

COPÁN RUINAS HONDURAS FLAAR PHOTO ARCHIVE

Stelae, Altars, Rock Sculptures, Ceramics,
Temples, Pyramids, Acropolis, Ballcourt Architecture



Nicholas **Hellmuth**

2020

We would like to find every photograph of Copan Ruinas, Honduras in the FLAAR Photo Archive and figure out how to make them available for research. Because it takes a capable and patient team to find and sort all this material, basic funding is needed. We have professional scanning equipment but to scan this material would take many months and thus correspondingly costly. But until I win PowerBall or other lottery in the USA, we at least would like to make a preliminary list of categories what we have photographed. Note the word category; we do not have funds to list each negative or slide but by at least noting the categories this can get started.

Copan is an area that provides courteous hospitable access: we had access to both museums (the village museum and the new one at the site). We were also provided open access to photograph sculptures at night with electrical portable studio lighting, both inside the museum and out in the plazas. The result of our many visits to Copan is the archive of photographs of Copan sculpture and architecture. In every aspect we worked together with IHAH, indeed inside the village museum are enlargements of FLAAR photos that we donated to them several decades ago. There were years when most of the “Visit Copan Ruinas” posters of the Honduras tourism department were photos by Nicholas Hellmuth with credit to FLAAR.

Yes, the Peabody Museum, Harvard, already has thousands or probably tens of thousands of photos of Copan, from over a century of capable research there. But, we have a quality that is a tad different: we are one of the few photo teams at an archaeological site that uses tripods for 90% of our photos. Our cameras were Hasselblad medium format, Zeiss lenses with Made in Germany quality. Leica cameras, etc. Plus, since the “Nicholas style” of lighting is distinct, we have results that can add to the Harvard project photographs.

We have high-resolution photos, with Hasselblad digital backs. In the decades before we also used Hasselblad (obviously with film) but always with a tripod. During the 1970’s-1990’s also had Leica and Nikon cameras. We did some scans of sculptures with large-format tri-linear scanning equipment but will be a challenge to find these digital images taken literally two decades ago (during the years 1998-2000 we had the most powerful high-resolution digital cameras of any photographic entity in all Mesoamerica: BetterLight/Dicomed portable tri-linear large-format sensor camera, Linhof to hold it, and Rodenstock and Schneider lenses).

Let’s look at a few of the topics that our photography at Copan focused on:

CONTENTS

Cacao Pods

Depicted in 3-Dimensions in Stone Sculpture _____ 5

Crocodiles in

Classic Maya Art _____ 7

Planetary Bands (Planets and Constellations;

Sun and Moon Pictured in a Row) _____ 10

Turtles and Turtle Carapace

as Quadripartite Design _____ 14

Cruciform Medallion: _____ 17

Nymphaea ampla, Water Lily Flowers

in Stone Sculpture _____ 19

Amphibians

in Monumental Sculpture _____ 22

Birds Pictured in

Sculpture at Copan _____ 24

Bats, Slicer Bats

of the Popol Vuh Saga _____ 32

Other Aspects of Popol Vuh Chapters

Visible at Copan Ruinas, Honduras _____ 34

CONTENTS

Scenes on Sculptures at Copan Ruinas	36
Paddler Gods	39
Altar Q, Kings of Copan and their Teotihuacan (Tlaloc) Aspect	46
Photographs of Hieroglyphs of Copan Stelae	48
Monumental Architecture at Copan Ruinas	52
Head Profiles	58
Beards at Copan Especially Bearded Kings	61
Copan pottery Artifacts	64
Resurrection of Teotihuacan Symbolism in the Late Classic	66
Camera Equipment that Was Used:	72

CACAO PODS

DEPICTED IN 3-DIMENSIONS IN STONE SCULPTURE

Cacao pods are pictured in the art of Copan. We also have photographs of *Theobroma cacao* trees, one cacao tree from the museum itself (the village museum) and others from a nearby hotel orchard. Cacao also grows in the FLAAR ethnobotanical research garden in Guatemala City. Plus we have photographed cacao in diverse ecosystems around Guatemala (and in Tabasco and Chiapas). All three editions of Michael Coe and Sophie Coe's book on cacao of the Maya and Aztec have photographs by Hellmuth. Plus the book on cacao and

chocolate by the Japanese linguist (of Mayan languages), Yasugi Yoshiho, has Hellmuth/FLAAR photos of cacao. He was curator at the National Museum of Ethnology (MINPAKU, outside Osaka, where I was Visiting Research Professor with a Japanese government fellowship for six months circa 1995-1996). We also have an ample photo archive of flowers, fruits, and trees of *Theobroma bicolor* (pataxte, balamte). Plus we are one of the few entities in Mesoamerica that has photographs of *Theobroma angustifolium*.





CROCODILES IN CLASSIC MAYA ART

No alligators in Central America; crocodiles are in several sculptures at Copan and at Yaxchilan. We have also accomplished extensive photography of all three species of crocodilians of Mesoamerica to document the placement of the teeth and fangs (so that the crocodiles in Maya sculpture can be identified). We have acquired permission to enter crocodile pens at two major zoos, and took literal close-ups of the open jaws of the crocodiles and caimans (no species with the name “alligator” in the Maya areas; two Crocodile species and one Caiman). We have also photographed, in high-resolution detail, the scales, since the “Crocodile Trees” of Izapa stelae and Early Classic Peten ceramics are an iconographically interesting combination of crocodilian and tree. Plus we have photographed the top part of the heads of each species of crocodilian, since the size, shape, and proportions are helpful to allow you to identify which creature is on the CPN 4 (Stela C), seated anthropomorphic crocodilian on CPN 33 (Altar T) plus possible partial crocodilian (underside and clawed feet), east side of CPN 82 (Altar D’). The top of CPN 33 is a more complete crocodile. So even

if Harvard and other Copan research institutes already have photos of the sculptures of Copan, it would help to have photographs also of the jaws, dentition pattern of each species, head size and shape, scales, etc. of all three species.

Yaxchilan has two 3-dimensional crocodile sculptures, not surprising considering crocodiles enjoy the adjacent Rio Usumacinta.

In order to help identify which species of crocodile is featured at Copan Ruinas, we have worked over the years to get access to crocodile areas of zoos. We then get down on the ground and photograph the teeth and fangs of the crocodile, of each species. So FLAAR has the only iconographic archive with the details of teeth for crocodile renderings in Classic Maya art.

Same to help understand water lily flowers in headdresses at Copan: we have been photographing water lily flowers for decades; now we are photographing *Nymphaea ampla* flowers in Rio Dulce and El Golfete, Municipio de Livingston, Izabal.





Sample of photography of profile of crocodiles; to get this angle you have to be down flat on the ground with your camera in front of your face (and hope the crocodile is not hungry).

PLANETARY BANDS

(PLANETS AND CONSTELLATIONS; SUN AND MOON PICTURED IN A ROW)

(Planets and constellations; sun and moon) are well known from stone sculptures, stucco sculpture, plus around ceramic plates, around vases and bowls. There are so many diverse varieties of sky bands on vases, bowls, and especially plates, that there needs to be a fresh new PhD dissertation what includes an inventory in all the components of these decorations. But Copan has monumental sculpture with planetary and lunar symbolism. We used portable studio lighting and high-resolution Hasselblad cameras with Made in Germany Zeiss lenses to photograph the bench fronts (throne fronts) with astronomical symbols. The Moon Goddess with her Rabbit friend, and the Scorpion character are well rendered with the lighting style of Hellmuth (Skyband Bench, Group 8N-11, in the museum).







TURTLES AND TURTLE CARAPACE AS QUADRIPARTITE DESIGN

Turtles are common at Copan; these are a challenge to study since there are so many different sizes and shapes of turtles in the oceans and wetlands: marine turtles, land turtles, and turtles of rivers and lakes. In studying the iconography of turtles it is crucial to also understand the turtle aspect of the cave entrance four-lobed symbol.

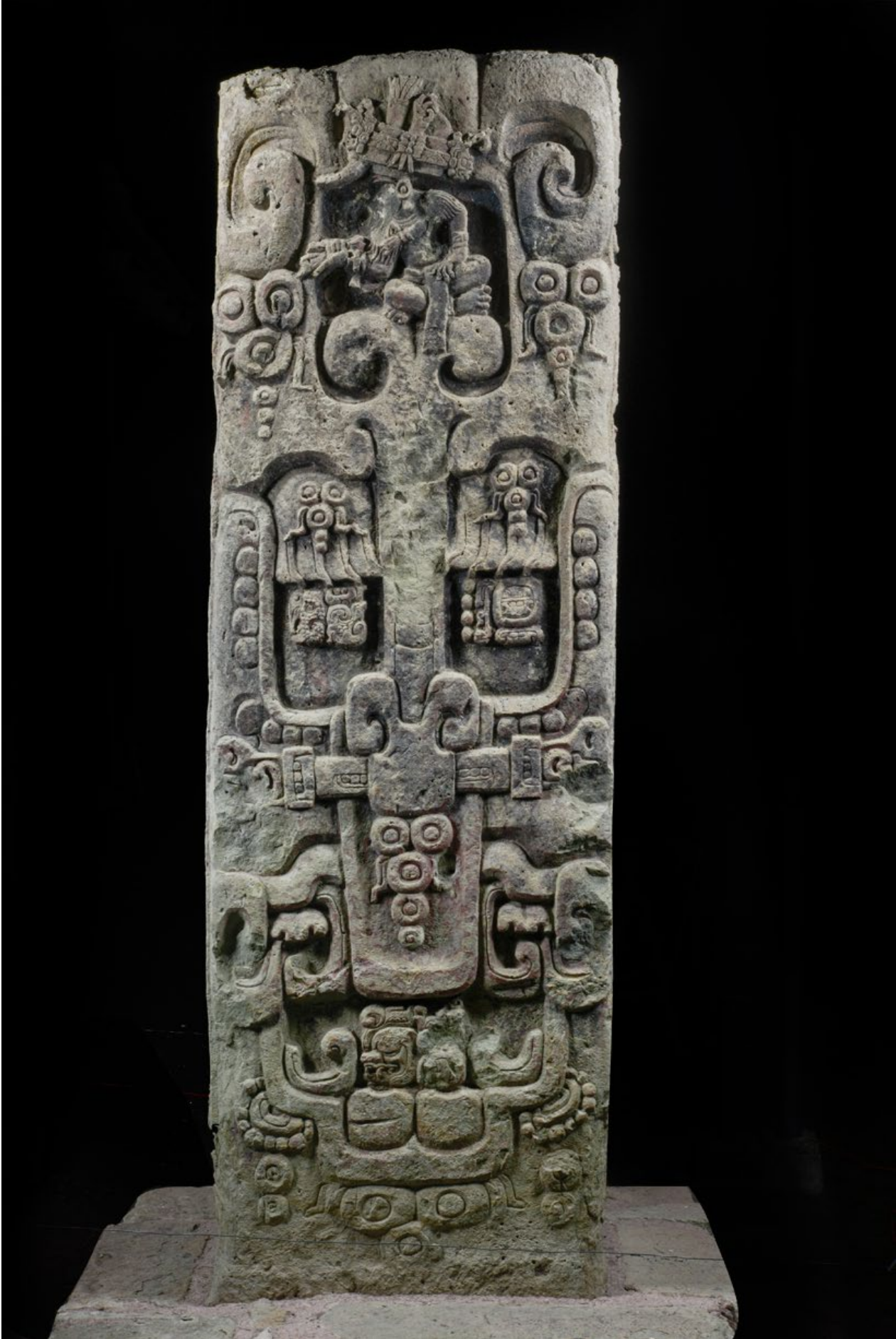




CRUCIFORM MEDALLION:

In some instances this is the stylized underside of a turtle carapace and when stylized is also a cave entrance symbol. This symbol comes from Olmec heritage. In some Maya examples it is a stylized 4-petalled flower. We are studying the undersides of all turtles in Guatemala though have only a few to photograph so far. The 4-petalled flower we have the largest photo archive in the world of high-res digital photos of 4-petalled flowers of Guatemala. We have a list of literally every species that has four petals. However at Copan most are turtle carapace underside; 4-petalled flowers are mainly on Tepeu 2 vases, bowls, and plates. I uncovered two bowls with these symbols in 1965 in the Tomb of the Jade Jaguar (Tikal Burial 196) so I have been interested in these flower designs for half a century. Whereas most at Copan are more “turtle derived”

CPN 131 is more 4-petalled (or 4-lobed leaf). With our unique photo archive of 4-petalled flower photos a student could do a breakthrough thesis or PhD dissertation. We have driven about a thousand kilometers every 2 months for more years than I can count through the remote roads (with 4-wheel drive double-cabin pickup truck carrying a photography team and the entire back of the pickup with camera equipment). Every time we see a 4-petalled flower we stop, setup a portable studio, and take photos. We also raise several of these 4-petalled flowers in our FLAAR ethnobotanical research garden surrounding our 7-level office building in Guatemala City. For turtles we have access to collections of carapaces as well as access to many of the living species to do further photography of their undersides.



Nymphaea ampla, **WATER LILY FLOWERS IN STONE SCULPTURE**

Water Lily Flowers (especially being nibbled on by fish) are frequent at Copan, Palenque and at other sites. Water lily flowers are pictured very clearly on Copan sculpture (CPN 26). But not many iconographers, epigraphers, or archaeologists have had the opportunity to go on field trips over a 12 year period in the rivers, lakes, and swamps of Canal de Chiquimulilla, Lake Peten Itza, and a river that is literally a “water lily river” with water lilies growing, AND FLOWERING underwater. So again, lots of photos of the water lily aspect of Copan Stela N are available.

Our photo archive is unique because FLAAR has the largest photo archive in the world of high-resolution photos of the actual plants and the flowers, buds, seed pods plus stems and leaves (lily pads). The leaves are a different color depending on the angle of the sun, on the angle you see them at, and whether you are physically underwater looking up through the lily pad at the sky, etc. We have photographs of every angle (including from underwater). On CPN 110, all four panels have underwater-world symbolism (the subject of my PhD dissertation) and water lily flowers are visible in one panel (the stems are in all panels). CPN 109 has more.





Copan Stela N CPN 26

AMPHIBIANS IN MONUMENTAL SCULPTURE

Frogs and toads (Especially *Bufo marinus*, now named *Rhinella marina*) are clearly visible in monumental sculpture at Copan, such as on the north side of CPN 82. A frog or toad faces downwards on the north side of CPN 28 (Altar O). The giant 3-dimensional sculpture at Los Sapos is impressive, as are other styles of these venomous toads at Kaminaljuyu and in the Museo Popol Vuh, Universidad Francisco Marroquin, Guatemala.

Because the toads with the noticeable poison sacs are the most common in the pre-Columbian art throughout Guatemala, we search for these toads in diverse ecosystems of Guatemala and photograph them alive. They pose nicely, then we let them hop happily away.

We have learned (during studies in remote households where we hike many hours to reach since there are no roads here) that most Q'eqchi' and Peten Mayan rural houses keep one *Bufo* (*Rhinella marina*) inside their home and allow it to wander around at night to clean up the insects inside the house.





BIRDS PICTURED IN SCULPTURE AT COPAN

Waterbirds

Natural and deified; Waterbirds are the noticeable birds in Mayan art and one of the literally best 3-dimensional sculptures of a waterbird with a fish in its beak is in the Copan museum. FLAAR also has one of the larger digital photo archives of the actual waterbirds of the rivers, lakes, swamps and other wetlands of Guatemala. We could include a few Gigabytes of high-resolution photos of waterbirds taken with Nikon D5, Canon EOS 1DX Mark II cameras and prime telephoto lenses (for Nikon we have 200mm, 400mm, 600mm, and 800mm Nikkor lenses). These photographs can assist epigraphers, iconographers, art historians, archaeologists, ornithologists and ecologists better list which birds are present in Classic Maya art, and which are not visible.



Rollout by Nicholas Hellmuth, FLAAR, using their special high-resolution digital rollout camera at Copan Ruinas, Honduras.

White pelican with fish



White pelican male has
a raised area on the top
middle of it's beak during
mating season.



Here we have captured a scene of a male white pelican with the center of his beak in mating phase. You can see that the other pelicans do not have this feature (so we estimate they are females). In other times of the year the males do not have this raised area in their beak.



Macaws

At Copan, macaws are featured on stucco sculpture and Copan ballcourt markers. The headdress of one of the ruling elite of Copan Altar Q includes a nice macaw (but whether it's a composite macaw-quetzal is a good question). Macaws are also found in Late Classic ceramic scenes, especially in palace scenes. Macaws are more commonly pictured in Peten ceramic art, especially on Tzakol 2 or 3 basal flange bowl lids and sides.

The saga of the Popol Vuh has several birds featured in this mythology; the best known Popol Vuh bird also has many transformations (but in actual Classic Maya sculpture it is a “macaw” very rarely (mostly only at Copan)). Otherwise this bird tends to be a snake-eating falcon, hawk, or other snake-eating raptor (as documented by Hellmuth PhD dissertation and cited subsequently). But at Copan the “Popol Vuh bird” is a macaw, not the Laughing Falcon (same bird is called a Snake-Eating Hawk). The Snake-eating Hawk is clearly mentioned in the Popol Vuh story (eating a snake that ate a frog or toad that ate the insect carrying the message from the grandmother of the Hero Twins).







BATS, SLICER BATS OF THE POPOL VUH SAGA

Slicer Bats are on stone sculptures of Copan, of Museo Popol Vuh-UFM, and in a snapshot that Dr Guillermo Mata sent me years ago. Lots of slicer bats are on polychrome Late Classic plates, bowls, and vases. Few of these vases (other than the Castillo Vase/Bowl of the MPV) have been published. Would be a great thesis or dissertation topic for a student (with the photographs available to show aspects of iconography and epigraphy not previously documented). Plus, we have prepared bibliographies of both of the two species of False Vampire; the Killer Bat is one of the False Vampires (not one of the smaller true vampire bats of Latin America).






OTHER ASPECTS OF POPOL VUH CHAPTERS VISIBLE AT COPAN RUINAS, HONDURAS

Much of my PhD dissertation research in the 1970's-1980's was on aspects of the Popol Vuh that are in Classic Maya art. This is partially a result of being a post-graduate Research Fellow at Yale University from circa 1968 for over a decade (with sequential appointments). So I learned a lot from Mike Coe and I helped provide him with a lot of iconographic identifications as well.

I have explored the Caves of Xibalba, and even found a cave in Guatemala that has Maya-made steps leading into its interior (just as mentioned in the Popol Vuh). We have found the River of Pus (in Campeche in a cave) and the River of Scorpions (in Guatemala).

But all that is a separate segment of the FLAAR Photo Archive. For Copan Ruinas, I have zompopo ants, leaf-cutting ants carrying flowers. Yes, LEAF-cutting ants carrying FLOWERS, not leaves. I spent over four years looking for this aspect of the Popol Vuh throughout Guatemala. We have the largest photo archive in the world of leaf-carrying ants carrying flowers (some marvelous examples from Tikal). For the Copan archive we can include the photos of zompopos carrying flowers in the Copan park. No photos here because we have 14 hard drives with more Terabytes than I can count and to fish out each topic is precisely why we are seeking outside funding.



Leaf-cutting ants (zompopos) can also be found carrying flowers in Copan Ruinas park in Honduras. This is exactly what the Popol Vuh saga says.

SCENES ON SCULPTURES AT COPAN RUINAS

Holmul Dancer:

There are so many scenes of the Holmul Dancer that this topic is both a dance dissertation and coffee table book, plus one on deities, dwarfs, midgits and a lot more that are pictured on these same many Holmul Dancer vases and occasional plates. The Holmul Dancer is mainly on vases of whitish background with orange color painting. However this dance theme is also known from other styles. I mention this because it is rather obvious that Copan Stela CPN 16 shows an individual with significant aspects of a “Holmul Dancer outfit.” Again, great material for a breakthrough thesis or dissertation, to have the sculpture plus material on ceramic paintings of the same century.

The FLAAR Photo Archive has several thousand pages of notes: these are mimeographed reports with photos, and descriptions. My notes on the Holmul Dancer etc. are as follows:

The Holmul Dancer and the Principal Young Lord in Maya Art; total 310 pages, in three parts:

1. *Holmul Dancer and Principal Young Lord*
2. *The Headband Gods – the Hero Twins*
3. *The Loincloth April Face*

There are lots of other animal dances (mostly people dressed up as animals, often as a Way). Several of these animal dances are mentioned in the Popol Vuh.

Copan Stela H,
(CPN 16)
Holmul Dancer.



Holmul Dancer,
East side.



PADDLER GOODS ON COPAN STELAE

These deities are known as the Paddler Gods because they are the rowers of the canoe going into or coming out of the Underworld (which in my PhD dissertation I named the Surface of the Underwaterworld). This river or lake could also be associated with Xibalba, since many of the caves in Alta Verapaz and the Cueva del Tigre in the Municipio de Livingston, Izabal have rivers flowing in and out of them. Yes, the Cueva del Tigre has a stream flowing INTO the cave entrance.

In Alta Verapaz there are caves where the river flows into one side of a hill and flows out the other.

On our family farm in the Missouri Ozark Mountains, Sinking Creek flows into one side of a karstic hill (solid limestone hill) and 50 meters later flows out the other side. And near our house a cave pumps out about 1 million gallons of water a day (as kids we would swim in both these areas).

The elderly JGU is at the front of the canoe with his paddle. The elderly Stingray Spine deity is in the back. He has a stingray spine through his nose area.

When no canoe is pictured, one deity is at one end of the ceremonial bar; the other deity is peeking out the other end.













ALTAR Q KINGS OF COPAN AND THEIR TEOTIHUACAN (TLALOC) ASPECT

The four sides of this altar have been photographed by over 100 years. And surely the Peabody Museum now has their own 3D scans of the entire four sides. Nonetheless, the photographs of FLAAR have impressive detail. These high resolution images will be great for photo exhibits, displays, infographic posters, classroom lectures, conferences via ZOOM, etc.

Plus we joined all four sides together. Since all our photos are high resolution, any capable user of Photoshop and Adobe Lightroom (or Capture One software from Phase One of Denmark) can achieve even better images from the high resolution of our photos. We show here the images without all that makeover.

Teotihuacan military invaded Central Peten, the Costa Sur, and the Kaminaljuyu Highlands in the 4th century. The impressive capital of the Teotihuacan empire was abandoned several centuries later. Yet Maya kings in many areas resurrected Tlaloc and Year sign emblems after that (to pretend that they were descendants of the mighty imperial families?).



Photographs with authorization of INAH. Agradecimientos especiales al General de INAH, Dr. Carlos A. Escobedo, Subgerente Lic. Eva Martínez, Directora de Sitio Arqueológico Copan Ruben Salazar Virela, Coordinador de Copan Ruinas y Museo de Escultura Juan Antonio Rodríguez y al Misionero Histórico José Antonio Toral Magaña.

Authorized by The Royal Order of LightBorne and Lucia Carro-Bellocq. We thank Michael Collette for providing the Bertoni Light Super 68 48-megapixel digital camera. We thank Colman Pears for providing the Canon Ultimate 4K camera. We thank Thomas Metz president of J.J. Sheppard for providing the special cool temperature digital Bussinesst lighting. We appreciate the Manfrotto tripod head and Gitzo tripod courtesy of Roger Imaging.

Photograph by Nicholas Redman, FLAAR



This rollout can be printed for a museum or for a traveling exhibit at life-size (8 meters long by a meter or so high (whatever is the actual size of the altar).

The image here is a snapshot; with the RAW images and/or high-quality TIF files your team can make an even better rollout.

Naturally we wish these digital files to be available to IHAH and the local Copan Ruinas NGO to help them publicize the ruins to attract interested people from around the world (this provides helpful jobs for the Chorti Mayan and all other local people).

PHOTOGRAPHS OF HIEROGLYPHS OF COPAN STELAE

We estimate that the Peabody Museum already has scans of almost all the inscriptions and stelae, altars, and zoomorphs of Copan Ruinas. But the advantage of our photographs of the hieroglyphs is that we took multiple photos with the camera locked on a tripod. We then changed the angle of the lighting; so we have several photographs of the same hieroglyphic text showing different details. Since all were taken with the camera in one identical position they can be merged by software into a view not available in other photo archives.

Plus, photographs of actual stelae inscriptions are more “natural” than a 3D scan.



Ceiba Tree spines

Scores of cache vessels and incensarios have conical spines on them. It is well known that these are spines from the sacred *Ceiba pentandra* tree. The FLAAR Photo Archive of Trees, Flowers, Plants & Mushrooms has the largest collection in the world of photographs of spines of both species of Ceiba trees of Guatemala. We raise both species in our Mayan ethnobotanical research garden so we can photograph them in high-resolution at macro quality. We show two samples here that we photographed at Copan Ruinas area.





Young *Ceiba pentandra* trees have the most spines.

We have found spines on *Ceiba aesculifolia* trees (from dry areas of Guatemala) that have spines up to 5 cm long).

We have searched for, and found, every tree genus and species in Guatemala that has spines or prickles.

MONUMENTAL ARCHITECTURE AT COPAN RUINAS

Ball Court Steps

(They are more important than the sloping benches). Several ballcourts around the world of Maya sites are not correctly re-constructed. Much of the athletic action and much of the ceremonial performance was NOT on the sloping sides, but “around the corner” on the portion of the ballcourts that had steps. You find the stepped areas well preserved and adequately reconstructed on the main

Copan ballcourt. Steps are partially but incompletely preserved at Tikal because the step component has not officially been recognized as a major aspect of ballcourt architecture and location for ballgame ceremonies. Eric Taladoire has produced helpful and well-documented reports on ballcourts, but we have additional information in our photographs and the reconstruction drawings we had done of about a dozen ballcourts.



Adjacent to the Copan ballcourt, setting up the entire tri-linear CCD digital camera from Better Light/Dicomed. We achieved photographs in the late 1990's and year 2000 of previously unachieved quality.

This digital sensor back used a 4x5 inch camera with Made in Germany Rodenstock or comparable other German brands of specialized lenses for 4x5 inch cameras.

These digital images are on 20-year old storage disks. We need to set

up workstations with 20-year old computers that can handle SCSI disk reader systems. This is a reason we are requesting funding since it makes no sense to donate such old storage disks: all the digital images should be on a modern USB-connectable hard drive.

We have computer specialists available to handle all this but need to acquire and set-up the special workstations to read all the old disks. Our team can do this as soon as funding is available.

There is a provincial Chenes style doorway at Copan and here you have a provincial Puuc style corner decoration (mosaic of large stones). So far I am not familiar with any Rio Bec style towers outside of the Yucatan Peninsula, but surely they exist because there is a rudimentary provincial Chenes style monster-mask doorway at Tikal also.



Ballgame Sculptures:

These are well known and already well photographed. But overall, the FLAAR Photo Archive has one of the largest sections of photographs of ballgame steps, ballgame stelae, and ballgame panels from throughout the Maya areas. For the Copan ballgame scenes we have used portable studio lighting to accomplish crisp details of the details of the scenes and the hieroglyphs.



We photographed all three ballcourt markers during many separate visits, so we have multiple kinds and styles of lighting. On each visit to the museum we had a complete portable photo studio (meaning all the necessary kinds of lighting equipment).

Obviously the same sculptures are already photographed dozens of times by all other projects, but none had the lighting equipment of our FLAAR technology. And most important, we have an angle of lighting specifically to bring out the detail of the sculptures.



Almost all modern reconstructions of the Classic Maya ballgame are fanciful copy-and-paste. Most modern reconstructions do not understand the difference between the regional and temporal ballgame outfits (when hachas and yokes are used; and when not; when palmas are (rarely) illustrated. And the major most common error is assuming that the chest-high outfits are stone yokes: sorry, these are “ballgame deflector outfits” of wood, leather and/or other materials. So the details of the game gear on the Copan ballgame scenes are very important because they document cultural diversity.

HEAD PROFILES WITH COSMETIC ACCESSORY FOR NOSE PROFILE

The facial profiles of rulers of Palenque suggest that the rulers seem to add a cosmetic attachment along top of the nose, between the eyes. They are trying to create a regal godly profile (they of course also strapped the skulls of newborn children to create the skull shape). Here we show an example from sculpture at Copan Ruinas, Honduras.

It would be an interesting to see how many other Classic Maya rulers or elite

did comparable. At Palenque the nose accessory is often shown with a line under it to document that it really is an accessory. On the Copan rendition the profile of the nose is exaggerated as is the head shape. This is an idealized appearance.

Here we show an example from sculpture at Copan Ruinas, Honduras.





Scribe, stone statue, Copan Ruinas museum, Honduras. This rare 3-dimensional portrait of an individual includes a naturalistic human head with no cranial deformation. So would help to have a thesis, dissertation, or research project on why his head is not deformed.



BEARDS AT COPAN

ESPECIALLY BEARDED KINGS

The popular comment on pre-Columbian people is that they were not bearded. Yet there are beards on Veracruz sculptures near the Caribbean Sea of Mexico. There are beards on Cotzumalhuapa (Bilbao) sculptures near the Pacific Ocean coast of Guatemala. And unexpectedly, there are more beards in the Classic art of Copan than at most other Classic Maya sites.





COPAN POTTERY ARTIFACTS



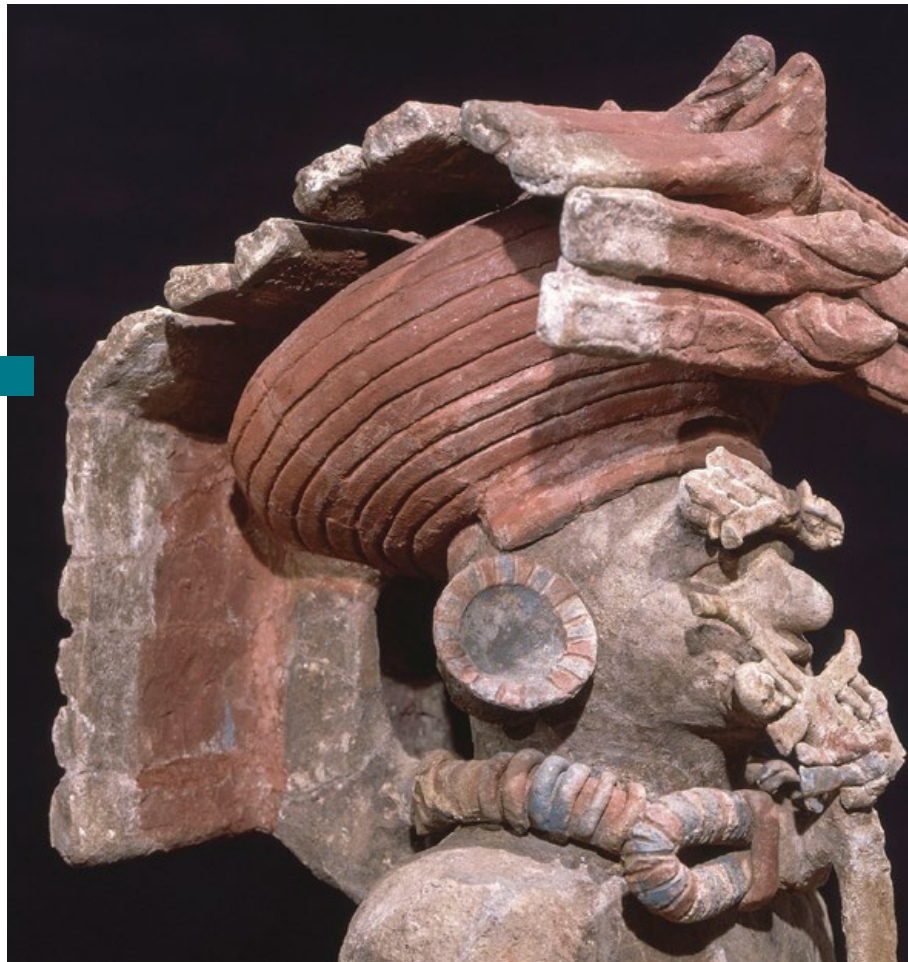


RESURRECTION OF TEOTIHUACAN SYMBOLISM IN THE LATE CLASSIC

My MA thesis was on Teotihuacan symbolism in Late Classic Maya art. Obviously most of these features arrived in the Early Classic but there was a resurrection in the Late Classic. So we have good photos of many of the Teotihuacan-related sculptures and incensarios at Copan (since the Early Classic aspects are also crucial). Much of this research was based on earlier studies of Teotihuacan-related art of the Costa Sur of Guatemala (Tiquisate area). This art, and especially from Lake Amatitlan, are at the Museo Popol Vuh, UFM.



Archaeologists at Copan uncovered more of these Tlaloc-faced, and other Teotihuacan-oid style ceramics. They are in excellent condition and professionally restored. Copan is one of the most impressive Classic Maya sites that received, accepted, and blended Teotihuacan influence into its local styles and over time the Late Classic Maya style prevailed (even with Tlaloc eyes and Yeuersign symbols to remind the local publication and visiting rulers of their imperial connections in past century with the Teotihuacan empire.











CAMERA EQUIPMENT THAT WAS USED:

In earlier years we used Leica and Nikon for 35mm black-and-white negatives and color slides. We also has three Hasselblad cameras with a range of Zeiss lenses for medium format B&W and color transparencies.

By late 1990's we had a large-format digital tri-linear CCD camera (Better-Light/Dicomed). This was one of the highest resolution cameras in the world in its day.



We work day and night when doing photography. We bring a complete photo studio.



Here we are using soft lighting (digital fluorescent lighting from FJ Westcott). Everything is done with a computer. We have worked at Copan Ruinas museum many times with this level of equipment.

Sturdy studio tripod (Gitzo); sturdy tripod head (Manfrotto), professional 4x5" camera (Linhof); tri-linear scanning camera (BetterLight). This equipment is what allows us to provide photographs that can be enlarged to 5 meters long!



We wish to facilitate having this material available to iconographers, epigraphers, archaeologists, and art historians.

The downside of digital photos is that if your hard drive fails you lose all your images. Yes, of course we have backups, but with two DECADES of digital photos, without funding, it is not realistic to have the RAID backup nor the personnel to handle all this. So we want to find and preserve all our digital images we have of Copan plus all the black-and-white film, color medium format film, 35mm transparency (slides). Everything that we can find that shows Copan sculpture, artifacts, architecture we would like to initiate a project to locate and bring together.

It is also a courtesy to have funds to make digital images available to the helpful IHAH, Instituto Hondureño de Antropología e Historia.

Plus it would help students and scholars if we could make available pertinent segments of flora and fauna that related specifically to Copan sculptures. We have lots of high-resolution digital photographs from over 20 years of photography of edible, utilitarian, and plants of Mesoamerica that are featured in the art of Mesoamerica.

So, we could provide enough digital photos of water lily plants, flowers, buds and seedpods to fuel master's

thesis or PhD dissertation or coffee table book or peer-reviewed journal article. Plus, our annotated bibliographies of Slicer Bats (on the two actual species).

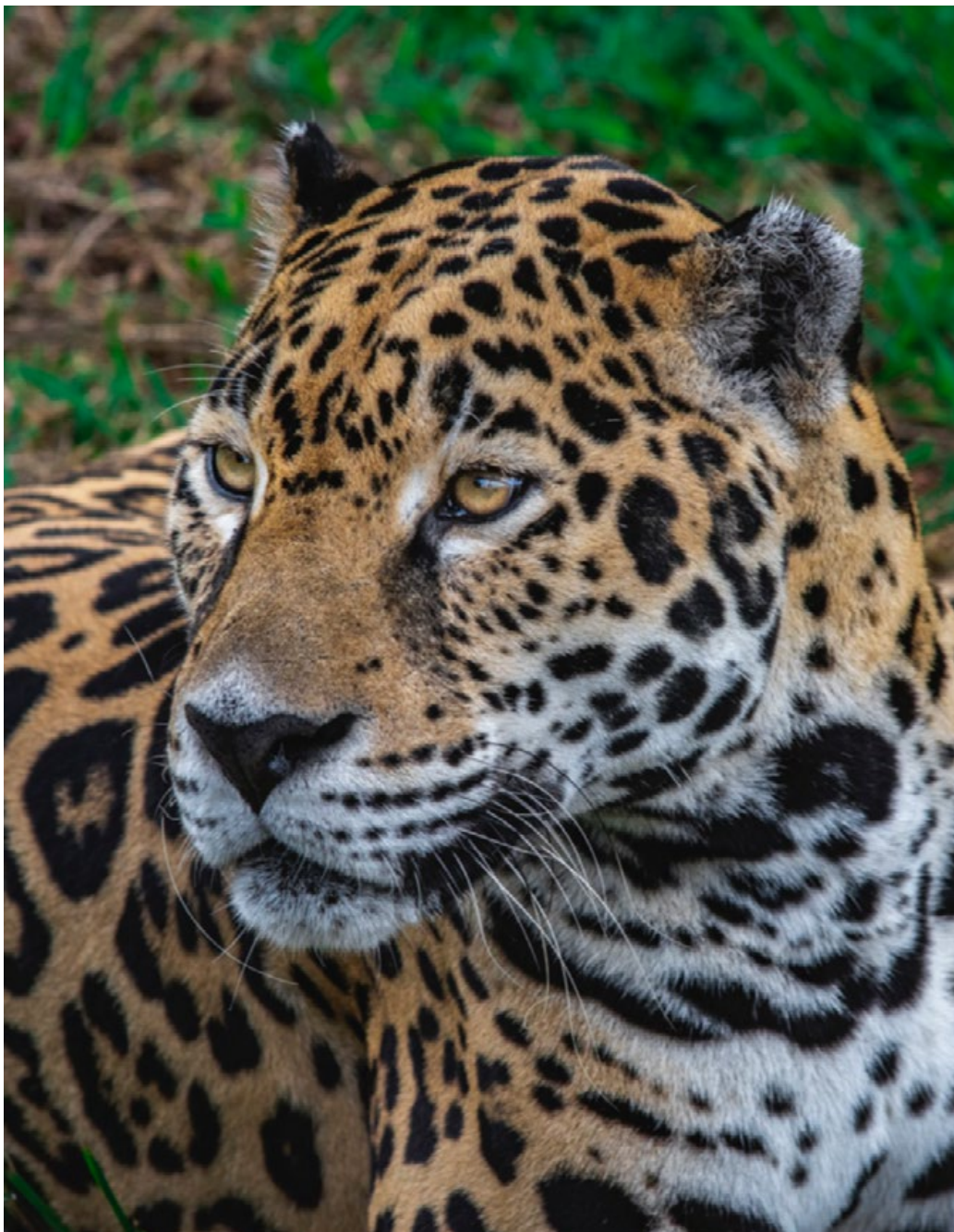
An abundance of high-resolution digital photographs from recent years of waterbirds so a student could do thesis or dissertation, or professor could do coffee table book or peer-reviewed journal article.

Abundance of our high-resolution photos of ALL THREE SPECIES of crocodilians in Mesoamerica. We have frequently obtained permission to enter zoos and do literally close-up photography of the jaws and teeth of the crocodiles because we are curious which of the species of crocodilians is on CPN 4. Once in the cage I get down on the ground (literally) and photograph at ground level straight into the jaws of the crocodiles.

We also are allowed into cages of the snakes and other creatures in zoos of both Mexico and Guatemala, since we are experienced interacting with these creatures. So we have close-up photos of margay and ocelots (these are not with tripods since we are inside the cages with the margay and ocelots on branches a few centimeters from us; same with jaguarundis (which mostly stay on the floor, to play with our shoelaces).

For jaguars are pumas we work in-person only with young cubs. We have had them in our arms, as well as them nibbling on my feet and legs (not to mention scratch marks from the claws). For adult pumas and jaguars we obviously do not hold them in our arms nor do we enter their cages but in the zoos they take us into the private feeding areas, so we have an access not open to the general public.

We wish to make these photographs available to students and Mayanists. Realistic funding would be appreciated so this is possible to sort and prepare the material.



<p>FLAAR Photo Archive of Copan Ruinas</p>	<p>FLAAR Photo Archive of <i>Theobroma</i></p>	<p>FLAAR Photo Archive of Reptiles and Amphibians</p>
<p>Copan stelae, architecture, altars, panels, etc.</p>	<p>Theobroma cacao; fruits, seeds, pulp, and flowers.</p> <p>Theobroma bicolor: fruits, seeds, flowers, groves, etc.</p> <p>Theobroma angustifolium; not documented whether pre-Hispanic or from Costa Rica in 16th century.</p>	<p>Photographs, all digital, of all three species of crocodilians.</p>
<p>Actual Toads of Mesoamerica</p>	<p>FLAAR Photo Archive of Waterbirds</p>	<p>FLAAR Photo Archive of Water Lilies</p>
<p>Photographs, all digital, of both species of “Bufo” toads with poison sacs.</p>	<p>Waterbirds of Pacific coastal area of Guatemala.</p> <p>Waterbirds of Lake Atitlan.</p> <p>Waterbirds of Lake Yaxha</p> <p>Waterbirds of Rio la Pasion and Arroyo Petexbatun</p> <p>Waterbirds of Amatique Bay, Canyon Rio Dulce, El Golfete, Rio Dulce, Lake Izabal, Bocas de Polochic, etc.</p>	<p>The largest photo archive in the world of <i>Nymphaea ampla</i>: buds, flowers, seed pods, above water, and underwater photography over 10 years.</p>

Over 30 years of **photography at Copan Ruinas**, but especially in 1980's-1990's early 2000's.

Digital photography of cacao, plus we raise it in our FLAAR ethnobotanical research garden. We have access to remote areas of Alta Verapaz so we have photos of varieties of cacao not in any of the helpful monographs on cacao and chocolate.

No one is crazy enough to get permission to get into the crocodile pens at zoos (in several countries of Mesoamerica), lay down on the ground so that I can **photograph directly into the mouth of the crocodiles** so I can record the pattern of their teeth in high resolution digital photography. Plus we have photos of crocodiles in Rio San Pedro, Arroyo Petexbatun, and of course the Tikal Aguada. Plus caiman from south coastal Guatemala.

Toads of two species; of which the larger species is the toad shown in monumental stone sculpture of Kaminaljuyu, Quirigua, Copan and elsewhere.

High-resolution photographs of **waterbirds of the Maya areas** with 180mm tele-macro (Canon), 200mm tele-macro (Nikon), 300mm, 400mm, 600mm, 800mm prime telephoto cameras. Perfect for ZOOM conferences, for coffee table books on waterbirds in Classic Maya art, and for PhD dissertations of students.

The FLAAR Photo Archive of *Nymphaea ampla* water lilies and their ecosystems is unparalleled since we know where to go, what month, and we don't mind getting, literally, into the rivers and lagoons and doing close-up photography with Hasselblad and diverse other cameras. Plus no archaeologist, iconographer, epigrapher, linguist, or botanist has dedicated field-trip after field-trip to doing underwater photograph of water lilies blooming underwater and others blooming above water and withdrawing underwater to develop seed pods. These photos have the potential to literally rewrite anything and everything ever conceived about water lilies in Early Classic and Late Classic Maya art.