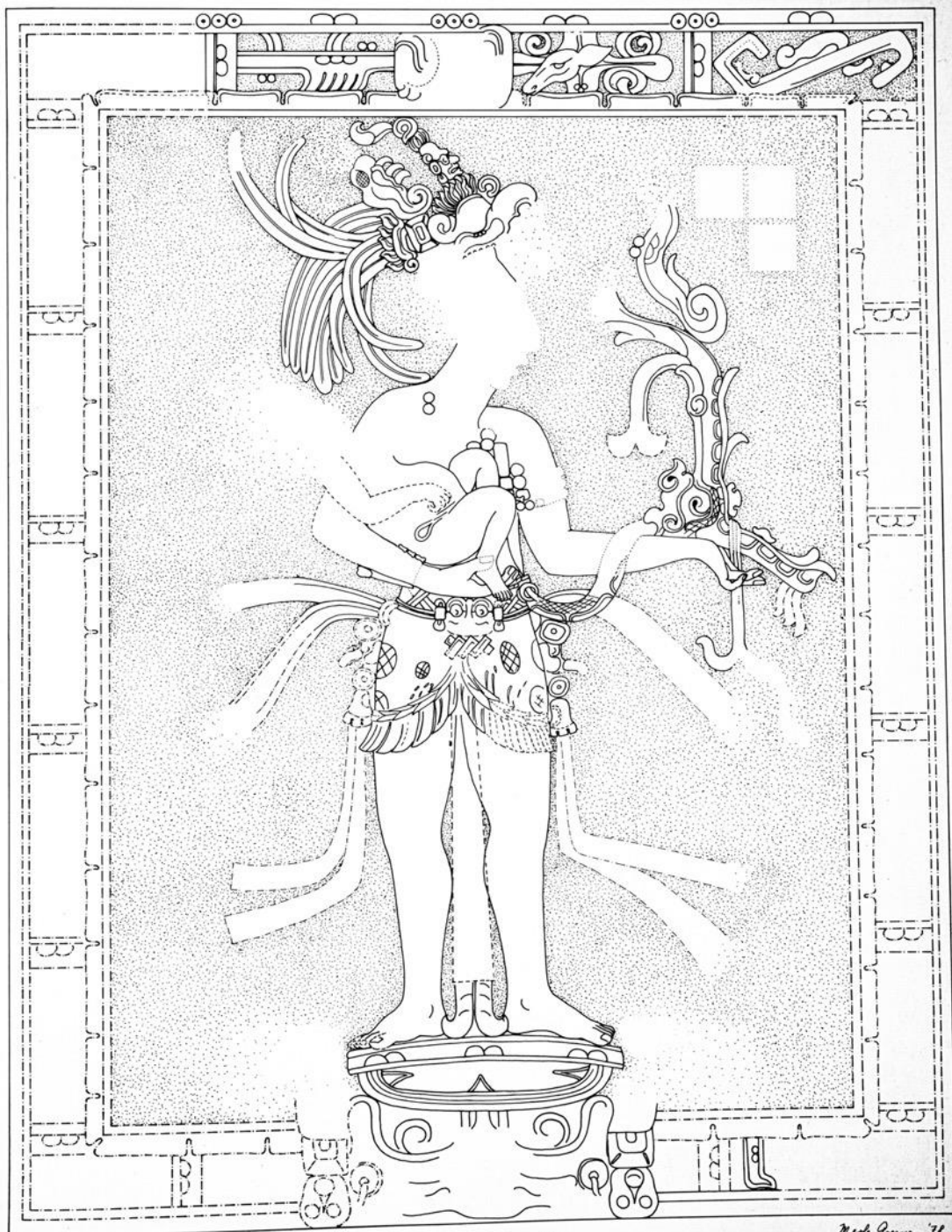


It is easier to recognize individual supernaturals when you crop to them. K0501

Here a Deer Head is a celestial motif at the top center right. This Sky Band “ends and begins” with the Quadripartite Badge Headdress god. No crocodile face. Note that the underside of the entire Sky Band are reptile underbelly scale pattern. Open mouth is a snake.

Palenque stucco pier decoration, Temple of-the Inscriptions Pier B Robertson 1983: Fig. 21, Volume I

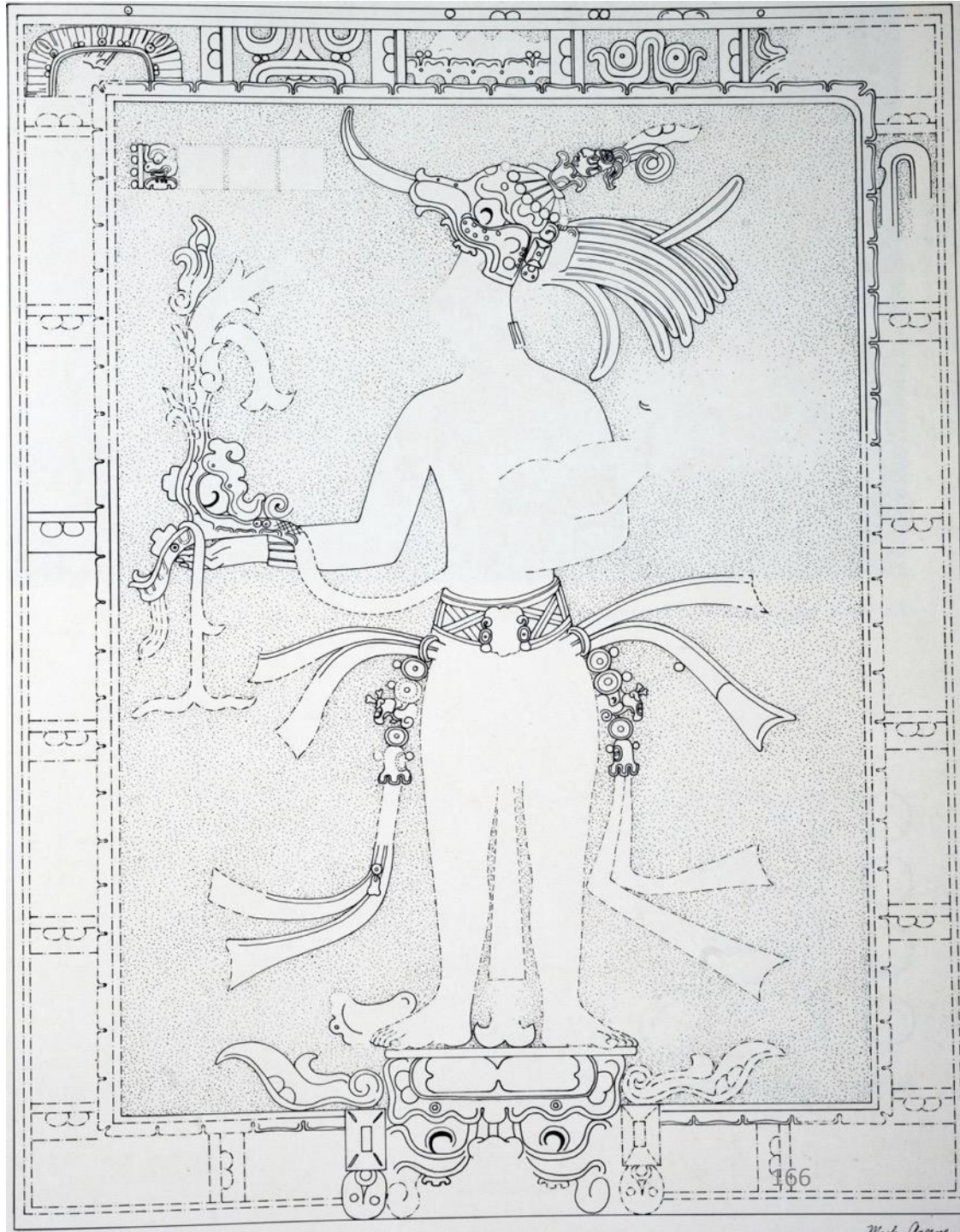
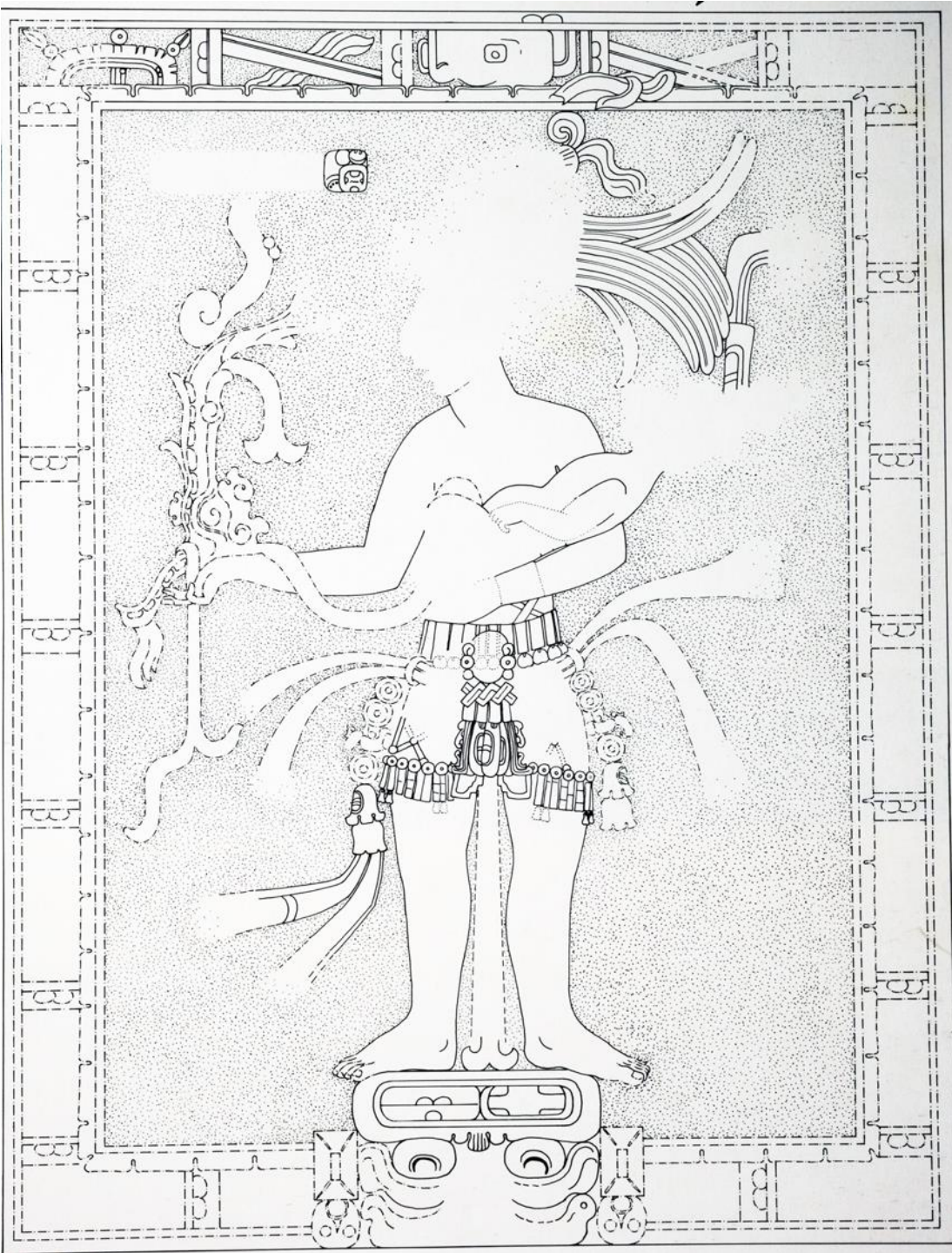
Palenque stucco pier decoration, Temple of-the Inscriptions Pier C Robertson 1983: Fig. 39, Volume I

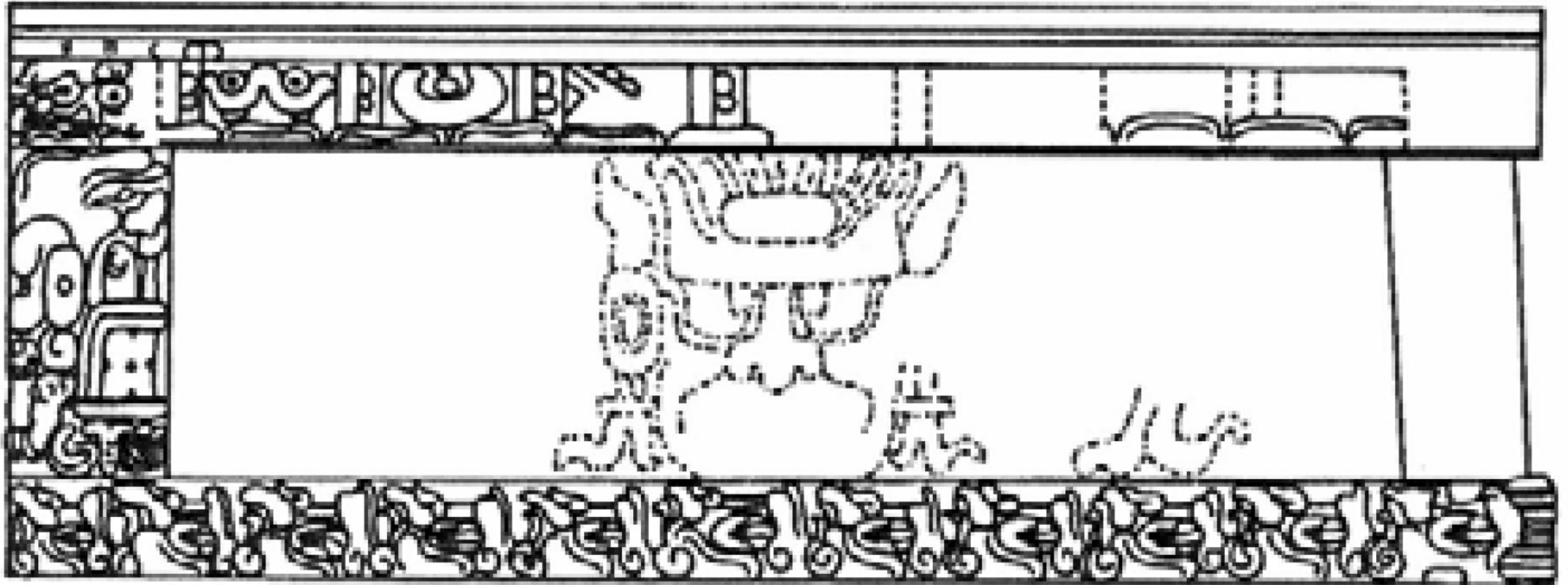


These two Sky Bands “end and begin” with the Quadripartite Badge Headdress god.

Palenque stucco pier decoration, Temple of the Inscriptions Pier D  
Robertson 1983: Fig. 64, Volume I

Palenque stucco pier decoration, Temple of the Inscriptions Pier E  
(Robertson 1983: Fig. 78, Volume I.

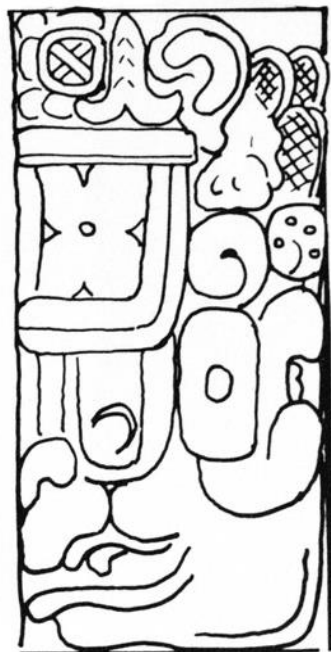




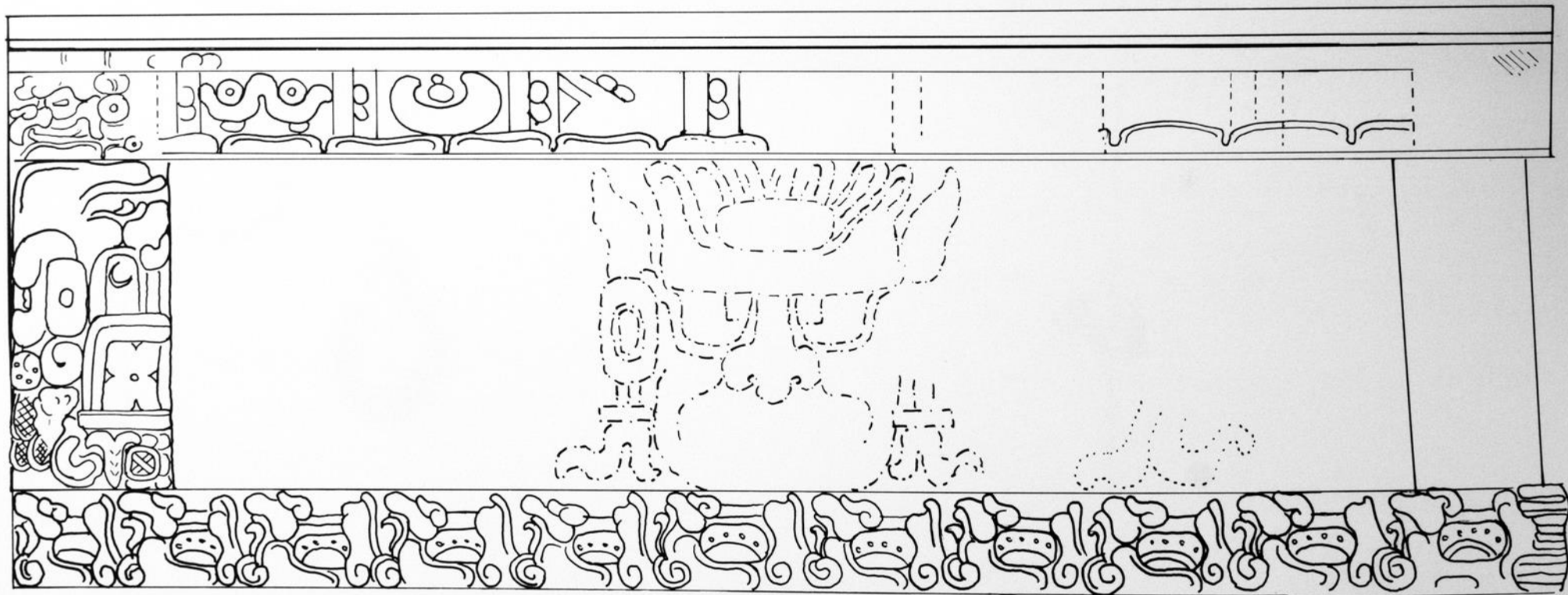
Sad that resolution is not better. Palenque stucco, Temple of the Sun, Sanctuary tablet. Robertson 1991: Fig. 134, Vol. IV.

I have not yet found all the Merle Greene Robertson drawings in a database. There is higher resolution in Callaway 2006: Fig. 4,1,c citing Robertson.

Palenque, Temple of the Sun, sanctuary. Drawing by Merle Greene Robertson, Vol. IV 1991: Fig. 134.

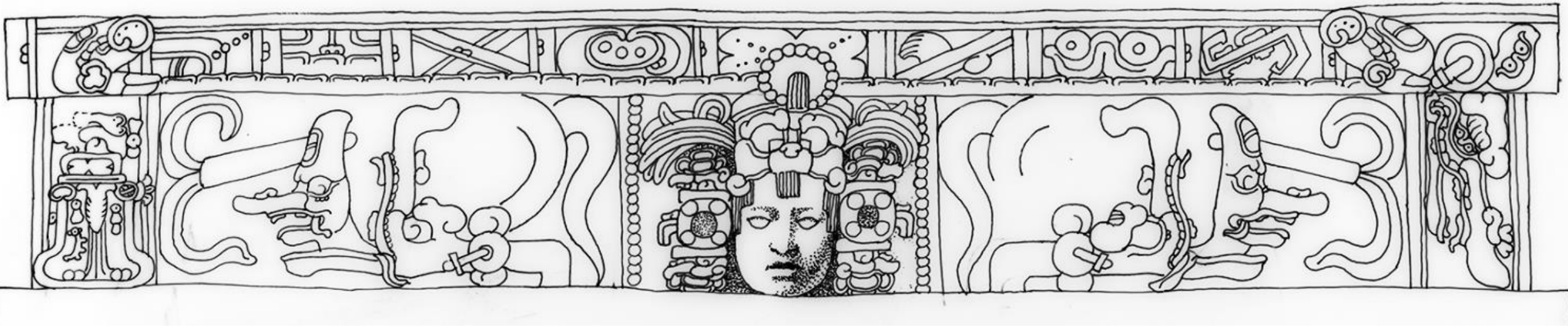


To show you the Quadripartite Badge Headdress that is normally (as here), Upside down.



The Crocodile head is not preserved. But it would have been in the now empty space.

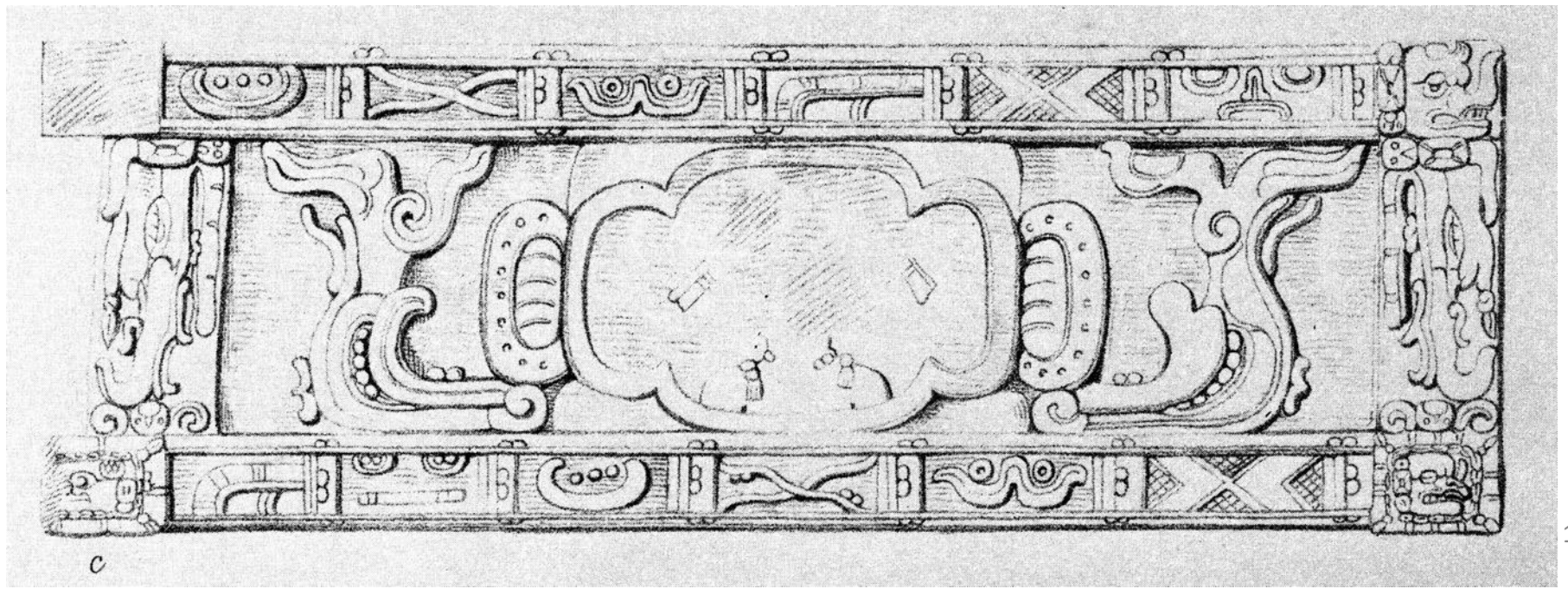
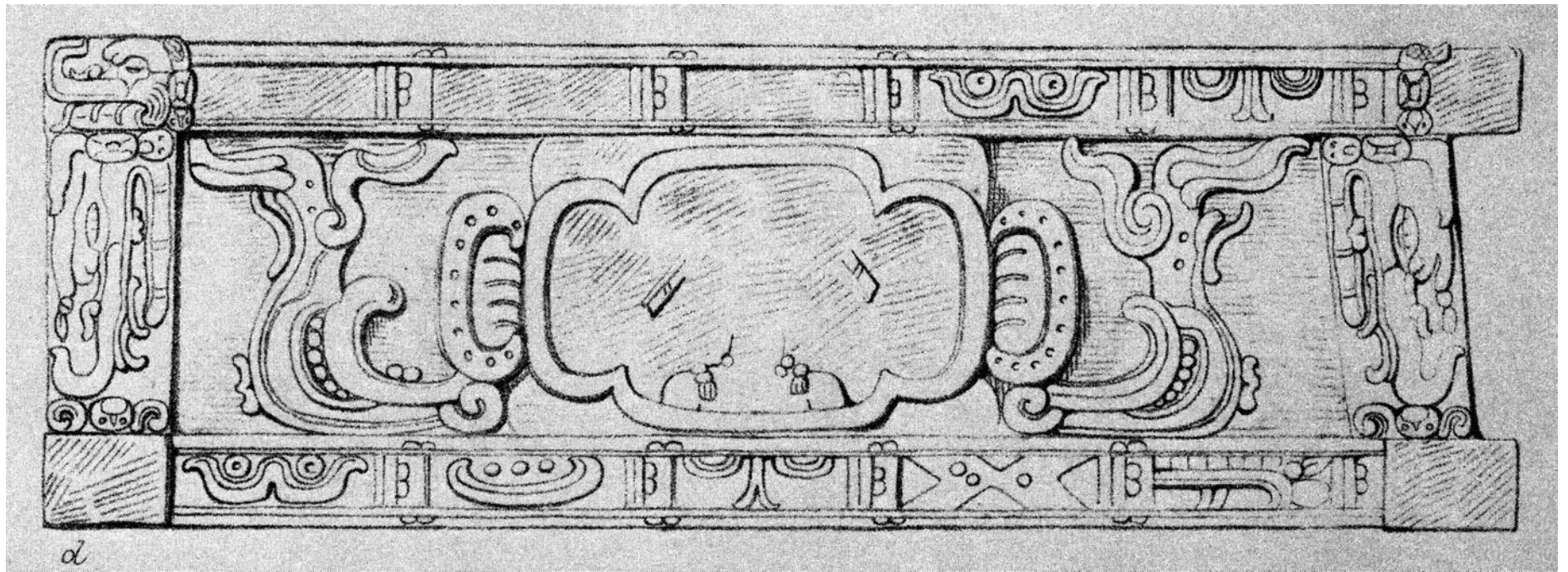


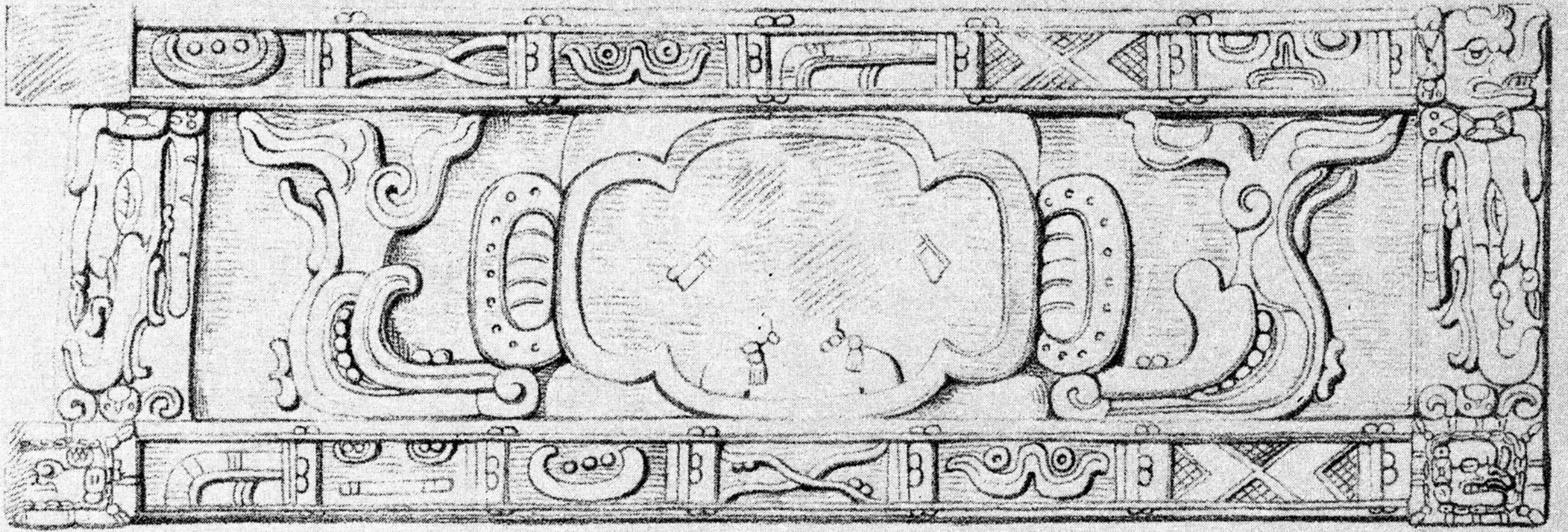


Here the Quadripartite Badge headdress deity is at the left; and the deer-ear-deer-hoof-crocodile is at the right. The body of the bicephalic Cosmic Monster is a Sky Band of celestial motifs each in a rectangular frame. In the middle panels a God K (Manikin Scepter deity) is sticking out the head of a reptile.

Need to ascertain whether the “starry eye” (and starry ear) is a feature of deer and not as crocodile-related.

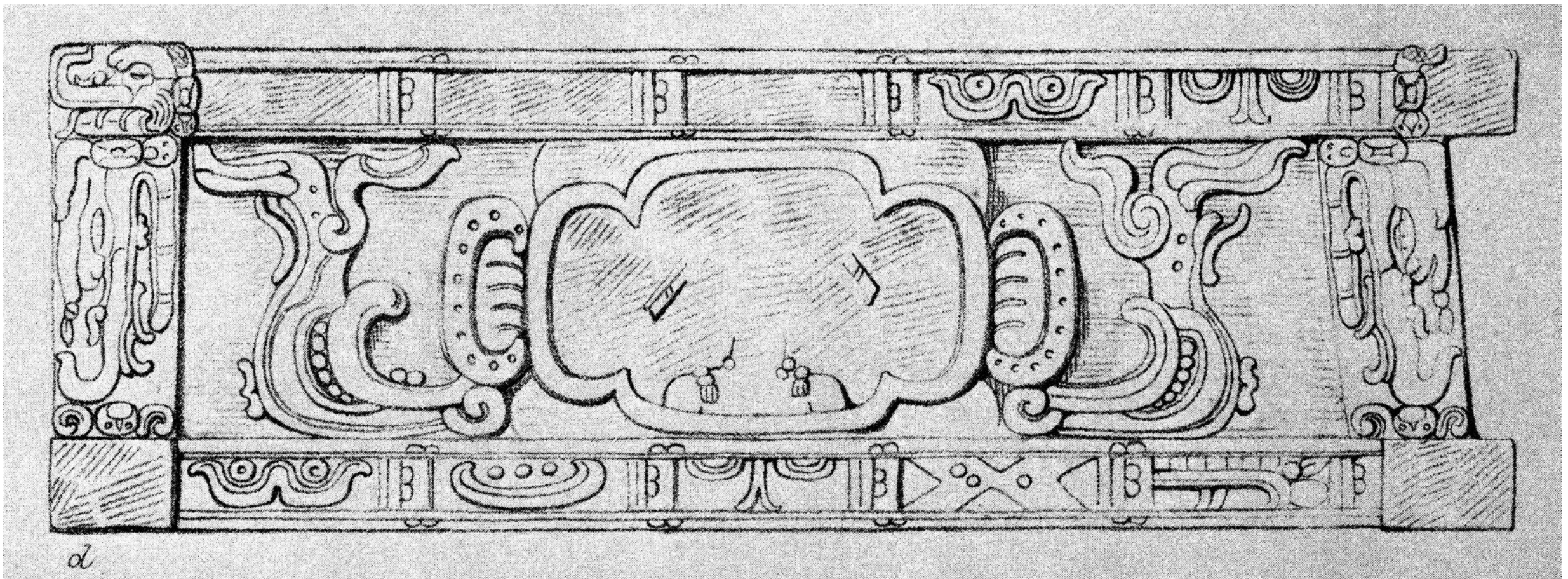
Palenque  
stucco  
reliefs,  
Temple of  
the Cross,  
frieze, west  
side,  
Maudslay  
from the  
1800's.





c

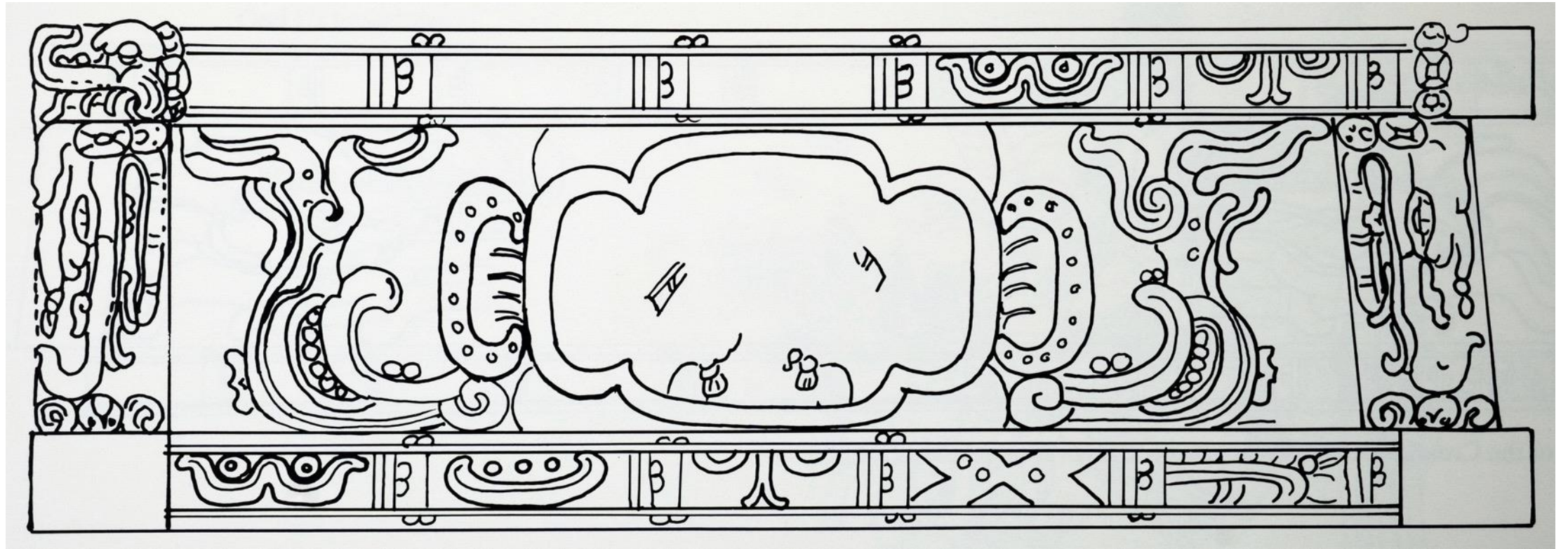
Palenque, Maudslay. Notice that the bicephalic heads of the two horizontal Sky Bands are heads of supernaturals, but neither a deer or crocodile nor the Long Count bird head that is common at each end of steps leading up to a throne room. The two crocodile heads here simply hang down as though they are a secondary set of heads. But we know from other scenes that their downward-pointing angle is traditional.



The Sky Band seems to have two sets of heads: horizontal and 90-degrees downward. At the left, both are crocodile-like though the top (horizontal) had has a recurved snout of a “Zip Monster.”

Palenque, Temple of the Cross, frieze of sanctuary, Maudslay Plate 68.

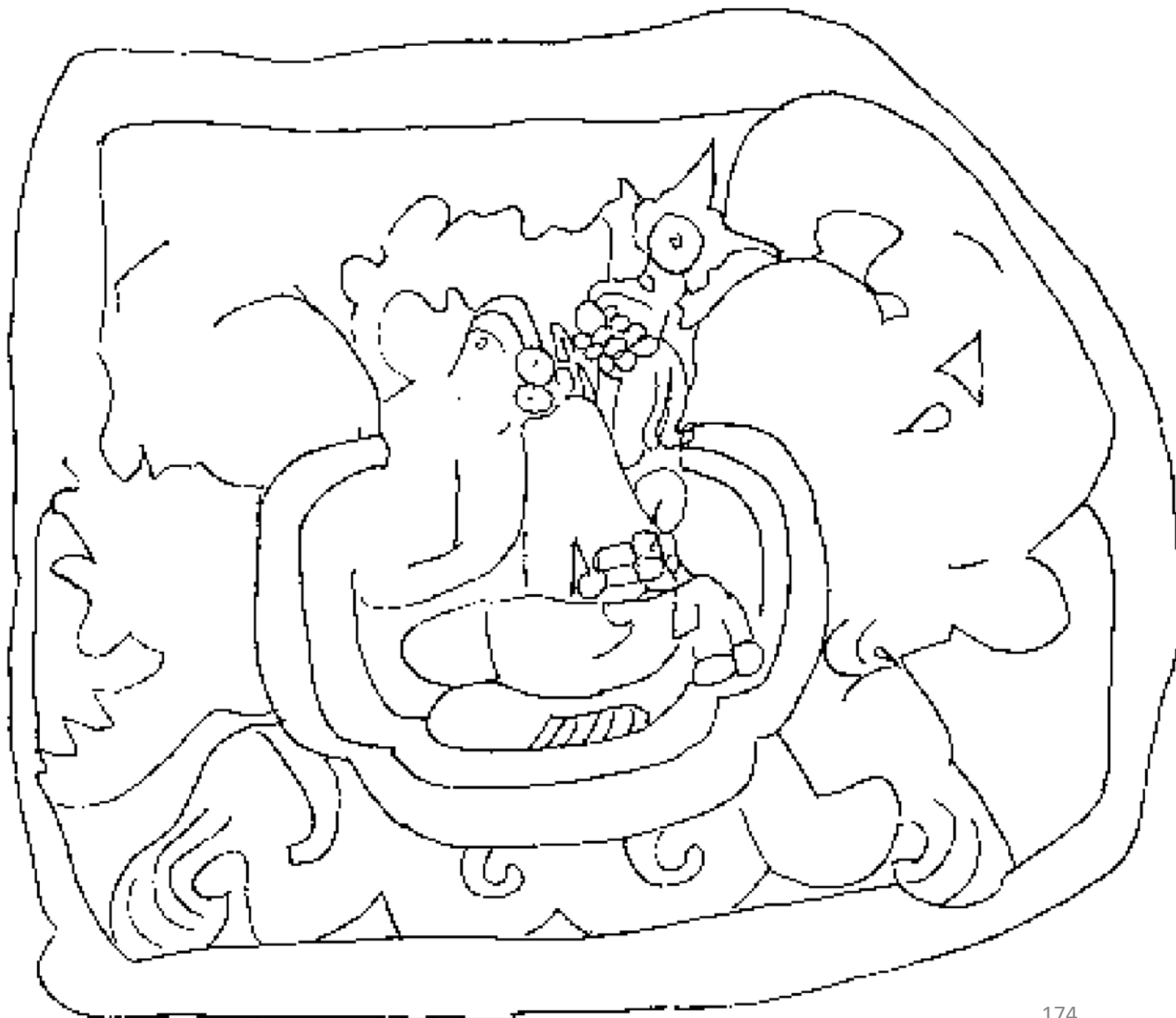
Palenque, Temple of the Cross, west Sanctuary upper façade stucco (Robertson Vol. IV, 1991: Fig. 47)



Cosmic Monster  
associated with  
Quatrefoil (cave  
entrance). Takalik  
Abaj, Altar 48,  
drawing by Rachel K.  
Egan, Egan 2011: page  
16, Figure 8.

New Perspectives On  
The Quatrefoil In  
Classic Maya  
Iconography

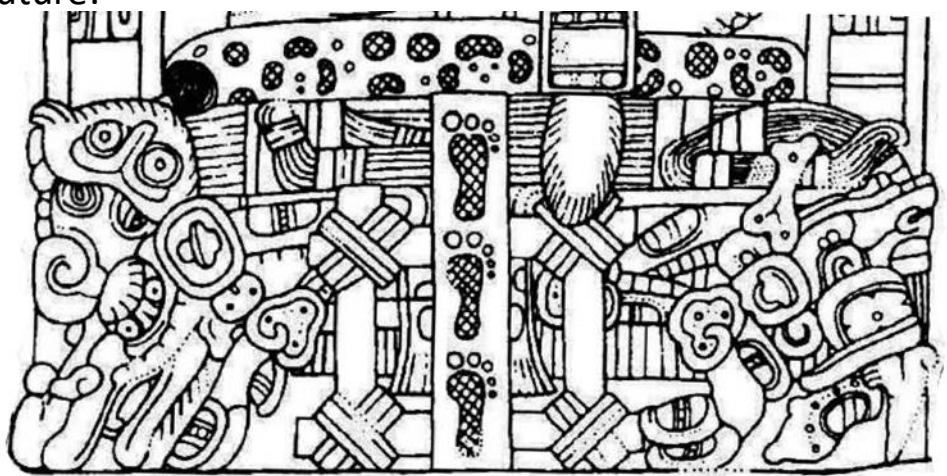
The Center And The  
Portal. MA thesis.



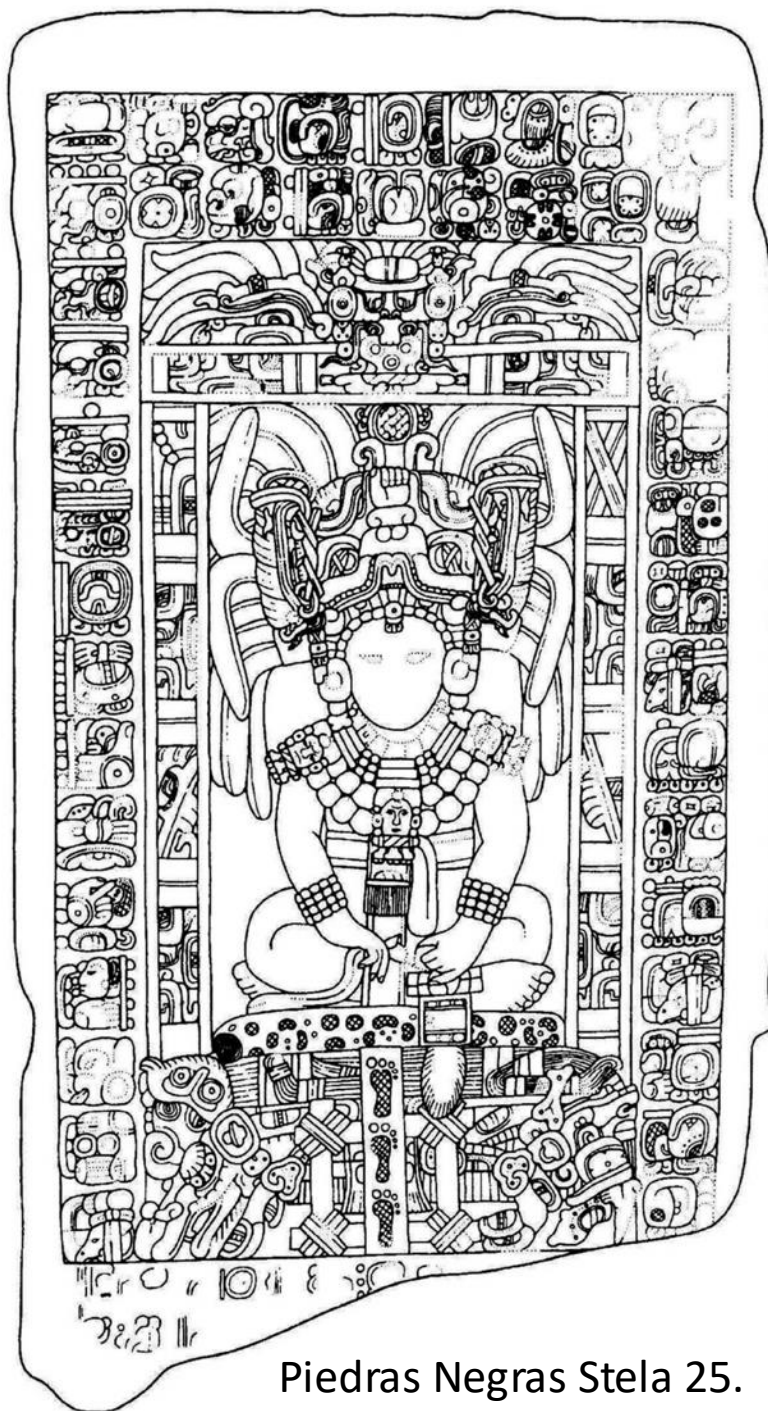
Cosmic Bands, in addition to common at Palenque are present as the top of “Sky Band Thrones” that are at the front of “Sky Band Throne Rooms.”

I estimate these are temporary structures constructed of perishable material (so not solid stone). These were built for festivals and ritual performances (probably in courtyards or plazas; not sure most vaulted rooms had enough space for these).

We appreciate line drawings from CMHI of PMAE, Harvard. Since many stelae have been drawn by CMHI, also by Linda Schele, also by John Montgomery, and also by other epigraphers and iconographers, we have to dedicate more time to caption each drawing in the future.

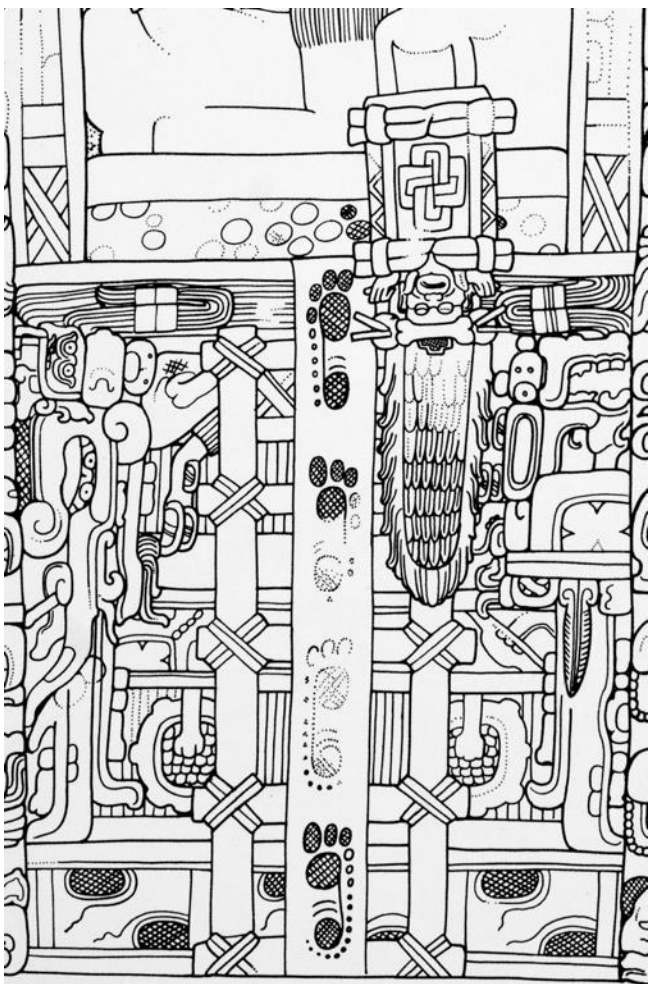


Generic celestial/Venus symbol, not crossed-bands.

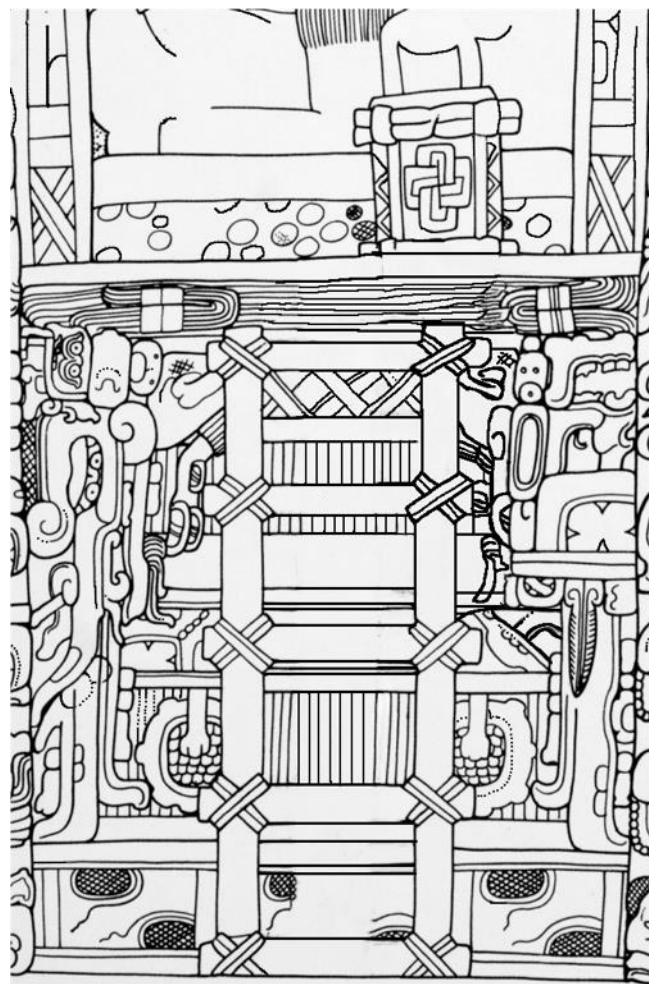


Piedras Negras Stela 25.





This is the actual Sky Band Stairway, PN Stela 1. Earth Band at base; then another band (reminds me of a water lily pad but could be something else). Then a not very high sky band. The top “step” is also a sky band.



Here is first draft (by Byron Pacay) to show what is really under the “foot prints” and under the incense bag. We need to add the Sky Band symbols on the two steps on which they occur.

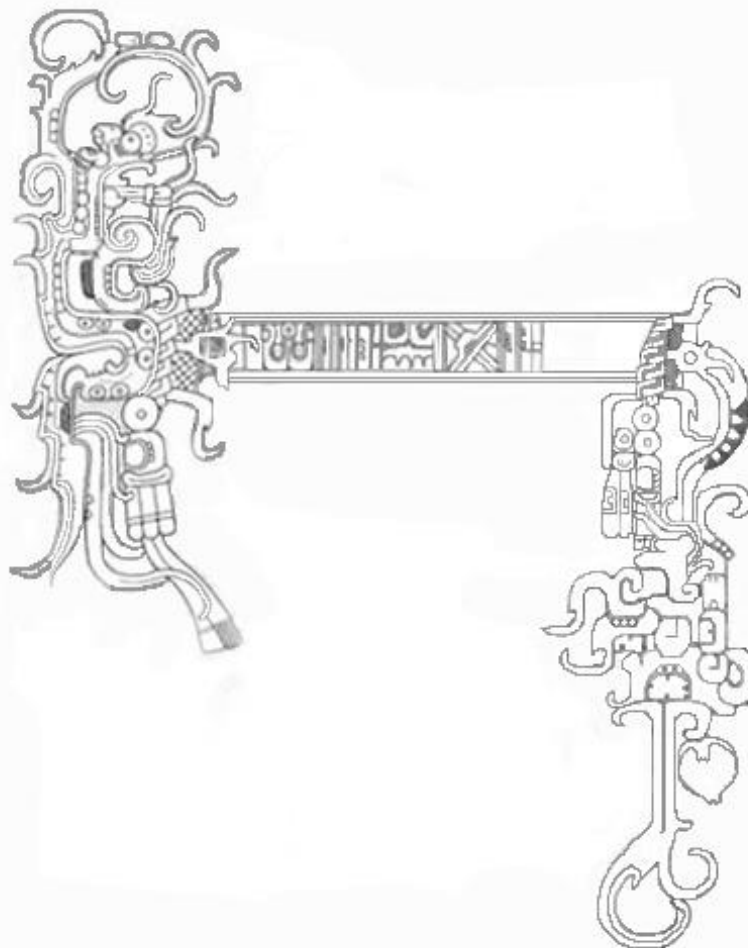
Sky Band  
Thrones in a Sky  
Band Throne  
Room deserve a  
separate  
publication  
(which we have  
been working  
on for over a  
year).



Here the Cosmic Monster is a Ceremonial Bar.

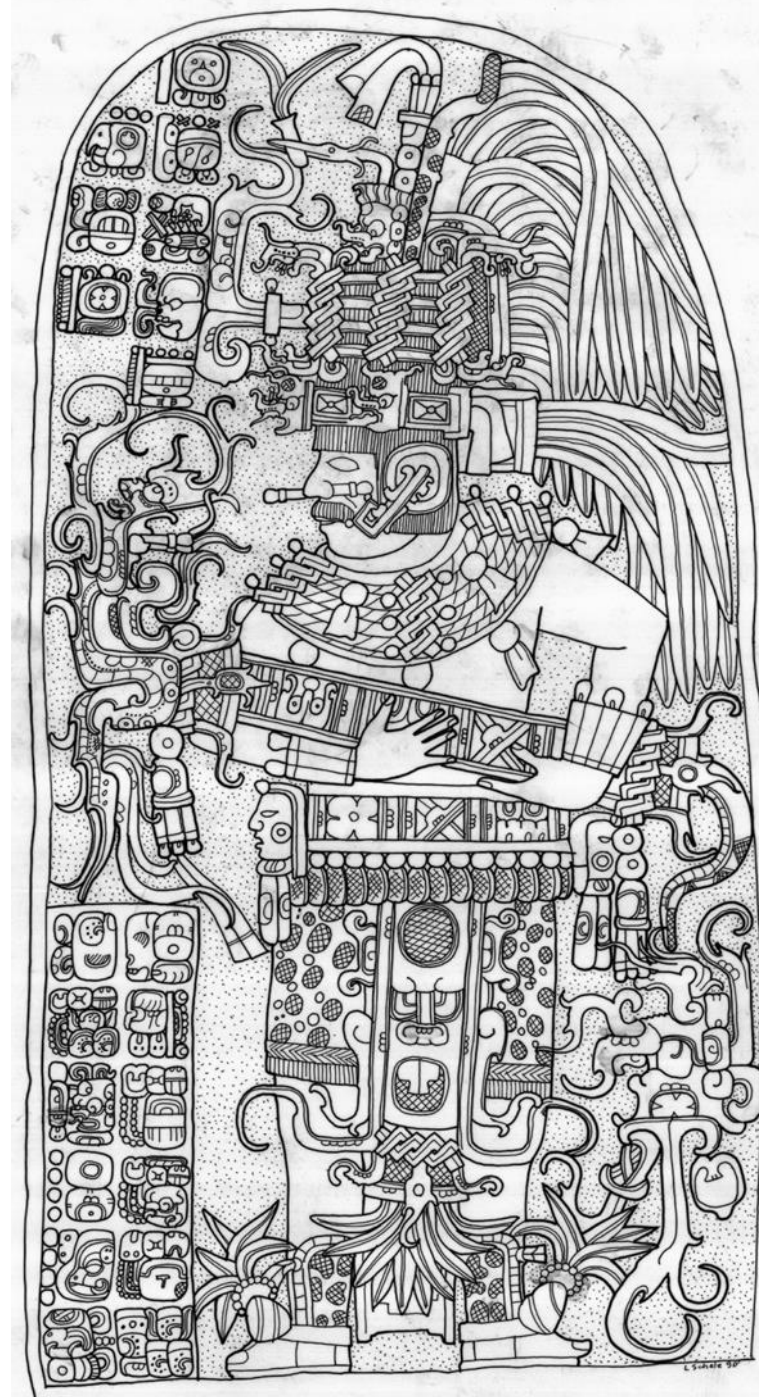
Nonetheless, it has the “body” as a Sky Band (albeit with no reptile scales across the bottom). The Quadripartite Badge does show reptile scales on the tail of a snake (not the tail of a crocodile). The “stingray spine” curls out as if it were on steroids.

The main face of this Cosmic Monster, traditionally at the left, has no noticeable deer features.



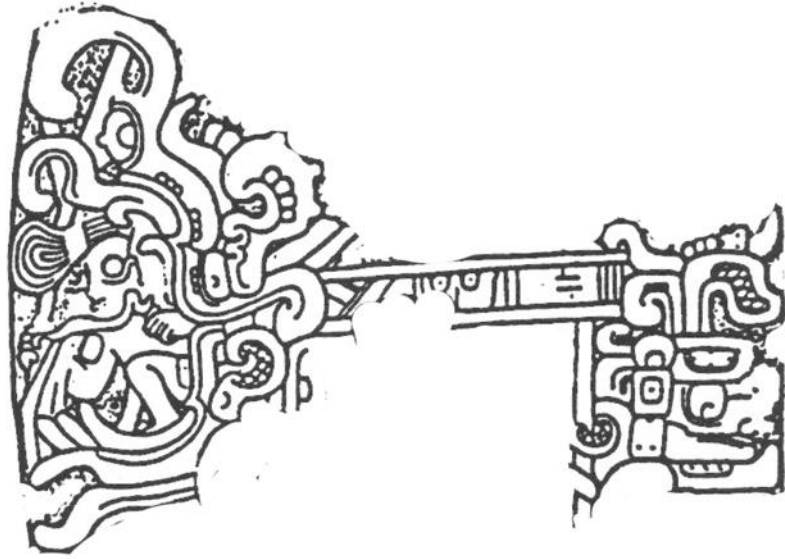
Byron Pacay, FLAAR Mesoamerica, turned this Cosmic Monster straight.

Seibal (Ceibal) Stela 10, helpful resolution though the top quality drawings kindly sent to my long-r iconography research by CMHI PV are often better. Drawing by Linda Schele, SD-7646. © David Schele. Drawing courtesy Ancient Americas at LACMA (ancientamericas.org).



Below we show the Quadripartite Badge Headdress with the Stingray Spine almost like deer antlers (though I estimate the Maya had other concepts in mind)



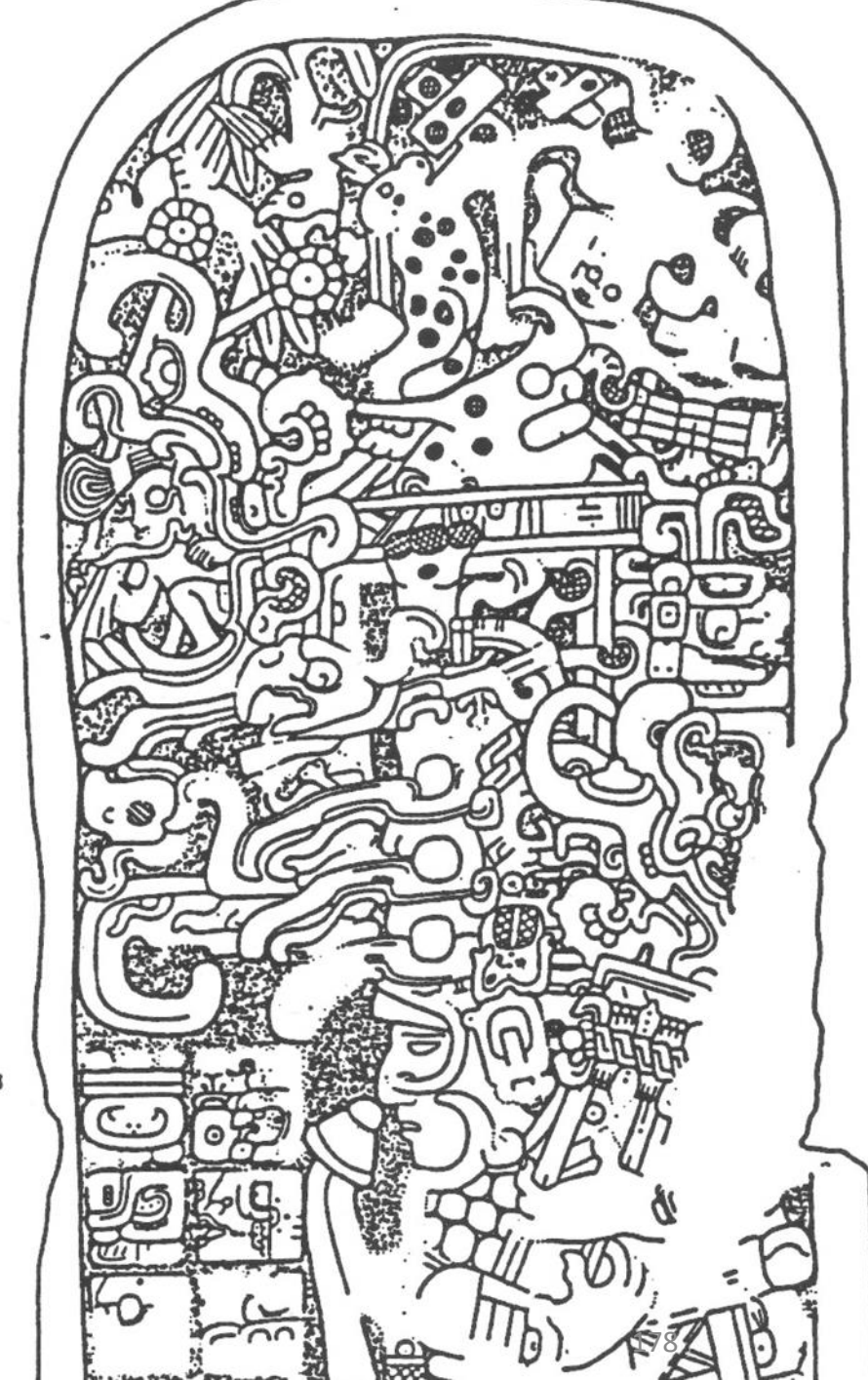


Yaxha Stela 31.

This upper part has so many monsters, animals, deities, it's amazing. Would help to be redrawn with more detail.

We (FLAAR) assisted Ian Graham while we were mapping Yaxha. We also assisted Merle Greene Robertson. I can still remember Ian Graham showing his appreciation by carrying buckets of water all the way from Lake Yaxha up the steep path up a high hill overlooking the lake (where the campsite was, near the entrance to the ruins). Only when the President of Guatemala visited Yaxha and asked us how he could help us was it possible to move the camp downhill to near the lake (so we could have water for drinking, cooking, and bathing).

Ian Graham kindly gave me any and all drawings of his that were of iconographic topics that he noticed that I was interested in.



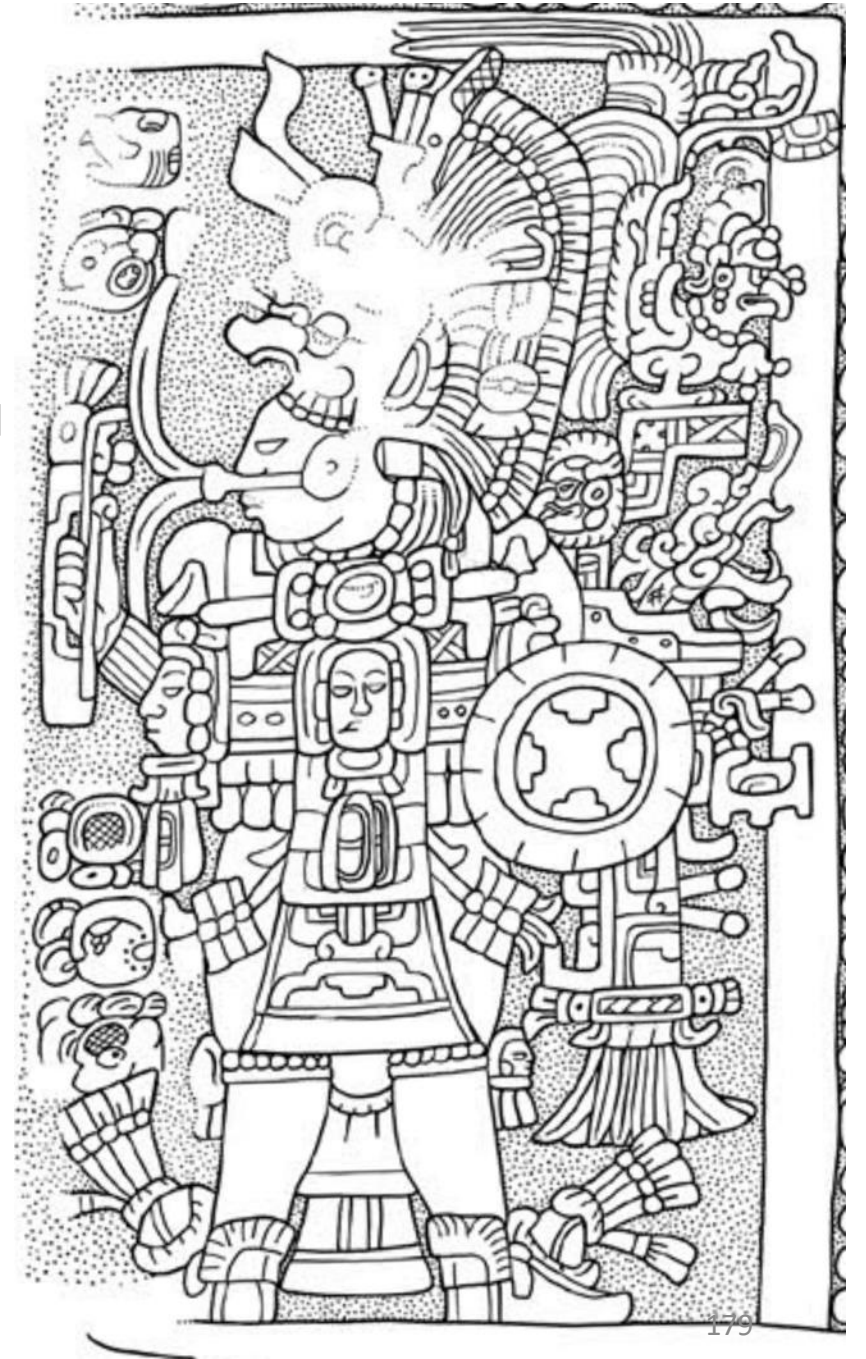
Many Sky Band elevated throne rooms have a Principal Bird Deity in the middle of the roof.

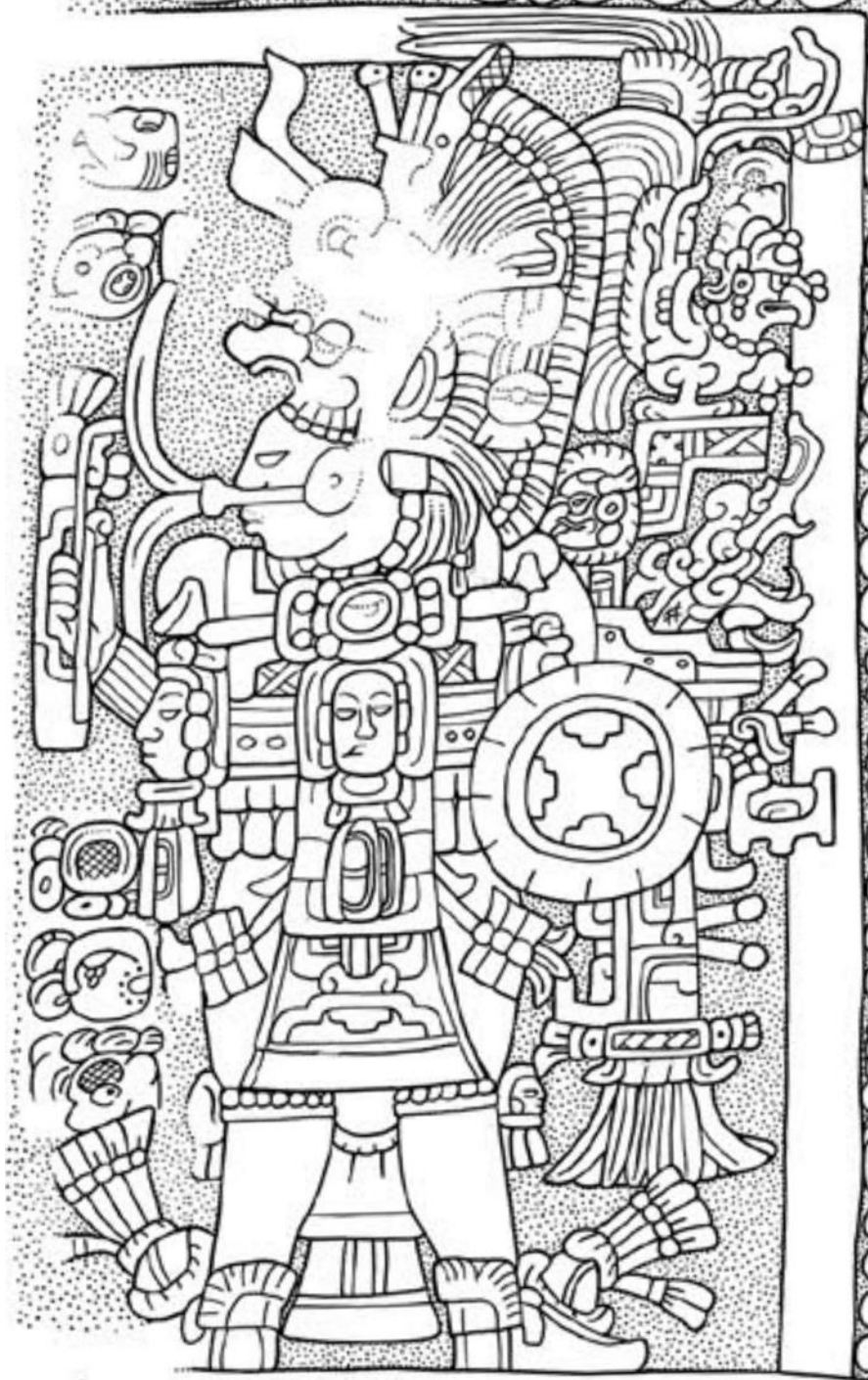
When I saw the crocodile-like (also snake-like) feature, I definitely felt this should be discussed. Then I saw the “calendric bird” at the end of the Sky Band and I realized this was not the Crocodile Cosmic Monster but the Calendrical Bird Sky Band.

This backrack is very common on Holmul Dancer vases and the few Holmul Dancer plates. Not many bas-relief stelae show the Holmul Dancer backrack.

There are several sculptures that show backracks and dozens of vases and a few plates. There is so much symbolism associated with Holmul Dancer backracks that I show only two pages in this presentation (because Holmul Dancer outfits need a separate research project).

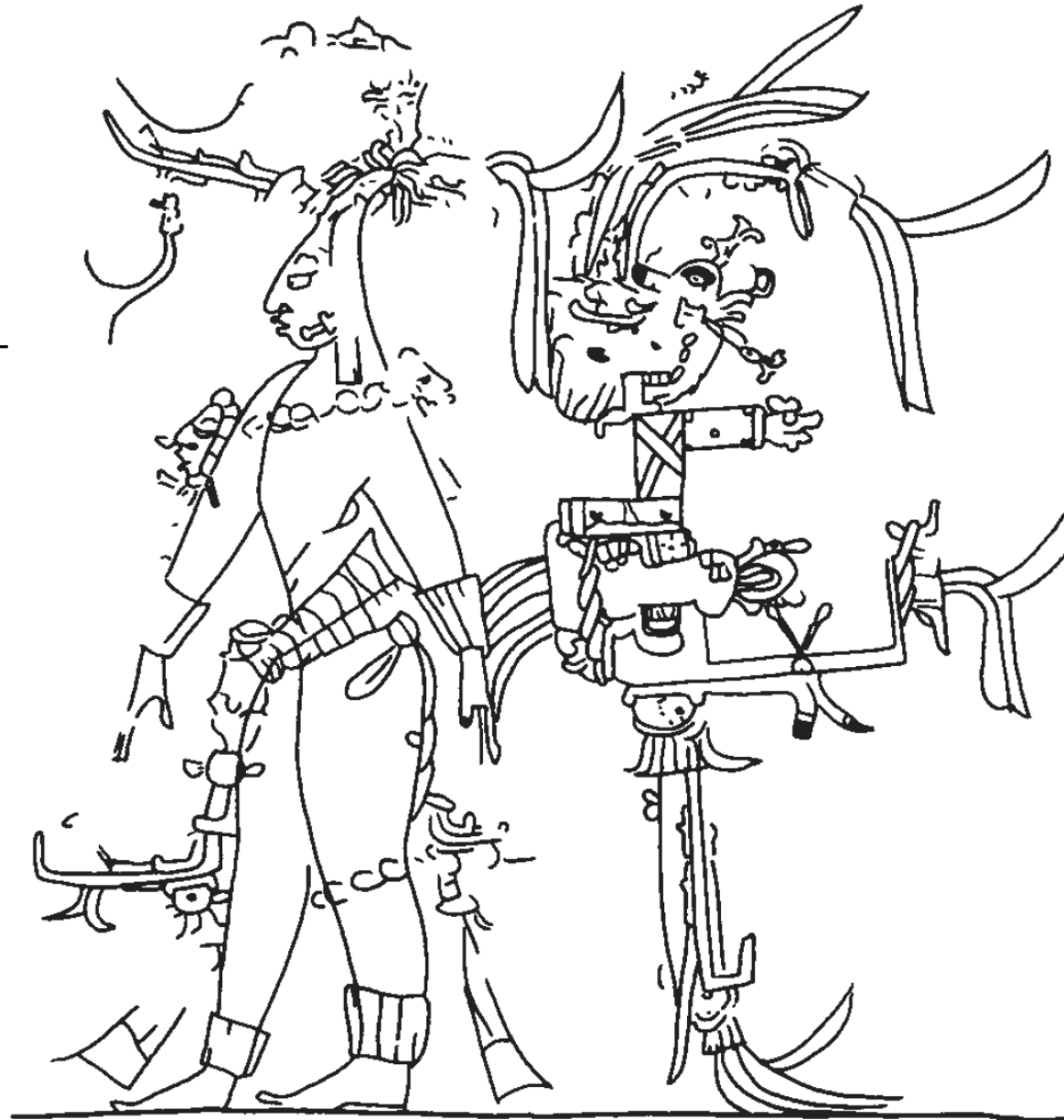
La Corona Panel 1, drawing by David Stuart.





Holmul Dancer on bas-relief stone sculpture at the left. La Corona Panel 1, drawing by David Stuart.

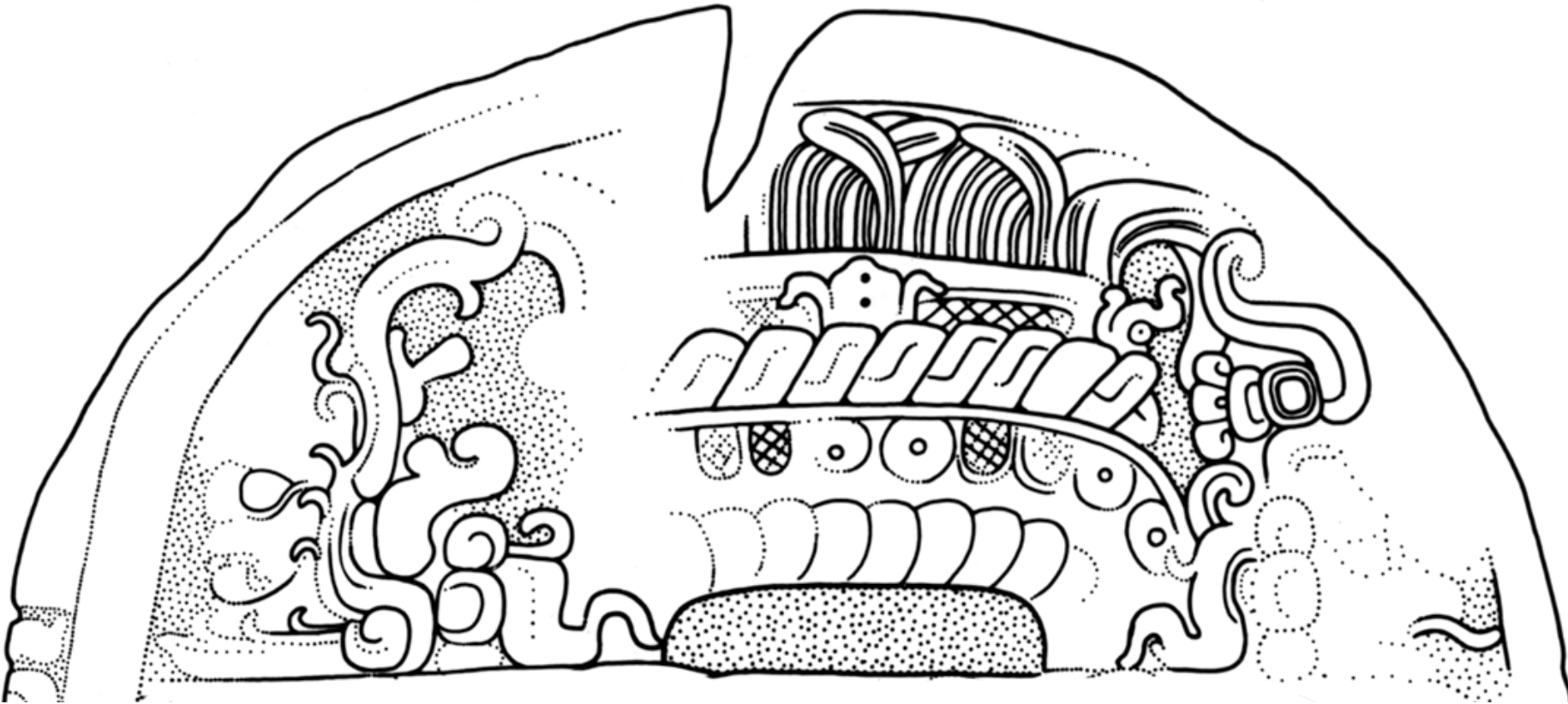
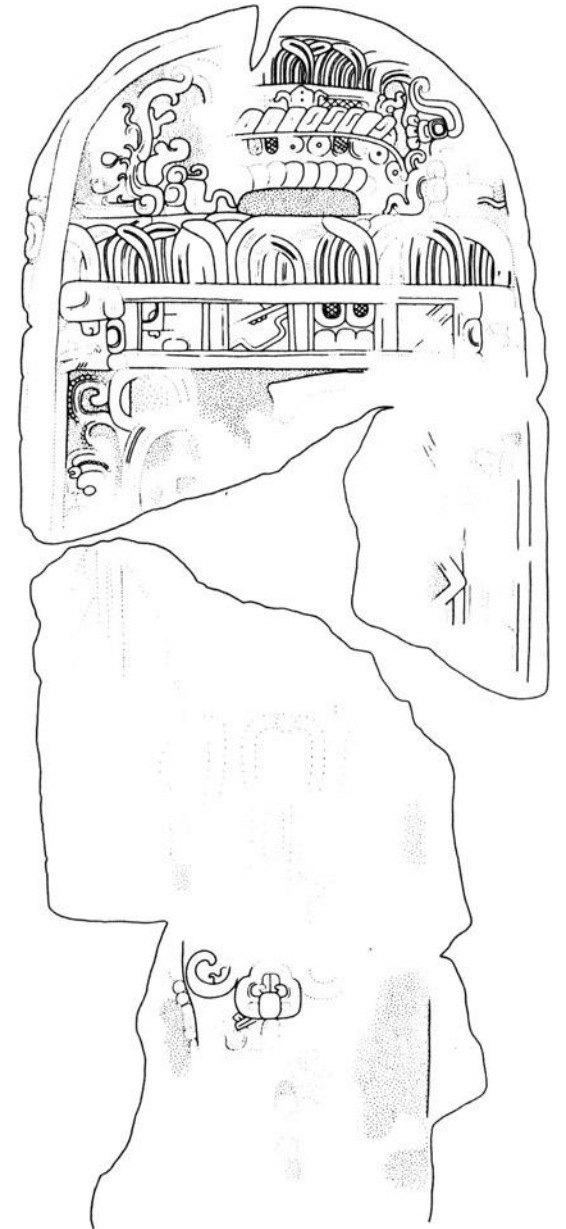
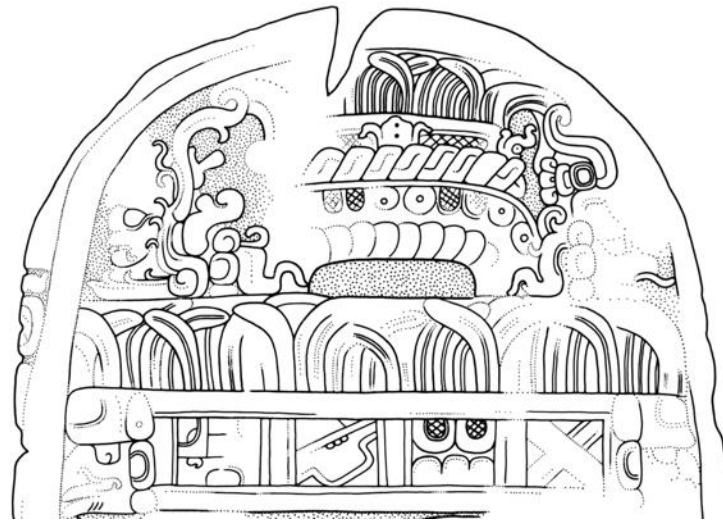
At the right: simplified Holmul Dancer on polychrome vase based on Kerr rollout, K5355.



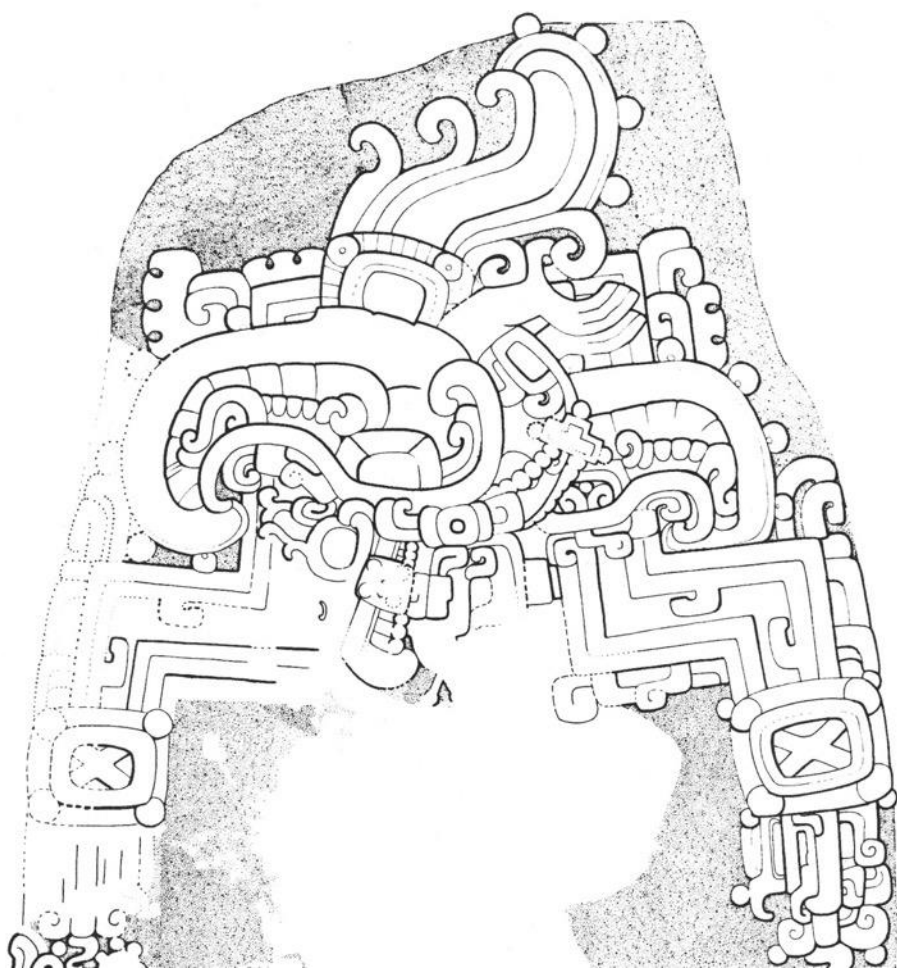
**4.12.** Maize God, detail of vessel MSO159 (K5355) from San Agustín Acasaguastlán area. Drawing by author.<sup>180</sup>

Cropped by Hellmuth to show Sky Band and the Bicephalic Serpent Monster (not a crocodile Cosmic Monster). Cropped from Graham 1986: Page 5, 151 PMAE-112880304.

These helpful line drawings are part of the CMHI of the PMAE, Harvard University.

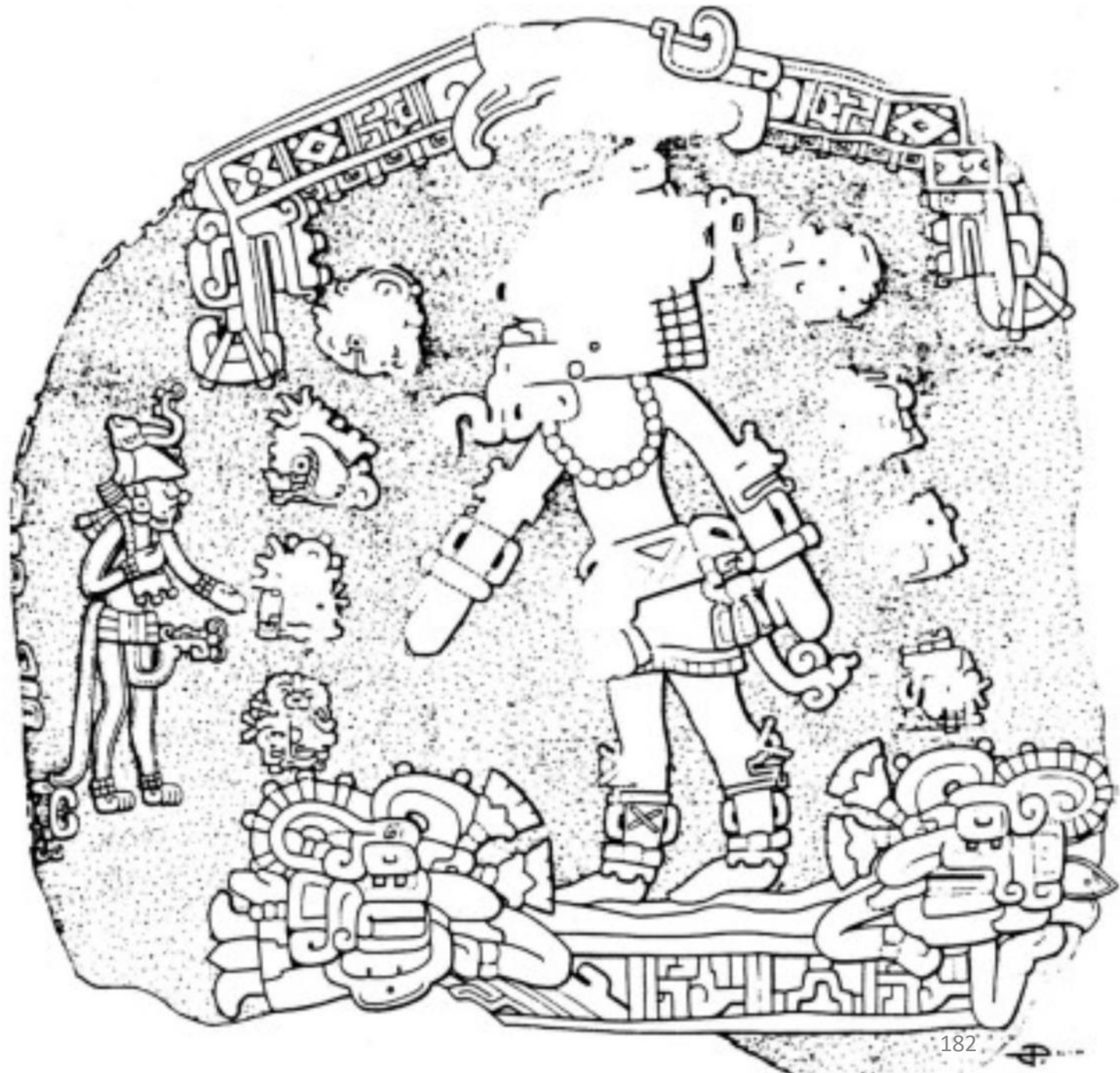


Uaxactun, Stela 7. Front. (Drawing by 1. Graham)

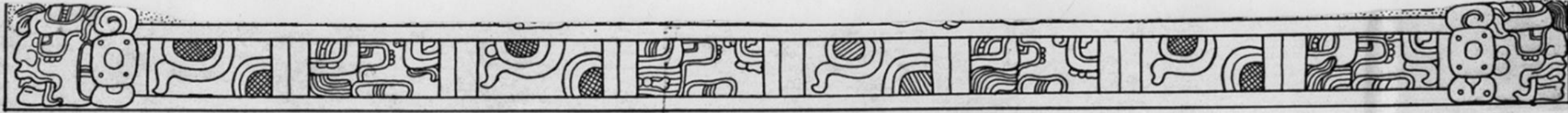


Two-headed Sky Band Monsters already existed at Takalik Abaj, centuries before Palenque or elsewhere. Some symbols of the Sky Band are in epi-Olmec or related pre-Maya inscriptions.

The Takalik Abaj Sky Bands even have the Principal Bird Deity at their center.



## Other Bicephalic Sky Band Monsters



Base of sanctuary sculpture, Palenque, Temple of the Sun. Usually this would be higher up in a scene.

Sky Band with Calendric Bird Head at Each End (no Crocodile, no Quadripartite Badge at either end).  
Cropped from Schele drawing, SD-0171, © David Schele. Drawing courtesy Ancient Americas at LACMA  
([ancientamericas.org](http://ancientamericas.org)).

Lots of Sky Bands have a calendrical bird at each end (instead of a crocodile, deer or Quadripartite Badge Headdress deity). The Sky Bands with calendrical bird have the same bird at each end.

Sometimes the Sky Bands are horizontal; other times they rise up to form corners (walls) of a “Sky Band Throne Room.”



Quirigua Stela I, drawing byLooper 2008: Fig. 4-16

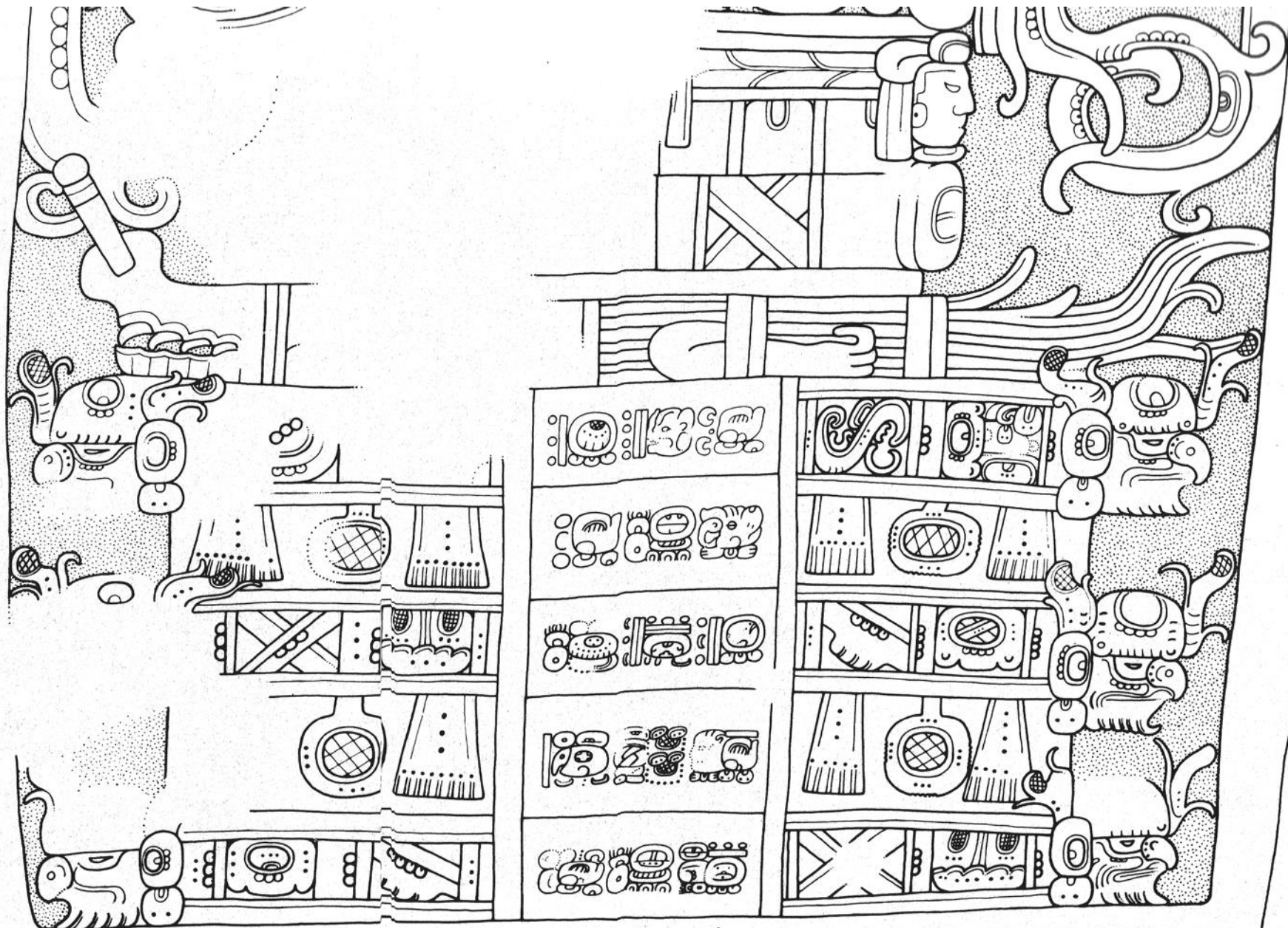
This throne room shows no sky band steps (or any steps). But the Sky Band enclosure (Sky Band Throne Room) is very similar to others (with bicephalic calendrical birds).





Tied animal across the top. The Sky Band Thrones of Codex Paris also have a bound animal across the top (but the heads at each level point downward).

The bicephalic sky bands on this Sky Band Stairway (up to a throne room) have calendrical birds at each end. So these Sky Bands are bicephalic but no reptiles.



Y Z A'

As here, the  
Quadripartite Badge  
headdress deity is  
usually upside down.

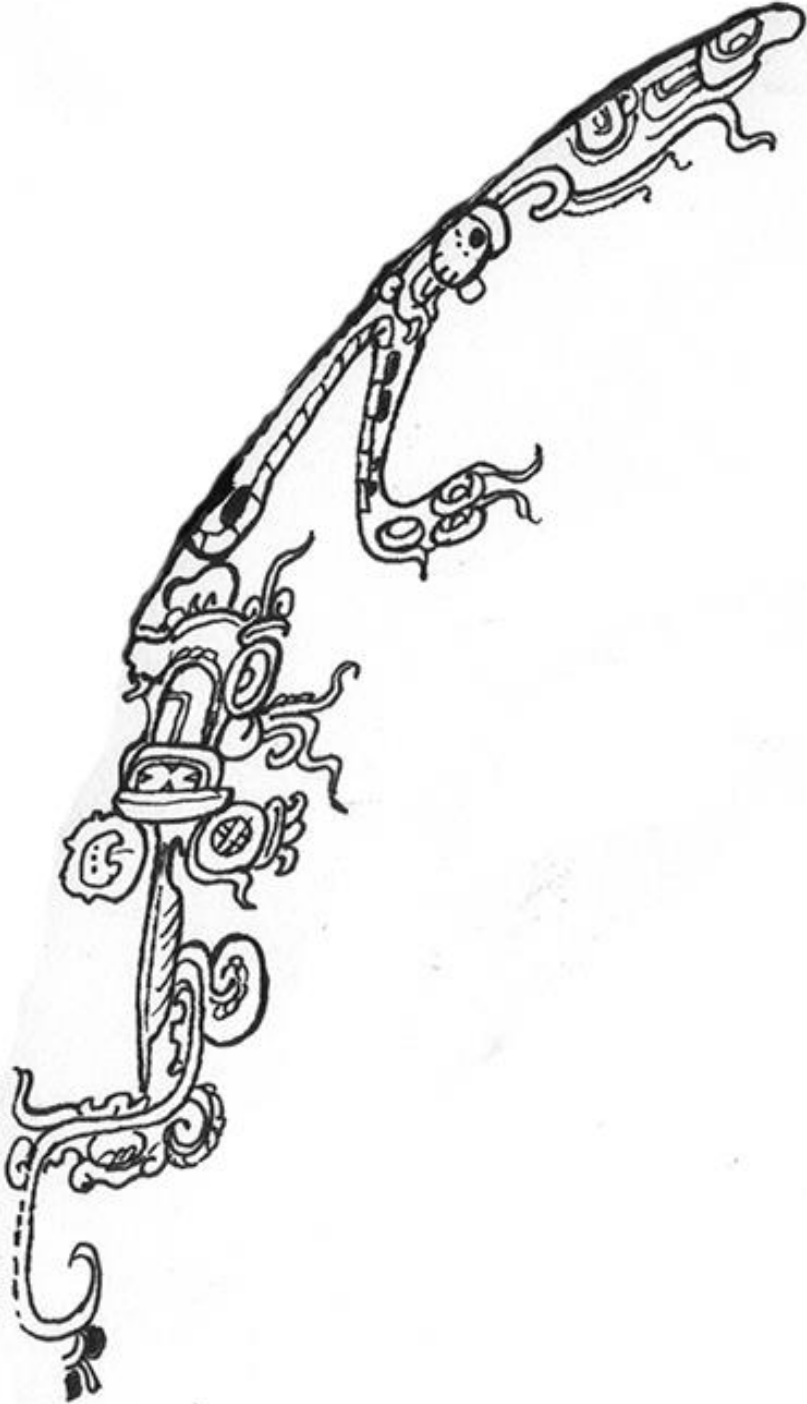
But this symbol is  
normally at the right  
end of the crocodile.



Crocodile is usually (but not  
always) at the front of the  
Cosmic Monster.

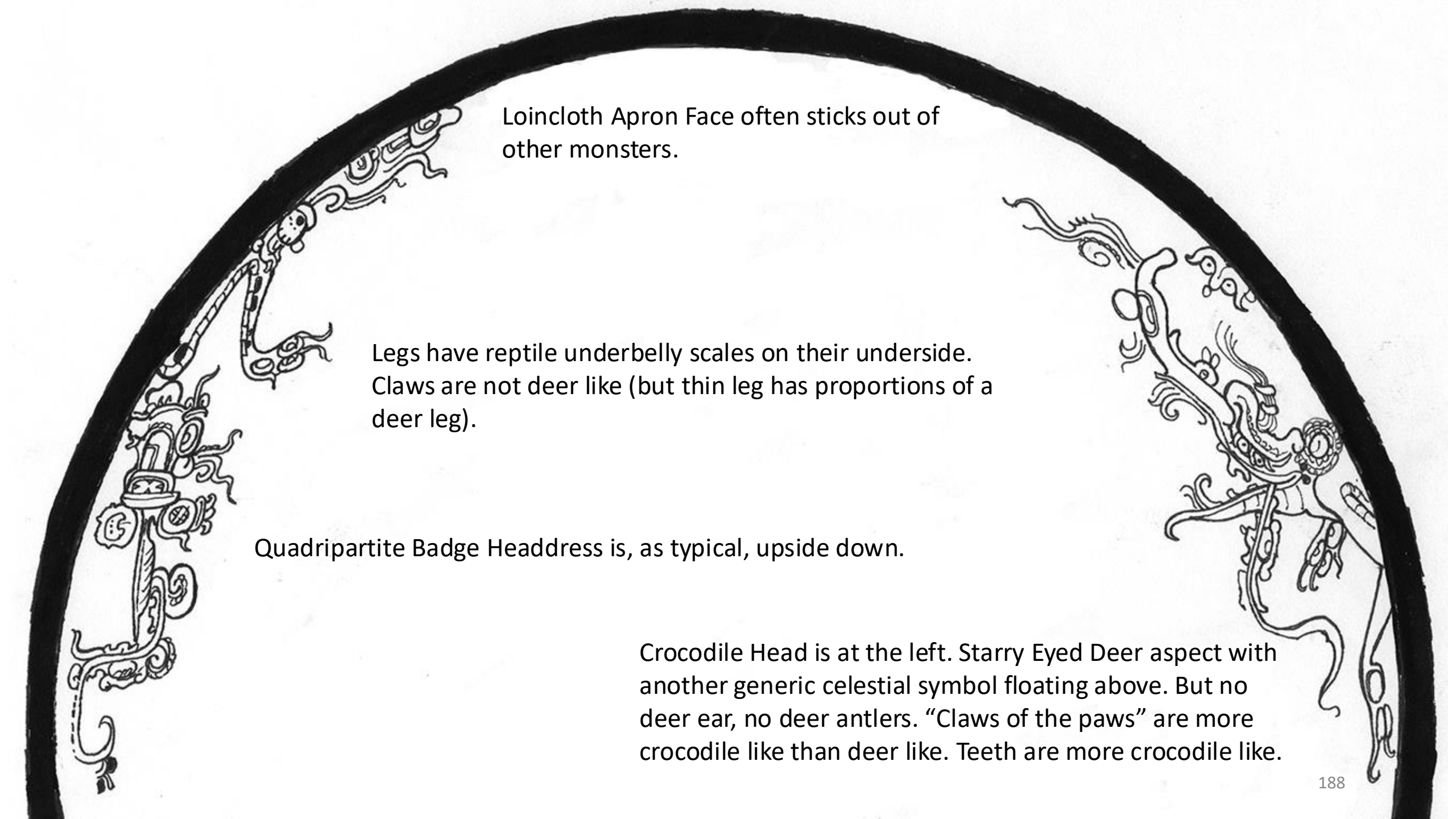


Drawing by  
Linda Schele,  
SD-7321.<sup>186</sup>



This often generic Recurved Snout Monster is found in hundreds of stelae, stucco, paintings, etc. It comes in many sizes and shapes, often resembling the calendrical Zip Monster.

Quadriparte Badge Headdress Monster



Loincloth Apron Face often sticks out of other monsters.

Legs have reptile underbelly scales on their underside. Claws are not deer like (but thin leg has proportions of a deer leg).

Quadripartite Badge Headdress is, as typical, upside down.

Crocodile Head is at the left. Starry Eyed Deer aspect with another generic celestial symbol floating above. But no deer ear, no deer antlers. "Claws of the paws" are more crocodile like than deer like. Teeth are more crocodile like.



Profile Half-Frontal



Joined to make a frontal face that now we can recognize as a variant of the common Loincloth Apron Face. Best not to call this God C. Only about 2% of the hundreds of these faces have monkey features. Carl Callaway also independently has suggested not to confuse this with the monkey-face-God C.

I could recognize the Profile Half-Frontal face because in year 2022 the two surgeons who operated on my sinus system said I had to stay in bed in order to recuperate from their many hours of surgery inside my face. They said not work at my desk for several months! So I turned my bedroom into an office: had a 32" 4K monitor installed, moved hundreds of books to tables next to my bed, installed a "computer desk" that straddles your body on the bed so you can work on a computer without getting out of bed. The same table can be your table for eating breakfast, lunch and dinner. But every time the care-giver left the room, I moved to the adjacent desk since I can study iconography best on the space of a 32" monitor (on the bed-desk I used just my 17" laptop); the huge monitor was on the actual desk adjacent to my bed.

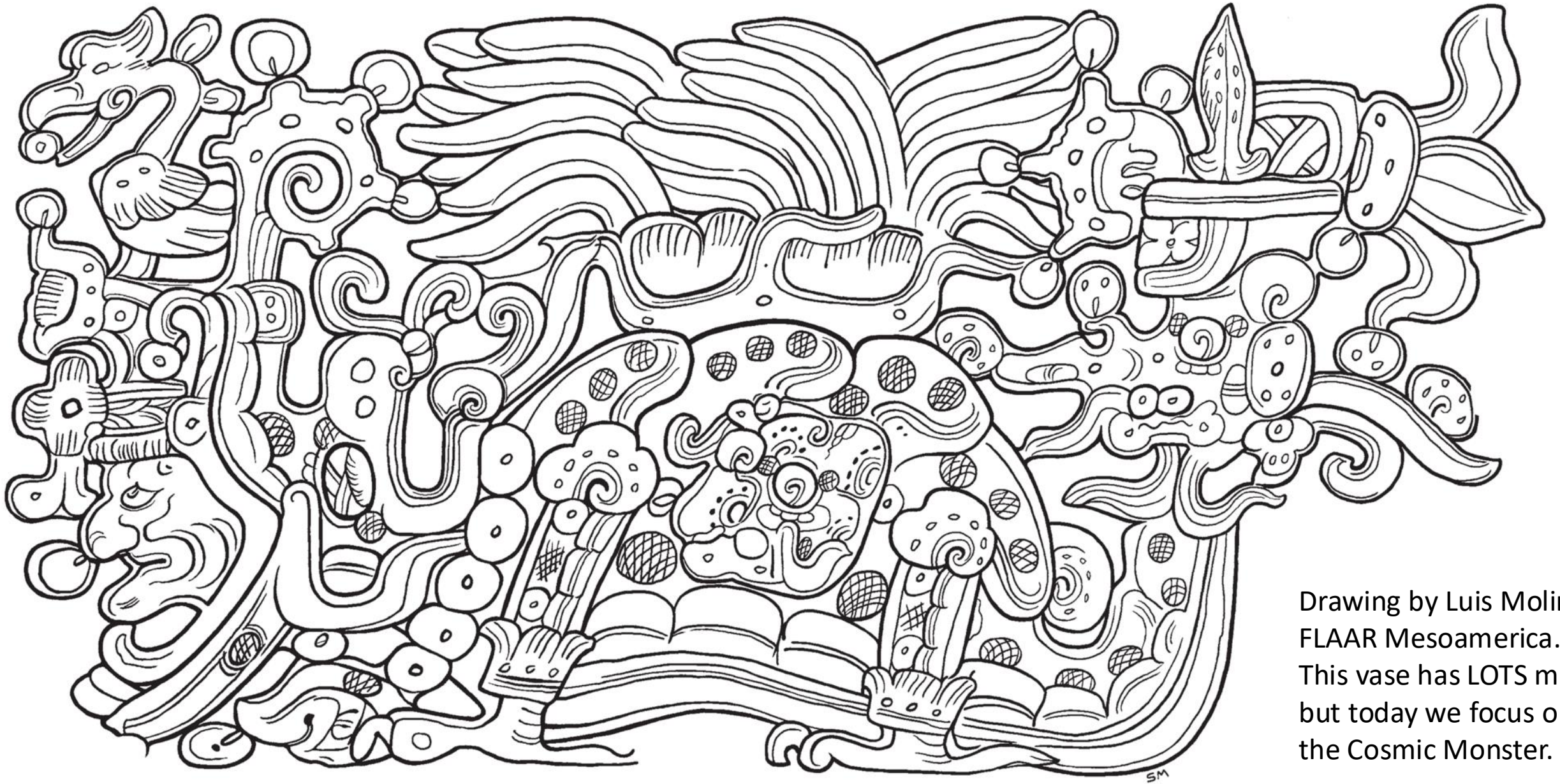
I decided to focus on Sky Bands for the several months that the doctors ordered that I "stay in bed" (meaning also no more field trips to swamps, marshes and savannas of Peten). So for 10 to 12 hours a day I studied Sky Bands on stela, murals, stucco façade decoration, the codices, and ceramics (vases, bowls and plates). The Profile Half-Frontal face is common and well known from Palenque Sky Bands. I then found the same face on hundreds of other carvings, paintings, etc. So when I see a complex plate such as this scene, my eyes can detect dozens of different deities, monsters, and mythical symbols.



How can we notice, and showcase, such a small deity face?

It helps to be at my desk 12 hours a day, 7 days a week, holidays and weekends, with several thousand PDFs, downloaded by my reference library team. Plus all the hundreds of line drawings and PDFs of books and articles on iconography kindly sent to me by epigraphers and iconographers over the years. Plus of course my library of actual (old fashioned) books.

Now let's return to pure crocodile monsters in the Surface of the Underworldworld. The Cosmic Monster is (usually) high above up in the heavens. But the same monster also likes to associate with the Underwaterworld.



Drawing by Luis Molina,  
FLAAR Mesoamerica.  
This vase has LOTS more  
but today we focus on  
the Cosmic Monster.

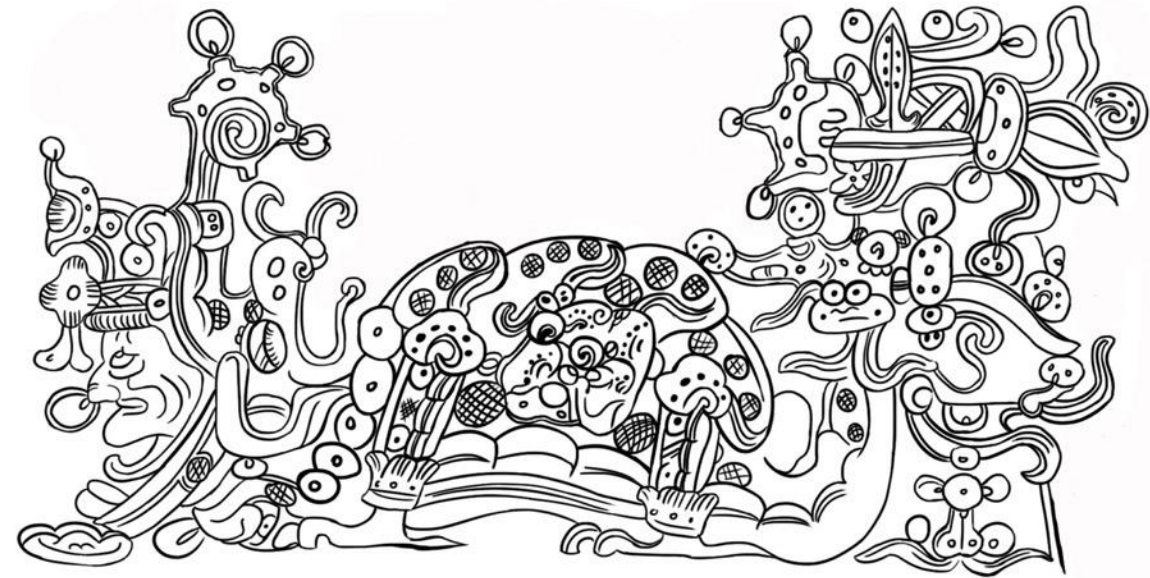
There is also a drawing by Simon Martin (2015) of this same segment. But we did our drawing directly from the rollout of the vase. <sup>191</sup>

We (Norma Cho Cu and Nicholas) move off the waterbird and move up the feathered" water lily flower.



We want to show the bicephalic crocodile monster (so we remove the accessory decorations of waterbird and water lily).

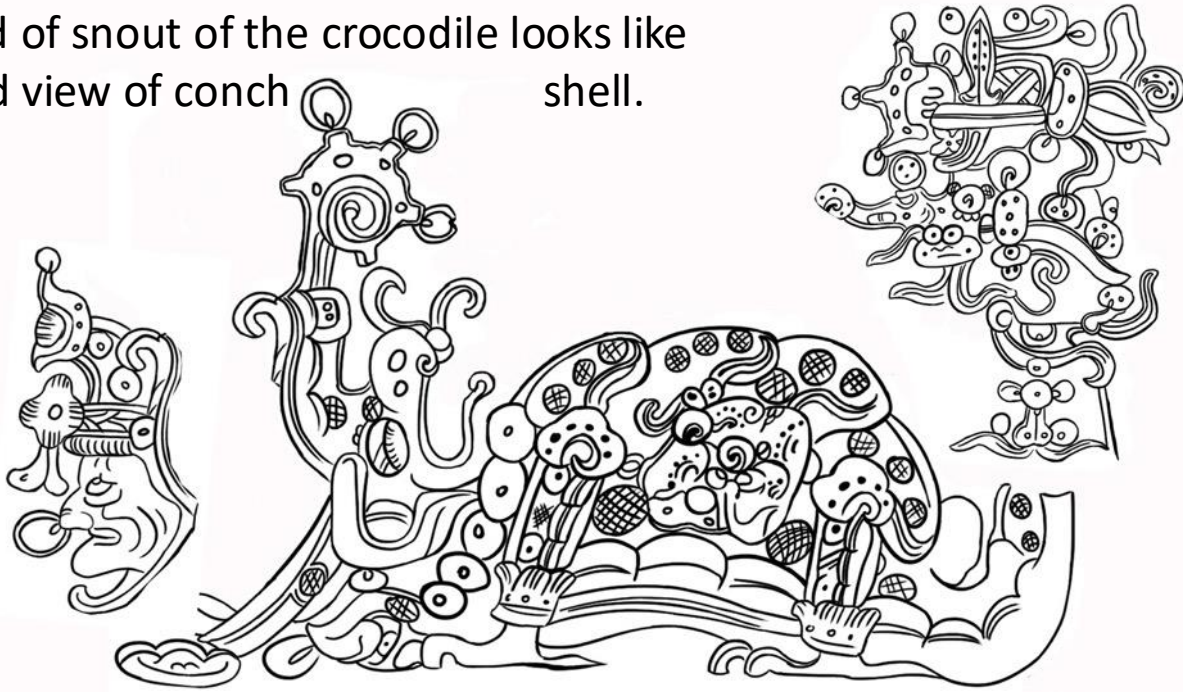
The head at the back is not upside-down so you can see it better.



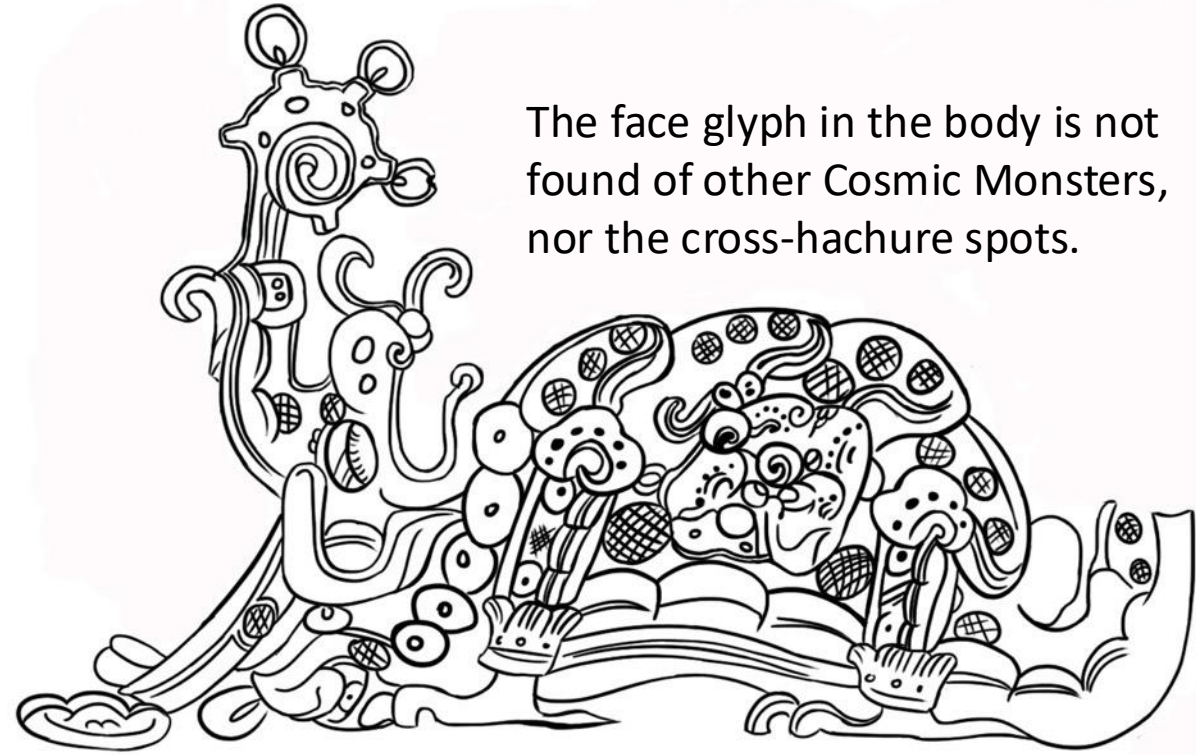
The scene on this vase is so detailed that it helps to separate each aspect. To be able to do this, 50+ years of iconographic study of Classic Maya art helps my eyes notice each aspect.



End of snout of the crocodile looks like  
end view of conch shell.



The face glyph in the body is not  
found of other Cosmic Monsters,  
nor the cross-hachure spots.



To show you the crocodile's mouth, we move the God N.

The Quadripartite  
Badge has very  
small 4-petalled Kin  
sign; the giant  
seashell above  
takes all the space.



The Crossed Bands  
has a large "plant  
bud" at it's right side.

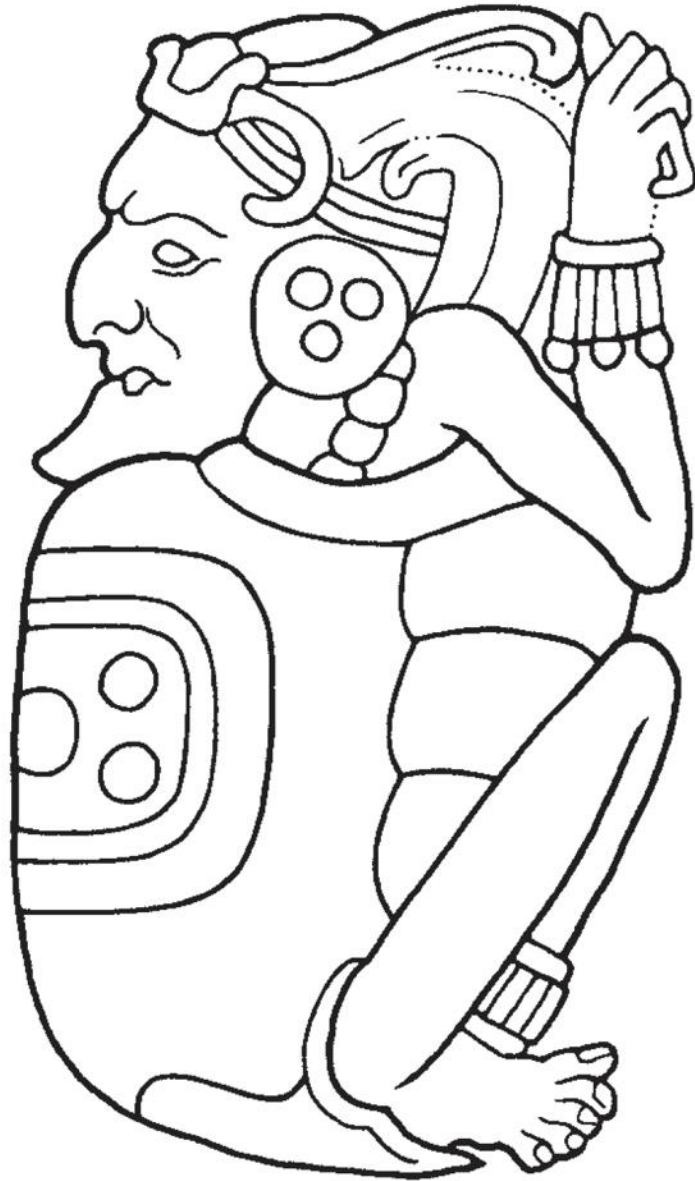
I am not an ornithologist but the feet look more  
like bird feet than a crocodile foot.

God N is often associated with the Cosmic Monster, usually inside the mouth of the crocodile. God N is also associated with crocodiles that are not bicephalic.

Here are two images from Quirigua Zoomorph P, Panels C and D.

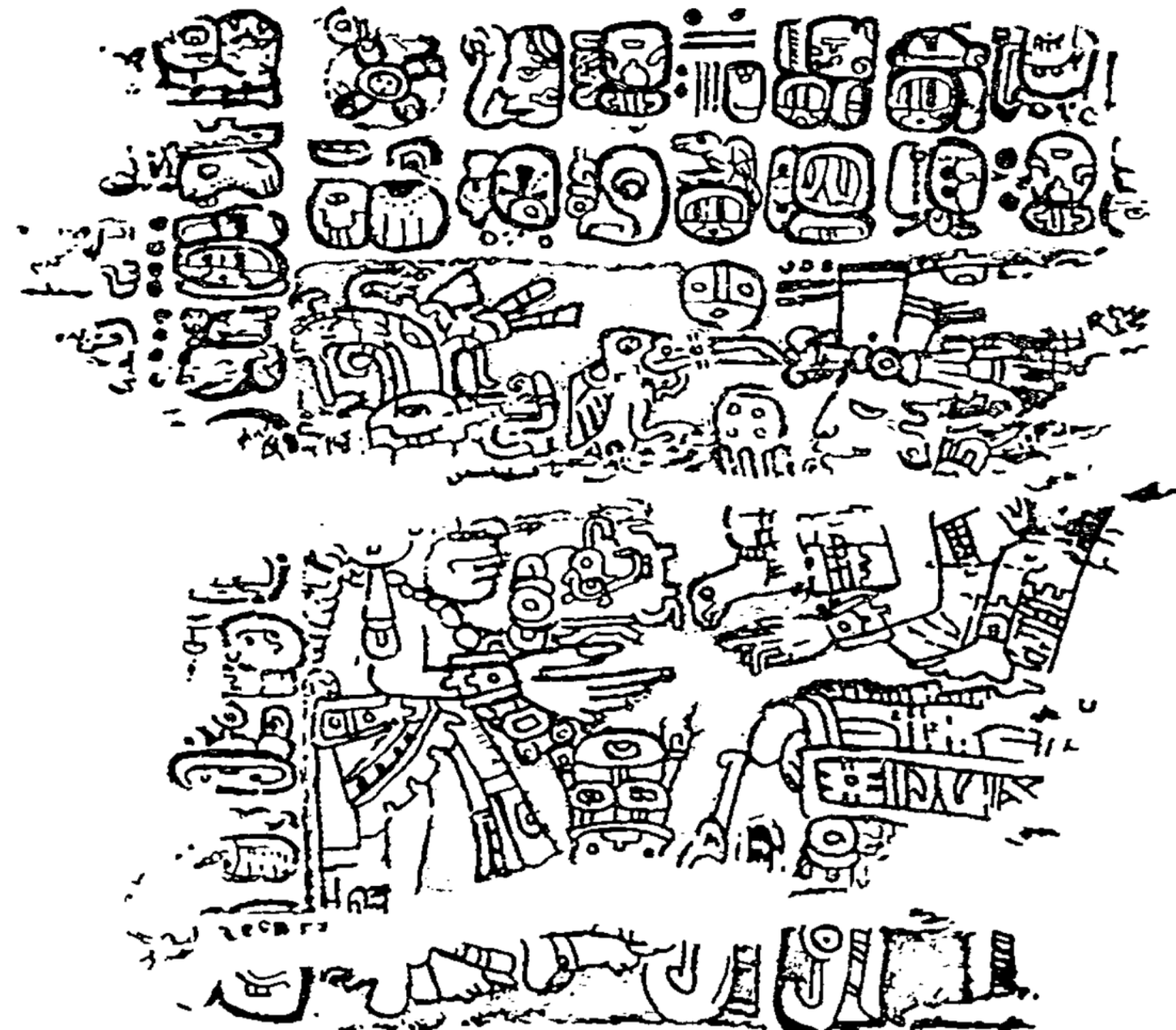
Would be essential to visit Quirigua in-person and check to see whether the crocodile image has crossed-bands or other symbol in its eye.

Drawing by Simon Martin after Maudslay 1989-1902, 2: Pl. 83 c and d, in Martin 2015: Fig. 15c.





Bicephalic; obviously a crocodile (length and posture). But the rear head is atypical. Pictured by Martin in a helpful article in Mesoweb.



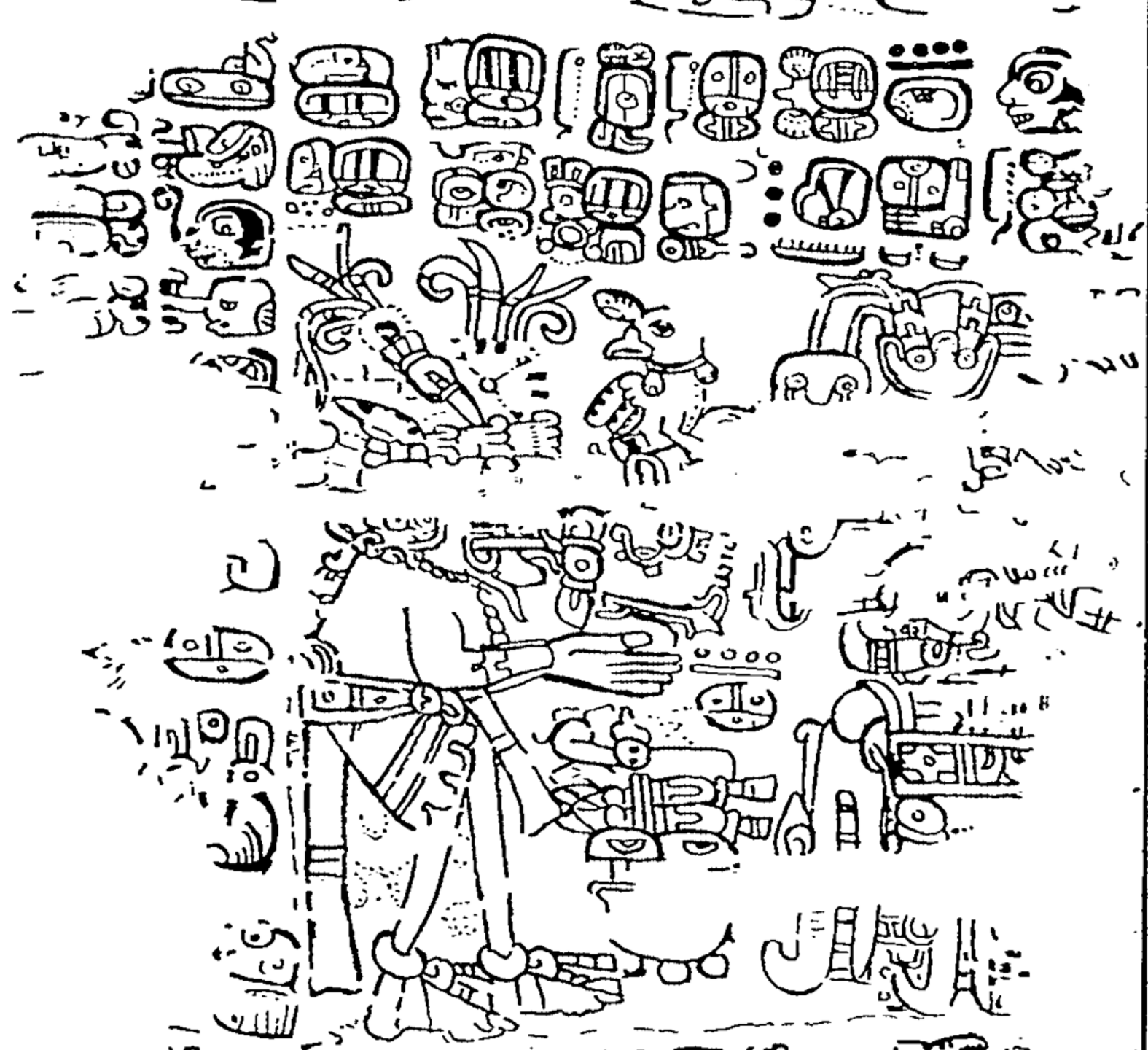
There are almost a dozen thrones in the Codex Paris that are very similar to thrones on Late Classic bas-relief Maya stone stelae.

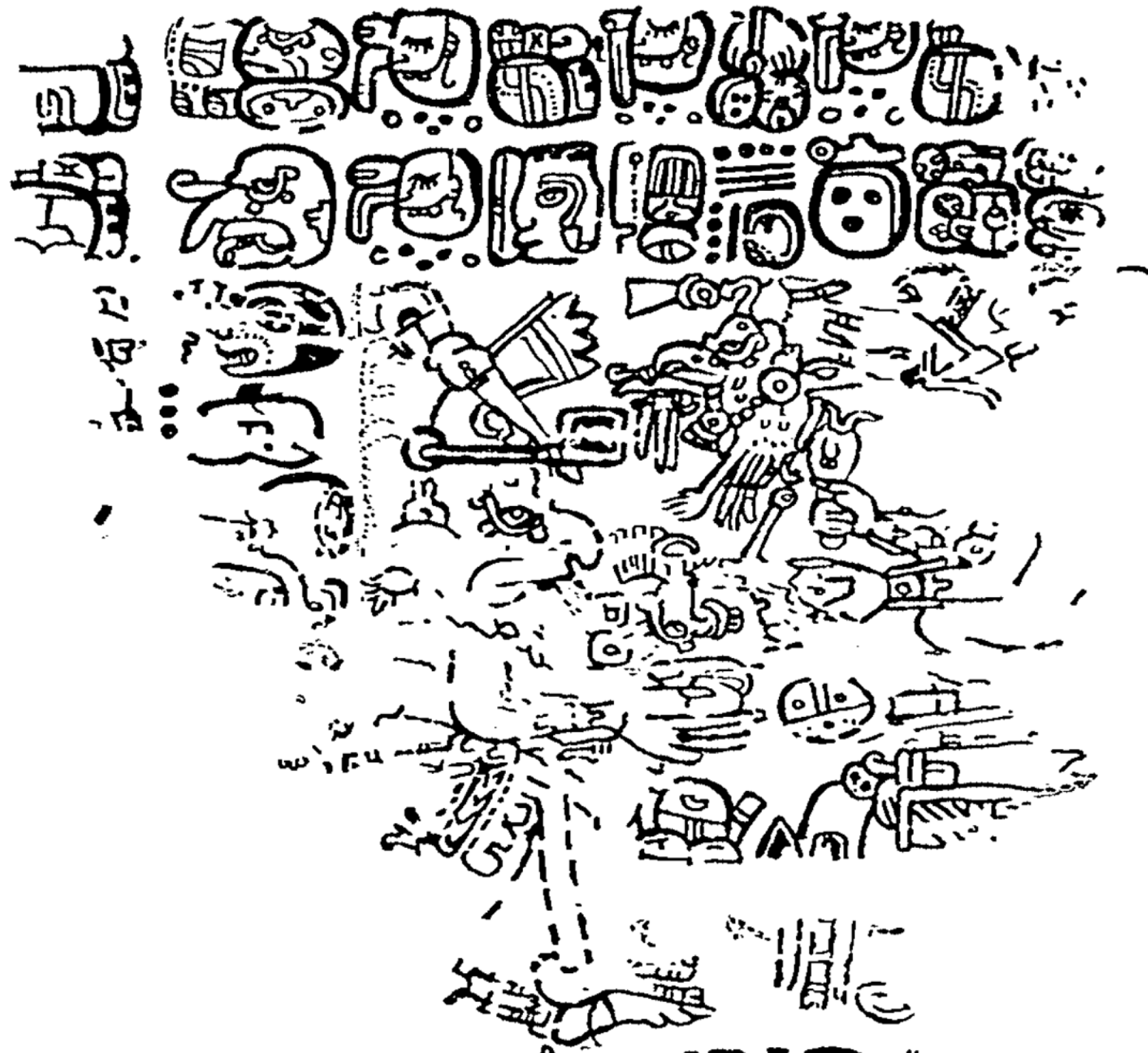
Each throne has two levels of decoration remaining (the middle portion and back portion are not shown; either no space for a wall and roof or in the Post Classic they did need primarily just the Sky Band Throne). The bottom level is the Sky Band, with a simplified stylized reptile head pointing down at the end.

Above this is a “bound-legs” deer-like animal but with a long crocodilian-sized mouth. These bound animals are so similar to ones on Late Classic stelae it’s notable (not “identical” but so obviously similar).

Drawing in the Villacorta and Villacorta edition of the three codices.

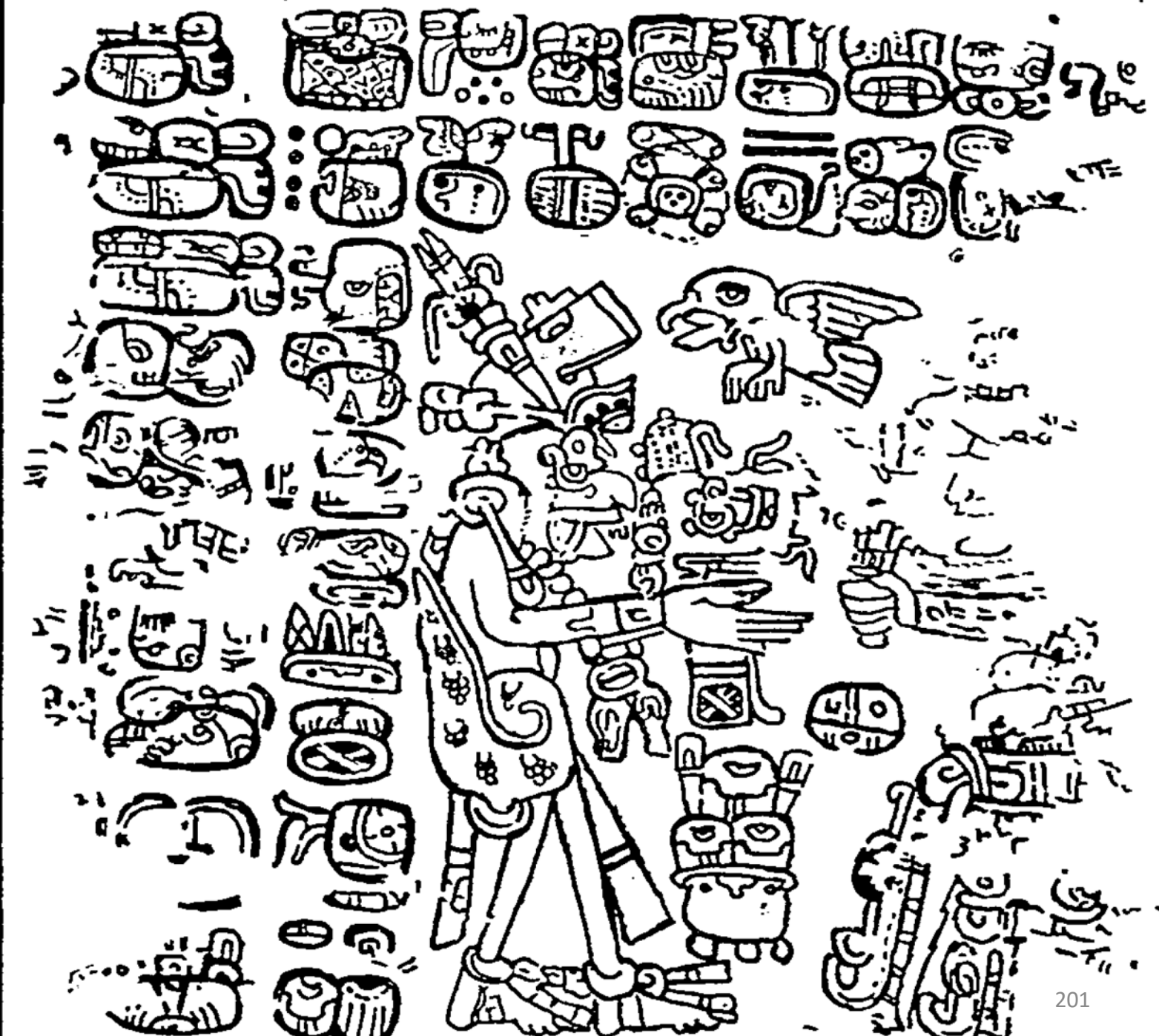


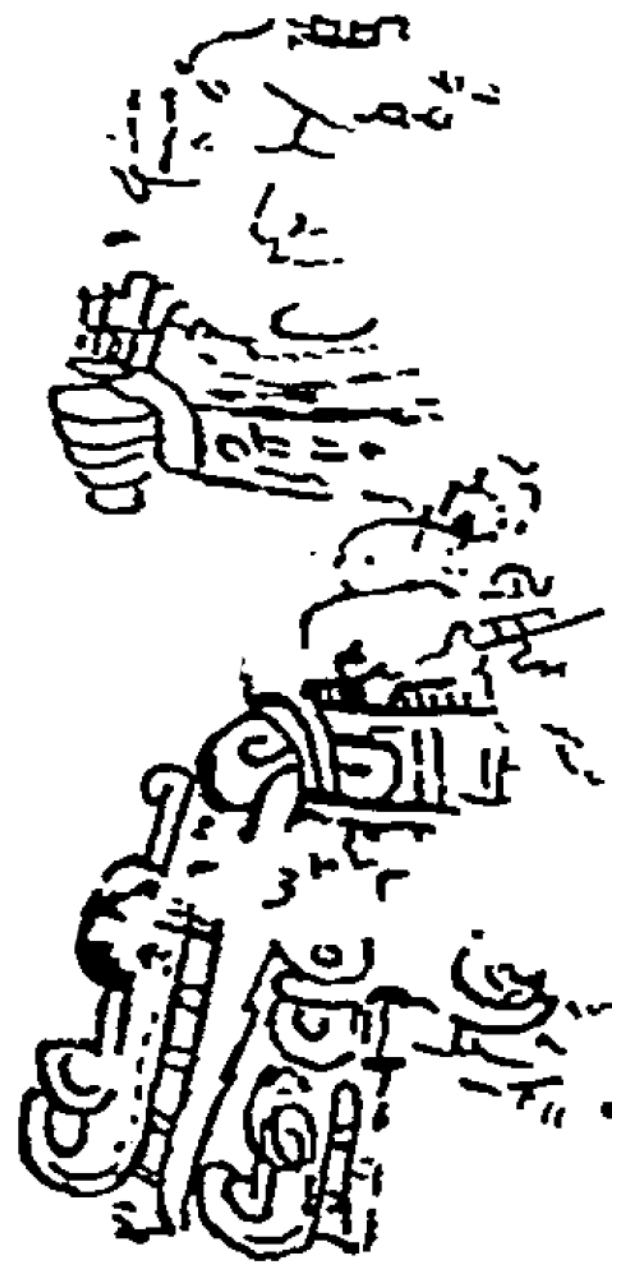
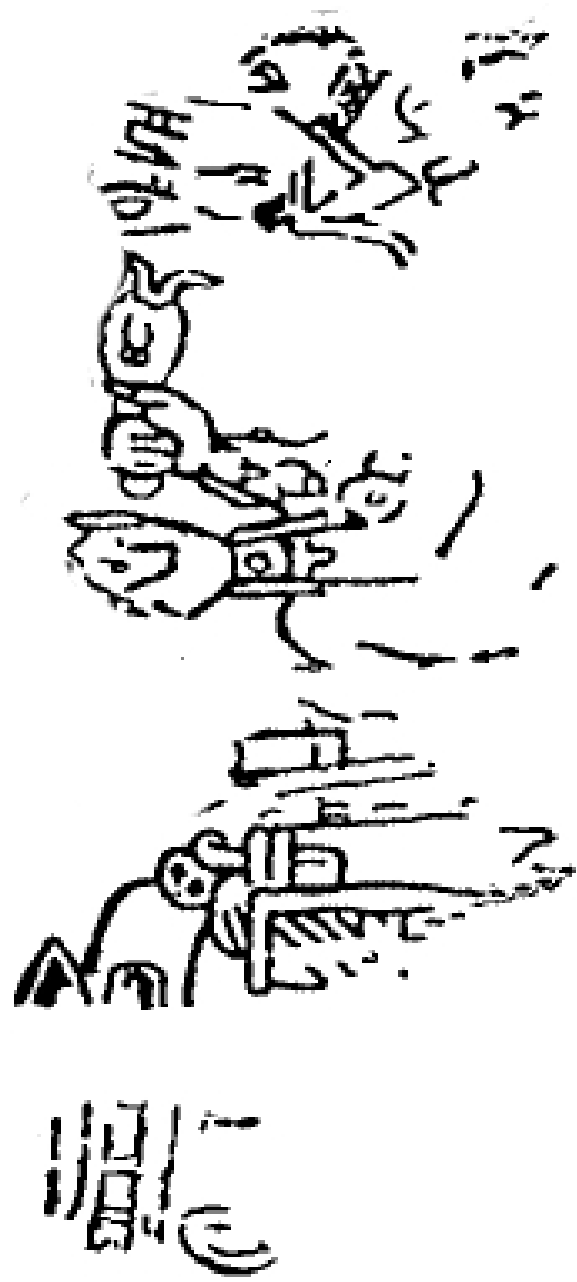


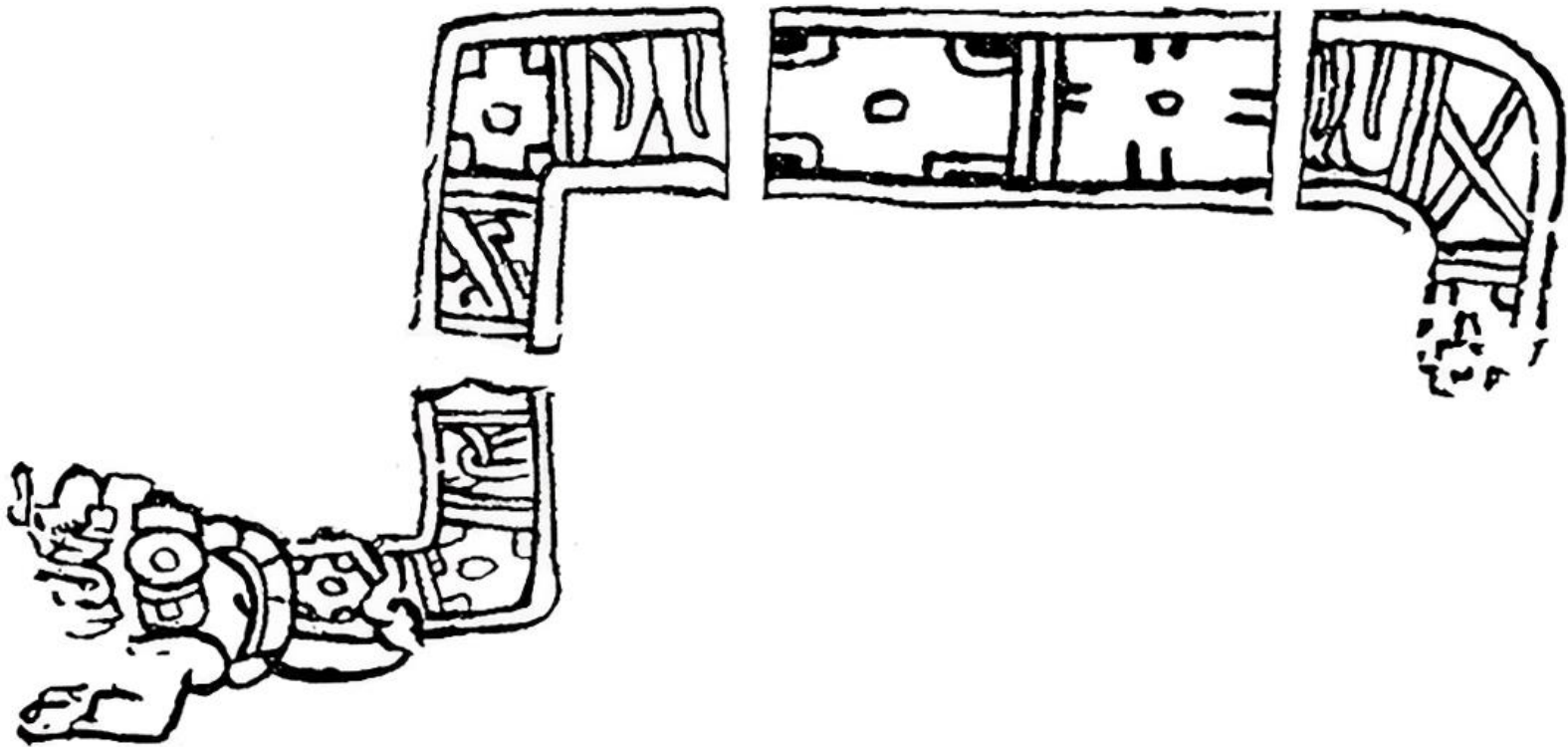






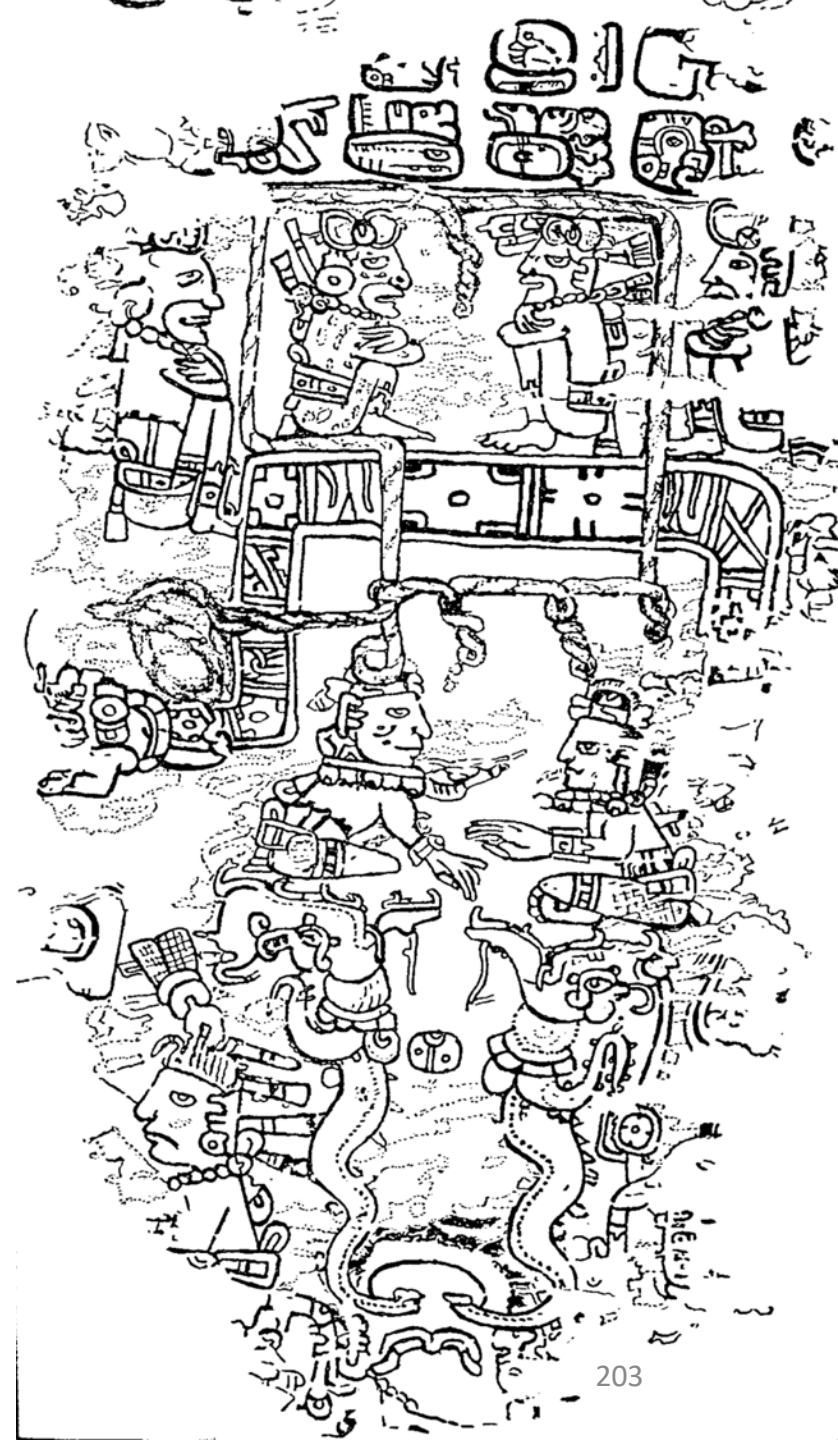


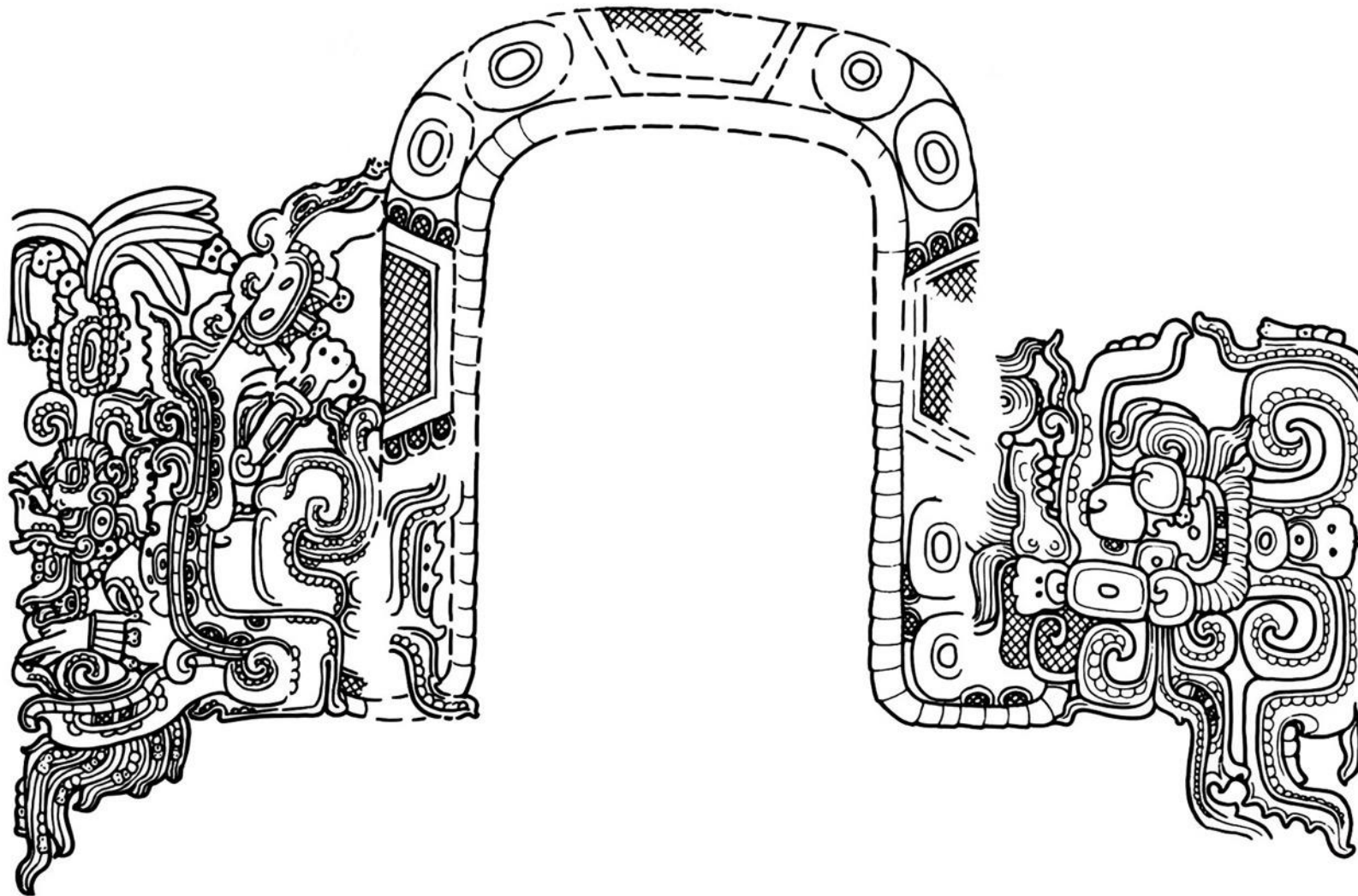




Many other Cosmic Monster Sky Bands are tops of thrones. But here the throne itself is up in the sky. The front face at the left is eroded, but this creature has arms/legs “on the ground” so is either a crocodile or crocodile deer.

Codex Paris, page XXII, Villcorta and Villacorta page 218.





There are also Bicephalic Snake Monsters. So a lot more demons, devils, and deities to study for your thesis or PhD dissertation.

Tikal Temple 4, Lintel 3, drawing by either Schele or Mark Van Stone, © David Schele. Drawing courtesy Ancient Americas at LACMA ([ancientamericas.org](http://ancientamericas.org)), cropped to 2-headed Snake Monster by Hellmuth.

The bibliography on crocodiles of Mesoamerica and their iconography is a separate FLAAR Report.

Each chapter is also a separate PPTx.

### 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

I thank Chris Layser for the invitation to give this presentation to The Pre-Columbian Society of University of the University of Pennsylvania Museum. [www.precolumbian.org](http://www.precolumbian.org)

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[www.maya-archaeology.org](http://www.maya-archaeology.org)

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