Chichen Itza and Ek Balam
Yucatan, Mexico
August 27th – September 2nd 2023

Prepared 9/4/2023 by Scott McAvoy

Attending/Collaborating:

Scott McAvoy – CHEI/UCSD
Dr. Jeremy Coltman – UCR – iconographer
Dr. Arianna Campiani – independent researcher/Palenque collaborator
Esteban Miron Marvan – UC Berkley/ Palenque collaborator

Jose Osorio (Pepe) – INAH Chichen Itza Administrative Director
Francisco Perez (Pancho) – INAH Chichen Itza Archaeological Director
Claudia Garcia-Solis – INAH Yucatan Conservator/Restorer
Jesus Gallegos Flores – INAH Chichen Itza GIS specialist
Luis Alberto Catana (Alberto) – INAH Tren Maya Biologist, Chichen SFM specialist

Expedition Summary:

An extremely hot and humid August visit, riding up against a presidential visit that weekend. Energy and time was in short supply, but we were nonetheless productive and the presidential event provided a unique networking opportunity, as INAH archaeologists from all over the country flocked to Merida.

Sponsored by Travis Stanton at UC Riverside, Scott and Jeremy along with Scott's Palenque 3D Atlas collaborators Arianna and Esteban, visited Chichen Itza to continue an ongoing 3D documentation campaign, focusing on the augmentation of existing efforts including:

1. A study of wooden lintels in the El Castillo superstructure and upper Temple of the Jaguars. 16 wood samples were collected for c14 and species analysis, in close collaboration with Claudia Garcia-Solis. Jeremy Coltman is writing an article describing the iconography on these lintels, which heavily feature the sun god. The lintels were very worn, and very difficult to read in person. The lintels had all been imaged during the February 2023 expedition at approximately 300 micron resolution and incorporated into the 3D Atlas. Jeremy had obtained rubbings of the lintels done by third parties.

2. An effort to reconstruct the serpent columns on the El Castillio superstructure exterior. In February Scott had helped confirm conservator theories about the origin of the lone serpent head in the plaza north of El Castillo to have been on the western serpent column. Additional fragments of these columns' tail pieces were scanned atop El Castillo, along with more tail fragments by the Eagle and Jaguars platform which the conservation team also assumed to be from these columns.

3. A study of the grand ballcourt monument. Simon Martin, epigrapher from Penn, is writing an article about the glyphs on this hemispherical piece, currently housed in the tourist center bodega as 5 pieces, scanned and reconstructed by Scott during the February expedition. Though documents placed the monument on the southern side of the ballcourt, Scott wanted to scan a radial platform at the north temple, which seemed to be the same size, to see if it's possible for the stone to have sat atop the platform.

4. A structural assessment of the Temple of the Chacmool. Using the Leica BLK 360 to create a 3mm resolution model of the Temple of the Warriors substructure, which would give some insight into the structural integrity of structural reinforcement performed by the INAH conservation team some years back. These scans were collected by Arianna Campiani.

5. Scan of El Castillo substructure north façade. Using a specially configured rig including the low profile Sony qx1 and a batter powered ringlight on an extending pole, Jesus and Jeremy went to image the façade which extends some 6 meters above the excavated tunnel floor. Unfortunately, the pole wasn't long enough and images only show the lower criss-cross molding and central Rosette. Apparently Alberto had scanned this earlier with a gopro on a selfie stick, we're trying to track down this data, as previous drawings and images of this feature are problematic.

6. Scan of key structures at Ek Balam – continuing work done in Travis' July expedition, to obtain a TLS ground truth for his SLS images of the famous façade, along with scans of Banqueta 44 and its context within the acropolis. This was visit was key to the continued development of the Ek Balam 3D atlas, as Scott was previously unaware of model locations and received no contextual notes.

7. Database Design and 3D Atlas training – Unfortunately Scott was out sick for two key days and this effort was unsuccessful. Jesus offered to share his GIS project detailing INAH location codes names and organizational structure. Scott provided the updated version of the 3D Atlas, featuring new datasets and interface improvements.

8. Osario serpent 3D documentation – The serpents at Osario are many and unique. We spent some time scanning the northern balustrades along with several serpent heads. Plans for the reconstrcuted Witz façade were frustrated by heavy rain. Some time was mis-spent re-scanning the adjacent venus platform which had already been documented in the July trip.

9. Upper Temple of the Jaguars serpent 3D documentation – Scanned large serpent heads, this whole area needs a TLS scan. INAH models should fill out nicer photogrammetric detail.