Actuncan Archaeological Project

Report of the tenth season 2017

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The Actuncan Archaeological Project: 
Report of the 2017 Field Season

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David Mixter, Saint Louis and Lisa LeCount, Tuscaloosa
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Chapter 1: The 2017 Field Season and Future Research Directions at Actuncan

David Mixter (Binghamton University)

The 2017 field season at Actuncan focused on two major research goals: understanding the layout and use of field systems at Actuncan and investigating the early sequence of the E-Group’s plaza construction. These two goals each build on Actuncan’s two major programs of research, which investigate the trajectories of Actuncan’s urban households and monumental construction respectively. The 2017 and upcoming 2018 field seasons represent a moment of transition for the Actuncan Archaeological Project (AAP), as Actuncan’s first phase of research, largely associated with household excavations, culminated in the presentation of this research in a symposium titled *Palimpsest Urbanism: Charting the Long-term Development of the Ancient Maya Center of Actuncan, Belize* organized by Lisa LeCount and I for the 83rd Annual Meeting of the Society for American Archaeology. Future research will grow the project’s second phase, focused on understanding Actuncan’s earliest settlements and the earliest foundations of Actuncan’s monumental construction dating to the Middle and Late Preclassic periods. This chapter will provide a very brief reflection on our archaeological research endeavors to date, their relationship to the 2017 investigations, and finally a discussion of future research directions.

**Summary of Research Efforts to Date**

Beginning in 2001, research at Actuncan, led by LeCount, focused on investigating households in an attempt to understand how the process of growing social stratification and the eventual adoption of divine kingship would appear in developmental trajectories of their residences. (LeCount and Blitz 2001; LeCount 2004; LeCount et al. 2011; Mixter et al. 2013; Mixter et al. 2014). This research has resulted in a surprising conclusion: institutionalized authority at Actuncan is first evident through a single planned construction event not through the gradual aggregation of power within incipient elite households. This finding suggests that the establishment of divine kingship resulted from a much more dramatic moment of collective action rather than the slow aggregation of power into individual hands (LeCount 2018). Nonetheless, this research has provided important context for the sifting position of Actuncan within the dynamic regional political environment from the establishment of the planned center around 200 B.C. to the site’s abandonment in the 10th century A.D. (LeCount et al. 2011; Mixter et al. 2013; Mixter et al. 2014). Additionally, the project’s intensive analysis of micro-archaeological activity area proxies and detailed collection of contextual information for recovered artifacts have contributed to studies focused on community integration, use of space, and economies (Fulton 2015; Heindel 2015; LeCount et al. 2016b; Shults 2012; Shults and LeCount 2013; Simova 2013). This work continues through ongoing artifact analysis and data construction by individual researchers. In 2017, however, Lisa LeCount and John Blitz began a concerted effort to analyze all artifact classes, beginning with groundstone manos and metates (Blitz and LeCount 2018), which will continued in 2018 by expanding to include obsidian and other non-local materials. This effort was aided by the construction of the project artifact database by Wade Tidwell (2018). He compiled all the annual artifact databases into a master excel file, and with the aid of Lisa LeCount assigned each lot to a ceramic phase and architectural context. This work was done by consulting LeCount’s ceramic databases and the
Harris Matrices and Analytical Units tables of each operation. Finally, excavation volume was calculated using bucket counts or lot size and depth for each lot. While our volume data are not perfect, LeCount and Blitz consider it critical for standardizing artifact data by time period or context.

Additionally, these household investigations have been expanded through the collection of geophysical remote sensing data and subsequent exploration of the disparate activities that took place within the open space between residences in the northern settlement zone (Blitz et al. 2012; LeCount et al. 2016a; Millar 2016; Walker 2012). This research continued in 2017 through Theresa Heindel’s on-going investigation, begun in 2016 (Heindel 2017), of agricultural field complexes located around the Actuncan urban center. In Chapter 2 of this report, Heindel presents the most recent results of this research. This includes expanded excavations of to two agricultural plot systems identified in Actuncan’s northern settlement zone and new research into the cobble mound system located below Actuncan in the floodplain along the western bank of the Mopan River.

Beginning in 2013, the Actuncan Archaeological Project began the transition to a second phase of research, which has focused explicitly on exploring the developmental trajectory of the site’s monumental architecture to understand the changing nature of political authority at the site across Actuncan’s 2000 years of occupation. Gaining a nuanced understanding of these long-term trajectories is critical to understanding why Actuncan remained an occupied and utilized place for such a long time (Mixter 2017b). To date, this research has focused at the ends of the chronological spectrum. For instance, a Terminal Classic civic structure has been identified at Group 4 (Mixter 2016, 2017a), while excavations in Actuncan’s E-Group have identified layered construction episodes dating from 1100 B.C. to the third century A.D., well after the establishment of the site as a royal capital (Donohue 2014; Heindel 2016; LeCount et al. 2017; Simova and Mixter 2016). The earliest constructions beneath the E-Group’s eastern structure include the earliest known occupation of the Actuncan ridge dating to around 1100 B.C. (LeCount et al. 2017). Borislava Simova’s on-going research in the E-Group focuses on understanding the social interactions that took place in this early public place, which underpinned early monumentality at Actuncan. Presented in Chapter 3, this research continued in 2017 with Borislava Simova’s initiation of a trench stretching across the center of the E-Group’s plaza from Structure 26 to Structure 23.

Throughout all phases of research at Actuncan, Carolyn Freiwald has a led research on Actuncan’s mortuary practices, human remains, and faunal artifacts (Freiwald 2012; Freiwald and Micklin 2013; Freiwald et al. 2014; Freiwald and Billstrand 2014; Freiwald et al. 2015; Micklin 2015). In Chapter 4 of this report, Freiwald provides an updated inventory of all vertebrate fauna and marine shell recovered at Actuncan to-date.

Our research to date culminated in the presentation of a symposium summarizing our research at 83rd Annual Meeting of the Society for American Archaeology on April 12, 2018. During this symposium, our team presented our research results in 11 papers followed by discussions by Olivia Navarro-Farr and David Carballo. LeCount (2018) led the session with a synthesis of Actuncan’s chronology and her understanding of Actuncan’s collective leadership structure. This
was followed Kathryn Brown and Jason Yaeger’s (2018) contextualization of Actuncan within the broader landscape of the Mopan River Valley’ shifting political dynamics from the perspective of neighboring Early Xunantunich, Buenavista del Cayo, and Classic Xunantunich. Thomas Jamison and I (2018) then provided a synopsis of Actuncan’s monumental construction based on data from AAP and James McGovern (2004). Angela Keller (2018) summarized her work on the trajectories of construction and occupation within Actuncan’s urban residential groups. Freiwald et al. (2018) then provided a synopsis of mortuary at archaeology through a survey of Actuncan’s burial landscape, with a particular focus on the multiple burials located in Group 1’s eastern shrine structure. Simova (2018) continued with a survey of the household ritual deposits used to consecrate and terminate household constructions and occupations across the Actuncan site core. Wells et al. (2018) draw on the AAP’s extensive database of anthropogenic soil chemistry data to discuss the variety of activity signatures evident across Actuncan’s urban core. Heindel (2018) presented her recent findings on the organization of the local community’s agricultural system, and Blitz and LeCount (2018) presented an initial take on Actuncan’s domestic economy based on their analysis of the site’s groundstone artifacts. Finally, I contextualized the corpus of research at Actuncan within the broader theoretical frame of palimpsest urbanism, in which the old and the new, the ruined and the pristine existed side-by-side, reflecting periods of centralized planning and centuries of ad hoc decisions regarding the use and maintenance of specific locations (Mixter 2018). The idea of palimpsest urbanism is appropriate for understanding the impact of Actuncan’s 2000 years of occupation on the development and occupation of the site as an urban center. The symposium will serve as the groundwork for an edited volume that lays out the first phase of AAP research within the context of palimpsest urbanism.

Future Research

Future research at Actuncan will continue to grow the AAP’s enduring interest in understanding the growth and development of divine kingship in western Belize during Late and Terminal Preclassic periods. Current evidence suggests that Actuncan was established as a planned center around 200 B.C. when an earlier Preclassic village was buried in a single large construction event (Mixter 2016). This event is currently dated to around 200 B.C. based our radiocarbon model for the construction of the Owl Platform version of Structure 26 in Actuncan’s E-Group (LeCount et al. 2017). Within the E-Group, this moment reflects the transformation of Structure 26 from an unusual and poorly understood series of clay platforms into a proper, Cenote-style E-Group, following the typology established by Chase and Chase (1995). Within our corpus of dates from across the site, 200 B.C. also fits well between our one radiocarbon assay from the buried Late Preclassic village beneath Group 1 (415 to 380 B.C.) and our dates associated with later construction, which all post-date 100 B.C. in the Terminal Preclassic period (LeCount 2015). More excavation and more dates are required to date the construction of Actuncan’s urban center more precisely.

New research at Actuncan will explore the establishment and construction of the site’s planned center to place the establishment of divine leadership at Actuncan within a broader regional context. In his research book, Doyle (2017) divides the Preclassic Maya world into
several distinct cultural traditions based on empirical differences in the form of monumental construction, style of monuments, and elite burial practices. His book, as well as many syntheses of the Late Preclassic culture history, focuses on what he labels the Central Lowlands Cultural Tradition. This tradition is marked by the construction of Cenote-style E-Groups, triadic temple groups and ballcourts, along with 2-dimensional incised stone monuments (Doyle 2017; Estrada-Belli 2011; Hansen 1998, 2016). Although architectural technologies and the scale of monumental construction vary across the central lowlands zone, this basic architectural package remains consistent. Strikingly, this architectural package differs from the Late Preclassic sites to the east of Actuncan in Belize, where the eastern shrines at sites such as Cahal Pech, Blackman Eddy, Pacbitun, and Baking Pot are distinctive “Eastern Triadic Assemblages” (Awe et al. 2017) rather than E-Groups. In this eastern periphery, triadic temple groups also are absent, and the small number of Preclassic monuments in Belize, such as Cahal Pech Stela 9, are carved in the round rather than in two dimensions (Awe et al. 2009).

Actuncan, as constructed starting around 200 B.C., clearly resembles a site in the Central Lowlands Cultural Tradition rather than the Belizean Cultural Tradition. The site’s Cenote-style E-Group, the large 27 m tall triadic temple group, and incised Stela 1 look much more similar in form, if not scale, to sites in the Central Karstic Plateau around El Mirador and around Cival in Eastern Petén than it does its contemporaneous neighbors in Belize. Viewed from this perspective, Actuncan can be interpreted as a Late Preclassic cultural frontier—reflecting the furthest manifestation of the Central Lowlands Cultural Tradition down the Belize River. This observation leads to a number of questions. What do these cultural markers tell us about Actuncan’s internal social and political organization? What does Actuncan’s participation in the Central Lowlands Cultural Tradition indicate about Actuncan’s relationships with its immediate neighbors and other more distant Central Lowlands sites? Why were these cultural markers not adopted further to the east?

The construction of the triadic temple group at Actuncan during the site’s major period of renovation provides some hypotheses about the solutions to these questions. Triadic temple groups are constructed across the Central Lowlands as a dominant monumental architectural form during the Late Preclassic period. Chronological models suggest that triadic temple groups succeed E-Groups as the dominant architectural form (Doyle 2017; Hansen 1998, 2016). The spread of triadic temple groups, marked most dramatically by the direct burial of an E-Group under a new triadic group at San Bartolo, appears to reflect the spread of a new political ideology across the Maya Lowlands (Estrada-Belli 2011; Saturno et al. 2017; Saturno et al. 2018). Evidence suggests that perhaps the Late Preclassic is defined by the expanding hegemony of El Mirador (Freidel 2018; Reese-Taylor and Walker 2002), represented in part by the spread of the Central Lowlands Cultural Tradition. This hypothesis is complicated by continued uncertainty over the nature of Late Preclassic Maya kingship (Martin 2016). Is Preclassic kingship a direct predecessor of Classic period dynastic kingship that evolved as specific lineages gained authority and evolved into incipient dynasts (Martin 1997; McAnany 1995)? Or were kings during the Late Preclassic period selected by councils from eligible members of elite families (Freidel 2008, 2018)? Under this model, early kingly legitimacy derives much more strongly from ritual practices rather than descent.
This second model fits well within Actuncan’s data, where the absence of a Preclassic royal residence points to a collaborative form of rule (LeCount 2018). Further, the sudden construction of Actuncan’s Terminal Preclassic center may indicate that it replaced Early Xunantunich as the center of authority for populations living along the Mopan River. Like the earlier buried Actuncan village, Early Xunantunich was a Middle Preclassic center without a triadic temple group, but was terminated sometime late in the Late Preclassic period in the smashing of “Protoclassic” pottery on the steps of the early E-Group (Brown et al. 2011:217). These disjunctions hint at a dramatic sociopolitical disruption in the Mopan River valley. Certainly, interventions in the valley by the growing hegemonic authority of El Mirador would fit the bill.

The next phase of research at Actuncan will focus particularly on the triadic temple group to attempt to better understand the establishment of divine kingship at the site. Deep penetrating excavations into Plaza A will attempt to determine the earliest evidence for construction beneath the triadic temple group. These data are needed to understand if the group’s construction is contemporaneous to our data from Actuncan North and the construction of Owl Platform within the E-Group. Second, excavations will target early monumental art programs, in the form of stucco masks, affixed to the façades of the triadic temple group’s pyramids. These symbol systems will provide evidence for how Actuncan’s depiction of early leadership fits within the broader corpus of Central Lowland Preclassic art. Excavations in Plaza A will also test for the presence of Preclassic burials or caches that can be compared to evidence emerging in both the Central Lowlands and Belize zones. Third, excavations will target the “service area” attached to the east of Plaza A to investigate if the triadic complex functioned as a temporary (or permanent) residential space for Actuncan’s kings, as is evident in the Classic period triadic group at Calakmul (Folan et al. 2001). These excavations will be complimented by the application of AAP’s multi-component sampling procedures to determine what kinds of activities took place within the service area, across Plaza A, and on the outside steps and terraces of the pyramids, as well as those inside structures. Finally, research on Preclassic artifacts from the site will focus on evaluating Actuncan’s integration into Late Preclassic trade networks. Indeed, access to the Belize River transportation corridor may have been a prime motivator for leaders from the Central Lowlands to gain interest in bringing Actuncan into their hegemonic umbrella.

Conclusions

This year’s field season saw the continuation of research by Heindel and Simova. Heindel completed her delineation of field systems in Actuncan’s western periphery and began excavations on cobble mounds on the Mopan River floodplain. Simova began a trench running across the center of Plaza F from Structure 26 to the plaza’s midpoint to look at the stratigraphy of Actuncan’s E-Group. Freiwald and other project members continued research on the collections of artifacts acquired from the past 17 years of research. Tidwell’s critical work assembling Actuncan’s database will allow for more robust analysis of our existing data in the near future. Collectively, these efforts will form a bridge as the project enters through a period of publishing and fundraising in anticipation of renewed largescale excavations within Actuncan’s triadic temple group in the future.
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Chapter 2: Investigating Agricultural Plot Systems and Chich Cobble Mounds: Operation 51 and 52, and On-going Operation 14 Excavations

Theresa Heindel (University of California, Riverside)

During the 2017 field season, excavations took place in the western portion of Actuncan’s northern settlement zone. Excavations conducted during the 2016 field season focused on Operation 14, south of Group 7, which revealed a stone terrace made up of stone cobbles and limestone blocks. About 7 m of this wall was uncovered, running north-south (against the slope) (Heindel 2017). A gradiometer survey conducted by Chester Walker (2012) in this area found intersecting linear anomalies that Lisa LeCount and colleagues (2016) suggest is a set of agricultural box plots or field systems. My 2017 excavations of Operation 14 were therefore focused on revealing these other walls to determine if they connected to the terrace wall found in 2016. A similar possible agricultural plot system was found to the north and east of the first system, and in 2017 excavations in Operation 51 focused on delineating this second system of agricultural plots. Reconnaissance by Salberg (2012) and subsequent LiDAR imagery (Chase et al. 2014) also revealed a system of cobble (chich) mounds found on the first terrace about the Mopan River that is hypothesized (based on earlier interpretations of cobble mounds by Sabloff and Tournellot 1992 and Killion et al. 1989) to be an orchard. Preliminary excavations in Operation 52 were conducted to further understand these constructions.

Units 14X through 14BA were located downslope and south of Group 7 (Figures 2.1 and 2.2). Units 51A through 51T were located upslope and to the west of Operation 14 (Figures 2.1 and 2.3). Finally, Units 52A and 52B were located to the east of the site core, along the Mopan River (Figure 2.4). Operations 14 and 51 revealed two possible agricultural plot systems. Operation 52 provided an initial inspection of the stratigraphy on and between the chich mounds. Cobble mounds are utilized by modern Maya for agricultural purposes and are present at multiple ancient Maya archaeological sites. Each agricultural system is composed of a collection of divided plots that may have been used for planting. These plots are defined by walls that may have acted as boundaries and created terraces, which protected the plots from large quantities of water draining downslope. While this year’s excavations were limited among the chich mounds, they led to the recovery of soil to be used for later botanical analysis. Further, they revealed a floor that indicates a possible habitation area between the mounds.

Previous Research on Actuncan’s Field Systems

During the 2016 field season, excavations took place in the western portion of Actuncan’s Northern Settlement Zone (Heindel 2017). Units 14Q, 14R, 14T, 14U, and 14W were located to the south of Group 7. These excavations revealed one possible agricultural feature: a traditional stone terrace made of limestone and chert cobbles with domestic fill on its western side that reinforced the terrace against water draining downslope. Units 14Q, 14R, 14T, 14U and 14W revealed a stone terrace called Stark Wall. In total, a 7 m length of Stark Wall, oriented horizontally in line with the natural slope of the land, was uncovered in these excavations. In Units 14Q, 14R and 14T, Stark Wall consisted of a single course of stone cobbles and limestone blocks. In Op14U where the natural terrain subsides, Stark Wall was constructed as four courses of stone cobbles and limestone blocks. Stark Wall may have continued past Unit 14W;
Figure 2.1. Operation 14 and Operation 51 Areas of Excavation within Actuncan.
Figure 2.2. Operation 14 Excavation Units.

Figure 2.3. Operation 51 Excavation Units.

Figure 2.4. Operation 52 Area of Excavation.
however, excavations did not continue to follow the wall. Instead, excavations refocused on new types of architecture that were found in this test pit. Lannister Wall consists of two stone cobbles running parallel to the Unit14W northern sidewall, Martell Wall consists of two stone cobbles running parallel to Stark Wall (to the east), and Baratheon Wall runs perpendicular to Stark Wall with a line of ten stone cobbles. One large stone cobbles continues the Stark Wall line past Baratheon Wall, but it is unclear if Stark Wall continues past this cobble. Fill, made up predominately of large ceramic sherds and large lithics, particularly cores, was found to the south/southeast of Stark Wall. Based on the presence of daub (as well as the size of sherds and lithics), the fill should be best described as domestic midden. The fill continues to the full depth of Stark Wall; however, the majority of the artifacts were concentrated in the humus layer. This fill was also found between Lannister and Baratheon Wall. It is likely that this fill would have improved water drainage, thereby protecting the stone terraces against erosion. Artifact analysis was not conducted during the 2016 field season.

**Previous Research on Mopan Valley Chich Mounds**

*Chich* mounds, a Yucatecan word for mounds or piles of stone cobbles (Barrera Vásquez 1980), are found at sites throughout the Belize River valley and the Yucatán Peninsula (Dahlin et al. 2006; Fedick and Morrison 2004; Kepecs and Boucher 1996, Sabloff and Tourtellot 1992; VandenBosch 1993), though their purpose is not clear. Modern-day studies have found that walls similar to *chich* mounds are erected around large trees in the Yucatán today, and it has been suggested that ancient *chich* mounds found at Maya sites also functioned to conserve moisture and provide support for trees cultivated in the shallow soils of the northern lowlands (Kepecs and Boucher 1996). ArcGIS research conducted by Borislava Simova (2015) has also shown that the collection of water during rainfalls around the *chich* mounds may indicate the use of this architecture as raised fields or to facilitate some other type of agricultural production.

VandenBosch (1993) and others (Holley et al. 2000) found that these types of mounds were common along this stretch of the Mopan River, and could be found on either side of the river north and east of Xunantunich. He determined that these mounds were constructed during the Late Classic period. It was determined that this portion of the valley had undergone tremendous fluvial change through the Preclassic period, with stabilization of the river terraces occurring prior to, or early within, the Late Classic period, when some cobble mounds were buried under a stable surface (Holley et al. 2000). VandenBosch mapped and tested cobble mounds near the site of Xunantunich as part of the Xunantunich Settlement Survey in 1992, classifying the morphology based on shape, including: 1) long linear mounds, 2) isolated mounds, and 3) mounds attached to linear features (1993:85). Excavations revealed both natural and cultural factors for *chich* mound creation, with evidence for formal Late Classic architecture and domestic trash in both small and large *chich* mounds. In addition, deep test pits found that the constructions sat directly on a coarse yellow-brown sand deposit underlain by a series of alluvial deposits characteristic of high intensity, high velocity floods to low velocity floods (VandenBosch 1993:91). Evidence for this flooding was also indicated by the fact that the cobbles were heavily stained by organics and that extremely water worn sherds were found in the deposits. In addition, minor lensing of sands and pebbles indicated that the lower strata were deposited by
recurrent flooding, probably during the Early Classic period, with landforms stabilizing in later periods allowing for constructions that could be used for an extended period of time during the Late and Terminal Classic periods.

During the 2011 field season survey project, cobble mounds were mapped to the east of Actuncan on the Mopan River floodplain (LeCount 2012:7; Salberg 2012). The anomalous mounds, which consist primarily of assorted chert cobbles, stretch up and down the western side of the Mopan River below Actuncan’s site center. The cobble mounds range in elevation from less than half a meter to roughly two meters in height and vary greatly in shape, length, and diameter. Some mounds are roughly circular with diameters ranging from slightly less than five to more than 15 m across. The majority of the features, however, have long, linear forms, with widths of roughly three to 10 m across and lengths of 10 to over 100 m. Mapping of chich mounds during the 2011 field season included collecting coordinates at roughly 2 m intervals to produce an accurate topographic representation of the mounds (Salberg 2012:28). Contour maps and Triangular Irregular Networks (TIN) maps (representations of physical land surface utilizing lines with three-dimensional coordinates) were also created in ArcGIS using these data to represent the dimensions of these mounds. I hypothesize that these mounds (and the area between them) could have served an agricultural purpose—either as raised fields or orchards.

**Methods**

The aims of the 2017 field season were to continue excavations of agricultural features seen on the ground surface in the western area of the northern settlement of Actuncan proper. Operation 14 was expanded following a terrace wall found downslope. Operation 51 was created to examine limestone and chert cobbles on the surface upslope of Operation 14 that were similar to those found before Operation 14 excavations. Operation 52 was created to examine the first terrace above the Mopan River below Actuncan’s site core that contains many linear cobble mounds. Excavation procedures followed AAP protocols. Units were excavated by natural levels. Lot changes only occurred after a soil change or the appearance of architecture. All excavated soil was sifted in a ¼ inch screen, and artifacts were taken to the AAP lab to be stored on-site for further analysis. Several 4 L soil samples were also taken for future analysis, as well as small amounts of soil collected in Whirl-Pak bags for possible microbotanical analysis. It should be noted that a total station was not brought into the field this year and, as such, the location of units are only approximated. However, permanent datums were created for future total station points to be taken. Datums 51-1 and 51-2 were used for Units 51A through 51T, Datum 52-1 was used for 52A, and Datum 52-2 was used for 52B. Artifacts were washed and catalogued.

**Agricultural Plot System 1**

Thirty units (14X through 14BA) were placed to further explore the terrace system associated with Stark Wall and the box-like construction found in 14W during the 2017 field season. These finds pointed to a system of intersecting walls along the terrace (Figures 2.5 and 2.6). Named “Agricultural Plot System 1,” this system, defined an interconnected group of terraces and agricultural plots – currently counted at five possible plots (Figure 2.7). The first plot was
Figure 2.5. Operation 14 Plan View Line Drawing.

Figure 2.6. Operation 14 Plan View.
excavated to the east of Stark Wall and is bounded by Baratheon (Figure 2.8), Tully, Bolton, and Reed Walls (Figure 2.9). While most of the walls in the system consist of one course of mixed chert cobbles and limestone blocks, Reed Wall, the wall that creates the eastern boundary of the system, consists of large limestone blocks layered in three courses. This plot was fairly square, about 2 m by 2 m in size. The second plot, to the west, is bounded by Baratheon, Tully, Mormont (Figure 2.10) and Stark Walls, creating a long rectangular plot 1 m (east-west) by 3 m (north-south) in size. The largest plot, (Plot 3) further west, is bounded by Baratheon, Stark, Mormont and Barristan/Baelish/Greyjoy Walls and is roughly 3.5 m (north-south) by 5 m (east-west) in size. The western-most boundary is not a straight line of cobbles and blocks, and with the turning of the wall, three walls – Barristan, Baelish and Greyjoy – connect to form the western boundary of this larger plot. There is likely a fourth plot, or possibly more, but excavations ended before it was completely revealed. This possible fourth plot is in the northwest portion of the system and bounded by Karstark and Dondarrion Walls to the west, Baratheon Wall to the south, and Stark Wall to the north. The northern end of Dondarrion Wall was reached in 14BA, and a small wall, Targaryan Wall, was found coming off of Dondarrion Wall running east, possibly to connect to Stark Wall. Excavations were not conducted inside this possible plot due to time constraints, so subdivisions could exist inside it. If Targaryan Wall connects to Stark Wall, the plot would be 3 m (east-west) by 5 m. These interconnected excavation units ranged from 1 m by 1 m to 2 m by 1.5 m in size and were placed to follow new walls as they were encountered. A total of 15 walls were found, making up at least three, but probably four (or more) agricultural plots.

A platform, called Platform 1, was also revealed on the southeast edge of the agricultural system, roughly 2 m by 2 m in size (Figure 2.11). Unlike in other areas of the system, many small chert cobbles were found within this square, bounded by Tully, Bolton, Reed and Mormont Walls. While not raised above the rest of the system, the platform is bounded on the north, south and east by multi-course walls, unlike the one-course walls found in other portions of
the system suggesting a different function. If the area is an agricultural system, it is possible that this platform was created as a sort of field house, where the person tending the field could stay for a short time to get out of the elements. At the northeast corner of the system, to the east of the Stark Wall terrace and north of the first plot described, excavations revealed a linear zone of flattened *yeso*, a soft clay soil made of gypsum that is less permeable than other soils. Millar’s 2015 excavations (Millar 2016) in Units 14K and 14M in this area also revealed evidence of terraforming, in which *yeso* was cut to form berms perpendicular to the slope and the removed soil was redeposited downslope. Located in Unit 14AL, 14AS and 14AU, this *yeso* feature, Feature 11, was found below a dark yellowish-brown clay layer containing very few artifacts. Stretching 3 m east-west, and between 1 and 0.5 m north-south, the *yeso* was only about 5 cm thick. The dark yellowish-brown clay continued underneath it. Excavations did not continue farther east due to time constraints, but it appears that the feature continues further east. It also appears to extend towards Stark Wall, which was not evident when Stark Wall was originally excavated. A small posthole, Feature 12, about 10 cm in diameter was found along the
southern edge of the eastern portion of Feature 11 (in Unit 14AL). It was not associated with any other known structures. The thin layer of yeso above and below different soils suggests that it was purposefully placed here, possibly as a tamped floor.

Unit 14X. Unit 14X was placed as an extension unit along the eastern sidewall of 14W, which was excavated in 2016. Excavations in Unit 14W exposed Stark, Baratheon, Lannister, and Martell Walls, which formed a system of intersecting walls in the southern portion of the terrace. In order to understand these walls, 14X (a 1 m, facing north-south, by 1.5 m, facing east-west, unit) was placed to determine if Baratheon Wall continued east as suggested by the 14W excavations. Excavations in Unit 14X consisted of one lot—the humus layer from the modern surface down to the top of Baratheon Wall located 20 to 40 cm below the surface. The lot consisted of a very dark grayish brown clay loam (10YR3/2) with large sherds, cores, flakes, and large pieces of daub. These excavations probably penetrated both undisturbed surface and fill contexts. Baratheon Wall was constructed of chert cobbles and undressed limestone between 15 and 25 cm in diameter. It continued northeast from 14W, with fill to the south of the wall. A new wall was also found, running perpendicular to Baratheon Wall and parallel to Martell and Stark Walls. Named Tully Wally, this wall is located south of Baratheon Wall, and then connects to the northwestern portion of Baratheon Wall.

Unit 14Y. Unit 14Y was a 1 m (north-south) by 1.5 m (east-west) unit placed as an extension of the western sidewall of the previously excavated 14W. One lot was excavated, which was intended to reveal the top of a wall/architecture. This lot was made up of very dark grayish brown clay loam (10YR3/2) with large sherds, cores, and flakes, combining both undisturbed surface and fill contexts. Excavations were stopped at about 30 cm down, as the unit was mostly fill consisting of large artifacts and chert cobbles. A number of stones pointed towards the western sidewall, suggesting that Baratheon Wall may have extended further west, but it was
decided that they could also have just been a part of the chert cobble fill. It is interesting to note that groundstone—possibly part of a broken _mano_ or _metate_—was found in this lot, which suggests the fill was composed of redeposited domestic trash.

_Unit 14Z._ Unit 14Z was placed as a 1 (north-south) by 1.5 (east-west) m extension unit along the southern sidewall of 14W to continue Stark Wall to the south of the previously excavated unit. Unit 14Z contained one lot, a combination of undisturbed surface (humus layer, very dark grayish brown clay loam – 10YR3/2) and fill. Stark Wall did continue to the southeast, but the composition of the fill in 14Z appeared to be slightly different from previously excavated units as it contained more cobbles in some areas. Thus, while large sherds, cores and flakes (i.e. redeposited domestic fill) were more prevalent to the southwest (downslope) of Stark Wall, chert cobbles were more prevalent to the northeast (upslope) of Stark Wall. Whether this was intentional or a result of natural formation processes over the years is unknown, and will be analyzed further. Excavations were stopped after the top of Stark Wall was revealed, between 10 and 30 cm below the surface.

_Unit 14AA._ Unit 14AA was a 1 m (east-west) by 1.5 m (north-south) unit placed as an extension from the southern sidewall of unit 14X in order to determine if Tully Wall continued to the south. The unit consisted of one lot of very dark grayish brown clay loam (10YR3/2) with large sherds, cores, flakes, and large cobbles (i.e. undisturbed surface and fill). The artifacts were located towards the northern end of the unit and chert cobbles (as well as artifacts) to the southern end of the unit. About 10-20 cm below the surface, Tully Wall appeared and continued southeast through the unit, until it began to curve west about 25 cm north of the southern sidewall of the unit before going into the southwest corner of the unit. The curve was unusual in comparison to the previously straight parallel/perpendicular walls, making it unclear if Tully Wall was connecting to a new perpendicular wall. As a result, the curve from Tully Wall going to the southwest was named Arryn Wall in case it turned into a different wall after further investigation. Another new wall was also revealed, called Bolton Wall, that ran perpendicular to Tully Wall (on the eastern/upslope side of Tully Wall) and into the eastern sidewall of Unit 14AA.

_Unit 14AB._ Unit 14AB was a 0.5 m (east-west) by 1.5 m (north-south) unit placed as an extension from the western sidewall of 14AA to follow Arryn Wall west of 14AA. The unit consisted of one lot of very dark grayish brown clay loam (10YR 3/2) with large chert cobble inclusions in the humus layer and one undressed limestone block in the southern part of the unit. Neither Arryn Wall, nor any other walls, was found in this unit that contained mainly cobble fill.

_Unit 14AC._ Unit 14AC was a 1 m (east-west) by 1.5 m (north-south) unit placed as an extension from the eastern sidewalls of 14X and 14AA to determine if Baratheon and Bolton Walls continued to the east of the previously excavated units. The unit consisted of two lots: the first of very dark grayish brown clay loam (10YR 3/2) and the second of dark yellowish brown clay (10YR 4/6). 14AC1 consisted of undisturbed surface and fill, with large sherds, cores, and flakes in the north, west, and south ends of the unit. The lot revealed that Baratheon Wall continued east along the northern sidewall of the unit while Bolton Wall continued to the northeast through the unit. A new wall was also found in the eastern portion of the unit, perpendicular to both Baratheon and Bolton Walls, and was named Reed Wall (see Figure 2.12, where Bolton...
and Reed Walls meet). No fill, and only a few artifacts, were found in the northeast area of the unit (upslope from Reed Wall). Between 20 and 40 cm deep, 14AC1 was excavated until the three walls were uncovered. The area without fill in the northeast corner was composed of different color and type of soil. This 40 by 50 cm space was excavated separately from 14AC1 and 14AC2. This lot connects to the eastern sidewall of 14AQ2 (which was excavated before 14AC2 and is described below). More of Reed Wall was uncovered in this 5 to 20 cm thick lot, which showed that the wall consisted of three courses. Redeposited domestic fill was found throughout the unit except east (upslope) of Reed Wall.

**Unit 14AD.** Unit 14AD was a 1 m by 1 m unit extending from the southern sidewall of previously excavated 14Y and excavated to see if Baratheon Wall continued to the southwest. The unit comprised of one lot consisting of very dark grayish brown clay loam (10YR 3/2) with large sherds, cores, and flakes (i.e. undisturbed surface and fill). Large cobbles were also found to the south of Baratheon Wall (20 to 40 cm deep) and Baratheon Wall was shown to continue southwest across the unit.

**Unit 14AE.** Unit 14AE was a 1 m (east-west) by 1.5 m (north-south) unit excavated to see if Stark and Arryn Walls continue southeast of 14Z and 14AB. The unit comprised of one lot consisting of very dark grayish brown clay loam (10YR 3/2) with cobble (0 to 25 cm in diameter) fill present to the north (upslope) of Stark Wall. Arryn Wall did not continue, and it was decided that it was not actually a distinct wall, but rather an extension from Tully Wall. Stark Wall did continue through the southeast part of the unit into the southeast corner. The southwest corner of the unit was not excavated to the bottom of Stark Wall as it was clear that no walls were present on that side, making the unit/lot between 10 and 30 cm thick.

**Unit 14AF.** Unit 14AF was a 1.5 m (north-south) by 2 m (east-west) unit placed as an extension from the western sidewall of 14AD to see if Baratheon Wall continued to the west of 14AD. The unit comprised of one lot consisting of very dark grayish brown clay loam (10YR 3/2) with cobble (0 to 25 cm in diameter) fill. Baratheon Wall continued southwest in the unit, with the cobble fill present on either side of the wall. A possible wall, Karstark Wall, appeared perpendicular to Baratheon Wall was seen in the northern portion of the unit. Excavations continued until Baratheon Wall was uncovered, about 10 to 20 cm below the surface.

**Unit 14AG.** Unit 14AG was a 1 m (north-south) by 1.5 m (east-west) unit placed as an extension from the eastern sidewall of 14AE to determine if Stark Wall continued southeast of 14AE. The
unit comprised of one lot, 10 to 20 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with large sherds, cores, flakes, and some chert cobbles (0 to 15 cm in diameter), which were likely redeposited domestic fill. Stark Wall continues slightly into the unit, with new walls, named Umber Wall and Mormont Wall, appearing in the northwest corner of the unit and running northeast. Both Umber and Mormont Walls are perpendicular to Stark Wall and parallel to each other, and enter the northern sidewall of the unit. Umber Wall has two courses and is separated from Mormont Wall by the redeposited domestic fill.

**Unit 14AH.** Unit 14AH was a 1 m (north-south) by 1.5 m (east-west) unit extended from the southwest corner of 14AF to see if Baratheon Wall continued to the southwest. The unit comprised of one lot, 10 to 15 cm thick that consisted of very dark grayish brown clay loam (10YR 3/2) with large sherds, cores, flakes, and some chert cobbles (0 to 20 cm in diameter), which were likely redeposited domestic fill. Baratheon Wall continues across the unit. Additionally, a new wall, called Greyjoy Wall, was identified extending perpendicularly from Baratheon Wall’s southern face of Baratheon Wall towards the southeast corner of the unit. It was unclear as to whether Greyjoy Wall also continued through the unit to the northwest or if Baratheon Wall continued to the southwest.

**Unit 14AI.** Unit 14AI was a 1.5 m by 1.5 m unit placed along the northeast corner of 14AG to see if Mormont and Umber Walls continued to the northeast. The first lot of the unit, between 15 and 40 cm deep, consisted of very dark grayish brown clay loam (10YR 3/2) with many limestone and chert cobbles (0 to 30 cm in diameter) in certain areas. Excavations in the northeast corner this lot revealed the corner where Reed Wall and Mormont Wall meet (Figure 2.13). Limestone and chert cobbles were found in between the two walls, but no fill was found outside the walls (i.e. no fill was encountered in the southern portion of the unit), which indicates that this was the corner of a platform. The second lot, about 30 cm thick, consisted of dark yellowish brown clay (10YR 4/6) and revealed that Mormont Wall contains three courses, with all blocks made of undressed limestone. Compared to the rest of the excavation area, very few artifacts were found in both lots.

![Figure 2.13. Operation 14AI2, Photo of Mormont and Reed Wall Meeting.](image)
Unit 14AJ. Unit 14AJ was a 1 m (north-south) by 1.5 m (east-west) unit placed along the southeast corner of 14AH in order to investigate whether Greyjoy Wall continued to the southeast. The unit comprised of one lot, 15 to 20 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with many large limestone and chert cobbles (0 to 30 cm in diameter), large cores, and a limestone biface. In the northwest corner of the unit, Greyjoy Wall turned from running southeast to directly south following along the western sidewall of the unit. Similar to Arryn Wall, it was unclear if this turn was part of a new wall. This section of the wall was named Baelish Wall. It was also unclear if Baelish Wall continued to the southwest. No cobbles (fill or part of the cobble wall) were encountered in the unit’s southwest corner.

Unit 14AK. Unit 14AK was a 2 m (north-south) by 1.5 m (east-west) unit placed along the southern sidewall of 14AH and the western sidewall of 14AJ to see if Stark, Baratheon and/or Greyjoy Walls continued to the southwest. The unit comprised of one lot, 5 to 15 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with few artifacts and some limestone and chert cobbles (0 to 25 cm in diameter) along the eastern sidewall of the unit. The majority of the excavated matrix consisted only of the humus layer. No walls were found, suggesting this unit is most likely the southwest extent of the agricultural system (Figure 2.14).

Unit 14AL. Unit 14AL was a 1 m by 1 m unit placed along the northern sidewall of 14AC to determine if the corner of Reed and Baratheon Walls (suspected to be the northeast edge of the agricultural system) had been reached. The unit comprised of five lots, the first of which was 20 to 30 cm thick and consisted of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and some small undressed limestone inclusions. Baratheon and Reed Walls meet at the southwest corner of the unit, rising higher than in 14X and 14AC. Lot 14AL2 was a roughly 1 m by 0.7 m lot created to dig down into the northern half of the unit to expose all of three courses of Baratheon and Reed Walls. The lot, 15 to 20 cm thick, consists of dark yellowish brown clay (10YR 4/6) and small undressed limestone inclusions. Yeso clay – a softer dark yellowish brown clay – was hit at the bottom of the walls, appearing in the western portion and northeast corner of the unit, and was called Feature 11. Lot 14AL3 was created to excavate down until yeso was hit in the rest of the unit. The lot was focused only on the western side of the unit (0.7 m by 0.7 m), was about 10 cm thick, and consists of dark yellowish-brown clay (10YR 4/6) with small undressed limestone inclusions. A possible posthole was found between the walls and the yeso, so the lot was stopped in order to excavate the posthole. Lot 14AL4 was a posthole, Feature 12, about 10 cm in diameter, with no artifacts, containing very dark grayish brown clay loam (10YR 3/2). The hole only went down 2 cm. It
likely was originally deeper; however, its original top was not recognized during the excavation of previous lots. Lot 14AL5 was about 17 cm by 18 cm, placed in the southern portion of the unit, and was created to find more yeso. Between 2 and 10 cm thick, the lot consists of dark yellowish brown clay (10YR 4/6) with few artifacts (see Figure 2.15 for yeso and meeting of Baratheon and Reed Walls). After excavating further and examining the profile of the yeso layer (Feature 11), it appears that the yeso was about 5 cm thick and that the dark yellowish-brown clay continues underneath it. Excavations ended when it was determined that we would not hit more yeso, and the thin lining of yeso above and below these different soils suggests that the yeso feature was purposefully place here instead of being a naturally occurring stratum.

Unit 14AM. Unit 14AM was a 1 m (north-south) by 2 m (east-west) unit placed along the northern sidewall of 14AI, the southern sidewall of 14AC and the eastern sidewall of 14AA to determine the dimensions of the platform bounded by Reed and Mormont Walls. The unit comprised of two lots, the first of which was 10 to 40 cm thick (with the deeper portion on the eastern side of the unit), consisting of very dark grayish brown clay loam (10YR 3/2) with few artifacts. This lot was ended at a soil change in the eastern portion of the unit. Lot 14AM2 was excavated as a 1 m (north-south) by 0.5 m (east-west) unit in the eastern portion of 14AM to expose Reed Wall’s eastern face. The second lot, 20 to 30 cm thick, consisted of dark yellowish brown clay (10YR 4/6) with very few artifacts and revealed that Reed Wall is four courses tall, about 45 cm in total height.

Unit 14AN. Unit 14AN was a 1 m (north-south) by 1.5 m (east-west) unit placed along the southern edge of 14AE and western edge of 14AG to follow a limestone block that seemed to go through the western sidewall of 14AG and which may continue to the southwest. The unit comprised of one lot, 30 to 35 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2), with some large sherds, flakes, and cores, and small chert cobble fill (0 to 5 cm) in the northern side of the unit. Mormont Wall continued to the southwest across the unit, perpendicular to Stark Wall.

Unit 14AO. Unit 14AO was a 1 m (north-south) by 1.5 m (east-west) unit placed in the middle of 14AE, 14AG, 14AA, 14AI, and 14AM to uncover western edge of the platform/platform fill found in 14AM and 14AI. The unit comprised of one lot, 10 cm thick in the eastern half of the unit and 35 cm thick in the western half of the unit, consisting of very dark grayish brown clay loam (10YR 3/2), with chert cobble fill (0 to 25 cm) in the eastern portion of the unit. More of
Tully Wall was found, extending from the southern sidewall of 14AA towards the southeast. The platform/platform fill is located only in the eastern portion of the unit, east of Tully Wall, which suggests that Tully Wall marks the western, downslope, edge of the platform. Excavations on the eastern portion of the unit ended with the appearance of cobble fill and excavations on the western portion of the unit ended at a soil color change found to the west of Tully Wall.

*Unit 14AP.* Unit 14AP was a 1.5 m by 1.5 m unit placed off the southwest corner of 14AN in order to determine if Mormont Wall continued to the southwest. The unit comprised of two lots, the first of which was 10 to 30 cm thick and consisted of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, and cores. Lot 14AP1 was terminated at a soil change at the same depth where the line of Mormont Wall was revealed. Lot 14AP2 was excavated to reveal more of the Mormont Wall face to determine if it constructed with more than one course of stones. It was 30 to 40 cm deep and consisted of dark yellowish brown clay (10YR 4/6) with some chert cobbles (5 to 20 cm) in the northwest corner of the unit, north of Mormont Wall. These excavations determined that the undressed limestone blocks making up Mormont Wall were larger (roughly 25 cm tall) and more rectangular than previously believed, but the wall was only one course high. It also appears that some of the limestone blocks making up Mormont Wall fell on their sides at some point towards the northern portion of the unit.

*Unit 14AQ.* Unit 14AQ was a 1 m (north-south) by 1.5 m (east-west) unit placed along the eastern edge of 14AC and northern edge of 14AM to reveal more of Reed and Bolton Walls (which seemed to form the eastern and northern sides of the platform). The unit comprised of two lots, the first being 30 to 40 cm thick and consisting of very dark grayish brown clay loam (10YR 3/2) with few artifacts and no cobbles. Bolton Wall did not continue east, but Reed Wall did. Excavations in this first lot were stopped at a soil change. Lot 14AQ2 was 20 to 35 cm thick and was excavated to reveal more of the Reed Wall profile. The matrix in this lot consisted of dark yellowish-brown clay (10YR 4/6) with very few artifacts. Reed Wall, constructed of undressed limestone, was three courses in height.

*Unit 14AR.* Unit 14AR was a 1 m (north-south) by 1.5 m (east-west) unit placed along the western edge of 14AP to follow Mormont Wall southwest. The unit comprised of one lot, 30 to 40 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and chert cobbles (0 to 15 cm) along the northern portion of the unit. Mormont Wall continued to the southwest, with chert cobbles only north of Mormont Wall.

*Unit 14AS.* Unit 14AS was a 1 m by 1 m unit placed along the western sidewall of 14AL to investigate the yeso feature, Feature 11. The unit comprised of two lots, the first of which, 15 to 20 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with fewer artifacts than in other areas. Yeso was not found, so a new lot was created at a soil change. Lot 14AS2 was 20 to 30 cm thick and consists of dark yellowish-brown clay (10YR 4/6) with few artifacts and some undressed limestone inclusions. Feature 11 continues west from 14AL and rises slightly in elevation.

*Unit 14AT.* Unit 14AT was a 1 m (north-south) by 1.5 m (east-west) unit placed along the western edge of 14AR to reveal more of Mormont Wall and to determine if it continues to the
southwest. The unit was excavated in one lot, 10 to 20 cm thick, that consisted of very dark grayish brown clay loam (10YR 3/2) with a few sherds, flakes, cores, and small cobbles (0 to 5 cm) in the northeast corner of the unit. It was unclear if Mormont Wall continued southwest; instead it turned at about a 130-degree angle into the north sidewall of the unit. This stone alignment was called a new wall, Barristan Wall, but later excavations have led to the conclusion that Barristan Wall was likely a continuation of Mormont Wall and Baelish Wall (see Unit 14AV and 14AX descriptions).

**Unit 14AU.** Unit AU was a 1 m by 1 m unit placed along the western sidewall of 14AS to investigate the yeso feature, Feature 11. The unit comprised of two lots; the first of which, 5 to 20 cm thick (with the deepest portion located in the western area of the unit) and consists of very dark grayish brown clay loam (10YR 3/2) with fewer artifacts than in other areas. Yeso was encountered in the southwest corner, and a new lot was created after a soil change. Lot 14AS2 was 5 to 50 cm thick (with the shallowest portion located in the southwest corner of the unit) and consists of dark yellowish-brown clay (10YR 4/6) with few artifacts and some undressed limestone inclusions. The yeso of Feature 11 covers the bottom of the unit, rising and falling at different depths.

**Unit 14AV.** Unit 14AV was a 1 m (north-south) by 1.5 m (east-west) unit placed along the northern edge of 14AT to determine if Barristan Wall continued to the northeast. The unit comprised of one lot, 15 to 20 cm thick, consisting of very dark grayish brown clay loam (10 YR 3/2) with large sherds, flakes, cores, and chert cobbles (0 to 10 cm) in the western portion of the unit. A large amount of charcoal was also found in the northwest and southwest corners of the unit, around 136 cm below datum 16. Barristan Wall appears to continue north, connecting to Baelish Wall, suggesting it is actually a continuation of Baelish Wall (with Baelish Wall possibly being a continuation of Mormont Wall). The majority of the chert cobbles and redeposited domestic fill were found to the west of this wall, along with the charcoal.

**Unit 14AW.** Unit 14AW was a 1 m (east-west) by 1.5 m (north-south) unit placed along the northern sidewall of 14AF to see if the cobbles (about 20 cm in diameter, found in a fairly straight line) in the northwest portion of 14AF form a wall perpendicular to Baratheon Wall. The unit comprised of one lot, 5 to 15 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with a few artifacts and chert cobbles (0 to 25 cm) in the eastern portion of the unit. A new wall, called Karstak Wall, was revealed (perpendicular to Baratheon Wall and parallel to Stark Wall) heading northwest. There are a number of cobbles to the east of this new wall that running upslope towards Stark Wall. These cobbles are similar to those found in 14AO, 14AM, 14AA, and 14AI, which suggests there may be another platform in the northwest corner of this area.

**Unit 14AX.** Unit 14AV was a 90 cm by 90 cm unit placed along the northern sidewall of 14AV and southern sidewall of 14AJ to determine if the wall found in 14AV (Barristan Wall) connects to Baelish Wall and is thus actually part of Baelish Wall. The unit comprised of one lot, 5 to 20 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and chert cobbles (0 to 5 cm). A line of chert and limestone cobbles appeared during excavations, connecting the walls found in 14AV and 14AJ, which suggests that Barristan Wall is
actually a part of Baelish Wall. There were also some limestone cobbles to the east of Barristan/Baelish Wall (running north-south, against the slope), which are most likely collapse from the wall.

*Unit 14AY.* Unit 14AY was a 1 m (east-west) by 1.5 m (north-south) unit placed northwest of 14AW to determine if Karstak Wall continues to the northwest. The unit comprised of one lot, 10 to 20 cm deep, consisting of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and chert cobbles (0 to 15 cm). It was determined that Karstark Wall continues to the northwest while a new wall, called Dondarrion Wall, also appears to the west of Karstark, running perpendicular to the first wall (i.e. also going northwest). There is about 20 cm between the two walls, which creates a narrow channel. It is also possible that the platform in 14AW also appears to the east of Karstark Walls. Chert cobbles and many artifacts were encountered to the west of Dondarrion Wall.

*Unit 14AZ.* Unit 14AZ was a 1.5 m by 1.5 m unit placed along the northern sidewall of 14AH to determine if any cobbles from 14AH made another wall or connected to Dondarrion Wall. The unit comprised of one lot, 10 to 35 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with many large chert and undressed limestone cobbles (0 to 50 cm). Due to the high number of large cobbles, it is unclear if there is another line of cobbles/blocks, or if the unit is purely collapse.

*Unit 14BA.* Unit 14BA was a 1 m (east-west) by 1.5 m (north-south) unit placed along the northern sidewall of 14AY to determine if Karstark and Dondarrion walls continue to the northeast. The unit comprised of one lot, 20 to 30 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, and cores. Karstark Wall does not continue, but Dondarrion does penetrate slightly into the unit. Two new walls, Targaryan and Frey appear to connect to Dondarrion and continue east, creating a corner. Based on the direction of Targaryan Wall, it is likely that it meets up with Stark Wall in the northeast, connecting the entire agricultural system, but excavations were stopped in Op. 14 due to time constraints.

**Agricultural Plot System 2**

Another agricultural system, Agricultural Plot System 2 (Units 51A through 51T)—determined to be either a terrace or agricultural plots—was first identified by Drs. Lisa LeCount and Angela Keller upslope (east) of Operation 14. A line of cobbles was re-discovered in this area during the 2017 field season, which looked similar to the cobbles found on the surface of Agricultural Field System 1, and excavations of 20 units revealed at least eight distinct walls (Figures 2.16 and 2.17).

Unfortunately, likely due to natural erosion, this system was not well-preserved and was covered by a large amount of collapse that made it difficult to find specific walls and plots. The entire system was bounded by Orthanc Wall to the north and Rohan Wall to the east, both of which were constructed of larger limestone blocks. Possible plots include one bounded by Hobbiton, Shire, Rohan and Orthanc Walls, roughly 2 m (north-south) by 3 m (east-west) in size.
Another may be bounded by Isengard, Gondor and Mordor Wall, a third by Isengard, Mordor and Valinor Walls, and a fourth by Gondor, Orthanc and Hobbiton or Shire Walls. None of these possible plots are completely bounded, but this could be due to lack of extensive excavation or an intentional construction method different from Agricultural Plot System 1.

Large sherds, flakes, and cores were found throughout the system, pointing to a similar process of filling the interior of the plots with redeposited domestic fill. There also appears to be a large rectangular platform (2 m by at least 3.5 m) in the middle of the system based on the presence of a level surface of chert cobbles found in this area, similar to those found on Platform 1 in Agricultural Plot System 2. Two pit features (Feature 1 and Feature 2) were also found: Feature 1 was dug into the possible platform, and Feature 2 is located at the southeast edge of the system. Both features were roughly 80-90 cm diameter, with Feature 1 reaching 70 cm in depth (Feature 2 was not dug to the bottom due to time constraints). Feature 1 was circular, bounded by a circle of chert and limestone cobbles and filled with soil similar to the humus excavated above (Figure 2.18). These pits contained large pottery sherds and charcoal at the bottom, but not throughout. Feature 2 was not completely excavated – only the northern semi-circle was excavated (Figure 2.19). Chert and limestone cobbles surrounded the pit. The purpose of these pits is unclear, and future investigation and analysis is required to determine their function.
Unit 51A. Unit 51A was a 1 m (east-west) by 1.5 m (north-south) unit placed upslope from Operation 14 (Agricultural Plot 1) to find evidence of another terrace/agricultural plots. The unit was placed in this area because four limestone cobbles were found on the surface running northwest to southeast. The unit comprised of one lot, 10 to 25 cm thick, of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, and cores, and chert cobbles and undressed limestone (0 to 25 cm). The southern-most block of the four limestone blocks found on the surface was very degraded but also large – almost 40 cm in length. The wall created by the limestone blocks was called Hobbiton Wall (running north-south, against the slope) while a new wall – Buckleberry Wall – made of chert cobbles and undressed limestone was found at a lower depth and perpendicular to Hobbiton, running east. Redeposited domestic fill was located to the east of Hobbiton Wall, and cobbles (determined to be collapse) were found in the southwest corner of the unit.

Unit 51B. Unit 51B was a 1 m (east-west) by 1.5 m (north-south) unit placed along the eastern sidewall of 51A to determine if Hobbiton Wall continued southeast. The unit comprised of two lots, the first of which, about 10 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2), large sherds, flakes, cores, and many chert and undressed limestone cobbles (0 to 25 cm). The large artifacts appear to be redeposited domestic fill while the cobbles appear to be collapse. A possible new wall, composed of small limestone and chert cobbles, was found in the northern portion of the unit running southeast, named Shire Wall. It appeared to run in a similar direction to Hobbiton Wall, connecting to the southern end of Hobbiton Wall, but was not in a direct line (instead running more towards the south than southeast) with Hobbiton Wall and thus was given a different name. Lot 51B2, 5 to 10 cm thick, was excavated below Shire Wall (which could be a wall, or a line of collapsed stones) to see if other walls appeared below it. The lot consists of very dark grayish brown clay loam (10YR 3/2) – the same matrix as the humus layer in the lot above it – with large sherds, flakes, and cores in the northeast portion of the unit and chert cobbles to the southeast. Shire Wall continued down, though it was only constructed of one course of stone, and it appears to create a boundary between the redeposited domestic fill in the northeast and cobbles that may be part of a platform, or collapse. These cobbles are
smaller than those identified as collapse in the other areas of the larger system, but both are at the same level, and it could be that the smaller cobbles (present further downslope) were broken up more during later flooding events.

**Unit 51C.** Unit 51C was a 1 m (north-south) by 1.5 m (east-west) unit placed along the eastern sidewall of 51B to determine if Shire Wall continues to the southeast. The unit was excavated in two lots, the first of which was 10 to 15 cm thick and consisted of very dark grayish brown clay loam (10YR 3/2) with many artifacts and small rock inclusions, especially on the northeast side of the unit. It was unclear if Shire Wall continued or if any other walls appeared. At this point a second lot was created. Lot 51C2, about 20 cm thick, consists of dark yellowish-brown clay (10YR 4/6) with fewer artifacts and small cobbles (0 to 5 cm). A possible arcing wall, called Moria Wall, was found curving from the southwest corner of the unit into the middle of the northern sidewall, running both against and along the slope. It was later noted that collapse from a wall excavated afterwards, Rohan Wall, could be seen along the eastern sidewall of the unit.

**Unit 51D.** Unit 51D was a 1 m (north-south) by 1.5 m (east-west) unit placed along the eastern sidewall of 51A (towards the northeast) to determine if Buckleberry Wall continued west. The unit comprised of one lot, 15 to 20 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with large sherds and flakes. Many chert and undressed limestone cobbles (0 to 20 cm) were found as well, which are most likely the result of collapse. Buckleberry Wall appeared to continue in small arc, similar to Moria Wall, as did a new wall— Rivendell Wall—which appeared in the northeast center of the unit, curving to the southwest then going north. It was unclear if Hobbiton Wall continued and connected to other curving walls, as it was very difficult to identify new walls versus those connected to Hobbiton Wall as a result of the large amount of collapse. Later excavations indicated that what was previously identified as Hobbiton Wall in Unit 51D could actually be collapse, a part of Orthanc Wall (see below), or may have represented a wall completely different from Hobbiton Wall.

**Unit 51E.** Unit 51E was a 1 m (north-south) by 1.5 m (east-west) unit placed along the southern sidewall of 51D in order to determine if any of the walls (Buckleberry, Moria or Hobbiton) found in 51D continued south. The unit comprised of two lots, the first of which, was 10 to 20 cm thick and consisted of very dark grayish brown clay loam (10YR 3/2) with chert and undressed limestone cobbles (0 to 10 cm). It is possible that previous walls continued in 51E, or that new walls were present, but it was difficult to distinguish between separate walls as the possible alignments curved and connected to each other. All of the walls in Agricultural Plot System 1, aside from Arryn Wall, form straight lines that connected to each other at right angles, but some walls in Agricultural Plot System 2 (i.e. Moria, Lothlorien, Buckleberry and Rivendell) have straight and curving components. Additionally, their ends were difficult to identify among other, small cobbles. These walls may have been intentionally constructed this way, or their appearance may be the result of collapse. Buckleberry Wall does appear to continue, and stop, in the northwest corner of the unit. A hemispherical feature (Feature 1) was revealed at the level of a soil change evident in the rest of the unit. Feature 1 consisted of a pit containing the humus matrix in the southern portion of the unit encircled by a line of cobbles. Curiously, these cobbles were not at the mouth of the pit, but were encountered 3cm below the pit’s...
mouth. The lot ended at the aforementioned soil change. The southeast corner of the unit was excavated a bit lower than the rest of the unit (20 cm below surface) to investigate Feature 1. Lot 51E2 was 35 cm thick and was created to excavate deeper into Feature 1. This lot consists of very dark grayish brown clay loam (10YR 3/2—like the previous lot) with large, broken pieces of ceramic, some of which may have previously been from a whole bowl broken at the time of deposition. The feature in this lot was half of a larger circle, with a radius of 35 cm running north-south and a diameter of 50 cm running east-west within and below 51E1. Some of the feature was excavated, but after it was determined to be part of a larger circle, and it would be too difficult to excavate only one side of the feature, the bottom of the feature was not reached until the creation of 51J1 (see below).

Unit 51F. Unit 51F was a 1 m (north-south) by 1.5 m (east-west) unit placed along the northern sidewall of 51C to determine if Moria Wall continues to the north. The unit was comprised of two lots, the first of which consists of a 20 cm thick layer of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, and chert and undressed limestone cobbles (0 to 25 cm). Moria Wall appears to continue north through the middle of the unit. Limestone blocks were also found, but they seem to be the result of slopewash or collapse. One limestone face was found along the eastern sidewall of the unit, in the southeast corner. It was unclear if this was part of collapse, but later excavations revealed that the limestone face is part of Rohan Wall. 51F2 was created to continue through the soil change that was seen at the end of 51F1 to reveal more of Moria Wall, if present. The lot, 5 to 10 cm thick (on the western side, as only the western portion of the unit was excavated), consists of dark yellowish brown clay with fewer artifacts and cobbles. Moria Wall continues to the north, appearing to split into two walls, but later excavations led to the conclusion that it was still one wall. Another wall, Lothlorien Wall, appeared in the form of three limestone cobbles, also continuing north, against the slope.

Unit 51G. Unit 51G was a 1 m (north-south) by 1.5 m (east-west) unit placed along the northern sidewall of 51D, facing northwest, to determine if any of the walls (Buckleberry, Moria or Hobbiton) from 51D continue the south. The unit comprised of two lots, the first of which, about 30 to 40 cm thick, consists of very dark grayish brown clay loam (10YR 3/2) large sherds, flakes, cores, and some small chert cobbles (0-5 cm). Some limestone blocks were encountered in this lot, including the face of a dressed limestone block along the southern sidewall, at the southwest corner of the unit. It was unclear if this one limestone block was part of a larger wall, and a new lot was created at a soil change to determine if any other blocks would be found below. Excavations in other units later showed that this block is part of Orthanc Wall. Lot 51G2 was 5 to 10 cm thick in the eastern portion of the unit and 55 cm thick in the western portion of the unit and consists of dark yellowish-brown clay (10 YR 4/6) and many small (0 to 1 cm) limestone inclusions. No new limestone blocks were encountered, but there was a larger than normal quantity of obsidian flakes and blades in the northeast corner of the unit.

Unit 51H. Unit 51H was a 1 m (north-south) by 1.5 m (east-west) unit placed along the southern sidewall of 51E to determine if Feature 1, found in 51E, continues south. The unit was excavated in two lots, the first of which was 10 to 15 cm thick and consisted of very dark grayish brown clay loam (10YR 3/2) with some artifacts. Many limestone cobbles and blocks and some chert cobbles were found surrounding the other side of Feature 1. More chert cobbles were found in
the eastern portion of the unit, while limestone blocks were found in the western portion of the unit. Excavations in this lot exposed the blocks, and a new lot was created to dig into Feature 1. It is possible, based on the lines of rocks in the unit, that one or two walls were encountered in the western portion of the unit, but it was difficult to follow the lines. 51H2 was a half-circle lot with a radius of 40 cm, running north-south, and a diameter of 90 cm, running east-west, within and below 51E1. The lot, 50 to 70 deep, consists of very dark grayish brown clay loam (10YR 3/2) with large pieces of broken ceramics and chert and limestone cobbles. A large limestone block was found in the western side of Feature 1 near the surface, but it was removed so it wouldn’t fall as we excavated deeper. The bottom of Feature 1 was not reached due to logistical issues (also encountered in 51E2), and it was decided that a new unit would be created to excavate the entire Feature.

**Unit 51I.** Unit 51I was a 1 m (north-south) by 1.5 m (east-west) unit placed along the northern sidewall to determine if Moria and Lothlorien Walls continue north. The unit was excavated in two lots, the first of which consisted of a 10 to 30 cm thick layer of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and some chert and undressed limestone cobbles (0 to 25 cm). Possible walls were found in the middle of the unit, and a new lot was created at a soil change to determine if cobbles found in 51I1 were part of Moria and Lothlorien walls. Later excavations, however, determined that Rohan Wall and wall collapse is probably located along the eastern sidewall of the unit. Lot 51I2 consists of a 5 to 10 cm thick layer of dark yellowish brown clay (10YR 4/6) with small chert and undressed limestone cobbles (0-5 cm). Moria and Lothlorien walls did not continue into Lot 51I, but Rohan Wall was revealed more clearly along the eastern sidewall of the unit.

**Unit 51J.** Unit 51J was a circular unit with a 90 cm diameter located in both 51E and 51H, below 51E2 and 51H2. This unit was created to continue excavating Feature 1 as a combined unit. As discussed above, Feature 1 consisted of a very dark grayish brown clay (10YR 3/2) with few artifacts, unlike the 10YR 4/6 soil change that occurred around it. This unit was excavated in one lot, 30 to 60 cm deep. The unit and Feature 11 began at 90 cm in diameter at the top, but then began decreasing in diameter starting at 40 cm below its surface. In total, Feature 1 was found to be about 75 cm deep. Charcoal was found at the bottom of the unit. The function of Feature 1 is not yet clear.

**Unit 51K.** Unit 51K was a 1 m (north-south) by 1.5 m (east-west) unit placed along the southern sidewall of 51G to determine if the limestone cobbles/blocks found in the southwest corner of 51G continue south. The unit was excavated in two lots, the first of which consisted of a 10 to 20 cm thick layer of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and some small chert and undressed limestone cobbles (0 to 5 cm). A wall appeared in the unit, running north-south and facing east-west against the slope, along the eastern sidewall of the unit, termed Gondor Wall. It connects to another wall found later, called Orthanc Wall, facing perpendicular to Gondor Wall, running east-west and located along the southern sidewall of 51G. Some limestone cobbles were found to the west (downslope) of Gondor Wall, but it was unclear at the time if they formed a wall, or if they were collapse from Gondor Wall. Lot 51K2 was created at a soil change, and to determine if Gondor Wall went down further. This second lot, 10 to 30 cm thick, comprises of dark yellowish brown clay (10YR 4/6) with small pieces of
undressed limestone (0 to 5cm). It was revealed that Gondor Wall did not have any more courses, but later excavations confirmed that what was previously described as collapse from Gondor Wall in the southern and southwestern parts of the unit is likely a wall called Mordor Wall (see Figure 2.20 for Mordor Wall and meeting of Gondor and Orthanc Wall).

Unit 51L. Unit 51L was a 1 m (east-west) by 1.5 m (north-south) unit placed along the western sidewall of 51C, running southwest, to determine if Rohan Wall continues south. The unit included one lot, about 10 to 15 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and chert and undressed limestone cobbles (0 to 25 cm). Rohan Wall continues to run south, with a small angle towards the east, and it was determined that the wall also goes through 51F, along the unit’s eastern sidewall. Large ceramic pieces, including a large jar rim, were found in the southeast corner, about 6 cm below datum. Additionally, chert and limestone cobbles—probably the result of collapse— are present to the east (upslope) of Rohan Wall.

Unit 51M. Unit 51M was a 1 m (east-west) by 1.5 m (north-south) unit placed along the southern sidewall of 51L to determine if Rohan Wall continues to the south or southeast. The unit comprised of one lot, about 5 to 20 cm thick and consisted of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and undressed limestone cobbles (0 to 10 cm), and small limestone inclusions. Rohan Wall is sparse— only two large limestone blocks with a few limestone cobbles— but is still able to be traced and continued southeast.

Unit 51N. Unit 51N was a 1 m (east-west) by 2 m (north-south) unit placed along the southern sidewall of 51K and western sidewalls of 51E and 51H to determine if Gondor Wall continues southeast and if the cobbles found in 51K are a wall or just collapse. The unit comprised of two lots, the first of which, 10 to 20 cm, consisted of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes and cores, and small chert and undressed limestone cobbles (0 to 5 cm). Gondor Wall continues. Additionally, another line of cobbles appeared in the western part of the unit. This line corresponded with a soil change, so a new lot was created. 51N2, 5 to 10 cm thick, consists of dark yellowish-brown clay (10YR 4/6) with large chert cobbles and undressed limestone (0 to 25 cm). Excavations revealed that Gondor Wall may be a part of some
limestone cobbles found in the southwest corner of 51H, which suggests that Gondor Wall continues to the southeast (i.e. not just south, which it seems to be in 51N, where the wall is present along the entire eastern sidewall). Another limestone block was found in line with the two limestone blocks seen in 51N1, in the western side of the unit. It was unclear if these stones are collapse from Gondor Wall or created a new wall. I identified this alignment as a separate wall—Isengard Wall (see Figure 2.21 for Gondor and Isengard Walls). Many cobbles were also found in the southeast corner of the unit, between Gondor and Isengard Walls.

Unit 51O. Unit 51O was a 1 m (east-west) by 1.5 m (north-south) unit placed along the southern sidewall of 51M, running southeast, in order to determine if Rohan Wall continues southeast. The unit comprised of one lot consisting of a 15 cm thick layer of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and many large chert and undressed limestone cobbles (0 to 25 cm). It is unclear if Rohan Wall continued southeast through this unit, as the entire unit was filled with limestone and chert cobbles. The large limestone block that was revealed in the southeast corner of 51M travels about 5 cm into 51O, but no other large blocks were found. Some small limestone blocks were found aligned toward the eastern sidewall of the unit that I believe might show the line of Rohan Wall (if it continued, which was not determined).

Unit 51P. Unit 51P was a 1.5 m by 1.5 m unit placed along the southern sidewalls of 51N and 51H (south of 51N and southwest of 51H) to determine if Gondor and Isengard Walls continued southeast. The unit was excavated in two lots, the first of which consisting of a 10 to 20 cm thick layer of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and some chert and undressed limestone cobbles (0 to 25 cm). Many small chert cobbles were also found in the southern part of the unit. Isengard and Gondor Walls appear to continue southeast, but a large amount of collapse was encountered in 51P1 obscuring the line of these walls. Based on these findings, I suggest that Isengard Wall was collapse from Gondor Wall. A new lot was created at soil change to determine if Isengard Wall was actually a wall. 51P2 consisted of a 5 to 20 cm thick layer of mainly dark yellowish-brown clay (10YR 3/2). Large limestone blocks were found at the bottom of the lot, forming Isengard Wall, which continued to the south-southeast. A new wall, called Mirkwood Wall, was found in the southwest corner of the unit. The wall is curved, with one side entering the southern sidewall and one entering the western sidewall, appearing to form a half-circle around a posthole or pit that was found in the southwest corner of the unit—called Feature 2. Charcoal was found in a screen from the soil of Feature 2 (which consisted of very dark grayish brown clay loam, 10YR 3/2). It was determined that excavations should continue to the west of the unit to see if Feature 2 is a pit feature like Feature 1, or a posthole.
**Unit 51Q.** Unit 51Q was a 1 m (east-west) by 2 m (north-south) unit placed along the eastern sidewall of 51O to determine if Rohan Wall is still present and, if so, if it continues southeast. The unit comprised of one unit, 10 to 15 cm thick, consisting of very dark grayish brown clay loam (10YR 3/2) with many artifacts and chert and limestone cobbles (0 to 5 cm). There is no indication that Rohan Wall continues. Instead, the entire unit is filled with chert and limestone cobbles and large pieces of ceramic—possibly indicated fill on top of a platform. Due to time constraints, excavation did not continue in this area. Additionally, investigating this area did not cohere with my goal of locating walls. There is a lens of soil coming off the eastern sidewall of the unit that does not contain cobbles, but the reason for the formation is unclear.

**Unit 51R.** Unit 51R was a 0.5 m (north-south) by 2.5 m (east-west) m unit placed along the eastern sidewall of 51G and the western sidewall of 51I. The unit comprised of one 20 to 25 cm thick lot that consisted of very dark grayish brown clay loam (10YR 3/2) with large sherds, flakes, cores, and some small chert and undressed limestone inclusions (0 to 5 cm). The entire unit is also filled with limestone block collapse the remnants of Orthanc Wall (Figure 2.22). Orthanc Wall appears to connect to Gondor and Rohan Walls, and forms the northernmost wall of the research area.

**Unit 51S.** Unit 51S was a 1 m (east-west) by 1.5 m (north-south) unit placed along the western sidewall of 51P to find the western edge of Feature 2 and determine if other walls are present to the west. The unit comprised of one 5 to 20 cm thick lot that consisted of very dark grayish brown clay loam (10YR 3/2) with some large sherds. Feature 2 continues into this lot, including the curved wall surrounding it (Mirkwood Wall). A large amount of collapse was found in the center of the unit, but it is unclear if it originally formed a wall of its own, or if it is collapse from Isengard Wall. In case it is a wall, it was named Valinor Wall.

**Unit 51T.** Unit 51T was a 1 m by 1 m unit placed along the northern sidewall of 51B to determine if the redeposited domestic fill found in the northeast portion of 51B/2 continues north and if any other walls were present. The unit comprised of one 15 to 30 cm thick lot that consisted of very dark grayish brown clay loam (10YR 3/2) and large sherds, flakes, and cores. Some limestone blocks appeared at a soil change, where excavations stopped, that may be
from the collapse of Orthanc Wall or Rohan Wall. Some of Orthanc Wall—or Orthanc Wall’s collapse—can be seen along the northern sidewall of the unit.

**Chich Cobble Mounds**

Operation 52 excavations were conducted to the east of the Actuncan site core, along the western edge of the Mopan River, where chich mounds have previously been identified by survey and LiDAR (refer back to Figure 2.4). Vertical excavations were conducted in this area, specifically on the western slope of what has been named Cobble Mound 1 (52A; Figure 2.23) and about a meter east of Cobble Mound 1 (52B; Figure 2.24) to determine the stratigraphy of the area and to collect soil samples for future macrobotanical analysis. Unit 52A revealed a humus layer with cobbles, a sandy loam layer underneath with few artifacts or inclusions, and a darker sandy loam layer with more chert cobbles as well as some charcoal. 52B was placed close to Cobble Mound 1 in the space between it and other cobble mounds to examine the stratigraphy inside the space created by the cobble mounds. The unit consisted of a humus layer with few artifacts present. A floor, July Floor (Figure 2.25), constructed of many chert cobbles and artifacts was found below the humus. A layer of fill containing many artifacts was encountered below the floor. Soil samples (both in Whirl-Pak bags and as flotation samples) were taken throughout excavations. Analysis has not been done on these soil samples, and more excavations are necessary in this area to gain a clear idea of the activities that occurred here. The appearance of a floor and the large quantity of artifacts, however, suggest that people may have lived in this area.
Unit 52A. Unit 52A was a 1.5 m by 1.5 m unit placed along the edge of Cobble Mound 1 to examine the stratigraphy along the mound’s edge and to excavate below the humus layer to reach a more pristine context for botanical sampling (see Figure 2.26 for complete stratigraphy). The unit comprised of three lots, the first of which consisted of a 10 to 30 cm thick layer of very dark grayish brown clay loam (10YR 3/2) with very few artifacts and some small limestone and cobble inclusions (0 to 5 cm). A new lot was created when the soil changed. Lot 51A2, a 10 to 20 cm thick layer, consisted of a dark yellowish brown sandy loam (10YR 3/4) with very few artifacts or inclusions. Lot 51A3, a 5 to 10 cm thick layer, was created at another soil change that consisted of brown sandy loam (10YR 5/3) with small limestone inclusions and very few artifacts. More chert cobbles (0 to 20 cm) appeared in this lot, particularly in the southwest corner. While not at the same depth as the cobbles on the modern surface that make up the bulk of the mound, it is probable that these cobbles are part of early constructions of the mound. Excavations ended due to time constraints.

Figure 2.26. Operation 52A East Profile.

Unit 52B. Unit 52B was a 1.5 m by 1.5 m unit placed 1 m away from Cobble Mound 1 to examine the stratigraphy between cobble mounds and to excavate below the humus layer to reach a less disturbed context to sample for botanical materials (See Figure 2.27 for complete stratigraphy). The unit comprised of three lots, the first of which was a 20 to 30 cm thick layer consisting of very dark grayish brown clay loam (10YR 3/2) with some small limestone inclusions and chert cobbles (0 to 20 cm) and very few artifacts. Excavations ended at a soil change. 51B2 consists of a 15 to 20 cm thick layer of dark yellowish-brown clay loam (10YR 3/4) with many cobbles (0 to 20 cm), small limestone inclusions, and many artifacts, including a broken groundstone metate.
The cobbles created a floor, July Floor, which appeared shortly after the lot was begun (refer back to Figure 2.25 for July Floor and area below July Floor). A new lot was created after the removal of the cobbles and a soil change. 51B3 is a 10 to 15 cm thick layer that consists of 10YR 4/4 clay loam with no inclusions but many artifacts, including large ceramic sherds that may refit into a partial vessel located in the northwest corner of the unit. Excavations ended after the recovery of these sherds due to time constraints.

Analytical Units

The following section describes the individual analytical units defined in Units 14X through BA, 51A through T, and 52 A through B. The descriptions are separated into three main constructions: 1) Agricultural Plot System 1 (Op. 14); 2) Agricultural Plot System 2 (Op. 51); 3) Cobble Mounds (Op. 52). For a chart of Analytical Units, see Table 2.A.1 for Operation 14, Table 2.A.2 for Operation 51, and Table 2.A.3 for Operation 52, all in appendix 2.A. Harris Matrices are also provided for all three operations in Appendix 2.A (Figures 2.A.1, 2.A.2, 2.A.3).

Agricultural Plot System 1

*Humus Layer with Cobble Fill outside of the System Boundary—AU1.* Lots Excavated: 14AK1, 14AZ1. This analytical unit describes modern soil development (humus layer) without redeposited domestic fill and no associated walls. The matrix was a very dark grayish brown (10YR 3/2) clay loam humus that ranged between 10 and 35 cm thick depending on the slope in/between the units. This layer contained a substantial amount of large chert and undressed limestone cobbles (0 to 50 cm), which may have supported the western portion of the agricultural system as it does not appear to be part of any plots, but is located directly downslope from the western-most boundary walls.

*Humus and Redeposited Domestic Fill within Walled Plots—AU2.* Lots Excavated: 14X1, 14Y1, 14AA1, 14AB1, 14AC1, 14AD1, 14AE1, 14AF1, 14AG1, 14AH1, 14AI1, 14AJ1, 14AM1, 14AN1, 14AO1, 14AP1, 14AQ1, 14AR1, 14AT1, 14AV1, 14AW1, 14AX1, 14AY1, 14BA1. This analytical unit is a layer of modern soil development (humus layer) mixed with some (presumed) Terminal Classic domestic fill intruding into the humus layer. The matrix was a very dark grayish brown (10YR 3/2) clay loam humus that ranged between 10 and 40 cm thick.
depending on the slope found in the different units. This layer contained a substantial quantity of large sherds and cores, as well as chert cobbles and undressed limestone inclusions ranging from 0 to 20 cm in size. The tops of walls from the agricultural system appeared at the bottom of this layer. All of these lots have at least one wall in them. The fill, located towards the inside of the system, may have been used to support the walls and/or create better soil fertility. In addition, it is likely that the fill was created from domestic refuse due to the quantity of sherds and cores. Based on its depth and preliminary ceramic investigation, AU1 probably dates to the Late and Terminal Classic time periods.

**Humus and Platform Fill – AU3. Lots Excavated: 14AA1, 14AC1, 14AI1, 14AM1, 14AO1.** This analytical unit consists of a very dark grayish brown (10YR 3/2) clay loam humus between 15 and 40 cm thick. The area contained a large amount of undressed limestone and chert cobbles and fewer artifacts than in other humus layers in the agricultural plot system. Excavations in this analytical unit ended once the base of the excavation unit was covered entirely in cobbles. It was determined that certain areas of 14AA, 14AC, 14AI, 14AM, and 14AO form a 2 by 2 m platform, but it should be noted that other areas of these units also were excavated as part of analytical unit 2. Based on its depth and preliminary ceramic investigation, AU3 probably dates to between the Late and Terminal Classic time periods.

**Unknown Occupation to the West of Reed Wall – AU4. Lots Excavated: 14AC2, 14AM2, 14AQ2.** This analytical unit consisted of a dark yellowish brown clay (10YR 4/6) with small undressed limestone inclusions and very few artifacts, mostly between 20 and 30 cm thick. Reed Wall is a 4 m long wall forming the eastern-most edge of the agricultural plot system (as well as the platform) and was constructed in three courses, two of which are below the humus layer, at a lower depth than the other walls. This analytical unit is the soil that covered the last two courses of Reed Wall.

**Unknown Occupation to the South of Mormont Wall – AU5. Lots Excavated: 14AI2.** This analytical unit was comprised of dark yellowish-brown clay (10YR 4/6) with small undressed limestone inclusions and very few artifacts. Mormont Wall is a 4 m long wall forming the southern-most edge of the agricultural plot system (as well as the platform – called Platform 1 – and was constructed of three courses of stone, two of which are below the humus layer and at a lower depth than the other walls. This analytical unit is the soil that covered the last two courses of Mormont Wall. This analytical unit was about 30 cm thick.

**Humus and Redeposited Domestic Fill above Yeso Feature – AU6. Lots Excavated: 14AL1, 14AS1, 14AU1.** This analytical unit describes modern soil development (humus layer), as well as Late and Terminal Classic domestic fill mixed within the humus layer. The matrix was a very dark grayish brown (10YR 3/2) clay loam humus that ranged between 20 and 30 cm thick. This layer contained a substantial quantity of large sherds and cores, as well as chert cobbles and undressed limestone inclusions ranging between 0 and 20 cm in size. Walls began appearing near the bottom of this layer. All of the lots in this analytical unit have at least one wall in them. The area of redeposited fill was located towards the inside of the system and may have been used to support the walls and/or create better soil fertility. In addition, the redeposited fill may have been created from domestic refuse based on the amount of sherds and cores. Based on its depth and preliminary ceramic investigation, AU6 probably dates to the Late and Terminal Classic time periods.

**Unknown Occupation Surrounding/Below Yeso Feature – AU7. Lots Excavated: 14AL2, 14AL3, 14AL5, 14AS2, 14AU2.** This analytical unit consisted of dark yellowish-brown clay (10YR
4/6) with small undressed limestone inclusions and very few artifacts. Its matrix is similar to AU4 and AU5. Yeso (Feature 11) appeared at the soil change separating AU6 and AU7, and this analytical unit represents the soil excavated to uncover the yeso feature. The feature did not cover the entire base of the lots in AU7. Excavations revealed that Feature 11 was about 5 cm below and the matrix of unknown occupation layers resembles that in AU7. None of the yeso feature was excavated because Millar found it generally does not contain artifacts. The analytical unit was between 10 and 30 cm thick in 14AL and 20 to 50 cm thick in 14AS and 14AU.

Posthole Associated with Yeso Feature – AU8. Lots Excavated: 14AL4. This analytical unit consisted of a very dark grayish brown clay loam similar to the humus encountered over the remainder of the agricultural plot system, but without redeposited domestic fill or cobbles. This analytical unit was a posthole located next to Feature 11’s southeastern edge. The posthole, Feature 12, was about 10 cm in diameter and 2 cm deep. It may have originally been deeper, but our excavations did not recognize the difference in matrix where it penetrated the humus layer.

Agricultural Plot System 2

Humus Layer – AU1. Lots Excavated: 51G1, 51K1. This analytical unit describes the modern soil development (humus layer) outside of Orthanc and Gondor Walls. The matrix was a very dark grayish brown (10YR 3/2) clay loam humus that ranged between 10 and 20 cm thick. This layer did not contain the quantity of fill and collapse evident in the humus layer of other parts Agricultural Plot System 2, and it is likely that the two lots containing this analytical unit are located beyond the agricultural plots. It should be noted, however, that while the majority of 51K1 and 51G1 contain this analytical unit, Gondor and Mordor Walls penetrate slightly into 51K1 along the eastern and southern sidewalls and Orthanc Wall goes penetrates into 51G1 along the southern sidewall. In addition, some of the platform that is bounded by Gondor Wall is also present along the eastern sidewall of 51K1.

Humus Layer with Cobble Fill outside of the System Boundary– AU2. Lots Excavated: 51O1, 51Q1. This analytical unit describes a humus layer without redeposited domestic fill and no associated walls. The matrix was a very dark grayish brown (10YR 3/2) clay loam humus that ranged between 10 and 35 cm thick depending on the slope in the unit. This layer contained a substantial amount of large chert and undressed limestone cobbles (0 to 50 cm), which may have supported the western portion of the agricultural system. This area does not appear to be part of any plots and is located directly upslope from the eastern-most boundary wall—Rohan Wall.

Humus, Redeposited Domestic Fill and Wall Collapse – AU3. Lots Excavated: 51A1, 51B1, 51B2, 51C1, 51F1, 51I1, 51L1, 51M1, 51N1, 51P1 51S1, 51T1. 51R1. This analytical unit describes an area of modern soil development (humus layer) mixed with (presumed) Terminal Classic domestic fill. The matrix was a very dark grayish brown (10YR 3/2) clay loam humus that ranged between 10 and 30 cm thick depending where on the slope the excavation units were located. This layer contained a substantial quantity of large sherds and cores, as well as chert and undressed limestone cobbles, ranging between 15 and 25 cm thick. Walls began appearing towards the bottom of the layer. All of these lots, except 51C1, have at least one wall in them. The redeposited fill, located towards the inside of the system, may have been used to support the walls and/or create better soil fertility. In addition, I determined that the fill was created
from domestic refuse based on the quantity of sherds and cores recovered. The area was poorly
preserved due to the sharp slope and natural processes of erosion occurring over the years. It
is likely that many cobbles found in these lots derived from collapsing walls. Based on its depth
and preliminary ceramic investigation, AU3 probably dates to the Late and Terminal Classic
periods.

Humus and Platform Fill – AU4. Lots Excavated: 51A1, 51D1, 51E1, 51H1, 51K1, 51N1,
51P1. This analytical unit consisted of a very dark grayish brown (10YR 3/2) clay loam humus
between 15 and 40 cm thick. The area contained a large amount of undressed limestone and
chert cobbles and fewer artifacts than in the humus layers over other parts of the agricultural
plot system. Excavations in this analytical unit ended once cobbles covered the base of the
unit. At the base of these lots a platform of unknown size—it was not fully excavated—similar
to that in Agricultural Plot System 1 was identified. Based on its depth and preliminary ceramic
investigation, AU4 probably dates to the Late and Terminal Classic periods.

Unknown Occupation to the West of Rohan Wall – AU5. Lots Excavated: 51C2, 51F2,
51I2. This analytical unit consisted of dark yellowish brown clay (10YR 4/6) with small undressed
limestone inclusions and few artifacts, mostly between 10 and 20 cm thick. Rohan Wall is a 4
m long wall forming the eastern-most edge of the agricultural plot system, and is the only wall
encountered in this analytical unit. No wall was encountered in 51C.

Unknown Occupation around Isengard and Gondor Walls – AU6. Lots Excavated:
51N2. This analytical unit was comprised of a dark yellowish-brown clay (10YR 4/6) with small
undressed limestone inclusions and very few artifacts, mostly between 20 and 30 cm thick.
Isengard Wall is a 2 m long wall forming the western-most wall running north-south that was
evacuated. Unit 51N contains both Isengard and Gondor Walls, and probably contains the
beginning of a new plot, but excavations in this western portion of the agricultural plot were
ended due to time constraints.

Unknown Occupation outside the System Boundary – AU7. Lots Excavated: 51G2,
51K2. This analytical unit consisted of a dark yellowish-brown clay (10YR 4/6) with small
undressed limestone inclusions and very few artifacts, about 55 cm thick. This area contains
part of Orthanc Wall, along the southern sidewall of unit 51G; however this analytical unit also
evacuated below the one-course wall. Orthanc Wall was the northern-most wall in the system.

Feature 1 Pit – AU8. Lots Excavated: 51E2, 51H2, 51J1. This analytical unit consisted of
a very dark grayish brown clay loam (10YR 3/2) similar to the humus encountered in the rest
of the agricultural plot system, but without the any evidence of redeposited domestic fill or
cobbles. These excavations dug into a pit containing large pottery sherds and charcoal, both at
its bottom. The pit is located in what appears to be the middle of the possible platform. A circle
of cobbles surrounded the opening of the pit. Feature 1 is a truncated conical pit with a 90 cm
diameter at the top, which gradually decreases in diameter starting at 40 cm below surface.
This analytical unit and Feature 1 were about 75 cm deep.

Feature 2 Pit – AU9. Lots Excavated: 51P2, 51S1. This analytical unit consisted of a very
dark grayish brown clay loam (10YR 3/2) similar to the humus in the rest of the agricultural
plot system, but without the same type of redeposited domestic fill or cobbles (similar to AU8/
Feature 1). This pit contained a few large pottery sherds and charcoal, both at the bottom,
and was located to the west of Isengard Wall and south of Valinor Wall. A circle of cobbles
surrounded the opening of the pit, called Mirkwood Wall. Due to time constraints, only the
northern portion of the feature was excavated, creating a half-circle, but it is likely that it
formed a full circle like Feature 1. Feature 1 is a circle with a 90 cm diameter running east-west, with 60 cm excavated running north-south (it is likely that the Feature is 90 cm in diameter in total). This analytical unit and Feature 2 were about 20 cm deep.

**Chich Mounds**

*Humus along and beside Cobble Mound 1 – AU1. Lots Excavated: 52A1, 52B1.* This analytical unit consisted of a very dark grayish brown clay loam (10YR 3/2), between 10 and 30 cm deep with few artifacts and small limestone and cobble inclusions. It appeared to be a natural soil layer.

*Yellow Sandy Loam along the edge of Cobble Mound 1 – AU2. Lots Excavated: 52A2.* This analytical unit consisted of of a dark yellowish brown sandy loam (10YR 3/4) between 5 and 10 cm deep with very few artifacts and no inclusions. It appeared as a natural soil layer.

*July Floor beside Cobble Mound 1 – AU3. Lots Excavated: 52B2.* This analytical unit consisted of a dark yellowish brown clay loam (10YR 3/4), 15 to 20 cm deep, with many cobbles and small limestone inclusions. It contains some soil from above the floor, the floor itself, and a small bit of sediment from under the floor. The matrix under the floor is very similar to that above the floor likely due to bioturbation that has taken place as the floor eroded away. July Floor consisted of a layer of chert cobbles about 20 to 25 cm in size beneath a layer of many large sherds, flakes, and a broken groundstone metate that were sitting on the cobbles. The cobble floor itself also contained many artifacts.

*Brown Sandy Loam along the edge of Cobble Mound 1 – AU4. Lots Excavated: 52A3.* This analytical unit was comprised of a very dark grayish brown sandy loam (10YR 5/3) with few artifacts and small limestone inclusions. More cobbles, like those used to construct Cobble Mound 1, began to appear in the southwest corner of 52A3. Excavations into this analytical unit were 5 to 10 cm deep. They were ended due to time constraints so the base of this analytical unit was not reached.

*Unknown Occupation beside Cobble Mound 1 – AU5. Lots Excavated: 52B3.* This analytical unit consisted of a 10YR 4/4 clay loam with many artifacts, including a pile of large ceramic sherds in the northwest corner of 52B3 that probably fit together. Excavations into this analytical unit were 10 to 15 cm deep. They ended due to time constraints, and it is unclear how deep this matrix continued down.

**Preliminary Conclusions**

Excavations this year continued 2016 excavations in the western portion of Actuncan’s northern settlement zone, with two possible agricultural plot systems located to the south and southeast of Group 7. The first agricultural plot system was an extension of a terrace previously found in Units 14Q, R, T, U, and W and extending into Units 14X through 14BA excavated this year. Stark Wall created a stone terrace running about 7 m in length and up to five courses of chert cobbles and limestone blocks, perpendicular to the natural slope of the land. The 2016 excavations terminated with a small “box” of one to two cobbles converging at the end of Stark Wall, with Stark and Martell running north-south and Lannister and Baratheon Walls running east-west in 14W. Units 14X, 14Y, and 14Z were placed along 14W to determine if any of these four walls continued. Martell Wall stopped in 14W, but Stark Wall and Baratheon Walls continued running perpendicular to each other throughout the agricultural system. Other walls continued to be
found throughout the units, enclosing what appears to be at least three, possibly four, plots ranging in size. Stark Wall continued throughout the system, but as a one-course wall after the appearance of the box in 14W.

As stated above, this agricultural system consists of three, probably four (or more) agricultural plots as well as a yeso terraforming and a square platform. Few artifacts were found in the areas excavated outside of the system, but many large sherds, flakes, and cores were found within the plots, suggesting that redeposited domestic fill was used to aid in creating more productive soil. Reed Wall, bounding the eastern-most portion of the system, is, along with Stark Wall, the only wall constructed of more than one course of well-cut large limestone blocks. East-northeast is upslope, so it is possible that Reed Wall was better maintained and larger in size to combat soil erosion and water running downslope. It also provided a base for the eastern (upslope) side of the platform. Larger cobbles were found in the matrix further downslope (to the southwest), with many large chert cobbles (and fewer artifacts) to the west of Greyjoy/Baelish/Barristan Wall (the western-most boundary of the system). These cobbles likely held the furthest downslope portion of the system together. The yeso feature and the terrace wall created by Stark Wall may have created a water diversion, forming a channel to guide excess water north around the agricultural plots. It is interesting to note, however, that there is a gap between the yeso and Baratheon Wall, which leads towards the small box created by Stark, Lannister, Baratheon and Martell Walls. While the function of the small box (1 x .5 m) is still unclear, it is possible that Feature 11 was also used to divert water into the box to create a sort of cistern.

Agricultural Plot System 2, upslope of Agricultural Plot System 1 by an unmodified slope and separated from Agricultural Plot System 1 by an unmodified hillslope, appears to be bounded by Orthanc Wall to the north and Rohan Wall to the east. Excavations revealed at least eight distinct walls. Unfortunately, the area was not well preserved, and much of the system was covered by collapse likely washed over the system by rainwater run-off and colluvium. It is probable, however, that there were at least three plots along with a possible platform and two pits, each surrounded by a circle of cobbles. Similar to Agricultural Plot System 1, this system, with the exception of a possible platform located in the middle of the system as well as two pit features, was covered in redeposited domestic fill. A large quantity of artifacts was found mixed with small chert cobbles in this possible platform. Further examination of artifacts and the area will allow for additional interpretation. More analysis is also required for functional interpretation of the two deep pit features. The stone cobbles surrounding the pits only form one course, and do not continue down, making it unlikely that the pits were used as wells. The charcoal found at the bottom of the pits will need to be examined in particular to determine the pits’ function(s).

Finally, to the east and downslope of Actuncan, two excavation pits (52A and 52B) revealed some of the stratigraphy present in the cobble chich mound located close to the Mopan River. Unit 52A was placed along the western slope of Cobble Mound 1, and 52B was placed a meter east of 52A in order to examine its stratigraphy. Soil samples (both in Whirl-Pak bags and as flotation samples) were collected from throughout these excavations. Unit 52A contained a humus layer with cobbles from the top strata of the cobble mound, with a sandy loam layer underneath, and a darker sandy loam layer with cobbles below the original sandy loam layer.
While the stratigraphy is not complete, especially in terms of the darker sandy loam layer with cobbles – which was not fully excavated, it is hypothesized that this lower layer of cobbles represents an earlier construction of the cobbles mounds. Larger excavations will be required to confirm this hypothesis. Unit 52B contained few cobbles, aside from the cobbles making up July Floor, which was found below the humus layer. Many artifacts were found just above, mixed in with, and just below this floor, suggesting a habitation zone in this area.

Further excavations and analysis will involve expanding the chich cobbles mounds investigations to learn more about the structure and function of Agricultural Plot Systems 1 and 2 and the chich cobbles mounds. Future research will focus on continued excavations of areas on and between the cobbles mounds along the western floodplain of the Mopan River. These investigations will attempt to determine if there are more habitation zones. Additional soil samples will be collected for macrobotanical analysis to determine if the area was used for agricultural purposes. Artifact analysis will focus on understanding the chronology of both the two excavated agricultural plot systems and the cobbles mounds evaluating evidence for redeposited domestic trash in the agricultural plot systems and habitation around the cobbles mounds. Investigations will also continue to understand the possible platforms found in Operations 14 and 51, and the pits found in Operation 51.

Acknowledgements

I would like to thank Lisa LeCount, first and foremost, for her help with my excavations and interpretations. I would also like to thank David Mixter for his aid in writing this chapter and for making me think more critically about my work and my interpretations. Wade Tidwell aided me in my excavations and drawings and provided lightheartedness in the field. Bobbie Simova has also always provided constant encouragement throughout my fieldwork, and Taylor Lawhon was incredibly helpful both for her drawing skills and support. I also want to thank my amazing excavators and ayduantes: Rene and Alvin Uck, Elmer Cocom, Marky Chaman, Oscar Chulin, and Carlos Hernandez. And of course, my thanks to Azucena Galvez for her hospitality, fantastic food, and for taking care of me like a mother through the 2017 field season.

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Fedick, Scott L., and Bethany A. Morrison


### Table 2.A.1. Operation 14 Analytical Units

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<th>AU Number</th>
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<th>Excavated Lots</th>
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<td>AU1</td>
<td>Humus layer with Cobble Fill outside of the System Boundary</td>
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<td>AU2</td>
<td>Humus and Redeposited Domestic Fill within System Boundary</td>
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<td>AU3</td>
<td>Humus and Platform Fill</td>
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<td>AC2, AM2, AQ2</td>
</tr>
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<td>AU5</td>
<td>Unknown Occupation to the South of Mormont Wall</td>
<td>AI2</td>
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<td>AU6</td>
<td>Humus and Redeposited Domestic Fill above Yeso Feature</td>
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<td>AU7</td>
<td>Unknown Occupation Surrounding/Below Yeso Feature</td>
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<td>AU8</td>
<td>Posthole Associated with Yeso Feature</td>
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![Figure 2.A.1. Operation 14 Harris Matrix](figure)

### Table 2.A.2. Operation 51 Analytical Units

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<td>Humus Layer with Cobble Fill outside of System Boundary</td>
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<td>Humus, Redeposited Domestic Fill and Collapse</td>
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</tr>
<tr>
<td>AU3</td>
<td>July Floor beside Cobble Mound 1</td>
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<td>Unknown Occupation beside Cobble Mound 1</td>
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Figure 2.A.2. Operation 51 Harris Matrix

Figure 2.A.3. Operation 52 Harris Matrix
Chapter 3: Ritual Spaces and Social Integration:
Trench Excavations in E-Group Plaza, Plaza F

Borislava S. Simova (Tulane University)

The 2017 excavations in Plaza F were conducted as part of my on-going dissertation research in which I investigate the role of early constructed ritual spaces in social integration that occurred during the Early to Middle Preclassic periods (1100-400 BC). This research focuses on Actuncan’s E-Group (Figure 3.1), a ritual space defined by a western radial pyramid and an elongated eastern structure surrounding an open plaza, and will incorporate excavations and sampling techniques that elucidate the structure of activities occurring within the complex. By examining the types of activities, their spatial organization, and the ways they shift over time, I will test hypotheses about the role of constructed space in generating and formalizing new forms of social interaction.

E-Groups have a long history of investigation in the Maya Lowlands. Recent research at sites such as Ceibal and Cival in Guatemala has confirmed that these complexes were often the first construction projects to define an archaeologically visible community (Inomata et al. 2013, 2015; Estrada-Belli 2011, 2012). The form, arrangement, and widespread presence of E-Groups point to the presence of large-scale labor organization and broad interregional interactions. Actuncan’s E-Group is an example of this early complex and can offer important insights into the development of local community and social complexity.

Discussion about activities within E-Groups has largely focused on their ceremonial functions. Some of the earliest interpretations of E-Group function were its possible use as a solar observatory (Laporte and Fialko 1990, 1995; Aveni and Hartung 1989; Aveni et al. 2003) or as a setting for agricultural ritual (Chase and Chase 1995; Aimers and Rice 2006). Ceremonial caches within the earliest reported E-Groups have been highlighted as evidence of placemaking activities (Estrada-Belli 2012) and exclusionary practices (Aoyama et al. 2017). Although the architectural space is largely perceived as serving integrative gathering functions, the ceremonial deposits are interpreted as strategic actions undertaken by emerging elites (e.g., Inomata et al. 2013; Rice 2015). This incongruity in interpretation may be resolved through a stronger focus on activities associated with these spaces.

The present research adopts techniques developed for the study of domestic and economic activities, namely soil chemistry analysis, to examine the use of the E-Group plaza. Plaza spaces are often viewed as multi-functional, allowing for greater interactions between people for a variety of economic, political, and ritual goals. However, discussions of E-Groups have been largely focused on ritual functions. Understanding the significance of these early constructed plaza spaces should incorporate an understanding of a broader range of activities, beyond periodic ritual deposits. Soil samples from occupation surfaces of the plaza and structures will provide multi-elemental profiles that can be used to identify the chemical residues of activities such as burning, food production and consumption, and craft production (Barba and Manzanilla 1987; Middleton and Price 1996; Terry et al. 2004; Wells et al. 2000; Wells 2004). Clay and plaster surfaces can trap and preserve a variety of chemical compounds over very long periods, and are ideal for studying chemical residues of repetitive activities, which are
more likely to allow for the accumulation of inorganic elements over time. Using soil chemistry, I will identify patterns in the use of the structures and plaza. The types and spatial patterning of these activities will offer insights into the relationships people had with early ceremonial spaces and into how these constructed spaces relate to later architectural elaboration and social organization at the site.

The excavations of the 2017 season focused on a 20 m long, 1.5 m wide trench, designated Operation 50, through the center of the E-Group plaza, Plaza F (Figure 3.2). The plaza is defined by the elongated platform of Structure 26 to the east and the Structure 23 pyramid to the west. Previous excavations in the plaza at the base of the range structure suggested that six constructed floors were present, while a test pit toward the center of the plaza uncovered eight surfaces (Mixter and Craiker 2013). This year’s excavations aimed at exposing these occupation surfaces in order to correlate floors identified in previous excavations, to collect soil chemistry samples, and to locate caches and other evidence of activities that occurred in the plaza. Due to limitations in time and labor, sections of the trench at the center of the plaza and near the base of the building were more intensively excavated.

Figure 3.1. Actuncan Site Map.
The excavations clarified the construction history of the plaza and located a ceremonial cache (AU20-Feature 7) containing several serving vessels in a pit below the 4th plaza floor. Some interesting construction features were identified in the process, including a low, dressed-stone wall (AU12, Blue Plaza Wall) constructed on Kanye Floor near the base of Structure 26 and later buried. Moreover, I was able to collect ceramics and carbon, which will be used to refine the chronology of construction. Additionally, 305 soil chemistry samples were collected from across sections of all nine floors for future subsampling and analysis.

**Previous Excavations**

Various components of the E-Group complex have been investigated over three seasons. In the 2012 summer season, Craiker supervised the Operation 31 test excavations and posthole sampling in Plaza F as part of Keller’s plaza investigation program (Keller and Craiker 2012; Craiker 2013; Mixter and Craiker 2013). This work made use of test excavations and extensive, expedient sampling of the terminal plaza to investigate activates occurring within these public spaces. Operation 31 consisted of two contiguous 1 by 1 m units (A and Q), one of which was...
excavated to sterile soil (Figure 3.2). Following test excavations, the depth of the terminal plaza floor was determined and samples were collected in a 5 m grid using a clamshell posthole digger with 19 cm average diameter. A total of 104 postholes were placed and sampled. Mixter’s analysis of artifact density suggests a greater concentration of activity near the structures and in the northern area of the plaza (see Mixter and Craiker 2013: Figure 7.4). Within the scope of this research, Plaza F samples point to a lower density of activity than Plaza C located to the south, as is expected for a space with a restricted, ritual function.

The 2012 excavations identified eight plaza floors, summarized in Table 1. The 2013 and 2015 excavations at the base of Structure 26 identified five floors in excavation and two in profile. These excavations are designed Operation 39. The 2017 excavations attempted to reconcile these findings by extending excavations at the base of the structure toward the center of the plaza. Unfortunately, the excavations did not directly connect to the 2012 units, as new understandings of the layout of the structures suggested that the plaza center was likely located further to the north than initially believed. Nevertheless, with further analysis of the 2012 excavations and comparison with the current excavations, I believe I have been able to securely correlate the construction sequences, as discussed later in this chapter.

Table 1. Plaza F floor correlations.

<table>
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<tr>
<td>Bambi</td>
<td>Fever</td>
<td>4th</td>
</tr>
<tr>
<td>Cinderella</td>
<td>Dengue?</td>
<td>5th</td>
</tr>
<tr>
<td>Mickey</td>
<td></td>
<td>6th</td>
</tr>
<tr>
<td>Simba</td>
<td>Nelly?</td>
<td>7th</td>
</tr>
<tr>
<td>Aladdin</td>
<td></td>
<td>8th</td>
</tr>
<tr>
<td>Pinocchio</td>
<td>Felix ?</td>
<td>9th</td>
</tr>
</tbody>
</table>

The 2013 excavations focused on the eastern structures of the E-Group, beginning with excavations of the central platform (Str. 27, Operation 38) and continuing west in Operation 39 along the central axis of the Structure 26 platform (Donohue 2014). Excavations were conducted in contiguous 2 m by 2 m units aimed at determining the structures’ construction histories and locating activity areas on the structures’ summits. A total of 13 units were placed in the central platform. They identified steps on the plaza-facing, western façade of Structure 27, as well as two to three possible terraces, similar to architectural patterns reported from Holmul, Guatemala (Estrada-Belli 2009). An altar, Operation 38 Feature 3, was identified on the structure summit, dating to the Terminal Preclassic period. Deeper excavations in Unit E (see Figure 3.2), found evidence of an earlier structure phase marked by Ludacris Floor, and several distinct fill
levels below it, which may mark earlier structure phases.

The Operation 39 excavations in Structure 26 spanned a 2 m by 16 m axial trench placed on its western façade (Figure 3.2). These excavations initially exposed four platform floors, two staircases, and five plaza floors at the base of the structure. A number of ritual deposits were identified in these excavations, including Burial 18 in the Terminal Preclassic Lupe Fiasco Floor, and a deposit of eight chert eccentrics in the structure collapse above the location of the burial.

In 2015, excavations continued on Structure 26’s axial trench and new excavations were initiated into Structure 23 (Figure 3.2). Simova and Mixter (2016) reopened the Operation 39 trench into Structure 26, extending two of the summit units to allow for deeper excavations to proceed into the structure. Heindel (2016) began Operation 49, investigating the construction history of Structure 23.

Structure 26 consists of six construction phases, defined by six staircase constructions and nine summit floors, collectively referred to as Owl platform. Below this dressed-stone and lime construction, we identified two earlier constructions, Structure 26-sub-1 and Structure 26-sub-2. The former structure, referred to as Brown Jay Platform, consists of a central clay platform constructed in at least two phases with a cobble façade and low dirt and cobble terraces. The lower Structure 26-sub-2, an earthen platform, was identified under a cobble fill that augmented the size of the ridgetop prior to the construction of Brown Jay. It is poorly understood at this point, but appears to be a clay mound with a foundational deposit of Cunil ceramics.

In the course of these excavations, we collected soil chemistry samples from several plaster floors. The samples were processed by E. Christian Wells. Results demonstrate relatively clean floors. Phosphorus was the only element found in quantities exceeding natural concentrations in the matrix. The floors each had a unique residue pattern, showing slight shifts in organization of activity within them, however, a general pattern of organic residues, likely from food and drink, persists through time (Simova et al. 2017).

Heindel’s (2016) excavations targeted the eastern terrace of Structure 23 in order to locate the plaza-facing staircase, in Units A, B, D, and E. An additional unit, Unit C, was placed on the north side of the structure to determine if outset, radial staircases are present, consistent with E-Group structures reported from Tikal and Uaxactun (Laporte and Fialko 1995).

Excavations in the eastern façade identified two buried construction phases (23-2nd and 23-3rd) with dressed limestone and plaster staircases, and floors suggesting at least one additional phase underneath the identified stairs. Unfortunately, the terminal staircase had completely collapsed or been purposefully dismantled. The first staircase identified, that of 23-2nd, consisted of five steps and a rounded stairblock, which likely marks the structure centerline. The earlier 23-3rd structure featured six steps with heavily eroded plaster suggesting intensive use of the staircase. Two floors identified below the second staircase suggest that earlier building phases had a different arrangement, with broader steps or terraces.
Methods

This season’s excavations focused on a 20 m by 1.5 m trench through the center of Plaza F (Figure 3.2). The trench was subdivided into ten 2 m by 1.5 m units. The plaza centerline was approximated from the location of caches within the 2015 trench excavated in Structure 26 and the stair block located in the eastern trench of Structure 23. Because one goal was to locate foundational caches in the center of the plaza, we estimated the midpoint between Structure 23 and 26. This was difficult since the early phases of Structure 23 have not yet been excavated. I estimated that 18 m from the western edge of the Operation 39 trench may place us in the center.

Excavations proceeded following established AAP procedures. Units were excavated in natural, rather than arbitrary, layers and material was screened through a ¼” screen. Ceramics over ½” in size and all lithics were collected.

All ten units were excavated down to the last well-preserved plaster floor, identified as Kanye Floor, to establish a baseline count for the floors. After this, excavations focused in two locations: Units I and J targeted the plaza center, and Unit A targeted the base of the eastern structure. I hypothesize that activities involving production of crafts or preparation and consumption of food would have clustered near the building while displays of ritual offerings may have been more centrally located in the plaza. Units I and J were excavated down to a buried A-horizon. Unit A was excavated to just below the fourth plaza floor, where a ceramic cache containing at least six plates and dishes was encountered.

A significant focus of this season’s excavations was the collection of soil chemistry samples from successive floors of Plaza F. Samples were collected with a clean trowel, rinsed using demineralized water. The section of floor was gently scraped prior to collection to remove loose debris from excavations (Figure 3.3). Approximately 100 mL of soil were collected in Whirl-Pak bags. Floors were sampled in a staggered grid pattern (Figure 3.4). We closely followed the grid...
while collecting samples except in cases where offsetting the sample location a few centimeters could ensure that we collected plaster from a well-preserve patch of floor rather than an eroded section. For very eroded floors, collection preceded as normal, gathering soil as well as plaster.

I collected six samples per 2 m by 1.5 m unit to ensure as full coverage as possible; however, the grid is arranged in such a way that I can sub-sample each unit depending on future resource availability. Samples were photographed next to collection areas and brought back to the lab where they could dry in a controlled setting before being sealed and stored.

Construction of the E-Group Plaza

During this season’s excavations, we identified nine constructed surfaces in Plaza F (Figure 3.5). All but the terminal floor have some preserved plaster. The latest five floors are extensively eroded, suggesting they were in use over longer periods of time between construction events and/or constructed with lower quality plaster. They also were constructed on somewhat thicker stone fills. In contrast, the earlier four floors have thick, well-preserved plaster and were built on shallow ballasts and fills. For instance, the first plaster floor was constructed on top of leveled clay with a shallow layer of small to medium sized cobbles serving as a ballast. In the following section, I summarize the floor constructions, starting with the terminal floor and continuing down. I also provide current interpretations of how these floors relate to previous Plaza F excavations, summarized in Table 1.

The terminal floor, Biggie Floor, was extensively eroded, with only pebbly ballast left in situ. We identified this surface below the collapse and soil washed down from Structure 26 and were able to follow it part way into the plaza, where it appeared deflated and virtually undistinguishable from the humus layer. Because of the extent of this erosion, this floor had not been identified and labeled in the Operation 31 test excavations (Table 1).

The penultimate plaza floor, named Tupac in the 2013 excavations, consisted of a shallow cobble fill underlying a partially eroded plaster surface. The elevation and thickness depth and size of the fill of Tupac floor are consistent with those of Pluto Floor (Op. 31). The plaster of Tupac Floor is well preserved in the four eastern units and shows episodes of replastering. Two shallow pits (Feature 1 and 2) were cut into the floor, as was a 17 cm deep posthole (Feature 3), and then covered by plaster patches (Figure 3.6). Within the fill of Tupac, we encountered a single-course wall, named Blue Plaza Wall (Figure 3.7), associated with a sascab fill directly behind it. The wall faces east, toward Structure 26 and the fill extends about 5 m to the west. Since no west-facing wall was found, the Blue Plaza Wall and fill are currently interpreted as features of Tupac fill rather than features constructed on the earlier Kanye Plaza Floor. However, it is possible that they formed a low platform within the plaza and its western face was destroyed prior to the construction of the penultimate Tupac Floor.

The third plaza floor encountered, Kanye Floor (Op. 39), or Eeyore Floor (Op. 31), had a relatively well-preserved plaster surface, which we were able to follow from the base of Structure 26 though the center of the plaza, where it is more deteriorated. We identified one shallow circular pit (Feature 5 in Unit E) and two postholes (Feature 4 and 6 in Units I and G
Figure 3.5. Operation 50 South Profile.
respectively) in this floor. No notable cultural material was recovered from them. Portions of the floor ware also replastered. In the interest of time, we only excavated through Kanye Floor in six units, omitting Units B, D, F, and H. There was only a thin deposit of fill separating Kanye from the 4th plaza floor, except in Unit C, where we failed to identify a plaster floor. Instead, we encountered a larger stone fill (AU17), suggesting the 4th plaza floor had eroded away in this section.

Excavations through a fourth plaza floor were only carried out in Units A, I, and J. While I suspect that, given their position in relation to Kanye Floor, the plaster floors in Unit A and in I and J were the same surface, representing Fever Plaza Floor, there are some notable differences. In Unit A, near the base of Structure 26, the plaster of Fever Floor is better preserved than within the Operation 39 units at the base of the structure. In Units I and J, the 4th floor lacked preserved plaster, identified only by a pebbly ballast. This pebbly ballast is likely the same as Bambi Floor (Op. 31).

Below the 4th floor of Unit A, we encountered a higher concentration of ceramic sherds and an alignment of stones, forming a south-facing wall (Figure 3.8). Just below this wall, we identified a layer of large sherds overlying nearly complete ceramic vessels in a cache (AU20, Feature 7). The vessels were placed upside-down in the pit, piled over each other. Toward the bottom, we recovered a nearly complete Z-angle bowl. This ceramic material was deposited in a pit with a loose, gravelly fill, and the line of stones was placed above it, partially overlapping it (Figure 3.8). This deposit was found on the last day of excavations, so we did not have time to follow the stone alignment or clean around the cache to find if it was placed within an earlier floor.

In Units I and J, we identified a 5th plaza floor with deteriorated plaster surface. The pebbly ballast of the floor overlay a dense, pavement-like deposit of cobbles forming the floor fill. This is similar in to the construction of Tupac floor. The position of this 5th floor and its thicker fill are consistent with Cinderella Floor (Op. 31). However, since fewer floors were identified in the
Operation 39 excavations at the base of Structure 26, I am not easily able to relate the 5th through 8th floors to these floors. Two factors may be causing this discrepancy: the floor sequence may be more compressed in the center of the plaza due to more extensive erosion, and a higher frequency of cultural deposits near the base of structures may be affecting preservation around the plaza edges. Continued excavations in Unit A, near the base of Structure 26, should help improve these correlations.

Excavations continued through the 6th plaza floor, which is the top floor in a sequence of well-preserved early floors. In Unit I, we encountered the edge of a plaster patch, extending further to the east. Although this patch is rather substantial, it did not appear to mend more than an eroded section of floor. Portions of this floor appeared gray and flaky, suggesting burning. Given its position, I believe the 6th floor is the same as Mickey Floor, but Craiker (Mixter and Craiker 2013) encountered a sherd ballast and layer of clay under this floor, which was not present in Units I and J. Craiker’s findings may represent a feature within the floor.

The subsequent 7th plaza floor consists of thick plaster floor with thin ballast constructed directly on a previous floor. The plaster shows evidence of burning. This floor corresponds to Simba Floor (Op. 31).

The next floor was easily distinguished by a dark gray, extensively burned surface. The matrix of this 8th plaza floor was yellowish and friable. Consistent with Aladdin Floor, this floor is constructed directly on top of the next floor.

The 9th and earliest plaster floor is constructed on clay, with coarse cobble ballast. Its position and appearance are consistent with Pinocchio Floor (Op. 31), and it is likely the same as Felix Floor at the base of Structure 26. However, Felix floor appeared to lack a ballast. This floor is similarly soft in texture and worn down, suggesting a long period of use. A small accumulation of chunky fired clay, likely daub, was recovered from the floor, suggesting that perishable structures may have been present in the plaza.

The clay below the 9th floor may have been a prepared surface in its own right. The lack of sizable cobbles in the clay set it apart from later construction fills, therefore I think it is
unlikely to have been a fill layer for the 9th floor. It covers a shallow (up to 5 cm in depth) deposit of darker clay with small cobbles strewn over the surface, which we interpret as a buried A-horizon. Although this shallow deposit was likely naturally formed, it is very level, suggesting that both the clay below and the horizon were prepared for the construction of occupation surfaces. Since we continued to encounter small lithic and ceramic fragments in the deepest excavated sections of Units I and J, it was clear we did not reach the base of the plaza construction. However, using Operation 31 and 39 profiles as a guide, we were likely no more than 10 cm from the natural clay underneath.

**Analytical Units**

**AU1- Humus. Lots excavated: A1, B1, C1, D1, E1, F1, G1, H1.** The humus consists of a dark, 10YR 2/2, clay loam with small to medium sized stone inclusions. It appears more thickly accumulated in Units A, B, and C, near the base of the structure whereas toward the center of the plaza, in Units H, I, and J, it was nearly indistinguishable from the terminal plaza surface. This open area may have been more prone to deflation, caused by wind erosion, or to trampling by grazing cows. Some evidence of posts erected by archaeologists or from the 2012 rapid sampling of the plaza using a posthole digger was encountered in this context. The visibility of the posts varied, but some were clearly seen in Units D, F, and I.

Unrecorded feature: A 14 cm wide post was identified in the eastern section of Unit I as a dark depression. Because it was initially believed to be a remnant from the 2012 season and excavation did not produce any artifacts, I did not assign a lot or feature number to it. The posthole is 50 cm deep, penetrating through Kanye Floor (AU16), and maintaining a consistent width throughout. It was probably a modern post.

**AU2- Collapse. Lots excavated: A2, B2.** Collapse material from Structure 26, consisting of small, undressed limestone inclusions in a 10YR 4/3 clay loam matrix, was present only in Units A and B, located near the base of the eastern platform. The matrix of the collapse was lighter in color than the above humus and the ballast of the terminal plaza floor directly below.

**AU3- Biggie Plaza Floor. Lots Excavated: A3, B3, C2, D2, F2, G2, H2, I1, J1.** The terminal floor consisted of only a pebbly ballast, with any plaster likely eroded due to exposure to the elements. The pebbles of the ballast are generally small, 1 to 6 cm, in size. The clay loam matrix is 10YR 4/2 through most units, grading into a darker brown toward the center of the plaza, where the floor is nearly indistinguishable from the humus. In Units I and J it was initially collected as humus, due to its dark soil texture, but examination of the profile suggest that they are part of the terminal floor. In Units F and I, the ballast contained more common artifacts, suggesting redeposited domestic trash.

Soil chemistry samples were collected along this remnant of the occupation surface to have as comparative material for lower samples. However, due to their proximity to the surface, the samples are likely to show extensive contamination from the modern usage of the site for cattle pasture.
This floor lacked a correlate with the Operation 31 named floors. Given the Operation 31 units’ location near the center of the plaza, the terminal floor and humus were likely eroded, making the penultimate floor the first one that could be clearly identified.

**AU4- Mixed Context. Lots excavated: E4, I2, J2.** These lots combined material from the pebbly ballast of Biggie Floor (AU3) and fill of Tupac floor (AU9), which presented here as only a handful of larger stones, rather than the densely packed stone fill encountered in other units. In Units I and J, it was assumed we were excavating through the terminal floor ballast after removing a thin layer of dark soil from the surface, but in evaluating the profile, it became evident that the terminal ballast began at the surface. What we observed to be a ballast with small to medium sized inclusions may represent deflation and admixture of the fill below both Biggie and Tupac floors.

**AU5- Tupac Floor Patch. Lot excavated: A4.** Small lot consisting only of a plaster patch over Tupac Floor (AU9). It was removed to allow for sampling over the contiguous surface, but comparative samples were also collected from it. We identified two shallow pits (AU7 and AU8) below the patch.

**AU6- Feature 3 Posthole. Lot excavated: B5.** This feature consists of a 15 cm wide, 17 cm deep posthole in Tupac floor. The posthole narrows toward the base and terminates the 4th plaster floor. The fill of the posthole is a 10YR 5/3 clay loam with small (1 to 6 cm) limestone and chert pebbles. Small lithics and daub were recovered from it. I suspect that it was patched, since we encountered small bits of plaster above it.

**AU7- Feature 1 Pit. Lot excavated: A5.** An oval, shallow pit cut into Tupac floor. It measures 42 cm by 34 cm and is 7 cm deep. Its matrix is a 10YR 5/3 loam with few small inclusions and sparse artifacts. It appears Features 1 and 2 were cut into the floor, possibly for the purpose of placing a post, but encountered larger fill below and were replastered.

**AU8- Feature 2 Pit. Lot excavated: A6.** An oval, shallow pit cut into Tupac floor. It measures 62 cm by 34 cm and is 4 cm deep. Its matrix is a 10YR 5/3 loam with few small inclusions and sparse artifacts. It appears Features 1 and 2 were cut into the floor, possibly for the purpose of placing a post, but encountered larger fill below and were replastered.

**AU9- Tupac Plaza Floor. Lots excavated: A7, B4, C3, C4, D3.** Tupac floor is most likely the first plaza floor encountered by Craiker (Mixter and Craiker 2013) as the ballast of Biggie floor was nearly indistinguishable from the humus in the center of the plaza. Craiker named the floor Pluto. The plaster surface of Tupac floor appeared preserved only in Units A, B, C, and D. In Units A, B, and C, the floor additionally appeared to have been patched or resurfaced. In Unit C, the plaster was poorly preserved, identified only along the southern edge of the unit. By Unit D, there was no remnant of polished surface and only small patches of plaster in the eastern half of the unit. Interestingly, the secondary sascab fill (AU11), was only identified in these sections as well, but there was no clear demarcation, such as a wall, between the sascab and cobble fills. In Unit A, the cobble and sascab fills were separated by a single course wall (AU12, Blue Plaza Wall). Its dressed limestone and chert stones faced to the east, toward Structure 26 (Figure 3.7).
AU10- Tupac Cobble Fill. Lots excavated: A8, D5, F3, G3, H3. This analytical unit was a cobble fill that defined Tupac Floor in Units E, F, G, H, I, J, and parts of Units A and D. It was not well differentiated during excavation in all units, however, and was excavated as a mixed context (AU4). The fill generally consists of densely packed stones, ranging in size from 3 to 20 cm, in a sparse 10YR 4/2 clay loam matrix. In the western units, the floor was recognized only by the cobble fill, as the plaster had eroded. This fill was not encountered in the western sections of Unit A, Units B and C, and eastern sections of Unit D. Given the consistency in their appearance, I believe the cobble fill excavated as lot A8, directly to the east of the low wall is the same context as the cobble fill in the western units.

AU11- Tupac Fill with Sascab. Lots excavated: B6, C5, D4. In Units B, C, and portions of D, Tupac floor appeared to overlay thin sascab layers, which were initially interpreted as floor resurfacing. However, as no flat, polished surfaces could be distinguished, this was likely floor fill. The sascab fill is more yellowish-white than the above plaster. And is intermixed with a 10YR 5/3 clay loam with small to medium (up to 20 cm) inclusions. In Units B and C, a few of the limestone inclusions appeared burned, but did not form a particular arrangement. The sascab is not as plentiful or perhaps more deteriorated in Unit C and appears to be related to the low wall in Unit A. This fill ends in Unit D, where it appears more intermixed with the cobble fill of AU10. If, with Blue Plaza Wall, this fill represented a platform constructed on Kanye Plaza Floor, its western face may have been destroyed prior to the construction of Tupac Plaza Floor.

AU12- Blue Plaza Wall. Lots excavated: A9, A10. We uncovered a single course wall with dressed stones and large cobbles in Unit A. The wall faces to the east, toward Str. 26. This AU consists of lots that were believed to form the wall fill, but more likely represent a different section of the Tupac Fill with Sascab (AU11). The main difference between the two contexts is the presence of larger stones in the lots excavated in Unit A, just west of the wall. Fill with sascab in the matrix located directly west of a low alignment found in Unit A. No west face to the wall was found. It is possible that this was a narrow platform within the plaza, whose western face was destroyed, or that it is much larger and has a western face on the other side of the plaza. However, for the moment, I interpret the wall and sascab fill of AU11 as a feature of the fill.

AU13- Feature 5 Pit. Lots excavated: E3. This is a roughly circular pit in Kanye Floor, located along the eastern edge of Unit E. The pit measures 22 cm wide and 12 cm deep. It does not penetrate beyond the fill of Kanye Floor. Only a small sherd and two lithic fragments were recovered in this feature.

AU14- Feature 6 Posthole. Lot excavated: G4. This is a round posthole or pit in Kanye Floor, located in the northeast corner of Unit G. Its construction appears to have damaged the plaster around it. Its fill consists of a dark (10YR 4/2), loose, clay loam. The feature measures 36 cm in diameter at the floor level, and narrows to a 32 by 20 cm oval toward the base. The hole is approximately 29 cm deep, penetrating though the 4th Plaza Floor.

AU15- Feature 4 Posthole. Lot excavated: I4. This is a narrow posthole on Kanye Floor, located in the northeast corner of Unit I. Only one jute was recovered in its 10YR 4/2 loam fill. The
posthole measures 8 cm in diameter and is 8 cm deep.

AU16- Kanye Plaza Floor and Fill. Lots excavated: A11, C6, E4, E5, G6, I3, J3. Kanye Floor was the third plaza surface to be exposed through all the Operation 50 units. It likely corresponds to Craiker’s Eeyore floor. The floor is relatively well preserved, even toward the center of the plaza. In the interest of time, we only excavated this context in every other unit, up to Units I and J which were both excavated down to the initial constructed surface.

The floor and thin deposit of fill beneath it were removed together for the most part. Soil of the fill was a light, 10YR 6/3, clay loam with small undressed limestone rocks. Two carbon samples (Sample #275, #274) were collected in this context. In Unit C, the fill was a slightly darker 10YR 5/3 clay loam with small to medium inclusions, which gave way to a larger fill, excavated as a separate context. In Units E and I, the floor appeared to have been replastered. This was marked by a thicker deposit of plaster in Unit E, lacking clear separation to suggest separate floors, and by eroded sections of plaster appearing at different elevations.

AU17- Large Floor Fill. Lot excavated: C7. This lot consists of plaza floor fill with some larger stone inclusions (up to 20 cm). No surface was encountered at the base of the lot, but we did expose a denser concentration of stones, some of them showing evidence of burning. This may be a feature of the Kanye Floor fill, but I suspect that it is actually the fill of the 4th plaza floor (Fever), which may not have preserved well in this section.

AU18- Fever Floor and Fill. Lot excavated: A12. The 4th plaza floor is better preserved in Unit A than at the base of Str. 26. It measured 3 to 8 cm in depth and had extensive eroded sections with cobbles showing though. The matrix of the floor ballast and fill consisted of a 10YR 5/4 clay loam with small (1 to 6 cm) inclusions. Directly below this floor, we located a ceramic cache (AU20, Feature 7) described below.

I am currently unable to relate the fourth surface identified in Unit A to that identified in Units I and J, though I suspect they form the same floor. Correlating the two is also complicated by the lack of plaster at the same elevation in Unit C. In Unit E, only a small portion of plaster was identified along the western edge of the unit. This patch was not excavated this season, so it remains unclear if it relates to Fever floor or the 5th Plaster Floor.

AU19- Fever Floor B. Lots excavated: I5, J4. The 4th plaza floor encountered in Units I and J consisted of a pebbly ballast, lacking preserved plaster. I believe it is the same as Fever Floor (AU18) encountered in Unit A, but we were not able to connect the two areas this season. The ballast consists of small (1 to 6 cm) limestone and chert inclusions in a 10YR 5/2 clay loam matrix. This is also likely the Bambi floor identified in the 2012 season (Mixter and Craiker 2013).

AU20- Feature 7 Ceramic Cache. Lots Excavated: A13, A14, A15, A16, A17. Feature 7 consists of a circular pit with broken ceramics. It is located below a line of stones identified along the southern edge of Unit A. Stones appeared to form a wall, facing to the south. We removed three of the stones to more fully expose the deposit and avoid them falling onto the ceramics. The
The matrix of the pit was lighter in color than the surrounding fill. It consisted of a gravely 10YR 5/6, clay loam, lacking stone inclusions.

The deposit contained many large fragments of ceramic, some nearly complete serving vessels. They were removed in several lots, with drawings and photos taken between each lot to facilitate reconstruction of the fragile vessels. The preservation of the ceramic was so poor that many of the pieces felt soft and crumbled easily. The last vessel in the feature, at 142 cm below datum 1, was a complete Z-angle bowl, possibly Aguacate Orange type. We measured the bowl in situ, since the poor preservation of the clay made it unlikely to come out without breaking. It is 30 cm in diameter and 11 cm in height. Two flotation samples, one from above and one just below the bowl, as well as soil chemistry sample were taken from this context.

AU21- 5th Plaza Floor. Lots excavated: I6, J5. The 5th surface encountered in Units I and J consisted of a layer of deteriorated plaster, lacking a preserved polished surface. The floor ballast had a light gray matrix with limestone inclusions of various sizes. We excavated it down to a dense deposit of cobbles, initially thought to be a feature, but found to be part of a cobble fill, similar to that found in Tupac floor (AU10).

This floor likely corresponds to Cinderella floor (Mixter and Craiker 2013), but I am unable to relate it to floors identified at the base of Structure 26. There, we had only encountered six floors, the lowest of which remain to be linked to excavations further into the plaza.

AU22- 5th Plaza Floor Fill. Lots excavated: I7, J6. This analytic unit consists of a single, pavement-like layer of cobbles deposited over a plaster surface (Figure 3.9). The cobbles range in size from 1 to 40 cm and are covered by a sparse, 10YR 5/3 clay loam. Perhaps they were deposited to combat subsidence in the center of the plaza prior to the construction of the 5th Plaza Floor.

AU23- 6th Plaza Floor and Fill. Lots excavated: I8, I9, J7. This plaza floor consists of a well-preserved, thick plaster. Its fill is shallow with small to medium chert and limestone rocks (1 to 10 cm). In Unit I, there is a patch of plaster along the east edge that sloped upward, like a ramp (Figure 3.10). This patch was excavated as lot I8 because we thought it marked a feature, but alas it did not. Along the north section of the unit, there was also a roughly rectangular area with degraded, gray plaster suggesting heavy burning.

I believe the 6th plaza surface corresponds to Mickey Floor identified by Craiker (Mixter and Craiker 2013). However, Craiker encountered a sherd ballast below Mickey with a thin layer of brown clay underneath. Perhaps this was only an isolated section of the plaza floor, but it is
nonetheless notable.

**AU24- 7th Plaza Floor. Lots excavated: I10, J8.** The plaster (10YR 8/3) of the 7th floor had evidence of burning, with gray clouding that lacks clear spatial definition. The floor lacks a soil fill, being constructed directly on a heavily burned previous floor. We found a circular posthole on this surface in the central north section of Unit I. It measured 10 cm in diameter and 7 cm deep, lacking artifacts.

Craiker (Mixter and Craiker 2013) noted that the corresponding Simba Floor may have been constructed out of a clay and plaster mixture, which is consistent with my observations of the softer plaster consistency of this floor.

**AU25- 8th Floor and Fill. Lots excavated: I11, J9.** This analytical unit is a thin plaster floor, with soft, yellowish plaster (10YR 7/6, 6/2). It appears extensively burned, with a soft, degraded texture in Unit J, but in Unit I, the burning is not as intense and more remnants of polished surface remain. The fill of the floor is thin, without many stones for a ballast. Some larger stones encountered in the northeast corner of Unit J appear to be part of the 9th Floor (AU26) showing through an eroded section.

**AU26- 9th Plaza Floor. Lots excavated: I12, J10.** This analytical unit was the earliest plaza floor constructed using plaster. This floor is most likely the same as Pinocchio floor (Mixter and Craiker 2013) and Felix Floor (Simova and Mixter 2016) as it is constructed on a clay fill. The floor had fairly large ballast constructed out of medium sized (4 to 10 cm) chert and limestone cobbles, and lacks a fill. The size of the cobbles made collecting a micromorphology sample difficult. The floor was better preserved in the southwest corner of Unit J. In some places the floor had eroded, revealing the cobbles and clay deposit underneath. In the northeast corner of Unit J, we recovered large fragments of a clunky, fired clay object, likely daub, on top of the floor. I separated the material, which was plotted in a previous base of lot, but more pieces were scattered in both units.

**AU27- Brown Clay. Lots excavated: I13, J11, J12.** This analytical unit consists of a mottled brown (10YR 4/3) clay with small (1-3 cm) undressed limestone inclusions and some small limestone flecks throughout. There was an accumulation of small stones toward the base of the lot, which appeared to mark the transition to a clay surface underneath. The larger limestone rocks encountered were concentrated in the northeast section of Unit J, mapped in base of lot, and the east section of Unit I. One carbon sample was recovered in Unit J (sample #276). This may be a buried A-horizon, developed over an early prepared surface and later covered over by the brown clay, perhaps to create an elevated plaza surface. Due to its shallowness, the likely
A-horizon was not excavated as a separate lot.

**AU28- Clay with Artifacts. Lots excavated: I14, J13.** This analytical unit represents the deepest excavated section of the Operation 50 trench this season, up to 172 cm below Datum 2. The clay is brown, 10YR 3/2, with very small (0 to 1 cm) undressed limestone inclusions. We continued to encounter small ceramics and lithics, suggesting this was an anthropogenic deposit. I suspect it represents the earliest prepared surface of the E-Group. Although we did not reach sterile clay this season, comparison with the Operation 31 profile suggest we are within 10 to 15 cm of sterile deposits.

**Conclusions**

Although the artifacts and soil chemistry samples have yet to be analyzed, the Operation 50 excavations have contributed to our understanding of Plaza F. The sequence of floors from the center of the plaza is now well understood and demonstrates two shifts in the construction history that parallel Structure 26’s development. The earliest construction of the plaza consists of mounded and leveled clay with sparse artifacts, similar to the Earthen and Brown Jay platforms of Structure 26. These constructions gave way to a series of well-constructed, plaster floors, likely constructed in rapid succession. This may represent a period of intense use and modification of the E-Group. The Feature 7 ceramic cache may have been deposited toward the end of this period. These floors also show evidence of intense burning activities, similar to termination patterns encountered on a Middle Preclassic temple, Structure Q, at the site of Pacbitun, Belize (Powis et al. 2017). Perhaps this signals a shift between Middle and Late Preclassic ritual practices.

The later modifications of the plaza incorporate deeper cobble fills and shallower plaster surfaces, which were likely in use over longer periods of time. A similar trend was noted in the later construction sequence of the Owl Platform of Structure 26 (Simova and Mixter 2016). Further analysis is necessary to confirm the timing of constructions and their relationship to Structure 26 constructions.

Future excavations in the plaza will attempt to locate more ritual deposits in the early constructions and expand the sample coverage for soil chemistry analysis. Shifts in building strategies and timing suggest that there were substantial changes in how the Actuncan community engaged with the E-Group plaza over its occupation history. If these can be correlated to shifts in the types and density of activity occurring within the plaza, we will be able to construct a more complete understanding of the emergence and development of public ritual spaces at the site.

**Acknowledgements:**
The plaza excavations were funded by the Tulane Department of Anthropology Graduate Student Fund. I would like to thank our foreman, Rene Uck, for assuring we had talented and cautious excavators and well-trained excavation assistants for this relatively late and short season. As always, our teams of excavators and assistants from Soccotz were critical in making this work possible, and I am eternally grateful to them. Wade Tidwell’s assistance in the field
and lab was also a welcome addition this year and instrumental in assuring we could stay ahead of the rains. Wade, Theresa Heindel, and Taylor Lawhon all provided lots of good humor and support throughout the season, and I am thankful to them. Finally, this work would not have been possible without Dr. Lisa LeCount. She continues to provide critical logistical support and sage advice to guide my research.

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Wells, E. Christian


Wells, E. Christian, Richard E. Terry, J. Jacob Parnell, Perry J. Hardin, Mark W. Jackson, and Stephen D. Houston


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**Appendix 3.A.**

![Diagram](image)

Figure 3.A.1
<table>
<thead>
<tr>
<th>AU Number</th>
<th>AU Name</th>
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<td>2</td>
<td>Collapse</td>
<td>A2, B2</td>
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<td>Biggie Plaza Floor</td>
<td>A3, B3, C2, D2, F2, G2, H2, I1, J1</td>
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<td>4</td>
<td>Mixed Context</td>
<td>E4, I2, J2</td>
</tr>
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<td>5</td>
<td>Tupac Floor Patch</td>
<td>A4</td>
</tr>
<tr>
<td>6</td>
<td>Feature 3 Posthole</td>
<td>B5</td>
</tr>
<tr>
<td>7</td>
<td>Feature 1 Pit</td>
<td>A5</td>
</tr>
<tr>
<td>8</td>
<td>Feature 2 Pit</td>
<td>A6</td>
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<tr>
<td>9</td>
<td>Tupac Plaza Floor</td>
<td>A7, B4, C3, C4, D3</td>
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<td>10</td>
<td>Tupac Cobble Fill</td>
<td>A8, D5, F3, G3, H3</td>
</tr>
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<td>11</td>
<td>Tupac Fill with Sascab</td>
<td>B6, C5, D4</td>
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<tr>
<td>13</td>
<td>Feature 5 Pit</td>
<td>E3</td>
</tr>
<tr>
<td>14</td>
<td>Feature 6 Posthole</td>
<td>G4</td>
</tr>
<tr>
<td>15</td>
<td>Feature 4 Posthole</td>
<td>I4</td>
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<td>Large Floor Fill</td>
<td>C7</td>
</tr>
<tr>
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<td>Fever Floor and Fill</td>
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</tr>
<tr>
<td>19</td>
<td>Fever Floor B</td>
<td>I5, J4</td>
</tr>
<tr>
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<td>Feature 7 Ceramic Cache</td>
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<td>I6, J5</td>
</tr>
<tr>
<td>22</td>
<td>5th Plaza Floor Fill</td>
<td>I7, J6</td>
</tr>
<tr>
<td>23</td>
<td>6th Plaza Floor and Fill</td>
<td>I8, I9, J7</td>
</tr>
<tr>
<td>24</td>
<td>7th Plaza Floor</td>
<td>I10, J8</td>
</tr>
<tr>
<td>25</td>
<td>8th Floor and Fill</td>
<td>I11, J9</td>
</tr>
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<td>26</td>
<td>9th Plaza Floor</td>
<td>I12, J10</td>
</tr>
<tr>
<td>27</td>
<td>Brown Clay</td>
<td>I13, J11, J12</td>
</tr>
<tr>
<td>28</td>
<td>Clay with Artifacts</td>
<td>I14, J13</td>
</tr>
</tbody>
</table>
Chapter 4: The Status of Marine Shell and Other Fauna at Actuncan

Carolyn Freiwald (University of Mississippi)

Marine shell can signal many things at archaeological sites, including resource acquisition and animal use patterns, status, funerary rituals and beliefs, craft production, and even personal taste in art and cultural perceptions of beauty. Seventy-eight pieces of marine shell analyzed to date at Actuncan include complete incised ornaments, tubular and disc beads, Olive snail shell “tinklers,” and debitage that may represent the remnants of producing these items. Freshwater snail shells also were found by the thousands and include stream and river dwelling jute (Pachychilus) species and a small number of clam (Nephronia sp.) and apple snail (Pomacea sp.) shells. Vertebrate fauna consist mainly of mammals, most of which were large ones such as whitetail deer. Animal remains were found in middens, but jute snail shells were the only fauna found in large quantities in deposits at Actuncan. Still, while small assemblages like this one tell us little about overall subsistence, they add significant information to our interpretations of specific contexts and the activities they represent.

This report focuses on marine shell but summarizes general information on vertebrate fauna and freshwater shell. Overall, the data show that marine shell use was most common and most widespread during the Terminal Classic period. Marine shell was recovered from a variety of Preclassic to Postclassic civic and residential contexts, including burials. The assemblage consists of finished pieces, polished or cut shell specimens that were broken either pre- or post-use, and possible “unworked” debitage from early stages of craft production. The number of analyzed shell fragments is small at just 78 specimens, but examination of the AAP inventory suggests that additional marine shells might be identified in our collections. Therefore, the patterns identified in this report serve as a preliminary look at how marine shell and other fauna were used at Actuncan.

Non-marine fauna

Actuncan faunal remains come from excavations by two projects: the Xunantunich Archaeological Project (XAP), directed by Richard Leventhal and Wendy Ashmore from 1992–1997, and the Actuncan Archaeological Project (AAP), led by Lisa LeCount, that began in 2001 and continues in 2018. James McGovern conducted the XAP research at Actuncan from 1992–1994 (Lecount and Blitz 2002) and found a total of 152 bone fragments in 15 lots located in eight different operations. Researchers at the Cotsen Institute of Archaeology at ULCA made initial species identifications, which I subsequently re-analyzed and completed in 2008 at the University of Wisconsin-Madison Zoological Museum and the Department of Anthropology (Freiwald 2010). Standard zooarchaeological observations include identification to species or the lowest taxon possible, observations on human modification, including cut marks and evidence of burning, and examination of other taphonomic factors such as animal activity (e.g., Gilbert 1990; Howell and Webb 1995; J. Lee 2000; L. Lee 1994; Olsen 1982; Reid 1997; Reitz and Wing 1999). I was not able to identify most Actuncan bones excavated by XAP to species, and invertebrate fauna was not included in the analysis (Table 4.1). Most fauna derived from test
units with a significant proportion of Early Classic period ceramics (LeCount and Blitz 2002). Absolute dates for each time period vary by site (see LeCount 2016), but approximate dates put these data into perspective (Preclassic 2000 BC–AD 250; Classic AD 250–1000; Postclassic AD 1000–1525).

Table 4.1. XAP vertebrate fauna excavated by McGovern.

<table>
<thead>
<tr>
<th>Site Location</th>
<th>Operations</th>
<th>#</th>
<th>Animal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>12C, 12I1</td>
<td>2</td>
<td></td>
<td>Bird, mammal limb fragments</td>
<td></td>
</tr>
<tr>
<td>Structure 15, North Terrace</td>
<td>92A5, 92C11</td>
<td>3</td>
<td>Dog lower arm (radius) and limb fragments</td>
<td></td>
</tr>
<tr>
<td>Structure 18</td>
<td>93A6, 93A7, 93A8</td>
<td>33</td>
<td>Whitetail deer lower limb (tibia, humerus, phalanx), bird lower arm (ulna), armadillo scute, other mammal</td>
<td>4 burned fragments</td>
</tr>
<tr>
<td>96A3</td>
<td>1</td>
<td></td>
<td>Large mammal limb shaft fragment</td>
<td></td>
</tr>
<tr>
<td>Structure 31</td>
<td>98C3</td>
<td>3</td>
<td>Mammal bone fragments</td>
<td></td>
</tr>
<tr>
<td>Structure 28</td>
<td>99B2, 99C2, 99C7</td>
<td>105</td>
<td>Large mammal limb shaft and 1 turtle shell fragment</td>
<td>Highly fragmented: 1 specimen worked</td>
</tr>
<tr>
<td>99G1</td>
<td>4</td>
<td></td>
<td>Large mammal (deer?)</td>
<td></td>
</tr>
<tr>
<td>Structure 13</td>
<td>131A5, 131C1</td>
<td>2</td>
<td>Mammal and vertebrate bone</td>
<td>1 worked bone in floor ballast; other bone fragment in overburden</td>
</tr>
</tbody>
</table>

Nearly 30,000 faunal remains have been excavated by AAP, most of which are freshwater jute snail shells (*Pachychilus* sp.) collected from rivers and streams. Jute are found in the majority of deposits in quantities ranging from a single snail shell to hundreds of shells. Most jute at Actuncan are the small, smooth-shelled species (*P. indiorum*), which today are still found in the stream along the eastern border of the site. Smooth-shelled jute in other locations such as the Lacandon area in Chiapas are often significantly larger, which may result from the season the animals were collected, how frequently they were harvested, or even the presence of more than one (sub)species of smooth-shelled jute. Noticeably larger jute in the Belize Valley are usually the ridged or sculptured species (*P. glaphyrus*). Ridged jute are uncommon at Actuncan, but are found at other sites on the Mopan River such as Ucanal, which is located upstream in Guatemala near modern deposits, and downstream at Buenavista del Cayo.

Only a limited amount of animal bone has been recovered, and the bone fragments were largely dispersed across the site in small quantities. Two exceptions include worked bone,
antler, and shells in Group 1 and animal bone in a midden near Structure 18. These findings resemble the faunal assemblage at Xunantunich, where the collection was small with the exception of a single deposit at residential Group B that was excavated in 1995 and 1997 (Etheridge 1996; Yaeger 1998). Table 4.2 provides a summary of the AAP faunal material, which includes more than 24,571 jute snail shells and 696 analyzed animal bone fragments. All invertebrate fauna were analyzed at the Actuncan field lab in Clarissa Falls, Belize, with a small number of bones exported for analysis at the University of Mississippi. Information on unanalyzed bone from the project inventory is also included; discrepancies will be clarified during the next excavation season. Jute were distributed widely across the site, but twenty-one lots contained more than 200 snail shells, with the largest deposits in Structure 73 (Operation 18). The small number of other freshwater snails such as clams and apple snails are not included.

### Table 4.2. AAP vertebrate fauna excavated 2001–2013.

<table>
<thead>
<tr>
<th>Operations</th>
<th>AAP Inventory Jute #</th>
<th>AAP Inventory Bone #</th>
<th>Faunal Analysis Bone #</th>
<th>Animal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>854</td>
<td>N/A</td>
<td>273</td>
<td>Agouti, armadillo, whitetail deer, collared peccary, rodent, bird, Brown Basilisk, toad/frog, and turtle</td>
<td>Tubular bone object, burned (whitetail deer) and lip-to-lip cache with bird skeleton Op 1DD. Deposit of apple snails in Operation 1HH</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>4</td>
<td>N/A</td>
<td>Not identified</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>2</td>
<td>2</td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>37</td>
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<td>2</td>
<td>Mammal</td>
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</tr>
<tr>
<td>5</td>
<td>1,433</td>
<td>N/A</td>
<td>86</td>
<td>Mostly whitetail deer, but also brocket deer near Burial 2 and rabbit</td>
<td>Early Classic midden and trash below occupation surface and in lower level of deposit</td>
</tr>
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<td>6</td>
<td>1,068</td>
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<td>Armadillo, deer, iguana</td>
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<td>1,322</td>
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<td>8</td>
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<td>3</td>
<td>Large mammal</td>
<td>Includes awl fragment</td>
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<tr>
<td>9</td>
<td>146</td>
<td>18</td>
<td>23</td>
<td>Large mammal (peccary?), turtle</td>
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<tr>
<td>10</td>
<td>102</td>
<td>15</td>
<td>6</td>
<td>Mammal</td>
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Table 4.2. AAP vertebrate fauna excavated 2001–2013.

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<thead>
<tr>
<th>Operations</th>
<th>AAP Inventory Jute #</th>
<th>AAP Inventory Bone #</th>
<th>Faunal Analysis Bone #</th>
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<th>Comments</th>
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<td>353</td>
<td>53</td>
<td>50</td>
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<td>286</td>
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<tr>
<td>13</td>
<td>314</td>
<td>8</td>
<td>9</td>
<td>Whitetail deer</td>
<td>Mostly burned at high temperatures</td>
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<tr>
<td>14</td>
<td>310</td>
<td>65</td>
<td>9</td>
<td>Vertebrate, large mammal</td>
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<td>16</td>
<td>188</td>
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<td>Agouti, armadillo, brocket deer, whitetail deer, bird</td>
<td>Worked bone awl and spatula fragments</td>
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<td>11,684</td>
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<td>Whitetail deer and brocket deer</td>
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Table 4.2. AAP vertebrate fauna excavated 2001–2013.

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<th>Faunal Analysis Bone #</th>
<th>Animal</th>
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<td>49</td>
<td>340</td>
<td>0</td>
<td>0</td>
<td>Not identified</td>
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<tr>
<td>50</td>
<td>225</td>
<td>1</td>
<td>0</td>
<td>Not identified</td>
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<tr>
<td>51</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>Not identified</td>
<td></td>
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<tr>
<td>52</td>
<td>134</td>
<td>0</td>
<td>0</td>
<td>Not identified</td>
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</tbody>
</table>

**Marine Shells**

Marine shells were often recorded as special finds, although those discovered during lab analysis generally are identified only by context (Table 4.3). Identifications and shell part classifications were made using AAP comparative specimens in Belize and shell identification guides (e.g., Classen 1998; Romashko 1974). Angela Keller and Norbert Stanchly also contributed to identification of shell taxa and production stages. The assemblage is small at just 78 specimens, but the inventory contains more shells that have not yet been analyzed. To date just five species have been identified, including large shells (*Strombus* and *Spondylus*) that could be used to make multiple ornaments, and smaller ones like *Oliva* that were used for a single ornament referred to as a ‘tinkler’ (see Willey et al. 1965). Four of the five species are found in the Caribbean, and small quantities of marine fish and/or shells are common at lowland Maya sites (e.g., Emery (Ed.) 2004; Emery and Gotz (Eds.) 2013; Powis et al. 1999). One Preclassic shell may be a Pacific thorny oyster species (*Spondylus princeps*), and its acquisition may represent participation in long distance trade networks. Most *Spondylus* have only been identified to genus. More research on the identification of shells, perhaps using geochemical methods, might indicate how the use of marine fauna varied from site to site and over time.
Table 4.3. Marine shell identification to date at Actuncan. Images are shown half-size except for Special Find 20, which is shown at approximately a quarter of its real size.

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<tbody>
<tr>
<td>1A9</td>
<td>Special Find 20</td>
<td>Thorny oyster cf <em>Spondylus princeps</em></td>
<td>Body (25-75%) Stage 2 Floral Park Terminal Preclassic Group 1 residential Platform fill</td>
<td>88.74</td>
<td>1</td>
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<tr>
<td>1B3</td>
<td>Special Find 25</td>
<td>marine shell</td>
<td>Bead (complete) Stage 4 Late Classic II Group 1 residential Occupation surface</td>
<td>2.84</td>
<td>1</td>
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<tr>
<td>1B3</td>
<td>Special Find 25</td>
<td>marine shell</td>
<td>Bead (complete) Stage 4 Late Classic II Group 1 residential Occupation surface</td>
<td>0.25</td>
<td>1</td>
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<tr>
<td>1B10</td>
<td>Special Find 21</td>
<td>marine shell</td>
<td>Fragment (&lt;25%) Stage 2? Floral Park Terminal Preclassic Group 1 residential Platform fill</td>
<td>1.69</td>
<td>1</td>
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</table>
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<tr>
<td>1C31</td>
<td>Thorny oyster <em>Spondylus</em> sp.</td>
<td>Ornament w/perforations (complete) Stage 4</td>
<td>Barton Creek Late Preclassic Group 1 residential yellow clay fill</td>
<td>5.17</td>
<td>1</td>
</tr>
<tr>
<td>1D11 Special Find 7 (5B2?)</td>
<td>Olive snail <em>Oliva</em> sp.</td>
<td>Columella/outer lip (50%) Stage 4, broken</td>
<td>Late Classic I Group 1 residential</td>
<td>4.18</td>
<td>1</td>
</tr>
<tr>
<td>1D20 Special Find 2 Burial 3</td>
<td>Olive snail <em>Oliva</em> sp.</td>
<td>Body (50%) w/perforation Stage 4 (reworked?)</td>
<td>Early Classic Group 1 residential Burial</td>
<td>0.63</td>
<td>1</td>
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<tr>
<td>1D20 Special Find 2 Burial 3</td>
<td>Thorny oyster <em>Spondylus</em> sp.</td>
<td>Beads (complete) Stage 4</td>
<td>Early Classic Group 1 residential Burial</td>
<td>1.23</td>
<td>2</td>
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</table>
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<tr>
<td>1D23 Special Find 3</td>
<td>marine shell</td>
<td>Debitage? (&lt;25%) Stage 1</td>
<td>Floral Park Terminal Preclassic Group 1 residential Fill and patchy floor</td>
<td>5.34</td>
<td>1</td>
</tr>
<tr>
<td>1EE3</td>
<td>marine shell</td>
<td>Debitage? (&lt;25%) Stage 1</td>
<td>Terminal Classic Group 1 residential Fill</td>
<td>8.23</td>
<td>1</td>
</tr>
<tr>
<td>1FF6</td>
<td>Olive snail <em>Oliva sp.</em></td>
<td>Tinkler pendant w/perforation (complete) Stage 4</td>
<td>Early Classic Group 1 Residential. Wall construction &amp; floor</td>
<td>3.09</td>
<td>1</td>
</tr>
<tr>
<td>1RRR6</td>
<td>Fighting conch <em>Strombus pugilis</em></td>
<td>Spire (25-50%) Stage 1</td>
<td>Barton Creek Late Preclassic Group 1 residential. Clay fill</td>
<td>10.62</td>
<td>1</td>
</tr>
<tr>
<td>1TT3</td>
<td>cf conch cf <em>Strombus sp.</em></td>
<td>Ornament (complete) Stage 4</td>
<td>Late Classic II Group 1 residential Cobble fill</td>
<td>0.17</td>
<td>1</td>
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<tr>
<td>1D17</td>
<td>“Spondylus”</td>
<td>Incised pendant w/perforation “God N” Stage 1</td>
<td>Early Classic Group 1 residential (LeCount 2015:2 Fig. 1.1)</td>
<td>1</td>
<td></td>
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</table>
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<tr>
<td>2A2 Special</td>
<td>cf Olive snail</td>
<td>Fragment (&lt;25%)</td>
<td>Late Classic II Group 2 residential Occupation surface</td>
<td>0.79</td>
<td>1</td>
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<tr>
<td>Find 24</td>
<td>cf <em>Oliva</em> sp.</td>
<td>Stage 1?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5A2 Special</td>
<td>marine shell</td>
<td>Star adorno w/perforation Stage 4, broken</td>
<td>Late Classic I Str. 18 residential Collapse</td>
<td>0.56</td>
<td>1</td>
</tr>
<tr>
<td>Find 6</td>
<td>cf Olive snail</td>
<td>No information</td>
<td>Late Classic I Str. 18 residential Collapse</td>
<td>0.64</td>
<td>1</td>
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<tr>
<td>(5)A6 Burial</td>
<td>Olive snail</td>
<td>No information</td>
<td>Early Classic Str. 18 residential Burial</td>
<td>-</td>
<td>1</td>
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<tr>
<td>2</td>
<td><em>Oliva</em> sp.</td>
<td></td>
<td></td>
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<tr>
<td>5B7 Special</td>
<td>marine shell</td>
<td>Debitage? (&lt;25%) Stage 1</td>
<td>Early Classic Str. 18 residential Midden</td>
<td>1.42</td>
<td>1</td>
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<tr>
<td>Find 8</td>
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<tr>
<td>5B8 Special</td>
<td>marine shell</td>
<td>Ornament disc w/perforation (complete) Stage 4</td>
<td>Early Classic Str. 18 residential Midden</td>
<td>2.17</td>
<td>1</td>
</tr>
<tr>
<td>Find 10</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5B8 Special</td>
<td>marine shell</td>
<td>Debitage? &lt;25% Stage 4</td>
<td>Early Classic Str. 18 residential Midden/mixed context</td>
<td>1.23</td>
<td>1</td>
</tr>
<tr>
<td>Find 12?</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>5B9 Special</td>
<td>Fighting conch</td>
<td>Apex (&lt;25%) Stage 4</td>
<td>Early Classic Str. 18 residential Refuse</td>
<td>20.21</td>
<td>1</td>
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<tr>
<td>Find 14</td>
<td><em>S. pugilis</em></td>
<td></td>
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<tr>
<td>6AAAAA1</td>
<td>Olive snail</td>
<td>Body (&lt;25%) Stage 3-4</td>
<td>Terminal Classic Str. 41 residential (elite) platform 1 surface</td>
<td>0.56</td>
<td>1</td>
</tr>
</tbody>
</table>
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<tbody>
<tr>
<td>6C2 Special Find 17</td>
<td>marine shell</td>
<td>Fragment (&lt;25%) Stage 3</td>
<td>Terminal Classic Str. 41 residential (elite) Fill/collapse</td>
<td>17.15</td>
<td>1</td>
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<tr>
<td>6D2 Special Find 18</td>
<td>Olive snail <em>Oliva sp.</em></td>
<td>Tinkler pendant w/perforation body (50%) Stage 4</td>
<td>Early Classic Str. 41 residential (elite) Refuse</td>
<td>3.44</td>
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</tr>
<tr>
<td>6D3 Special Find 19</td>
<td>Olive snail <em>Oliva sp.</em></td>
<td>Tinkler pendant w/perforation body (50%) Stage 4</td>
<td>Early Classic Str. 41 residential (elite) Refuse</td>
<td>5.93</td>
<td>1</td>
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<tr>
<td>6G2</td>
<td>Fighting conch <em>S. pugilis</em></td>
<td>Worked abapical fragment (&lt;25%) Stage 2-3?</td>
<td>Postclassic Str. 41 residential (elite) South Plaza sheet wash 1</td>
<td>3.62</td>
<td>1</td>
</tr>
<tr>
<td>6HHH1</td>
<td>marine shell</td>
<td>Debitage (&lt;25%)</td>
<td>Terminal Classic, possibly Postclassic? Str. 41 residential (elite) Building platform surface</td>
<td>9.7</td>
<td>1</td>
</tr>
<tr>
<td>6T10</td>
<td>marine shell</td>
<td>Fragment (&lt;25%) Stage 1?</td>
<td>Floral Park Terminal Preclassic Str. 41 residential (elite) Plaza fill</td>
<td>2.1</td>
<td>1</td>
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</tbody>
</table>
Table 4.3. Marine shell identification to date at Actuncan. Images are shown half-size except for Special Find 20, which is shown at approximately a quarter of its real size.

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<tbody>
<tr>
<td>6XX3</td>
<td>Fighting conch</td>
<td>Spire (25-50%)</td>
<td>Terminal Classic Str. 41 residential (elite) Fill</td>
<td>30.62</td>
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<tr>
<td>6XXXXX/9</td>
<td>S. pugilis</td>
<td>Stage 1</td>
<td></td>
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<td></td>
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<tr>
<td>6YYYY/10</td>
<td>marine shell</td>
<td>Beads (complete)</td>
<td>Mount Hope Terminal Preclassic Str. 41 residential (elite) Burial</td>
<td>2.31</td>
<td>18</td>
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<tr>
<td>Special Find 52</td>
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<td>Stage 4</td>
<td></td>
<td></td>
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<tr>
<td>Burial 5</td>
<td>marine shell</td>
<td>Fragment (&lt;25%)</td>
<td>Terminal Classic Str. 29 residential (elite)</td>
<td>2.8</td>
<td>1</td>
</tr>
<tr>
<td>7N1</td>
<td>Olive snail</td>
<td>Worked Stage 3-4?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oliva sp.</td>
<td>marine shell</td>
<td>Fragment (complete)</td>
<td>Terminal Classic Group 4 civic/public Fill</td>
<td>2.9</td>
<td>1</td>
</tr>
<tr>
<td>8F6</td>
<td>marine shell</td>
<td>Stage 3-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9D6</td>
<td>marine shell</td>
<td>No information</td>
<td>Late Classic I Group 5 residential wall and fill</td>
<td>1.29</td>
<td>1</td>
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<tr>
<td>9O2</td>
<td>Olive snail</td>
<td>Tinkler pendant w/performation (complete)</td>
<td>Terminal Classic Group 5 residential collapse</td>
<td>6.59</td>
<td>1</td>
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<tr>
<td>Special Find 1</td>
<td>Oliva sp.</td>
<td>Stage 4</td>
<td></td>
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<tr>
<td>9V8 Cat #142</td>
<td>marine shell</td>
<td>Fragment, worked (&lt;25%)</td>
<td>Early Classic Group 5 residential Floor and fill</td>
<td>2.96</td>
<td>1</td>
</tr>
<tr>
<td>10H2</td>
<td>Fighting conch</td>
<td>Whorls (25-50%) stage 3-4</td>
<td>Terminal Classic Str. 40 residential (elite) Fill</td>
<td>13.4</td>
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<tr>
<td>11A3 Special Find 4</td>
<td>marine shell</td>
<td>Fragment, worked (&lt;25%) Stage 3-4</td>
<td>Terminal Classic Group 5 residential. Above patio floor 1</td>
<td>2.8</td>
<td>1</td>
</tr>
<tr>
<td>11E7</td>
<td>marine shell</td>
<td>Fragment, worked (&lt;25%) Stage 3-4?</td>
<td>Terminal Classic Group 5 residential. Fill below patio floor 1</td>
<td>0.31</td>
<td>1</td>
</tr>
<tr>
<td>11I4</td>
<td>Olive snail Oliva sp.</td>
<td>Fragment Stage 4, broken</td>
<td>Late Classic II Group 5 residential. Plaster floor 1 and fill below.</td>
<td>0.46</td>
<td>1</td>
</tr>
<tr>
<td>11Q2</td>
<td>Fighting conch S. pugilis</td>
<td>Abapical fragment (&lt;25%) Stage 1</td>
<td>Late Classic II Group 5 residential. Above plaster floor 2?</td>
<td>13.03</td>
<td>1</td>
</tr>
<tr>
<td>12GG3 Burial 6</td>
<td>Olive snail Oliva</td>
<td>Tinkler pendant body (50%) w/perforation Stage 4</td>
<td>Terminal Classic Group 1 residential Burial</td>
<td>1.61</td>
<td>1</td>
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<tr>
<td>12V5 Special Find 20 Burial 8</td>
<td>Common Marginella cf Prunum sp.</td>
<td>Complete shell (bead?) with perforation Stage 4?</td>
<td>Terminal Classic Group 1 residential Burial</td>
<td>0.15</td>
<td>1</td>
</tr>
<tr>
<td>12V6 Burial 9</td>
<td>Olive snail Oliva sp.</td>
<td>Body (50%) Stage 4, broken</td>
<td>Late Classic II Group 1 residential Burial</td>
<td>0.81</td>
<td>1</td>
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<tr>
<td>12V6 Special Finds 26,27 Burial 9</td>
<td>marine shell</td>
<td>Ear flares (complete) Stage 4</td>
<td>Late Classic II Group 1 residential Burial</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>13C5</td>
<td>Olive snail Oliva sp.</td>
<td>Body (25-50%) Stage 4, broken</td>
<td>Early Classic Group 6 Residential Soil with artifacts</td>
<td>1.02</td>
<td>1</td>
</tr>
<tr>
<td>13D2</td>
<td>marine shell</td>
<td>Worked body (25-50%) Stage 2</td>
<td>Terminal Classic Group 6 residential Mixed context</td>
<td>12.9</td>
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<tr>
<td>13D3</td>
<td>marine shell</td>
<td>Fragment (&lt;25%) Stage 1</td>
<td>Early Classic Group 6 Residential Soil with artifacts</td>
<td>1.73</td>
<td>1</td>
</tr>
<tr>
<td>13D3</td>
<td>marine shell</td>
<td>Margin (&lt;25%) Stage 3</td>
<td>Early Classic Group 6 Residential Soil with artifacts</td>
<td>3.01</td>
<td>1</td>
</tr>
<tr>
<td>16A1</td>
<td>cf Fighting conch cf S. pugilis</td>
<td>Base, Stage 1</td>
<td>Terminal Classic Group 7 residential Surface</td>
<td>1.95</td>
<td>1</td>
</tr>
<tr>
<td>18G2</td>
<td>Olive snail Oliva sp.</td>
<td>Tinkler pendant with horizontal perforation (complete) Stage 4</td>
<td>Terminal Classic Str. 73 residential (elite) Summit terminal use debris</td>
<td>5.76</td>
<td>1</td>
</tr>
<tr>
<td>18K1</td>
<td>marine shell</td>
<td>Worked fragment &lt;25% Stage 3-4?</td>
<td>Terminal Classic Str. 73 residential (elite) Terrace surface</td>
<td>0.96</td>
<td>1</td>
</tr>
<tr>
<td>18Q2 Special Find 11</td>
<td>marine shell</td>
<td>Ear or lip plug with incised flower (complete) Stage 4</td>
<td>Terminal Classic Str. 73 residential (elite) Terrace surface. See Simova (2014:56 Fig. 4.6) Terminal use debris</td>
<td>5.04</td>
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<tbody>
<tr>
<td>22FFF2</td>
<td>Strombidae cf <em>Strombus gigas</em></td>
<td>Circular disc w/perforations stage 4, broken</td>
<td>Terminal Classic Str. 19 civic/public Surface summit, floor of room 1</td>
<td>3.22</td>
<td>1</td>
</tr>
<tr>
<td>22GGG2</td>
<td>cf Queen conch cf <em>Strombus gigas</em></td>
<td>Circular disc Stage 4</td>
<td>Terminal Classic Str. 19 civic/public Surface summit, floor of room 1</td>
<td>2.95</td>
<td>1</td>
</tr>
<tr>
<td>22P11</td>
<td>Strombidae cf <em>Strombus pugilis</em></td>
<td>Body fragment w/perforation Stage 4</td>
<td>Floral Park Terminal Preclassic Str. 19 civic/public Floor and soil fill</td>
<td>1.13</td>
<td>1</td>
</tr>
<tr>
<td>31A16</td>
<td>marine shell</td>
<td>Not worked (debitage) Stage 1</td>
<td>Jenny Creek Middle Preclassic Plaza F civic/public Fill</td>
<td>10.47</td>
<td>1</td>
</tr>
<tr>
<td>39A2 Special Find 2</td>
<td>marine shell</td>
<td>Flat bead (complete) Stage 4</td>
<td>Late Classic II E Group civic/public Collapse (?)</td>
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</table>
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<tbody>
<tr>
<td>39D1 Special Find 3</td>
<td>marine shell</td>
<td>Cylindrical bead (complete) Stage 4</td>
<td>Late Classic II E Group civic/public Surface</td>
<td>1.48</td>
<td>1</td>
</tr>
</tbody>
</table>

Marine shell was found in both residential and civic contexts. Table 4.4 shows the distribution of both worked and unworked shell across the site by operation and group. Most groups had both complete and fragmentary shell, with more marine shell found in Group 1 and Structures 29, 40, and 41 around Patio D than elsewhere at the site (Figure X.1). Worked shell descriptions follow Willey et al. (1965), who identified beads (n=92), adorno ornaments similar to 5A2 SP#6 (n=10), flat pendants (5B8 SP#10) (n=4), and Olive pendant tinklers in a proportionately smaller quantity than AAP found at Actuncan. Just four examples were found in an assemblage of 283 specimens, which includes freshwater shell.

Table 4.4. Location of marine shell by operation (Op.) and location (Group, Plaza, and/or Structure).

<table>
<thead>
<tr>
<th>Op.</th>
<th>Worked</th>
<th>Not worked</th>
<th>Total</th>
<th>Location</th>
<th>Olive ‘tinklers’</th>
<th>Ear plugs</th>
<th>Beads</th>
<th>Adornos/ornament</th>
</tr>
</thead>
<tbody>
<tr>
<td>Op. 1</td>
<td>10</td>
<td>5</td>
<td>15</td>
<td>Group 1</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Op. 2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>Group 2 (Str. 51)</td>
<td>?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op. 5</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>Str. 18</td>
<td>?</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Op. 6</td>
<td>21</td>
<td>5</td>
<td>26</td>
<td>Str. 41 (Plaza D)</td>
<td>2</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op. 7</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>Str. 29 (Plaza D/E)</td>
<td>?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op. 8</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>Group 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op. 9</td>
<td>2</td>
<td>?</td>
<td>3</td>
<td>Group 5 (Str. 64)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op. 10</td>
<td>?</td>
<td>?</td>
<td>1</td>
<td>Str. 40 (Plaza D)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op. 11</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>Group 5</td>
<td>?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.4. Location of marine shell by operation (Op.) and location (Group, Plaza, and/or Structure).

<table>
<thead>
<tr>
<th></th>
<th>Worked</th>
<th>Not worked</th>
<th>Total</th>
<th>Location</th>
<th>Olive 'tinklers'</th>
<th>Ear plugs</th>
<th>Beads</th>
<th>Adornos/ornament</th>
</tr>
</thead>
<tbody>
<tr>
<td>Op. 12</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>Group 1 (Str. 60)</td>
<td>1</td>
<td>2</td>
<td>1?</td>
<td></td>
</tr>
<tr>
<td>Op. 13</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>Group 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op. 16</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>Group 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op. 18</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>Str. 73</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Op. 22</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>Group 8 (Str. 19)</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Op. 31</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>Plaza F</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op. 39</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>Str. 26 (E Group)</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>21</td>
<td>78</td>
<td></td>
<td>6</td>
<td>3</td>
<td>26</td>
<td>8</td>
</tr>
</tbody>
</table>

The proportions of shell by location show that most marine shell was found in residential groups (Figure 4.1), which reflects the excavation focus of most Actuncan research. Two exceptions are Structure 26, the eastern range of Actunca’s E-Group, and Structure 19 in Group 8. A comparison of the number of lots or excavation by volume has not yet been completed to put the raw number of marine shells into perspective, but in general, the groups with the most shell had both Preclassic and Classic period occupation so the quantity might reflect the overall occupation length as well as the extent of the excavations.

A preliminary analysis of the types of marine shell in each group shows some statistically significant patterns. The shell was categorized by the stage of production, with unworked fragments (stage 1), fragments that are worked but appear to be incomplete (stages 2-3), and whole or broken finished pieces (stage 4), following Emery and Aoyama (2007). Differences among groups with shells in each of the three categories were statistically significant (chi-square = 9.2613, p = .026012). The quantity of finished marine shell in Group 1 is markedly different than in Groups 5, 6, or Structures 29, 40, and 41 around Patio D (Figure 4.2).

The contexts in which the shells were found may explain some of the differences (Figure 4.3). The midden near Structure 18 contained only debitage, or unworked fragments. Most residential groups had marine shell at all stages of production. There is no concentration of shell to evidence craft production loci, but the distribution of marine shell does suggest that marine shell production was associated with households (e.g., Emery and Aoyama 2007). We will further explore this possibility in conjunction with analysis of the small worked bone assemblage. The association of elite contexts noted by Emery and Aoyama (2007) at Aguateca with marine shell production likely will not be borne out at Actuncan. Group 1 is interpreted as a nonelite household but is associated with the highest quantity of marine shell; in contrast, the
Figure 4.1. Actuncan site map with proportions of marine shell by group, plaza, or structure (also see Table 4.4).
residence of the site’s final rulers in Group 8 contained almost none. Two other elite residential structures (Strs. 41 and 73) also lacked the quantity of marine shell found in Group 1.

The contexts in which the shells were found may explain some of the differences (Figure 4.3). The midden near Structure 18 contained only debitage, or unworked fragments. Most residential groups had marine shell at all stages of production. There is no concentration of shell to evidence craft production loci, but the distribution of marine shell does suggest that marine shell production was associated with households (e.g., Emery and Aoyama 2007). We will further explore this possibility in conjunction with analysis of the small worked bone assemblage. The association of elite contexts noted by Emery and Aoyama (2007) at Aguateca with marine shell production likely will not be borne out at Actuncan. Group 1 is interpreted as a nonelite household but is associated with the highest quantity of marine shell; in contrast, the residence of the site’s final rulers in Group 8 contained almost none. Two other elite residential structures (Strs. 41 and 73) also lacked the quantity of marine shell found in Group 1.

One key difference is the presence of burials in Group 1. Actuncan burials contain relatively few grave goods (LeCount 2002; LeCount (Ed.) 2005, 2010, 2011, 2012, 2013, 2014). However, two complete marine shell beads were found 8 cm from the head of the 2-4-yr-old child in Group 1 Preclassic Burial 3, and 18 shell beads were found with greenstone beads in the neck area of the 3-5-yr-old child in Early Classic Burial 5 (Freiwald 2012; Mixter 2012; Scopa-Kelso in LeCount and Blitz 2005). Ear flares were found in Late Classic Burial 9, and Olive and Marginella shells were found in Burials 2 and 8. All but Burial 5 were located in Group 1. Some worked bone also was present, including an incised whitetail deer antler and limb femur shaft worked into a ‘tubular object’ (following Willey et al. 1965). Most interesting was a distal human phalanx in a
Understanding the temporal distribution of marine shell also helps to explain these preliminary patterns. The highest density of use as well as the widest distribution of marine shell occurred during the Terminal Classic period (Figure 4.4). Twenty-four percent of the marine shell came from Terminal Classic contexts, which include one or more lots in 12 operations (Ops. 1, 6-13, 16, 18, and 22). In contrast, 23% of the shells date to the Mount Hope phase of the Preclassic period but come from a single deposit in which a set of beads were found with the burial of a child in an elite residence (Burial 5 in Str. 41, see Freiwald 2012; Mixter 2012). Marine shell use also was found during the Early Classic period, but its distribution was limited to five operations (Ops. 1, 5, 6, 9, and 13). The close correlation between shells by count and context also shows how uncommon the material was. Excavators rarely found more than one shell in any given lot, with the exception of burials. The presence of shell debitage is curious, as no shell production locale has yet been identified.
Figure 4.4. The number of marine shell fragments and the number of lots with marine shells in Jenny Creek (JC), Barton Creek (BC), Mount Hope (MH), Floral Park (FP), Early Classic (EC), Late Classic (LCI, LCII), Terminal Classic (TC), and Postclassic (PC) contexts.

Next steps

This first step in the analysis of marine shell shows some interesting patterns. Group 1 was one of a few locations at Actuncan selected as a burial ground, so perhaps its importance also is reflected in the presence of a high proportion of marine shells. Structures 41 and 73 also served as burial locations, but a closer comparison of all artifact categories, as well as Fulton’s analysis of activity patterns at the site are needed to understand how marine shell was used at Actuncan. Once all shell is re-assessed for the presence of marine species, all fauna including vertebrate bone remains and freshwater shell can be analyzed by location, time period, and context to better understand animal use at Actuncan. This includes an intensive analysis of jute and the markers of snail extraction that identify food preparation techniques. Finally, a comparative analysis with fauna from other Belize Valley and Maya lowlands sites—especially where marine shell is concerned—will allow us to place Actuncan animal use in the broader Maya lowland context.

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