

Full-Figure Personified Maya Hieroglyphs

on front of Bench in Copan Str. 9N-82

House of the Bacabs
Sepulturas Group

Museo de Escultura de Copán
Parque Arqueológico Copán, Honduras

Nicholas Hellmuth

March 2024



Full-Figure Personified Maya Hieroglyphs
on front of Bench
in Copan Str. 9N-82

House of the Bacabs
Sepulturas Group

Museo de Escultura de Copán
Parque Arqueológico Copán



Iconography of Full-Figure Hieroglyphs (Raptors-Mammals-Fish) at Copan

Bas-Relief Personified Full-Figure Maya Hieroglyphs on front of Throne of Copan Structure 9N-82
together with
Iconography of God N and other Pauahtuns (supports of this Bench of Copan Str. 9N-82)

FLAAR

Parque Arqueológico Copán, Honduras

FLAAR Photo Archive Publication Number 5,
Maya Sculptures of Copan, Honduras, Publication Number 3

FLAAR
MESOAMÉRICA

CONTENTS

ACNOWLEDGEMENTS

Introduction to the Full-Figure Hieroglyphs on the bench front of Copan Structure 9N-82

References Cited and Suggested Reading

Work-in-Progress on Sky Bands and on Loincloth Apron Face

Initial List of FLAAR Reports to make available FLAAR Photo Archive photos on Copan, Honduras

Block A

Block B

Block C

Block D

Block E

Block F

Block G

Block H

Block I

Block J

Block K

Block L

Block M

Block N

Block O

Block P

Each Glyph Block is a Segment of a Reptilian Bicephalic Cosmic Monster

Seated Royals, one at each end

Supporters of the Weight of the Sky:
God N and others as Pauahtun and other personages on the supports of the bench

Support 1

Support 2

Support 3

Support 4

Bibliography on Full-Figure Personified Hieroglyphs
of Copan Structure 9N-82, House of the Bacabs

List of Suggested Reading on Stone Sculptures of Copan

Introductory Bibliography on the Bicephalic Cosmic Monster

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 also appreciate the access to photographing in both the village museum and the sculpture museum at the site. Profesor Oscar Cruz assisted us at Copan museums for many of our visits. We will donate these photos to IHAH.

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.

Caption for Front Cover and Title Page Photos:
A half century of experience with portable studio lighting allows us to achieve these views. Photo by Nicholas Hellmuth in a past decade. Image cut out manually by Byron Pacay, FLAAR Mesoamerica.

The present FLAAR Report is to make photos available to students, professors and to the local guides at Copan Ruinas, Honduras. These photos can help students do term papers, theses and PhD dissertations. These photos can be used by professors in their PowerPoint lectures and at conferences and symposiums. The present report mentions iconography but is not intended to discuss details of Quadripartite Badge, Cosmic Monster etc. I covered that in my July 27, 2023 lecture on crocodiles at the Museo Popol Vuh, UFM. All the iconographic aspects have been covered by the capable iconographers, epigraphers and archaeologists that we include in the introductory bibliographies at the end of this report.

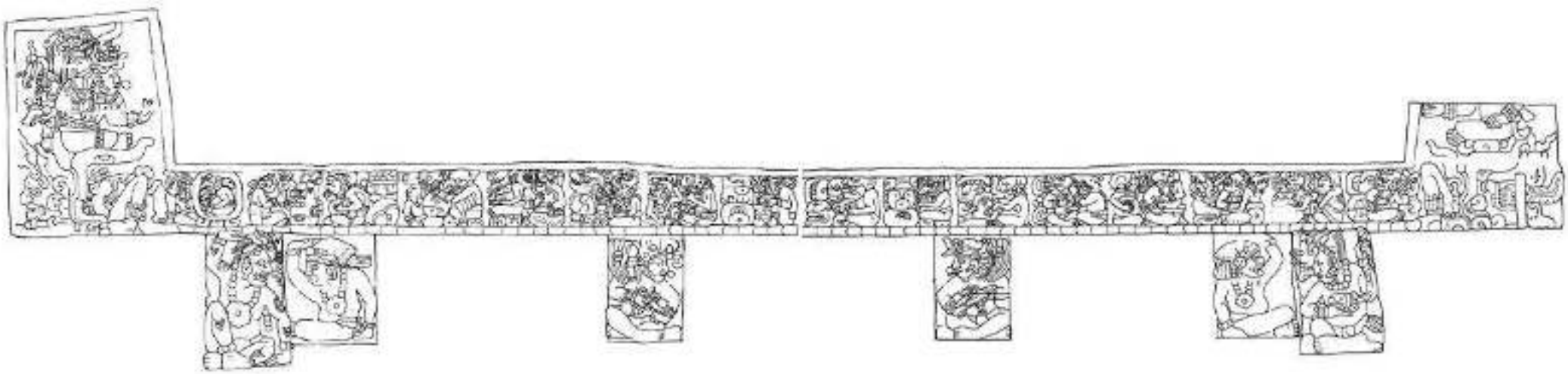
There are probably thousands of photos of this bench front with deep-relief carving. I would estimate that the various Copan projects have plenty of photos, including 3-dimensional scans. The photos Zender uses (2019: Figures 1 to 3) are very well illuminated; the lighting is perfectly balanced from both sides. 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 good portable studio lighting and using a sturdy tripod and sturdy tripod head so the camera is not vibrating). And publishing at full-page size



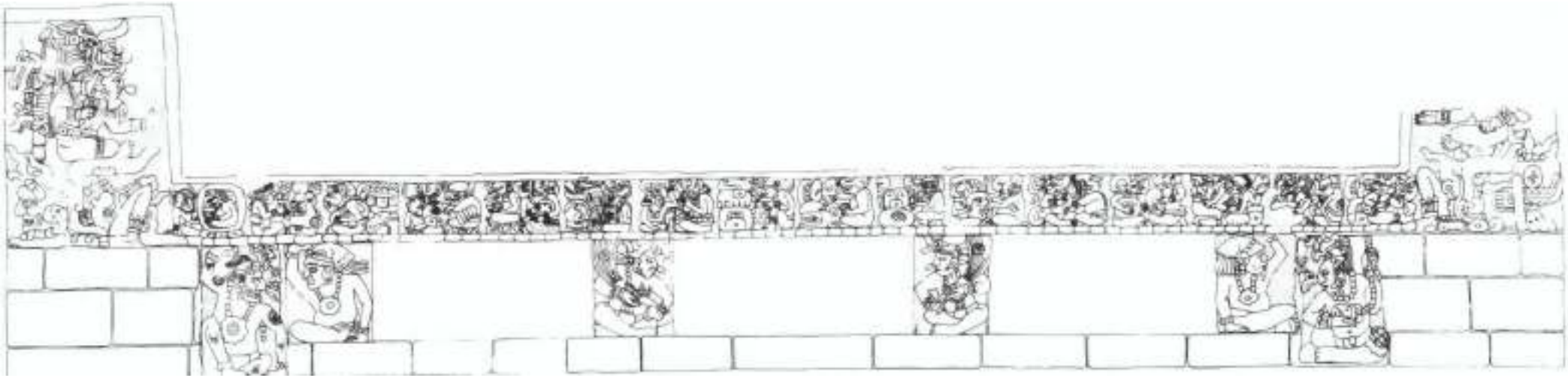
Introduction to the Full-Figure Hieroglyphs on the bench front of Copan Structure 9N-82

Structure 9N-82 and its surroundings of Copan, Honduras, are fully introduced in numerous articles and especially in the book edited by David Webster. That book includes chapters by William Fash and experts in other fields. So the present FLAAR Report is focused on showing the birds, fish, mammals, deities, and other mythical personalities on the front of the throne.

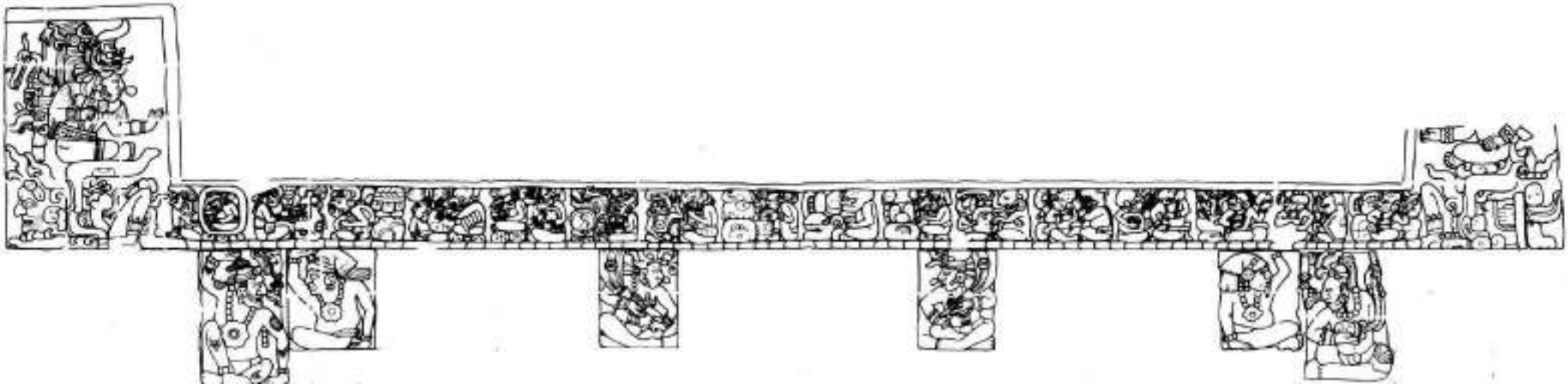
The present report is to make samples of our photos available. We photographed the same bench several times. The long-range goal is to encourage students to do a PhD dissertation on full-figure hieroglyphs of Copan. To help identify each creature, each hieroglyph, it helps to compare the bench front of Str. 9N-82 with the comparable full-figure personified hieroglyphs on Str. 9M-146. Half of those full-figure hieroglyphs are eroded but if you form a reference archive from all full-figure glyphs from Copan, Quirigua, Palenque and other sites, you should be able, today, to ID a major percentage of the characters and motifs. The advantage of studying FULL-figure PERSONIFIED hieroglyphs for a graduate student is that they will learn both iconography, epigraphy, and linguistics. We are preparing a list of over 65 sculptures of the Maya Lowlands that have full-figure hieroglyphs. That will be a separate FLAAR Reports publication in the coming months.



Linda Schele was a capable and respected epigrapher and illustrator. Now, in the digital era, we realize it is essential to have cross-lit photos plus 3D images so you can add missing details and Classic Maya sculptor's stylistic aspects. One aspect of Schele's drawings is that they are available on-line, first at FAMSI and now at Ancient Americas at LACMA. This helps hugely. Schele, SD-7657.

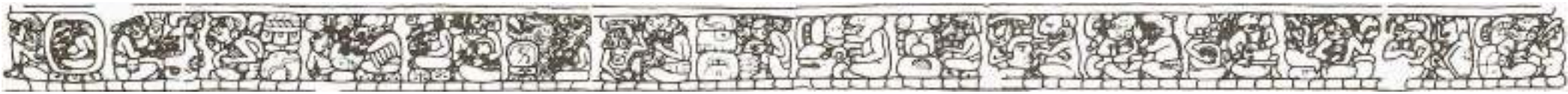


This rendition by David Webster adds the row of actual stones which helps you see why some “supports” are taller than others (because two start at a different level). Webster 1989: Fig. 13.



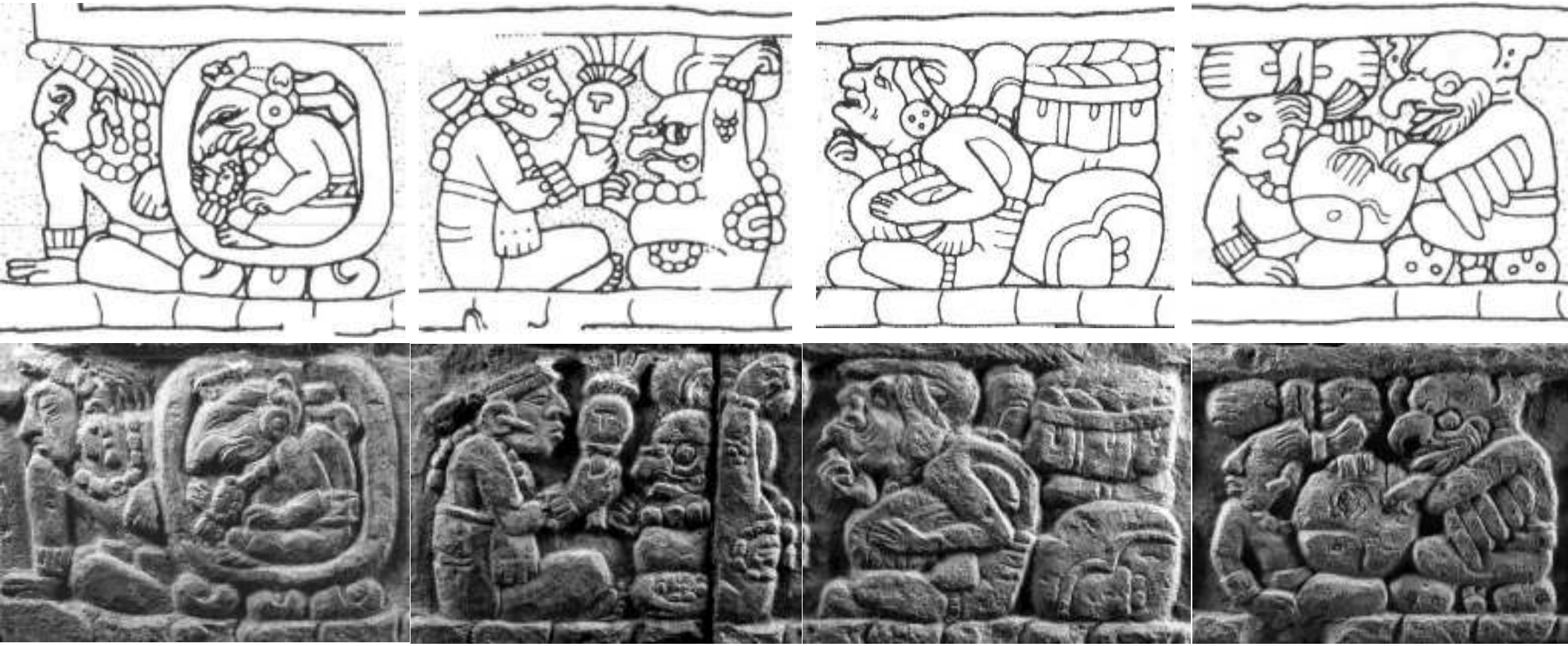
I also recommend the drawing by Anne Dowd, Barbara Fash and David Webster since they are each totally focused on Copan. So Anne Dowd was at Copan for months and Barbara Fash for decades in front of the actual sculptures. Today (2024) with digital imaging, a few details can be added, but since these full-figure personified hieroglyphs were in pretty good condition, most of the details were already visible.

A B C D E F G H I J K L M N O P

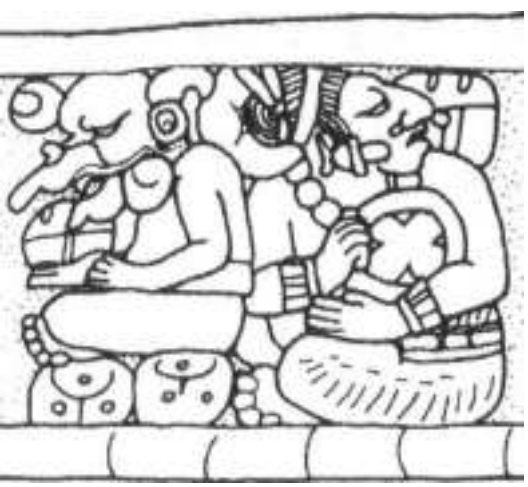


Complete set of 16 glyph Blocks, drawing by Anne Dowd in Baudez 1994: Fig. 111. In the close-up views below, of each individual glyph block, we use the drawings by Linda Schele since the scan of her drawing was better than a scan from Baudez. But what is needed is a scan of the original drawing of each (so not a scan from a fuzzy low-resolution illustration in a quarter century old book. If you compare the SD drawings with the photos you notice quickly that the drawings are a free-hand sketch; the angles, size, and shape of actual details are stylized by the SD drawing. With the help of cross-lighting, and on a Wacom tablet or comparable, each individual hieroglyph needs to be redrawn at "full page size". Having each hieroglyph a few centimeters in a drawing of the entire bench front is the source of the low-resolution and fuzzy detail when you wish to study each individual hieroglyph. The project should consider adding a rule to have new drawings of individual hieroglyphs at 1:2 size or at least 1:4 size. 1:10 size for an individual glyph is a typical traditional aspect that result in no advances.

A B C D

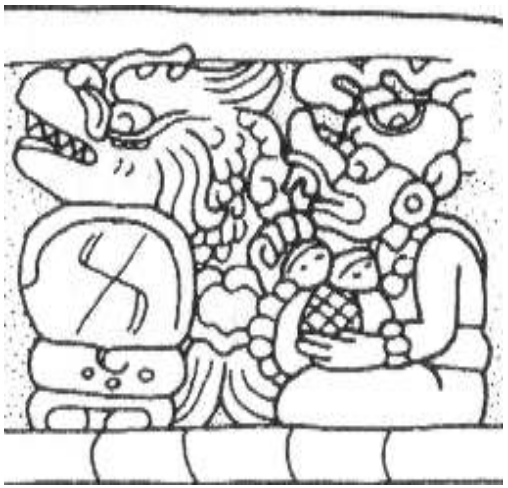


E



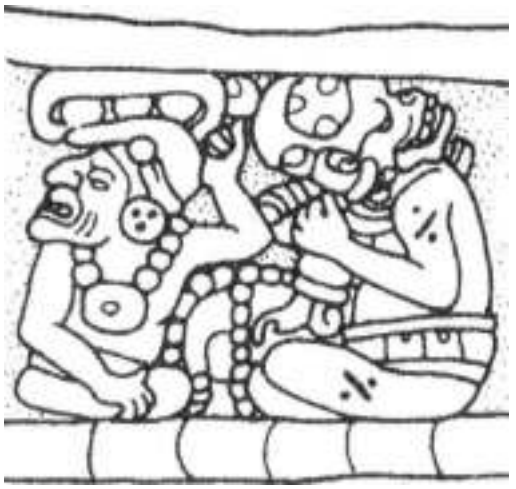


F



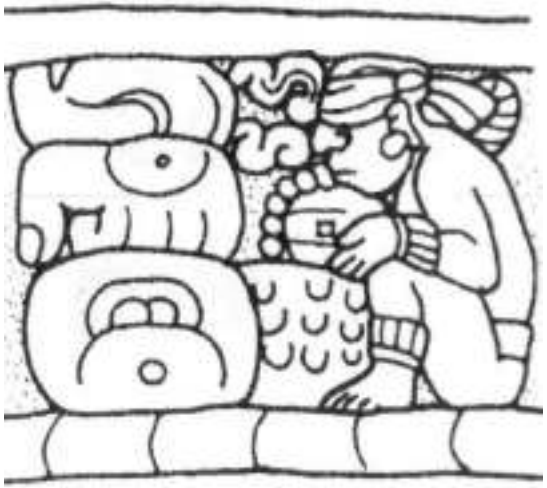


G



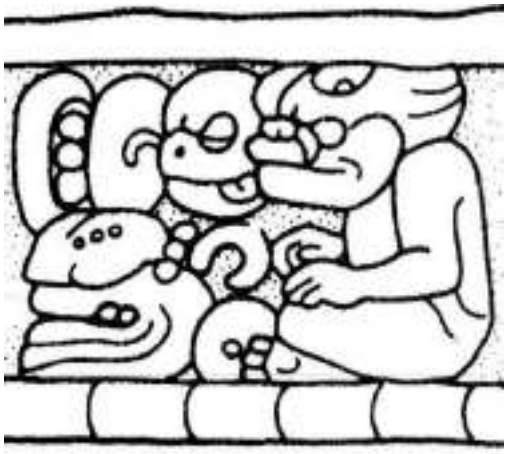


H



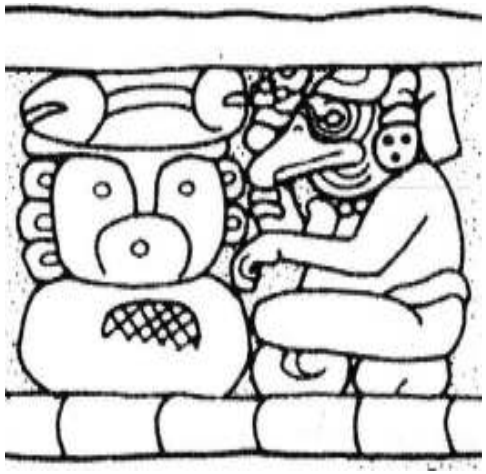


I



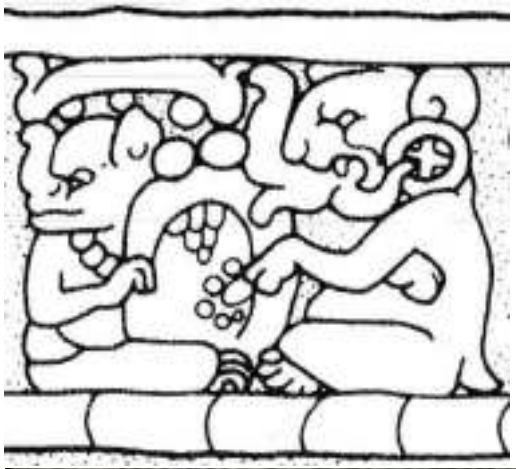


J





K



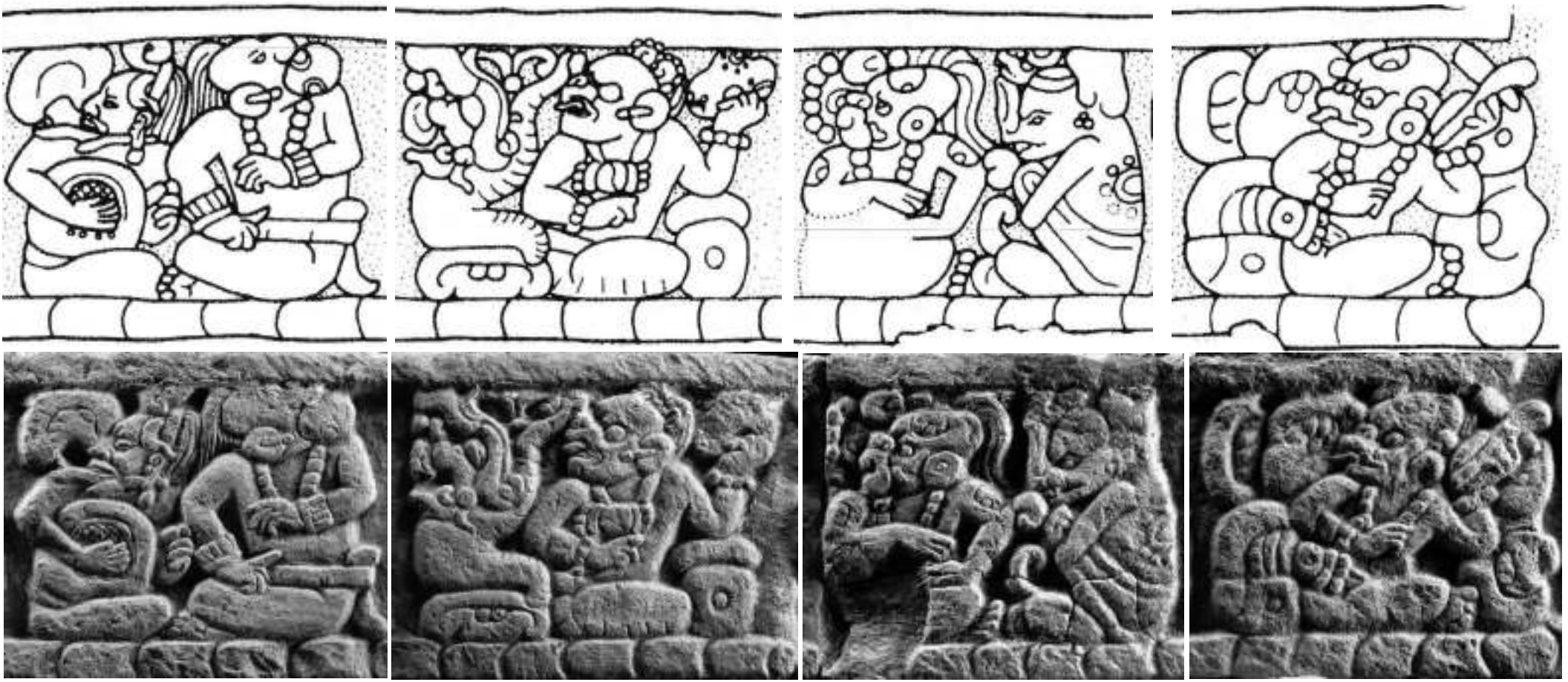


L





M N O P



The other suggestion would be to do separate drawings of each individual glyph block at legal size (or at least full normal page size). Because traditional drawings at 1:10 scale (or whichever was the traditional in the 1990's), when you scrunch them down for publication but then later need to enlarge them for publication, the lines become too thick and clumped together to form black areas that obscure the detail. I would also suggest that the 3D style by Simon Martin (for Copan CPN 25, altar of Stela M) should be considered. His drawings, and those of Matthew Looper of Quirigua, are outstanding.

Full size photos help to study full-figure personified Maya hieroglyphs. I show one in color and another in black and white. Iconographic and epigraphic discussion would need lots more time so it's more practical to publish the photos first. Epigrapher Stephen Houston now has a year 2020 article on full-figure glyphs. Courtesy of him for the article and for the library of the Museo Popol Vuh (UFM) for the book, it has been possible to initiate a research project on discussions of all full-figure hieroglyphs at Copan and elsewhere. Copan has more individual full-figure Maya glyphs than all other Maya sites put together. Palenque, Quirigua, Yaxchilan (lintels and altar), Tonina, Caracol and other sites that I show in my forthcoming publication also have full-figure hieroglyphs. So far have found only one full-figure glyph in all the three Maya codices.
The drawing of area G by Nikolai Grube (Grube 2021 Figure 10) is an excellent example of how showing an individual glyph block has significantly better resolution and more detail than enlarging from a several-meter-long row of glyphs.



Block A, 11 Oc (Riese 1989: 83). On a 21” or 27” monitor you can see more of the how the Copan Maya sculptor created this work. The symbol around the eye of the seated personified number 11 is “incised” whereas the style of the overall body profile and jewelry is different.



If you are an epigrapher it would help to have full-page size prints of each individual glyph block at different angles of lighting. So occasionally we show two different digital images. Although nowadays we all study on our computer monitors you can also print each page in legal size (best to save money and use the B&W images). And by putting the pages on your desk you can compare these images with the full-figure personified hieroglyphs of the other benches at Copan and comparable glyphs elsewhere.



We also suggest showing each hieroglyph with “background removed.” Byron Pacay, FLAAR Mesoamerica, worked many weeks to produce these.; in the future an epigrapher should accomplish this.



Sometimes you can see more with white background; othertimes gray or black background helps. We do both.



Block B. Potential reading 3 Yax (Riese 1989: 83), keeping in mind that in the over 3-decades since 1989, so many new glyph texts have been discovered and today there are dozens of more epigraphers. So it helps that Riese suggests a reading but leaves it open.



All photographs are by Nicholas Hellmuth, FLAAR Photo Archive, taken with a complete photo studio: tripods, lights on each side on sturdy light stands, based on over a quarter-century of photography at sites and museums of Mesoamerica before focusing on Copan, Honduras.











Block C. Suggested readings by Riese pages 83-84. Some images we leave in color; others we process to black-and-white. It's the detail that counts.



Processed to black-and-white allows you to show more details.







Block D



I prefer black-and-white so I can focus on the details. Birds are the main fauna pictured in full-figure hieroglyphic texts.















Block E

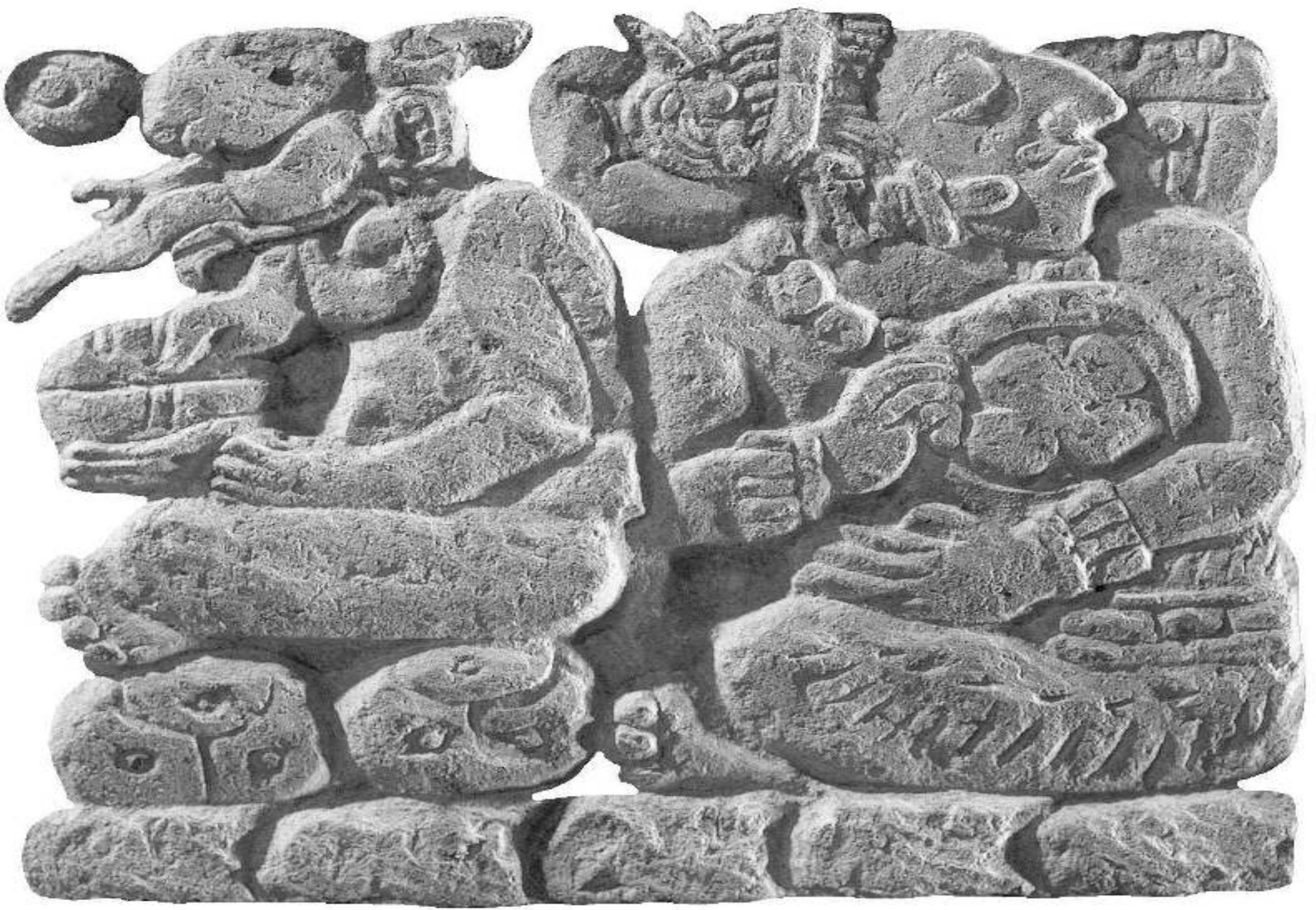


Processed digitally from color to black-and-white. With cross-lighting you can see more details than using merely light from one side.











Block F. Fish or shark (considering the row of teeth and raised front of the mouth). This creature has the same “god eye” as lots of Maya deities.





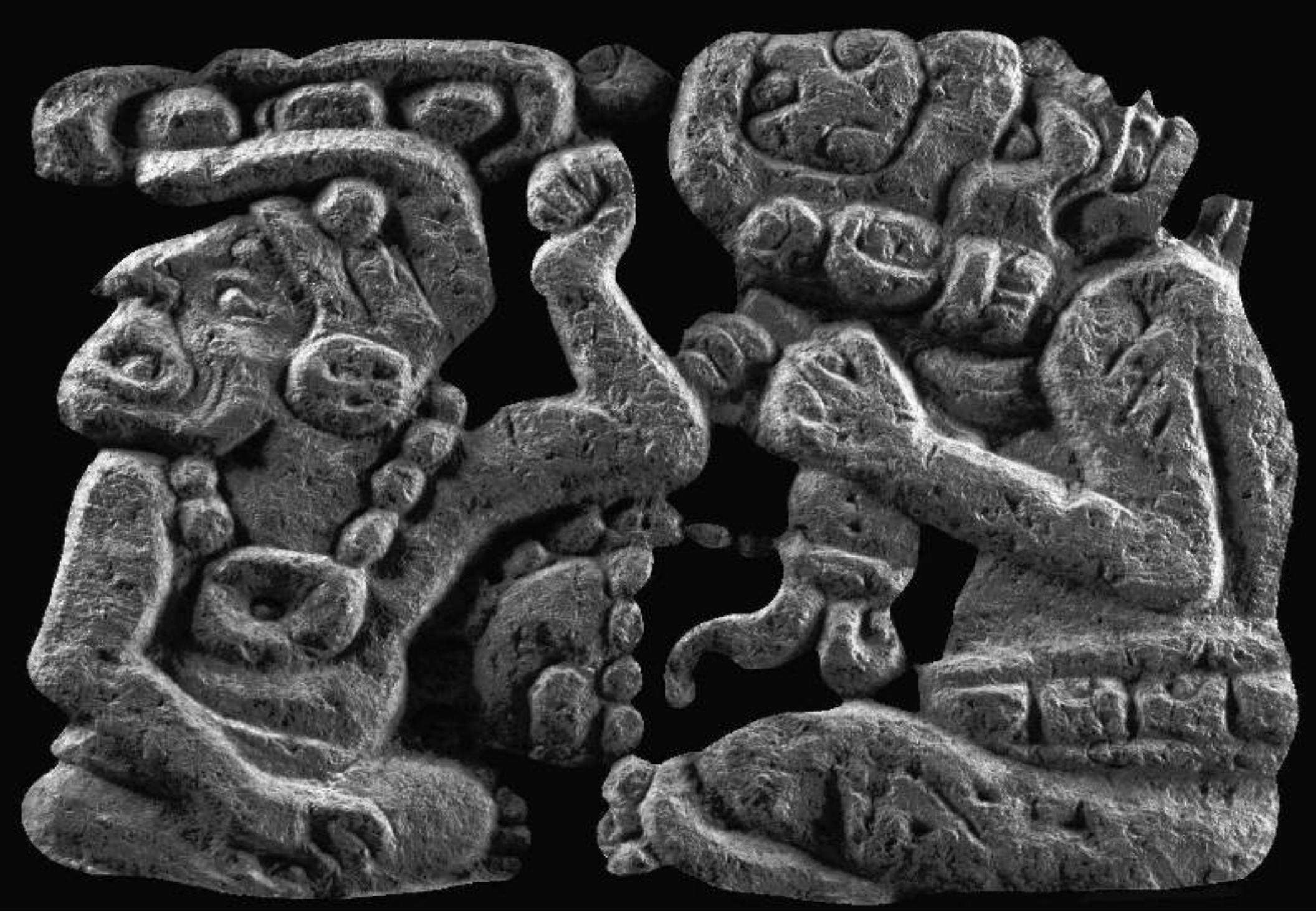


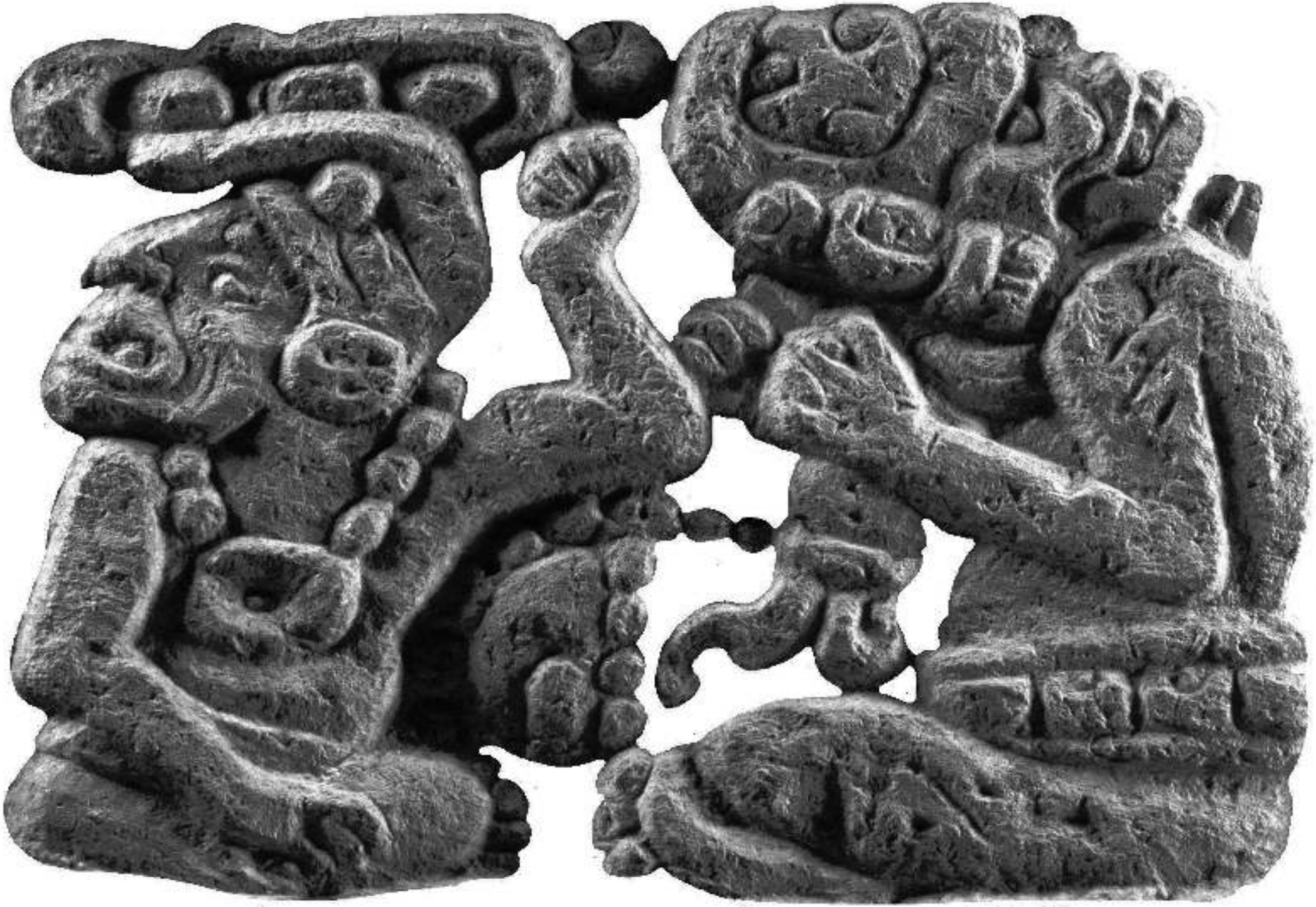


Block G. Nikolai Grube has an excellent line drawing of this glyph block G. Whether he has drawn the entire bench I have not yet seen.



It helps to have lighting from more than just one side. And, to see details, we need to return to take close-up of infixes, etc.







Block H has only one personified hieroglyph. A stack of other glyphs are in front (that are not humanized).



All together there are several hundred full-body personified Maya hieroglyphs (Copan, Quirigua, Palenque and elsewhere). They need a PhD dissertation to update both the linguistics, epigraphy and the iconography. Morley says about five or so; John Montgomery worked for decades and found 24. The FLAAR list is 100% more (so more than 65, so in 3 months more than Montgomery found in 20 years). This is a work-in-progress that we hope to issue before end of December.



Block I. Obvious full-figure seated monster at the right. Everything in front is more glyph-like than personified other than the head in the upper middle.



Block J.

I estimate the bird is a vulture, one of the birds most commonly seen as a face-variant Maya hieroglyph at sites across the Maya area





















Block K. The bat at the left and other animal at the right are very common also as face-variant glyphs elsewhere.





Bat at the left, holding a hieroglyph. Possible gopher at the right (ear is not long enough nor the shape of a rabbit ear. Gophers as head variants are very common in Maya hieroglyphic inscriptions.



Block L. Again, expressing with position of arms, fingers, and angle of the head.









Block M. Yax Paca(h) (Riese : 86**).**



The person at the right is definitely communicating with the position of his arms, hands, and fingers. Theses, disserations and books by iconographers have discussed this form of communication in Maya art.















Block N. Chan Toh (Sunrise Heavens Storm from Block M and N together) (Riese 1989**).**



My favorite reptilian monsters are like the ones like you see here at the left.







Block O. Copan emblem glyph (Riese 1989: 86). The bat is obvious. There will be a separate FLAAR Report on the giant bat sculpture of Copan in the main museum there. In that report I will identify the probable species that is discussed in the Popol Vuh.

FLAAR is working together with Guatemalan bat specialist Jose Cajas to find and photograph the three largest bat species of Guatemala.







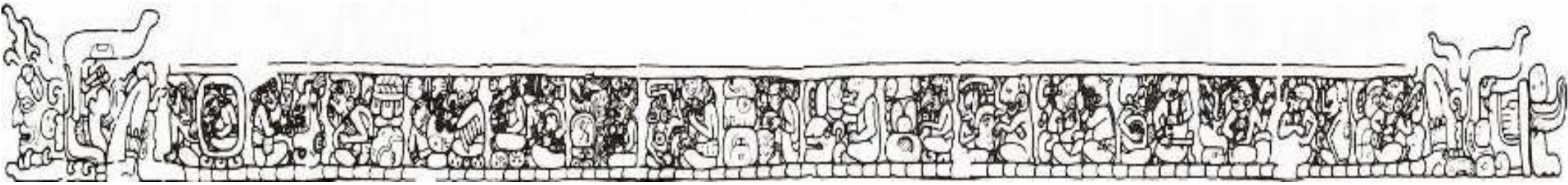
Block P. Epigrapher Marc Zender provides a reading of each glyph block in Fig. 1, 2 and 3 of his year 2019 article.



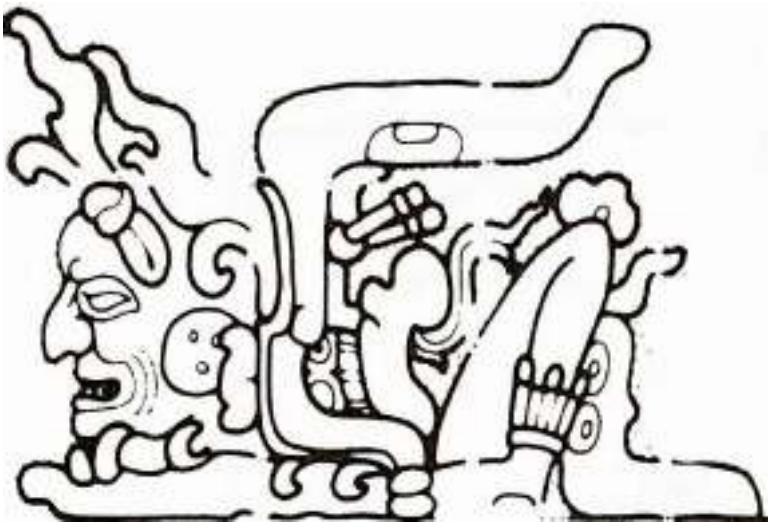




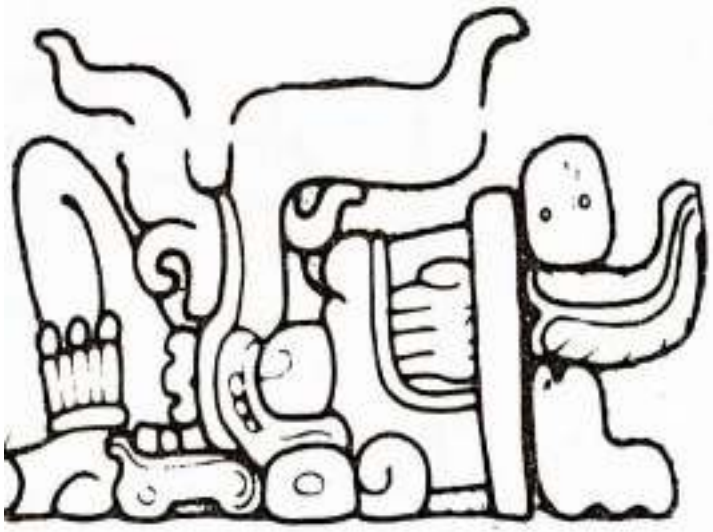
Each Glyph Block is a Segment of a Reptilian Bicephalic Cosmic Monster



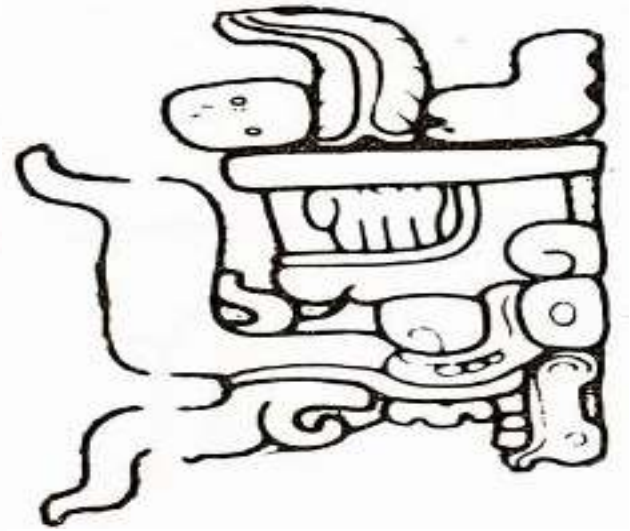
You can see the bicephalic Cosmic Monster more easily if you remove the supports and remove the individuals seated above at each end. Drawing by Anne Dowd in Baudez 1994: Fig. 111. Cropped by Nicholas Hellmuth from scan of this drawing, Epson Perfection V850 Pro with SilverFast 9 software.



God N can be identified by the stem (of a water lily plant) tied around his forehead. Normally you can also see the water lily flower (no space in this scene). This "crocodile" has deer legs and deer hoof and celestial symbol in the eye, so is called Starry Eyed Deer. Normally a starry ear is also present but the upraised leg covers that area, so the design to the right of the anklet may be a reference to the starry ear.



Quadripartite Badge Headdress Monsters are well known and easy to spot. Instead of a 4-petalled Kin sign in the forehead there is a hand. The stingray spine or elongated shark's tooth had to be curved due to the location of the bench.



I remove the deer's leg (which is simultaneously of human proportions) and rotate the monster head so you can more easily see the Quadripartite Badge Headdress aspect.



In front of the open jaw is the anthropomorphic leg of the Starry Eyed Deer. So the crocodile has deer features and, as often, human-like aspects for the legs (but the hooves are of deer). You can see lots more bicephalic Cosmic Monsters in that chapter of our Crocodile Lecture.



In most Cosmic Monsters the Quadripartite Badge Headdress monster is turned 90-degrees downward, but there is no space for that on this bench.



Rotated to show the Quadripartite Badge Headdress.



Seated Royals, one at each end

The waterbird in the backrack is notable. In the sculpture museum you can see a 3-dimensional waterbird with a fish in it's mouth. I have identified that 3D bird as a male white pelican in mating season (since the raised area in the middle of its beak is only there during mating season).

It helps to identify birds and flowers in Maya art if you do field trips into remote areas of the Maya Lowlands over a fifty-year period.

The bird on the backrack we will study to determine its name. Many birds in the art are simplified (so you can't see all their natural features). Other birds are so decorated it's a challenge to know what they really are. But I was able to document that the Principal Bird Deity (not shown on this bench front) is indeed a Snake Eating Hawk (in most but all cases).







Notice the raised crest on the beak. This is a male in mating season.
If you want to photograph an individual bird (rather than a flock) it helps to have an 800mm prime telephoto lens (here with Nikon D5 camera, January 15, 2021, AutoSafari Chapin). At this location inland from the Pacific Ocean area of Guatemala there are several lagoons so birds are happy here, so they are resident birds, not migratory. To photograph the migratory white pelicans, that's a few kilometers south, in the swamps, marshes and lagoons near Monterrico. The mating season of migratory white pelicans is very different than that of the few residents.



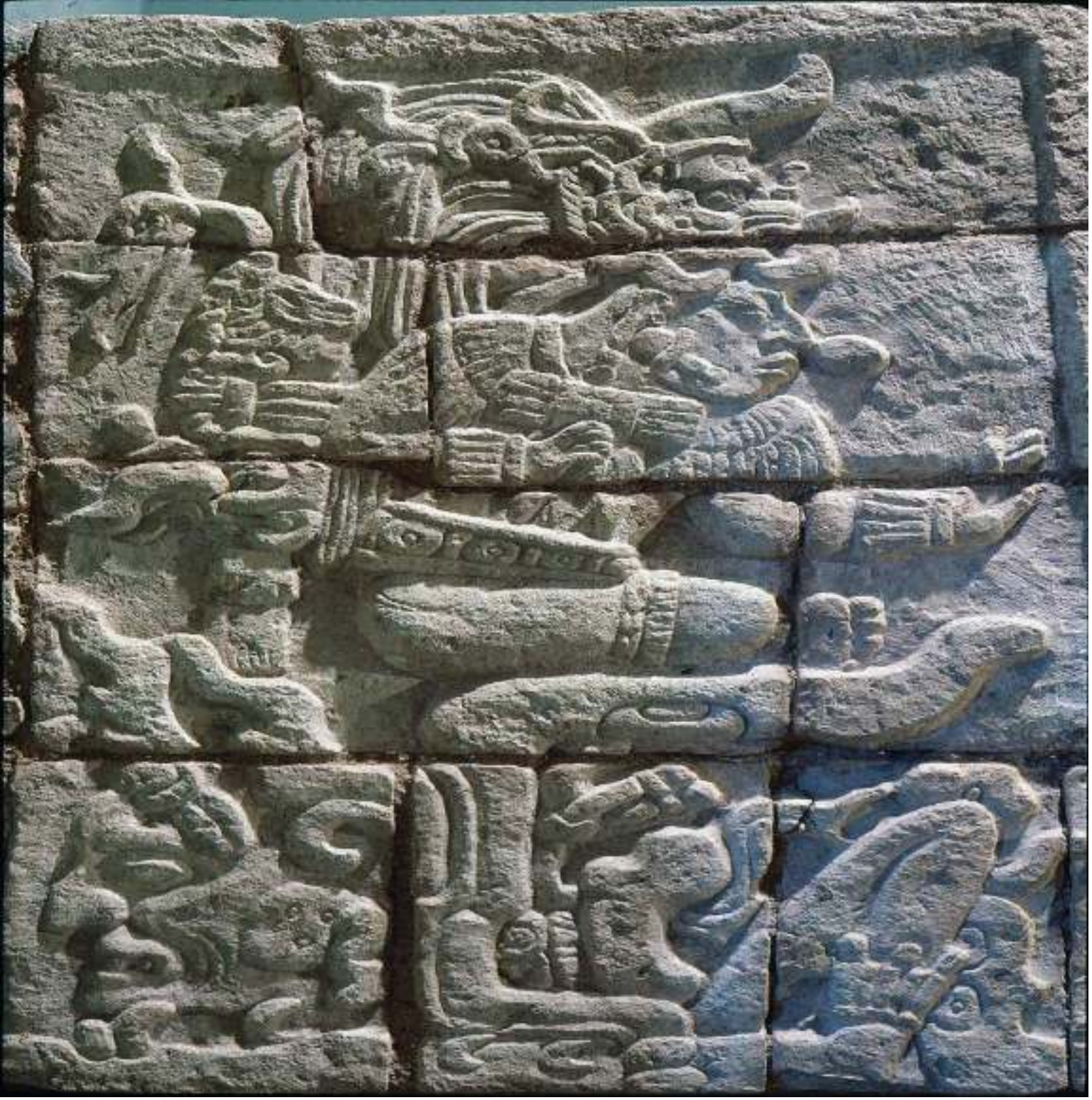
April 28, 2015, Auto Safari Chapin, main lagoon, Nikon D800E with 28-300mm tele-zoom (which was what I had in 2015). But now we have 400mm, 600mm, and 800mm prime telephoto lenses, and the newer Nikon D5 has better quick-focusing capability.
White pelicans, *Pelecanus eryhrorhynchos*, Lake Izabal, Feb. 11, 2018, photo by Nicholas Hellmuth with Nikon D5 and 600mm Nikon prime telephoto lens. Only in mating season do the males get the oval crest on their beak. We did field trips for 17 weeks across the eastern part of the Municipio de Livingston, Departamento Izaba, Guatemala, during 2018-2020 (that's right, during COVID, but in areas so remote not many people). And when COVID was at its peak



obviously we postponed field trips during those months of thos years. If you are in good health, and vaccinated, even when you got COVID you did not even need to see a doctor: just rest for 2 days the entire day; then rest half a day the next two days and by the 5th day back at work.



Close-up view so you can see the angles of the carving.



This royal person of Copan is seated atop the raised elongated snout of the composite crocodile Starry-Eyed Deer front of the bicephalic Cosmic Monster.





This style of soft lighting is not what brings out the details for iconographers.

This is the lighting that I prefer, so I can see each motif. Both these photos were taken on the same day, August 1, 2013 with digital Nikon D800E with 60mm lens (so no distortion that happens with a wide-angle lens).



Left and middle photo were same day; these are repeated from the previous photos but now to compare with scanned transparency of the decade before digital cameras were available. Creo and Creo Scitex and Kodak Creo Scitex kindly donated top-quality scanners. This is scanned with the Creo iQ Smart 2 scanner. This was their entry level flatbed scanner, $12,000 when new (yes, entry model for Creo since their scanners went up to over $40K for a single scanner). Very simply, if you want good quality, if your original 35mm slide was taken with a Leica or your medium format transparency was taken with a Hasselblad, you don't want to ruin the quality with a cheap scanner and low-bid software (each scanner has scanning software).

Kodak did not handle digital projects well, so the Creo-manufactured scanners have not been continued after Kodak bought the Creo-Scitex scanner division (HP bought the Scitex printer division). Today digital scanning technology has advanced so far that an Epson Perfection V850 Pro does an excellent job. We use SilverFast 9 software which is better than the older version 8 that comes with the scanner. Our team tried the Epson V600 scanner and it was not adequate if you want the quality of a Leica or Hasselblad that you used half a century ago; so they went for the V850 Pro.

If you are studying iconography (or epigraphy) it helps to have different lighting aspects. Although we all use Adobe Photoshop, often Adobe Lightroom is better. And often Capture One software (from Phase One in Denmark) beats both of them. One advantage of SilverFast is that you can do most of your processing before the scan and after the scan since SilverFast has two sets of software. Then you don't often need Photoshop.

In appreciation of the access and hospitality at both museums and the site of Copan, Honduras, we will donate all our photos: digital photos and scanned photos; processed and also the original unprocessed. This will take time but sculpture-by-sculpture we will be sending these to Honduras.







No Photoshop whatsoever. Photo with soft lighting.



No Photoshop whatsoever. Photo with raking light.



This is the far right end of the Cosmic Monster, with a seated lord on top. Notice his figure gestures (the Maya elite often “spoke with their hands and fingers).



Illuminated so you can see everything more clearly.

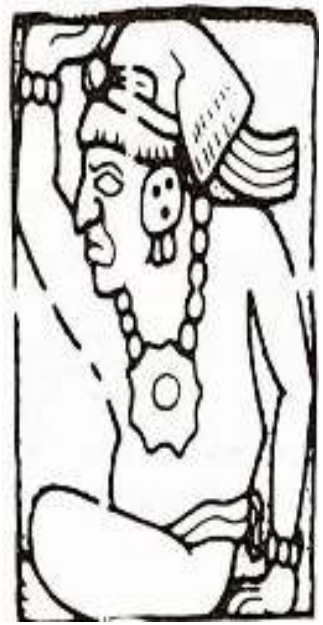
Supporters of the Weight of the Sky:
God N and others as Pauahtun and other personages on the supports of the bench



Supports of the bench in Copan Structure 9N-82. Cropped by Hellmuth from drawing by Anne Dowd in Baudez 1994: Fig. 111.
He is called a Pauahtun (spelled many different ways, such as Pauahatun, Pauhatun, Pawahtun). But I prefer to name the individual "a God N who is acting as a Pauahtun."



Aged head of God N, with wrinkles on the cheek. Stem of a water lily pad tried around forehead, with water lily flower and fish out front. All these are aspects of God N. Nose extension decoration is not as common.



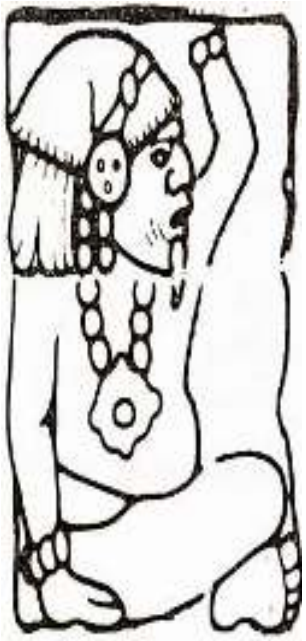
Same necklace and same earring as God N; and also serving as a Pauhatun (also spelled Pawahtun). But the face is not a typical God N.



Are considered to be Copan lords; they are not serving as. Pauhatuns. Bacab is another term used, which is why this is called the House of the Bacabs.



Are considered to be Copan lords; they are not raising their hands up to hold the bench.



Same necklace and same earring as God N; and also serving as a Pauhatun. But the face is not at all typical for God N.



Same headdress of God N but not the same head or face or other features. Thigh seems to have a water lily pad motif (rare on to see this on a person's body). Nose extension is same as his partial mirror image on the far other side of the bench..

When a line drawing is printed, lines that are close to each other become black across empty space. To avoid this, what is needed is a digital copy of the original drawing at good resolution (several MEGAbytes instead of KB). To compare with photos, I put the photos in black-and-white so colors don't distract from the details.






Support 1, far left. Each photo helps you see different details. Here the “bunches of grapes” hieroglyphic infix is shown four times.



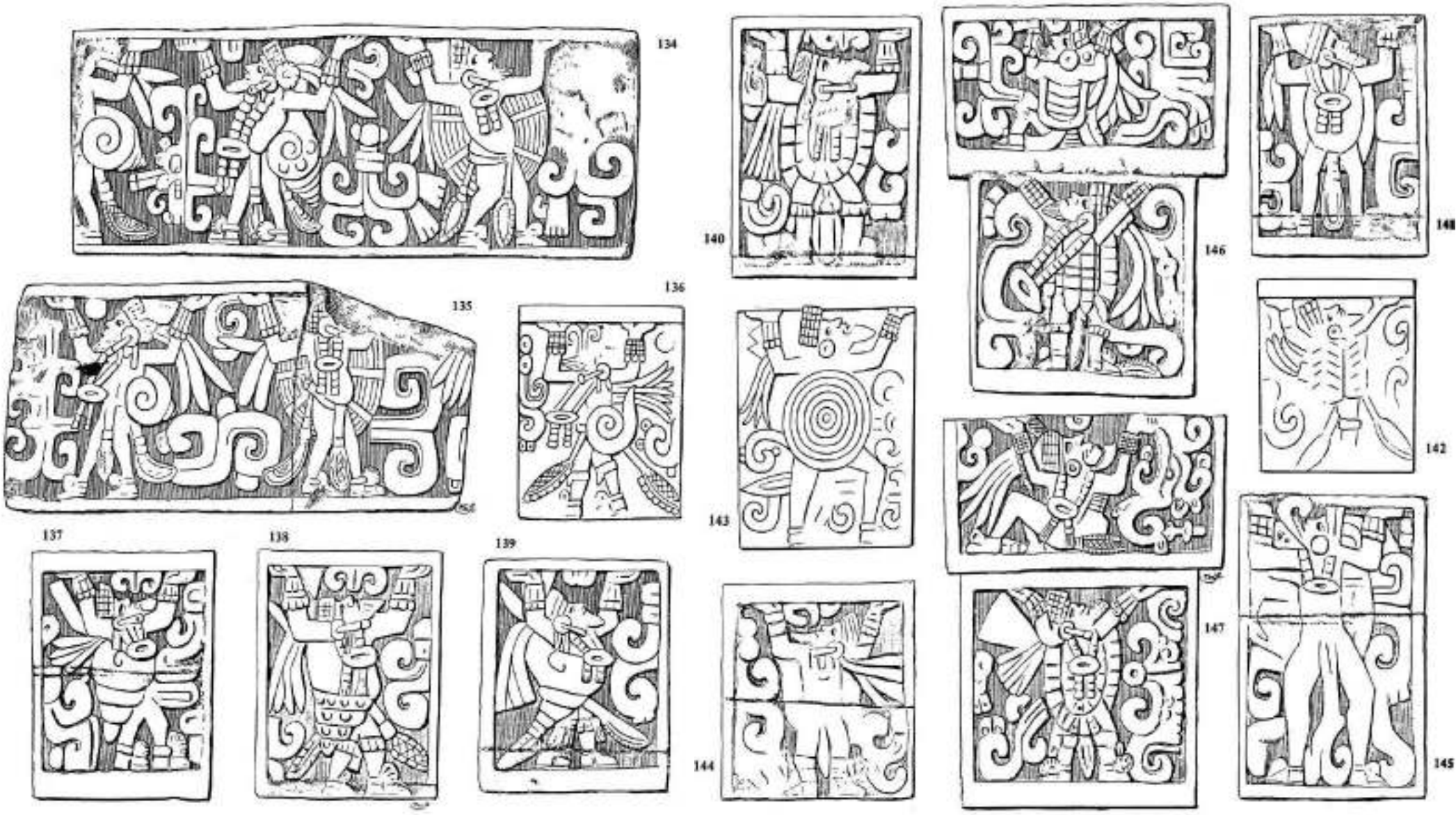


Black-and-white. This water lily flower is not as well preserved. But this kind of headdress is VERY common in Early Classic and Late Classic Maya art, in sculpture, hieroglyphs, and on vases, bowls, and cylindrical tripods.

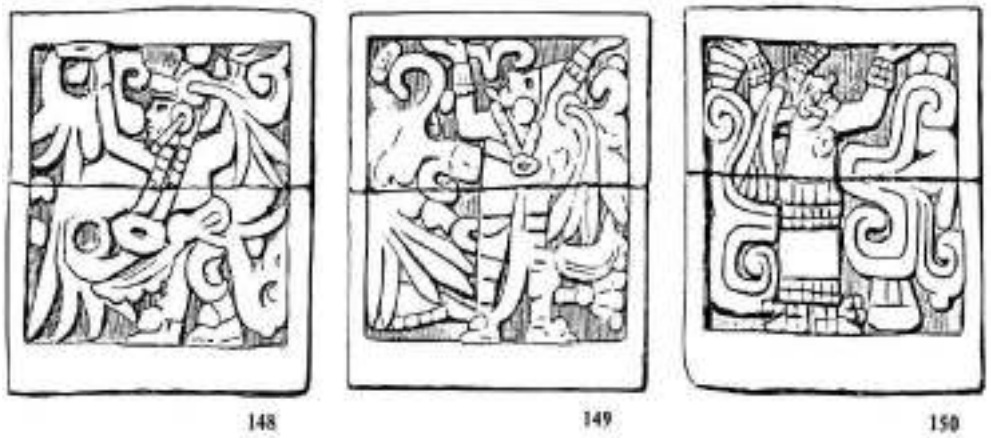
At a recent symposium in Guatemala City, two of the speakers discussed fish in Classic Maya art. Often they are stylized (as here). But in other scenes, especially on vases, you can see more anatomical details.

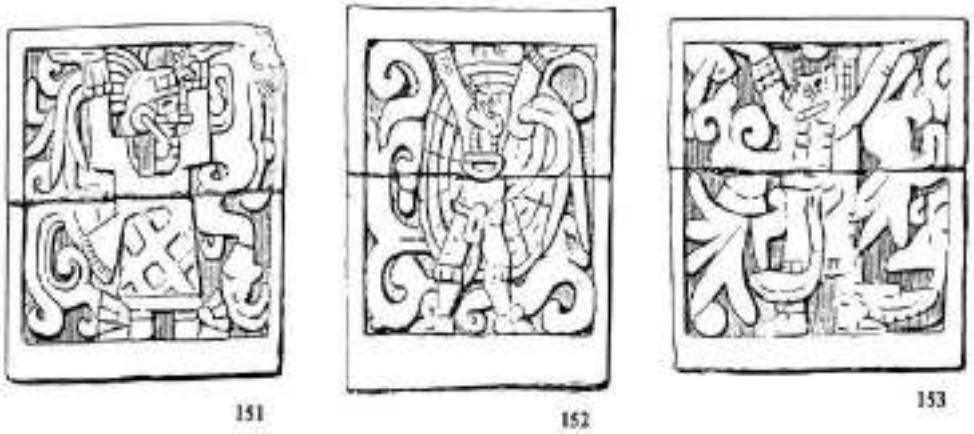
The figure at the left is clearly an old man God N, with water lily flower and fish as head decoration. Notable that both the obvious old man God N and the obvious idealized young male both wear the same Surface of the Underwaterworld water lily and fish concept. The person at the right is not elderly, not thin, but has same headdress and same nose bead as the elderly God N.

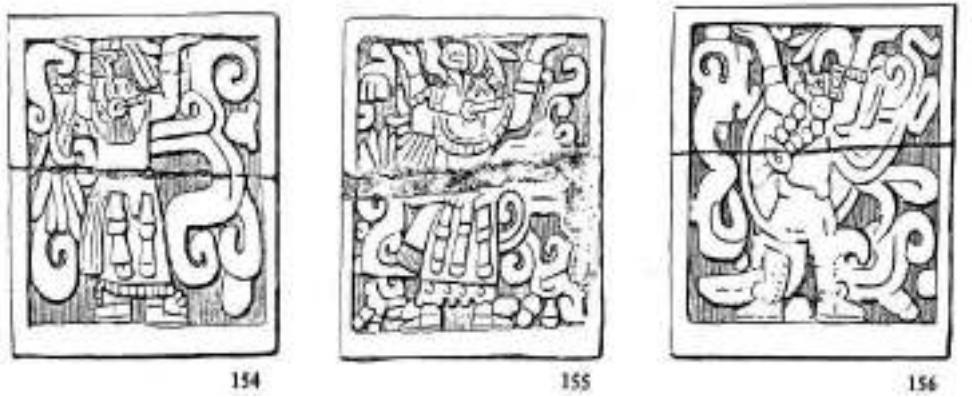
God N supporting the World Above Him at Chichen Itza

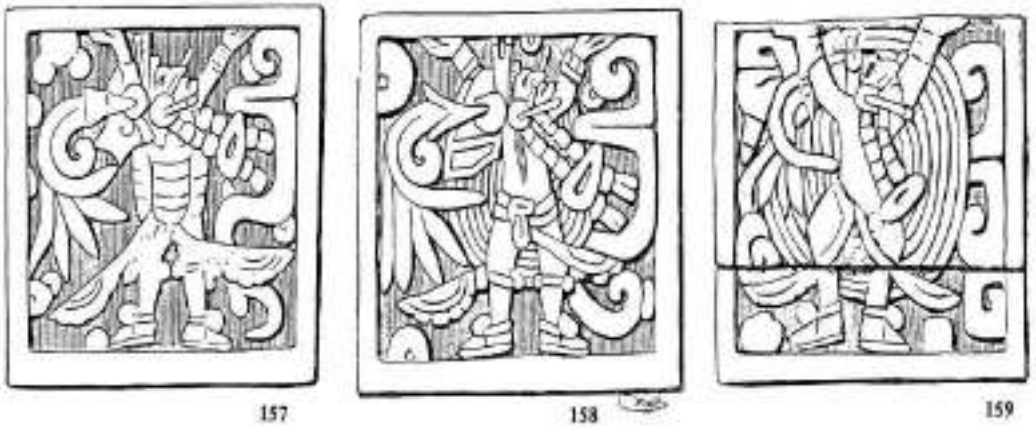


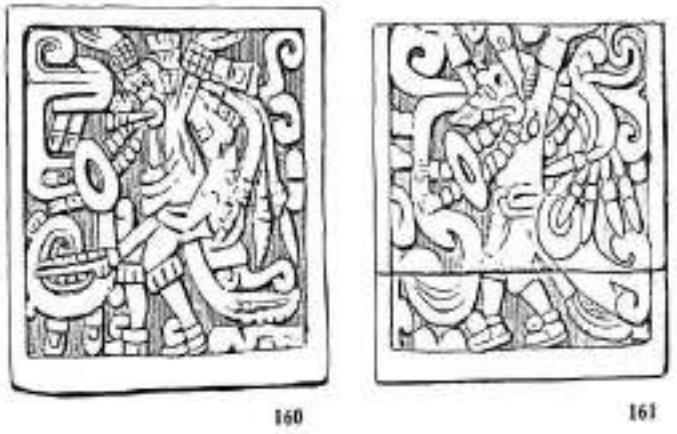
Eduard Seler shows dozens of God N Pauahtuns for Chichen Itza. Here many have conch shell but many other have spider web instead. Some turtles, one circular spider web. Seler Volume VI, page 90, Figs, 140-147.

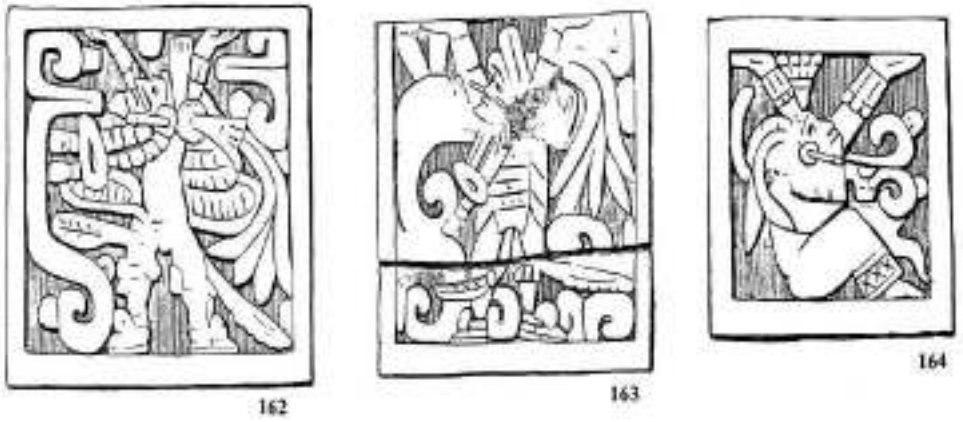












Oval like a turtle but most are spider webs. Seler Volume VI, page 92, Figs. 148-156.

158 and 159 are spidern webs. Seler Volume VI, page 88, Figs. 157-164.

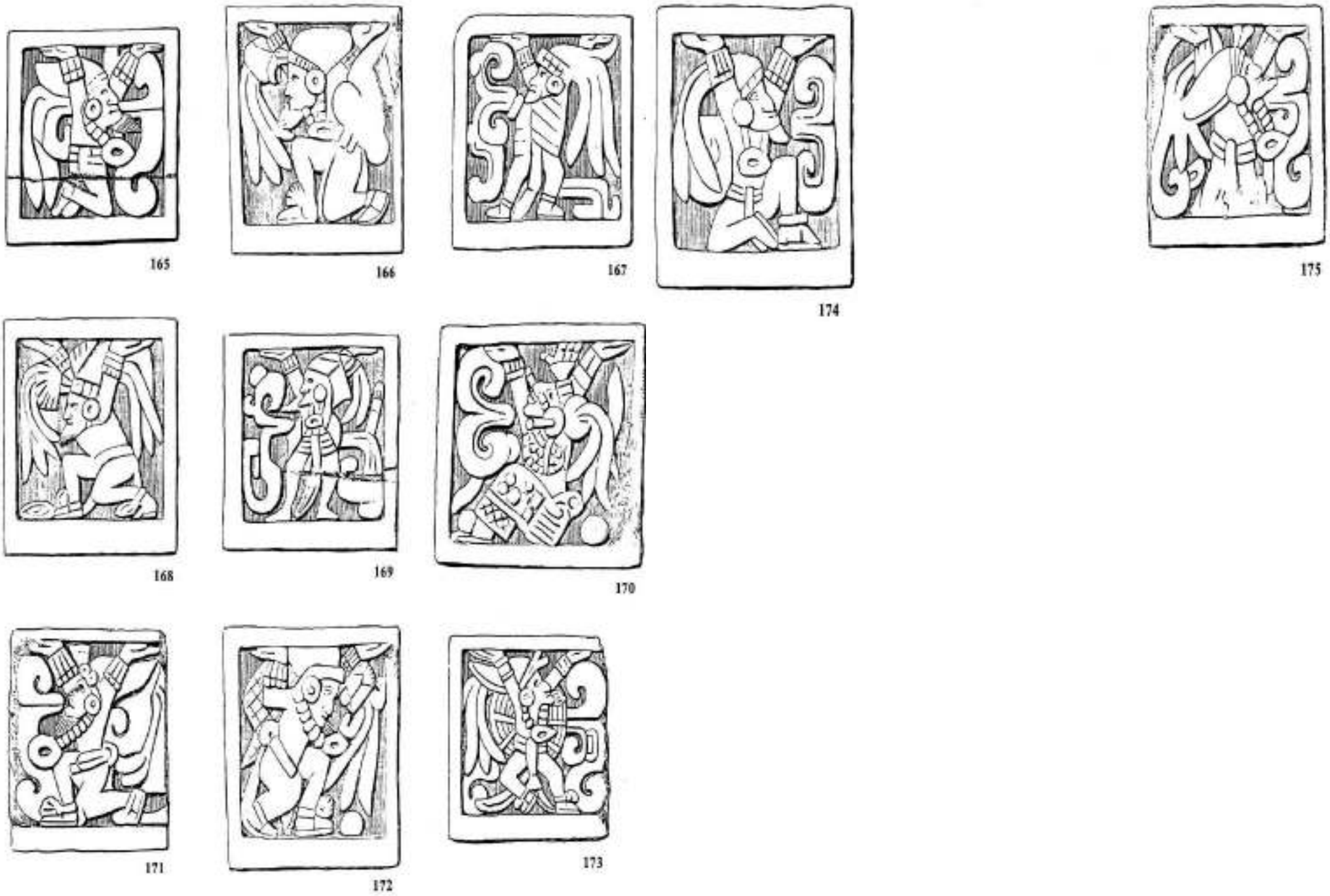


Fig. 171 is probably a conch shell; Fig. 173 is a spider web. Seler Volume VI, page 96, Figs. 165-173.

Seler Volume VI, page 98, Figs. 174-175.



Support 2.

Same necklace but face is not as aged and has no water lily headdress. But is a Pauahtun (holding up the bench symbols).



Support 3.

The sculptured aspect of this is best seen in a well-illuminated photo. I would estimate that Jorge Pérez de Lara has as good and often better. But the FLAAR Photo Archive shows them at large size, good resolution, and once we find a university of museum that has enough office space, storage space for the physical archive plus our large research library, plus research assistants (student interns) and funding for Hellmuth, assistants and a coding team for preparing an on-line database at that university, museum, or research center, then we can move the entire archive there so that the actual original photos can be downloaded at excellent resolution.

And now in the digital era, drawings can be made on a tablet directly from the photograph.

This individual appears to be holding a perforator.





Support 4 person also holds a perforator.

All these men have long hair and large nose beads. Either these nose beads were worn only for ceremonies or they simply had to get used to showing off with such decorations. The earrings, if jade, would have been unbelievably heavy.

Notice that most of these individuals are not wearing sandals.









Support 5. With a line drawing there is no easy way to render the hair style (same aspect with the three frontal “Loincloth Apron Faces” on the Sky Band glyph bench). The thick space between the “hair” braids (or decoration) is not easy to render with single lines. Also, the wrinkles on the face and shape of the end of the nose are easier to see in the photograph.

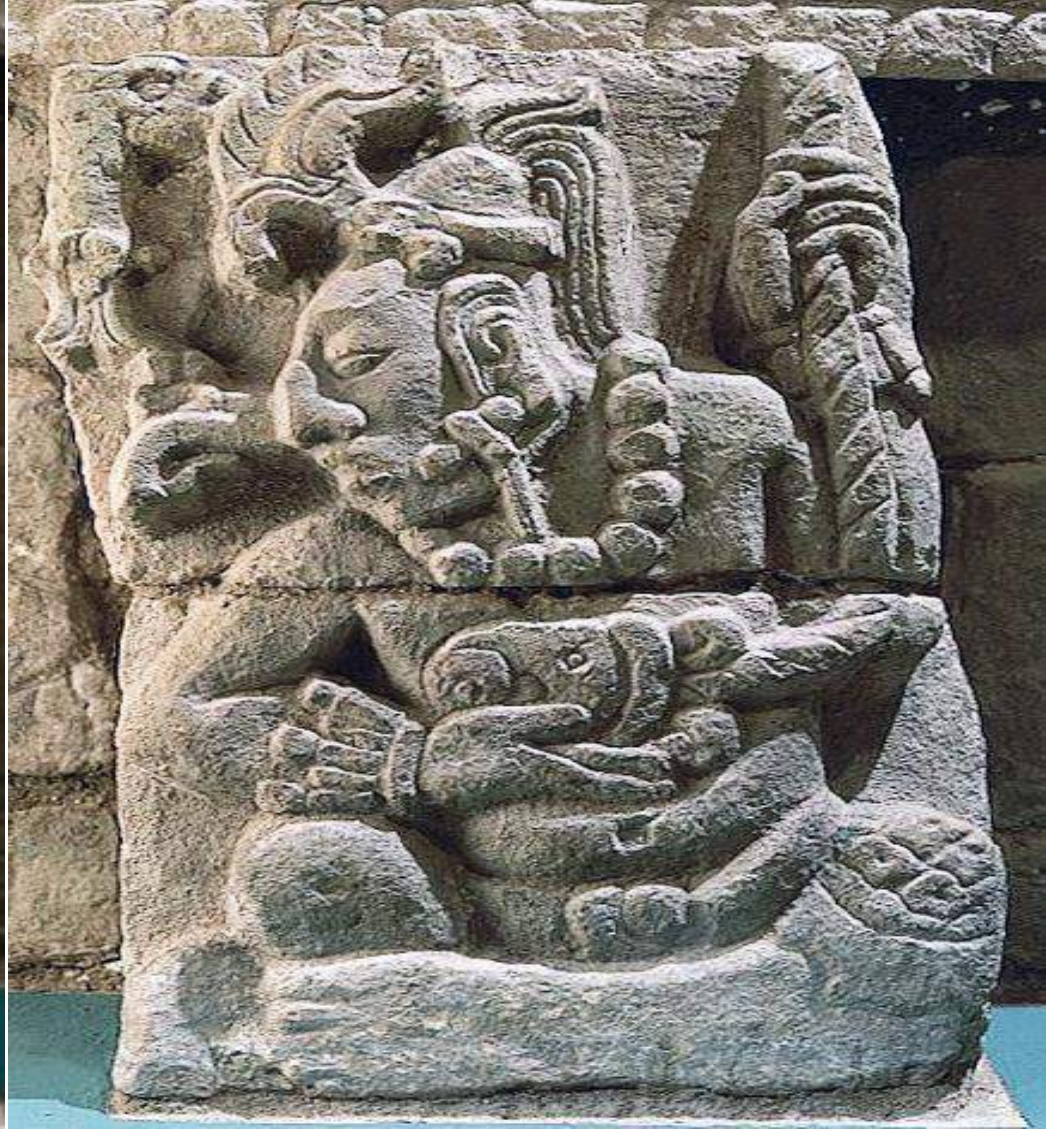
Plus, to study how many different sculptors worked (and which individual sculptors did more than one bench) it is necessary to see the photos.

The line drawings, however are essential for publications since 90% of books and 98% or article never show photos in full page size.



#6





Different year, different lighting, details can now be seen differently.

I have waded into swamps, marshes, edges of rivers and lakes of Guatemala over many decades to study water lilies. If you want to succeed in iconography, field work in flora, fauna and biodiverse ecosystems really helps you recognize the lily pad on the knee. This is unprecedented in this position (hopefully someone can tell me about other water lily pad leg decorations that I have missed).

Support 6.

Now with a different angle of cross-lighting I can see that the criss-cross repeated motifs on the knee really are a water lily pad. The upper round protrusion of the typical outline of the leaf of a water lily is not visible, and so far this is the only aspect of this personage that should be added to the drawing.

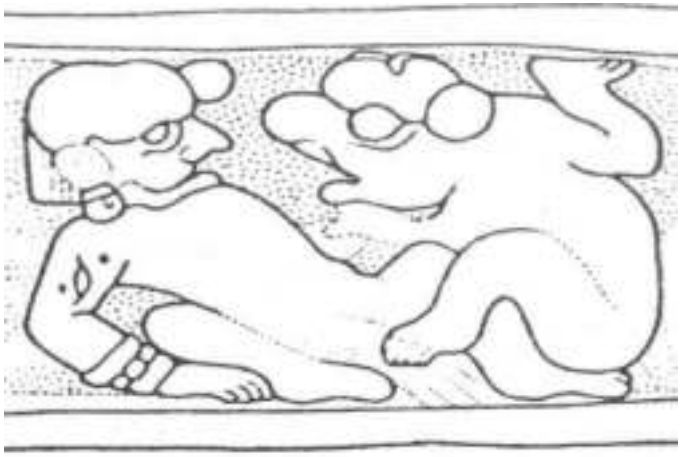




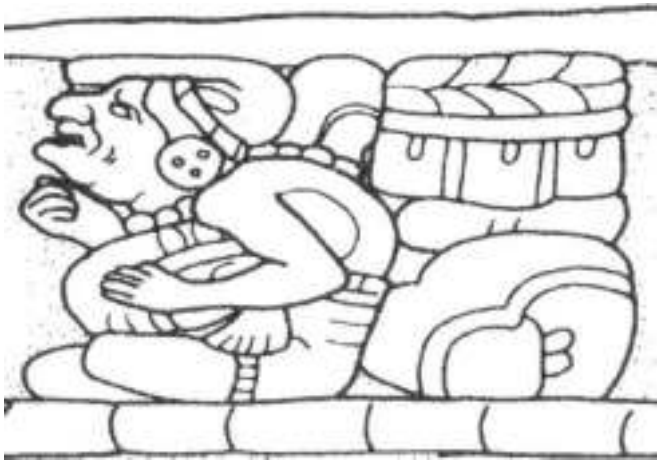
It helps to photograph each sculpture at different angles.

Photo by Nicholas Hellmuth, August 1, 2013, with Nikon D800E digital camera, using Nikkor 60mm lens. Best to avoid lens, tripods, or tripod heads that are low-bid brands (so you buy it because it's cheaper; then it falls apart and you have to buy another). None of our Nikon, Canon or Sony cameras have fallen apart despite decades of field trips to remote areas.

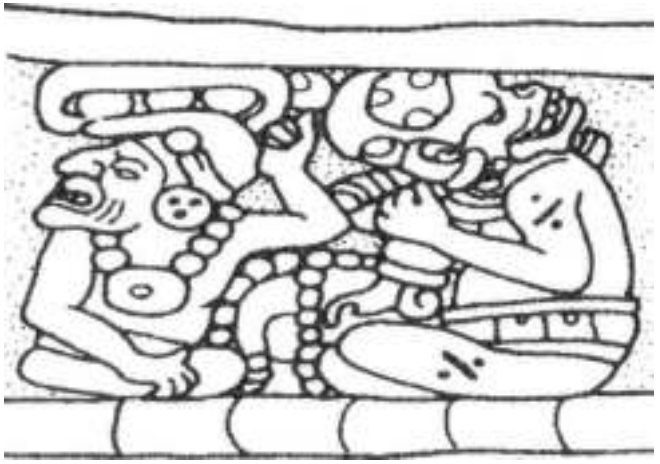


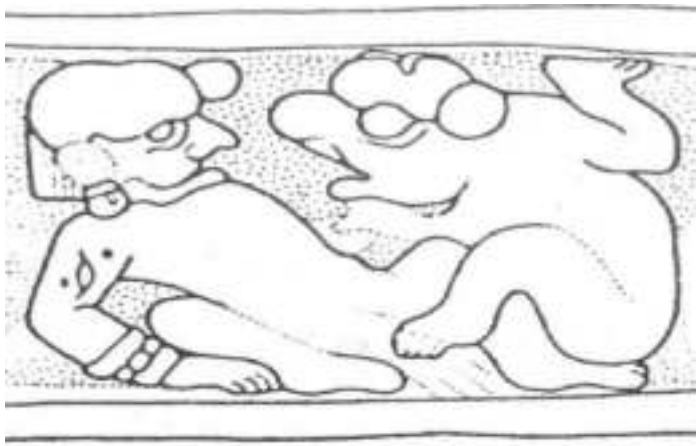


There are three Old Male Gods: God D, L and N. But God L is not in this context; not God D. So I estimate this is God N but without water lily headdress it's tough to document. So I would accept suggestions by epigraphers.

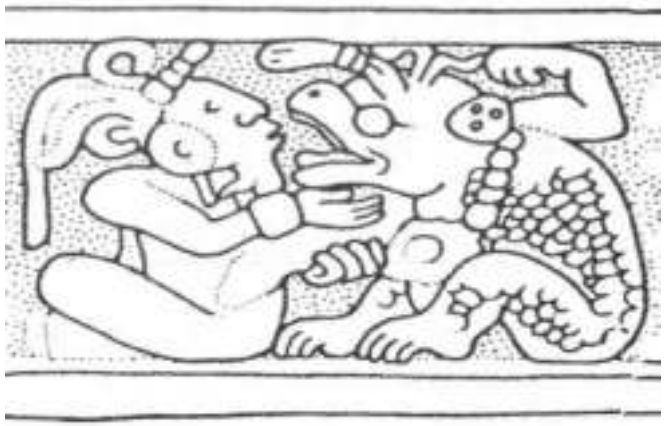


Similar earring (round with three circles inside) as Bufo Toad. Some felines have similar earrings or eye designs.





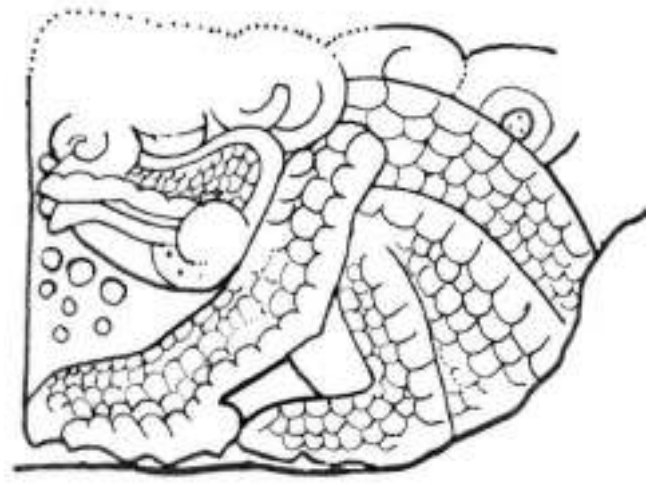
Copan Str. 9M 146, Harvard Bench, Glyph Block B. Rotated. Drawing by Barbara Fash.



Copan Str. 9M 146, Harvard Bench, Glyph Block F. Rotated so Bufo Toad is in same position as in Long Count examples.



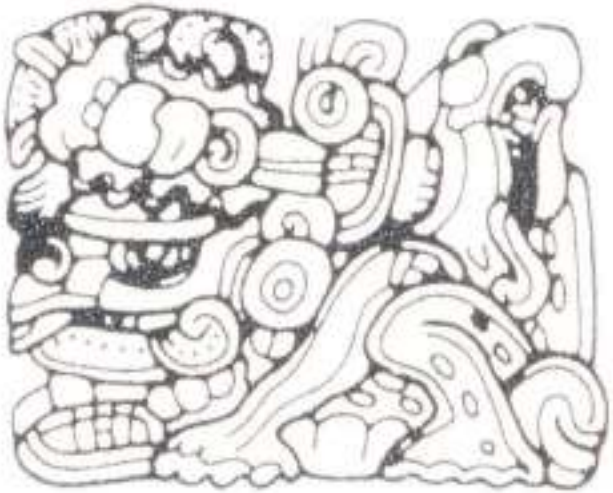
Copan Stela D, CPN 7, drawing Linda Schele, SD-1006.



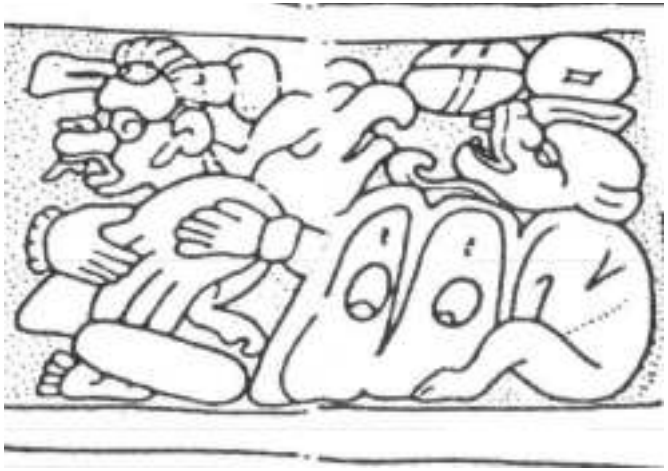
Bufo Toad, Uinal, full-figure hieroglyph in Long Count, Copan Stela 15, CPN 64, drawing Linda Schele, SD-1043.



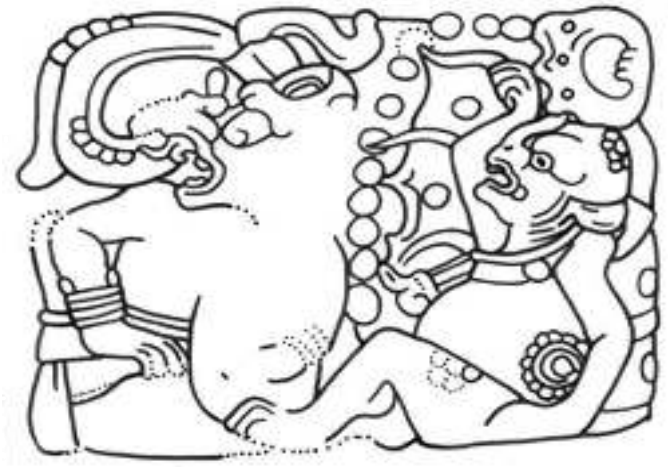
Bufo Toad, Uinal, full-figure hieroglyph in Long Count, Copan Stela 24, CPN 76, drawing Sylvanus Morley 1920: Fig. 13.



Bufo Toad, Uinal, full-figure hieroglyph, Early Classic style so very different than Late Classic renderings. In Long Count, Copan Stela 63, drawing by Barbara Fash is helpful but is at 1:10 or comparable that is no help to iconography. In the future should be 1:2 or at least 1:4 for each individual hieroglyph. Otherwise, the complete drawing is just decorative to show the whole scene but is not functional for iconography and actually epigraphers need 1:2 or at least 1:4 also.



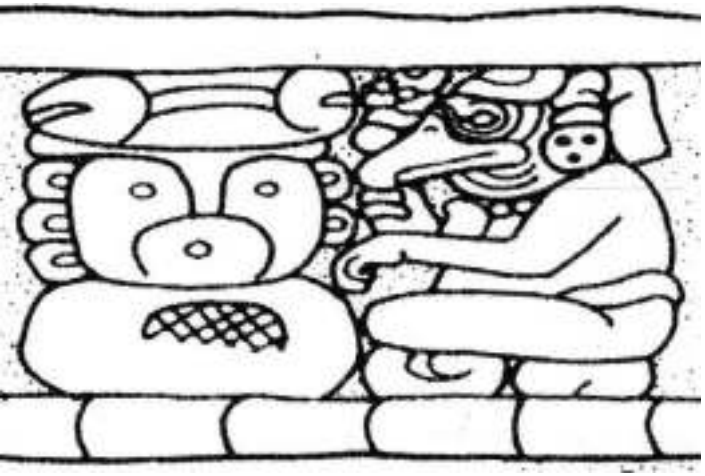
Copan Str. 9M 146, Harvard Bench, Glyph Block M, drawing by Barbara Fash.



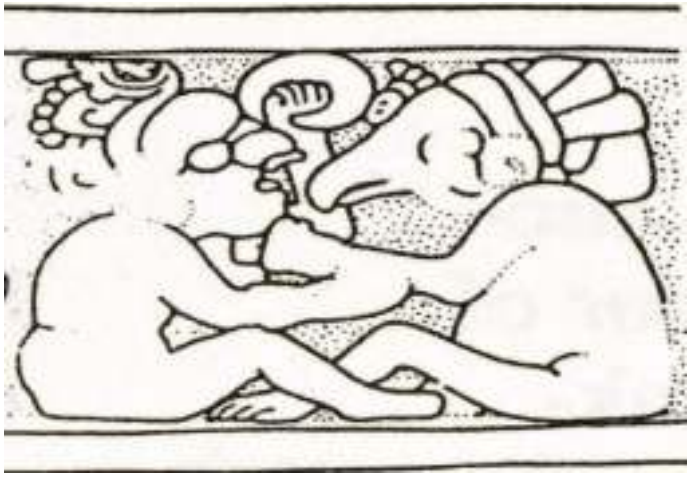
Copan Stela D, CPN 7, full-figure personified bat emblem glyph for Copan, drawing by Linda Schele SD-1006. AA at LACAMA has slightly better resolution than earlier FAMSI database.



Copan Temple 26, Position B1-B2, cropped by Hellmuth from Kawil (God K) from excellent drawing by David Stuart.



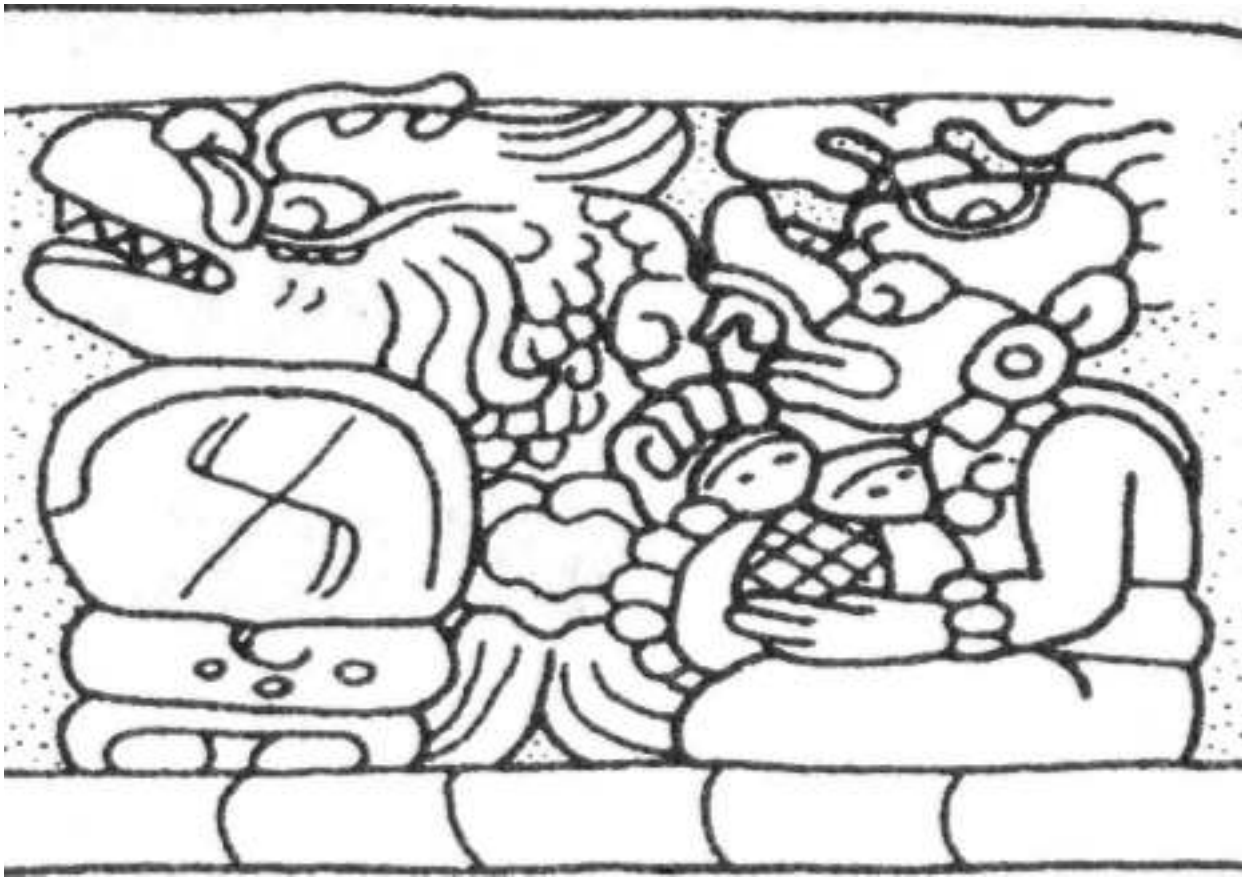
Copan Str. 9N-82, House of the Bacabs, bench front, Glyph Block J. Drawing Linda Schele, SD-7657.



Copan Str. 9M 146, Harvard Bench, Glyph Block H, drawing by Barbara Fash. To enlarge to study details would help to have higher resolution.



Cropped and cleaned by Hellmuth from drawing by Linda Schele, SD-0193, AA at LACMA database.



Copan Str. 9N-82, House of the Bacabs, bench front, Glyph Block F.

Lots of Fish Monsters as full-figure hieroglyphs at Copan plus at other sites. We are working full-time on full-figure personifield hieroglyphs so in the future can show a complete corpus of full-figure Fish Monster hieroglyphs. Below is one example that we will ID in the future.

Drawing Linda Schele, SD-7657.





Bibliography on Full-Figure Personified Hieroglyphs of Copan Structure 9N-82, House of the Bacabs

Lots of material is available; we list here ones we know.

FASH, William L.

1989 The Sculptural Façade of Structure 9N-82: Content, Form, and Significance. Pages 41-72 in *The House of the Bacabs, Copan, Honduras*, edited by David Webster, Studies in Pre-Columbian Art and Archaeology 29. Dumbarton Oaks.

FASH, William L.

1991 Lineage Patrons and Ancestor Worship Among the Classic Maya Nobility: The Case of Copan Structure 9N-82. Pages 68-80 in Palenque Round Table (6th., 1986), Virginia M. Fields, editor. University of Oklahoma Press.

RIESE, Berthold

1989 The Inscription on the Sculptured Bench of the House of the Bacabs. Chapter 4, pages 82-88 in: *The House of the Bacabs, Copan, Honduras* (David Webster, editor). Studies in pre-Columbian Art & Archaeology; no. 29, Dumbarton Oaks.

WEBSTER, David (Editor)

1989a The House of the Bacabs, Copan, Honduras. *Studies in pre-Columbian Art & Archaeology*; No. 29, Dumbarton Oaks. 116 pages.

Helpful download is available, but is locked (if clever you can unlock it).

WEBSTER, David

1989b The House of the Bacabs: Its Social Context. Pages 5-40 in: *The House of the Bacabs, Copan, Honduras* (David Webster, editor). Studies in pre-Columbian Art & Archaeology; no. 29, Dumbarton Oaks.

The bench is pictured in Figures 14, 15, 16 and discussed on pages 30ff.

ZENDER, Marc

2019 The Classic Mayan Causative. *The PARI Journal* 20(2): 28-40.

The photos Zender uses are very well illuminated; the lighting is perfectly balanced from both sides. Zender provides suggested translation for each glyph on his Figures 1 to 3. Would be helpful to compare them to Schele's translations in the previous decade, SD-7657.

List of Suggested Reading on Stone 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, William L.

1991 Lineage Patrons and Ancestor Worship among the Classic Maya Nobility: The Case of Copan Structure 9N-82. Mesoweb.

Helpful documentation of the architecture. Not the bench hieroglyphs.

Download, but locked (meaning you have to know how to unlock it). www.mesoweb.com/pari/publications/RT08/Fash1991.pdf

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 edition

WEBSTER, David, FASH, William A., BAUDEZ, Claude F, RIESE, Berthold, and **William T. SANDERS**
1989 The House of the Bacabs, Copan, Honduras. *Studies in Pre-Columbian Art and Archaeology No. 29*, pp. i-iv, 1-111, 113-116 (119 pages), Dumbarton Oaks.

WEBSTER, David
2023 The Skyband Group, Copán, Honduras Penn State Excavations 1990, 1997 *Paris Monographs in American Archaeology 59* Series editor: Eric Taladoire. Archaeopress Publishing Ltd..

We highly recommend Archaeopress because they publish nice printed editions but let scholars download PDFs at no cost. This is true s scholarship and sharing with colleagues.

ZENDER, Marc
2019 The Classic Mayan Causative. The PARI Journal 20(2):28-40, 2019 Ancient Cultures Institute.

His Figures 1, 2 and 3 show nice photographs (by him) of the full-figure hieroglyphs. He provides a reading for as many of the glyphs as possible.

Introductory Bibliography on the Bicephalic Cosmic Monster

There are dozens of article, theses and dissertations that discuss the Cosmic Monster, previously named the Bicephalic Monster. You also need to study crocodiles and the back end of the Cosmic Monster, namely the Quadripartite Badge Headdress Monster. We list a sample of pertinent research results.

COHODAS, Marvin
1976 The Iconography of the Panels of the Sun, Cross, and Foliated Cross at Palenque: Part III. In *The Art, Iconography & Dynastic History of Palenque Part III*, edited by Merle Greene Robertson, pp. 155-176. Robert Louis Stevenson School, Pebble Beach, California.

Mentions the Cosmic Monster on his page 109.

COHODAS, Marvin
1982 The Bicephalic Monster in Classic Maya Sculpture. *Anthropologica* New Series, Vol. 24, No. 2 (1982), pp. 105-146.

GREENE Robertson, Merle

1974 The Quadripartite Badge – A Badge of Rulership. In *Primera Mesa Redonda de Palenque Part I*, edited by Merle Green Robertson, pp. 77-93. Robert Louis Stevenson School, Pebble Beach.

Still uses the early name Bicephalic Monster for the Cosmic Monster and 99% of her research is on the Quadripartite Badge not on the Cosmic Monster and especially not on crocodiles. What later was suggested to be a stingray spine Merle calls a leaf (definitely not a leaf).

Mesoweb download is helpful but was locked; our team was able to unlock it finally. You can also download it on: www.precolumbia.org/pari/publications/RT01/RT01_00.html

HELLMUTH, Nicholas

2023a Crocodile and Composite Deer-Crocodile as Bicephalic Cosmic Monster. Chapter 6 in: Symposium Presentation July 27, 2023, at Museo Popul Vuh, Universidad Francisco Marroquin. Iconography and Ethnozoology of the Crocodiles and Caiman of Mesoamerica and their relation with the Cosmology of the Underworld and the Heavens. FLAAR.

HELLMUTH, Nicholas

2023b Cauac Monster, Cosmic Monster with Quadripartite Badge Headdress, Crocodile & God N, Copan CPN 25, Altar of Stela M. FLAAR Photo Archive Publication Number 1, Maya Sculptures of Copan, Honduras, Publication Number 1. FLAAR (USA).

Work in progress to show high-resolution photos of Copan CPN.

INGALLS, Victoria Ann

2012 The Quadripartite Badge: Narratives of Power and Resurrection in Maya Iconography. MA thesis. 125 pages

Helpful download: https://stars.library.ucf.edu/cgi/viewcontent.cgi?article=3392&context=etd

Discusses the Quadripartite Badge (Headdress) which often is at trail end of a Cosmic Monster (or occasionally at the front end). But since the Quadriparte Badge Headdress Monster is found in other settings, it helps not to limit yourself to the Cosmic Monster. Her list is impressive. The Copan Str. 9N-82 hieroglyphic bench is illustrated in her Fig. 29, page 89, with a drawing by Linda Schle. To learn about the diversity of aspects of the Quadripartite Badge, this thesis is essential. It shows many examples not in shorter discussions of the Cosmic Monster.

KUBLER, George
1969 Studies in Classic Maya Iconography. The Connecticut Academy of Arts and Sciences.

The name Cosmic Monster was not yet developed nor was the Quadripartite Badge name a fixed jargon for iconographers in that era. It was not until Merle Greene Robertson suggested the term Quadripartite Badge in 1974.

LOOPER, Matthew
2012 The Maya "Cosmic Monster" as a Political and Religious Symbol. Chapter 8, pages 197-215 in the *Ashgate Research Companion to Monsters and the Monstrous*. Taylor & Francis Group.

The Cosmic Monster is a major chapter in the iconography of crocodiles in Classic Maya art. This chapter by Looper is very helpful. The illustrations show three good examples of this Cosmic Monster (which usually, but not always, has a crocodile at the front and a Quadripartite Badge deity headdress at the back).

MILBRATH, Susan
1999 Star Gods of the Maya: Astronomy in Art, Folklore, and Calendars. University of Texas Press.

Cosmic Monster on pages 277-281.

SCHELE, Linda
1976 Accession Iconography of Chan-Bahlum in the Group of the Cross at Palenque. In *The Art, Iconography & Dynastic History of Palenque Part III*, edited by Merle Greene Robertson, pp. 9-34. Robert Louis Stevenson School, Pebble Beach, California.

Cosmic Monster on page 17.

SPINDEN, Herbert J.
1913 A Study of Maya Art: Its Subject Matter and Historical Development. *Memoirs of the Peabody Museum of Archaeology and Ethnology*, VI. Harvard University.

Cosmic Monster first pulled out to be studied by Spinden (page 53), though obviously his database in that time was limited.

This 1913 monograph was reprinted in 1970 by Kraus Reprint. Illustrates LOTS of Sky Bands starting pages 19-20. Then on page 53 he has a section on **Two-headed Dragon** which today is called the Cosmic Monster.

SPINDEN, Herbert J.
1975 A Study of Maya Art: Its Subject Matter and Historical Development. Dover Publications (with new introduction and bibliography by J. Eric S. Thompson. 755 illustrations in 285 pages

STONE, Andrea
1983 The Zoomorphs of Quiriqua. PhD dissertation, Department of Art History, University of Texas at Austin. Austin, TX.

STONE, Andrea
1985 Variety and Transformation in the Cosmic Monster Theme at Quirigua, Guatemala. In *Fifth Palenque Round Table*, 1983, edited by V. Fields and M. G. Robertson, pp. 39-48. Palenque Round Table Series 7, Pre-Columbian Art Research Institute, San Francisco.

STUART, David
A Cosmological Throne at Palenque. Mesoweb. 4 pages.

His Figure 1 is a helpful line drawing that shows the crocodile face at left with star symbol on its deer-ear (Stuart calls this creature the Starry Deer Alligator). Right end is a sideways Quadripartite Badge Monster. Normally this faces down but no space for it to turn downwards. No Sky Band symbols on the body of the monster (just basic hieroglyphic text).

Am still hoping to find the date of this report.

VELÁSQUEZ Garcia, Erik
2002 Una nueva interpretación del Monstruo Cósmico maya. Pages 419-458 in XXIV Coloquio Internacional de Historia del Arte, UNAM, Mexico.

Goes in depth on several aspects of the Cosmic Monster; then goes to celestial aspects (so stars and constellations rather than features of the Cosmic Monster). Very helpful for archaeoastronomers.

VELÁSQUEZ Garcia, Erik
2006 The Maya Flood Myth and the Decapitation of the Cosmic Caiman. *The PARI Journal*, Volume VI, No. 1, Spring 2006. Pages 1-10.

Helpful discussion of one aspect of the Cosmic Monster. Since caimans are more on the Pacific Ocean coast, and since the three codices are more Yucatec-area or at least elsewhere in the Maya Lowlands (nowhere near the Pacific Ocean), crocodiles are more likely than caimans.



In museums around the world we always bring a full set of studio lighting, since it's the lights that bring out the detail. In some countries when I flew in, I had to rent two taxi cabs at the airport to take the equipment to the museum.

Forthcoming publications of the FLAAR Photo Archive

Our long-range goal is to find all our 35mm and medium format film (1960's-1990's) and scan at good resolution. And simultaneously to find all our digital photographs from circa 1998-2015 that we have taken at the ruins and museums of Copan, Honduras. Once we have all the digital images we will sort them into topics so we can present the images topic-by-topic. Most of these publications will be in 2024 because we are still working on flora, fauna, and biodiverse ecosystems of the Reserva de la Biosfera Maya, Peten, Guatemala. But during the rainy season, when you can't fly a drone due to weather and the roads are too deep in mud even for a 4x4 pickup truck, we are working on preparing our decades of photography at Copan Ruinas. Below we list the first eight topics (lots more to come), plus we are looking for our Nim Li Punit stelae photos, our Santa Rosa Xtampak, Campeche photos, and lots more).

Cauac Monster, Cosmic Monster with Quadripartite Badge Headdress, Crocodile, Deer and God N, Copan CPN 25, Altar of Stela M
FLAAR Photo Archive Publication Number 1,
Maya Sculptures of Copan, Honduras, Publication Number 1

Scorpion, Venus, Moon Goddess with Rabbit Companion, *Celestial Deities on Sky Band Motifs on Copan Structure 8N-66C Bench Front*
FLAAR Photo Archive Publication Number 2,
Maya Sculptures of Copan, Honduras, Publication Number 2

Copan Ceramic Incensario Lids, Local adaptation of Teotihuacan Style
Volume I, Photos in full-page Height, Vertical Format
FLAAR Photo Archive Publication Number 3,
Maya Ceramics of Copan, Honduras, Publication Number 1A

Copan Ceramic Incensario Lids, Local adaptation of Teotihuacan Style
Volume II, Vertical Format
FLAAR Photo Archive Publication Number 4,
Maya Ceramics of Copan, Honduras, Publication Number 1B

Full-Figure Personified Maya Hieroglyphs on front of Bench in Copan Str. 9N-82, House of the Bacabs, Sepulturas Group
FLAAR Photo Archive Publication Number 5,
Maya Sculptures of Copan, Honduras, Publication Number 3

Beards on Kings of Copan
FLAAR Photo Archive Publication Number 6,
Maya Sculptures of Copan, Honduras, Publication Number 4

Paddler God Faces and Hieroglyphs at Copan
FLAAR Photo Archive Publication Number 7, Maya Sculptures of Copan, Honduras, Publication Number 5

Cauac Monsters at Copan, especially in Stacks on Corners of Palaces and Mythical Structures
FLAAR Photo Archive Publication Number 8,
Maya Sculptures of Copan, Honduras, Publication Number 6

Copan Maya Ballgame Players, Maya Outfits: Chest Protector & Deflector and Thigh Protector,
Mexican Ballgame Outfits: Yoke, Hacha and Ballgame Handstone
FLAAR Photo Archive Publication Number 9,
Maya Sculptures of Copan, Honduras, Publication Number 7

Copan Maya Ballcourt Architecture & Scarlet Macaw Logo Goal Stones, Stepped Areas were as important as Playing Field down the Center
FLAAR Photo Archive Publication Number 10,
Maya Architecture of Copan, Honduras, Publication Number 1

Maya Ballcourt Architecture, 3-Dimensional Architectural Reconstruction Drawings by David Morgan
FLAAR Photo Archive Publication Number 11,
FLAAR Drawings Archive Segment, Publication Number 1.

Toads and/or Frogs in Art and Iconography of Copan, Honduras
FLAAR Photo Archive Publication Number 12,
Maya Sculptures of Copan, Honduras, Publication Number 8

Bats in Sculpture and Hieroglyphic Inscriptions of Copan, Honduras
FLAAR Photo Archive Publication Number 13,
Maya Sculptures of Copan, Honduras, Publication Number 9

Samples of Classic Maya Ceramics of Copan, Honduras
FLAAR Photo Archive Publication Number 14,
Maya Ceramics of Copan, Honduras, Publication Number 2

Jade and Greenstone Craftsmanship of Copan, Honduras, Finished Jade Ornaments plus Documentation of Jade Working on Raw Stone
FLAAR Photo Archive Publication Number 15,
Artifacts of Jade, Obsidian, Flint (Chert) and other Materials of Copan, Honduras, Publication Number 1.

Full-Figure Personified Maya Hieroglyphs and Pauahtuns: Bench Front of the "Harvard Bench" inside Copan Structure 9M-146 of Group 9M-18
FLAAR Photo Archive Publication Number 16
Maya Sculptures of Copan, Honduras, Publication Number 10

Iconography of Incense Scattering and Maya Hieroglyphs, Face-Variant Long-Count Glyphs on Nim Li Punit Stela 15, Belize
FLAAR Photo Archive Publication Number 17
Maya Sculptures of Belize, Publication Number 1

The Story of the Blom Plate: a Masterpiece of Maya Iconography and Primary Standard Sequence, PSS, Hieroglyphs, Chetumal, Quintana Roo, Mexico
FLAAR Photo Archive Publication Number 18
Iconography of Maya Ceramics of Mexico, Publication Number 1
Primary Standard Sequence, PSS, Maya Hieroglyphs in the FLAAR Photo Archive, Publication Number 1

Tlaloc, Yearsign, and other Teotihuacan Motifs in Classic Maya Art at Copan, Honduras
FLAAR Photo Archive Publication Number 19
Maya Sculptures of Copan, Honduras, Publication Number 11.