Pacbitun Regional Archaeological Project (PRAP):

Report on the 2019 Field Season

Edited by

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Horizontal Excavations of Early Ceremonial Architecture in Plaza A, Pacbitun, Belize

Terry G. Powis (Kennesaw State University)
Gary Owenby (Kennesaw State University)
Matthew Tarleton (Kennesaw State University)

Over the past decade, archaeological research in the site core of Pacbitun has focused on the architectural history of Plaza A. In the summer of 2019, the Pacbitun Regional Archaeological Project (PRAP) conducted investigations at two locations within plaza A. The first location was in front of Structure 2, which is situated on the west side of the plaza and forms part of the E Group architectural complex (Figure 1). The second location was in front of Structure 6, which is situated at the south end of the plaza and represents a continuation of research from the 2018 field season. At both locations the main goal was to identify any constructions that would predate the E Group. The E Group in Plaza A consists of four buildings (Structures 1, 2, 4, and 5) with the initial construction, based on pottery and radiocarbon dating, to have occurred at the onset of the Late Preclassic period (ca. 400/300 BC) (Healy 1990; Micheletti 2016a).

Figure 1. Map of the site core of Pacbitun.
Structure 2 in Plaza A

Of the four buildings comprising the E Group, Structure 1 is the tallest, measuring 16 m, with Structure 2 following at about 11 m in height. Structures 4 and 5, which are positioned to the north and south of Structure 1, respectively, are the smallest of the architectural complex. Healy (1990) tested Structures 1, 2, and 4 with axial trenches running up from the plaza side. These trenches exposed numerous Classic period burials and caches as well as two fragments of ritually deposited monuments, one carved (Altar 3) and the other plain (Stela 10) (Healy 1990; Micheletti 2020; Skaggs et al. 2017).

In 2019, we decided to return to Structure 2 to further investigate the earliest occupation phase exposed by Healy in the mid-1980s. Our re-investigation of this structure would also be an extension of previous field seasons (2013-2018) and excavations associated with the large late Middle Preclassic (Mamom phase) ceremonial platform (labeled as Q) located on the north side of the plaza beneath Structure 3 (Powis et al. 2019a). Given its immense size, Q, measuring 32 m long by 24 m wide by 2 m high, extended under a portion of the northeast corner of Structure 2. Q’s northern location and proximity to Structure 2 suggested that additional early platforms may lie beneath the Classic period E Group architecture buried below the eastern and western ends of Plaza A. Given the solitary nature of Structure 2, expanding from Healy’s Structure 2 unit offered the best opportunity to locate architecture coeval with Q.

Although Healy did not find any evidence of Middle Preclassic construction in Structure 2, we set out in the summer of 2019 to determine if this structure did indeed contain earlier architectural remains. At the eastern base of Structure 2, we placed Unit 19-A-A2-1 measuring 2 m (north-south) by 2.5 m (east-west). The unit was strategically placed on the eastern edge of the eastern most 2 m by 1 m unit of the central axis excavations by Healy in the mid-1980s. A quick re-exposure of the older unit provided a glimpse of the construction history of this location prior to conducting our own explorations into the plaza. Healy had identified four plaza floors in his excavation unit. The re-exposure also provided an opportunity to re-examine the uncarved monument, Stela 10, discovered by Healy at the eastern base of Structure 2. Its deposition here may signal that the monument had once stood at this location in front of Structure 2, in line with Stela 4 and Altar 2 located in the center of Plaza A. However, Healy’s research, in conjunction with our own, has led us to speculate that between the 6th and 8th centuries AD Pacbitun was sacked, perhaps repeatedly, by one or more of the competing dominant centers of the southern lowlands (Micheletti et al. 2020). Stela 10, among other carved and uncarved monuments at Pacbitun, was likely desecrated and destroyed as a result. Skaggs et al. (2017) believe that the inhabitants at Pacbitun reburied monuments, like Stela 10 inside Structure 2, after their defeat at the hands of raiders from Naranjo. Interestingly, the reburial is seen as a form of reverence to the defeated ruler at Pacbitun. Upon re-excavating Healy’s unit, we encountered Stela 10 (Figure 2). After cleaning the smoothed faces of the monument and confirming its uncarved status (Figure 3), we left Stela 10 in situ and proceeded to dig to bedrock.

In Unit 19-A-A2-1, we identified eight different construction events in Structure 2 before hitting bedrock at a depth of 320 cm below unit datum (Figure 4). While Healy’s excavation went down to bedrock, the 75 cm (north-south) by 50 cm (east-west) dimensions of his bedrock
unit had limited exposure, particularly in comparison to our own unit, which exposed 13 times more area. At a depth of 295 cm below unit datum, we found Middle Preclassic pottery (primarily sherds belong to the Savana and Jocote Groups) sealed below a thin, gray-colored tamped marl surface (measuring 4.5 cm thick) indicating contemporaneity with other early constructions in Plaza A, including Q located at the north end of Plaza A. Sitting on top of this tamped marl surface, we were able to find a portion of the westernmost task unit that was used to bury Q around 400-300 BC (Figure 5). Standing 1.5 m in height this task unit, part of a set of four spaced at eight-meter intervals, ran north-south across the plaza. These task units were laid down as part of the reconfiguration of Plaza A. The construction of the task units signifies that the entire Middle Preclassic ceremonial complex in Plaza A was purposely buried for the construction of the E Group (of which Structure 2 belongs) at the beginning of the Late Preclassic period.

Figure 2. Photo, looking west, of Stela 10 found buried inside Structure 2 (Courtesy of Jeff Powis).
Figure 3. Photo of Stela 10 located below lowest terrace in Structure 2 resting on terminal plaza floor (Courtesy of Terry Powis).

Figure 4. Bedrock shown in center bottom of photo (the feet of a local staff member, wearing red, sit inside Healy’s old unit) in Unit 19-A-A2-1 (Courtesy of Terry Powis).
Structure 6 in Plaza A

In 2018, we began investigations at the base of Structure 6 located on the south side of Plaza A (Powis et al. 2019b). Like Structure 2, we wanted to learn as much as possible about the construction history at this end of the plaza as Healy did not conduct excavations in any non-E Group building (i.e., Structure 3 and Structure 6). While we have found evidence for Middle Preclassic occupation beneath the northern (Structure 3) and western (Structure 2) structures of Plaza A, our preliminary fieldwork in 2018 revealed Mamom phase architecture and associated features (i.e., fire pits, round and square/rectangular structures) at the northern base of Structure 6. We did not have sufficient time to fully expose these Middle Preclassic features, which lie further to the south beneath both Plaza A and the central bulk of Structure 6, hence our return during the 2019 season.

During the 2018 field season, we had placed an L-shaped excavation unit measuring 7 m by 4 m at the northern base (plaza side) of Structure 6 (Powis et al. 2019b:161). Like Structure 2, the unit was placed in the plaza on the central axis of Structure 6. Our excavations unearthed portions of three Middle Preclassic platforms aligned in an east-west direction (Figure 6). The three platforms (designated as Sub-Structures A1-A3) were sealed beneath a thick (15 cm) Late Preclassic plaza floor—the same plaza floor that sealed Q and the task units at the north and west ends of the plaza around 400-300 BC. Two of the platforms (Sub-Structures A1 and A3) were rectangular or square in shape, while the third platform (Sub-Structure A2) was round. Sub-

Figure 5. Task unit shown in middle of photo (looking north) of Unit 19-A-A2-1 (Courtesy of Terry Powis).
Structure A2 is centered equally between Sub-Structures A1 and A3, which are approximately 1-1.5 m to the west and east, respectively. All three platforms were built on top of the same plastered floor surface, measuring 5-7 cm in thickness.

Of particular interest was the domestic nature of these three platforms. Unlike their ceremonial contemporary (Q), these three platforms were more reminiscent of early domestic structures previously discovered on or near bedrock in Plaza A (Micheletti 2016b) and Plaza B (Hohmann and Powis 1999; Hohman et al. 1999). Our 2019 excavations were set to explore this notion of domestic occupation. A total of sixteen contiguous units (19-A-A6-1 through 19-A-A6-16) were placed around the L-shaped unit excavated in 2018 (Figure 7). The combined unit size was 15 m by 9 m, exposing a total area of 135 square meters of Middle Preclassic occupation. While the three platforms vary in length and width, they share the same construction height of two courses of roughly hewn cut limestone blocks measuring 34-40 cm in length and 10-18 cm in width. The round central platform (Sub-Structure A2), measuring 4.40 m in diameter, is connected by a single east-west running wall to Sub-Structure A3. The interior surface consists of tamped marl. Inside Sub-Structure A2 are the remains of a fire pit that measured 80 cm in diameter, as well as a Late Classic monument (designated as Stela 14) (Figure 8). The fire pit, coeval with the one in Sub-Structure A3, is located at the north end of the round platform, approximately 35 cm to the south of the northern wall. The fire pit consists of cut stones half set into the tamped surface of Sub-Structure A2, each with dimensions similar to those used in the construction of the three platforms. All of the cut stones exhibit evidence of burning (most are
dark gray to black in color) and large pieces of charcoal are found centrally located within it. The centerline of both the fire pit and the round platform align with the centerline of Q located at the north end of Plaza A, some 50 m away. Furthermore, all three Mamom phase buildings also align with the Late Classic architecture (Structures 3 and 6) and associated monuments (Stelae 4, 11, 14 and Altar 2). It is significant that these buildings and monuments have maintained the same centerline from at least 600 BC onwards through the Late Classic.

Figure 7. Photo of excavation unit from 2019 showing portions of Sub-Structures A1 (bottom), A2 (center), and A3 (top). Note both circular fire pits inside each platform (Courtesy of Terry Powis).
Figure 8. Photo of Sub-Structure A2 with fire pit located at the north end (on the centerline with the plaza). Note Stela 14 behind the fire pit. This base represents a new monument discovered at Pacbitun (Courtesy of Terry Powis).

Both Sub-Structures A1 and A3 exhibit the same square/rectangular shape, orientation (10 degrees west of north), and tamped marl interior surface. However, their overall size differs considerably. Sub-Structure A1 is located 1.5 m from the round platform but is not connected to it like Sub-Structure A3. Although not fully exposed, Sub-Structure A1 measures 4.5 m (north-south) by 1.5 m (east-west). Besides the difference in size, a unique feature to Sub-Structure A1 is that the tamped marl surface is black in color, not white as evidenced in Sub-Structures A2 and A3. The black tamped marl surface is visible beginning at about 20 cm inside the north and east walls (Figure 9). Investigations in 2020 will hopefully determine the nature of the discoloration and thereby identify the function of Sub-Structure A1, which may be unlike the other two platforms.

Sub-Structure A3 is a much larger platform than Sub-Structure A1, measuring 8.6 m (north-south) by 8.8 m (east-west) (Figure 10). Inside this platform is another fire pit sharing strikingly similar characteristics with the fire pit found within Sub-Structure A2. Composed of stones set into the tamped marl surface, the Sub-Structure A1 fire pit also measures 80 cm in diameter and is similarly situated about 35 cm inside the west wall. All of the cut stones are heavily burned, and large amounts of charcoal are present in its center. A unique architectural feature attached to Sub-Structure A3 are two additional walls that may have served as a porch or an exterior activity area (see Figure 10). This extension is located off the northwest corner of Sub-Structure A3. More investigation into this feature will be conducted in 2020.
Figure 9. Photo of the black tamped marl inside Sub-Structure A1 (Courtesy of Terry Powis).
Figure 10. Photo of Sub-Structure A3 (upper right) with fire pit located inside the northwest corner. It is this same corner where we have identified an extension, possibly an exterior activity area (Courtesy of Terry Powis).

Conclusions

Our investigations at the base of Structure 6 in Plaza A have yielded substantial late Middle Preclassic architectural remains. Our goal in this area of the plaza was to identify any buildings that may have been built prior to the E Group beginning around 400/300 BC. Although we did not find a southern ceremonial counterpart to Q, we did encounter three Mamom phase platforms that may have had a domestic function. Given the location of these platforms, set opposite of Q at the southern end of Plaza A, we speculate that these platforms may have been elite in nature. Supporting the domestic interpretation is the presence of fire pits in two of the three platforms (Sub-Structure A2 and A3). To date, we have been unable to find elite houses at the site dating to the Middle Preclassic. With the discovery of these three platforms, it is now possible to compare them to the non-elite houses excavated in Plaza B (Powis et al. 2017). If the platforms in Plaza A are indeed elite residences, there are a few significant spatial, architectural, and functional distinctions and similarities that should be discussed.

Spatially, the elite houses of Plaza A were constructed on the highest elevation at Pacbitun, situated 6 m higher than those in Plaza B. The elevated residences in Plaza A suggest spatial preference associated with environmental opportunism which likely led to a privileged status. Furthermore, while the spatial proximity from the residences in both plazas to the community’s most sacred ceremonial architecture, Q, is relatively equidistant, for this
comparison, each plaza’s visual perspective would be a more appropriate spatial determinant of “elevated” social status than would be their distance away. Thus, considering the quality of visual perspective, the orientation, elevation, and structural alignments of the Plaza A residences were situated with a vantage point better situated for viewing the ornate southern facade of Q. Though the inhabitants of Plaza B may have been able to view the elevated structure, their vantage point would have made it difficult to view the structure and its southern facade in its entirety. What is more, any occupant whose residence may have shared a plaza floor with such a publicly revered structure as Q would have surely been considered superior by the less fortunate members of the community. If this is true, it is conceivable to believe that the occupants residing, not at the plaza level, but at the same elevation of Q’s summit might even be communally perceived as theocratically predestined—an accepted concept ascribed to the Classic period with potential origins in Preclassic times.

Architecturally, aside from the engineering complexity and knowledge associated with the artificially raised plaster plaza floor, the size and shape of the cut stones and the overall form of the Plaza A structures vary little in comparison with those in Plaza B. In fact, despite their earlier date, the cut stone blocks of the platform nearer the bedrock in the front of Structure 5 were much larger, finely hewn, and consistently shaped in comparison with the three platforms under discussion (Micheletti 2016b). Unfortunately, how these Plaza A structures relate to one another is still unknown. Continuing with architectural comparisons, while the houses in Plaza A are surrounded by a plaster plaza floor, their interior surfaces consist of tamped marl. In Plaza B, tamped marl was employed for both the exterior alleyways and the interior floors of each structure. The presence of plaster in Plaza A again supports the wealth and elite status of these occupants. Furthermore, the common use of tamped marl for interior floors may simply be a characteristic of residential space which supports the domestic function for the Plaza A platforms. On the other hand, the absence of fire pits in the Plaza B platforms is an interesting distinction. While it is difficult to suggest that domestic fire pits were an indication of elite status, an argument could be made for those associated with more elevated functions, such as ritual practices.

Functionally, one of the more revealing activities signaling a social distinction between the two Middle Preclassic plazas revolves around shell bead production. Years of excavations have helped to extensively document the presence of a shell bead industry in Plaza B (Healy et al. 2004; Hohmann 2002, 2014; Hohman and Powis 1996, 1999; Hohmann et al. 1999; Hohmann et al. 2018; Powis et al. 2017). These houses doubled as production locales, engaged in the manufacture of thousands of shell beads made primarily from marine shell obtained from the Caribbean Sea some 110 kilometers away. Embedded in the floors of these houses and in the alleyways between them were shell beads (both complete and incomplete) that were found in direct association with marine shell detritus and chert micro-drills. While this industry flourished throughout the Middle Preclassic (900-300 BC) in Plaza B, no evidence of shell bead production has been found in the platforms located in Plaza A. This information indicates that shell bead production, the economic engine of the Middle Preclassic period, was solely restricted to Plaza B and its inhabitants. One takeaway from this is that the occupants of the houses in Plaza A may have been primarily engaged in ceremonial activity, given their more relevant proximity to Q as discussed above. If this is true, we might also speculate that evidence such as the newly
discovered fire pits associated with the Plaza A structures are related to the ritual, and cleansing, like the plaster surfaces of Q, which were heavily burnt to a calcined state. This would indicate that fire in both areas may have played a large role in the ceremonial performance.

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Powis, Terry G., George J. Micheletti, and Sheldon Skaggs  

Skaggs, Sheldon, Christophe G. Helmke, Jon Spenard, Paul F. Healy, and Terry G. Powis  
Recent Results of Excavations on Structure 29 and the Alley Between Courts at Pacbitun, Belize

Sheldon Skaggs (Bronx Community College)
Mike Lawrence (Pacbitun Regional Archaeological Project)

In the Epicenter of Pacbitun are the administrative, religious, and residential structures of the elite controlling the surrounding region. The arrangement of the Epicenter consists of 41 masonry structures and three main plazas (A to C), with two smaller plazas adjacent to the northern edge (D and E) (Figure 1). The entire complex is built up on a natural limestone rise, further enhanced in elevation and shaped by the inhabitants (Healy et al. 2007). The constructions are oriented in an east-west direction, with an additional architectural group (designated the Eastern Court) and a large reservoir to the northeast of Plaza A (Cheong 2013).

Connected to the south edge of Plaza B is a complex of three isolated courtyards with surrounding range structures, likely the residence of Pacbitun royalty. Previous field seasons have focused on this palace complex. They focused on the sunken courtyards and the eastern structures of Court 1 and 3 (Figure 2) in order to determine access and the likely elite residential, administrative, and diplomatic functions through stratigraphic and artifactual evidence of Classic period activities. Excavations in the Courts have focused on five structures; Structure 23 on the north side of Court 2 (Bill 1987; Lawrence and Pierce 2018), Structure 25 on the east side of Court 1 (Skaggs et al. 2017), Structures 22 and 33 on the north side (Pierce and Skaggs 2018) and Structure 29 on the east side of Court 3 (Skaggs 2019). While there is evidence of underlying construction in the Terminal Preclassic Ku phase from 100 BC – AD 300 (Table 1) in Court 2, the visible portions of the surrounding 13 structures were constructed early in the Late Classic Coc phase from AD 550 – 800 (Table 1) and underwent episodes of construction and modification until the Terminal Classic Tzib phase from AD 800 – 900 (Table 1), (Bill 1987; Healy et al. 2004:210; Skaggs et al. 2017:9).

Casandra Bill’s (1987) research in the 1980s revealed that the core of Structure 23 on the north of Court 2, was first constructed in the Early Classic Tzul phase (AD 300 to 550: Table 1). According to Bill, there is evidence for both residential and administrative functions in this building and Court 2. An addition to the west side of the building in the Late Classic period, which served as a slate production or storage area, resulted in the restriction of access from Plaza B to Court 2 (Bill 1987; Lawrence and Pierce 2018).

The 2016 excavations undertaken by Skaggs (2017) in Structure 25 found that it served as a residence or other habitation structure in the Late Classic Coc phase, with administrative/ritual functions located on the north end of the building. During the Late Classic Coc phase access to Court 1 may have been restricted by additions to the north end of Structure 25, connecting it with Structure 24.
Figure 1. Plan map of 41 structures and 5 plazas which make up the Epicenter of Pacbitun. Yellow lines show elevation in meters.
Figure 2. Previous excavations conducted on Courts 1 to 3 and the surround 13 range structures. Topographic lines show the high and low elevations of the land under the wireframe models of each structure.
Table 1. Chronological sequence of Pacbitun, Belize (based on Powis et al. 2020).

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* TU-PAP = Trent University-Pacbitun Archaeological Project (Healy 1990a).
** PRAP = Pacbitun Regional Archaeological Project (Powis et al. 2017).
Excavations of units at the centers of Court 2 (Cherico and Skaggs 2018) and Court 3 (Skaggs and Cherico 2018) in 2017 discovered several burials and caches (Skaggs and Powis 2018), which were used to determine the age of the plaster floors using radiocarbon and ceramic dates. This established that Court 3 was constructed around AD 550–650 (Skaggs and Cherico 2018:43). In addition, a test excavation was started across Structures 22 and 33. These form part of a small elevated courtyard group enclosed by four masonry structures at the north side of Court 3. The initial evidence suggests the final construction phases of the group is the Late Classic Coc phase in date. This courtyard within a courtyard arrangement is unique at Pacbitun (Pierce and Skaggs 2018).

The excavation at the center of Court 2 exposed a portion of a Middle Preclassic Mai phase (900–300 BC; Table 1) wall which was part of a round structure 13 meters in diameter (Cherico and Skaggs 2018). The 2017 excavations in the Court 2 Structure 23 Annex further explored the possibility that it had contained a slate workshop, concluding that it likely served as a storage area for slate (Lawrence and Pierce 2018).

The 2018 investigations continued to focus on Court 1 (Pierce and Skaggs 2019), with excavation of the approximate center of the courtyard, and the first excavation of units on the eastern side of Structure 29 (Skaggs 2019). It was discovered that instead of a single rectangular construction, Structure 29 is a northern building and southern building with a deep 1-meter wide alleyway separating the two structures (Figure 3). Preliminary ceramic analysis suggests that the structure was constructed at the beginning of the Late Classic period on top of the edge of the area where the round structure was found in Court 2. This would have required some sort of social memory of the round structure, since it had been completely covered in the Early Classic Tzul phase. It appears that the structures might have been multiple stories tall. Both north and south buildings were positioned on a platform with stairs leading up from Court 3 to the entrances of the lower levels of the buildings and to the alleyway access into Court 2. The orientation of the group is more heavily weighted towards Court 3, since the alleyway is centered on the axis of that courtyard and likely enters Court 2 well north of the central axis of that area. Additionally, based on the height difference from the courtyard levels (Court 3 is many meters lower than Court 2), more of the lower portion of the buildings would be accessible from the Court 3 side (Skaggs 2019).

At some point in the Late or Terminal Classic periods, the two structure were connected, or at least access was restricted, since the alleyway had been filled with soil. No evidence of later construction spanning the alleyway was found, but this may have been removed by a Postclassic Canto phase (AD 900-1000) burial that was intruded into the alleyway fill (Skaggs 2019). Additionally, on the slope of the hill leading down into Court 2, some large stones were found in the upper level that might have been used as rudimentary stairs down into Court 2 after the alleyway was filled (Skaggs 2019: Figure 4).
2019 Excavations of Structures 29 and 31

The general plan for excavations in 2019 was to complete the last 2 or 3 meters of alleyway excavations to find the access point in Court 2, and to define the northeast and southeast corners of each building in order to determine the overall area each building occupied. Additionally, a test excavation at the western side of Court 3 was planned to determine how far out the stairs leading up to Structure 31 extended into Court 3. The topographic map suggested these stuck out into the Court 3 further than the other surrounding buildings (see Figures 1 and 2).

Unit Positioning Structure 29

Placement of the first two 2.5 m x 2.5 m square units (Unit 19-B-29-1 and 2) was just east of the end of the alleyway in Court 2 (Figures 3 to 5) to connect to the previous alleyway units. Different sized Units (19-B-29-4 to 7, and 10) were placed to open the area above the western side of the Middle Preclassic Mai phase round structure in order to determine the shape of the building on the western side of Court 2 (Figure 5). Excavations in Unit 19-B-29-3 and 4,
from the lowest plaster floor to the top of the round structure were conducted by Dr. Terry Powis. Various sized Units 19-B-29-8, 9, and 11-12, were placed along the southern most edge of Structure 29 to define its southern boundary and any extensions connecting it to Structure 28 (Figures 4 and 5). Various sized Units 19-B-29-13 to 18 (Figures 4 and 6), were placed on the north end of the structure to follow the walls partially excavated by Bill (1987) and follow the north edge of Structure 29 to find the corners of the upper building and the extension from Structure 23.

**Figure 4.** Red outlines show all the 2019 excavation units place on Structures 29 and 31. Green outlines show 2018 excavation units, and the solid green shape the total of 2017 excavations in Court 3.
Figure 5. Unit labels for southeast side of Structure 29 (Units 19-B-29-1 to 12).

Figure 6. Unit labels for north side of Structure 29 (Units 19-B-29-13 to 18).
Unit Positioning Structure 31

Placement of the first two 2.5 m x 2.5 m square units (Unit 19-B-31-1 and 2) was set up to have the center line of the units match the centerline of Court 3 on the east side of Structure 31, 10.5 meters south of the north edge of the building mound (Figures 4 and 7). Unit 19-B-31-1 was set where the slope of the building mound for Structure 31 leveled off flat into the courtyard area of Court 3 in the hopes of finding the eastern edge of the stairs suggested by the topographic map created from LiDAR data collected in 2013 by the West Central Belize Survey (Chase et al. 2014). Unit 19-B-31-3 was placed to determine that the last step was reached and investigate breaks in the plaster surface of the courtyard. Unit 19-B-31-4 was placed to follow the stairs north. Finally, 19-B-CT3-1 was placed to connect the units to the 2017 excavations and perhaps recover additional fragments of the Ulúa Valley vase found in and around the Burial CT3-2 (Skaggs and Cherico 2017; Skaggs and Powis 2018, Skaggs et al. 2019).

Excavation Findings: Structure 29 Northern Edge

The 2019 Structure 29 Units 29-B-29-13 to 18 excavations were conducted by Mike Lawrence under the supervision of Sheldon Skaggs and were aided chiefly by local workers J. Mai, C. Salam, M. Coh and L. Mai. The excavations were conducted over a period of eight days from June 17th to June 24th, 2019.
Investigations began with Unit 13 (19-B-29-13) which was a 1 m x 2 m unit placed to correspond to, and include architecture previously excavated by Bill (1987) in association with her Unit 24 in 1987 and left partially exposed at the surface. After clearing the surface of soil and backfill, the unit extended into previously unexcavated soil. This revealed a possible alignment of cut limestone in the center of the unit and a series of cut stones extending west past the edges of the unit, that appeared to be a continuation of the wall previously excavated by Bill (Figure 8). Excavation of Unit 13 progressed, finding a fragment of carved bone within fill at the 93 cm below datum level and a fragment of obsidian was collected in the screen from a bucket of fill taken from approximately 1m below the datum. Further excavation progressed to the extent of reaching the remnants of a 20 cm thick plaster floor in two separate places within the unit at the 133 cm below datum level.

A second unit, identified as 19-B-29-14 (Unit 14), 1 m x 2 m in size, was opened adjacent to the west edge of Unit 13 to follow architecture. A possible corner stone was found at the extreme western edge of Unit 14. This stone appeared to have slid or slumped to the NW down the steep slope towards Court 3, possibly aided by the intrusion of a tree root (Figure 9). A small area of plaster floor approximately 15 cm by 25 cm in area was found at the 133 cm below datum level, adjacent to the east / west running cut stone wall that was being exposed. It is suspected that this is the same floor that was exposed in Unit 13. As excavation progressed within Unit 14, cut stones appeared to the north of the architecture.

A small 50 cm by 75 cm unit, Unit 15 (19-B-29-15), the boundaries of which were largely dictated by the presence of mature trees to the east and west of the unit, was opened to follow a possible north/south cut stone alignment. Unit 15 revealed a series of 14 cut stones, with no discernable alignment but that appeared to be slumping to the east into unexcavaed soil under one of the aforementioned trees. A small portion of plaster floor was found at the western edge of the unit at the 133 cm below datum level. It is suspected that this plaster corresponds to the plaster floor found in Units 13 and 14, and ultimately may be evidence of a patio to the north of Structure 29 and covering the area between Structure 29 and the Structure 23 – Annex area.

Unit 16, a 1 m by 1 m unit (19-B-29-16) was placed to the south of Unit 14 in such a way as to confirm or disprove the supposition that the large cut stones found in Unit 14 represented the NW cornerstones of Structure 29 at this level (Figures 8 and 9). This steeply sloped unit, facing into Court 3, indeed provided the opportunity to define the limits of architecture at this elevation. Excavations uncovered one large cut stone and at least two smaller cut stones in a north/south alignment that were situated on top of another course of cut stones that extended into the south edge of the unit. Further extension of the unit to the south was prevented by the presence of a juvenile Ceiba tree that the landowner wished not to disturb. The western face of this two-course wall had slightly slumped downslope in a westerly direction and towards Court 3 but was measured to be located 5.5 m west of the very clearly defined east face of Structure 29 that had been excavated by Bill in 1987. In association with cut stones evident on the surface further to the south of Unit 16 that were in rough alignment with the cut stones within Unit 16, but not included in this excavation, we suggest this short wall and large cut stones respectively represent
Figure 8. Excavation units and cut stone walls found in units on the north end of Structure 29.

Figure 9. Looking south at corner stone of wall in west side of Unit 19-B-29-14. Photo courtesy of Mike Lawrence.
the western face and NW corner of Structure 29 and define the width of the upper portion of Structure 29 at 5.5 meters at this elevation.

To the south of Unit 13, Unit 17, a 1.1 m by 1.7 m unit (19-B-29-17) was opened to attempt to locate the suspected spine wall of the structure the northern end of the building. This unit was situated to capture any architecture i.e. a spine wall that would conform to the location and alignment of a spine wall excavated by Skaggs in the southern end of the building. Approximately 15 cm below the surface, an alignment of cut stones began to show and eventually an eastern facing wall began to appear. Concurrently a series of cut stones was uncovered roughly 80 cm to the west of the east facing wall. Eventually a five course west facing wall extending down 30 cm to a plaster floor was exposed. Within this unit, an east-west alignment of cut stones was also found. As excavation progressed in Unit 17, two inside corners were exposed, the one associated with the west facing wall formed an almost right angle and helped to define not only a west, Court 3 facing room, but also the width of the end wall of Structure 29 (Figure 10). The corner to the east, although slightly less sharply defined also eventually proved to be the inside corner of a Court 2 side room. Through the extension of Unit 17 and opening Unit 19 (19-B-29-19) on the eastern side, a room was exposed that measured 1.6 m wide at the edge of excavation and extended down to a plaster floor at a depth of 63 cm from the datum (Figure 11). This helped to define both the spine and end walls at the northern end of Str. 29. The spine wall measured an average of 80 cm in width and the portions of the end wall exposed measured an average of 70 cm at the top.

In order to identify and situate our excavations in 2019 with previous excavations by Lawrence and Pierce in 2017 and Bill in 1987, a 1 m by 1 m unit was laid out to the north of Structure 29, Unit 18 (19-B-29-18). This unit began to define the relationship of Structure 29 to Structure 23 – Annex, but it quickly outgrew its boundaries to both the north and east and became a nominal 3 m by 2 m unit. The northern boundary became defined by the architecture previously excavated by Bill as her Unit 28, while the eastern boundary extended into the area Bill excavated as her Units 27 and 24 (Figure 8). The ultimate eastern boundary was dictated more by time than by any other limiting factor as we decided on an arbitrary eastern boundary partway into Bill’s previously excavated area.

Unit 18 involved initially clearing of what was assumed to be Bill’s backfilled area in the SE corner of the unit. Once accomplished, the excavation began to show a slumped stack of five large cut stones. As excavation proceeded, further slumped stones, a total of seven of which appeared to have slumped from the west in a southeasterly direction, were removed after their locations were recorded and mapped (Figure 12). Upon removal of these stones, a plaster floor was uncovered which showed evidence of burning. One of the cut stones in the stack had a
Figure 10. Unit 19-B-29-17, looking north at the corners of walls in the unit. Photo courtesy of Mike Lawrence.

Figure 11. Unit 19-B-29-19, looking north at the spine wall at the western edge and the corner of the room on east side. Photo courtesy of Mike Lawrence.
plaster coating on both the upper and lower sides and possibly the western edge. A sample of this plaster was recovered for possible later analysis. While excavating down to the plaster floor level, a ceramic scatter was found that extended from underneath the stack of slumped cut stone to the west, approximately 150 cm eastwards and ultimately extending almost the full width of the area between the northern wall of Structure 29 and the south facing portion of the Structure 23 annex wall, roughly 1.5 m (Figure 13). A chert biface was found at the 147 cm depth near the extreme eastern edge of the ceramic scatter, somewhat underneath the ceramic scatter in that area, but above the level of the floor. A suspected human bone was found at a depth of 133 cm near the NW corner of the unit, 13 cm from the south face of the wall at the unit’s northern boundary.

A cache or post hole was located to the east of the stack of cut stones under the plaster floor that the cut stones were sitting on. This floor level, at 150 cm, did not correspond to the plaster floor levels in units 13, 14 and 15 which were at the 133 cm depth. The plaster in this area was found to have some ceramics impressed into the floor. This floor showed evidence of burning (Figure 14). The floor was measured to be 5-8 cm thick. This cache or filled in post hole, was located approximately 45 cm from the northern unit boundary, which was the short wall of Bill’s unit 28, approximately 30 cm west of the eastern edge of said wall. The cache, when excavated, consisted of pottery sherds and some rocks with a thin layer of lime under the ceramics. A single larger rock, the top of which was at the 160 cm level, was found to be centered directly over the underlying cache or post hole.
Figure 13. Looking down on the ceramic scatter in Unit 19-B-29-18 that was under the stacked stones and across the entire unit. Photo courtesy of Mike Lawrence.

Figure 14. Looking north at the cache/post hole found intruded into plaster floor of Unit 19-B-29-18. Photo courtesy of Mike Lawrence.
In total, excavation of these seven units served to define the northern edge of Structure 29 and to define the width of the structure as approximately 5.5 meters at the elevation of the excavations. It also gave some insight into the relationship of architecture of Structure 29 relative to the western end of Structure 23’s annex area.

**Excavation Findings: Structure 29 Center and Southern Edge**

Excavations started on May 25th and ended June 17th. Unit 19-B-29-1 was excavated as a 2.5 m square excavation unit set up on the eastern edge of previous alleyway excavations (Unit 18-B-29-8) and positioned so the center axis of the units was also the center between the alleyway walls (Figures 4 and 5). A part of a mano was found in the topsoil layer, and both a mano and metate fragment were in the level below the collapse (Level 2). The alleyway walls were also discovered about 105 cm below surface at the bottom of Level 2, along with a grayish soil. It appeared the soil might continue to the east of the unit (Figure 15). A large tree root had grown from north to south through the alleyway corners/walls and made determining the end difficult. Just above the alleyway floor, a limestone spindle whorl with triangle design was found.

Unit 19-B-29-2 was also set up as a 2.5 m square unit just to the west of Unit 1 to confirm the alleyway had ended. A whole spindle whorl and ¼ of another, and a tiny shell earring were found in the topsoil of Unit 2. No alleyway walls were found, but Level 2 ended 29 cm below the surface at the same grayish soil. Level 3 ended at the courtyard plaster floor, with another spindle whorl and the tip of a chert biface discovered above the plaster. Profiling the north wall of Unit 1 and 2 and combining the 2018 south wall profile of the alleyway shows a complete pseudo-section of the alleyway configuration (Figure 16). It is interesting to note that the east side of the excavations show that the gray soil (Level 2 to Level 3) interface mirrors the architecture found in Unit 19-B-29-3. It is very probable that future excavation units placed to the north of Unit 1 and 2 would uncover the eastern walls of the northern part of Structure 29.

Unit 19-B-29-3 (2 m by 2 m) and then a northern extension, Unit 19-B-29-4 (0.5 m by 2 m) were placed south of Units 1 and 2 after removing enough backfill to determine the western edge of the 2018 Court 2 excavations (Figure 4). The intention was to sample the base of Structure 29 at this point and clear away the Late Classic Coc phase overburden from the western side of the Middle Preclassic Mai phase round structure wall which would run through the unit in a northwest direction. About 45 cm below the surface, an 8 cm thick layer of greyish soil (Level 2) was found which matched the expectations from Unit 1 and 2. A fragment of red painted plaster was found in the upper area of the layer (Level 3) below the greyish soil, proving that part of Structure 29 was painted red, just like Structure 25 to the east (Skaggs et al 2017). Level 3 continued 80 cm deeper, when large, unweathered ceramic fragments started to come up. These were part of a ceramic scatter that extended from north to south across the entire unit, and from a wall or face found in the western side of the unit about 1.5 m to the east of the wall (Figure 17). The scatter was excavated in two layers, since it was more than 10 cm thick and was composed of fragments of jars, vases, and dishes, along with large ceramic vase or dish footings, faunal material (including an antler stub), and other artifacts (Figure 18). Below the ceramic scatter was a 2-3 cm thick soil deposit, meaning the scatter was not placed directly on the plaster floor below the scatter. Residue and samples for lipid analysis were taken from some of the ceramic
Figure 15. Plan map of all 2018 and 2019 walls, floors, and stairs found in excavations of Structure 29 and 31.

Figure 16. Pseudo-section profile of the alleyway separating the north and south sides of Structure 29 along its center axis. Created by combining the south wall of the 2018 excavations with the north wall of the 2019 excavations in Units 19-B-29-1 and 2.
Figure 17. Lay out of the ceramic scatter at the bottom of Unit 3 Level 3 just about the courtyard plaster floor. The larger, likely mendable ceramic fragments and the other artifacts are shown.

Figure 18. Looking south over the top layer of the ceramic scatter in Unit 3.
fragments, in the hope that we will be able to determine the last materials inside of the ceramics. It is assumed, pending further analysis, that this scatter was either a feasting or termination ritual deposit (Stanton et al. 2008). Excavations below the plaster floor were conducted by Dr. Terry Powis as part of the exploration of the round structure.

Unit 19-B-29-5 (2.5 m by 1.5 m) was placed just west of Units 3 and 4 in order to determine what the interior layout of Structure 29 was like. No interior walls or floor were found above the wall in Units 3 and 4, however, because the layer below the topsoil (Level 2) consisted of core stones (over 50 cm wide) all the way down to the wall, as can be seen in the profile of the units (Figure 19). Also noted was the presence of cut stones resting directly on the Preclassic muck layer (cut stones extent below the bottom of plaster floor) which capped the round structure (Figure 20). This two course N/S running alignment might be evidence of an earlier structure that was built over when the plaster floor was emplaced. Below the muck layer, the top of the round structure was found, and this extension of that building helps in determining that the total round structure was likely between 12 and 13 meters in diameter.

Units 19-B-29-6, 7, and 10 were excavated to explore the upper section of Structure 29 and to follow the spine wall found in Unit 7 to the north to see how it connected with the alleyway. The upper section had a plaster floor that deteriorated to the east side of the building, perhaps at the front of an open room facing into Court 2. The western side of the excavations revealed a double wall running N/S through the center of the building (Figure 21). Excavations into the interior of the spine wall showed it was earth and stone filled, and that the plaster floor from the room to the east extended under the wall, suggesting that the wall was a later addition which separated the building. There was a small line of stones running E/W from the spine wall toward Court 2, which might be the foundation of an interior wall that separated the open room. The spine wall ran to the north until it came within 1 meter of the alleyway wall, and then ended in an irregular fashion (Figure 22). This may indicate the building was partially dismantled during the emplacement of the alleyway burial found in 2018 or by a proposed earlier tomb constructed out of the alleyway (Skaggs 2019).

Units 19-B-29-8, 9, 11, and 12 were excavated on the south end of Structure 29 in order to follow the spine wall to the south and establish the southern end of the building. As expected, a double wide wall (Figures 15 and 23) was found about 8.5 meters south of the center of the alleyway, which corresponded well with the northeast corner of the exterior wall visible on the northern edge of Structure 29. Also found was an extension of plaster from the exterior wall in Unit 9, which led to a two more E/W walls in Unit 11 further south (Figure 23). A later addition of a N/W running wall and an E/W running wall created a rectangular shaped patio or room annex on the south end of Structure 29, which could have been an annex room or the top of a set of stairs leading up from Court 3 (Figures 15 and 24). The plaster deteriorated as the slope fell away on the west side of the unit, suggesting the room or stairs collapsed into Court 3.

Excavations in Unit 9 and 11 were continued through the plaster between the end of Structure 29 and the extension. This work probed down as far as was safe, which was about 1.3 meters below the plaster floor. The upper plaster floor was thick (14 cm), and part of another plaster floor was encountered 16 cm below the first (Figure 25). This floor was cut by the Maya, and only 15 cm extended south from the exterior wall. Below this cut floor was boulder core
Figure 19. West to East profile down the center axis of the southern building of Structure 29.

Figure 20. Bottom level of Unit 19-B-29-5 looking west, showing N/S stone alignment below the plaster floor and sitting on the muck layer. Below the muck, the top of the round structure is visible.
Figure 21. Unit 19-B-29-7, looking west at N/S running, double wide, spine wall and possible room dividing wall E/W. Plaster floor was found to run under the spine wall.

Figure 22. Unit 19-B-29-10 looking west at the end of the N/S running spine wall. The wall ends approximately 1 meter from the alleyway wall to the right of the picture.
Figure 23. Looking north at the exterior wall in Unit 9 (furthest north) and the two additional E/W running walls in Unit 11.

Figure 24. Looking south at series of walls in Unit 19-B-29-12 which create an extended room or patio off the south end of Structure 29.
**Figure 25.** Looking east into Unit 19-B-29-9+11 at the upper two plaster floors. The floor to the south (right side of unit) on which the north arrow sits on extended across whole unit, while the lower floor was cut as shown by the Maya in antiquity. A third cut floor may have been found 85 cm below the floor the north arrow sits on.

fill, and a potential third plaster floor 85 cm below the topmost floor. This floor was also cut in the past.

**Excavation Findings: Structure 31**

The excavation of the center axis of Structure 31 on the west side of Court 3 was an attempt to determine if there was a stair block extending into Court 3. The base where the first set of the stairs rise above the Court 3 plaster surface was found in Unit 19-B-31-1, but the cut stones were much smaller than anticipated (Figures 15 and 26). There was also plaster in front of the stairs, which probably melted off the building, but could be a deteriorated floor above the well-preserved floor seen to the east in Figure 26. Overall, it appears that there were at least two different sets of stairs, with one set being constructed on top of the earlier set. An attempt to follow the stairs to the north (Unit 19-B-31-4), showed the first course had been robbed in antiquity, so it was not possible to determine the width of the stair block. About 13 rounded fragments of yellow limestone (Figure 27) were found among the cut stones that were used to make up the stairs. It was considered that these fragments might be part of an altar, but none of
Figure 26. Looking west at Unit 19-B-31-1 at the first set of stairs and the Court 3 plaster floor. The cut stones used in the stairs were smaller and thinner than other cut stones on site.

Figure 27. Example of curved yellow limestone fragments found among the Structure 31 stairs cut stones.
the fragments were carved. These were mapped, but the fragments couldn’t be reassembled into a complete altar shape. It seemed improbable that these fragments came from multiple different altars, so the fragments were reburied during backfilling.

Preliminary Artifact Analysis

The ceramic artifacts found in the excavation units consist primarily of Late Classic Coc phase sherds found in both surface and interior layers. Not all units and levels were washed, so only the number of sherds is presented in Table 2. The ceramics from the scatter in Units 19-B-29-3, 4 and those from the scatter in Unit 19-B-29-18 are nearly identical, and all from the Late Classic Coc phase. The Unit 3 scatter consisted of finer made ceramics, such as very thin walls and several ash-tempered polychrome vase bases and on incised ceramics (Figure 28), and plates or bowls with feet (Figure 29). Some of the feet have inscribed lines and grooves, identifying them as Late Classic Platon Punctated Incised wares (Gifford 1976). There were also several large globular shaped jars with very constricted orifices and squared rims (Figure 30). Based on the number of fragments of all the vessel types, it is very likely that most of the ceramics are mendable and come from a limited number of complete or nearly complete vessels. There is a smaller, but similar ceramic scatter in Unit 19-B-29-18. Though a detailed analysis has not been performed, the ceramic types identified are also Coc phase, and come from the same vase and bowl types as in Unit 3. One square foot from an ash-tempered ceramic was found in Unit 18 that was not found in the other ceramic scatter (Figure 31). The only type not represented in the Unit 18 compared to Unit 3 were the large jars. This deposit is likely related to the abandonment of Structure 29.
Table 2. Summary of number of sherds in levels of Units 19-B-29-1 to 18, 19-B-31-1 to 4, and 19-B-CT3-1 in 2019 excavations. Ceramic types given when available (after Gifford 1976).

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<tr>
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<td>19-B-31-4 Level 3</td>
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</table>
Figure 28. Examples of polychrome and incised vase bases from Unit 19-B-29-3 Level 3 Ceramic Scatter.

Figure 29. Examples of the feet of dishes and bowls from Unit 19-B-29-3 Level 3 Ceramic Scatter. Types are from Belize Red, Platon Punctated Incised, and a long, unidentified brown carbonate ware (Gifford 1976).
Figure 30. Large globular jar with restricted orifice preliminarily identified as a Roaring Creek Red type (Gifford 1976).

Figure 31. Square base, ash-tempered ceramic bowl foot.
Conclusions

Although there is still much work to do before we truly understand all aspects of the Courts at Pacbitun, the 2018 and 2019 summer excavations have illuminated several features about Structure 29 and Court 2. The area was first the location of a Middle Preclassic Mai phase round structure that was covered with a thick muck layer before later constructions on the west and north sides of the courtyard occurred. On top of these earlier buildings, the beginnings of Late Classic Coc phase Structure 23 to the north and Structure 29 to the west were constructed. From what we have learned so far, Structure 29 was originally two structures separated by an alleyway between them that was on the centerline axis of Court 3, but north of the centerline axis of Court 2. This suggests that all the buildings around Court 3 and Structure 29 were constructed at the same time in the Coc phase and focused on Court 3 instead of Court 2. Both the northern and southern Structure 29 buildings were likely two stories with multiple rooms on the western side, and a single open room at the top on the eastern side (Figure 32). A stair block ascended the western side to the large platform on which the buildings sat. The upper building was likely a single room facing west at first, and then subdivided into multiple rooms later to face both courtyards. This likely occurred at the same time as Structure 23 was divided into separate courtyard and Plaza B facing rooms (Bill 1987). The entire structure was filled in later, either as a part of a termination ritual shown by the ceramic scatters in Units 3 and 18 (Stanton et al. 2008), or so the upper rooms could be secluded and to restrict access from Court 3. Finally, at least one burial was intruded into the alleyway fill (Skaggs 2019).

Figure 32. Proposed floorplan of Late Classic Coc phase Structure 29.
Acknowledgements

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Skaggs, Sheldon, and Peter Cherico

Skaggs, Sheldon, and Terry G. Powis

Skaggs, Sheldon, Robert H. Tykot, and Terry G. Powis

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Exploring the Settlement Hierarchy in the Periphery at Pacbitun, Belize

George J. Micheletti (University of Central Florida)

This report is a summary of the methodology and results of the 2019 hinterland project at the Maya center of Pacbitun, Belize (Figure 1). While the investigation of Pacbitun’s periphery will offer an increased understanding of an area that has been little explored, the purpose of the 2019 season was to identify groups thought to represent minor centers located within the site’s hinterlands and attempt to define the occupation chronology of these groups. This preliminary data, discussed in the following sections, is part of a larger dissertation project that will examine the Classic period political affairs at Pacbitun from a hinterland perspective. After analyzing ceramics collected from excavations and looted areas of each of the groups, the results appear to be consistent with data provided by the initial investigation of Healy et al. (2007). Although some ceramics hint at Preclassic and Early Classic occupations, all sherds belonging to these time periods were found in mixed deposits. Interestingly, the ceramics suggest that each group tested had been constructed sometime during the Late Classic period.

The Minor Centers at Pacbitun

The primary focus of the hinterland project was to investigate the middle-level settlement of the periphery zone (Figure 2). Architectural groups categorized as middle-level settlement are what Normand Hammond (1975) refers to as “minimal ceremonial centers” due to the presence of at least one non-domestic structure that implied “a degree of ‘religious,’ ‘political,’ and ‘economic control,’” otherwise known as minor centers. Aside from architectural size, these special purpose structures are what distinguish middle-level settlement from lower-level settlement (Iannone 2004). Minor centers were inhabited by high-status individuals commonly referred to as intermediate elites due to their scaled-down status as middle-level management (Figure 3) (Elson and Covey 2006; Walden et al. 2019). These individuals are thought to have had close relations with the elite of the site core evident in the imitation of architecture and ideology of their social superiors (Chase and Chase 1996). Because of these shared practices, an investigation of minor centers and the intermediate elite at Pacbitun will provide a greater understanding of the site’s political organization and status by shifting the social vantage point to provide a new, “bottom-up” perspective for analysis.

Prior to the field season, many potential middle-level settlement groups were visually identified by examining various rasterized map imagery created by the author using LiDAR data courtesy of the 2013 west-central Belize LiDAR survey (Chase et al. 2014). Because many of the groups were located on private property, the first task upon arrival was to request permissions from each of the landowners. Although a few landowners had already granted permission while ground-truthing several groups of interest during a short field season in December 2018, each were still contacted and notified. By the end of the 2019 summer field season, a total of 41 groups categorized as various types of minor centers were visually verified within the 4.5 km radius considered to be Pacbitun’s territory. Of those groups considered to be minor centers, a total of ten locations were explored in more depth over the course of the summer and are the
subjects of this summary. Using a Hillshade grid map of the Pacbitun permit area (Figure 4) composed of 0.5 km tiles, these groups were labeled according to their tile location and assigned a group number. For example, the first and second groups identified/investigated in column P, row 10 would be labeled P10-1 and P10-2 respectively. Therefore, the ten targeted groups that were investigated are labeled as K10-1, K12-1, L6-1, N8-1, Q11-1, R5-1, R7-1, T6-1, T8-1, and V8-1 (Figure 5-8). Seven of the ten groups received plaza excavation units.

Figure 1. (top) Map showing location of Pacbitun and surrounding sites in west-central Belize; (bottom) Site map of Pacbitun.
Figure 2. Hillshade of the settlement zones at Pacbitun; the red square represents the 0.5 km² epicenter, the yellow square represents the 1 km² site core, anything beyond the yellow square is considered periphery settlement.
Figure 3. Settlement hierarchy illustrating examples of major centers (Group 1), minor centers (Groups 2, 3, and 4), and high-status commoner (Group 5) (Walden et al. 2019, Figure 3).
Figure 4. Hillshade grid map of Pacbitun’s permit area. Measuring 500 m² (0.5 km²), each tile can be identified by a letter (x-axis) and number (y-axis) combination (i.e., Pacbitun’s epicenter is located within tile S9) (Data courtesy of Chase et al. 2014).
Figure 5. Images of K12-1, also known as San Antonio Viejo, categorized as a Group 2a minor center.

Figure 6. Images of periphery settlement (L6-1, R5-1, T8-1, and Pol Sak Pak) categorized as Group 2b minor centers.
Figure 7. Images of periphery settlement (N8-1, K10-1, Q10-1, X6-1, T6-1, and V8-1) categorized as Group 3 minor centers.

Figure 8. Images of periphery settlement (R7-1, Q11-1, and R11-1) categorized as Group 4 minor centers.
Because many of the groups were found within dense jungle overgrowth, it was often necessary to clear the vegetation within the plaza areas so that each could be mapped, photographed, and excavated. Mapping of architecture and plazas was done using an RTK global positioning system. When possible, groups surrounding the targeted location that were relatively clear of vegetation were also mapped as exemplified in Figure 16. The primary goal of excavation was to identify an occupation chronology for each group through ceramic analysis; thus, units were set for sub-plaza exploration based on cultural levels to reveal a stratigraphic sequence of renewed plaza floors. Excavations were terminated when solid or sterile bedrock was encountered. Although the architecture associated with these groups could contain earlier evidence of occupation and typically reveal a better construction history, plaza excavations are preferred as they generally provide a solid chronology and are far less extensive and time consuming. Furthermore, excavations of groups skirting the edge of Pacbitun’s core zone in 2018 found that bedrock was shallowest near the center of the plaza. Therefore, measurements were taken to locate the approximate center of each plaza. These areas were extensively cleared of vegetation so that an excavation unit could be set. These units measured either 1-meter square or 1.5-meters square. The latter unit size was opted for when the artificial surface appeared to be significantly raised often signaling the use of boulder core construction fill—a common construction material used in the site core and elsewhere at the site. Deep excavations into boulder core can be difficult in small units as space and safety eventually become an issue. Fortunately, however, no boulder core fill was found during these investigations and the average bedrock depth was approximately 0.60 m below the modern ground surface. Once bedrock was encountered, a profile of the stratigraphy was drawn (Figures 9-15), and the unit was backfilled.

A majority of the groups that were investigated had evidence of looting activity likely occurring in the recent past. To make the best out of a bad situation, looted areas were also investigated to add to the chronological data for each group. Looter’s trenches/pits were often overgrown and needed to be cleared of vegetation and debris. Once cleared, all loose ceramics within these areas were gathered and placed into a general collections bag. The walls of the trench/pit were then shaped and scraped to identify phases of construction. Any ceramics associated with the different phases of architecture were collected according to their stratigraphic level for analysis. Like the plaza units, profiles of the looted areas were also drawn to illustrate stratigraphic levels (illustrations still in progress). Looted areas were explored at four of the seven groups that were excavated as well as the three groups that were not excavated. The following sections will provide a detailed description of each group’s location and architectural composition.
Figure 9. Illustration of the west profile of Unit 1 centering the plaza of K10-1.
Figure 10. Illustration of the north profile of Unit 1 centering the plaza of N8-1.
Figure 11. Illustration of the south profile of Unit 1 centering the plaza of Q11-1.
Figure 12. Illustration of the east profile of Unit 1 centering the plaza of R5-1.
Figure 13. Illustration of the east profile of Unit 1 centering the plaza of R7-1.
**PACBITUN - T8-1**

South Profile of Unit 1

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**Figure 14.** Illustration of the south profile of Unit 1 centering the plaza of T8-1.
Figure 15. Illustration of the east profile of Unit 1 centering the plaza of V8-1.
Periphery Group Investigations

*K10-1*

K10-1 is located approximately 4 km to the west of Pacbitun’s site core (see Figure 7). After obtaining permission from the landlord, Fernando Tzib, our crew (Joe Tzul, Diego Tzul, and Ademar Mai) approached the group from the property entrance (about 1.5 km to the north of...
the San Antonio Village center) off of the Noh Beh Tenah Rd. K10-1 is positioned on a hilltop at an elevation of 247 meters above sea level (masl). The vegetation on and around the hillside was low but thick and required extensive clearing before mapping and excavations could commence. Once cleared, the architecture composing the group, oriented slightly west of north, appeared to be composed of three eastern buildings arranged in a linear formation with a large central building standing approximately 3-4 meters tall flanked by two smaller structures measuring about 1.5-2 meters tall. This arrangement is very reminiscent of an E Group complex, particularly the variant form recently verified at several Belize Valley centers (Awe et al. 2017; Micheletti 2016, 2020). In addition to the three eastern buildings, the group also included two low (< 1 meter), rectangular structures set on the north and south edges of the plaza. No western structure was identified. Evidence of looting was apparent at the summit of the central and northern buildings of the eastern architectural arrangement as well as on the eastern side of the plaza’s northern structure.

A single excavation unit measuring 1-meter square was placed in the center of the plaza. Beneath the humus layer, three changes in construction matrices were noted before bedrock was encountered at a depth of 50-60 cm below the modern ground surface (see Figure 9). No preserved plaster surfaces were identified. Of note, however, an east-west alignment of core stones was found in the southern half of the unit. Each stone was set directly on bedrock and was subsumed within Level 4 fill just beneath the bottom of Level 3 suggesting a floor may have been constructed just above the height of this alignment. The function of this core stone alignment remains unknown, though it appears to mark the centerline of the central eastern structure and possible the entire plaza.

**N8-1**

N8-1 is located 2.8 km west of the site core of Pacbitun, positioned at the summit of another hilltop at an elevation of 242 masl. After requesting permissions from landowner John Tzib, the group was accessed 1.5 km down a dirt road extending from Noh Beh Tenah Rd. approximately 0.5 km north of the San Antonio Village center. The hilltop was mostly clear of vegetation due to its location in a pasture. However, each of the architectural mounds of the hilltop group was overgrown with vegetation and thick underbrush requiring extensive clearing for mapping purposes. The group is composed of three buildings set on the north, east, and west edges of a rectangular plaza. The largest building in the group was a 3-4-meter-tall square structure was set on the eastern side of the plaza. The northern and western buildings are both rectangular in form; however, the former stands slightly taller measuring 1-1.5-meter-tall whereas the latter stands less than 1 meter in height. No building was located on the southern edge of the plaza. Of note, this group was deemed unique due to its orientation. Almost all architecture associated with Pacbitun’s site core and periphery is oriented west of north. N8-1 is one of only a few groups at Pacbitun oriented east of north.

An excavation unit measuring 1-meter square was placed near the center of the plaza. While setting up the unit, several stone alignments were discovered on the plaza surface possibly representing structures associated with post-abandonment occupation or patios extending from the northern and eastern buildings. Due to the limited time and small excavation, the purpose of these features remains unknown. Some larger core and cut stones were found within the humus
layer, likely associated with collapse debris from the northern structure. A very poorly preserved floor was also uncovered at a depth of ca. 30 cm below the modern ground surface. Approximately 15-20 cm beneath the floor, bedrock was encountered (see Figure 10).

Q11-1

Q11-1 is located approximately 1.7 km to the southwest of the site core (see Figure 7). Permission was granted by the landowner (the father of Gary Canto, one of the local field assistants of the Pacbitun project) to clear vegetation and excavate this group’s location, situated on a low plateau 70 meters east of the Tzul Causeway. We approached the group from the entrance of Joe Tzul’s residence on Noh Beh Ox Mul Rd. about 2.3 km from the San Antonio village center. From here, the group is about a 0.5 km hike south through pastures, fields, and horseback riding trails. Despite being surrounded by farmland, the group was very overgrown and required extensive clearing before operations could begin. Oriented slightly west of north, the group is composed of four structures set on the north, east, south, and west edges of the plaza. The largest structure is a rectangular building positioned on the western side of the plaza standing approximately 2 meters tall. The eastern building is square in plan and standing about 1 meter tall. The northern and southern buildings are also square in plan and stand less than 1 meter tall. The only evidence of looting was found on the summit of the western structure. In addition to Q11-1, two smaller groups were also located to the south and southwest. These were subsequently names Q11-2 and Q11-3 respectively (see Figure 9). Both were mapped to illustrate their proximity to Q11-1. These and other groups are slightly visible in the LiDAR imagery. Each group was ground-truthed to confirm their existence. It appears that this area, just east of the Tzul Causeway, was densely occupied at some during Pacbitun’s inhabitation.

A 1-meter square unit was placed near the center of the plaza of Q11-1. After removing the humus layer, four distinct construction matrices were encountered suggesting there may have been four floor constructions associated with this group. Bedrock was located about 0.75 to 1 meter beneath the modern ground surface (see Figure 11).

R5-1

R5-1 is located approximately 2 km to the northwest of the site core on property belonging to the owner of Maya Ranch (Joe Tzul, personal communication 2019; see Figure 6). After requesting permission to clear and excavate R5-1, we approached the group by turning north off of Noh Beh Ox Mul Rd. onto an unnamed road approximately 3 km to the east of the San Antonio Village center (0.5 km west of the entrance to Pacbitun). The group is located in dense jungle overgrowth (0.5 km hike from the roadside) and required extensive clearing to map and set up the excavation unit.

It was not until the area was fully cleared that we realized the complexity of R5-1. Once cleared, we were able to determine that the site was composed of four plazas (A-D) with at least 11 structures. The tightly packed architecture of this minor center would have restricted access to the most elevated, prestigious location, Plaza A. Here, a 4-5-meter-tall square eastern structure is set across from a 2-meter-tall range building (oriented north-south). The northern edge of Plaza A is also bounded by another range structure standing 2-3 meters tall. No southern building was
identified in Plaza A. The northern structure in Plaza A appears to connect with the northern structure of the group to the east, associated with what is now designated as Plaza B. Set 1-2 meters lower than Plaza A, Plaza B is framed on the west edge by another range structure. A much smaller ancillary structure is attached to the southern end of the western range structure extending to the east. The backside of the western structure of Plaza A bounds the eastern edge of Plaza B. Plaza C lies to the south of Plaza A and B and is composed of several low structures (< 1 meter tall). Moving to the east in Plaza C around the backside of eastern building of Plaza A, a 4-meter-wide pathway leads to two additional buildings on the northeast side of the hilltop site designated as Plaza D. Although extensive, the only evidence of looting was a large trench on the summit and western face of the eastern building in Plaza A.

To determine the occupation chronology of what is most certainly a minor center, a 1.5-meter unit was set at the approximate center of Plaza A, centered between the east and west structures. After removing the humus layer, a single poorly preserved plaster floor was encountered at a depth of 15-20 cm below the modern ground surface. Bedrock was located 20-25 cm below this floor (see Figure 12).

R7-1

R7-1 is situated on an elevated plateau 1.3 km to the north, northwest of the site core of Pacbitun (see Figure 8). We approached the group from an unnamed road running north of the Noh Beh Ox Mul Rd. approximately 3 km to the east of the San Antonio village center. The group was relatively clear of vegetation and only required minimal chopping of the structures and plaza area. After clearing the vegetation, the group was determined to be composed of 5 structures. Two large range structures bound the northern and southern sides of the plaza, standing approximately 2-3 meters tall. The largest building, another range structure bounding the western edge of the plaza, stands approximately 3-4 meters tall. Of all the architectural damage due to looting activity we documented in the periphery over the course of the field season, the damage to the western structure of R7-1 was by far the worst. A 2-3-meter-wide trench running down the center of the eastern face to the backside of the building left much of the construction debris at the eastern base of the structure. In addition to this, the summit of the southern range building of R7-1 was also looted, though only minimally in comparison to the group’s western building. Clearing also revealed two low platforms bounding the eastern edge of the plaza. In addition to R7-1, two more smaller groups were located to the southwest and west and were subsequently designated as R7-2 and R7-3 respectively.

A single unit was placed in the center of the plaza measuring 1.5 meters square. After removing the humus layer, three distinct construction matrices were encountered. The only remnants of poorly preserved (and possibly burned) plaster floor was located at a depth of 1 meter. Bedrock was encountered 20 cm below this floor (see Figure 13).

T8-1

T8-1 is located 0.7 km to the northeast of the site core, positioned on the summit of a large hilltop (see Figure 6). Joe Tzul, who acted as the field guild in December 2018 and again during the 2019 field season, is the landowner of this property. We approached the group from
the site core, hiking through open pasture and up the overgrown hillside. Similar to R5-1, T8-1 proved to be quite complex. While the majority of the architecture associated with T8-1 is not as grandiose as R5-1, the artificial modifications to the T8-1 hilltop surpassed the aforementioned minor center. One construction that greatly exceeded all other periphery constructions discussed to this point is the summit platform now designated as Plaza A (Figure 17). Previous excavations during the 2018 summer field season placed a unit near the center of Plaza A and determined that the entire summit platform may be artificial. The construction fill was found to primarily consist of boulder core extending down over 3 meters in depth. Unfortunately, bedrock was never encountered as the unit was eventually abandoned due to safety concerns associated with collapse. The platform stands 5-6 meters tall and measures approximately 40 meters (east-west) by 45 meters (north-south).

![Plan view illustration of the hilltop minor center T8-1.](image_url)

**Figure 17:** Plan view illustration of the hilltop minor center T8-1.
Despite its location in pasture fields, the hill on which T8-1 sits is covered within dense jungle vegetation. Thus, in order to explore the modifications of the hilltop site, extensive clearly was necessary. Using the LiDAR imagery as a guide, clearing confirmed the presence of at least 4 plazas (A-D). Preliminary explorations have led us to suspect that access was restricted so that select pathways would guide individuals through each plaza up to the summit. As Figure 17 illustrates, foot traffic may have been directed from Plaza D to the east along a narrow pathway wrapping around the northside of Plaza B and leading to a small building flanking the entrance to Plaza C. Access to Plaza B was most likely gained via a ramp at the south end of Plaza C. Alternatively, another ramp ascending north from Plaza C along the eastern edge of Plaza B may have led to a platform to the north. Stairs may have ascended to the south from the platform leading to two structures at the north end of Plaza B. The most preserved pathway is the stairway at the north end of Plaza A providing access from Plaza B to the most elevated and prestigious group. Plaza A is composed of a low eastern range structure and a slightly larger rectangular southern structure. Interestingly, the modest constructions of Plaza A appear to be residential rather than ceremonial. Thus, due to the restricted and secluded location, T8-1 may have had a defensive function. However, much more work will need to be conducted to support this hypothesis.

Because the previous attempt to determine an occupation chronology in Plaza A at T8-1 was unsuccessful due to a failure to locate bedrock, we decided to place another unit in Plaza B. This unit was placed to the north of a small, raised platform extending out into Plaza B from the stairway descending from Plaza A. The excavation encountered two possible floors, both poorly preserved. Bedrock was located about 0.75-1 meter below the modern ground surface (see Figure 14).

V8-1

V8-1 is located on a hilltop approximately 1.5 km to the east of the site core of Pacbitun. We approached the group from Chiquibul Rd. at a location about 1 km to the north of the Noh Beh Ox Mul junction. From here, we hiked west approximately 0.5 km over a plowed field and up the hillside into dense jungle vegetation. The site required extensive clearing before mapping and excavation could begin. As the LiDAR imagery depicts (Figure 7), this group is composed of a single 4-meter-tall structure set on the east edge of what appears to be a rounded platform. Whether this shape was intentional or due to poor preservation is unknown. The lone eastern building had been extensively looted—a large summit pit reaching a depth of approximately 2 meters.

A 1.5-meter square unit was placed at the approximate center of the plaza area about 10 meters to the west of the eastern building. Although no plaster surfaces were uncovered, excavations penetrated 3 different fill matrices suggest poor preservation. Bedrock was located around 40-50 cm below the modern ground surface (see Figure 15).
Preliminary Ceramic Chronology of Investigated Periphery Groups

Ceramic analysis was conducted throughout the season but was primarily done near the project’s end. The sherds within the collection as a whole represented each of the ceramic phases for Pacbitun, spanning from the Middle Preclassic Mai phase (900-300 BC) to the Terminal Classic Tzib phase (AD 800-900). However, the majority of the ceramics belong to the Late Classic Coc phase (AD 550-800) and Terminal Classic Tzib phase heavily represented by types such as Belize Red, Dolphin Head Red, Garbutt Creek Red, Cayo Unslipped, and Alexanders Unslipped (Gifford 1976). Though found in mixed deposits near bedrock or in secondary (looted) contexts, sherds belonging to Savanna (Mars Orange ware) and Jocote (Uaxactun Unslipped ware) ceramic groups—the two groups that compose 67 percent and 32 percent of the Middle Preclassic Mai phase (900-300 BC) ceramics at Pacbitun respectively (Terry Powis, personal communication, 2019)—were found in larger quantities at two groups, K10-1 and R7-1. Nevertheless, according to the ceramic analysis, all excavated groups were occupied by the Late Classic Coc phase (AD 550-800) and were abandoned sometime during the Terminal Classic Tzib phase (AD 800-900). While nothing can be said with certainty about the earliest occupation of the three unexcavated groups, the ceramics from the looted areas correlate with the excavated groups suggesting Late to Terminal Classic habitation.

Conclusions

Though the data is limited in comparison, the dates of these groups correspond well with the core zone and periphery settlement data collected by Paul Healy and colleagues (2007) during the initial investigation in the 1980s. As Table 1 demonstrates, excavations of 53 periphery structures and 21 core zone structure found no evidence of Middle Preclassic occupation (Healy et al. 2007, Table 3). Occupation during the Late Preclassic Puc phase (300-100 BC) and Terminal Preclassic Ku phase (100 BC-AD 300) reached 11 percent and increased to 13 percent by the Early Classic Tzul phase (AD 300-550). By the Late Classic Coc phase (AD 550-800) the occupation percentage of the tested structures jumps to 30 percent and then rises dramatically to 100 percent occupancy by the Terminal Classic Tzib phase (AD 800-900). With such low percentage numbers for periphery occupation during the Middle Preclassic period up to the Early Classic period, the Late Classic dates of the groups tested during the 2019 field season are not too surprising. What does come as a surprise, however, is that the targeted groups for the 2019 project compose some of the largest settlement in Pacbitun’s periphery. It would be reasonable to believe that these larger groups would have grown in size over time. On the contrary, the evidence suggests that each of these monumental constructions were built sometime during the Late Classic period. Whether or not this was the product of the site’s Late Classic florescence, as evinced by the surge of construction and elaborate burials and grave furniture, is not known. Nevertheless, this preliminary data obtained from these groups will help to narrow the focus of the 2020 excavations.
Table 1. Population estimates based on Healy and colleagues (2007, Table 3) settlement research.

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<td>Tzib phase (AD 300-550)</td>
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<td>Mai phase (900-300 BC)</td>
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