KA'KABISH ARCHAEOLOGICAL RESEARCH PROJECT (KARP)

REPORT ON THE 2013 FIELD SEASON

Submitted to

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Edited by

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As archaeological work would not be possible without the co-operation of the local people who have as much invested in our work as we do, if not more, we would also like to thank the following individuals: Ben and Margaretha Dyck of the Blue Creek Community for helping with the project logistics both during and between the field seasons; Srs. Blanco, Che, and Magana for allowing access to their land; the ladies of Las Orquideas for keeping us well fed; and all the members of the various communities, Indian Church, Indian Creek, and Shipyard, that provided us with information and assistance in a variety of ways.

CHAPTER 1

SIX YEARS AND COUNTING!: OVERVIEW OF THE 2013 FIELD SEASON

by
Helen R. Haines

Situated in North-Central Belize, Ka'Kabish has held an allure for me since I first encountered it in 1990 when a small team of us from the Maya Research Program were sent to investigate its' existence. While we did find the site, we did not make any formal survey of the area as we also found that areas around it were being used for growing "alternative crops". Prudence being the better part of safety we beat a hasty retreat until we could return under safer conditions to map the site. That opportunity came in 1995 when another crew (now different other than myself) from the Maya Research Program (MRP) returned to Ka'Kabish to map and formally document the site in an attempt (albeit perhaps a naïve one) to stave off the rampart looting to which the site has regrettably become a victim. In 1995, Ka'Kabish had lost none of its appeal to me and I vowed to return to further investigate the site.

It wasn't until a decade later, in 2005, that I was able to apply for a permit to return to Belize and, with the help of Dr. Morris and the Institute of Archaeology, begin laying out the groundwork logistics for an archaeological project. The land on which the site sits is administered by the San Filipe Land Committee and is spread across several parcels of land (207-210, 222-224, and 227). By 2005, the site's core area was, and still is, owned by three different landowners; Sr. Blanco (San Lazero), Sr. Guadalupe Pech (Yo Creek), and Sr. Rufino Magana. All of whom are supporters of the archaeological work.

Actually archaeological investigation of the site commenced in 2007 with a small crew of three Canadians (including myself) and three men from Indian Church Village. This early work was dedicated to clearing and remapping the south side of the site as the original 1995 map was done under non-ideal conditions and the accuracy of it suffered as a result. After a hiatus in 2008, work resumed in 2009 with an even smaller crew (myself and three men from Indian Church Village) at which time the north side of the site was remapped. Excavations began in 2010 with three graduate students, two undergraduate students and eight men from Indian Church Village. This work was supported by a research grant from the Social Science and Humanities Research Council of Canada. Each year since 2010 has seen a modest growth in the size and scale of the project and has greatly expanded our understanding of Ka'Kabish and the socio-political interactions in this area.

In 2013, the Ka'Kabish Archaeological Research Project (KARP) began awarding students who participated in the project a 3rd-year field school credit from Trent University. This year we had 10

students join the project, seven of whom applied to Trent to earn a credit. Due to the limited number of qualified supervisors the work was concentrated in two areas, both on the south side of the road on Sr. Blanco's property.

The first area, and the location of the largest excavation area, was in the Group D plaza between Structures D-5a and D-9. This area was worked on in previous years, starting in 2011 and continuing into 2013 (Haines 2011, 2012; Haines and Aimers 2011; Haines et al. 2013; Lockett-Harris 2013; Sinclair 2013; Tremain and Haines 2013). This area has yielded wealth of information about what is currently the earliest occupation at Ka'Kabish. This information has included a secondary burial with numerous jade and greenstone objects and over 500 marine shell beads dated to the Swasey-Bladen phase (ca. 800-600 BC) (Gomer 2013; Haines and Aimers 2011; Haines et al. 2013). In the levels above this bedrock burial, and in front of a later platform, was a deposit that included over 30 full and partially intact vessels in what is presumed to be an early ritual deposit (Haines 2012; Gomer 2013). These excavations also have revealed a complex of buried/remodeled platforms tentatively dated to the Late Formative and Early Classic periods (Locket-Harris 2013; Sinclair 2013).

The first of these platforms, discovered in 2012, was a relatively low stone wall approximately 40 cm high running east/west (Haines et al. 2013; Lockett-Harris 2013; Tremain and Haines 2013; Sinclair 2013). In 2013, when trying to determine the extent of this platform, by following what we perceived to be the east wall, we discovered it was an extension of a larger platform. This second, taller platform, also running east/west, was located approximately 2.5 metres further to the south. The majority of this work was conducted by Joshuah Lockett, first as an undergraduate student in 2012 (supervised by myself and Cara Tremain), then as a graduate student in 2013 as part of his Master's thesis research. The details of the 2013 work conducted and discoveries made are contained Lockett's chapter (this volume).

The second area investigated was a chultun located to the north-east of the C-Group. This work was carried out by Toni Gonzalez's as part of her Master's thesis research being conducted at California State University-Los Angeles under the supervision of Dr. James Brady and was the second chultun excavated by Gonzalez, the first being done in 2012 in Group B (Gonzalez 2013). The 2013 excavation was carried out to provide additional, comparative information as to the use of chultun (Gonzalez and Haines 2013).

The focus of Toni Gonzalez's Master's thesis research explores the possibility that chultuns functioned as small artificial caves or earth shrines and if the use of chultuns in the southern Maya lowlands and if it was materially different from that in the Northern Yucatan. Theories as to the function of these chultuns abound and include their use as water cisterns, burial chambers, sweat baths, food cellars, underground religious shrines, and some form of outdoor plumbing (Puleston 1965: 24). Despite

these suggestions, most hypothesis exclusively point to food storage as the primary use in the southern lowlands (Puleston 1971: 322).

While Gonzalez's research into the Group B chultun (Chultun B-1) showed signs of possibly having been used for storage initially, its final end-use was as a grave (Gonzalez 2013, Gonzalez and Haines 2014, Verdugo et al. 2014; see also Verdugo this volume). Chultun C-1 was also used for mortuary purposes and contained the remains of six individuals (Verdugo this volume; also Verdugo et al. 2014). The C-1 chultun also contained a wealth of copper objects, along with marine shell beads, jade beads, and small flat jade pieces believed to have originally formed part of a mosaic. The copper artefacts were exported at the end of the 2013 field season and are currently in the care of Dr. Aaron Shugar, Buffalo State University, for cleaning, stabilisation treatment, and XRF-analysis.

Both chultuns have been dated via radio-carbon and ceramic seriation to the Early Post-Classic periods (it should be noted that differences between Terminal Classic period and Early Post-Classic period ceramics are difficult to distinguish and that "it is difficult if not impossible to distinguish Terminal Classic from Early Post-Classic occupation [Chase and Chase 2004:247; see also Graham 1987 and Pendergast 1986])

Discoveries in the chultuns change our perception of the occupation of the site as previously we did not believe that areas in or immediately around the site core were occupied past the Terminal Classic period. We do, however, have evidence from the settlement zone indicating that the local populace thrived during the Terminal Classic period and into the Post-Classic period (M^{c}Lellan 2011, 2012a, 2012b; M^{c}Lellan and Haines 2013). Evidence from Gonzales' work suggests that the residential courtyards around the larger plazas may have been occupied longer than we previously thought.

Our work at Ka'Kabish over the last six years has not only greatly increased our understanding of the site itself, extending its history back to 800 BC and revealing its survival of the "Classic period collapse", but it has also shed a wealth of information about the possible larger political relationships and inter-site conflicts in the region (Haines 2012; Haines and Sagebiel 2014). While six years of work has revealed a considerable amount of information it has also shown how much more there still is to learn; we have barely scratched the surface of Ka'Kabish! We are hoping that, with the continued support of the Institute of Archaeology, NICH, and the owners of the site, the next six years (or more!) will be as productive and surprising as the past years.

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CHAPTER 2

2013 PLAZA EXCAVATIONS: SOUTH-PLAZA D - OPERATION 8 - UNITS 4, 5, 6, 7 AND 8

by
Joshuah J. Lockett-Harris

Introduction

Excavations undertaken within the South-Plaza of Group D at Ka'Kabish during the 2013 field season continued efforts initiated in 2010, 2011 and 2012 (Haines 2011 and Lockett-Harris 2012). Previous year's excavations within the South-Plaza of Group D at Ka'Kabish have revealed a substantial sequence of plaza floor surfaces and cultural deposits, denoting a long history of use and renovation, with the earliest levels excavated yielding pottery types datable to 800-600 BC (Aimers 2011 and Sagebiel personal communication), and associated radiocarbon dates of 760-400 BC (Haines 2011), and 799-511 BC cal (Lockett-Harris 2013). Investigations during the 2013 season sought to expanded on previous excavations that have encountered significant ceramic, architectural, and mortuary evidence demonstrating that the central area of the South-Plaza of Group D was subjected to an active ritual agenda during the Middle Formative period (Haines 2011, Haines 2013, and Lockett-Harris 2013).

All units initiated throughout the 2013 season were new excavations placed in logical alignments with previous year's units. It was the intent of the principal investigator to excavate these units down to sterile bedrock, but the presence of substantial architecture in Units 4, 5, and 6 prevented these unit's full excavation. Unit 8 was terminated due to safety concerns associated with the depth and the slopping of the excavation walls. While, Unit 7 was the only unit excavated down to bedrock. Efforts within the South-Plaza of Group D, during the 2013 field season, consisted of the commencement of two contiguous 2m by 3m units (Units 5 and 6), and an adjacent 2m by 2m unit (Unit 4), located in the approximate center of the South-Plaza of Group D, between Structures 5 and 9. Also, two unaligned 2m by 2m units (Units 7 and 8) were commenced in the northern portion of the plaza. Units 5 and 6 were laid out in a north-south alignment, directly to the south of Units 1 and 2 (Lockett-Harris 2013). Unit 4 was laid out to the west of Unit 3 (Sinclair 2013 and Lockett-Harris 2013), while maintaining a 30cm baulk wall between units. Continuing previous years designation practices, all excavations undertaken with the South-Plaza of Group D during the 2013 season have been designated as Operation 8.

The main focus of investigations within the South-Plaza of Group D during the 2013 season sought to determine the extent and nature of buried masonry Platform D-III, initially encountered in Unit 3 and Unit 2 (south) during the 2012 season (Sinclair 2013 and Lockett-Harris 2013). Units 5 and 6 were placed to the south of Units 1 and 2 (north-south integrated) with the intent of determining the eastern extent of the buried stuccoed masonry Platform D-III, as well as the construction sequence of the platform itself. Unit 4 was placed due west of Unit 3 in an attempt to determine the western extent of Platform D-III. A subsidiary research focus included the placement of two exploratory units in the northern portion of the South-Plaza of Group D (Units 7 and 8). The primary research focus throughout the 2013 season built upon previous years efforts to further ascertain the character of ritual activities evinced in the material traces present within the South-Plaza of Group D, and further refine the chronological sequencing of the earliest occupations of this area of the Ka'Kabish (Haines personal communication 2012; Lockett-Harris 2013).

Description

The 2013 field season commenced on the 13th of May with the laying out of Units 4, 5, 6, and 7, and was terminated on the 12th of June with the completion of backfilling. Further lab work and logistics were carried out following the close of fieldwork. Unit 4 was excavated from the 14th of May through till the 29th of May. Excavations of Unit 4 were halted due to the presence of a three-course stuccoed masonry wall in direct alignment with Platform D-III, first revealed during the excavations of Units 3 and Unit 2 (south) during the 2012 season (Sinclair 2013 and Lockett-Harris 2013). Due to the fact that there was insufficient space to properly excavate in front of the face of Platform D-III it was deemed best by the principle investigator to close excavations, with the intent of opening a new unit to the north of Unit 4 during the upcoming 2014 field season. Unit 4 failed to determine the western extent of Platform D-III, due to the continuation of the platform to the west, thus necessitating further excavations to the west of Unit 4 during the 2014 season.

Units 5 and 6 were excavated from the 14th of May through till the 10th and 3rd of June, respectively. Though, mapping of the two integrated units continued till the final day of fieldwork. Units 5 and 6 were laid in a north-south alignment, as two contiguous 2m (north-south) by 3m (east-west) units with no separating baulk wall between the units. Unit 5 was extended to the north by 1m, though this extension was integrated into Unit 5, and not recorded separately. Thus, at the close of excavations of Units 5 and 6 this excavated area was mapped, photographed, and interpreted as one integrated unit (Figure 1 and 4).

Excavations of Unit 5 failed to locate an eastern extent of Platform D-III, first encountered in Unit 3 and Unit 2 (south) during 2012 (Sinclair 2013 and Lockett-Harris 2013), though some evidence

was recovered to indicate that the eastern corner of Platform D-III was destroyed during subsequent renovation and construction episodes (Figure 4). However, it was revealed in the northwestern quadrant of Unit 5 that the plaster surface forming the top of Platform D-III articulates with another series of substantial buried platforms (Platforms D-II and D-I), the bulk of which were encountered in Unit 6 (Figure 1 and 4). Excavations in the northwest quadrant of Unit 5 were terminated due to the presence of Platform D-III, while excavations in the southeast and southwest quadrants were terminated due to the presence of a plastered limestone wall forming the exterior of Platform D-II. Excavations in the north-east quadrant of Unit 5 were terminated at a plaster floor (referred to throughout this chapter as Floor 1) that is believed to articulate with plaster Floor 2 encountered in Units 1 and 2 (north-south integrated) during the 2012 season (see Lockett-Harris 2013). This arbitrary closing point was deemed pertinent due to time limitations, as the close of the season was quickly approaching, and the fact that rich and plentiful nature of the ceramic middens, mortuary offerings, and human remains had been recovered from adjacent horizons during previous seasons (Haines 2011 and Lockett-Harris 2013). It is the intent of the principle investigator to commence excavations in the northeast quadrant of Unit 5 during the 2014 field season, in order to further explore the earliest occupational horizons present above bedrock within the South-Plaza of Group D at Ka'Kabish (Haines personal communication).

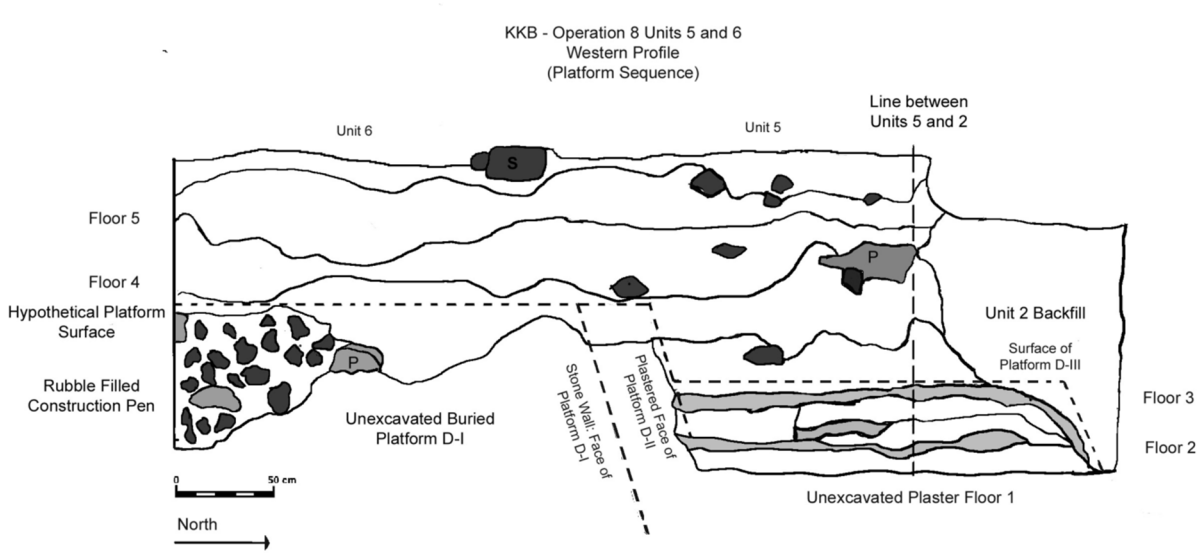

Figure 1. Platform and Floor Sequence in Units 5 and 6
Inked by Lockett-Harris

Excavations of Unit 6 were terminated due to the presence of a substantial buried platform that served to approximately delineate the separating line between Unit 6 in the south and Unit 5 in the north.

Investigations and selective excavations of this buried platform revealed that it exhibited two construction episodes, an initial masonry wall exterior (Platform D-I), followed by the later addition of a plastered limestone brick exterior wall (Platform D-II) (Figures 1 and 4). The interior construction of this buried platform featured small construction pens filled with plaster-like marl, as well as larger pens filled with loose rubble (Figure 7). It is the intention of the principle investigator to cease excavations of Unit 6, while opening units to the west and southwest of Units 6 in order to ascertain the western extent of this substantial buried platform and further determine its chronological and construction sequence. Carbon samples recovered from beneath sealed plaster floors associated with the platforms encountered in Unit 5 and 6 are currently being tested at the University of Arizona Radio-Carbon Laboratory The results of these test, along with a ceramic chronology being developed by Dr Kerry Sagebiel (see Sagebiel this volume for discussion of Ka'Kabish ceramics), will help to further determine the temporal, material culture, and architectural sequence present within the South-Plaza of Group D at Ka'Kabish.

Excavations of Unit 7 were carried out between the 14th of May and the 16th of May. These excavations were terminated after only two days of work, due to the presence of bedrock at a relatively high elevation compared to all other units yet excavated within the South-Plaza of Group D at Ka'Kabish (Lockett-Harris 2013). Excavations were then commenced in Unit 8, and were conducted between the 17th of May and the 7th of June. Efforts within Unit 8 were terminated due to the depth and slopping walls of the unit. Excavations within Unit 8 failed to reach sterile bedrock, despite the relative depth of the unit. A sequence of plaster floors, a ceramic midden, and a sequence of ceramics were recovered and recorded from Unit 8 (Figure 9), which has shed light on the traces of cultural activities practiced within the northern portion of the South-Plaza of Group D. Excavations within Units 7 and 8 have clearly demonstrated the variability of depth at which the limestone bedrock under-laying the South-Plaza of Group D at Ka'Kabish is present.

Methodology

Unit 4 consisted of a 2m by 2m excavation grid, while the eastern extent was retained as a 30cm baulk wall separating Unit 4 from Unit 3 (2012). When excavations revealed the surface of Platform D-III, Unit 4 was split into a northern and a southern portion, with the southern portion remaining unexcavated. However, excavations were soon halted due to space limitations. Unit 5 and 6 consisted of two contiguous 2m by 3m excavation grids with no delineating baulk retained between them. Unit 5 was extended to the north by a meter, in order to explore for the extent of Platform D-III. The northern extent of Unit 5 was integrated into the rest of Unit 5 and was not treated as a separate unit. Unit 7 and Unit 8 both consisted of 2m by 2m excavation grids that were not aligned with any previous excavation units.

All elevation measurements were taken using a digital theodolite, set up above a known datum point. A full collection strategy was employed throughout excavation, with all material being sieved through a ¼ inch screen, and some material being sorted by hand when we encountered high concentrations of small artifacts, such as jade beads and obsidian debitage. Excavation was undertaken predominantly with trowels and rock hammers, though dental picks, brushes, and other small implements were also utilized when cached ceramics were encountered. All materials recovered from a particular level were bagged respectively, but all given a corresponding LOT number, so as to keep associated, but distinct, cultural materials in relation to each other. All mapping was completed using a grid system of controlled points, tape measures, line-levels, rulers, and plumb bobs. All plan and profile maps were drawn at the scale of 1:20, and included depictions of all relevant features, caches, and artifacts. Levels were excavated stratigraphically, based upon changes in the matrix of the soil, artifactual composition, or architectural elements, rather than by arbitrary depths or quadrants.

Group D South-Plaza Unit 4: Excavation

Investigations within the central area of the South-Plaza of Group D, during the first 2013 field season, consisted in part of the excavation of a unit directly to the west of Unit 3 (2012), designated Op 8-Unit 4. A 30 cm bulk-wall was maintained between Units 3 and 4, in order to maintain spatial provenience between the units, and prevent contamination from the backfill of Unit 3. The research interests motivating the excavation of Unit 4 were focused upon determining the western extent of Platform D-III, as well as further exploring cultural horizons that had previously evidenced ceramic middens, ritual paraphernalia, and mortuary remains (Haines 2011 and Lockett-Harris 2013).

Excavations of Unit 4 were commenced with the removal of the overlying humus layer, followed by excavation by both depositional and cultural levels down till the surface and face of Platform D-III was encountered. The second level consisted of rubble mixed with small pieces of plaster, possibly indicating the presence of a highly eroded plaster subfloor. Such an interpretation aligns well with previous plaster floor sequences reconstructed from within the South-Plaza of Group D (Lockett-Harris 2013). All levels excavated from within Unit 4 consisted of anthropogenic soils mixed with construction fill, interspersed between plaster floor events. However, due to poor preservation few of these events are evident within the profiles of Unit 4 (Figure 2), as compared to previous unit's profiles (Lockett-Harris 2013). Ceramic, lithics, obsidian and faunal remains are relatively ubiquitous throughout the levels of Unit 4, however some levels showed much higher frequencies of diagnostic ceramic sherds. The ceramic sequence recovered from Unit 4 represents another substantial addition to the growing sample from within the South-Plaza of Group D at Ka'Kabish. Subsequent analysis shall greatly contribute to our

understanding of the sequence of material cultural change present within this ritually significant area of Ka'Kabish (see Sagebiel this volume for discussion of Ka'Kabish ceramics).

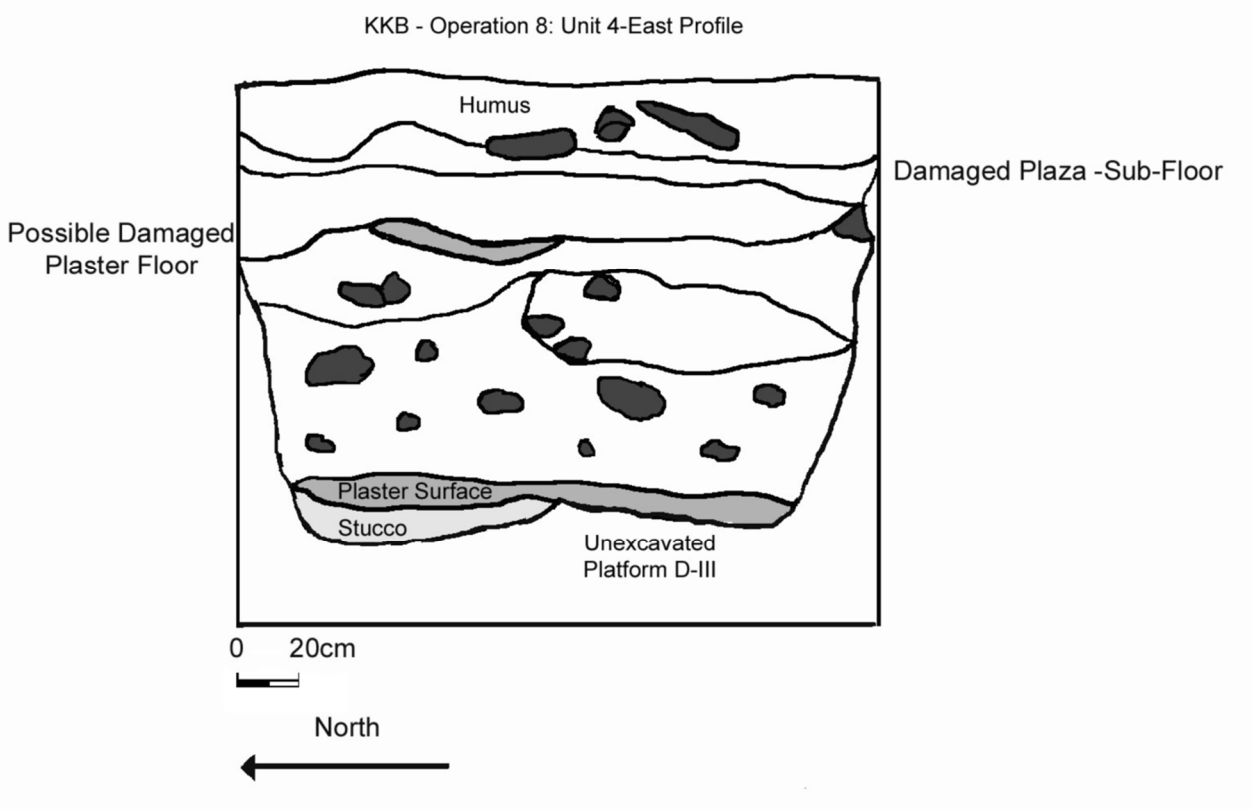

Figure 2. East Profile of Unit 4
Inked by Lockett-Harris

Excavations were ceased in Unit 4 during the 2013 season due to the presence of the buried Platform D-III in the southern half of the unit (Figure 3). Exploratory excavations in front of Platform D-III, in the northern half of the unit, revealed what may be a stuccoed surface on the exterior wall of the buried platform (Figure 3). Future excavations to the north of Unit 4 will seek to further expose this stucco surface and further investigate the cultural deposits associated with Platform D-III. As mentioned above, Unit 4 failed to determine the western extent of Platform D-III, thus necessitating future investigations further to the west to determine the extent of this buried platform.

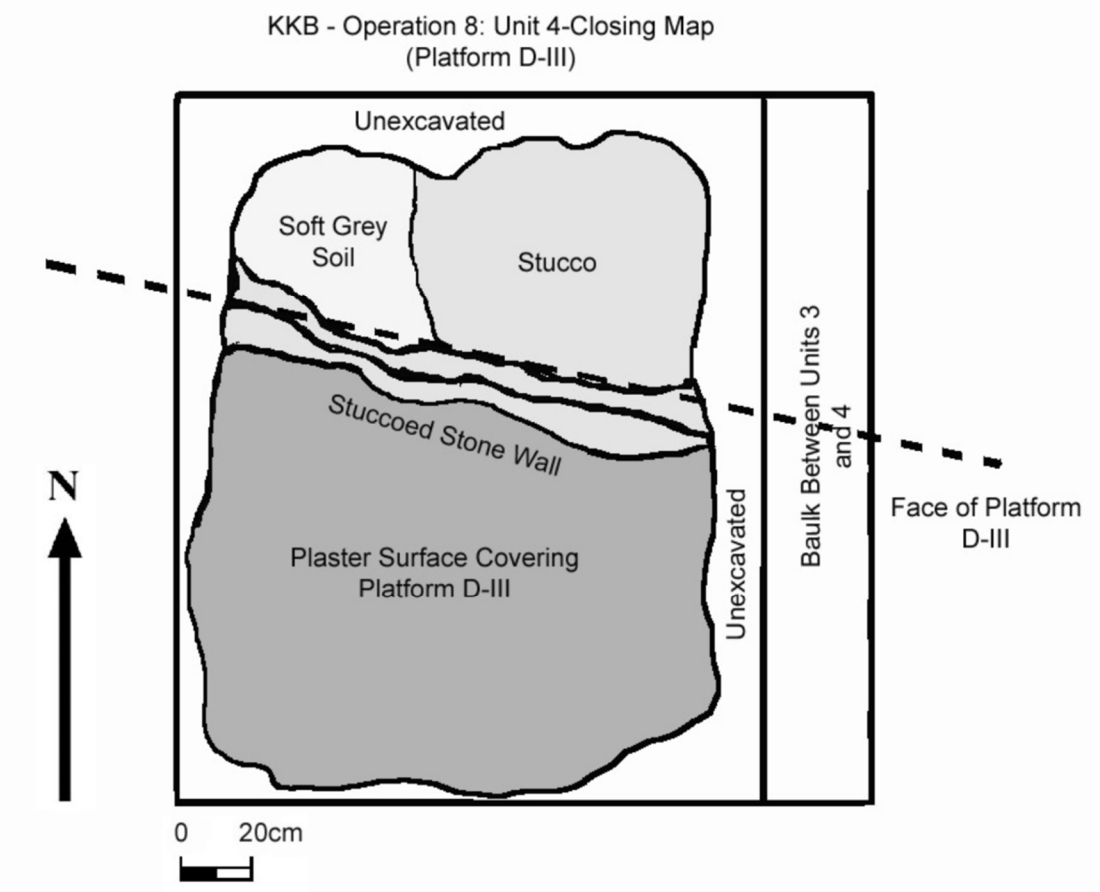

Figure 3. Surface of Platform D-III
Inked by Lockett-Harris

Group D South-Plaza Units 5 and 6: Excavation

Units 5 and 6 were excavated as separate units; all documentation, artifact labeling, and proveniences were recorded separately. However, due to the fact that the two units were excavated as two contiguous excavation grids, with no baulk retained between them, it is profitable to describe and interpret these two units as one integrated whole. This approach is also supported by the articulation of architectural features and plaster floors between the two units. Excavations within Units 5 and 6 throughout the 2013 field season uncovered the presence of substantial architecture within Unit 6 and the southern portion of Unit 5 (FIG 1 and 4), as well as evidence that Platform D-III, initially encountered in 2012 (Sinclair 2013 and Lockett-Harris 2013), articulates with these larger buried platforms (Figure 1 and 4). As discussed earlier, excavations within Unit 5 failed to locate the eastern extent of Platform D-III, though evidence was recovered indicating that it may have been damaged or intentionally destroy during subsequent construction episodes (Figure 4).

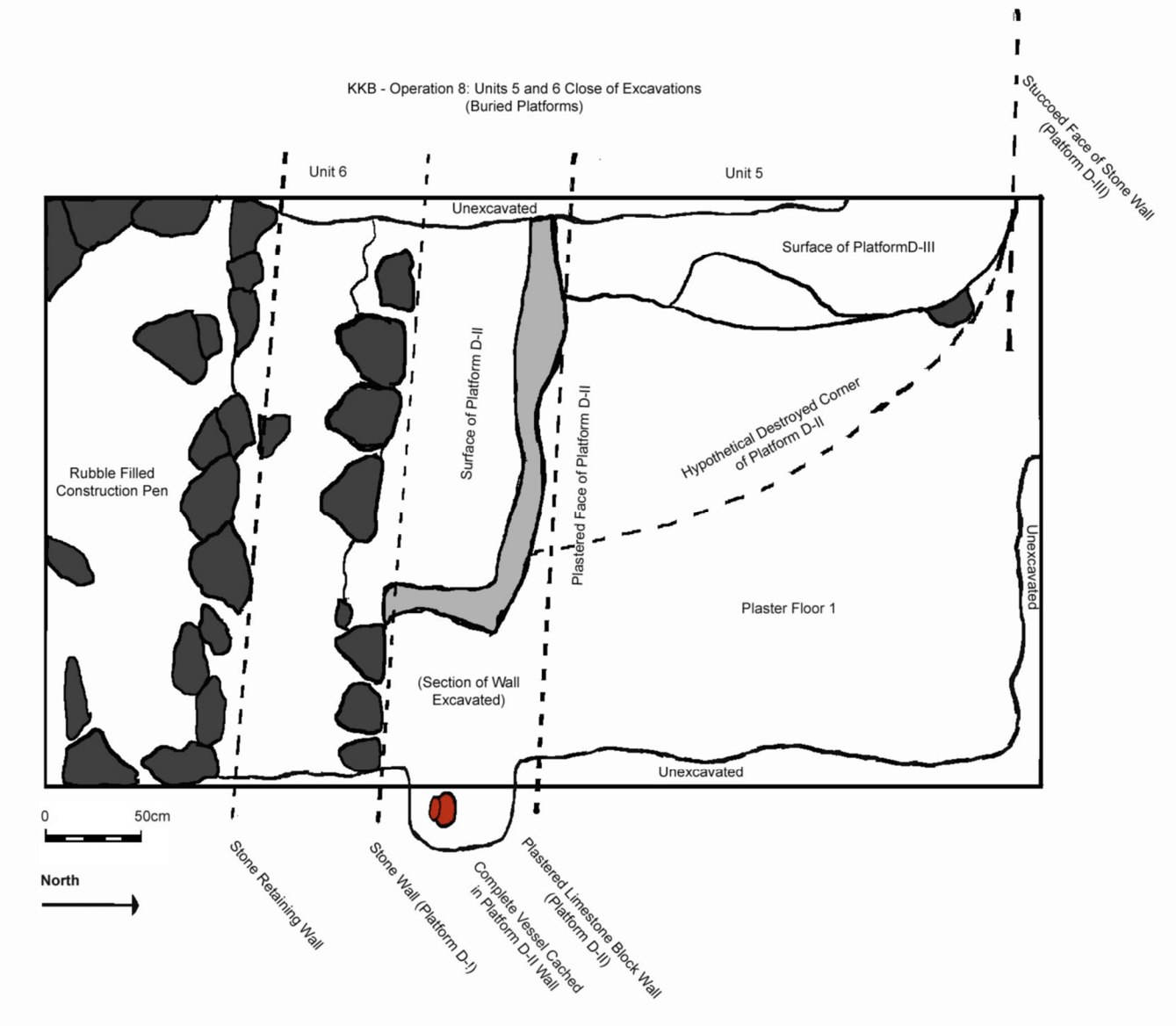

Figure 4. Platforms D-I, D-II, D-III and Plaster Floor 1
Inked by Lockett-Harris

D-VIII: Humus Layer to Final Fill Layer (U5-Level 1 and U6-1)

Excavations of Units 5 and 6 commenced with the removal of the overlaying humus layer. Within the humus layer of both units, excavations encountered large stones, however in Unit 5 excavations encountered a concentration of stones in the center of the unit. A Post-Classic honey colored chalcedony arrowhead was recovered in association with the rock concentration in Unit 5. To the northeast of this rock concentration we encountered a higher concentration of ceramics, lithics and obsidian. Though highly degraded, this rock concentration may represent a Post-Classic residential platform mound. Thus,

representing tentative evidence of potential post-abandonment reoccupation within the South-Plaza of Group D. Analysis of ceramics associated with these latest occupational levels will likely help ascertain the chronological age of the final cultural activities associated with the South-Plaza of Group D (see Sagebiel this volume for discussion of Ka'Kabish ceramics).

D-VII: Final Fill Layer to Floor 5 (U5-Level 2 and U6-levels 2, 3, and 4)

The culminating fill layer of the construction of the South-Plaza of Group D, lying below the overlying humus, consisted of dark, grey-brown sediment, with another rock concentration encased within its matrix in Unit 6. Initial interpretations hold that this concentration may also represent the residential rubble foundation of a reoccupation event. The matrix overlaying this rock concentration in Unit 6 was rich in ceramics and lithics, particularly in the northeast quadrant. Ceramics and lithics were relatively ubiquitous throughout the matrix of this layer in Unit 5 as well. Excavations encountered two concentrations of ceramics and lithics in Unit 5, and one in Unit 6, all in the eastern half of the respective units. The rock concentration in Unit 6 extended into the southern portion of Unit 5, but was located at a lower elevation than the previously discussed rock concentration from Unit 5. Excavations of the rock concentration in Unit 6 revealed that it rested on a relatively flat horizontal layer of aggregate and grey matrix.

D-VI: Floor 5 (U5-Level 3 and U6-Level 5)

This surface likely represent a highly eroded plaza floor (Floor 5) as well as the use-surface with which the rock concentration in Unit 6 is associated. Evidence was observed of scorching and carbonization on this flat surface, thus carbon samples were taken. Floor 5 consisted of pebble aggregate and brownish-grey matrix, and as mentioned above likely represent the sub-fill of an eroded plaza floor. Ceramics were relatively ubiquitous within this three as well, though at a higher frequency than in previous layers. Large diagnostic rim sherds were recovered from Unit 5, while large obsidian sherds were recovered from Unit 6.

D-V: Fill Layers Between Floor 5 and Floor 4
(U5-Level 4, 5, 6, 7, 8, 9, and 10 and U6-Levels 5, 6, 7, 8, 9 and 10)

The layer underlying Floor 5 represents a thick fill level, which consisted of a brown-grey matrix interspersed with pebble aggregate and stone ballast. This matrix was relatively sterile of cultural materials within Unit 5, though it contained a high concentration of ceramics within Unit 6. As excavations continued into this fill level a high frequency of large stones was encountered in Unit 5, which were absent from Unit 6. Excavation within Units 5 and 6 then revealed a thin lens of grey matrix

interspersed with stone ballast that stretched across both units, and contained a very high concentration of well-preserved ceramics sherds, and a number of large chert lithics. Within Unit 5, excavations within this lens uncovered a modeled ceramic animal head, most likely representing a coati, as well as what may have served as its tail or arms. Conversely, this coati head may have been a ceramic appliqué on a decorated ceramic vessel, rather than a figurine (Figure 5).

Figure 5. Coati Figurine or Appliqué
Courtesy of Haines

Continued excavation within Unit 5 then uncovered an alignment of plaster-encased rocks running parallel with the northern extent of the unit (Figure 6). The northern surface of this rock alignment displayed evidence that it may have been plastered, thus indicating that it may represent the southern wall of a low single-course platform. On the southeast border of Unit 5 a limestone block alignment was also located that further excavations would demonstrate to align with the plastered limestone block wall of Platform D-II beneath. This limestone alignment represents the topmost extent to which the limestone block wall of Platform D-II was preserved.

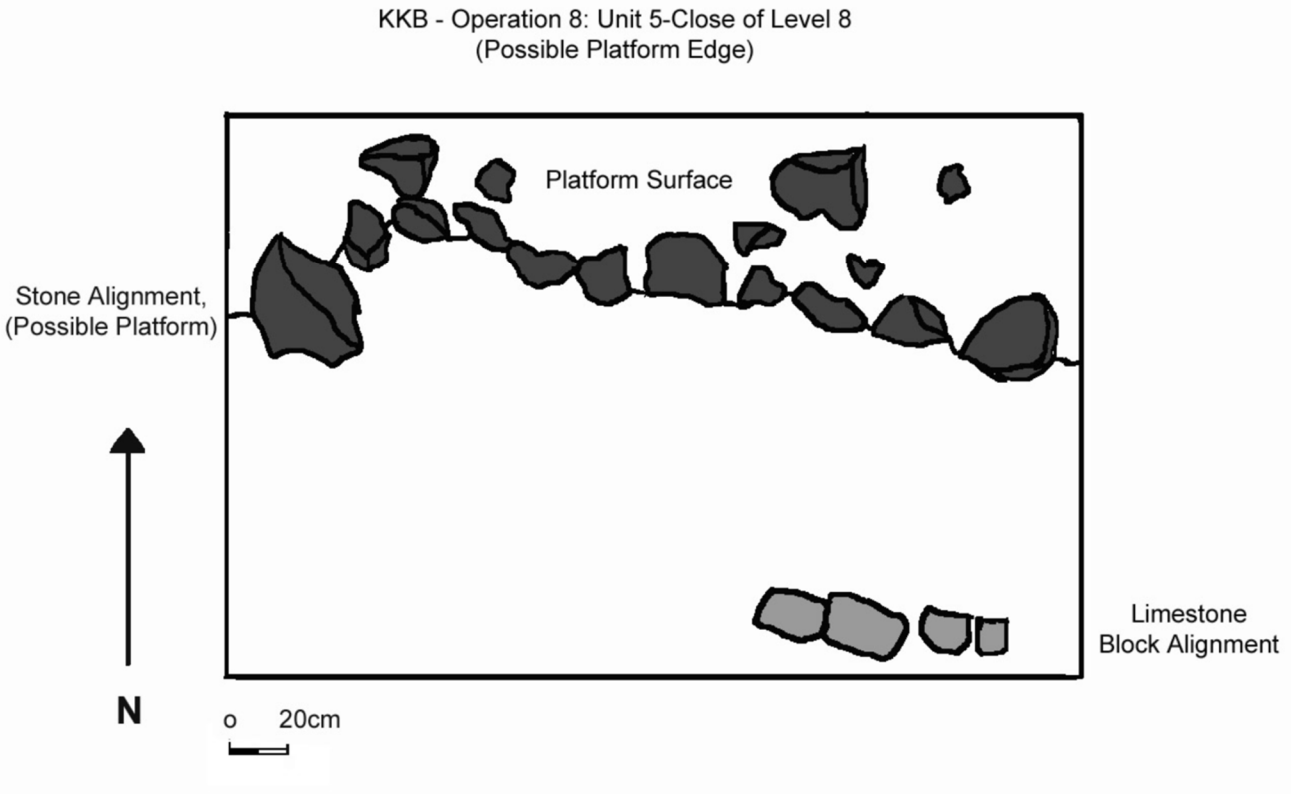

Figure 6. Possible Platform Edge and Top of Platform D-II
Inked by Lockett-Harris

The matrix encasing the northern rock alignment and the southeastern limestone block alignment was composed of a grey matrix interspersed with stone and plaster ballast. Cultural materials throughout this layer were relatively ubiquitous, with a fair quantity of ceramics recovered, as well as large chert cores, and faunal material. To the south of the limestone brick alignment excavations within Unit 6 encountered a layer of large stones overlaying a relatively flat horizontal surface. When these large stones were removed a concentration of large diagnostic ceramic rims was recovered from the northwest quadrant of Unit 6. Also, a void was encountered in the southwest quadrant of Unit 6 that would later reveal its self to be the topmost preserved portion of the rubble-filled construction pens composing the bulk of Platform D-I.

D-IV: Floor 4 and Surface of Buried Platform

(U5-Levels 11, 12 and U-6 Level 11 and 12)

Excavations below the stone alignment, to the north of the plaster block alignment within Unit 5, then encountered a horizontal plaster surface that correlated with a plaster surface covering the uppermost extent of the buried platform in Unit 6. This plaster surface likely represents the culmination of the plaza

floor construction event that completely buried the uppermost surface of Platforms D-I and D-II. The matrix of this plaster surface within Unit 6 shifted to a fine whitish-grey soil that contained a high frequency of ceramic sherds, lithics, and faunal remains. A shell bead was also recovered from this layer in Unit 6. As mentioned, a similar plaster surface was encountered within Unit 5. Thus, this whitish-grey sediment likely represents a degraded plaster plaza floor that completely covered the buried platform (D-I and D-II), which the remainder of excavations within Units 5 and 6 would continue to investigate.

Platforms D-I and D-II: Plaster Surface (U6-Levels 13)

It is at this point that we have to discuss the excavations of Units 5 and 6 separately, due to the uncovering of a substantial buried platform (D-I and D-II) delineating the two units almost precisely down their separating grid line. Excavations within Unit 6 continued down into a fine grey matrix interspersed with high concentrations of ceramics, until a differentially preserved plaster floor was encountered that likely represents the use-surface of Platforms D-I and D-II. This interpretation was supported by a widening series of voids in the southwest quadrant of Unit 6, which began to expose the rubble filled construction pens (Figure 7) beneath the plaster surface of Platforms D-I and D-II. As this plaster surface was further revealed it became apparent that there were ceramic sherds and lithics impressed into its surface. This plaster surface was differentially preserved throughout Unit 6, with the rubble filled construction pens exposed in the southwest quadrant, while the western extent evidenced thick plaster at a higher elevation than in the eastern extent.

As excavations began removing the grey-white matrix of the thick plaster surface covering the buried platform, it was revealed that the northern extent of the platform consists of an east-west alignment of rectangular limestone blocks encased in plaster (Platform D-II). It was also revealed that a second alignment of roughly triangular stones ran parallel to the limestone alignment, directly to the south (Platform D-I). These triangular stones were laid with their bases meeting, thus presenting a flat face to the north. The grayish white matrix composing the plaster surface of the buried platform was interspersed with well-preserved diagnostic ceramic sherds, as well as lithics and faunal materials (shells). Continued excavations into this matrix revealed that this first limestone wall (Platform D-II) represents a renovation event of the second triangular stonewall (Platform D-I), together forming a substantial raised platform, of which Platform D-III represents the third renovation event (FIG 6).

Platform D-I: Construction Pens (U-6 Level 14 and 15)

Excavations in the southern extent of Unit 6 revealed the presence of two small construction bins delineated by the stonewall of Platform D-I and another interior retaining wall running parallel, directly to the south (Figure 1 and 7). These two small construction pens were filled with a relatively sterile marl-

like plaster material, and were separated by a small alignment of stones. To the south of the two marl-like plaster filled construction pens, excavations continued to expose the large rubble filled construction pens first evidenced in the southwest quadrant of Unit 6 (Figure 7). As the fist to basketball size stones were removed from the upper levels of the large southern construction pen it was revealed that the stone retaining wall forming the southern wall of the marl-like plaster filled construction pens ran quite deep down into the body of the buried platform. Though the matrix within the rubble filled construction pen was relatively sterile, it nonetheless contained traces of lithics and ceramic sherds. Analysis and dating of these associated cultural materials should help to clarify the chronological placement of the construction of this substantial buried platform. Excavations within Unit 6 were terminated at this point, due to the increasing instability of the loose rubble filled construction bins undermining the southern extent of the unit baulk wall. Mapping of the interior construction of the buried platform commenced (Figure 7), while further excavation efforts were concentrated within Unit 5.

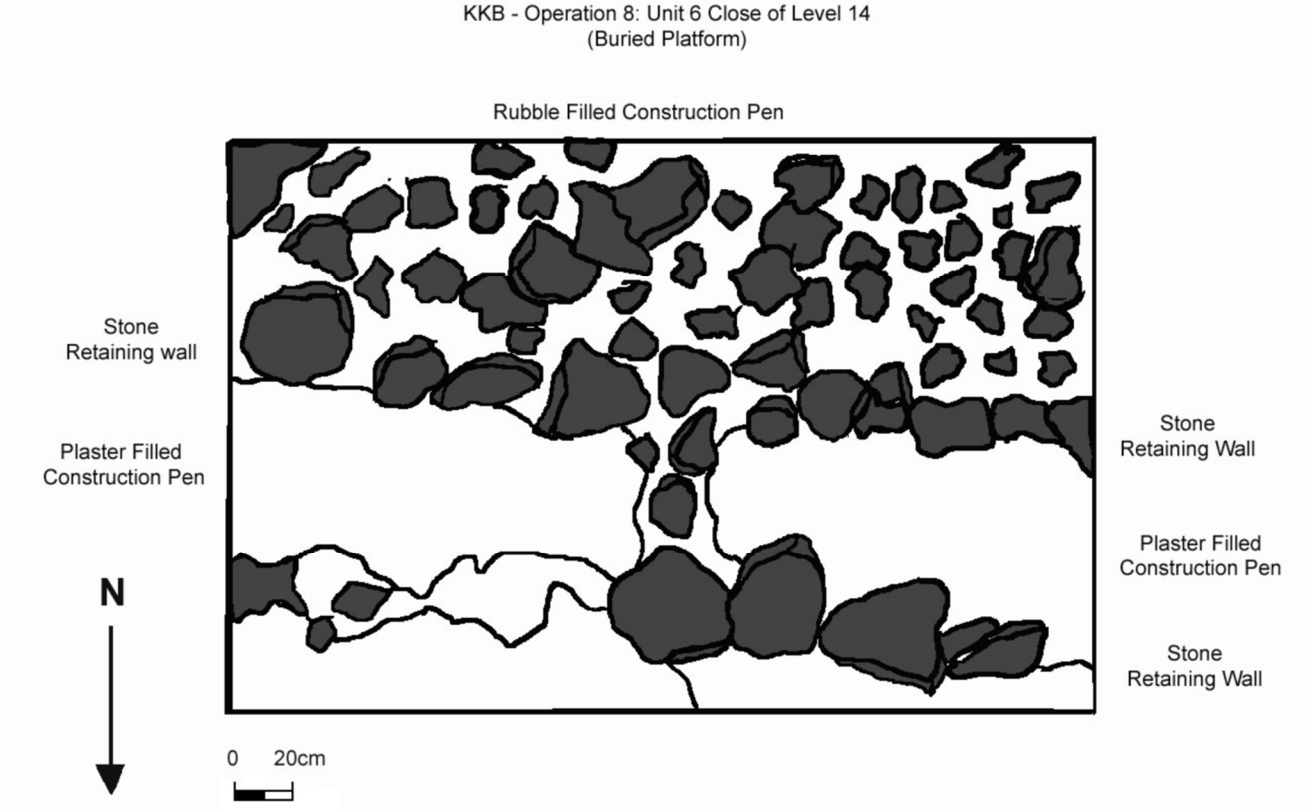

Figure 7 Construction Pens Composing Body of Platform D-I
Inked by Lockett-Harris

D-III: Fill Layer Between Floor 4 and Floor 3 (U-5 Level 13)

Excavations within Unit 5, beneath the degraded plaster surface (Floor 4) covering Units 5 and 6, revealed a thick fill layer consisting of a grey matrix, interspersed with what appeared to be fallen limestone blocks from the wall of Platform D-II. Cultural materials in this fill layer were less prevalent than in earlier layers. During excavations of this substantial fill layer the plaster alignment attested in earlier layers materialized into a substantial plastered limestone block wall forming the northern exterior of Platform D-II. This fill layer transitioned into a dark grey matrix, interspersed with higher concentrations of ceramics, lithics, and faunal remains, and containing more fallen limestone blocks. Excavations of this thick fill layer were ceased when we reached the well-preserved plaster surface of Floor 3. This fill layer represents the construction event that buried Platforms D-II and D-I.

D-II: Floor 3, and Fill Between Floors 3 and 2 (U-5 Level 14, 15, 16, 17, and 18 and 18a)

The well-preserved surface of Plaster Floor 3 was excavated revealing it was under-laid by a grey matrix, with pebble-aggregate interspersed throughout, as well as a large quantity of ceramics. Evidence suggests that Floor 3 may correspond with the surface of Platform D-III, although the fact that excavations failed to locate a continuation of Platform D-III into the eastern extent of Unit 5 makes this interpretation tentative until further excavations can clarify their relationship. A number of large diagnostic rim sherds were recovered from the fill beneath Floor 3 as well. Excavations of Plaster Floor 3 and the fill layer beneath revealed what likely represents an earlier floor renovation event, though excavations were continued until the plaster surface of Floor 2 was reached. Beneath the damaged surface of this lower sub-surface a quantity of large well-preserved diagnostic rims were recovered, as well as a small blue-green jade bead. The matrix underlying this subfloor contained a higher quantity of carbon than earlier levels. Faunal materials were also relatively ubiquitous throughout his layer, with one long bone fragment showing evidence of scorching. Thus, this fill layer underlying Floor 3 may represent refuse from a feasting event associated with the construction of Floor 3, or perhaps the build up of refuse from off of the side of the raised platform to the south. However, the presence of well-preserved diagnostic rim sherds indicates that the former situation may be more likely.

Platform D-II: Test Excavation (U-5 Level 20, 21, and 22)

An exploratory excavation was conducted on the eastern extent of the limestone block wall forming the northern exterior of Platform D-II (Fig 4). This test excavation revealed that the limestone block wall of the Platform D-II sat on top of the plaster surface of Floor 3. This excavation also revealed that Floor 3 articulates with the masonry face of Platform D-I, though this wall continued to run down into deeper layers. Once the plaster covered limestone wall of Platform D-II was removed from the test

excavation, and it was revealed that it sat upon Floor 3. Thus, the renovation event associated with the construction of the plastered limestone block façade of Platform D-II, took place after the use of Floor 3 and after the construction of Platform D-I. When disassembled the exterior wall of Platform D-II was revealed to be composed of rectangular limestone blocks encased in a hard plaster-like material.

Excavations then continued down into the fill layer beneath Floor 3. While excavating this layer an intact globular ceramic vessel was recovered from within the east baulk wall of the unit. The matrix within which this vessel was incased corresponds to the fill beneath Floor 3. Thus, it likely represents an intentional cache, placed beneath Floor 3, preceding the construction of the plaster covered limestone façade of Platform D-II (Figure 4). Evidence of Floor 2 was not as well preserved beneath the excavated portion of Platform D-II. Excavations were then continued down until Floor 1 was reached, before excavations were terminated. The extent of the masonry face of Platform D-I was not sufficiently revealed during this test excavation, thus indicating that this wall runs below Floor 1 into earlier occupation levels. Investigations during the upcoming 2014 field season shall seek to further illuminate the relationship between Platform D-I and the series of plaza floors evidenced within Unit 5.

Unit 5 Northern Extension

As mentioned earlier in this chapter, one of the primary research objectives of Units 5 and 6 was to determine the eastern extent of Platform D-III, initially encountered in 2012 (Sinclair 2013 and Lockett-Harris 2013). Excavation within the eastern portion of Unit 5 had up till this point failed to locate Platform D-III, thus Unit 5 was extended to the north by a meter. This extension was integrated into Unit 5 and not treated as a separate excavation unit. The material removed from the western extent of this unit extension was backfill from the previously excavated Unit 2 (south) (Lockett-Harris 2012). Once Platform D-III was located, excavations continued to reveal the plaster surface that capped its surface. Once this plaster surface was located, it was revealed that it articulated with the plastered limestone face of Platform D-II. Thus, indicating that Platform D-III may represents the third building phase, and post-date the construction of Platform D-II. However, as mentioned above, some evidence suggests that Platform D-II may in fact sit on top of the plaster floor (Floor 3) capping Platform D-III. Thus, necessitating further investigations to discern their chronological relationship during the 2014 season. Despite our extended excavations to the north of Unit 5, the eastern extent of Platform D-III was not revealed to be present. However, some tentative evidence was observed from further excavations that the eastern corner of Platform D-III may have been composed of plaster, rather than masonry blocks, or that it may have been destroyed during subsequent construction and renovation events that buried Platforms D-II and D-I (Figure 4).

Figure 8 Modeled and Incised Face, with Possible Sunrays
Courtesy of Haines

D-I: Fill Between Floor 2 and Unexcavated Floor 1 (U5-Levels 18A and 19)

Excavations within the eastern portion of Unit 5 then excavated through the highly differentially preserved plaster surface of Floor 2. This floor was well preserved and easily discernable within the northern profile of Unit 5, as well as in the eastern profile of Platform D-III (Figure 1), though it was less so in the rest of the unit. The plaster matrix of Floor 2 was interspersed by stain and chunks of yellow pigment in the southwest quadrant of Unit 5, particularly within the hypothetical curved corner of Platform D-III proposed in Figure 4. Beneath this plaster surface excavations encountered a grey matrix interspersed with large diagnostic ceramic sherds, high concentrations of carbon and bone, and evidence of organic staining. One of the ceramic sherds evidenced a modeled and incised face with possible sunrays or hair emanating from the crown of its head (Figure 8).

The soil composing the matrix underlying Floor 2 also possessed a slight kerosene-like smell, indicating the presence of decaying organic material. This evidence suggests that the fill layer underlying Floor 2 is composed of midden-like soils and materials, much as the preceding fill level was argued to be. Excavation of the fill matrix underlying Floor 2 was halted when another well-preserved plaster surface was encountered that stretched across the entire breath of Unit 5, where Platforms D-I, D-II, and D-III were not located (Figure 4).

Excavations within Unit 5 were terminated at this point due to time restraints, as well as due to the potential of rich cultural materials and mortuary remains beneath Floor 1, as previous excavations of adjacent occupation levels have evidenced (Lockett-Harris 2013). The exposed architecture of Platforms

D-I, D-II, and D-II, as well as the exposed surface of Floor 1, were then covered in tarps and backfilled. It is the intension of the principle investigator to continue investigations within Unit 5 during the 2014 season, in order to further explore the earliest occupational levels present above bedrock within the South-Plaza of Group D at Ka'Kabish.

This area of Ka'Kabish has produced ample evidence of sustain ritual activity, starting in the Middle Formative period (Haines 2011, Haines 2013, and Lockett-Harris 2013). As mentioned earlier in this paper, the results of radiocarbon samples taken from beneath sealed plaster floors associated with the platforms unearthed in Units 5 and 6 will greatly increase our understanding of the chronological sequence of the construction of the substantial architectural events and plaza floors within the South-Plaza of Group D. Also, ongoing ceramic analysis shall provide a chronology of material cultural change that will further enhance our chronological understanding of this prominent ceremonial area of Ka'Kabish (Sagebiel forthcoming).

Group D South-Plaza Unit 7: Excavation

As mentioned above, a subsidiary research focus during the 2013 field season was the placement of two units to the north of previous years efforts (Haines 2011 and Lockett-Harris 2013), in order to investigate the sequence of plaza floor construction and cultural materials present within the northern portion of the South-Plaza of Group D. The excavation of Unit 7 commenced with the removal of the overlaying humus layer, followed by the excavation of three remaining plaza construction fill layers overlaying a relatively high section of limestone bedrock, as compared to previous years investigations within the South-Plaza of Group D (Lockett-Harris 2013). The second layer excavated consisted of gravel, stones, and anthropogenic fill, which likely represent the highly degraded subfloor of the final plaza floor construction event. Within the second layer, cultural materials, such as ceramics, chert lithics, and obsidian, where relatively ubiquitous. Also, the lip of a *comal* was recovered from the second layer, thus indicating possible domestic activities within the latest occupational horizons present within the South-Plaza of Group D. Evidence of possible post-abandonment residential reoccupation within the previously ceremonial South-Plaza of Group D is also tentatively corroborated by evidence of residential stone-rubble foundations within the upper layers of Units 5 and 6. The third layer excavated consisted of larger rocks and fill, likely indicating a more substantial construction event of the South-Plaza of Group D. The third construction layer excavated contained reduced cultural materials such as ceramics and chert flakes, while obsidian was entirely absent. The final layer excavated above sterile bedrock within Unit 7 consisted of stones and white limestone chunks transitioning into a silky white powder, before becoming homogeneous white limestone. Excavations within Unit 7 only reached a maximum depth of

approximately a meter, thus representing the shallowest excavation unit within the South-Plaza of Group D, since investigations began in 2010 (Haines 2011 and Lockett-Harris 2013).

Group D South-Plaza Units 8: Excavation

The second unit excavated under the subsidiary research objective of further exploring the northern portion of the South-Plaza of Group D was Unit 8. Unit 8 was excavated from the overlaying humus layer until the 2m by 2m unit was of a depth that wall slope, time-demands, and increase risk made further excavations inadvisable. Thus, excavations of Unit 8 failed to reach bedrock despite excavating to an approximate depth of 2m. However, excavations of Unit 8 not only revealed a complex series of plaster floor construction events, but also a dense ceramic midden containing a relatively complete inverted cached vessel (the rim was damaged). All layers excavated within Unit 8 consisted of anthropogenic soils, construction fill, and plaza floor events. Not all of these layers are discernable in the profiles of Unit 8 (Figure 9).

Excavations of Unit 8 commenced with the removal of the overlaying humus layer. However, due to the presence of a massive amount of tiny obsidian debitage, the excavation of the humus layer of Unit 8 proved to be a much more tedious effort than in previous units. A smaller 1/8inch screen was employed in an attempt to retrieve as much of the tiny debitage flakes as possible. The presence of such a high proportion of obsidian debitage in the humus layer, within the vicinity of Unit 8, indicates that obsidian working took place in this area following the cessation of construction activities, and possibly after the "abandonment" of the South-Plaza of Group D. The evidence of obsidian working within the humus layer of the South-Plaza of Group D adds to tentative evidence of Post-Classic domestic occupation recovered from Units 5 and 6. Though further research will have to be undertaken to ascertain the level of post-abandonment occupation within the South-Plaza of Group D. The second layer present within Unit 8 consisted of small pebbles interspersed with ceramics, lithics and obsidian. Following similar evidence in other units excavated during the 2013 season (Unit 4 and 7) this layer likely represents the degraded subfloor of the final plaza floor construction event in the South-Plaza of Group D. Beneath this layer were a series of deposit of large to medium size rocks and stones encased in a dark brown to light-grey matrixes. This layer also contains relatively ubiquitous traces of ceramics, lithics, and obsidian. Though not observable in the profiles of Unit 8 (Figure 9), excavations within this second layer revealed the presence of variably composed deposits, including a white chalky lens, with which a lithic core and associated flakes was recovered. The presence of articulating flakes with an unspent core indicates that this assemblage was intentionally cached, either as an offering or as an act of storage for future use.

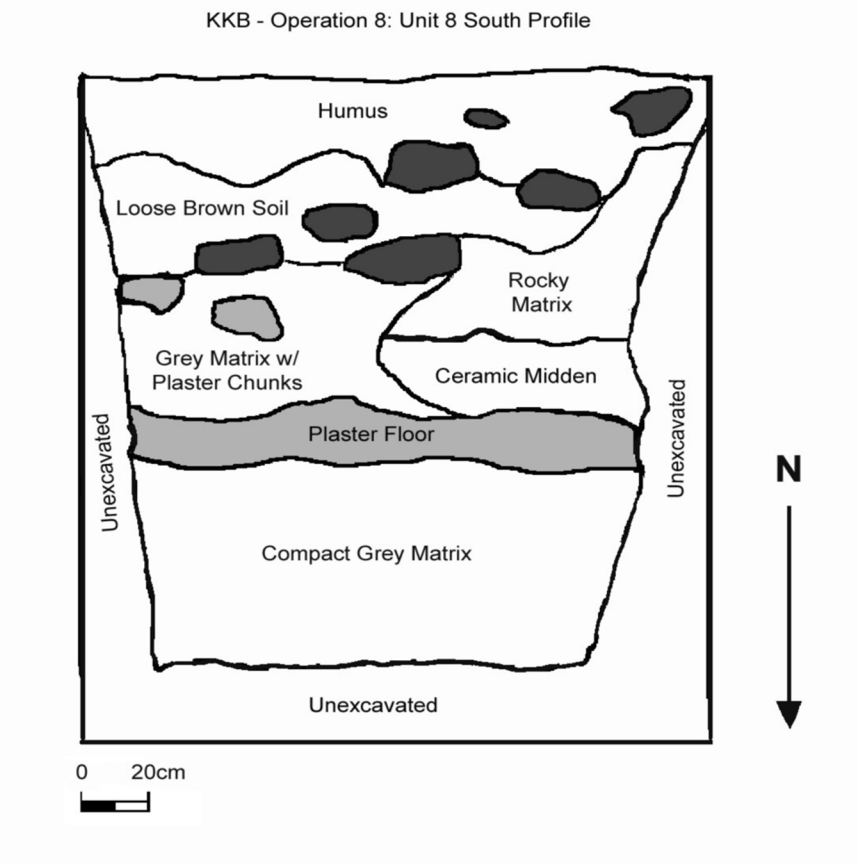

Figure 9. South Profile of Unit 8
Inked by Lockett-Harris

The next clearly differentiated layer excavated in Unit 8 consisted of a dense ceramic midden encased within a dark black humus-like matrix. The concentration of fragmentary ceramics was extremely high within this midden, as were the relative size of the largest sherds and the proportion of diagnostics preserved. Recovered from within this midden layer was a nearly intact globular ceramic vessel, which had been intentionally placed in an inverted fashion within the dark loamy matrix. A shell bead was also recovered from within this midden layer. The evidence of a cached ceramic vessel, coupled with the presence of large well-preserved diagnostic sherds, suggests this ceramic midden may indicate a short-lived event, rather than an extended garbage midden. Though, further analysis of the large quantity of ceramics recovered from this midden shall throw more light on the nature of this deposit, as well as its chronological dating.

Beneath the ceramic midden, excavations revealed a linear alignment of large rocks separating the eastern half of the unit. This alignment of rocks likely represents the edge of a short platform, for to the west of it lay a plaster floor covering the remainder of the unit. This possible platform is not visible within the profile of Unit 8 provided (Figure 9). The upper surface of the plaster floor was well preserved

to a depth of approximately 3cm, before a second more damaged plaster surface was revealed. Thus, the initial plaster floor likely indicates a re-plastering or renovation event of the second plaster surface. This second plaster floor was much thicker than its re-plastering event, measuring as thick as twenty cm in spots, and it covered the entire extent of Unit 8. Thus, the possible stone platform wall would have sat on top of this earlier plaster floor. Beneath the grey-white matrix of this thick plaster floor was a deep layer of loose dark-grey soil, which was interspersed with clumps of plaster, ceramics and lithics. A high proportion of aquatic apple snails (*Pomacea flagellate*) were recovered from within this level, indicating that part of the makeup of this anthropogenic fill level is likely composed of refuse from domestic events, such as food preparation. Beneath this thick fill layer, a layer composed of a single course of similarly sized rocks was excavated. Due to the relatively horizontal surface that these stones created this layer may represent part of a cobble subfloor, or possible the rubble foundation of a domestic platform. Beneath this layer of intentionally laid stones, excavations encountered a plaster-like matrix that was interspersed with ceramics, lithics and more faunal material. Test excavations into the dense grey matrix of this layer revealed that it was in fact not bedrock, due to the presence a dark loamy matrix, streaked with white-veins of decayed organic material underlying it. Present within this organic-laden matrix were ceramics, lithics, and faunal remains that clearly demonstrate that excavations within Unit 8 were not able to reach sterile bedrock. Excavations were ceased within Unit 8 at this point due to the increasing depth of the unit, the slopping of its walls, and the decreased working space. A tarp was placed at the bottom of Unit 8, before the unit was backfilled, to facilitate the possibility of continued investigations in future field seasons.

Discussion

Previous investigations within the South-Plaza of Group D at Ka'Kabish have demonstrated that this area of the site was subject to an intensive ritual agenda, beginning in the early Middle Formative Period (900-600 B.C.) (Haines 2011, Haines 2012, and Lockett-Harris). Mortuary evidence recovered from the earliest occupational horizon present within the South-Plaza of Group D have demonstrated that a process of socio-political differentiation, as negotiated through mortuary ritual and grave offerings, was active at Ka'Kabish during the early Middle Formative (Haines 2013 and Lockett-Harris forthcoming Master's thesis). Previous excavations had also revealed the presence of the substantial buried architectural Platform D-III. As mentioned throughout this chapter, a major research objective throughout the 2013 season was to further investigate this buried platform. Excavations carried out during the 2013 season not only refined our understanding of Platform D-III, through excavations in Units 4 and 5, but also uncovered two more substantial platform construction events (Platforms D-I and D-III). Though excavations undertaken throughout the 2013 season have facilitated in the initial interpretations of the

articulation and the building sequence of these three buried platforms, investigations to be carried during the 2014 season shall further assist to illuminate their relationship. Excavation carried out throughout the 2013 season have greatly increased our knowledge concerning the nature of the Middle Formative architectural program active in the South-Plaza of Group D at Ka'Kabish.

Conclusions

Investigations conducted within the South-Plaza of Group D, in Units 5 and 6, have revealed the presence of a substantial buried platform measuring over a meter in high. Further investigations have revealed that this buried platform consists of a core of rubble filled construction pens surrounded by a stone retaining wall. Surrounding this retaining wall was a series of smaller construction pens, which were filled with marl-like plaster. Forming the exterior of these plaster filled pens was an interlocking wall composed of triangular stones. Investigations failed to determine the terminating depth of this masonry wall, thus necessitating further excavations during the 2014 season. Initial interpretations of this buried platform indicate that this masonry wall represents that northern exterior of the first construction event. This initial masonry wall and the body of the buried platform have been referred to throughout this chapter as Platform D-I. Investigations also revealed the presence of a plastered limestone block wall (Platform D-II) representing a renovated addition to the masonry exterior of Platform D-I. This renovated plastered wall represents a façade that was subsequently added onto the exterior of the existing Platform D-I, rather than a true platform unto itself. This second renovation event has been referred to throughout this chapter as Platform D-II. Platform D-II was demonstrated to sit on the surface of Floor 3, which evidence tentatively indicates may also form the surface Platform D-III. However, It is also possible that the surface of Platform D-III may articulate with the existing face of Platform D-II, thus indicating that Platform D-III may represent the final platform construction event evidenced. However, further excavations during the 2014 field season shall greatly aid in refining the interpretation of the construction sequence of these substantial buried platform.

Evidence indicating that Ka'Kabish was a locus of Middle Formative architectural activities represents a significant contribution to the growing body of evidence of an early origin of such construction activities. Other sites throughout Belize and the Petén with similar early architectural sequences include Cuello (Hammond, Estrada-Belli and Clark 1992), Cahal Pech (Healy et al. 2003), and Nakbe (Hanson 2005). Initial interpretations indicate that the form and construction of the series of Middle Formative platforms uncovered at Ka'Kabish during the 2012 and 2013 seasons are comparable to similar sequences evidenced at Blackman Eddie, Pacbitun, Nohoch Ek, and Nakbe (Garber et al. 2003). Similar platforms to those excavated at Ka'Kabish are present at Nakbe by 800 BC (Hansen 2005). Though the investigation of the buried platform construction sequence at Ka'Kabish is still in its infancy,

evidence of potential feasting middens, suggest that these platforms may have been associated with public or ceremonial activities. Such an interpretation accords with similar evidence from Blackman Eddy (Garber et al. 2003) and Cahal Pech (Healy et al. 2003). In regards to the construction sequence evidenced at Ka'Kabish, and specifically the shift in construction techniques from a rough triangular stonewall (D-I) to a rectangular cut limestone plastered wall (D-II), it is worth noting that Hansen (2005) argues that such a shift at Nakbe indicates more centralized authority during the late Middle Formative (600-300 BC). However, the precise dating of this renovation façade event remains to be ascertained for Ka'Kabish, so such speculations remain tentative. The evidence of Middle Formative architectural activities recovered from Ka'Kabish during the 2012 and 2013 field seasons not only represents a significant enhancement of our understanding of the earliest occupational horizons within the South-Plaza of Group D, but also an important contribution to archaeology's understanding of the Middle Formative Period within the Maya Lowlands. This is particularly apparent when the growing architectural evidence from Ka'Kabish is considered in relation to the discovery of a richly adorned Middle Formative burial in front of the northern edge of Platform D-III (Lockett-Harris 2013 and Lockett-Harris forthcoming Master's thesis). Further investigations throughout the 2014 season shall undoubtedly continue to enhance our understanding of Middle Formative Period occupations at Ka'Kabish.

Evidence was recovered from the overlying humus layer in Units 4, 5, 6, and 8 that tentative interpretations imply may represent activities carried out within this ceremonially significant area flowing its "abandonment." This evidence includes domestic cooking materials in Unit 4 (*comal* lip), significant obsidian working in the vicinity of Unit 8, and potential residential platforms composed of rubble concentrations within Unit 5 and 6. The association of a Post-Classic chalcedony arrowhead with the potential house mound in Unit 5 tentatively supports a late date for this rubble concentration. However, further investigations, coupled with the ceramic chronology being developed for the South-Plaza of Group D (Sagebiel personal communication) will help to determine if a post-abandonment residential reoccupation can be attested for this formerly ceremonial area.

Though excavations within Units 5 and 6 were halted during the 2013 season before the earliest occupational horizons present below Floor 1were reached, continued investigation within Unit 5 during the 2014 season shall help to further illuminate the nature of ritual activities within the South Plaza of Group D. Furthermore, as mentioned above, it is the intention of the principle investigator to open additional units through the central area of the South-Plaza of Group D, in order to further investigate the substantial buried architectural remains that have thus far been revealed.

Acknowledgments

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CHAPTER 3

INVESTIGATION OF CHULTUN C-1 AT KA'KABISH

by
Toni Ann Gonzalez

Introduction

This report provides the excavation and description of Chultun C-1 during the 2013 Ka'Kabish Archaeological Research Project field season at Ka'Kabish, Belize. Chultuns, subterranean chambers, are common and abundant features not only at this site, but also all over the Maya region. Although many have been found and mapped at the site of Ka'Kabish, many still remain undiscovered considering that many new chambers are found each year. Up until the 2012 field season the chultuns of Ka'Kabish have been noted and briefly perused, but none had been extensively investigated.

During the 2012 field season, the excavation of Chultun B-2 showed that that chultun's primary function was a burial chamber that most likely dated to the Post Classic. It is unsure whether the chultun functioned as otherwise before being utilized for mortuary purposes, but it was apparent that the burial terminated further use of the feature. In order to gain a better understanding of the function of chultuns within the site, it was decided to excavate more chultun's in the vicinity to determine whether this use phase was common during this time period.

Description

Operation 11 will be the excavation of a chultun north of Group C and south of Group D. Considering its close proximity to Group C the chultun will be referred to as Chultun C-1 until a more direct transect is cut to determine where it lies in relation to the two groups. The area that Chultun C-1 is located in is very dense with jungle foliage and trees. There is another chultun directly northeast of this chultun approximately 2.74 m away. We decided on excavating Chultun C-1 because the accessibility was more convenient. Chultun C-1 was found uncapped with no capstone initially present. It is unsure how long the debris has been accumulating inside the single chamber. Three trees line the area of where the chultun is located. The closest is directly northwest of the opening. No prior excavations have taken place in this area before. Until further investigations in the area occur, it is unsure if there are any structures present in the vicinity. The opening is culturally modified to mimic an almost perfectly circular shape. The dimensions of the opening are 52 cm north/south and 50 cm east/west. From the upper lip of the opening to the floor is a drop of 1.24 m.

Figure 1. Chultun C-1's Opening into an Inner Chamber.

Methodology and Excavation

A unit datum was placed from a point on the tree that is 64 cm northwest of the lip of the opening and 34.5 cm high off the ground. From that datum point to the center point of the chultun opening is a distance of 93.5 cm. From the datum point in the tree to the center point of the chultun opening we plumb bobbed directly into the chultun's inner chamber giving an initial distance of 158.5 cm below datum to start. The chamber of the chultun is oval shaped and measures 280 cm directly north/south and 335 cm directly east/west. We decided to set up four reference points from the central point that we placed in the center of the diameter of the chultun's entrance at 0ºN, 0ºS, 0ºE, and 0ºW. From these reference points we will determine the opening and closing elevations for each level. The chultun slopes downward towards the southwest area of the chultun so we decided to start excavations at the highest point at the northeastern area and trench across downwards. The levels were excavated according to changes in the soil or changes in the cultural material present.

Excavation equipment consisted of trowels, a rock pick, and brushes. All excavated soil was screened upon removal from the chultun using a 1/8-inch screen and a 1/16-inch screen. All materials recovered through the screening process were bagged accordingly to their material type and those recovered in situ were carefully mapped and also collected accordingly to their material type.

Operation 11, Chultun C-1; Surface

The chultun was without a capstone for an unknown period of time. There is an abundance of debris that has accumulated over the years that consists of tree branches, twigs, leaves dirt, and stones. There is also a large amount of bat guano covering the surface. There is a high concentration of ceiling fall covering the entire chultun surface especially in the northeastern area of the chultun. The soil is

poorly sorted and the soil matrix is a light greyish white limestone matrix. The artifacts collected from the surface consist of one ceramic sherd and two small faunal remains.

Operation 11, Chultun C-1; Level 1

Level 1 consists of a loosely packed soil matrix that appears to be mostly limestone ceiling debris. There is some evidence of bio-turbation from rodent and tree root disturbance. Excavations started on the northeastern area of the chultun and continued towards the southern area. A large quantity of snail shell was observed in the northern area of the chultun. As the larger pieces of limestone ceiling fall were removed we noticed a considerable amount of faunal material and charcoal. The western and southwestern area of the chultun showed no sign of cultural material. Two human incisors were recovered in the screening process. It is unsure what area of the chultun they were initially from. The western side of the chultun is already partially at bedrock and does not seem to go much deeper. Artifacts collected from level 1 consist of two ceramic sherds, faunal material, charcoal, and two human incisors. At the end of Level 1 it was evident that the soil matrix on the western side was more whitish-grey with a lot of limestone inclusions while the soil matrix on the eastern side was darker brown in color, very compact, and had very little limestone inclusions. This marked the close for Level 1, and it was decided that the western area of the chultun and the eastern area would be divided from north to south and treated as levels of their own until excavation showed commonalities either in soil matrices or cultural material. There is a large boulder underneath the opening of the chultun. It is unsure if the boulder goes all the way down to bedrock.

Operation 11, Chultun C-1; Level 2

Excavation was only conducted in the western area of the chultun for this level. The soil matrix in this area is a whitish-grey with a lot of limestone inclusions. There is a large quantity of large limestone boulders form ceiling fall that needed to be removed. Small fragmented faunal remains were recovered underneath the ceiling fall. On the northwestern area of this level three human bones and four human teeth were uncovered. Bio-turbation from the trees lining the chultun seem to have penetrated the northwestern area of the chultun making it difficult to excavate. The discovery of human remains closed this level so it could be determined if there in fact was a burial and if it spread over to the eastern area of the chultun. The faunal material was also collected in this level.

Operation 11, Chultun C-1; Level 3

Excavation was only conducted in the eastern area of the chultun for this level. Over the two-day break, there has been a great deal of rodent disturbance. Tree root disturbance is visible in the

northern and northeastern area. The soil is a dark brown matrix with some limestone inclusions. In the central area of the eastern side the soil is less compact, while the outer area is hard and compact. During excavation a medium/dark green colored jade bead was unearthed in the northeastern area of the chultun. The bead is penetrated through the horizontal axis and is flat on one side. Other artifacts collected in this level include ceramic sherds and faunal remains.

Operation 11, Chultun C-1; Level 4

Excavation continued in the western area of the chultun. In the northwestern area, 189 cm below datum is where the first human remains were discovered. In the same area, about 193 cm below datum, more human remains were unearthed, although their positioning was not in situ due to bio-turbation from tree root growth and ceiling collapse. Along these remains was a single fragmented jade bead. All of the bones and artifacts excavated were numbered, mapped and collected. The western and southwestern area of the chultun appears to be at bedrock. The chultun slopes downward toward the eastern area. The soil is a light brown matrix with many limestone inclusions. During the screening process a copper bell, colored green in a layer of patina, about 1 cm in length and a small piece of ochre was found. We closed level 4 because of the bedrock that was uncovered in the western and southwestern area of the chultun, and it appears that there are large pieces of limestone ceiling collapse on top of the burials that we have already started to excavate. Other artifacts collected in this level include a large ceramic sherd and faunal remains that were excavated throughout the level.

Figure 2. Bone Cluster Discovered in Level 4, approximately 193 cm below datum.

Operation 11, Chultun C-1; Level 5

Excavations were only conducted in the eastern area of the chultun for this level. The soil is a loose dark/medium brown matrix that is riddled with limestone inclusions. There are large pieces of limestone ceiling fall littered throughout the level. Bio-turbation from tree root growth is a major issue excavating this level. About 15-20 cm. into the level large ceramic sherds started to appear in the central area of the level. In the northern part of the level human remains, including human teeth, eight copper bells, shell beads, and 11 pieces of ochre were discovered. During this level we switched to a 1/16th inch screen to make sure we collected all beads present. These remains and artifacts are in the same area adjacent to western side of the chultun where the previous human remains were unearthed. It appears as though bio-turbation has unsettled the burial and artifacts and scattered them throughout the northern part of the chultun. On the southeastern side underneath the chultun's opening a chert biface and a dark green jade bead that was flat and oval with the opening going horizontally through the center was discovered 196 cm below datum. An alignment of larger rocks became visible along the eastern area of the chultun. The rock alignment closed excavations in this level because it was assumed a burial lay underneath.

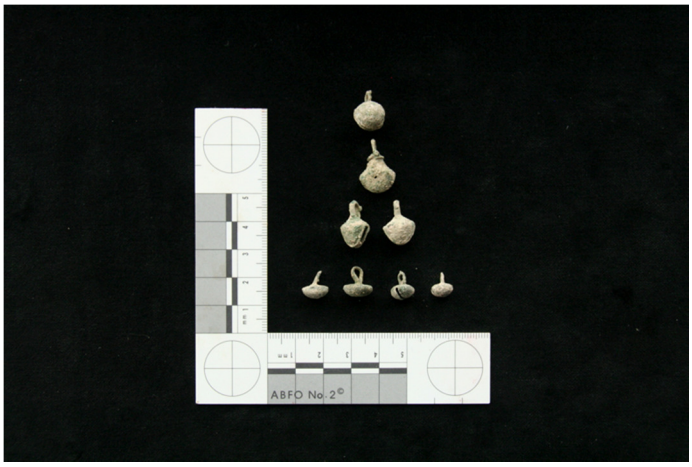

Figure 3. Eight Copper Bells Discovered in Level 5.

Operation 11, Chultun C-1; Level 6

Excavations were only conducted in the western area of the chultun for this level. Ceiling fall and bio-turbation from rodents and tree root growth are still major disturbance factors in this level. Tree root disturbance is more evident in this level than in previous ones. Root cutters were used to remove some of the tree roots that were penetrating the area where the burials were discovered. The soil is a very loose and sandy matrix with a lot of limestone inclusions. It seems that the floor of this level consists of ceiling fall that has crumbled and compacted down onto the limestone bedrock. In the northwestern area of the chultun a large human bone deposit that is very compacted together and wedged in between soft

limestone ceiling fall was unearthed 213 cm below datum. The bone deposit was extremely fragile. As we brushed the bone softly much of it flaked away into "bone dust". This area has been heavily disrupted by tree root growth therefore it is hard to discern if the bones correlate with each other or if there are multiple individuals. The human remains that were mapped and collected were badly damaged and fragmented due to this issue. About 45-50 cm south of the bone deposit a copper ring and another copper bell were discovered. Both the ring and bell were a pale green color due to a layer of patina that has formed. Both the artifacts were 211 cm below datum at about the same level as the human remains. The southern and southwestern area of the chultun is at bedrock. The level was closed because of the bone deposit that was discovered on the northwestern area. Excavation will continue on the eastern side to see if the burial extends to the northeastern area. Other artifacts collected in this level include ceramic sherds, faunal remains, and three pieces of ochre. One piece appears to have been rolled into a circular shape.

Operation 11, Chultun C-1; Level 7

Excavations for this level were only concerned with the eastern side of the chultun. The soil in this area is dark brown and clay-like with a lot of limestone inclusions. There is a high concentration of pebbles and snail shell that has melded together in this very muddy clay like soil matrix. The soil matrix is very different than the western side of the chultun. In the northeastern area of the chultun there appears to be two main bone clusters. Bone cluster 1 (224cm below datum) is directly in the northeast section and appears to be related to the bone cluster on the northwestern side, but bio-turbation makes that difficult to discern. Bone cluster 2 is more in the eastern area and is 222 cm below datum. Closer examination with an osteologist will have to determine if the two clusters are related or not. Two more copper rings (ring 1: 224 cm below datum; ring 2: 221 cm below datum) were discovered in between the two bone clusters. A deposit containing 8 pieces of ochre was discovered 220 cm below datum in the southern central area of the chultun. Most of the pieces appear to have been intentionally rolled into circular ball-like shapes. A large ceramic sherd cluster was unearthed underneath the chultun entrance in the southern area of the chultun that started 210 cm below datum and was 15 cm thick. The diagnostic rim sherds present at the time of investigation may suggest that there were at least two large ollas present. Further investigations will have to be made to determine if the ceramic sherds are from the same vessel or if they are from multiple vessels. The level was closed with the collection of the ceramic cluster. Other artifacts collected in this level include shell beads, lithics and faunal remains.

Figure 4. Two Copper Rings found in Level 7.

Operation 11, Chultun C-1; Level 8

In this level the western and southwestern area of the chultun are at bedrock. The central and northwestern area is still showing signs of depth and is riddled with cultural material. In the northern area of the western side we had two deposits that had a high density of bone, some human and some animal. A lot of the bone is extremely fragmented, which is caused by the bio-turbation and ceiling fall previously stated. Mapped along and in between the bone deposits we excavated three copper rings, one partial copper ring, 18 copper bells, two jade beads, a plethora of shell beads, two round ball-like pieces of ochre, and ceramic sherds. One of the shell beads discovered still had a piece of twine inside of the beads inner hole. The human remains and the artifacts collected were between 212 cam and 229 cm below datum. Cranium fragments were also discovered in the bone deposit. In the northern area of this level we have discovered the chultun goes inward into the earth. It is undetermined how deep it extends northwestern. The level was closed after the bone deposits were collected and the area beneath where the deposits were appeared to go sterile. Faunal material and charcoal were also collected in this level.

Operation 11, Chultun C-1; Level 9

Excavations commenced in the eastern area of the chultun. The soil is a dark brown/grey-like matrix with a lot of limestone inclusions. The soil is very clay-like and muddy. Excavations in the southeastern area consist of some ceramic sherds. The cultural material present seems to slowly be diminishing to sterile soils. The eastern part of the chultun is at bedrock and is sloping inward. Where the two bone deposits were, which correlate with the bone deposits on the western side, excavations unearthed one copper ring, one partial copper ring, six copper bells, shell beads and two spindle whorls. All artifacts seem to be correlated with the burials. As excavations commenced in the central area, a little

north of the entrance, a large disc shape circular feature appeared. The disc made out of limestone was 50cm x 48.5cm x 6cm and laid 236 cm below datum. It appears that this feature is the capstone of the chultun that at one point capped the entrance. The circular feature is culturally modified to be round and smooth. At one time it most likely fit the circular opening of the chultun perfectly. This level was closed when sterile soil reached.

Operation 11, Chultun C-1; Level 10

Since the entire chultun is basically sterile, Level 10 will consist of the excavation of the chultun in its entirety. Bio-turbation is still an issue at this level. The soil matrix is the same throughout the entire chultun. The chultun is at bedrock in the southwestern, western, and northeastern area. The soil is a brown/greyish matrix. Hardly any cultural material was present except for some small ceramic sherds. The entire chultun hit bedrock, the deepest area being the northern area at 242 cm below datum. There was some charcoal that was spread on top of the limestone bedrock across the center of the chultun going in a north/south direction. The charcoal was collected. This marked the end to the chultun's excavation.

Observations/Conclusions

Excavations showed evidence of at least four individuals (please refer to Cristina Verdugo's chapter on the mortuary analysis for Chultun C-1) who were buried intentionally within the chultun terminating further use of the feature. Due to bio-turbation caused by rodent disturbance, limestone ceiling fall, and tree root growth much of the remains were badly damaged, fragmented and shifted from their original positioning. These disturbances have also made it difficult to ascertain what position the bodies were placed in relation to one another. The only thing that can be said is that the bodies were intentionally placed along the northern wall of the chultun, and took up that entire northern area in both east and west directions. The rest of the chultun was almost sterile except for the ceramic deposit that was encountered in southeastern area underneath the chamber's opening.

From analyzing the mapped levels concerning the placement of artifacts, it appears that most, if not all, were placed intentionally with the burials as mortuary goods. The mortuary remains and artifacts were dispersed evenly throughout all levels of the chultun until bedrock suggesting that this was a primary burial and perhaps the chultun's primary function. The burials most likely date to the Post-Classic period considering that copper ornaments were discovered in relation to the deceased. Further investigation of the ceramic assemblage will have to be made in order to solidify the time period and to ascertain whether the mortuary use of the chultun was a primary or secondary function (please refer to Kerry Sagebiel's chapter on the ceramic analysis of Chultun C-1).

The limestone capstone was found at a depth that exceeded the burials by about 6-10 cm. The only explanation for this occurrence is that weathering and time ate away at the capstone causing it to loosen and fall through the chultun's opening next to where the burials originally lay. Through time bio-turbation took its toll on the remains and shifted the positioning of the environment drastically. This could be seen in how the bodies were in relation to each other and the damage that ensued from those disturbances.

It appears that the primary function of the chultun was a burial chamber, which terminated further use of the feature. As of now, it appears that there was no prior use of the chultun before it's mortuary use. Considering that the burials discovered in Chultun B-2, excavated in 2012, and Chultun C-1 date to the Post-Classic it is arguable that chultun burial at Ka'Kabish may have been more common than previously anticipated. Further investigations of chultuns and the surrounding area will better determine if this hypothesis stands.

CHAPTER 4

A PRELIMINARY ANALYSIS OF THE HUMAN SKELETAL MATERIAL RECOVERED FROM CHULTUNS B-2 AND C-1 AT KA'KABISH, BELIZE.

by
Cristina Verdugo

Introduction

This report provides a description and analysis of preliminary findings conducted of 201 bones and 346 teeth recovered from Chultuns B-2 and C-1 at Ka'Kabish, Belize during the 2012 and 2013 field season. The remains were excavated and collected by Toni Gonzalez. Skeletal remains were recovered from multiple cultural levels within the chultuns and include both adult and subadult remains.

Excavations in Chultun B-2 yielded the remains of at least one subadult and two adults. These remains were found as two distinct burials within the *chultun*, not comingled together. While the adult remains showed some evidence of being articulated in prone position, the subadult remains were in disarray due to tree root damage, making precise determination of body position impossible. Poor preservation of the skeletal material made determination of age and sex impossible.

Chultun C-1 yielded a number of individuals from within the subterranean chamber. The presence of four adult skeletons was determined using the internal occipital protuberance on the occipital bone (see figure 1). The recovery of two right radii indicates at least two subadults were also present in the chultun. The sex of the remains was determined to be male. Age could not be determined at this time.

Methodology

Osteological methods used for analysis are standard techniques developed for recovery and interpretation of skeletal remains. Identification of adult remains utilized methods from White, Black, and Folkens (2011), and Buikstra and Ubelaker (1994), while identification of subadult remains utilized methods from Baker, Dupras, and Tocheri (2005) and White, Black, and Folkens (2011). Remains were initially identified and catalogued by material type, bone name, side of the body, operation number, chultun, and level. Any additional information such as map number, excavators, and condition was also recorded into an excel spread sheet. In some cases, sorting of faunal material from the human skeletal material was necessary. Photographs were taken of the skeletal material recording the mostly intact bones as well as samples of fragmented and badly damaged material from each level.

It is important to note that that sex was determined using less relied upon methods then normally used because of the state of preservation of the remains. Missing the skull and pelvic bones made procuring sex of the individuals extremely difficult. Furthermore, the badly damaged remains made

obtaining accurate measurement from long bones difficult if not impossible. Drawing from Sulzmann et al (2008), Mastrengelo et al (2011), and Murphy (2002), sex was determined using the carpal bones, specifically, the lunate, pisiform, hamate, capitate, and trapezoid.

The skeletal material was dried in wire screens and tooth brushes were used to remove earth from the exterior surface of the bones. Efforts were made to remove the tree root growth and densely pack earth from the material without causing damage to the bones. This included the use of tooth picks and dental picks to remove earth from the shafts of long bones.

Teeth were also identified and catalogued into material type, name, operation, chultun, level, and differentiated between upper and lower placement within the mouth when possible. Furthermore, teeth were separated into two groups: modified and un-modified samples. Photographs were taken of each type of tooth (incisor, canine, premolar, molar) found in every level and of the modified teeth, also separated by type. The modified teeth were catalogued and categorized according the Romero's (1958, 1960, 1965) chart, as well as according to Tiesler's (2001) and Olivares' (1998) information. Furthermore, methods also drawn from the Williams and White (2006) study of modified teeth at Lamanai.

The Skeletal Assemblage

Preservation of the skeletal material from Chultun B-2 is extremely poor. Bones recovered from this chultun showed bioturbation damage including tree root etching on the surface of the bones as well as tree root growth within the shafts of some long bones. Furthermore, the moist environment made the bones extremely soft, rendering them difficult to lift from the ground without damaging. A large majority of the bone was crushed by roots and earth within the chultun. Three long bone shafts, too damaged for identification and one thoracic vertebra indicate a subadult was present. Two left humerii indicate the presence of at two least two adults in Chultun B-2.Of the total number of bones recovered from the two chultuns, only 27% came from Chultun B-2 as intact enough to be identified. Archaeological evidence suggests that these remains are primary burials.

The bones from Chultun C-1 were more intact than those recovered from Chultun B-2. The skeletal remains were recovered along the northern wall of the chultun starting in level 2, culminating in level 9, and extending from east to west. The remains also show root etching and pitting on the surface. 7% of the total remains recovered from Chultun C-1 were determined to be subadult material. Two right radii recovered indicate at least two subadults were present in the chultun. Chultun C-1 showed somewhat better condition of the skeletal material. The individuals interred appear to have been buried intentionally within the *chultun* terminating further use of the feature. Due to bioturbation and ceiling collapse, many of the remains were badly damaged, fragmented and shifted from their original positioning. These disturbances have also made it difficult to ascertain original body position relative to one another. The

rest of the chamber was almost sterile except for a ceramic deposit that was encountered in the southeastern area underneath the chamber's entrance.

Bone material recovered indicates that bodies were placed into the chultun, whole. Representative samples of the ribs, skull fragments and long bones were recovered. The remains do not indicate secondary burial as hand and foot bones were found in larger than expected amounts if this were so. Interestingly, only ten vertebrae were collected between the two chultuns, significantly less what than should have been present for the number of individuals.

Figure 1. Internal occipital protuberance.

Dentition

267 teeth were recovered from Chultun C-1. An additional 79 teeth were recovered from chultun B-2 for a total of 346 teeth. Table 1 illustrates the number of each type of tooth recovered from the two chultuns. A majority of the teeth were recovered in relatively good condition. Molars constituted the largest portion of the teeth with 81 samples and show extreme wear. 59 canine recovered would indicate that there are a total of 14 individuals present between the two chultuns. However, both the incisors and molars indicate the presence of six to nine individuals recovered between the two chultuns, consistent with MNI findings as determined by the bone material. The large quantity of canine teeth indicates a cache of teeth buried with the individuals. The teeth were found scattered throughout the chultun, most likely due to bioturbation.

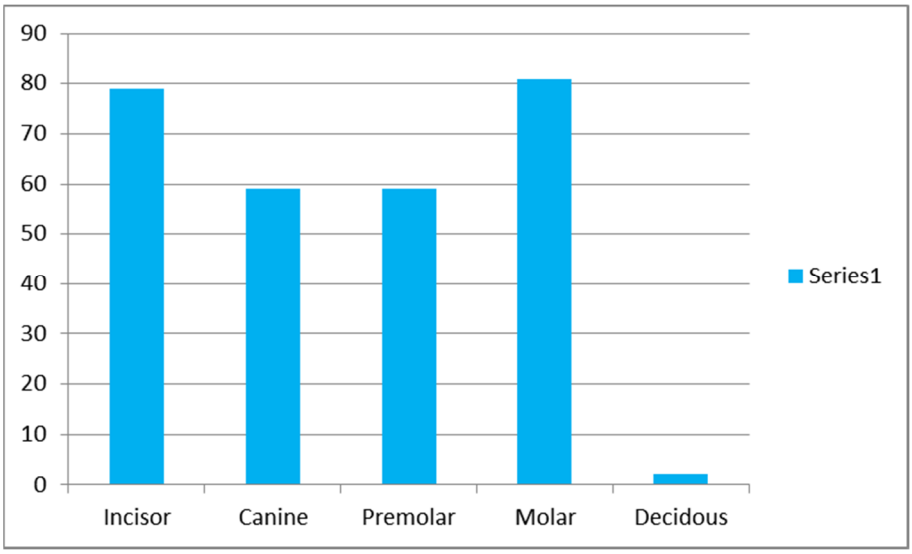

Table 1. Frequency of Teeth Recovered from Both Chultun B-2 and Chultun C-1.

Thirty-six teeth from Chultun C-1 and 3 teeth from B-2 show modification to either the occlusal edge, the angles of the crown, both angles of the crown symmetrically modified, asymmetrical modification of both the occlusal edge and angles of the crown or both the occlusal edge and labial face of the crown (Romero 1965). Table 2 illustrates the frequencies for dental modification classification types found with the material, as determined by Romero's (1965) chart. Eleven different modification types were identified in the material, the most common type being A4 which shows modification to the occlusal edge only. Figure 2 shows an example of modified incisors recovered from Chultun C-1. Further study of the teeth is necessary to determine, age, potential diet, and use of modified teeth for caching with the burials.

This large quantity of modified teeth potentially indicates cultural status or affiliation of the individuals buried in Chultuns B-2 and C-1 (see figure 2). Elena Gonzalez et al. (2007) as well as other scholars have suggested that the occurrence of caching teeth with burials may be an indication of elite status (Becker 1973; Romero 58, Smith 1972). Tiesler (2001) suggests the potential connection of dental modification as a means of local family organization. Finally, Konnild (nd) and Oliveres (1998) have argued for the use of dental modification as a rite of passage or having religious connotations. Along with the human teeth, a single dog canine (figure 3) displaying a conically drilled hole through the root was also recovered from Chultun C-1 level 5.

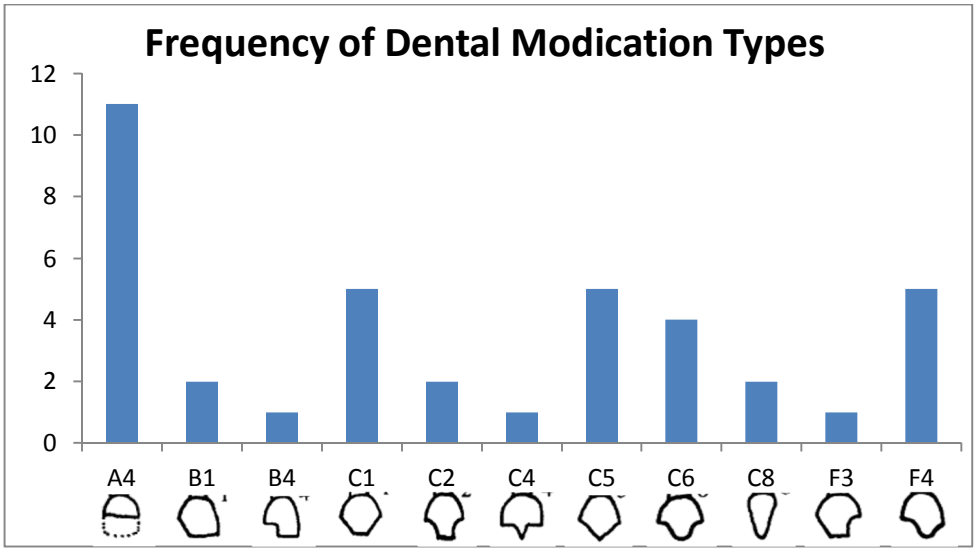

Table 2. Frequency of Dental Modification Types from Chultun B-2 and Chultun C-1.

Figure 2. Modified Incisors from Chultun C-1.

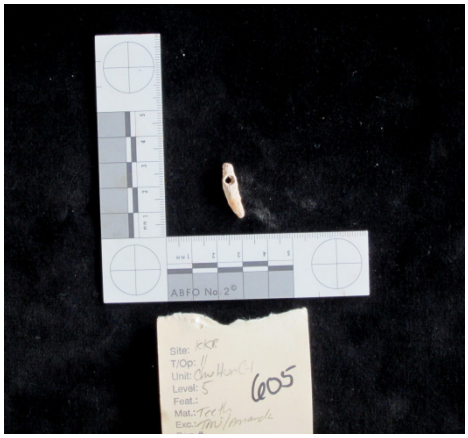

Figure 3. Faunal tooth with a hole drilled into to the root.

Future study of the bones should focus around the determination of age of the individuals and potential manner of death. DNA testing of the bone material would also be useful in order to determine if individuals buried together are consangeously related. This becomes especially important as the function of chultun use is re-examined for earth shrine mortuary practices involving ancestor veneration.

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CHAPTER 5

KA'KABISH CERAMIC ANALYSIS: EXAMINATION OF CERAMICS FROM THREE CRITICAL CONTEXTS

by
Kerry L. Sagebiel

Since the Ka'Kabish Archaeological Research Project began in 2005, 653 lots have been investigated and 633 have had associated sherds. The author joined the project in 2012 and has conducted two field seasons of laboratory work and has analyzed 402 (64%) of the lots containing associated sherds. Of the 231 lots not analyzed by the author, nearly all are small surface collections from settlement zone survey work completed before 2012. Three additional lots from the Group D South Plaza (Lots 282, 353, 438) were analyzed fully by Alice Gomer (2013a) for her master's thesis. The author assisted in the analysis, but has not fully analyzed the lots for herself. Those analyses are not included here (see Gomer 2013a, 2013b). All other lots from the site center have been analyzed by the author and all excavated lots from the settlement zone, along with surface collections from 2012 and 2013 from the settlement zone, have been analyzed by the author.

Although the author has begun to re-analyze the sherds collected before she joined the project in 2012, only the data from the two areas of major excavations that have provided the most ceramic data so far are discussed here—Operation 8 in the Group D South Plaza and the two chultun excavations (Chultuns B-2 and C-1). The data presented here are solely from the author's analysis and do not include data from previous analyses (for previous analyses see Aimers 2010; 2012).

Methods

Sherds equal to or greater than the size of a United States quarter (ca. 2.5 cm), as well as smaller sherds with diagnostic features (e.g., decoration, appendages), have been collected from all excavated contexts at Ka'Kabish. Some special contexts, particularly the two chultuns (Chultuns B-2 and C-1) and the "smash and trash" deposit (Operation 8 in the Group D South Plaza), have had 100% of sherds collected. Once in the laboratory, bags of sherds were logged into the log books with their provenience information and checked that they had correct labels and tags. The sherds were washed with plain water (soaking was avoided) and soft toothbrushes, unless fugitive paint or other decoration was present. They were dried on ¼-inch mesh screen along with their associated bags and tags. Once dry, they were re-bagged with new bags and tags made as necessary. The sherds were also labeled (for full discussion of laboratory procedures see Gomer and McCollum 2012). The sherds were then ready to be analyzed.

Analysis followed the type/variety/mode method of analysis (Gifford 1976; Sagebiel 2005; Smith et al. 1960). An initial analysis separated the sherds into proposed types and varieties and was used to help date the lots. A second, more intensive analysis of diagnostic sherds (e.g., rims, bases, handles, painted body sherds) has emphasized attribute analysis, particularly of form and visual paste characteristics (for information on petrographic analyses see Gomer 2013a). The latter data are still being processed and analyzed by the author.

The following table presents the time periods referred to in this report. The associated dates are preliminary and are largely based on ceramic cross dating with other southern lowland Maya sites, particularly in Northern Belize. In this report, no complex names are being provided. The previously proposed complex names (Haines 2012) are being discontinued because most have been used at other sites previously. New complex names for Ka'Kabish are currently under consideration.

Period Name	**Dates**
Late Post-Classic	a.d. 1350+
Middle Post-Classic	a.d. 1200/1250–1350
Early Post-Classic	a.d. 900/1000–1200/1250
Terminal Classic	a.d. 750–900/1000
Late Classic	a.d. 600–750
Early Classic	a.d. 300–600
Late Formative	400 b.c.–a.d. 300
Late Middle Formative	600–400 b.c.
Early Middle Formative	800–600 b.c.

Group D South Plaza (Operation 8)

Excavations in the South Plaza of Group D (Operation 8) have taken place between 2010 and 2013. Except where indicated, the author has analyzed or re-analyzed all lots from those excavations. The stratigraphy in the Group D South Plaza is complex and is still being worked out through analysis and continued excavation; therefore, no attempt is made here to present correlated stratigraphy across the entire operation. Instead, the following tables list the lots numerically by level within each unit. Although not necessarily representative of their stratigraphic order, the numeric levels are generally reflective of the stratigraphy and are the best evidence so far of the ceramic sequence of Ka'Kabish. Although no final, comprehensive set of Harris matrices has been created for Operation 8, the levels of each unit were analyzed by the author in stratigraphic order in the field whenever possible based on the preliminary Harris matrices provided. Using the preliminary excavation and analysis data, some initial observations about the Ka'Kabish ceramic sequence and about possible special activities that occurred in the South Plaza of Group D are presented here.

Early Middle Formative

So far, no Early Middle Formative deposits have been encountered at Ka'Kabish. However, Early Middle Formative ceramics have been found mixed into later deposits, particularly in the lower levels of the Group D South Plaza. The ceramics tentatively belong to the Swasey/Bladen sphere of Northern Belize (Kosakowsky 1987; Kosakowsky and Pring 1998) and include types that are likely part of the following ceramic groups: Copetilla (Copetilla Unslipped), Consejo (Consejo Red, Backlanding Incised, Barquedier Grooved-incised, Fireburn Red-and-cream, and Cudjoe Composite), Machaca (Machaca Black and Chacalte Incised), Quamina (Quamina Cream and Tower Hill Red-on-cream), and Chicago (Chicago Orange). The number of these sherds is large enough that they suggest some type of occupation at or near the Ka'Kabish site center during the Early Middle Formative.

Late Middle Formative

The Late Middle Formative at Ka'Kabish is still in the process of being sorted out from the Late Formative. However, it is likely that the lower levels of the Group D South Plaza date to the Late Middle Formative based on both the ceramics and related radiocarbon dates (six radiocarbon dates that have a 2-sigma range between 799–388 b.c.). Alice Gomer examined the "smash and trash" deposit in the lower levels of the Group D South Plaza (Lots 282, 353, and 438) for her master's thesis and has noted that many of the sherds originally thought to be Late Formative are more than likely Late Middle Formative and are similar to the Lopez Complex of Cuello (Gomer 2013a, 2013b; Kosakowsky 1987). The groups likely represented are: Richardson Peak (Richardson Peak Unslipped), Joventud (Joventud Red, Guitara Incised, and Desvario Chamfered), Chunhinta (Chunhinta Black and Deprecio Incised), Pital (Pital Cream), Muxanal (Muxanal Red-on-cream), and Chicago (Chicago Orange).

The difficulty in separating out the Late Middle Formative and Late Formative sherds is due to similarities and overlap primarily in slip and paste. Although some have the dark red to purple slip sometimes found on Joventud Group sherds, others appear to have a bright red slip that is very similar to that of the Sierra Group. The pastes also often have sherd inclusions, which is less common in the Joventud Group and more common in the Sierra Group (Gomer 2013b:33). However, the forms of many of these sherds are more similar to those of the Lopez Complex as is much of the incised decoration, which suggests that there are transitional sherds in the "smash and trash" deposit (Gomer 2013b:32). Within this potentially transitional deposit are also sherds that are more typical of the Swasey/Bladen Complex of the Early Middle Formative as well as sherds that are more similar to the Late Formative Cocos Complex of Cuello. Given that the center point of the radiocarbon dates is about 600 b.c. and that the deposit contains many sherds that appear to have both Late Middle Formative and Late Formative

attributes, it seems likely that the "smash and trash" event or events occurred sometime during the Late Middle Formative between about 600–400 b.c.

Late Formative

The Late Formative ceramics at Ka'Kabish also appear to be similar to the Cocos Complex of Cuello (Kosakowsky 1987). They likely include the following groups: Richardson Peak (Richardson Peak Unslipped), Sapote (Sapote Striated), Sierra (Sierra Red, Ahchab Red-and-buff, Society Hall Red, Laguna Verde Incised, and Puletan Red-and-unslipped), Polvero (Polvero Black and Lechugal Incised), Flor (Flor Cream), and Chicago (Chicago Orange). It is also possible that the Matamore Group (Matamore Dichrome) is represented, but this has yet to be confirmed. Although Richardson Peak Unslipped and Sapote Striated may be represented, more work needs to be done on the unslipped and striated sherds in order to determine how closely they relate to those types. The Formative Chicago Orange types are also very difficult to differentiate at this point, which is confounded by the fact that some may be eroded Ramgoat Red (Gomer 2013b:30).

It is possible that there is a late facet of the Late Formative (Terminal Formative) at Ka'Kabish. There are deposits in the Group D South Plaza stratigraphically between Late Formative and Early Classic deposits that contain mostly Late Formative sherds (Sierra and Polvero Groups) along with a copious amount of Society Hall Red (noted as increasing in frequency over the Late Formative at Cuello [Kosakowsky 1987:67]) and what may be Puletan Red-and-unslipped sherds. These contexts sometimes also contain Rio Bravo Red (Sagebiel 2005) and Sapote Striated sherds, which otherwise have so far been fairly rare at Ka'Kabish. There is also an unslipped "crud ware" restricted to small round bowls that occurs at a high frequency in these deposits as well as a large number of small slipped bowls. It is unclear at this point whether the addition of these types is strictly a factor of chronology or if they are indicative of specialized deposits related to feasting (Haines and Sagebiel 2013). It should be noted that no "Protoclassic" pottery has been found at Ka'Kabish yet (resist wares, mammiform feet, etc.). There is also the possibility that the Puletan Red-and-unslipped type continued to be used well into the Early Classic, although this needs further investigation.

Early Classic

Most of the latest construction phases in Ka'Kabish's site center date to the Early Classic and this appears to be true in the South Plaza of Group D. The Early Classic ceramics fit well within the established Peten ceramic groups (Smith 1955; Smith and Gifford 1966), including Aguila (Aguila Orange and Pita Incised), Balanza (Balanza Black and Lucha Incised), Pucte (Pucte Brown), and Dos Arroyos (Dos Arroyos Polychrome) along with unidentified Early Classic red and cream types.

Identifiable Early Classic striated and unslipped types have been rare, and it is possible that Puletan Red-and-unslipped or a very similar type continued to be used in the Early Classic.

Late Classic

Identifiable Late Classic types have been exceedingly rare at Ka'Kabish so far and all have been mixed into deposits with later sherds. No context has yet been encountered that only contains Late Classic (Tepeu 1 and 2) sherds.

Terminal Classic and Post-Classic

The surface and near-surface finds across Ka'Kabish, both in the site center and the settlement area, often consist of a mix of Terminal Classic and Early Post-Classic sherds. So far, it has been difficult to conclusively separate out the two time periods. These sherds include striated jars with "arrowhead" rims that have variously been named Alexanders Striated (Gifford 1976), Dumbcane Striated, Blue Creek Striated, Freshwater Striated (Aimers 2012; M^{c}Lellan 2012), and Chambel Striated (M^{c}Lellan 2012). Those with a red washed or slipped neck have been labeled as Red Neck Mother (M^{c}Lellan 2012) (Figure 1).

Figure 1. Red Neck Mother.

They are currently tentatively being separated by the names Dumbcane Striated (Fry 1987, 1989) and Red Neck Mother Striated (Chase 1982) until there is a larger sample and more comparisons can be made. However, they clearly are similar to the other Terminal Classic and Early Post-Classic striated types that occur across Northern Belize, no matter the name used. Outcurved plates and pedestaled chalices have been recovered that are very similar to Zakpah Orange-red at Lamanai (Aimers 2012:60) (Figure 2),

along with various red slipped types, some of which may belong in the Payil Group (Aimers 2012). Somewhat fugitively painted polychromes, similar to the unnamed type at Lamanai (Aimers 2012) have also been found (although there is a possibility that at least some of these date to the Early Classic). Thick, striated comals of unidentified type have also been found, including on the surface of Operation 8. In sum, the later deposits at Ka'Kabish have been poorly preserved making identification difficult. However, the two chultuns provide some evidence that may allow a differentiation of the Terminal Classic and Post-Classic time periods in the future (see Chultuns below).

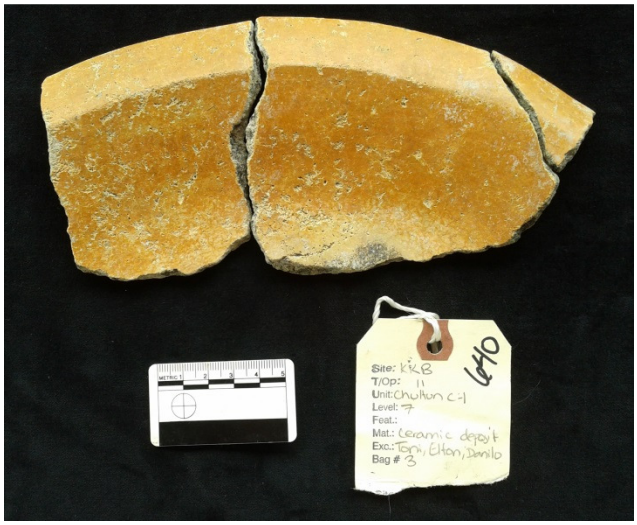

Figure 2. Zakpah Orange-Red

Operation 8 Unit 1

Lot	Level	Ceramic Date of Lot	Identifiable Sherds	Total	Comments
162	1	Terminal Classic/Early Post-Classic?	4	36	eroded Terminal Classic/Early Post-Classic
163	2	Late/Terminal Classic?	5	31	Tinaja Group, possible slate ware
164	3	Early Classic?	12	25	Aguila and Balanza Groups
165	4	Early Classic	59	89	Aguila and Dos Arroyos Groups
167	5	Early Classic	24	48	Aguila Group
166	6	Early Classic?	10	26	Aguila Group
168	7	Early Classic	6	19	Aguila Group
169	8	Early Classic	65	106	Aguila, Balanza, Dos Arroyos Groups
170	9	Late Formative	87	116	Sierra and Polvero Groups, Middle Formative Groups
171	10	Late Formative	196	369	Sierra, Polvero, and Flor Groups
172	11	Late Formative	74	121	Sierra Group
202	12	Late Formative	30	44	Sierra and Polvero Groups
205	13	Late Formative	107	316	Sierra and Polvero Groups
249	14	Late Formative	20	39	Sierra Group
466	14	Late Formative? Late Middle Formative?	101	258	Joventud and Chunhinta Groups?, lots of Consejo Group
263	15	Late Formative? Late Middle Formative?	32	35	Joventud and Chunhinta Groups?
472	15	Late Formative? Late Middle Formative?	326	863	Joventud and Chunhinta Groups?, lots of Consejo Group
282*	15	Late Formative? Late Middle Formative?			
283	15 and 16	Late Formative? Late Middle Formative?	13	24	Sierra Group?
480	16	Late Formative? Late Middle Formative?	32	82	Joventud Group?, lots of Consejo Group

**Sagebiel did not analyze, see Aimers 2012; Gomer 2013a, 2013b*

Operation 8 Unit 2

Lot	Level	Ceramic Date of Lot	Identifiable Sherds	Total	Comments
287	1	Classic period?	5	19	
288	2	Terminal Classic/Early Post-Classic?	24	94	eroded Terminal Classic and Early Post-Classic
289	3	Early Classic	13	17	Aguila and Balanza Groups
290	4	Early Classic	20	34	Aguila and Balanza Groups
291	5	Early Classic	25	81	Aguila and Balanza Groups
294	6	Early Classic	13	21	Aguila, Balanza, Dos Arroyos Groups
295	8	Late Formative/Early Classic transition?	130	322	Rio Bravo and Sapote Groups
324	9	Late Formative/Early Classic transition?	21	26	
343	10	Late Formative	76	94	Sierra and Polvero Groups
344	11	Late Formative	58	87	Sierra Group
353*	12	Late Formative? Late Middle Formative?			
416**	13	Late Formative? Late Middle Formative?	103	148	Joventud and Chunhinta Groups?, lots of Consejo Group
417	14	Late Formative? Late Middle Formative?	201	269	Joventud and Chunhinta Groups?, lots of Consejo Group
418	15	Late Formative? Late Middle Formative?	26	39	Joventud Group?, lots of Consejo Group
438*	16	Late Formative? Late Middle Formative?			

**Sagebiel did not analyze, see Aimers 2012; Gomer 2013a, 2013b*
***Units 1 and 2 Level 13*

Operation 8 Unit 2 South

Lot	Level	Ceramic Date of Lot	Identifiable Sherds	Total	Comments
510	3	Classic period	26	92	eroded Classic period
511	4	Early Classic	27	127	Aguila and Balanza Groups
512	5	Early Classic	43	148	Aguila and Balanza Groups
513	6	Early Classic	53	371	Aguila and Balanza Groups
514	7	Early Classic	297	1033	Aguila and Dos Arroyos Groups, lots of Late Formative
516	8	Late Formative/Early Classic transition?	544	901	most sherds are from possible Puletan Red-and-unslipped and possible transitional or Terminal Formative types
517	9	Late Formative/Early Classic transition?	970	2294	most sherds are from possible Puletan Red-and-unslipped and possible transitional or Terminal Formative types
518	10	Late Formative/Early Classic transition?	105	348	Sierra and Polvero Groups and possible transitional or Terminal Formative types
519	11	Late Formative/Early Classic transition?	432	1392	Sierra and Polvero Groups and possible transitional or Terminal Formative types
520	12	Late Formative/Early Classic transition?	142	225	Sierra and Polvero Groups and possible transitional or Terminal Formative types, some Middle Formative Groups
522	14	Late Formative?	4	7	Sierra Group

Operation 8 Unit 3

Lot	Level	Ceramic Date of Lot	Identifiable Sherds	Total	Comments
419	1	Post-Classic?	15	137	eroded Post-Classic
420	2	Post-Classic?	105	564	eroded Post-Classic
439	3	Early Classic	42	220	Aguila and Balanza Groups
440	4	Early Classic	142	428	Aguila and Balanza Groups
460	5	Early Classic	256	1239	Aguila and Balanza Groups
461	6	Early Classic	215	800	Aguila and Balanza Groups, lots of Late Formative
462	7	Late Formative/Early Classic transition?	569	1325	most sherds are from possible Puletan Red-and-unslipped and possible transitional or Terminal Formative types
465	8	Late Formative/Early Classic transition?	1166	3528	Sierra and Polvero Groups and possible transitional or Terminal Formative types
473	9	Late Formative/Early Classic transition?	186	433	Sierra and Polvero Groups and possible transitional or Terminal Formative types
474	10	Late Formative/Early Classic transition?	22	154	Sierra Group and possible transitional or Terminal Formative types
478	11	Late Formative	50	267	Sierra and Polvero Groups
479	12	Late Formative	71	179	Sierra and Polvero Groups
483	13	Late Formative	36	245	Sierra Group
488	14	Late Formative	69	89	Sierra and Polvero Groups
489	15	Late Formative	18	18	Sierra Group

Operation 8 Unit 4

Lot	Level	Ceramic Date of Lot	Identifiable Sherds	Total	Comments
539	1	Late Classic?	7	58	possible eroded Late Classic
540	2	Late/Terminal Classic?	4	120	Achote Group
541	3	Terminal Classic/Early Post-Classic?	10	185	Achote, Dumbcane, Tinaja Groups
542	4	Terminal Classic/Early Post-Classic?	13	166	Dumbcane, unidentified Classic slipped
584	5	Early Classic	42	163	Aguila and Balanza Groups
591	6	Early Classic	98	245	Aguila, Balanza, Dos Arroyos Groups
600	7	Late Formative/Early Classic transition?	140	238	1 small Aguila Orange sherd, lots of Formative
601	8	Late Formative/Early Classic transition?	734	1514	Sierra and Polvero Groups, possible transitional or Terminal Formative types, lots of Late Middle Formative
606	9	Late Formative/Early Classic transition?	38	71	Sierra, Polvero, Flor Groups; possible transitional or Terminal Formative types
607	10	Late Formative/Early Classic transition?	36	75	Sierra and Flor Groups, possible transitional or Terminal Formative types
613	11	Late Formative/Early Classic transition?	41	85	Sierra and Polvero Groups, possible transitional or Terminal Formative types
617	12	Late Formative	6	13	Sierra Group, possible Late Middle Formative/Late Formative transitional types
618	13	Late Formative	45	66	Sierra Group

Operation 8 Unit 5

Lot	Level	Ceramic Date of Lot	Identifiable Sherds	Total	Comments
543	1	Early Classic?	5	53	
544	2	Post-Classic	13	172	Early/Middle Post-Classic red slipped?
545	3	Early Classic	216	531	Aguila, Balanza, Dos Arroyos Groups
585	4	Early Classic	38	137	Aguila and Balanza Groups
586	6	Early Classic	198	345	Aguila, Balanza, Dos Arroyos Groups
592	7	Early Classic	176	338	Aguila Group, a lot of Formative
593	8	Early Classic	122	210	Balanza and Dos Arroyos Groups, lots of Formative
608	9	Early Classic?	28	42	Aguila Group, lots of Formative
609	10	Late Formative	93	229	Sierra and Polvero Groups
610	11	Late Formative?	69	188	1 very small Aguila Orange sherd
621	12	Late Formative	37	75	Sierra, Polvero, and Flor Groups
622	13	Late Formative	168	390	Sierra Group, some Late Middle Formative types
627	14	Late Formative	64	125	Sierra, Polvero, and Flor Groups
628	15	Late Formative?	5	14	Sierra Group
630	16	Late Formative	24	45	Sierra Group
631	17	Late Formative	24	41	Sierra Group
636	17a	Late Formative	27	31	Sierra and Polvero Groups, some Late Middle Formative types
632	18	Late Formative	150	192	Sierra, Polvero, and Flor Groups, some Late Middle Formative types and Mamon/Chicanel transitional types
638	18a	Late Formative	373	623	Sierra, Polvero, and Flor Groups, some Late Middle Formative types and Late Middle/Late Formative transitional types
641	19	Late Formative?	1	1	Sierra Group
642	20	Late Formative?	1	3	Sierra Group
647	21	Late Formative	69	109	Sierra and Polvero Groups, some Late Middle Formative types and Late Middle/Late Formative transitional types
648	22	Late Formative?	18	31	Sierra Group

Operation 8 Unit 6

Lot	**Level**	**Ceramic Date of Lot**	**Identifiable Sherds**	**Total**	**Comments**
547	1	Post-Classic	6	39	eroded Post-Classic
548	2	Post-Classic?	16	94	eroded Post-Classic
549	3	Late/Terminal Classic	21	107	
550	4	Late/Terminal Classic	12	48	
563	5	Post-Classic?	118	374	1 Post-Classic and 3 Late Classic sherds with many Early Classic
564	6	Early Classic	225	437	Aguila, Balanza, Dos Arroyos Groups
587	7	Early Classic	428	675	Aguila and Balanza Groups
594	8	Early Classic?	36	83	Aguila Group, lots of Late Formative
595	9	Early Classic?	41	130	1 very small Aguila Orange sherd, the rest are Late Formative
611	10	Early Classic?	50	82	Aguila Group, lots of Late Formative
612	11	Late Formative	164	299	Sierra, Polvero, and Flor Groups with some Middle Formative
614	12	Late Formative	11	25	Sierra Group
615	13	Late Formative	15	34	Sierra Group with some Middle Formative
623	14	Late Formative	12	33	Sierra and Polvero Groups with some Middle Formative
625	15	Early Middle Formative?	1	6	1 Consejo Group sherd

Operation 8 Unit 7

Lot	Level	Ceramic Date of Lot	Identifiable Sherds	Total	Comments
551	1	Indeterminate	0	40	
552	2	Late/Terminal Classic?	12	410	eroded Late/Terminal Classic
553	3	Early Classic?	5	14	Aguila Group
554	4	Early Classic?	3	6	Aguila Group

Operation 8 Unit 8

Lot	Level	Ceramic Date of Lot	Identifiable Sherds	Total	Comments
588	1	Indeterminate	0	60	
589	2	Post-Classic?	7	44	Post-Classic red slipped
596	3	Post-Classic?	8	97	Post-Classic red slipped
602	4	Early Classic?	1	29	Aguila Group
603	5	Post-Classic?	8	51	Post-Classic red slipped
604	6	Early Classic	31	87	Aguila and Balanza Groups, lots of Late Formative
616	7	Early Classic	30	60	Aguila, Balanza, Dos Arroyos Groups
619	8	Early Classic?	3	11	Dos Arroyos Group
620	9	Early Classic?	2	3	Aguila and Dos Arroyos Groups
624	10	Early Classic	2565	6805	Aguila, Balanza, Dos Arroyos Groups
633	11	Early Classic	71	163	Aguila and Balanaza Groups, lots of Formative sherds
634	12	Late Formative?	13	15	Sierra Group
635	13	Indeterminate	0	3	
637	14	Late Formative	83	219	Sierra and Polvero Groups, lots of Late Middle Formative
644	15	Late Formative	150	232	Sierra and Polvero Groups
645	16	Late Formative? Late Middle Formative?	17	23	Sierra Group, lots of Middle Formative
646	17	Late Formative? Late Middle Formative?	26	69	Sierra Group, lots of Middle Formative

Chultuns

The two chultuns excavated by Toni Gonzalez for her master's thesis (Gonzalez 2013) are located in the Ka'Kabish site center. Both contained burials and Chultun C-1 has produced a large number of copper artifacts. The two chultuns are good primary contexts with lots of ceramics. Chultun B-2 also has associated radiocarbon dates. These two chultuns have excellent potential for teasing out the Terminal Classic and Post-Classic ceramic sequence at Ka'Kabish.

Chultun B-2

All levels in Chultun B-2 contained Late/Terminal Classic Peten-style sherds and Terminal Classic/Early Post-Classic sherds typical of the Lamanai area and eastern Belize (see Table Chulton B-2). The only difference is that the upper levels (Levels 1–6) had clearly definable eroded (based on paste and form) and red-slipped Post-Classic sherds, whereas, the lower levels (Levels 7–9) lacked these. Certainly their distinctive red paste and forms (jars with tall, outflared necks and small folded rims) stand out from the

rest of the sherds and are similar to other Early/Middle Post-Classic sherds found elsewhere in Northern Belize (Padilla et al. 2013; Sagebiel 2006). Interestingly, although most of the sherds in the chultun are Terminal Classic/Early Post-Classic, the two radiocarbon dates from the chultun are Middle–Late Post-Classic (a.d. 1263–1394 and a.d. 1296–1418, two-sigma calibration). This, of course, begs the question as to whether the Late/Terminal Classic ceramics were still in use at such a late date or whether the radiocarbon dates came from some later use (trash dumping?) of the chultun that is associated with the red-slipped Post-Classic sherds. The Late/Terminal Classic types (compared to La Milpa, it is likely that these are largely Terminal Classic [Sagebiel 2005], including Tinaja Red, Achote Black, Garbutt Creek Red, Lemonal Cream, Cambio Unslipped, and Encanto Striated) found in the chultun have so far been uncommon in the collections from Ka'Kabish. It is interesting that they are found throughout the chultun alongside Dumbcane Striated, Red Neck Mother, and the Lamanai polychromes more typical of the area. This suggests that the latter types (particularly Lamanai polychrome) may have been used in the Terminal Classic alongside the more Peten-centric types, although they could also be later post-burial additions.

Chultun C-1

Compared to Chultun B-2, Chultun C-1 seems to have a more uniform distribution of ceramic types with all levels having Terminal Classic/Early Post-Classic types (Red Neck Mother, Zakpah Orange-red , and other eroded sherds) as well as unidentified Post-Classic slipped types (red, black, cream, and possibly brown) as well as unidentified Post-Classic unslipped and striated types (see Table Chultun C-1). What differentiates Chultun C-1 from B-2 is the relative lack of Late/Terminal Classic sherds and the lack of two Terminal Classic/Early Post-Classic types—Lamanai polychrome and Dumbcane Striated (see Table Chultuns Compared). However, Chultun C-1 has Zakpah Orange-red sherds, whereas, Chultun B-2 does not. Both chultuns have Red Neck Mother sherds and unidentified Post-Classic red-slipped types (including at least one incised grater bowl [Figure 3]), although there are many fewer in Chultun B-2. Further side-by-side analysis of the sherds from these two chultuns, along with more radiocarbon dates, may help clarify their relative dates, although it is likely (particularly given the presence of copper artifacts in Chultun C-1 along with the ceramics) that the burials in Chultun B-2 date to the Terminal Classic/Early Post-Classic and the burials in Chultun C-1 date to later in the Post-Classic.

Figure 3. Post-Classic Grater Bowl

Ka'Kabish Ceramics Chultun B-2

Lot	Level	Late Formative	Unidentified Preclassic	Early Classic	Late and Terminal Classic	Terminal Classic/Early Post-Classic	Unidentified Post-Classic	Unidentified	Count	Total
441	1				Late Classic Red				1	
							Eroded Post-Classic		3	
							Post-Classic red slipped		1	
								Unidentified	92	97
457	2				Late Classic Red				3	
					Eroded Late/Terminal Classic				2	
							Eroded Post-Classic		1	
							Post-Classic red slipped		2	
								Unidentified	239	247
458	3				Late Classic Red				2	
					Tinaja Group				1	
						Dumbcane Group			3	
						Red Neck Mother			1	
								Unidentified	187	194
463	4				Late Classic Red				7	
					Late Classic brown				3	
					Late Classic polychromes				4	
					Tinaja Group				4	
					Achote Group				6	
					Garbutt Creek Group				2	
					Lemonal Cream				2	
					Eroded Late/Terminal Classic				2	
							Eroded Post-Classic		3	

Lot	Level	Late Formative	Unidentified Preclassic	Early Classic	Late and Terminal Classic	Terminal Classic/Early Post-Classic	Unidentified Post-Classic	Unidentified	Count	Total
							Post-Classic red slipped		13	
							Post-Classic unslipped		1	
								Unidentified	58	105
464	5			Balanza Group					1	
					Belize Group				2	
					Late Classic red				78	
					Eroded Late Classic				5	
					Cambio Group				1	
					Tinaja Group				7	
					Achote Group				88	
					Garbutt Creek Group				23	
					Lemonal Cream				4	
					Eroded Late/Terminal Classic				8	
						Lamanai polychrome			1	
						Dumbcane Group			7	
							Post-Classic red		2	
								Unidentified	361	588
509	6				Late Classic red				1	
					Tinaja Group				6	
					Achote Group				1	
					Garbutt Creek Group				1	
						Dumbcane Group			1	
							Eroded Post-Classic		1	
								Unidentified	45	56
521	7	Sierra Group							2	
			Eroded Preclassic						2	
					Belize Group				2	
					Late Classic red				8	
					Tinaja Group				11	

Lot	Level	Late Formative	Unidentified Preclassic	Early Classic	Late and Terminal Classic	Terminal Classic/Early Post-Classic	Unidentified Post-Classic	Unidentified	Count	Total
					Achote Group				7	
					Garbutt Creek Group				1	
						Lamanai polychrome			6	
						Dumbcane Group			1	
								Unidentified	113	153
523	8				Late Classic polychromes				1	
					Belize Group				2	
					Late Classic red				19	
					Late Classic orange				1	
					Encanto Group				8	
					Tinaja Group				7	
					Achote Group				52	
					Garbutt Creek Group				11	
						Lamanai polychrome			198	
						Dumbcane Group			6	
						Red Neck Mother			1	
								Unidentified	451	757
526	9	Sierra Group							15	
					Late Classic red				1	
						Lamanai polychrome			8	
								Unidentified	85	109

Ka'Kabish Ceramics Chultun C-1

Lot	Level	Late Formative	Unidentified Preclassic	Early Classic	Late and Terminal Classic	Terminal Classic/Early Post-Classic (TC/EPC)	Unidentified Post-Classic	Unidentified	Count	Total
556	1				Eroded Late/Terminal Classic				1	
						Zakpah Orange-red			1	
							Eroded Post-Classic		3	
								Unidentified	21	26
557	2					Eroded TC/EPC			1	
								Unidentified	1	2
558	3		Eroded Preclassic						1	
						Eroded TC/EPC			1	
							Eroded Post-Classic		4	
								Unidentified	14	20
597	4					Eroded TC/EPC			1	
						TC/EPC red			1	
							Eroded Post-Classic		1	
								Unidentified	2	5
605	5			Eroded Early Classic					1	
						Zakpah Orange-red			14	
						Red Neck Mother			2	
						Tinaja or Payil Red			6	
						TC/EPC black			1	
						Eroded TC/EPC			2	
							Post-Classic		3	

Lot	Level	Late Formative	Unidentified Preclassic	Early Classic	Late and Terminal Classic	Terminal Classic/Early Post-Classic (TC/EPC)	Unidentified Post-Classic	Unidentified	Count	Total
							black			
							Post-Classic unslipped		1	
							Eroded Post-Classic		2	
								Unidentified	61	93
639	6					Red Neck Mother			1	
								Unidentified	14	15
640	7			Aguila Group					1	
				Balanza Group					1	
						Red Neck Mother			98	
						Zakpah Orange-red			36	
							Post-Classic red		56	
							Post-Classic black		9	
							Post-Classic unslipped		3	
							Post-Classic striated		2	
								Unidentified	341	547
650	7					Red Neck Mother			1	
								Unidentified	1	2
651	8					Red Neck Mother			59	
						Zakpah Orange-red			6	
						Unslipped TC/EPC			3	
						Striated TC/EPC			2	
							Post-Classic red		11	
							Post-Classic		1	

Lot	Level	Late Formative	Unidentified Preclassic	Early Classic	Late and Terminal Classic	Terminal Classic/Early Post-Classic (TC/EPC)	Unidentified Post-Classic	Unidentified	Count	Total
							cream			
							Post-Classic black		3	
							Post-Classic brown		1	
								Unidentified	119	205
652	9	Sierra Group							1	
				Aguila Group					4	
				Early Classic red					2	
					Tinaja Group				4	
					Eroded Late/Terminal Classic				2	
						Red Neck Mother			64	
						Zakpah Orange-red			14	
							Post-Classic red		17	
							Post-Classic unslipped		3	
							Post-Classic black		8	
							Post-Classic brown		1	
								Unidentified	231	351
653	10	Sierra Group							2	
						Zakpah Orange-red			2	
							Post-Classic red		11	
								Unidentified	32	47
598	11							Unidentified	1	1

Comparison of Ceramics in Chultuns B-2 and C-1

Chultun	Tinaja Group/ other Late Classic red	Achote Group	Garbutt Creek Group	Lemonal Cream	Cambio and Encanto Groups	Other Late/ Terminal Classic	Lamanai poly-chrome	Dumb-cane Group	Red Neck Mother	Zakpah Orange-red	Other TC/ EPC	PC red	PC black	Other PC slipped	PC unslipped and striated	Other PC
B-2	156	154	38	6	9	26	214	18	2			18			1	8
C-1	4					3			226	73	13	95	23	3	14	10

Conclusions

The ceramics of Ka'Kabish require further analysis in order to definitively provide a dated ceramic sequence. However, the ceramics indicate occupation in or near Ka'Kabish beginning in the Early Middle Formative. By the Late Middle Formative, occupation of the site center is likely and continued at least through the Early Classic. The scarcity of Late Classic ceramics suggests some kind of occupation hiatus at Ka'Kabish. The burial in Chultun B-2 suggests at least use of the Ka'Kabish site center in the Terminal Classic/Early Post-Classic. Surface and near-surface finds both in the site center and the settlement zone, as well as the ceramics in Chultun C-1, suggest that occupation in and around Ka'Kabish may have rebounded somewhat by the Early Post-Classic and continued into at least the Middle Post-Classic and perhaps later.

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THE FINAL WORD

by
Dr. Helen R. Haines

Over the course of the last six years of research (2007-2013)[1] we have made great advances in understanding the history of Ka'Kabish and, on a larger scale, contributed to our knowledge of the ancient Maya socio-political dynamics of north-central Belize. This work, which has been largely funded by a grant from the Social Sciences and Humanities Research of Canada, has produced three Master's thesis (Tremain 2011a; Gomer 2013; McLellan 2012a) with another two more in progress (Gonzalez n.d; Lockett-Harris n.d.). Additionally, two undergraduate thesis (Heath 2011; Pitre 2011) were also produced along with four articles in the Belize Archaeology Research Reports (Haines 2008a, 2011a; McLellan and Haines 2013; Haines et al. *forthcoming 2014*) and two additional book chapters have been submitted for review (Haines n.d; Haines and Sagebiel n.d.). Moreover a total of 15 papers have been presented at various conferences (Aimer and Haines 2011; Gonzalez and Haines 2013, 2014; Haines 2008b, 2011b, 2012a, 2012b; Haines and Patterson 2008; Haines, et al. 2014; McLellan 2012b; Sagebiel and Aimers 2014; Tremain 2011b, 2011c, 2012; Verdugo et al. 2014) not including the five papers presented at the Belize Archaeology and Anthropology Symposiums (Haines 2007, 2010; Haines and Aimers 2011; Haines and Sagebiel 2013; McLellan 2012c), and two additional chapters are forth-coming in two books (Haines n.d.; Haines and Sagebiel n.d.)

These papers and publications were the produce of preliminary investigations into a variety of locations around the site, the purpose of which was to sample the area so as to formulate an idea as to the occupation and construction history of Ka'Kabish. Based on the data produced over the past six-years we know that the site was settled by the Middle Formative period (ca. 800-600 BC) as evinced by the thick, rich deposits buried below the south-eastern area of the Group D plaza (Haines 2012a; Haines, Sagebiel and Gomer 2013; Lockett-Harris 2013). The people had an active agenda of construction as seen in the series of platforms buried below the plaza (Lockett-Harris this volume; also Lockett-Harris 2013; Sinclair 2013), and also likely with the initiation of Structure D-9 (Tremain 2011a). There also is evidence of a developed ritual agenda as noted in the prolific ceramic deposit of reconstructable and partial vessels found at the north-east corner of the buried platform which may be evidence for feasting (Haines and Aimers 2011; Haines, Sagebiel and Gomer 2013). Social differentiation is present at this early date as evinced in the burial and mortuary offerings in Operation 8 (Haines 2012a; Lockett-Harris 2013). The

[1] No work was done in 2008.

inhabitants of Ka'Kabish were also clearly tied into long-distance trade networks that brought exotic materials such as marine shell for beads, and jade beads and pendants.

Evidence for ceremonial architecture and associated elite activity is more clearly present, and manifested in more detail in Late Formative period (ca. 400 BC – AD 250), which is keeping with evidence from other sites in Northern Belize. During this period we see the construction of the earliest phase of Structures D-4 (Tremain 2011a) and a series of platforms below the Group D plaza (Lockett-Harris this volume; also Lockett-Harris 2013; Sinclair 2013). Tantalising evidence for possible additional buried Formative period material was recovered deep below Structure FA-6. This material was uncovered during the investigation of a looted tomb (FA-6/1) in 2010 (Budhoo 2011); however, due to damage to the tomb by the looters the area was unstable and therefore only a small area could be investigated. Future work is planned for in front of the FA-6 building with the hope that the acropolis platform upon which this building, and several other pyramid structures, sits may reveal more of this deposit.

Additionally, this tomb, constructed during the late 5th or early 6th century provides evidence of that high status individuals resided at Ka'Kabish. The tomb is a corbel-vaulted structure that was once painted red. Remnants of dark red glyphs, seen on a small section of the wall, are believed to be a Classic period death statement (Helmke 2011). While the tomb was looted of virtually all its contents (only some obsidian blades remained likely from the shaft in the ceiling [Haines and Glascock 2012]) the architectural form and decoration are considered indicative of high status, possibly divine, rulers (Fitzsimmons 2009).

Ka'Kabish's place in the socio-political landscape of North-Central Belize and its relationship with Lamanai and other sites is expanding. The presence of a cocoon crypt identical in construction, and now the presence of ceramic material likely from the Ka'Kabish tomb that also exhibits a high degree of similarity to the ceramics found in the Lamanai cocoon tombs show linkages between the two centres. Although no dates are available for the Ka'Kabish cocoon tomb, the fact the cocoon crypts at Lamanai have been dated to the 6th century correlates with the epigraphic evidence that suggests that the fates of the two sites were at some point conjoined.

Imagery and a hieroglyphic inscription on Stela 9 suggests that the ruler depicted was a military overlord or Kaloomte' (Closs 1988; Grube and Martin 2004; Taube 1992). It appears that the date for this monument (AD 625), the life of the Kaloomte' (ca. late 6th century) and its corresponding destruction likely at the beginning of the Terminal Classic period (Pendergast 1988), correspond to a possible architectural construction hiatus at Ka'Kabish. Few structure have been identified dating this period, however, as the excavation of the site is still in its infancy, this could simply be a lack of data.

Of current interest is the rise in prominence, and substantial increase in wealth, at Altun Ha during this period. The site flourished in the Classic period, particularly in the Late Classic when we see two major bursts of construction. The first occurred ca. AD 650, and the second in the early 9th century when there was an "absolute explosion of construction" (Pendergast 1990:243). This building boom ended around AD 875, with the last major architectural modification occurring ca. AD 925. By AD 1000 the site was effectively abandoned, although we do see some Post-Classic activity at the site including a Lamanai-style chalice deposited on the top of Structure B-4. It is also during the Classic period, particularly the Late Classic period, that the occupants at the site appear, based on the contents of the various caches and tombs, to have achieved a degree of wealth and prominence somewhat at odds with the rather modest size of the site. The beginning of the Late Classic period saw the first of a long history of "surprisingly rich" tombs (Pendergast 1969:1). The most famous of these perhaps is Tomb B-4/7 – better known by its sobriquet "The Sun God's Tomb". Although this tomb only yielded three pieces of jade, one of these pieces is the largest carved jade object know from the Pre-Columbian world – the Kinich' Ahau. Of particular interest to us is that this tomb dates to AD 600-650. Successively, an additional six extremely rich graves were incorporated into the B-4 structure, the last one in the late 9th century.

We find it particularly interesting that the timing of the Lamanai Stela 9 monument coincides with the period of great material wealth and architectural construction at Altun Ha, and concurrent declines in architectural investment at Lamanai and an outright hiatus at Ka'Kabish. Graham (2006) postulates, and we concur, that Maya conquests were done not for territory but for control of tribute, with labour resources being a type of tribute. If Altun Ha did become the Overlords of Lamanai (based on Stuart's new interpretation of directional Ka'loomte glyphs [Stuart 2000]), and we surmise Ka'Kabish as well, this would account for the waning of these sites as resources were diverted to support the rulers of Altun Ha.

There are many other, albeit tenuous, threads of evidence that we have not had time to adequately explore that could be woven into this narrative; the presence of a Teotihuacan cache at Altun Ha, the fact that the headdress linked to a Teotihuacan ideological origin, the presence of Altun Ha ceramics at Lamanai and vice versa. It also is worth noting, that the hiatus at Ka'Kabish lasted until the early 9th century, and it is, perhaps not co-incidentally, that the revitalisation of Ka'Kabish occurs around the time that that Structure N10-27 and Stela 9 are destroyed. It is also of interest that several of the more accessible tombs in Structure B-4 at Altun Ha were desecrated (objects smashed and burned and the tombs partially in-filled with foreign material). Regrettably, there is currently no clear date for this activity, only that it occurred prior to the 10th century based on dates from an offering atop the structure.

While we not yet know the exact nature of the relationships between Ka'Kabish, Lamanai, and Altun Ha, along with the myrid other sites in the vicinity (e.g., Chau Hiix, El Posito, Cuello, Indian Creek, etc.). We do know that, contrary to our earlier idea that Ka'Kabish was abandoned at the end of the Classic period, with only the outlying settlement zones remaining inhabited, it now appears that residential groups adjacent to the site centre may also have continued to be occupied into the Early Post-Classic period (Gonzalez this volume).

It is also clear that contrary to our initial assumptions about Ka'Kabish, the city was likely an autonomous political entity from the Middle Formative to the Early Classic period. What ultimately happened at Ka'Kabish, and how great, or minor, a role it played in the Classic period politics of north-central Belize is still to be determined and will be the focus of investigations as we move forward in the coming years.

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[2] Longfellow "A Psalm of Life"

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