The Belize Valley Archaeological Reconnaissance Project

A Report of the 2002 Field Season

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Excavation of Structure 209, Baking Pot, Belize

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Introduction

The site of Baking Pot is located in western Belize, about 10 kilometers northeast of San Ignacio Town, on the alluvial banks of the Belize River Valley (Figure 1). The site center is comprised of two large administrative and residential complexes (Groups 1 and 2) surrounded by hundreds of single “housemounds” and several plazuela groups (Figure 2). Group 1 has three large courtyards, including two ballcourts, two large temples, and several range structures. Group 2 is smaller than Group 1, and consists of seven (or possibly eight), structures that enclose two plazas, plus two other small structures that form a third ballcourt. The most imposing architecture in Group 2 is a large, 17 meter high, temple located on the eastern flank of the primary courtyard. Most of the other structures appear to be range-style buildings. Group 1 (to the north) is connected to Group 2 (to the south) by a 300 meter long by 15 meter wide causeway. A single mound (Structure 209) abuts the causeway roughly 50 meters south from its juncture with Group 1 (Figure 3). The causeway actually ends at the south end of Ballcourt 2, where the playing alley provides the only southern access into Group 1. Nicknamed the “Ticket Booth”, Structure 209 appeared to have an east west orientation and its location suggested that it was intricately associated with activities related to the causeway.

In the Belize Valley, Awe (personal communication 2003) notes that “Ticket booth” structures that are constructed near the entrances to important architectural complexes, and adjacent to (or abutting) major causeways, are present at Cahal Pech (see Str. A2 of the Zopilote Group in map by Awe, Grube and Cheetham in Press), Buena Vista (see map (Fig. 43) in Ball 1993), Xualcanil (see Str. 14C, Fig. 10, in Schwake 2000), Pacbitun (see Healy 1990:250) and possibly at Xunantunich (see map (Fig 2) in LeCount et al. 2002). Elsewhere similar structures may be present at Caracol where the Conchita causeway connects with Group B (see Fig 47, Chase and Chase 1987), and at Naranjo (see map (page 68) in Martin and Grube 2000). Because of its rather unique location, we hypothesized that Structure 209 may have served ritual rather than domestic function, and that possible ceremonial activities may have been associated with ritual uses of the causeway. In an effort to validate or negate our hypothesis we decided to investigate Structure 209 in the summer of 2002. The investigations included both penetrating excavations and the horizontal clearing of the terminal phase architecture. The results of these operations are provided below.
Terminal Phase Architecture

In its final, Terminal Classic, form, Structure 209 was comprised of a series of elliptical terraces crowned by a distinct upper platform that included both elliptical and straight walls. A short flight of stairs provided access from the causeway to the summit of the platform. The walls of the structure were made from cut limestone blocks ranging between 20-30 cm long, with slightly larger blocks used on the stairs and the lower terraces (Figure 4). The terminal phase floors were made from a 4-6 cm layer of plaster placed directly on top of alluvial clay fill with a few rock and artifact inclusions.

The three lowest terraces intersect with the causeway on both the northern and southern side of the building. The maximum height of the terrace on the southern side of the structure is over 2 meters in height. On the eastern side of the structure, however, the terraces stand only 1 meter high. These terraces decrease in size on the northern side of the building, where they are less than 50 cm high. The differences in height appear to conform to differences in the height of the natural ground level.

Three stairs are located on the western side of the building and lead to the second terrace. The third terrace is relatively low and may have also served as the final step leading to the summit of the platform. The stairs were constructed with large limestone blocks that were well preserved on the northern side of the staircase but absent to the south. The latter appear to have either been purposely removed to facilitate the placement of Burial 1 below the western half of the stairway, or may have been scavenged by Postclassic inhabitants of the site.

The upper platform is comprised of a lower apsidal terrace and two rectangular upper terraces. The lowest terrace was approximately four to five courses high (50 cm), although much of the wall appears to have been removed in antiquity (possibly during Late Postclassic times). The upper terraces were better preserved; with the second terrace four to six courses high (50-60cm) and the third terrace only two to three courses high (20-25 cm). The second and third terraces were only preserved on the western and northern sides of the platform and no collapse was encountered on the eastern and southern sides suggesting that the stones here were also removed in antiquity. Further supporting this possibility is the discovery of several late Postclassic arrowpoints on and around the building and the presence of a Late Postclassic household roughly 200 meters east of the Ticketbooth (Audet 2001, Audet and Awe 1999).

The terminal form of Structure 209 is unusual and, until now, has never been recorded in the Belize Valley. Similar building forms (with round lower terraces and rectangular upper platforms), however, have been noted at several Postclassic sites in the Yucatan (Andrews and Andrews 1975). This suggest that this architectural form could have been first introduced during the Terminal Classic and continued to be used in later times. More importantly, the unique architectural style of the structure may support the argument that the Ticketbooth likely served as a special function structure at Baking Pot.

Construction Sequence

Penetrating excavations into the Ticketbooth suggests that the structure underwent two phases of construction and one minor modification. Both construction
phases were faced with limestone blocks cemented together with lime plaster. The core fill of these platforms consisted predominantly of alluvial clays with a scattering of pebbles and cobbles. The floors of the platforms were made from thick layers of lime plaster, and there is evidence to suggest that these floors were re-plastered several times.

The earliest phase (Str. 209/1st) of architecture was recorded by three excavation units (Units 26, 27 and 36). Two of the excavations (Units 26 and 27, measuring 1.5x1.5m) penetrated the mound from the surface of the upper platform and the third excavation (Unit 36, measuring 1.5x1.5m) was placed in front of the staircase. Data produced by these operations indicate that the Str. 209/1st platform stood between 100-140 cm above sterile soil. This difference in height simply reflects changes in the natural contour of the terrain, particularly between the western side or front of the building and the southeastern section of the structure. Despite the fact that our excavations exposed a limited area of the earliest construction, it appears that 209/1st was a relatively low platform that may, or may not, have supported a perishable superstructure. No burials or caches were associated with this construction phase but associated ceramic remains suggest that it was constructed between 550 and 650 A.D.

The second construction phase (209/2nd) substantially altered Structure 209. New retaining terrace walls were added to the southern side of the structure and the summit of the platform was increased by 153 cm. The width of the platform was also extended by at least 3 meters and a wider central stairway was constructed on the west side of the structure.

Monuments

Excavations in the Ticket booth uncovered two altars and a possible stela. The stela was produced from dolomitic limestone and was broken into at least three pieces. Two fragments of the possible monument were located on the northern side of the platform and a third fragment, which appears to be the top of the stela, was discovered on the second terrace along the western side of the platform. Measurements of the fragments suggest that the monument may have been at least 2 meters in length. No evidence of carving was found on any of the fragments suggesting that, like other stela in the Belize Valley, the monument was originally plain or decorated with stucco and paint.

The two altars were found in the front, or western side, of the structure. Altar 1 was located along the central axis of the platform, one meter below the base of the stairway, and on top of the 1st plaza or causeway floor. This position suggests that it could have been originally associated with the first construction phase but kept in place following the construction of 209/2nd. Altar 1 is 18 cm thick, 72 cm in diameter, and was made from soft limestone. No evidence of carving, stucco, or paint was found on the monument and neither did it have associated caches or offerings.

Altar 2 was also found on the western side of the structure, however, it was located 60 cm under the second terrace floor and approximately 3 meters south of the central axis. It was slightly smaller than Altar 1, measuring 18 cm thick and 70 cm in diameter. Altar 2 was found resting on alluvial fill and its placement beneath the terrace suggests that this was not the original location of the monument. Like Altar 1, no associated caches or special deposits were discovered with Altar 2.
Burials

Four burials were located in Structure 209, all placed along the central axis of the platform.

Burial 1

Burial 1 was located one meter under the terminal phase stairs on the western side of the platform. The grave consisted of a cist that was placed slightly off the central axis of the structure. Because the limestone blocks of the stairway were missing in the area over the burial, it is possible that stones were either removed by later (Postclassic inhabitants) or that the stairs were never reconstructed following the placement of the burial. The burial was capped by a series of large limestone slabs that were placed over the body. These stones were 60-70 cm long, 25-34 cm wide, and 10-15 cm thick. One end of the stones rested against clay fill above the eastern side of the individual (the stones were on a 45 degree angle) and the other side rested on the floor west of the burial.

The grave contained a single individual (Figure 5). The skeleton was extended, supine, head to the south, and looking east. The skeleton is that of a male individual between the ages of 30-40 years (Glassman personal communication 2002). No obvious trauma or disease was noted but Jennifer Piehl will be conducting a detailed analysis of the bones in 2003.

The burial contained a number of grave goods. Seven whole vessels, including three Belize Red dishes, one Vinaceous Tawny Ware polychrome vase, one red on orange bichrome bowl, and two small ollas were placed with the body. One of the Belize Red dishes was placed on the back of the individual, the polychrome vase was located on the pelvis, and an olla and the bichrome bowl were resting on the femurs. The other two Belize Red dishes and one of the ollas were located north of the feet.

The Vinaceous Tawny Ware polychrome vase had alternating bands of red and black paint that were broken in the central third of the vase, where large red glyphs or pseudo glyphs were painted (Figure 6a). All of the decoration was limited to the outside of the vase. The red on orange bichrome bowl had 12 large, red, semicircular designs painted on the inner rim of the bowl (Figure 6b). Each of these designs was created with three strokes of the paintbrush, creating a small semi-circle, an intermediate semi-circle, and a larger semi-circle all nestled together. In the center of the bowl a red unidentified object/animal was painted. A large claw-like form can be seen, but the rest of the painting is unclear. It is possible that the painting is representative of a bird or the headdress of a human individual. The typology of this vessel has yet to be ascertained.

Three jade objects were discovered in Burial 1. Two fragmented greenstone ear flares, 7 cm in diameter, were uncovered on either side of the skull. Six semi-circles were carved into the flares, giving them a flower-like appearance. The location of the ear flares suggests that the deceased may have been interred with the flares on his ears. A third jade object was uncovered in the individual’s mouth. This small jade object appears to have been carved into the shape of a molar and may have been in the position of the third molar on the right side of the mandible. Only the top and one of the sides of the jade exhibited polish but unfortunately it fell out of the mouth while cleaning the mandible, and we are uncertain which side this faced when in the mouth. It is possible that this
“tooth” was glued into the mouth and used as an expensive denture but further tests are necessary to confirm this.

A single obsidian blade (possibly a bloodletter) was discovered in the cyst. It was located on the left side of the pelvis and appears to have been either directly on the individual, or leaning against the pelvis when the person was interred. The obsidian is green, suggesting an origin in Central Mexico at the Pachuca source.

Both the location of the grave, and its ceramic contents, argue for a Terminal Classic (800-900 A.D.) date for Burial 1. This late date makes Burial 1 the most recent of all the burials discovered in the Ticket booth. The fact that the stairway was destroyed above the burial is also intriguing. Two possibilities may account for this. First, the burial could postdate the platform. If this was the case, it could be argued that the stairs was destroyed during the construction of the grave and never reconstructed. The second possibility may be that the burial is associated with the terminal construction phase of the Ticket booth, and that the stairs were destroyed sometime after the structure was no longer in use. Given that the date of the grave goods is relatively coeval with the date of the terminal form of Structure 209/2nd, the second possibility appears more likely. Furthermore, there is substantial evidence of Late Postclassic occupation in the area around the Ticket booth, and we have noted at Baking Pot and other sites in the valley, that later inhabitants often scavenged cut stones from earlier architecture for use in their own construction.

**Burial 2**

Burial 2 was located on the surface of Floor 2, along the central axis of the Ticket booth (Figure 7). The burial was placed approximately 2 meters from the upper platform wall on the eastern side of the structure, and 153 cm below the terminal floor. The grave was a simple cist that contained the remains of a single individual. The grave was partly encircled and capped by large (60-80 cm long, 15-20 cm thick, and 30-40 cm wide) limestone blocks. The large stones were predominantly found on the southern and western side of the grave, and in several cases were placed directly on top of the individual causing some damage to the skeleton when they were removed.

Burial 2 was extended, prone, with head to the south. Individual 2 was male and was between the ages of 19-23 (Piehl personal communication 2002). The left arm, (including the humerus, ulna, radius and hand bones), as well as the left leg (including the femur, patella, tibia, fibula, and all feet bones) were missing. No sign of disease or trauma was noted, and it is likely that the bones were removed when two later graves (Burials 3 and 4) were placed just west of the burial.

Three ceramic vessels, two large ceramic flutes, two jade beads, a mother of pearl shell, 2 conch shell “buttons,” a large stuccoed perishable object, and two pyrite inlaid ceramic disks were located with the burial. Of the three vessels, a Saturday Creek polychrome dish and a partially complete olla with two appliquéd figures were located near the feet. The third vessel, with an appliquéd modeled neck and bird head was located on the southern end of the burial.

The Saturday Creek Polychrome vessel was poorly preserved and split into three pieces in antiquity. It lay broken on top of the partially complete olla, approximately 20 cm above the level of the skeleton. Although the preservation of the dish was poor, it was
possible to note the similarities between this vessel and the ceramic dishes found in Tomb 2 from Structure E. An image of an unidentified animal was painted in the center of the dish, while the outer rim was decorated with geometric designs. The olla was only partially complete, including the rim and part of the neck of the jar. A small animal, possibly a monkey, was modeled onto the neck of the jar on opposite sides. Similar designs on ollas have been found previously at Baking Pot and in Tunichil Muknal and Che Chem Ha Caves in western Belize (Awe 1999).

The zoomorphic vessel (Vessel 3) is of unusual design, and was decorated with a compliment of carving, modeling, and painting (Figure 8). The neck, head, and feet represent a bird that was modeled, carved and painted, while the rest of the vessel was slipped brown. The beak and feet were painted yellow, while parts of the face appear to have been painted white. The appearance/form of the bird and the colors used to decorate its features, strongly suggest that it depicts a curassow. The diameter of the vessel is approximately 10 cm, and it is approximately 16 cm high. The neck of this zoomorphic creature was hollow and an opening in the vase appeared initially to have allowed liquid to be poured from the vessel, into the neck of the bird, and out through the beak. In practice, however, this would have been hampered by the fact that liquid would have escaped through the top of the vessel before it would have been poured through the spout, thus giving this spout a merely decorative function.

Two ceramic flutes measuring 43 cm long and 9 cm wide were found along the western side of the burial, one above the pelvis and one above the right femur (Fig. These flutes were made of very thin pottery (measuring approximately 1 mm thick) and were painted with a red design in several places. Each flute had four barrels measuring over 30 cm long and four holes located near a thicker mouthpiece. A very detailed modeled/carved ceramic face was appliquéd on the front/top of each mouthpiece and faced down towards the end of the flute. The faces on both flutes are identical, and given the tremendous detail, may have been a portrait of the individual who used them. The hairstyle can be ascertained, earflares are clear, a headdress is present, the person had a large nose, and the eyes are closed. No flutes similar to these have been found in the Maya area (Figure 9).

Two jade objects were located near the neck of the individual, a small bead and a fragment of an unknown object. The fragment was approximately 5 cm long and had a circle carved into it. It was located on the right side of the skull and was leaning against the pyrite covered ceramic disk. The bead was found just under the mandible and may have been placed within the mouth of the individual or worn as part of a necklace.

A mother of pearl shell was located to the east of the burial. This shell was approximately 12 cm long and had 4 holes bored through it (two on either side). Nothing was carved or painted on it. Two small shell objects (2.4cm in diameter) were located on the eastern side of the head. They were carved from conch, and look like circles with piecrust edges that have small prongs sticking out from the center. Their actual function is difficult to ascertain, but it is possible they served as some kind of earflares.

A layer of red, green, blue, and white stucco was found in a semi-circular pattern east and slightly above the burial. No glyphs or other decoration was visible, possibly due to the extremely poor preservation of the material. The stucco was removed in large clumps with the underlying dirt to aid in preserving the material. It is likely that the
stucco was part of a large wooden bowl or dish (90cm-1 meter in diameter), given the shape of the remains.

Two ceramic disks adorned with pyrite were discovered with the skeleton. These disks were 6-7 cm in diameter and were located on either side of the skull. Given their location, it is likely that they served as part of the earflares. Pyrite mirrors, perceived as containing magical powers, were often used as decoration on the costumes of elites.

The ceramics discovered in the burial dates to the early part of the Late Classic period (550-650 A.D.) and is contemporary with cultural remains recovered in Burials 3 and 4 at Structure 209 (see below) and with Burial 2 from the E-Group in Group 1 (see Audet and Awe this volume).

Burials 3 and 4

Located in the center of the upper platform, Burials 3 and 4 were placed next to each other in a small tomb (Figure 10). The tomb was placed 3.2 meters below the terminal phase floor. The chamber was .8 m high, 2.4 m long, and .47 m wide and had been filled in with dirt before the burial was sealed with a series of large capstones. The capstones consisted of large limestone blocks piled 2-3 courses high. The blocks ranged from 20 – 60 cm long by 20-30 cm wide by 10-15 cm thick. The tomb also intruded below the level of floor #2 and was placed just a few centimeters west and 140 cm below Burial 2.

Burial 3

Burial 3 was a male at least 55 years old (Piehl personal communication 2002). The skeleton was laying in an extended, prone position, with head to the south. Prior to his death the individual had broken a rib, which healed, but the shaft had expanded in the process. The teeth were very worn and there were degenerative changes in his vertebrae. This individual was the primary individual in the tomb, and it is likely that Burial 4 (to be discussed below) was an offering to individual 3.

Numerous grave goods accompanied the skeleton (Burial 3), including 7 vessels, 16 bone hairpins, 6 jade objects, three obsidian blades, and the partially complete remains of individual that we have designated as Burial 4. Of the seven vessels, two were polychrome dishes, one was a stuccoed and painted vase, 2 were monochrome vases, and 2 were monochrome bowls. Vessel 1 was a polychrome dish and was located west of the left tibia and fibula. A seated human figure, with his arms held out in front of him and tassels dangling from his wrists, is painted in the center of the dish. An unidentified object rests on the lap of the seated figure, who also wears a small headdress, and a larger cummerbund (Figure 11a). Eight spider monkeys appear to be running around the outer 10 cm of the dish (Figure 11b). The vessel has been identified as a Saturday Creek Polychrome, similar to the dish located with Burial 2 (located east of Burial 3) and similar to the five polychromes discovered in Tomb 2 in the Eastern Shrine building in Group I.

Vessel 2 is a polychrome dish that was located west of the individual’s feet, under the western wall of the tomb. It contains the remains of burial 4 so we were unable to determine what was painted on it. It is a Saturday Creek Polychrome dish, like Vessel #1,
and dates to between 550-650 A.D. Vessel 3 is a stuccoed black-slipped vase that was placed between the trunk of the skeleton and the left radius and ulna. This vessel was in extremely poor condition, and most of the stucco was deteriorated beyond restoration. Vessels 4 and 5 were located on a wall stone, approximately 54 cm above the body. Vessel #5 was a red/orange bowl nested inside a brown bowl (Vessel 4). These vessels were placed in the grave after the tomb had been filled in, but before the capstones were placed above the tomb. Vessels 6 and 7 were located west of the individual’s skull and were plain brown vases. On the basis of ceramics analogy the tomb was dated to the early part of the Late Classic period (550-650 A.D.).

A possible bone hairpin, or weaving implement, was found east and slightly north of the skull, and a cluster of similar objects (approximately 15) was found just north of the feet (Figure 12). These bone artifacts are 2-3 cm wide at one end and taper to a point. They are 23 cm long. Although we are not entirely sure of their function, it is possible that they are hairpins or weaving implements. Given the location of one near the head, it is likely that they functioned as hairpins, however other sources indicate their possible use as weaving implements (Chase and Chase in press).

Six green jade artifacts were interred with the individual. Two were large beads or pendants and four were ear flares. The largest of the two beads (Bead 1) was located above the left clavicle and measures 6.4 cm long, by 5 cm wide, by 4 cm thick. It has a hole 1.2 cm in diameter that perforates it lengthwise. The smaller of the two beads was located just east of Bead 1 and measures 4.9 cm in length, by 3.8 cm in width, by 2.4-2cm in thickness. Bead 2 has two small conical “plugs” that were found stuck into both the holes that perforate the bead. These plugs are only .8 cm long by .6 cm wide at the top. There is an extension of the hole (.2 cm high by .6 cm wide) next to the blocked hole that a string could still be fit through but the plugs would have greatly restricted the movement of the bead.

Two small flares were discovered next to the skull and two larger flares were located at the junctions of the radius/ulna and the humerus. The small flares are 2.9 cm in diameter, 0.9 cm thick, and are shaped in the form of flower. The larger earflares are circular and are 5.4 cm in diameter and 2 cm thick. Three prismatic obsidian blades measuring 7-9 cm long were located around the skull. All three taper to a point, and appear more like blood letters than typical knife blades.

Burial 4

Burial 4 is a partially complete skeleton that was found in the polychrome dish (Vessel 2) in the western wall of the tomb. The burial was west of the feet of Burial 3 and was probably left as an offering to the principal occupant of the tomb. Initially we believed that the bones in the dish may have been the left arm and leg bones of Burial 2, which were removed postmortem, however this turned out to be incorrect. Burial 4 consists of the complete lower skeleton of an individual, plus two humeri and a few hand bones, and a few ribs (Piehl personal communication 2002). Piehl believes these remains represent a single individual. Based on robustness, Piehl suggests that this individual is probably male. A more thorough analysis will be completed in January 2002.
Caches

Two caches were located on or around Structure 209. Cache 1 was located on the third terrace of the lower platform on the southern side of the structure. It consisted of a partially complete Benque Viejo Polychrome vase and 36 olla sherds from various vessels. The sherds were placed on top of the plaster surface, possibly after the abandonment of the structure and/or the site.

Cache 2 was an axial lip-to-lip cache consisting of three vessels. It was discovered 20 cm under the terminal phase floor of the upper platform, 160 cm directly above Burial 2. The vessels were plain monochrome ware, and include a large orange slipped bowl as the bottom upturned vessel, a smaller orange dish upside down above it, and a brown bowl set inside the lower vessel. The vessels were filled with dirt, and inside the brown bowl a chert arrow point measuring 8 cm long was discovered. The dirt from inside the vessels was collected for sampling.

Artifacts

Although the majority of the fill was free of any special finds, three types of artifacts were commonly encountered in the collapse and terminal phase fill of the structure. These artifacts include 32 grooved stones, 19 manos, and 10 metates. The grooved stones are more commonly located at this building than at any other structure yet excavated at Baking Pot. It has been commonly assumed they were used as river net weights for fishing (Audet 2002), but these weights were previously found in residential contexts. Their discovery on the Ticket booth suggests that they may also have had a secondary function. This could have involved hafting the stones for weaponry or some other task that we are currently unaware.

Although a large number of fragmented manos and metates were found on the structure it is important to note that they were predominantly found in fill. Furthermore, the quantity of these objects on the Ticket booth is significantly lower than totals from residential buildings at Baking Pot. For example, a residential unit (Structure 198) excavated during the 2001 season yielded over 50 manos and 65 metates.

A single carved conch shell was located on the terminal phase floor of the uppermost terrace on Structure 209. It was a circular bead 1.5 cm in diameter with seven small “rings” decorating the outer edges. This was the only on-floor terminal phase deposit discovered during the season,

Discussion

The goals of our excavations on Mound 209 were to ascertain the function of the structure, and to determine whether these “Ticket booth” structures, that abutted major causeways, were of ritual significance. The results of our investigations appear to confirm our assumptions for, as we note below, there little or no evidence that Structure 209 served any domestic purpose.

Evidence for special function is suggested by the quality and form of the architecture, the presence of three plain monuments, several burials with sumptuary grave goods, and miscellaneous other features and cultural remains.
We noted above that the architectural style of Str. 209 is relatively unique in the Belize Valley. Most round, or rounded, structures in the Valley date between the Middle and Late Preclassic period and possibly served as low dance platforms (Awe 1992; Aimers et al. 2000). Structure 209 differs from the more circular Preclassic platforms, but its dimensions, form and location suggest that it too could have served as a place where ritual dancing could have been performed. Unfortunately, such a function is difficult to prove, but there are other lines of evidence that reinforces the argument for non-domestic activity. For example, none of the residential units excavated at Baking Pot, Cahal Pech, Xunantunich, Blackman Eddy, and other regional sites display the characteristic features of Str. 209. Furthermore, the location of the structure, at a point a few meters away from where the causeway connects with Group 1 via Ballcourt 2, does not make it a likely place for domestic activity. Like causeway termini groups (see Schwake 2000) it is therefore possible that these structures may have been related with special activities that incorporated access into particular areas of the sites via causeways.

Special function is also indicated by the presence of the two altars and the fragmented stela that were found in front and on the side of the platform. Several altars have been found at Baking Pot in Groups I and II, and all were discovered in front of large monumental architecture (Ricketson 1931 and Bullard 1965). At most Maya sites, altars are typically found associated with elite contexts and the Stela/Altar combination is a typical feature of the Classic period Maya ceremonial complex.

The three elaborate burials discovered along the central axis of the structure are also indicative of special function. The quality and nature of the sumptuous grave goods in the burials strongly suggest that the three individuals interred in Structure 209 were of high status. Elite individuals are typically interred in temple structures, within cists, or tombs. In contrast, commoners are predominantly buried in simple graves beneath the floors of their homes (McAnany 1993). The inclusion of obsidian blood letters with two of the individuals further suggests high status. Among the Classic Maya, the act of bloodletting was an activity predominantly conducted, privately and publicly, by elite individuals on special function structures.

Several other objects and features provide secondary evidence which suggest a special function for the Ticket booth. One unit yielded sherds from a spiked ceramic censer, while burnt plaster on the floor at the top of the building, suggest that either incense or other organic materials were burnt at the summit of the platform. At the center of this burnt area there was also a large hole that descended deep within the floor of the platform. Poor preservation, however, produced no trace of the type of materials that may have been burnt in this location.

Finally, a lack of household goods (i.e. broken obsidian blades, broken utilitarian pottery, chert flakes, animal bones, and the remains of edible shell fish) suggests that the building was not used for residential purposes. The discovery of manos and metates in such a context suggests they may have a secondary, more ritual, function. This has been noted by the discovery of these artifacts in caves and in burials (Awe 1998, Ricketson 1931).
Conclusion

The form, quality and size of the architecture of Structure 209, plus the monuments, artifacts and burials discovered in and on the platform strongly suggest that the Ticket booth may have served a ritual function within the Baking Pot community. It is likely that the ancient rituals were conducted on the altar in front of the building, around the stela (wherever it once stood), and at the summit of the platforms. We may never know who exactly conducted the ceremonies on the platform, but given that all the individuals interred within the structure are high status males, it is possible that they may have been the actual ritual practitioners. Hopefully, future investigations of similar structures at other sites will shed more light on the nature of these intriguing architectural types.
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INTRODUCTION

Baking Pot is located in western Belize, along the southern bank of the Belize River. The site is 10 km northeast of modern day San Ignacio town and only three km upstream from the ancient Maya city of Barton Ramie. It is comprised of two large administrative complexes which are surrounded by hundreds of housemounds. During the 2002 season, the Belize Valley Archaeological Reconnaissance Project (BVAR) focused investigations on four platforms in and around the site center. Penetrating “telephone booth” style excavations were placed at the summit of two large temple platforms located in Group 1 (Structures B and E). Additional excavations were conducted on Structure 209, a small temple platform located 30 meters south of Group 1, and Structures 196 and 197, adjacent residential platforms located roughly 200 meters southeast of Group 1. The latter, Structure 196, is the subject of this paper.

EXCAVATIONS

Structure 196 is a low platform adjacent to the larger Structure 197, located near several residences in the immediate periphery of Baking Pot (Figure 1). The upper section of the platform (Structure 197), which comprises roughly the southern two-thirds of the mound, rises approximately 3m above the modern ground level. The lower section (Structure 196), located on the northern side of the mound, rises only 1.4 m above the ground level. Two excavation units measuring 2 by 2 meters in length (Units 1 and 2) were placed along the central axis of the mound, on the slope between the upper and lower sections of the mound. Unit 1 was later extended 0.5 meters south, 0.5 meters east, and 0.5 meter west, to follow the front and eastern edge of a small staircase. Unit 3, measuring 1 by 2 meters in length was placed north of Unit 1, in an effort to expose sections of a possible midden originally discovered in Units 1 and 2.

BVAR investigations sought to determine the function and temporal association of the terminal phase of the platform. It was assumed that the structure would have a residential function, given the similarity in size and form of this mound to nearby dwellings however, we could not discount the possibility that this platform served a ritual purpose (Audet 2002; Audet and Awe 2000; Piehl 1997, 1998, Weller 2002). If this was a domestic structure, we expected to discover the remains of residential activities deposited around the terminal phase of the platform, including trash deposits of faunal...
remains, manos and metates, and utilitarian ceramics. If the platform was utilized for a
ritual or administrative function, we would likely find ritual paraphernalia, including high
concentrations of polychrome or molded ceramics, stone monuments, and/or high quality
architecture. In this scenario, few domestic remains would be expected.

Excavations revealed evidence of masonry architecture in the southern half of
Unit 1 and the western half of the extension. This feature consists of three ascending lines
of cut limestone blocks that appear to be a low outset staircase. The staircase connects the
two platforms, and likely leads to the top of the structure. The limestone blocks measured
between 26-28 cm long, 14-24 cm wide, and 7-13 cm thick. The staircase is less than 1
meter in height and at least 1.8 m wide. Although we followed the staircase to its eastern
extent, we did not have the time to extend the excavation to the western edge. Also
impeding our excavations was the extremely poor preservation of the staircase and plaster
floor on the western side of Unit 1. It is likely that a large tree combined with destructive
farming practices may have destroyed this section of the staircase.

A partially preserved plaster floor, measuring between 2-4 cm thick, topped the
lower platform (Structure 196) north and east of the outset staircase. Sections of the floor
east of the stairs were well preserved and showed evidence of burning. In the front, or
north, of the stairs the remains of the plaster floor extend at least 1.3 meters. Not
surprisingly, the floor degrades in preservation as it extends away from the platform and
the protection of the collapsed limestone. Although it is likely that there once was a
similar floor on Structure 197, no remains of plaster were uncovered on the upper
platform.

No evidence of a masonry superstructure (roof stones or large quantities of
collapsed limestone blocks) was uncovered during the excavations. Several fragments of
daub were located in the collapsed debris, suggesting that a perishable superstructure may
once have stood on the upper platform. This would be consistent with the construction
techniques found at similar sized platforms in the immediate periphery of Baking Pot.
No penetrating excavations were placed into the lower or upper platforms due to time
constraints. However, it is likely that future BVAR excavations will be conducted to
determine the construction chronology of the structure.

FEATURE 1

A concentration of domestic debris and was located five to 15 cm above the
terminal phase plaster floor (43 cm below the surface level), 1.5 m north of the outset
staircase. The artifacts were found in a 1.7m long by 1.2 m wide field, with the majority
of the debris concentrated near the eastern wall of units 1 and 2 and between 1.5 to 2.3
meters north of the outset stairs. A large variety of fragmented items were uncovered in
this feature, including 7 metates, 3 manos, 8 utilitarian bifaces (including two blank or
unfinished tools), one grooved stone, one chert arrow point, several animal bones, and
numerous pieces of ceramics tentatively dated to the Terminal Classic/ Early Postclassic
period.

The quality and quantity of the objects uncovered in Feature 1 suggest to
investigators that the area served either as an area for food preparation or as a location for
discarding objects associated with cooking. The ceramics were monochrome or unslipped
and were otherwise undecorated. One of the ceramic supports had incisions consistent
with other larger bowls found at the site supporting the hypothesis that these items were used in food preparation (Audet 2002). However, given the limited nature of our investigations and the small size of the feature, it is likely that the feature is the remains of an ancient midden.

DISCUSSION

Although excavations at Structure 196 were limited, we were able to partially ascertain the form and function of the building. We originally suspected that there were two platforms and we have found evidence of the ancient stairs that led to the upper platform. The stairs are found on the northern side of the building, suggesting that the front of the residence also faced north. This is in contrast to Structure 203, which faced southeast. Although this group of two platforms is slightly larger than most single platform dwellings, the perishable construction of the superstructure and the construction techniques used in the creation of the masonry platform is comparable to all the other residences excavated at Baking Pot (Audet 2002; Audet and Awe 2000; Piehl 1997, 1998, Weller 2002).

We have also recovered evidence of domestic activity on the lower platform of Structure 196. These remains are evidence of food preparation and domestic trash. Also, the discovery of two chert biface “blanks” suggests some level of (minimally) expedient craft manufacture. Willey et al. (1965) believed that bifacially worked tools were used in farming (as hoes, axes, etc.) and their prevalence at Structure 196 suggests that the members of the domestic unit likely planted their own food. This hypothesis has been postulated for the majority of the residential structures excavated at Baking Pot. For example, at Structure 198, over 60 such bifacially worked chert tools were uncovered (Audet 2002, Audet and Awe 2000). It is likely given the distance between residential platforms that all families were involved in some manner of food production.

The discovery of Terminal Classic to Early Postclassic ceramics in the midden and collapse is consistent with the some of the ceramic types found at the nearby Yaxtun Group (Audet 2002; Audet and Awe 2000). Baking Pot appears to have been occupied into the 10th century, as evidenced by residential remains in the immediate periphery of the site core. The ceramics found at Structure 196 appear to support this late date of occupation, however more excavations are needed to collaborate the small amount of data.

CONCLUSION

Structure 196 and Structure 197 combine to create a large multi-level residential platform in the periphery of Baking Pot. Our excavations have revealed a small section of the masonry platform (including an outset staircase), evidence for a wattle and daub perishable superstructure, and evidence of domestic activities such as cooking occurring on or around the structure. We were also able to ascertain that the platform was abandoned between the Terminal Classic and Early Postclassic period. Unfortunately, we were unable to conduct penetrating excavations in either the upper or lower platforms or to clear a larger portion of the terminal phase architecture, however BVAR will conduct these excavations during the 2003 season. We hope to discover evidence of any earlier
phases of construction, the wealth and status of the occupants, and additional information about the function and form of the two platforms.
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Excavations of Structure E in Group I at Baking Pot, Belize

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Introduction

The epicenter of Baking Pot is formed by two large architectural complexes (Groups 1 and 2) that are linked by a 200 meter long causeway (sacbe). Group 1 lies at the north end of the causeway and has three large courtyards enclosed by monumental architecture (Figure 1). Structure E, located in the central plaza (Plaza 2) of Group I, consists of a tripartite structure that resembles an E-Group complex. The primary structure (Str. E central) is a 15 meters tall pyramid that is flanked to the north and south by two 6 meter high platforms (Str. E north and E south).

The 2002 field season of the Belize Valley Archaeological Reconnaissance Project had two major goals at Baking Pot: 1) to initiate excavation of Structures E and B in Group I; and 2) to investigate Structure 209 (the "Ticket booth") at the north end of the causeway. Because a report of the work conducted on Structure 209 and Structure B are provided in separate papers in this volume, this article only describes the investigations on Structure E.

Previous Research on Structure E

Oliver Ricketson of the Carnegie Institution conducted the first investigation of Str. E in 1924. At this time he placed a small trench of unrecorded dimensions on the "south side of the pyramid, well down from the summit and continued north toward the center of the mound" (Ricketson 1931:5). Ricketson reported finding no evidence of masonry architecture but did note the discovery of nine eccentric flints and a small piece of worked jade. Limited "examination" of the summit also produced "more than two quarts of small flint chips" (Ricketson 1931:5) Believing that the chert flakes were nothing more than refuse Ricketson terminated his investigations on the assumption that nothing of importance was going to be found. In the 1920's Ricketson would have had no idea that chert flakes are commonly found above elite burials in the Belize Valley, and that his trench was literally a few centimeters above two of the most elaborate tombs ever found at Baking Pot.

Following Ricketson’s early exploration, the structures in Group 1 remained untouched for 70 years. This long hiatus was broken in 1995 when Jim Conlon of the BVAR project excavated two units in the alleyway between Str. F and Str. E south. Conlon’s investigations were conducted specifically to test whether the two mounds,
which lie at the northern terminus of the causeway, may have functioned as a ballcourt. Results of this limited research led Conlon (1996:50) to suggest that the mounds did resemble a ballcourt but that further excavations were required to accurately determine its form and design.

The following field season (1996) Jim Aimers continued BVAR’s investigations in Group 1. Aimers (1997:21-46) research had two major goals: 1) to confirm Conlon’s argument that Strs. F and E south did represent a ballcourt, and 2) to determine whether the tripartite Str. E (and Str. B to the west) may have functioned as an E-Group complex. To address these questions Aimers conducted several large-scale excavations on Structures E north, central and south and on Str. F. The investigations at the base of Str. E uncovered two cist burials, three caches and a previously unrecorded Stela, but failed to provide conclusive evidence that the tripartite structure served astronomical purposes. Other excavations on Str. F and E south led Aimers to concur with Conlon that the flanking mounds did indeed function as a ballcourt, and that the south access to Plaza 2 of Group 1 entered via the courts playing alley.

Investigations in Group 1 at Baking Pot were not conducted again until the 2002 BVAR field season. This research, which was co-directed by the two authors, is the focus of this paper. The primary objectives of our investigations were to determine whether Str. E served as an eastern shrine, and to assess the form and state of preservation of the monumental architecture in the site’s epicenter. Previous work by archaeologists in the Belize Valley (Healy 1990; Awe 1992, Conlon et al. 1994; 1995, Iannone 1996) has noted that E-Group like complexes generally contain large numbers of elite graves and that these structures likely served as the place of burial for the centers ruling lineages. Our excavations of Structures E and B sought to confirm whether this regional pattern was also evident at Baking Pot. Determining the form and state of preservation of the monumental architecture would allow us to compare Baking Pot with other centers in the region, and to draft plans for the tourism development of the site.

The 2002 Investigations on Structure E

Work commenced on Str. E in June of 2002. The first excavation was axially located at the summit of the mound, and measured 2m X 3 m. This unit was later extended 1.5 meters to the west, 1 meter to the east, and 2 meters to the south. The excavation revealed traces of a poorly preserved plaster surface, but no evidence of a masonry superstructure. This suggests that in its final form the summit of Str. E had a small building platform that may, or may not, have supported a perishable superstructure. Due to erosion, bioturbation and structural collapse, it was impossible to determine the actual size of the building platform.

Excavation below the floor of the terminal phase platform penetrated several 4-6 cm thick layers of chert flakes that had been deposited above the capstones of two tombs. Both tombs were oriented north to south and were constructed of limestone blocks that were cemented together with lime plaster.
Tomb 1

The capstones of Tomb 1 were discovered 36 cm below the natural surface of the mound. We recovered approximately 5000 chert flakes above the capstones (Figure 2). The majority of the flakes were thin (2-6 mm thick) and between 4-9 cm long. Beneath the flakes were 9 limestone capstones measuring between 50-60 cm long and 25-30 cm wide (Figure 3). They enclosed a hollow chamber measuring 120 cm wide, 120 cm high, and 273 cm long. The walls were constructed with rough limestone blocks that ranged between 18-43 cm long. The floor of the chamber was constructed of packed dirt that was covered by a thick layer of chert flakes and obsidian flakes and blades.

The tomb contained a large number of artifacts, including 10 ceramic vessels, 240 pieces of jade, 9 eccentric flints, 3 carved mother of pearl shells, 8 carved spondylus shells, 240 obsidian blades, 1 circular obsidian piece, and roughly 2000 chert flakes (Figure 4). Most of the human skeletal remains were absent. The only skeletal material recovered in the tomb were two molars and a hand phalange that were located on the southern side of the grave, and three left metatarsals that were located under vessel #7 on the north side. These bones were very well preserved, suggesting that most of the skeletal remains may have been purposely removed some time in antiquity. Unfortunately, it is difficult to determine whether this action occurred prior to, or after, interment in the tomb.

The removal of skeletal remains from burials is well documented at Maya and Mesoamerican sites (Chase and Chase 1989, Headrick 1999). This practice was associated with the tradition of ancestor worship and the removal of an individual’s skeletal remains generally reflected a high status within the community.

The distribution of the artifacts within the tomb, the location of the two teeth on the southern side of the grave, and the discovery of left metatarsals on the northern side, suggest that the body was originally placed in an extended fashion along the center of the chamber with head to the south. Examination of the teeth and bones indicated that the individual was an adult, but little more can be ascertained. The north-south orientation of the skeletal remains (with head to the south) reflects the typical burial pattern at Baking Pot and at most central lowland Maya sites (Ricketson 1931; Bullard and Bullard 1965; Willey et al.1965; Piehl 1997).

The floor of the tomb was covered with several thousand chert flakes and 240 obsidian blades. As indicated above, this practice has been noted at several sites in the Belize Valley, but rarely, if ever, in association with non-elite burials (c.f. Awe 1992; Song 1996, Piehl 1997). The placement of the burial between layers of chert and obsidian flakes on the floor and above the capstones is strongly imbued with symbolism. The Chilam Balam of Chumayel states that at each cardinal point the gods placed a sacred Ceiba tree to define the limits of the earth (Roys 1933:171). Each tree was associated with its respective colour and each location contained flintstones produced by the Chaacs. These rain gods, as we know, reside in caves that served as entrances to the Maya underworld. Schele and Friedel (1990:201; 463) report that flint and obsidian flakes were considered “the fingernails of the lightning bolt” or Chaac the rain god. Schele and Miller (1986:286) further note that flint (and obsidian) objects often served as “sacred power objects used in rituals, especially in the dedication and termination rites for Maya architecture and stelae, and as funerary objects to accompany the dead into the
Afterlife”. The placement of the burial between layers of chert flakes and obsidian blades may have therefore symbolized that the deceased was laid to rest in the watery underworld domain of the rain god. This symbolic combination of water and human flesh that was considered made from maize, were the essence of life, fertility and rebirth.

Ten complete vessels were found in the tomb. Seven (number 1-7) were located on the northern side of the room, and 3 (number 8-10) were lined against the southern wall. All of the vessels were monochrome and date to the Late Classic period (Tiger Run period- 580-680 A.D). Of the seven vessels on the northern side of the tomb, six were orientated in a semi-circle and one sat in the middle of the circle. From west to east, these vessels included a Sotero Red-brown vase, a red dish (probably Mountain Pine Red), an orange bowl (variety unknown), and three additional Sotero Red-brown vases. The single vessel in the middle is a Mountain Pine Red dish that was broken. Dirt was collected from all vessels but no preserved artifacts were discovered in any of them.

Three vessels lay against the masonry wall on the southern side of the tomb. From west to east, these vessels included a Mountain Pine Red dish, a Sotero Red-brown bowl, and a Sotero Red-brown vase with fire clouding. All three vessels were filled with dirt, which was collected, but like those on the northern side, no artifacts were uncovered from inside them.

Two hundred and forty pieces of green jade were located in Tomb 1 (Figure 5). This number exceeds the largest amount of jade previously located in a Baking Pot burial by 170. These pieces included 54 beads of various shapes and sizes, 182 fragments from a mosaic mask, three large pectorals (one that was broken into two pieces and then mended) and a single earflare. The jade beads were not composed of high quality jadeite like those found at Tikal or Altun Ha (Pendergast 1992). The beads were brown in places, not highly polished, and made into irregular shapes. This contrasts with the jade used in the mosaic mask, earflare, and the pectorals, which was highly polished and clear. Only a single piece was carved, unlike similar jade items from Altun Ha (Pendergast 1992).

The fifty-four jade beads were located on the southern side of the tomb and were probably part of a single necklace (Figure 6a). The larger beads were highly polished, but the majority had areas that contained imperfections and rough patches. The circular beads varied from 0.8 cm long to 3 cm long. A single long tubular bead, measuring 5 cm long, was highly polished and may have been part of the earflare or the central piece in the necklace. Two of the beads were flatter than the others and these were also highly polished.

The single jade earflare was located near the center of the tomb but no match for this flare was discovered with the burial. In fact, it was not until we excavated Tomb 2 that we discovered the matching piece. As we note below, it appears that the single flare discovered in Tomb 1 was originally placed with the individual in Tomb 2. It was later removed and placed with the individual in Tomb 1. We do not know why only a single earflare was pillaged, or if any other of the artifacts located in Tomb 1 originally were placed in the earlier tomb, however, we are fairly certain that this reuse of artifacts did occur.

The three jade pectorals were located in close proximity to each other in the southern half of the tomb (Figure 6b). They are each 17 cm long, 0.4 cm thick, and 6 cm wide. One of the pectorals was broken into two pieces and three mend holes had been carved into each side in an apparent effort to rejoin the pieces with string. The other two
pectoral were unbroken. Pectorals are commonly portrayed adorning the chests or waists of rulers depicted on stela, painted ceramics, and on carved images on jade (Coe and Kerr 1997).

The one hundred and eighty-two jade plaques, once pieces of an elaborate mosaic death mask, were found scattered throughout the southern side of the tomb. Each piece is polished on only one side making it relatively easy to determine which side is “face up”. Some fragments are less than 1 cm wide and long, making it almost impossible to put the mask back together. One of the pieces had an ajaw glyph carved on it, suggesting that the original inhabitant of the tomb was likely an elite ruler. This piece probably was located in the center of the mask, but due to the scattering of the objects we are not completely certain of this. The jade pieces appear to have been glued to a perishable object, probably a wooden base that provided the backing for the jade pieces. We found no traces of the wooden back for the mask during excavations.

All the jade was discovered on the southern side of the tomb. The scattered distribution of the mask fragments suggest that they may have fallen from a wooden litter that disintegrated with time, or that they had been scattered over the body. Alternatively, they may have been moved if and when some of the skeletal remains were removed from the chamber. Given that most of the jades were located in positions that reflect their original placement over the body (i.e. the 54 beads were clustered together and the pectorals were in the general area where the individual’s chest would have been), it is more likely that the pieces may have been disturbed subsequent to their placement in the chamber. This would suggest that some period of time had elapsed between the death of the individual and the removal of skeletal elements from the tomb.

The nine chert eccentrics were located throughout the tomb. Their forms included an X, two tridents, an H, a star, a six-pointed star, a Y, an S, and a semi-circular form with wave-like shape on the flat side. All of the eccentrics were less than 15 cm long, and they were made of blue-gray colored chert. The total number of eccentrics is obviously indicative of the nine levels of the underworld.

Eight small fragments of orange and pink spondulas shell were located across the southern half of the tomb. It is likely that these pieces represent sections of the jade mask, including the area around the pupil (which was most likely a rounded piece of obsidian or pearl shell), the teeth, and possibly other sections. These pieces are smooth on either one or both sides but were not carved into any recognizable shape.

The three carved mother of pearl shells were discovered in the southern section of the tomb. One is a small circle, which may have been used as one of the eyes in the jade mosaic mask. A second carved shell is in the form of a jaguar and measures approximately 2.7 cm long by 2.3 cm wide. Jaguars were animals worshiped by the Maya for their strength and are often associated with elite rulers. One side of the jaguar shell effigy is shiny and carved, while the other appears to have been glued to an object. The third shell is the same size as the jaguar effigy and is carved in the form of the glyph for sac, or white. Like the jaguar, the shell has one shiny side with a rougher side that appears to have been glued to another object.

Lastly, a single, small, rounded piece of obsidian was discovered on the southwestern side of the tomb. This piece was initially believed to be one of the eyes of the jade mask, however a second “eye” of obsidian was not located. It is possible that this
second eye was either lost, or that the actual eyes of the mask were made from the mother of pearl shell noted above.

Based on the ceramic data, Tomb 1 dates to the Tiger Run phase of the Late Classic period (between 550-690 A.D). The jade objects from Tomb 1 at Baking Pot are surprisingly similar to the jade artifacts that were discovered in Tomb 1 of the eastern shrine at Cahal Pech. Jade objects from the tomb at the latter site included a similar jade mosaic mask, and three pectorals (Awe and Campbell 1988; Reents-Budget 1994).

Who was the individual interred within the Baking Pot tomb? Our evidence strongly suggests that he or she was unquestionably of high status, and likely one of the most important Late Classic rulers of the site. The large vaulted tomb chamber, the location of the burial within the eastern shrine, the sumptuous grave goods, the exotic origin of many of the cultural remains, and the ahaw glyph adorning the death mask strongly support this conclusion.

Tomb 2

Tomb 2 was located adjacent to the eastern wall of Tomb 1 (Figure 7). The capstones were 96 cm below the natural ground surface and four layers of chert flakes, scattered in 2 - 4 cm thick layers, were recovered between the top of the tomb and the surface of the platform. A rough count of the chert suggests that between 4000 to 5000 flakes were deposited above the capstones. Unlike Tomb 1, Tomb 2 was filled with dirt. This feature probably saved the burial from being destroyed by looters who attempted to vandalize the structure on a Saturday evening when we were absent from the site. The burial chamber was constructed with crudely cut limestone blocks and capped by several larger limestone slabs. The chamber measured 2.4 meters long, 0.9 meters wide, and 1.2 meters in height.

The skeletal remains in Tomb 2 were not very well preserved. Despite their poor condition our osteologist determined that the individual was probably male and between 40 and 45 years old at death. Age was determined on the basis of dental ware and some degenerative changes in the lower theractic vertebrae. Sex was determined on the basis of a large mastoid and general robustness of the bones (Piehl personal communication 2002). The individual also had a number of abscesses and carries on 8 of his 13 remaining teeth. The position of the bones indicated that the burial had a north-south orientation with head to the south.

Although Tomb 2 contained less jade objects than Tomb 1, the burial had a large number of interesting and unique grave goods. Inside the chamber there were 8 ceramic vessels, a single, painted, mother of pearl shell, two plain mother of pearl shells, 12 carved spondylus shells, two canine pendants, two jade beads, more than a dozen small jade fragments that were glued onto the carved shell objects, a single jade ear flare, a fragment of hematite, a small perishable object with stucco and painted designs, and a larger perishable object also with painted stucco.

The eight ceramic vessels included five Saturday Creek Polychrome dishes, two Sotero Red-brown vessels, and a censer. The Sotero Red-brown vessels were discovered on the southern side of the tomb. All of the polychromes had painted animal figures on the inside of the vessels. Three of these vessels were stacked one on top of the other on
the southeastern corner of the tomb, and the other two were stacked above the a monochrome vase and bowl in the southwestern corner of the tomb.

The uppermost Saturday Creek Polychrome dish was broken into several sections, and parts of it were scattered throughout the tomb. Most interestingly, pieces of this dish were found in association with the Terminal Classic censer, suggesting that it may have been moved during the intrusion into the Tomb. Due to the breakage of this dish, the image in the center has yet to be ascertained. This vessel appears to have been placed above a second Saturday Creek Polychrome vessel with a bird figure (Figure 8). The third, fourth, and fifth polychromes were located east of the latter dish, and were stacked on top of one another. The uppermost vessel had the image of an armadillo painted on it, the second vessel had a painting of a dead deer (with the tongue hanging out), and the third vessel contained the image of two snakes rapped around the inner perimeter of the vessel with their heads and tails appearing in the center of the dish (Figures 9a and b).

Directly underneath the vessel with the bird figure and the polychrome of unknown design were two Sotero Red-brown vessels. The vessel closest to the skull was a bowl, while the one farthest south was a vase. Inside the vase were the remains of a stuccoed object of unknown design. The stucco was painted red, green, black, and white and several partial designs were noted on the crumbled remains. A second, larger, area with stuccoed remains was uncovered underneath the two Sotero vessels. The second stuccoed material measured approximately 30 by 40 cm. It consisted of several layers of stucco painted in green, white, red, black and yellow paint. Several flakes had images of possible glyphs and other presently undetermined designs. In an effort to preserve these remains the layers of stucco were collected in a single large segment held together with matrix from the tomb. We recently secured a grant from the Foundation for the Advancement of Mesoamerican Studies, Inc. (FAMSI) to curate this stucco material. It the stuccoed material may be the remains of a painted gourd, a wooden vessel, or part of a codex.

One half of a 17 cm long mother of pearl shell was located above the left humerus. The shell had been carved into a large 0 shape (with a hollowed out center), and the inner portion of the shell (or glossy section) had been painted. The image is difficult to determine given the faintness of the lines, but one half of the shell clearly details a reclined human figure with one knee propped up, and a snake (probably a boa) weaving through the figure’s legs and the mid-section of his body. The face may be looking away from the rest of his body, but poor preservation in this area makes it difficult to confirm this. The opposite side of the 0-shaped shell also contains an image, but this area is even more poorly preserved than the other side and thus making it impossible to determine its design.

Twelve, pink, spondylus shells were discovered under the skeletal remains. Many of these were elaborately carved while some were simple beads and earflares. The two large spondylus earflares, approximately 8 cm in diameter, were found on either side of the skeleton, one close to the skull and the second closer to the pelvis. These flares had separate plugs (3 cm in diameter) that likely extended through the ear lobes. Numerous thin jade fragments were discovered near the flares, suggesting that the jades were probably once glued to the shell to give the effect of solid jade earrings.

Two shells, carved in a form that resembles the “Mundo Maya” logo, were discovered on the eastern section of the grave, near the pelvic area of the skeleton. These
shells were less than 2 cm long and less than 0.3 cm thick. The function of these objects is unknown, but it is possible that they served as pendants. It is also possible they were sewn or glued onto the individual’s attire.

Two other carved shell objects, probably part of the earflares, were discovered in the tomb. Each of these objects actually contained two pieces of shell that appear to have been glued together. The composite shell objects measured 5.8 cm long, 3 cm wide, and less than 0.5 cm thick. The upper piece is an unusual shape, with a square top and a concave lower section that allowed for easy fitting with a flat, circular piece. It is the upper section that has the intricate carving. One side has an image of a seated fox or possibly a vulture. The creature is depicted with outstretched arms and some wavy object (possibly a codex) on its lap (Figure 10a). The eye is made from a small jade chip that was still in place when the shell was uncovered. The carved image actually resembles depictions of the Vulture God, who is a ruler (the image is a logographic substitute for ahaw) and a scribe (Coe and Kerr 1997). The other side of the shell contains an unidentified image, including a straight line on one side and a circular pattern on the opposite, lower, section.

Another shell object was finely carved in the form of a typical Maya face (Figure 10b). This object was discovered face up in the west central section of the tomb. The profiled face has a small mother of pearl shell fragment flanking a small circular piece of pyrite that forms the eye. The face on the shell is looking to the left, mouth slightly open, recessed chin, but no hair detailed. The function of this shell object is unknown, although it may have been used as decoration for clothing.

Three circular shell pieces, 5-6 cm in diameter, were located on the eastern side of the tomb next to one of the possible Vulture God like objects. Elements of jade were found in association with these artifacts but none remained on the shell. These pieces could have been either sewn onto clothing or used as pendants.

Several other pink spondylus shell items of various sizes and shapes, and a single, orange colored, shell spindle whorl, were also found with the carved shells. The former objects had no recognizable forms thus it is difficult to determine their function. Along the north end of the chamber were two complete, 8 cm long, mother of pearl shells. One of these shells had two holes carved through it, while the second had three holes. North of these shells were two canine teeth which also had suspension holes carved through them. It is possible that all these objects were used on one necklace or that they were attached to a perishable item, like clothing, that decomposed in the tomb. Beneath these items we discovered more fragments of painted stucco, but unlike the stucco on the southern side of the tomb, only traces remained of this material. We removed some fragments of green and red paint for future study.

Two jade beads and a single jade earflare were discovered in the tomb. The jade earflare is 2.6 cm in diameter and was located on the southeastern corner of the chamber, away from the location of the skull. As we noted above, however, the skull appeared to have been moved from its original location. It is therefore quite possible that this earflare was also moved from its original position sometime in the past. The two jade beads were located near the left humerus and were likely worn as part of a necklace. One of the beads had two holes drilled through it, while the other had three.

The distribution of artifacts in Tomb 2 make us relatively certain that the chamber was reopened and pillaged at some point during the Late - Terminal Classic period. The
latter is suggested by the discovery of a Late-Terminal Classic censer that was placed in the dirt well above the upper body of the skeleton, and the apparent movement of the skull and the earflare in Tomb 2. The censer is composed of two parts: a lower section that has a form of a bowl with a pedestal base and a lid with a semi-circular, fist-sized, handle. The latter is decorated with four long, narrow holes and one circular central hole with alternating bands of red and cream colored paint decorating the exterior. The lower section of the vessel has similar painted decoration and small circular appliqués along the upper rim of the vessel. The censor is approximately 36 cm high, and ranges from 6 – 12 cm wide. Stylistically this vessel dates between 800-900 A.D. This date is much later than that of the other pottery discovered in the tomb, which have been placed between 550-680 A.D. We hope that future radiometric dating of charcoal that was recovered within the censer will provide us with a more absolute date for this vessel.

The most compelling evidence supporting our argument that Tomb 2 was reopened in antiquity, however, comes from the discovery of a single, almost identical, jade earflare in Tomb 1. Since we know that Tomb 2 predates Tomb 1 (see below) by approximately 100 years, it is reasonable to suggest that the earflare in Tomb 1 was pillaged from the earlier Tomb 2 and subsequently deposited in Tomb 1. It is also possible that other objects were removed from Tomb 2, but this is far more difficult to prove.

Less conclusive evidence for intrusion into Tomb 2 comes from the apparent displacement of the skull. As we noted above, the skull was discovered 30 cm south and 12 cm west of its anatomical position on the endoskeleton. Although rodent activity could have disturbed the bones, this could only have occurred if the tomb had been hollow and not filled with dirt. But we found the grave filled with dirt from the floor to the capstones. This fact makes us confident that Tomb 2 was originally a hollow chamber that was later filled with dirt after it was reopened and pillaged in antiquity. This would certainly account for the distribution of objects within the burial, for the location of the censer above the rest of the cultural remains, and for the censer's substantially later date.

Conclusion

Our investigations on Structure E provide substantial evidence suggesting that the structure functioned as an important ancestral shrine at the ancient city of Baking Pot. Our data further suggest that Tombs 1 and 2 contained the remains of high status elites, or ahaw rulers, from the site. This conclusion is based on the type of graves accorded each individual, the identification of specific iconographic elements carved into some of the artifacts, the remarkable quality, quantity and exotic nature of the objects within the burials, and the location of the tombs in one of the largest temple pyramids in Group I.

We noted above that Tomb 1 contained more than 200 pieces of jade. Many of these jade pieces were part of a large mosaic mask that was made from jade, other stones and spondylus shell. One fragment of jade was incised with an ahaw glyph carved onto it. This glyph translates as holy lord, and the location of the glyph on a highly valued mosaic jade mask strongly supports that its owner was a ruler at Baking Pot.

The individual interred in Tomb 2 was also of high status, and could have been a ruler, or perhaps a scribe. The inclusion of five finely made polychrome dishes, the
stuccoed objects, and the intricately carved shells all suggest a high standing in the society. Tomb 2 also contained shell objects that were carved with two iconographic elements that are logograms for the term ahaw. The shell artifacts contain the image of a vulture in a seated position with a wavy element on its lap (possibly a codex). The individual is likely the Vulture God who, aside from representing the glyph for ahaw, is also representative of a scribe. This dual meaning may indicated that the individual interred in the tomb could have been a scribe, but we have little direct evidence to support this theory. One piece of secondary evidence is the discovery of what may possibly be a partially preserved codex that was placed south of the individual’s head and the very poorly preserved section of stucco located north of the feet. These artifacts may be sections of codices, but confirmation of this will have to await future analysis by specialists at the Smithsonian Institution.

We hope that future research on Structure E will yield more data on the elite rulers of the site, and information that will permit us to make further inter-regional comparisons between Baking Pot and other sites in the Belize Valley.
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INTRODUCTION

In the summer of 2002 personnel of the Belize Valley Archaeological Reconnaissance (BVAR) project worked in the South Acropolis (Group D) at Caracol to assist the Tourism Development Project with the excavation of Structure D6. The primary goal of the excavations was to clear and record the architecture of the structure prior to stabilization by the TDP conservation team.

The South Acropolis is formed by several structures arranged around a plaza. The southern structures are the largest in the group and have been intensively excavated by the Drs. Arlen and Diane Chase (Chase and Chase 2001a) of Central Florida University. Previous investigations of the southern mounds in the South Acropolis uncovered three large tombs with sumptuary goods. Structure D6, the northern range structure, is the most probable point of entry into the elevated compound (Chase and Chase 1987). It was previously excavated to uncover the central portion of the building – an open unvaulted room with two benches. Structure D7, the large pyramidal eastern building, was largely unexplored. For these reasons the TDP decided to commence excavation of Structure D6 during the summer of 2002.

STRUCTURE D6 (OPERATION 20B)

Excavations exposed new sections of the upper terrace wall (aligned east-west) first uncovered by Drs. Arlen and Diane Chase. This wall (designated wall 1) was formed by seven
courses of well-shaped limestone blocks, but is presently in a poor state of preservation. Collapse discovered around the wall suggested that there was at least one additional course. The central section of the wall was less well preserved, likely due to bioturbation, with only two to three courses remaining in situ. On its eastern side, wall 1 extended seven meters long, and terminated when it connected perpendicularly with another stone retaining wall. Aligned north-south and four meters in length, this wall is formed by rough, undressed stones and clearly mirrors a retaining wall approximately ten meters to the west exposed by earlier excavations.

The humus above wall 1 was cleared to ensure this was indeed the top terrace. No further terraces were encountered. A two by two meter unit was also placed in the fill of the terrace to test for earlier construction phases. However, the large dry core fill prevented the unit from going further than one meter in depth. No earlier constructions were discovered.

A moderately well preserved plaster floor extended from the base of wall 1 approximately 3.3 meters south until reaching the top of the lower terrace wall (wall 2). Wall 2 was constructed of large rough stones arranged in two courses above the plaza floor. Although only 7 meters of this wall was exposed, it most likely abuts the lowest terrace of adjoining Structure D7. No staircase or other access point to the upper terrace was located, possibly indicating Structure D6 was accessed by a central staircase in association with the central unvaulted room.

The overall artifact density recovered during excavation was extremely low. Ceramics dominated the assemblage, with small number of lithic artifacts. Preliminary analysis indicates the ceramics date to the Late Classic period (700-850 A.D.). Less than 50 pieces of chert debitage were discovered and only two bifacially worked tools were located. In addition, 10 prismatic obsidian blades were recovered.
STRUCTURE D7 (OPERATION 20A)

Architecture

The architectural form of this structure was not determined during the field season. Few cut stones were recovered on the surface of the structure and the majority of excavations involved clearing dry core fill of massive size. Excavations began with Lot 1, a 2 by 4 meter unit, placed halfway within the remains of an old excavation unit and halfway outside. This was determined visually to be the primary axis of the structure and the most probable locale for a staircase. However, only one wall (designated wall 6) was found on the lower portion of the structure. Wall 6 was constructed of two courses of stone forming a low terrace. Running north-south for over 12 meters, the wall terminated suddenly at its southern end with no evidence of a corner stone, a door, or any other architecture. However, at the northern end the wall turns eastward for approximately two meter before resuming its northern direction.

In this area, terminal plaza floor was broken through to investigate earlier architecture. As anticipated, the section of wall in this area extended below the terminal floor at least 15 cm to the penultimate floor and another approximately 10 cm to a third floor. The architecture was extremely well constructed and the arrangement of stones suggested a small, earlier staircase (similar to the side stairs present on Caana). A rough stone alignment approximately three meters in length was later appended to the outset section of Wall 6, thereby obscuring the corner and filling in the platform until it joins with Structure D6. It is entirely possible that this entire terrace was a late addition to the structure, a pattern observed in the B plaza.

A well-preserved plaza floor was encountered in association with wall 6. However, plaster observed above the wall on the probable terrace suddenly ended before encountering any architecture. Lot 9, a trench placed two meters to the south of Lot 1 to locate architecture
beyond the platform wall, encountered a floor approximately two meters above the platform surface and four meters to the east of Wall 6. The central section of the structure was extensively excavated and failed to uncover any more cut blocks *in situ*. The only other architecture recovered on the front of the structure was a rough alignment of stone two meters to the east of wall 6, possibly a retaining wall. The absence of clearly defined cut-stone architecture was surprising as it was expected that a central staircase would dominate the structure. While evidence of limestone architecture was lacking, the large number of red-painted stucco fragments in the collapse strongly suggest that such architecture did exist. The removal of these walls may have occurred either during or after the abandonment of Caracol.

Excavation units, designated Lots 5 and 6, were placed on the summit of Structure D7 to expose a possible superstructure and to determine the construction date of the architecture. In Lot 5, approximately 40 cm below the surface, the terminal phase plaster floor was uncovered. The floor measured 10cm thick and was well preserved in sections. Directly below floor 1, a second plaster floor was encountered. The eastern section of the penultimate floor was very well preserved but the western section was mostly destroyed and part of it was sloping to the east. The reason for this damage became clear when large capstones, characteristic of a tomb, were discovered under the destroyed sections of the floor. It appears that the penultimate floor was destroyed for the placement of the tomb. This discovery was unexpected, because the unit was not on the central axis of the structure, a favored locale for the placement of tombs.

Lot 6, a 1 by 1.5 meter unit located one meter north of Lot 5, had a similar construction sequence to Lot 5. The Terminal floor was located approximately 55 cm below the surface and was found in a very poor state of preservation. The penultimate floor was encountered 15 cm below the terminal floor. It ranged from 10 to 15 cm in thickness and was laid over stone ballast
and construction fill. Excavations continued an additional 90 cm before encountering the third floor. Due to the unstable nature of the large core fill in the unit walls, the excavation was terminated.

Two additional 2 by 2 meter lots (8 and 9) were placed on the northern and southern end of the structure summit. These excavations revealed a well-preserved superstructure. On top of the structure was a platform, as evidenced by wall 3 (an E-W aligned wall of at least four courses) on the northern end of the platform and wall 10 on the southern edge. Each wall runs for approximately 3.5 meters before cornering; the wall on the back of the superstructure (the eastern edge) is completely collapsed while the western portion is preserved intermittently with one to two courses.

One meter to the north of wall 3 is wall 8, an east-west wall of one course that faces north. Separating the two walls is well-preserved plaster floor. Wall 5, another east-west running wall of approximately four courses, is 50 cm to the north of wall 8. Wall 5 faces to the south, however, and a plaster floor is present at the bottom of the wall and extends to the one-course wall 3. Both walls 5 and 8 fail to connect with other walls, suggesting they may have formed a small platform or bench.

The south side of the superstructure is similar to the northern section. Wall 10 mirrors wall 3, while wall 9 is identical to wall 5. Likewise, wall 12 mirrors wall 8. However, extensive bioturbation led to poorer wall and floor preservation. The measurements are almost identical, as to be expected given the Maya penchant for symmetry. The excellent preservation of the superstructure is puzzling because it is not reflected in the remainder of the structure. Many pieces of red painted stucco were recovered in these excavations, indicating the superstructure was possibly painted red.
Artifacts

Although ceramic sherds were the most commonly discovered artifact type, less than 1,000 sherds were recovered. An analysis of the ceramics indicates that Structure D7 dates to the Late Classic period. Flaked stone tools include broken obsidian blades, a single obsidian flake, and a small amount of chert debitage. Mano and metate fragment were also recovered in small quantities (less than 5) and a single bark-beater was unearthed. Interestingly, numerous speleothems (likely from nearby caves) were discovered in the fill and the humus layer above the structure. Speleothems are found at Maya sites, often in ritual deposits, in particular ballcourts. They link the world of humans with the watery underworld inhabited by gods.

Burials

A single tomb (Tomb 1, Operation 20a, Lot 7) was discovered during the 2002 season. Covered by a double row of six capstones, this tomb measured 2.3 meters in length, approximately 80 cm in width and 75 cm in height. It is oriented north to south and is constructed of seven courses of well-cut limestone laid directly on core fill without a plaster floor. The tomb was filled with thick clayey soil that included intermittent pieces of broken ceramics. Excavation revealed a partially articulated adult skeleton and preliminary analysis suggests the individual suffered from osteoporosis. Broken and subsequently healed rib bones provide evidence of trauma suffered in antiquity. Interestingly, the disarticulated skull was located to the side of the body, next to the humerus.

In the northwest corner of the tomb, a small cluster of human bones was recovered. Preliminary examination indicates they are the remains of a juvenile (a determination based on
the teeth recovered). The only grave good in the burial was a complete obsidian blade placed between the knees of the adult (probably serving as a bloodletting implement). The lack of artifacts is unfortunate because it makes dating the interment difficult. After excavating through a limited amount of core fill below the tomb, a single jar sherd reminiscent of Cayo Unslipped (dating to AD 700-900) pottery was discovered, strongly suggesting the tomb dates to the Late Classic period.

Possible Ritual Offerings

Lot 4. While clearing the small terrace associated with Wall 6 on the presumed primary axis of the structure, several artifacts were uncovered on the floor. Composed primarily of a cluster of broken ceramics, this deposit was unusual because of the otherwise low artifact density on the structure. Measuring approximately 50 cm by 50 cm, it is probable that this deposit represents some type of termination activity.

Lot 17. Located on the floor, Lot 9 was a concentration of ceramics, jade, and shell artifacts. The cache included one inverted bowl (possibly a finger bowl), four shaped bars of indeterminate material and function, one carved piece of jade (possibly from a figurine), one jade bead, two shaped spondylus pieces, one conch piece, two shell figurines, and an assortment of deer bone and human teeth. This arrangement is likely a ritual offering of some type; it is placed on the same axis as the tomb.

DISCUSSION

Excavations conducted in the South Acropolis at Structures D6 and D7 uncovered poorly preserved architecture and a limited amount of artifacts. Those artifacts that were recovered
suggest that the structure likely served as a residence. The limited quantity of artifacts may be
due to either slow abandonment processes or extensive scavenging of the structure by Terminal
Classic – Early Postclassic Maya. (see Chase and Chase 2000 for abandonment episodes at
Caracol). Two special deposits, including ceramics, bone, shell, and jade may reflect evidence
of ritual activity, while Tomb 1 provides a glimpse into mortuary practices during the Late
Classic period at Caracol. Three other tombs apart from Tomb 1 in Structure D7 have been
recovered from structures within the South Acropolis and are similar to each other in form and
content. The three previously excavated tombs all had large vaulted chambers with numerous
offerings placed with the interments. Tomb 1, by contrast, is anomalous because of its
construction style, size, and lack of offerings. There are a number of possible interpretations for
the tomb: perhaps the individuals were unimportant, perhaps they were sacrifices for a tomb
deeper in the unstable core fill of the structure, or perhaps the tomb was entered in antiquity and
resealed. Another possibility is that the tomb itself was intrusive, a possibility supported by the
thick well-preserved terminal floor over the section of the tomb. Unfortunately, the large
unstable core fill of the mound prevented further exploration of the structure.

Tomb 1 reflects a wider mortuary practice (or tradition) at Caracol (Chase and Chase
2001b; D. Chase 1998). Diane and Arlen Chase (1998: 311) observed that tombs were often
constructed with the initial phase of construction, long before they received any human remains.
This is interesting as Tomb 1 is of poor construction. Another burial pattern observed at Caracol
is the deposition of multiple interments in association with a single primary burial (Chase and
Chase 1998: 311). This association of a primary burial with secondary individual is also
encountered in Structure D7.
Based on extensive excavations of Caracol, the Chases propose a pattern of ritual artifacts recovered in eastern structures of residential groups (1998: 311). Archaeological remains encountered in this context include, in addition to tombs with single and multiple interments, stalagmites and small bowls containing finger bones. Such ritual activity, it is believed, is associated with veneration of the dead and possibly even charnel houses. Finger bowls compose a standard offering recovered throughout the site and are almost always placed in front of eastern structures that contain burials (Chase and Chase 1998: 319). Furthermore, the Chases have observed that in eastern structures, tomb offerings were often placed at the entrance to the tomb or in the fill around the tomb. While Tomb 1 contained no clear entrance due to its small size, the Lot 17 assortment of artifacts was recovered on the same axis as the interment. Excavations in the South Acropolis are ongoing and it is believed that further investigation will provide a better picture of the terminal architectural form of Structure D7.
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INTRODUCTION

Caracol, a large Maya center, is located in the foothills of the Maya mountains, two hours south of San Ignacio town. Caracol is the largest known Maya city in Belize, and has been compared in size to the famous Guatemalan site of Tikal. The site is composed of several large plaza groups, which include numerous temples, palaces, and administrative buildings. The largest structure at the site is the enormous temple-palace complex of Caana, which stands over 137 feet tall. Caana is located on the western edge of Group B, which includes five additional platforms. On the eastern edge of Group B is a tripartite, E-Group-like complex, composed of Structures B27, B28, and B29. During the summer of 2002 members of the Belize Valley Archaeological Reconnaissance Project (BVAR) assisted the Tourism Development Project with preliminary excavations of Structure B29. This paper presents a report of the operations conducted on the structure during the 2002 field season.

Eastern Groups are common in Maya architecture, and are so-called because they typically line the eastern side of a courtyard or plaza. These structures are believed to have astronomical functions, including marking the summer and winter solstice and the vernal and autumnal equinox. Functioning E-Groups have been found at Lubaantun, Belize and at Uaxcatun, Guatemala (Sharer 1995). Some E-Group platforms do not function properly as astronomical observatories, however all E-Groups, particularly the central and most prominent structures, are potentially burial shrines and may have been the location for ritual performances by elites. Possibly because of this, the Chases from Central Florida University had investigated the centrally located Str. B28 in the Spring of 2002. The purposes of our investigations were to record the orientation of the architecture at the summit of B29 and to determine the state preservation of the masonry superstructure. It was also important to the investigators to expose a large portion of the terminal phase architecture to facilitate conservation of B29 by the Tourism Development Project (TDP). BVAR and the TDP worked jointly during the summer of 2002 in efforts of excavation and conservation, benefiting both projects.
STRUCTURE LOCATION AND CONDITION

Structure B29 is the northernmost mound on the east side of Plaza B. The summit of the mound is approximately 8 meters above the B group plaza floor and was heavily overgrown with jungle. Such environmental conditions, likely present for many centuries, appear to have contributed to the structure’s generally poor state of preservation. Evidence of natural vegetation and its effects were observed, primarily by way of root holes and subsequently disturbed architecture. In addition, excavators encountered numerous stones and debris that were likely re-deposited by erosion and site formation processes.

EXCAVATION RESULTS

Walls:

Structure B29 is oriented along the cardinal directions, running north south in length. Excavations completely exposed the terminal phase superstructure. The western and eastern walls measured 13.8 meters long, while the northern and southern walls measured 4.2 meters. Moderately sized faced limestone was used in the construction of both the interior walls and the exterior walls with masonry fill/core in the space between. The faced wall stones varied in specific measurements, ranging from 10-15cm in height, 40-60cm in length, and 10-15 cm in width. The northern, eastern, and western walls were double walls and measured approximately 1 meter in width. Little to no plaster remained on the wall stones. The best-preserved section of the wall measured 85 cm above the floor, and was found on the southern end of the building. It is possible that the southern end of B29 connects in some way with the northern edge of B28, however, due to time constraints, we were unable to fully expose this possibly jointed portion of the two adjacent structures (Figure 2).

Doorways:

Prior to excavation, we believed that Structure B29’s western wall, facing into the Group B’s plaza, contained a number of doorways. Surprisingly, excavations revealed evidence of only a single doorway along the western wall. This doorway was located just off center, 7.2 meters south of the northern end of the structure and 6.6 meters north of the southern end. An 80cm wide break in the wall, approximately 20cm above the floor, likely represents the only doorway along the structure’s western wall. Two possible doorways were also located in the structure’s eastern wall. The northernmost doorway is located approximately 5.2 meters (at the center point) south of the NE exterior corner of the structure, and is approximately 1 meter wide. This doorway had a well-defined doorjamb. The second potential doorway is approximately 10 meters (at the center point) south of the NE exterior corner of the structure, and includes an entrance approximately 1.8 meters wide. This space was poorly preserved and had a significantly less-defined doorjamb than the first, making its exact measurements more difficult to determine. As well as these three potential doorways, one distinct doorjamb was located inside of the structure. This doorway divides the interior of the structure into two rooms. The northern
room measures approximately 7 meters by 2 meters, while the southern room measures approximately 3.6 meters by 2 meters. The interior wall separating these two interior spaces measures approximately 80cm in width and stood, only partially intact, approximately 40cm above the floor (Figure 3).

Floors:

Two floors were uncovered during excavation. The terminal floor, located 95cm below datum, consisted of poorly preserved limestone plaster. Approximately 25cm below this compact limestone floor, excavators uncovered a well-preserved plaster floor. Due to time constraints, excavations were not continued any further.

In the eastern room, a bench was located along the northern wall. The bench stands approximately 60cm high and extends into the room approximately 30cm from the northern interior wall. The faced stones used in the construction of this bench are, generally, slightly larger than those used in the construction of the walls, but their overall difference in size was minimal.

ARTIFACTS

After the plaster floor was cleared throughout the structure, six small units were excavated into the floor of the rooms. One unit was excavated along the northern interior wall and one along the southern interior wall -- each measuring the width of the rooms. The northern test pit was excavated to an approximate depth of 80 cm below the plaster floor (2 meters DBD), and the southern test pit was excavated at an approximate depth of 100 cm below the plaster floor (2.2 meters DBD). In each instance, these two test pits terminated in core/fill that consisted of large stones and boulders. Two more units, each approximately 1.5 square meters, were placed along the midline and the primary axis of the structure’s interior. The centermost unit, along the primary axis of the structure, was excavated to a depth of approximately 1.1 meters below the plaster floor level (2.3 meters DBD) before termination. The other unit, along the midline of the structure and just south of the unit on the primary axis, was excavated to an approximate depth of 1.5 meters below the plaster floor level (2.7 meters DBD). Each of these units, as with the trenches at either end of the structure, terminated in core/fill that consisted of very large stones and boulders (some in excess of 80lbs.). Because of the latter, and due to time and safety constraints, they did not penetrate further into the structure. In addition to these test units within the rooms, investigations were also conducted immediately outside and in front of both suspected doorways on the eastern side of the structure. Each unit, located immediately in front of each “doorway” measured 1 meter by 1meter. Likewise, each unit was terminated at approximately 2 meters DBD in similar core/fill as encountered in the other four test pits.

Throughout the course of excavation, we located large amounts of wall collapse. Most of this collapse consisted of masonry core/fill and it extended from the humus layers until we reached the terminal phase plaster floor. Artifacts recovered were largely intermixed with wall collapse in secondary contexts (i.e. either from among the masonry
core/fill, or otherwise disturbed in contexts). No significant artifacts were located in situ within a particular cultural context at the terminal floor level. Few artifacts were located below the first or second plaster floor. Artifacts recovered under these floors were mixed with ballast, and none of them are special deposits.

Excavations revealed less than 450 ceramic sherds, approximately 200 chert flakes, and 25 obsidian blade fragments. A mano fragment was located in the fill of the western wall. In spite of the large number of pottery sherds discovered, the majority of them were non-diagnostic. However, the small number of diagnostic sherds suggested that the building was constructed during the Late Classic Period.

CONCLUSION

The relatively small number of artifacts recovered from Structure B29 does little to enlighten excavators about the function of the building. The type and quantity of artifacts suggest a number of possibilities. It is possible that evidence of ritual activity was cleaned up after its completion. It is also likely that those who utilized this structure removed items during the sites abandonment. Regardless of the explanation, it is undeniable that our only evidence for a ritual or administrative function of the structure is the location of the building and the monumentality of the masonry superstructure. Excavations along the eastern side of the structure may shed light on the problem.

The small quantity of Late Classic sherds and the known occupation of other structures at Caracol during the Late and Terminal Classic strongly suggest that Structure B29 was utilized during this period. Its location in the same plaza as Caana suggests that it may have served in some administrative capacity. It also may have served to restrict the flow of access between the B Group plaza and the Barrio complex. Again, further excavation and analysis is needed to better understand this structure’s role at Caracol.
Are There Any Holes Around Here?:
A Preliminary Report on the Caracol Regional Cave Survey

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Introduction

In 1992 and 1993, as part of the on-going Caracol Project directed by Arlen and Diane Chase (e.g., Chase and Chase 1987, Chase and Chase 1994), a total of 9 caves (7 of which are within a ca. 3 km radius) were briefly investigated by William Feld (1994) of Tulane University. Following his explorations, Feld (1994:76-82) reported that most of the subterranean sites were vertical (i.e., sinkholes) rather than horizontal caves, and that four of them contained remains of archaeological significance. Despite these observations, the extensive survey at Caracol continued to focus limited attention on subterranean features per se. In view of the latter, a primary objective of this initial reconnaissance was to assess the archaeological potential of subterranean features in the epicentral area of Caracol. A second more practical objective was to determine whether any of the cave sites had water sources that could be exploited by the Tourism Development Project (TDP).

Four weeks in July of 2002 were dedicated to reconnoitering the Caracol epicenter in search of cave sites. The crew consisted of a core group that included two cave specialists, Allan Cobb and Linda Palit, Belizean university student Jenny Guerra, a Japanese university student Takashi Ochiai, and Reiko Ishihara. The crew conducted reconnaissance for the duration of the project, locating and recording caves. In many cases TDP workers, who were familiar with the topography, guided staff to the sites. Even with the local workers’ expertise, however, the thick tropical jungle complicated the location and relocation of many cave sites. We also attempted to locate the seven caves in the immediate area reported by Feld about a decade ago (Feld 1994). GPS readings (etrex Garmin Legend was used this field season) were taken when possible, maps were produced, and artifacts were surface collected. Presence of any associated architecture and modifications were noted, whether within the cave, part of the cave entrance, or immediately outside the cave entrance.

During the last two weeks of explorations the crew expanded to include Cameron Griffith, co-Field Director, and nine WBRCP volunteers. Continued reconnaissance, detailed mapping, and test pit excavations in Group B Plaza were conducted at this time. Some of the cave maps that are not attached with this report are hoped to be reported in the following year’s report.

It should be noted that all subterranean features were designated as a “cave” and assigned a consecutive number (Caracol Cave 1, 2, etc.) These features include vertical sinkholes (blind pits), sinkholes with horizontal passages, horizontal caves, and depressions that are filled with debris. Here the objective was to be inclusive and to document as many subterranean features as possible, since little information has been recorded on such features in this area. Future investigations could test pit the depressions and sinkholes to assess their cultural significance.
Reconnaissance

Cave 1 (CC1) (Fig.1) is a very small vertical pit with its sinkhole entrance less than 1 m in diameter. This is an example of a blind pit, which is a vertical hole that has no extending passages or chambers. It is located northeast (ca. 40 m) of the Caracol visitors center and its informal parking lot. There is a bird watching trail that heads north on the northern side of the access road, and this small cave is located at several meters down the trail from the cleared area (ca. 20 m from the access road). It is fenced in by thin wooden poles so as to prevent tourists from falling in. The cave drops vertically to a depth of about 4 m. A dustpan was discovered in the pit during a reconnaissance trip the previous summer. No material of cultural significance was observed.

Cave 2 (Cueva Pizarra) (Fig.2) is a vertical pit whose entrance is 1.5 x 2 m, and the cave itself is approximately 11 m deep. This is the first cave that we dropped into and encountered an abundance of carbon dioxide. The bottom of the pit has an area of about 8 m x 3 m, with a central flat area (3 m in diameter). The southwestern end of the cave floor drops about 1 m and is filled with mud, vegetal material, and other debris, indicating that water drains out from this area.

The most interesting aspect of the cave was the presence of numerous slate and shale fragments (24 pieces) on the surface of the cave floor. The depositional process is questionable as the vertical nature of the cave allows drainage from the surface. The likelihood of secondary deposition increases as a small fragment (3-4 cm) was found on a higher ledge in the cave wall. Where then was the place of these slate pieces’ primary deposition? Although there appears to be a linear platform structure ca. 15 m north of the cave, further surveying of the surrounding area will be necessary to assess whether this structure is associated with the cave and to examine water drainage patterns in the immediate vicinity. There were at least three areas in which speleothem breakage could be observed. A few sherds (1 unslipped jar shoulder sherd; 2 sherds of unknown vessel form with grooved surface treatment) were also found on the surface, though the weathered nature of the latter sherds again raises the question of depositional process. The slate and sherds were surface collected without any detailed mapping of the exact proveniences due to the poor air quality in the cave; mapping and surface collection was conducted as quickly as possible. Finally, there is a questionable platform construction (50 cm size limestone rocks forming a possible retaining wall) at the southern end of the cave.

Cave 3 (Cueva de Mal Viento) (Fig.3) is reached by a 10-minute walk east from the Caracol visitors center along the main access road. A small cleared path, which cuts between 2 structures, led southward, perpendicular to the road. The cave entrance is actually located less than 15 m from the road. There appear to be at least 3 small platforms (ca. 2 x 5 m, 1 m high) adjacent and parallel to the south side of the road. Another small structure (ca. 2 x 4 m, 1 m high) is located about 5 m northwest of the cave entrance; a line of rocks that form the base of the structure is clearly visible. In addition, a slightly elevated platform may be present to the northwest of the cave entrance, as the eastern edge of the questionable platform appears to extend north-south from the north side of the cave entrance. Closer inspection of the western wall of the cave entrance suggests a possibly artificial placement of the rocks as a retaining wall, and may merge with the above questionable platform.
The sinkhole entrance is fairly small (ca. 1.5 x 2 m), and the actual narrow opening into the cave was under an overhang on the northern side of the entrance. Because of this we had to rappel to drop into the cave. Although an initial examination of the cave indicated no cultural material, our second trip revealed otherwise. The cave is comprised of three levels, with the lowest at approximately 21 m deep from the surface. Allan Cobb was the only one to drop into the bottom-most level due to the poor air quality, but he did not observe any material of cultural significance. At about 12.5 m above the deepest level is the middle level, which is a fairly flat, circular area of about 3.5 m in diameter. This platform area may have been modified in ancient times, due to the stacked appearance of the rocks on the northeastern side of the floor. One non-diagnostic sherd was found on the surface, close to the edge of this drop. In the northwestern corner of the area, there is an elevated and enclosed niche with some broken formations, reminiscent of an altar-like feature. A cursory examination showed no cultural evidence such as charcoal or sherds, and further examination would be necessary to determine the cultural context of this area.

The first level (ca. 8 m deep from surface) is the most interesting area of this cave. It starts as a narrow ledge along the south side of the pit, at which point there is a piece of travertine-like formation (ca. 1 m wide) that is broken out. A narrow opening (ca. < 1 m wide, < 1 m above the floor) leads into a small passage that continues northwestward for about 3 m. At this point, there is a 2 m-diameter chamber (ceiling is ca. 2.5 m high). This passage continues northward for about 7 m, at which point the slightly inclining passage nears the ceiling. No attempt was made to continue beyond this point at this time. Halfway through this part of the passage, one crosses over a 1 x 1m area in the floor laid with rocks; it is apparent that the rocks were placed so as to create a “bridge” over the gap that drops directly to the lowest level. A jar rim sherd was found amidst this “rock bridge” suggesting the artificial nature of this feature. Another non-diagnostic sherd and an unworked piece of shale were found on the surface in the first part of the passage. The air quality of the first level was drastically better than that in the middle or deepest levels. Airflow was even felt coming from the gap below the “bridge” and the deeper part after crossing the “bridge.”

Cave 4 (Pozo Petey) (Fig.4), located southeast of CC5, is a vertical pit (ca. 7.5 m deep) with a roughly circular entrance of about 1 m in diameter. The caretaker, Gustavo “Petey” Mendez, claims this is Gomercindo Cave as reported by Feld (1994), but this cave does not match the description. There was no apparent evidence of ancient Maya use, and the two stacks of rocks in different niches in the cave wall were suggested to be recent, likely as a natural occurrence due to water flow or other modern disturbance. The presence of a fallen tree vertically extending well above the entrance may indicate the possibility that others have entered the cave in recent times. No archaeological material was present. Several bats (about 10) were encountered in one of the niches.

Cave 5 (Cueva del Ronron) (Fig.5), a vertical cave 5.5 - 7.5 m deep with a sinkhole entrance diameter of 2 m, was the first cave into which we rappelled. A cursory examination showed no evidence of ancient Maya use, although the floor was covered in sedimentary deposit. If future investigations include sampling of vertical caves, this cave may serve as a potential site for a test pit. Poor air quality (higher than normal level of carbon dioxide) was noticeable.
Cave 6 is located about 5.75 km from the site center, just off of the east side of the main access road. The sinkhole entrance is oval in shape, about 3.5 m long, 2 m wide, and approximately 10 m deep. The most noteworthy aspect of this cave is an artificial retaining wall constructed along the southwestern wall of the cave entrance. The wall is about 4 courses high (ca. 15 limestone rocks of ca. 50 cm in size). Similar to CC5, there is soil deposition at the base of the sinkhole, though the amount is indiscernible. It appears that there may be some (surface) structures several meters southward and upslope from the cave. Cobb and Palit took the volunteers to practice rappelling at this cave. Thus no map was produced, though a cursory examination showed that no artifacts were found (Cobb 2002 personal communication).

Cave 7 is near CC6 about 5.6 km from the Caracol site center, and is located on the southeastern side of the main access road. The cave entrance is slightly larger than CC6, it has an oval shape (ca. 4 x 2 m) and is approximately 30 m deep. Exploration was attempted on the last day by Cobb and Palit, but was cut short because of the very poor air quality in the cave. At the base of the vertical drop, the cave branches out into two large, wide chambers, and will have to await future investigations for further exploration and any mapping. Formations were noted in the cave, but no archaeological material was observed at this time.

Cave 7 is noteworthy, however, for the associated architecture found around the cave entrance. Two artificial stone walls partially enclose the sinkhole entrance. Interestingly, one of these walls appears to be a deliberate extension of a short, natural line of rocks immediately to the north of the cave; the extended, artificial wall is 3 courses high and continues toward the eastern side of the cave. The other artificially constructed wall is at least 1 course high (perhaps 2) with flat limestone rocks, lining the southern circumference of the cave entrance. Closer inspection of the surrounding area both within the enclosure of the walls and outside is needed to assess the archaeological significance of the area.

Cave 8, named Cueva Tabano for the large numbers of tabano flies in the sinkhole, is one of the larger caves encountered during this field season. The two cavers mapped the cave in its entirety, and a more detailed map was produced by Griffith and field project volunteers focusing on the entrance area, as most of the architectural modifications were found in this area. The entrance to Cueva Tabano is in a sinkhole that formed from the collapse of the ceiling of the main cave passage. Access into the sinkhole is facilitated by breakdown limestone boulders and foliage as the sinkhole is only about 3 m deep. On the north side of the sinkhole, a passage approximately 7 m wide and 3 m high heads north.

Along the eastern side of the passage wall is an elevated platform. Assessment of whether the platform was artificially constructed requires further investigation (i.e., test unit). On the side of the platform closer to the entrance is a vertically standing, somewhat triangular limestone slab (1.9 m at base narrowing at top, 1.8 m high, 0.8 m thick) supported by similarly large limestone boulders. The vertical placement of the rock suggests that this may be a stone monument. This stone is visible from the outside of the cave entrance standing within the sinkhole, and lends itself to blocking visibility of the inner areas of the possible platform. A thin, red material appears on almost all sides of the rock, and initially it was thought that it may be red paint, but in fact its appearance on surrounding formations tentatively suggests that it is a subterranean growth, such as lichen. A sample was collected.

In the entrance passage paralleling the elevated platform area, there is a series of low
retaining walls (possibly 3 walls, ca. 0.5-1.5 m size limestone rocks) perpendicular to the passage, which has the appearance of a terrace sloping down into the cave. One possible chert flake and 1 questionably worked limestone uniface along with 1 non-diagnostic sherd was recorded in this area. Approximately 30 m into the cave, at which point the Entrance Passage ends, speleothems form a curtain across the passage. On the western side of the curtain, the speleothems have been removed or broken to allow passage, while the eastern side of the formation appears to have been blocked by rocks and speleothems. The passage (Main Passage) continues as mostly wide crawling passage for approximately 40 m before entering a large room. The dome-shaped room is approximately 10 m by 12 m. A large mound of mud-covered breakdown covers the central area and most of the chamber (Chamber 1, Mound Room). Along the vertical face of the chamber wall on the north side, just to the west of the entrance to Passage 1, is a pile of large limestone boulders that may or may not be of archaeological significance. No noticeable artifacts were amidst the rock pile but the location of the rocks in relation to the general topography of the chamber suggests that this rock pile was a deliberate placement.

Three primary passages extend from Chamber 1, although there are a few additional smaller passages as well. Passage 1 is the westernmost passage that leaves the Mound Room. The floor and walls of the passage are coated with a layer of clayey mud. At the far end of this loop the passage opens into a large room (Chamber 2) of breakdown covered in mud. It appears that water flows through the loop area from the back toward the large room (land snails throughout the cave indicate that occasionally water flows through the cave); a drain in the floor takes the majority of the water flow. There are a number of broken stalactites and re-growth of speleothems evident on the ceiling. Evidence of a termite trail and seemingly more oxygen (than the Main Passage) may indicate that the passage runs near the surface. The largest number of artifacts was collected from this passage, particularly from Chamber 2. On the eastern slope of the mound (1/3 of the way up) were 39 sherds of a Tinaja Red olla including an intact rim. Pieces of carbon (ca. 2 cm thick) were also recovered from the same lot. Part of the overlying mud had caked away exposing some of the olla sherds; this suggests that more archaeological material may be hidden on the mound. On the western side of the mound about 2/3 of the way up closer to the top and hence the ceiling, were 5 sherds of a possible shoe-pot or small olla with a thin, pinched fillet appliquéd on the shoulder. No rim sherds were found, and the base was slightly flat. Interestingly, there is a small circular kill hole in the base of the vessel. Possible burning on the basal exterior was noticed. In the area a few meters in from Chamber 1 in Passage 1, a mano fragment and a chert core (20% cortex) was found. Three non-diagnostic body sherds were also found in the passage.

Passage 2 leaves Chamber 1 in a northeasterly direction. Allan Cobb notes that water appears to flow down this passage from Chamber 1. The passage extends a short distance (ca. 10m) and terminates in a mud funnel that appears to take the water flow in the passage. After this mud funnel drop, at approximately 10m down the passage, charcoal (ca. 13 x 4cm) was found partially encompassed by calcite (evidence of a torch?) in the south wall. One animal bone with carbon adhering to it, 2 chert flakes, 6 non-diagnostic body sherds, and 2 unslipped olla sherds (1 rim, 1 shoulder) were located in this passage.

Passage 3 extends in an easterly direction from Chamber 1. The passage leads to a series of climbs, over which water appears to flow down and eventually seep into the floor. One chert flake, 1 unidentified crystalline stone (may be artifact or ecofact), and 2 non-diagnostic body sherds (1 is burnt on the exterior side) were surface collected.
An excess of carbon dioxide within the cave made explorations in the cave difficult. A simple “lighter test” was conducted, and surprisingly the lighter would not light in the Main Passage, indicating the lack of sufficient oxygen in the air. Although our second time in the cave in mid-July seemed to encounter better air than the first attempt at the beginning of the month, continued investigations at the end of the month did not detect any major differences in the air quality.

**Cave 9** is 20 minutes walking distance from the South Acropolis. The cave is located on the northern side of the trail that follows Pajaro-Retiro Causeway which starts immediately to the west of the South Acropolis. The small depression (ca. 1-1.5 x 2 m) is filled in with leaves and soil, although on the western side, bedrock is exposed.

**Cave 10** is 8 minutes by foot from CC9. It is located adjacent to the same *sacbe*, on the western side of the trail. This completely filled in sinkhole consists of an elongated area (ca. 6 m long) of drainage, the eastern edge of which aligns with the stones of the *sacbe* retaining wall. The circular sinkhole is actually at the northern end of the drainage, about 3 m in width.

**Cave 11** is a circular depression, likewise located along the same *sacbe*, adjacent to the trail on the south side. There is a small subterranean opening visible on the western side of the depression (ca. 2 x 2 m), which suggests that this sinkhole may open into a larger chamber.

**Cave 12** is a D-shaped, small depression (ca. 1 x 1m, ca. 1.5 m deep) entirely filled in with vegetal debris. It is located about 5 m from the well-cut path on the Conchita Causeway, close to CC4.

**Cave 13** is located 20 minutes walking distance along a trail that leads northwest of Group A. This D-shaped sinkhole is larger than the other small filled in sinkholes, with the linear eastern side (< 15 m long) coinciding with a vertical bedrock face. The curvilinear side (ca. 5 m wide) of the depression on the west slopes downward toward the bedrock on the east, with the sinkhole 3 m deep at this point from the top of the bedrock. The interesting aspect of this sinkhole is its possible association with a group of structures to the south ca. 15 m. The structures sit atop a protruding escarpment, with the sinkhole at the basal end. There is one pyramidal structure (one side ca. 4 m) with 2 smaller structures, and the edge of the protruding part of the escarpment is bordered by a thin C-shaped structure. Moreover, numerous subterranean formations (10-20 cm size, dogtooth spar) were observed in the rubble around the structures, particularly at the southern and eastern base of the largest structure.

**Cave 14** is just short of an hour’s walk from CC13. The dense and high canopy prevented a GPS reading, though a point was finally taken 250 m away. The sinkhole is a frying pan shape, with the circular (“pan”) section measuring about 6.5 x 3 m and a depth of ca. 6 m. The rectangular “handle” section is about 4 m long, 2 m wide, and 2 m deep. The sinkhole is interesting because there is a possible artificial rock wall in the “handle” area just before it drops into the deeper “pan”. This possible wall consists of stones (30-40 cm) 3-4 courses high and 2 courses wide. It appears that the wall may have extended the width of the area but has collapsed recently in the central portion. Some humus (ca. 50 cm thick) covers the top of the retaining wall.
The base of the sinkhole is covered with leaf litter and soil, and there are two small drainage holes in the northwestern corner. No artifacts were found on this cursory visit.

CC15, a partially filled, circular depression, was encountered on our way back to the site center along a trail that cuts through a plazuela group (Structures F1, F2, F3, F4 as map shows in Chase and Chase 1987: 64, Fig.45). The depression is found directly east of Structure F1 (southern structure) and southwest of Structure F4 (the eastern structure). The depression measures about 1.5 m by 1 m in width. The depression would have to be cleared of debris in order to assess its depth or whether it is a sinkhole. Similar to CC13, this feature is also located adjacent to a plazuela group situated on elevated topography.

Cave 16 (Fig.6), or Cueva Cerda, is a large collapsed sinkhole (ca. 10 m in diameter; paleocave), entirely in the light zone, allowing easy access into the bottom of the cave. The western end of the sinkhole is filled with reddish brown clay and breakdown rocks. A north-south cross section shows that the base of the V-shaped sinkhole has there are rocks stacked at the central part of the floor. It is difficult to distinguish without clearing the area whether this may be architecture or simply material that fell in from collapse. There is a possible retaining wall in the upper eastern side of the sinkhole wall. A metate fragment was found amidst the breakdown near the level and cleared area at the western base of the sinkhole. Also in this area, very white and fine sascab (kaolinite) is found in clumps. Cobb noted that this type of sascab is not natural to this cave, and thinks that it was brought in. Don Pablo Cerda, the guide that showed us the cave, informed us that the Retiro road leads to a sascabero, about 1 mile away. Interestingly, approximately 70 m upslope northeast of this cave was a plazuela group atop a hill (which Don Pablo informed us was a distance of “un grito,” or one yell). The hill, about 15 m high, supports four structures, each about 10 m long. Three of the mounds have conical sections about ca. 2.5 m high.

Cave 17, a small half-circle depression (ca. 1 m wide, 40 cm deep), was encountered while walking 30 minutes on a trail that leads from the staff camp toward Skull Cave (CC18). It is completely filled in with leaf litter and soil.

Cave 18 (Fig.7) is one of the caves that was relocated this season by Felix Uck, who worked with the Chases during Feld’s study. Known as Skull Cave (Feld 1994: 80-81), this cave is 1.6 km southwest from the site center, located in the same valley on the opposite side from Northwest Cave (CC19). The small cave entrance (less than 1 m in diameter) is about 10 m above the valley floor, and the scatter of large rocks along the slope in front of the entrance and the stacked nature of the rocks seen from the inside suggest the possibility that the entrance had been blocked off or at least restricted at some point.

Ceramics were found scattered throughout the cave, especially in the first passage (about 10 m long), though only 20 sherds (including 1 incurving bowl rim, 1 dish or bowl rim, and 2 refitting flat base) and 2 lithics (1 chert core, 1 slate fragment) were found (contrary to the comment that there were “large numbers of sherds” in 1990 (Feld 1994:80)). At the end of the main passage, rocks are wedged in the gap in the cave floor so as to construct a “rock bridge” in order to allow access to the back of the cave. Though there is a small hole after this “rock bridge” that leads to the lower level, we rappelled down the drop (ca. 8 m) at the very back of the
cave. The central area of the floor in the lower level was covered entirely with human and animal remains, much of it encased in white calcite, in concordance with Feld (1994:81). Further investigations are required in order to identify and assess the bone. Amidst the scatter of bone were some sherds including 1 rim and 1 flat base of a polychrome bowl and 2 incurving bowl rims along with a miniature jade celt.

Cave 19, referred to as Northwest Cave in Feld (1994), is one of the caves that had been reported in Chases monograph (see Feld 1994). The entrance faces approximately south and is, as Feld noted, halfway up a large hill; the entrance is not easily detectable from the bottom of the valley. The area (ca. 3 m²) in front of the entrance is curiously level and may be a product of modification. There are rocks stacked in the entranceway with several found inside as if toppled inward, suggesting that the entrance seems to have been blocked at one time, or at least restricted. Currently, the entrance is about 1 m high, and a short walkway (ca. 3 m) over the scattered stones leads to the main chamber. It is roughly oval (ca. 10 m north-south and 8 m east-west) with a dome-like ceiling approximately 10 m in height. The cave was mapped and surface collected. Past the short walkway from the entrance, a small chamber (ca. 3 m diameter) on the eastern side leads to an elevated passage that continues as a narrow ledge along the southeastern wall of the main chamber and overlooks it (Ledge 1). In this side chamber were found 24 sherds (1 jar rim, 21 non-diagnostic body sherds, and 2 non-diagnostic body sherds with carbon on interior sides) and 2 chert lithics (1 core, 1 primary flake with 80% cortex). Throughout Ledge 1 were sherds (12 non-diagnostic body sherds), most notably 1 polychrome vase rim sherd and 1 unslippered bowl rim sherd.

At the back of the cave in the northeast corner, accessible behind a large stalagmitic formation, is a low-ceiling chamber below the floor level of the main chamber. It appears that the point of access may have been restricted through the eastern side of the said formation since large boulders on the northern side of this formation serve to hide the entrance to the back chamber. This entrance is partially blocked by stones. Sherds were scattered starting at the narrow access way and in the chamber. Thirteen sherds including 1 ring base of a bowl and 3 jar rim sherds (from different vessels) as well as 1 chert flake (primary flake with cortex) were found. There is a looters pit in the back of this chamber as well as one on the other side of the boulders that enclosed this area. It is not surprising that there were so many looters pits, as it was evident that the easy accessibility into the cave had likely enticed people to enter the site; Feld had noted in his report that this cave was well known and staff members and workers had visited regularly (1994:77).

On the northwestern side of the main chamber is an elevated ledge (ca. 6 m high) which is accessible by carefully climbing the cave wall from the southwest part of the chamber. The ledge consists of a natural level area. At the northern part of the ledge is a looters pit. No cultural material was found in this area, although there may be a possible modified speleothem on the southern end.

Ceramics were scattered on the floor of the main chamber. Most of the material was found clustered around stalagmites or along the wall and were surface collected by area. Noteworthy is a flanged incensario fragment displaying a circular hole (pronged incensario?) which was found along the southern wall past the side chamber. Also immediately inside the entrance to the cave on the eastern wall was found a chert tool (not collected). Additionally, on the stubby and rounded stalagmitic formation immediately in front of the entrance were pecked
simple faces; there is another pecked face on the western wall along the narrow walkway at the entrance.

Another possible sinkhole, Cave 20, was encountered off of the trail south of Skull Cave. It consists of two small holes (and possibly a third to the southwest of the two) on either side of a boulder that are filled in with leaf litter but a visual examination detected that the cave goes down about 1 m (up to 3 m), and could possibly open up.

Cave 21 was located by Felix Uck on the South Causeway from camp, ca. 30 m west of the trail. Several large boulders covered the sinkhole entrance, and one can see through two small gaps between the boulders that there is a roughly circular chamber (ca. 2 x 3 m) directly below, with a depth of about 2.5 m. A narrow crawlway could be discerned that led in a northwest direction from the chamber. It was assessed that a ladder would be necessary, and time did not permit us to revisit the cave.

Cave 22 and Cave 23 were found while we were trying to relocate a large cave. CC22 was a 45-minute walk southward on the Pajaro-Ramonal Causeway past the Retiro logging road. We turned off of the trail eastward before the large pyramidal structure (about 10 m high) on the east side of the path on the causeway. No GPS reading could be taken. The entrance was only about 50 cm wide and 50 cm in height. It appears that this cave entrance was formed as part of a collapsed sinkhole (ca. 3 m diameter, 1.5 m deep to the top of the entrance) in which rocks (primarily large boulders) fell in, and created the said small entrance (there is a second smaller entrance on the southern side of the large boulder just above the first entrance but is blocked with leaves and soil). The first entrance goes in eastward horizontally about 3.5 m and the chamber is about 2 m wide. There is not enough space to sit up inside. At the easternmost end, there are rocks that are tightly wedged together as is the case at the southeastern end of the cave; one is able to see that the cave extends farther but is impeded by the rocks that could not be moved by hand. No artifacts were found.

Cave 23 is located about 200 m northwest of CC22, and no GPS reading could be taken. CC23 refers to two “caves” found on a platform structure (ca. 1 m high) amidst a plazuela group. One of the caves is located in the southwest corner of the platform. This more horizontal cave appears to have been dug out (probably artificially by humans, but if so, not so recent since there is no talus, i.e., backdirt) from the western side of the platform on the edge of the level area. At the entrance of this cave is a somewhat flat limestone rock (< 1 m) that spans the width of the entrance, and one must crawl to enter into a 2 m-diameter area within the platform structure. The walls are of a pinkish white marl (i.e., sascab).

The second cave is a vertical hole (ca. 2 m in diameter) about 2 m deep, located a few meters northeast of the former. This is found on the western-central part of the platform, almost as if to fill in the empty space on the western side due to lack of a masonry structure that forms the 3-structure plazuela group atop the platform. It is difficult to discern whether this cave is of a recent digging, though one must wonder since there is a looters pit that cuts into the top of the largest structure in the north side of the platform.

Cave 24 (Cueva Mono), southeast of the site core, is reached by a five-minute walk on
the main access road, going into the bush on the south side of the road. The sinkhole entrance is of an irregular shape (3.5 to 6 m in width) and the cave has a horizontal component extending in from the northeastern side of the sinkhole. The sinkhole is about 3 m deep, and easy accessibility into the sinkhole suggests that the cave has been entered in modern times. Furthermore, the presence of a few sherds seemingly picked up and gathered neatly in 2 or 3 spots strengthens the likelihood of a previous entrance by others. The ceramics found include 15 body sherds and 2 bowl rims (surface collected). There is possible architecture at the juncture of the entrance to the deeper part of the cave: the entrance may have been blocked up and/or the sinkhole may contain a platform, though the former seems more likely. This possible architecture is comprised of large uncut limestone rocks (average 1 m large) stacked in at least 2 (?) courses stretching across the entire width of the entrance. Wedged underneath one of the rocks on the southern end of the “rock stack” was 1 jute shell (tip broken). Scars of broken stalagmites were abundant in the areas closer to the entrance, possibly to facilitate access as one must be careful of one’s head for the ceiling is not too high in this area (which is even lower now due to the rocks blocking part of the entrance). The cave wall on the east side appears brittle and is of a loose marl-like material eroding from the wall. At the center of the cave is a rather steep drainage area; perhaps a unit there will yield archaeological material drained in from the higher areas of the cave floor.

Cave 25 was recorded due to the observation by Cobb that a newer rock was wedged under an older formation, suggesting the possibility that the aguada is built over a cave and may open up below. This aguada is located northeast of the Plaza of the 2 Stelae, which is 1.4 km from the site core along the sacbe. Numerous cave formations (predominantly dogtooth spar) were found on and around the eastern structure of the plaza group whereas on the other structures few were observed.

Group B Plaza (Tufa) Investigations

The exposed rock at the base of Caana on the eastern side of the main staircase was identified by Cobb as being tufa and not simply bedrock. Tufa is a type of travertine formed on the surface by calcitic deposits from a spring. This is interesting as it suggests the presence of a spring or some sort of water source at one time. Curiously, when the Tourism Development Project had drilled cores in the B Plaza to find water for the camp, the water they had hit emptied out into a cave deeper below (Awe and Bonor, personal communication 2002). This exposed rock had initially caught our attention as it protrudes out of the terrace wall of the terminal architectural phase. In addition, parts of the tufa are modified; the top coincides with the level of the first terrace floor, and the vertical face of the tufa was cut to accommodate the cut stone for the retaining wall. The tufa maintains a rounded triangular shape, with a horizontal fissure running through the mid-section. A small niche penetrates the central portion. Parts of the tufa base are modified, but rather than leveling the surface, it gradually slopes southward. In order to examine the morphology of this tufa and attempt to assess its cultural significance, units were placed around the tufa and a more detailed report is included in this volume (Ishihara and Jack 2003 this volume).
Summary

A total of 25 subterranean features were recorded and only 2 of the 9 caves reported in 1994 by the Caracol Project were relocated this field season. 22 of the 25 are located within the 3 km radius. The other three are located about 6 km from the Caracol epicenter. Relocating these previously documented caves was made difficult by the previous lack of precise plotting on the site map. Moreover, the thick and high vegetation complicated surveying and finding caves.

Of the 25 caves recorded, 10 showed evidence of archaeological material (CC2, 3, 6, 7, 8, 14, 16, 18, 19, 24). Nine were depressions that were filled with debris; 5 were narrow, vertical pits (CC1, 2, 4, 5, 6), 2 were collapsed sinkholes (CC14, 16) and 8 had horizontal passages (CC3, 7, 8, 18, 19, 21?, 23, 24). Fourteen caves were explored, 10 were mapped, and 6 were surface collected. None of the cave sites, however, contained any standing or running water source. Future investigations should continue to locate caves in the area, although a systematic survey is difficult. Sampling of morphologically different subterranean features is needed to assess their archaeological significance. Further investigations are also needed in the caves that contain architecture.

A major obstacle encountered this field season was the poor air quality in the sinkholes. Why and what is the cause of the lack of sufficient oxygen (i.e., predominance of carbon dioxide)? Was the poor air existent during Classic Maya times? If so, does this relate to the extent of ancient cave use? These are but a few of the questions that need to be addressed by future cave research in the Caracol Reserve.

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Caracol Cave 1
(Pozo Pequeño)

Caracol, Belize, C.A.
Western Belize Regional Cave Project
July 11, 2002
Suunto and Tape Survey
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Fig. 1. Profile and plan view of Caracol Cave 1 (Pozo Pequeno).
Fig. 2. Profile and plan of Caracol Cave 2 (Cueva Pizarra).
Fig. 3. Profile and plan view of Caracol Cave 3 (Cueva de Mal Viento).
Caracol Cave 4
(Pozo Petey)

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Western Belize Regional Cave Project
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Fig. 4. Profile and plan of Caracol Cave 4 (Pozo Petey).
Caracol Cave 5
(Cueva del Ronron)

Caracol, Belize, C.A.
Western Belize Regional Cave Project
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Fig. 5. Profiles and plan of Caracol Cave 5 (Cueva del Ronron).
Caracol Cave 16
(Cueva Cerda)

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Fig.6: Profile and plan of CC16 (Cueva Cerda).
Fig. 7: Profile and plan of CC18 (Skull Cave).
REPORT ON THE 3RD and 4TH SEASONS OF ARCHAEOLOGICAL INVESTIGATIONS IN ACTUN CHAPAT

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INTRODUCTION

During the 2001 and 2002 field seasons members of the Western Belize Regional Cave Project, directed by Dr. Jaime Awe, spent several weeks conducting archaeological investigations in the cave site of Actun Chapat in the Macal Valley, Belize. These investigations included survey, mapping, and the documentation, photography, and illustration of rock art. In addition, limited excavations were performed to investigate deposits below the cave surface around a selection of features. This report presents a summary of these speleoarchaeological efforts.

LOCATION AND PHYSICAL DESCRIPTION

Actun Chapat is located in the lower Macal Valley of Belize, approximately 7.8 kilometers southeast of Xunantunich and 9.5 kilometers southwest of Pacbitun (Euclidean distances calculated from site cores to Entrance One). To date the WBRCP has identified two entrances, Entrance One (a horizontal entrance to the East) and Entrance Two (a sinkhole entrance to the west), and a series of passages leading south/southwest between these two entrances (Figure 1). The distance between Entrance 1 and Entrance 2 is 535 m. The junction for the southern passages (Black Desert Passage) is 382 m from Entrance One and continues 277 m to a subterranean lake, making the total surveyed length of the cave 812 m (Figure 1). The largest distance separating cultural material within the cave is no more than 10 m throughout the entirety of the cave surveyed up to this point in time.

METHODOLOGY

The archaeological work in the 2001 and 2002 seasons consisted primarily of survey and mapping yet included limited excavations. The survey rounded out the mapping efforts initiated in the 1999 and 2000 seasons, and the excavations focused on areas in the cave that were not investigated in the previous seasons. Information on the
1999 and 2000 archaeological investigations may be found in the field reports by Ferguson (2000, 2001; see also Ishihara 2000, 2001).

**Survey and Description of Cave Attributes**

The survey and mapping endeavors were primarily conducted by tape and compass from baselines established throughout the cave. A Leica Geosystems DISTO laster distancemeter was also employed in the survey, which was particularly effective in producing accurate profiles. Offset measurements were taken at 50 cm and 1 m intervals along the baselines except when artifacts or significant morphological features were encountered (i.e. speleothems, sharp breaks in cave walls, architectural features, etc). In these situations tighter measurements were taken in order to more accurately represent the cave environment on the map. All profiles were created with offset measurements of 50 cm along the baselines.

During the 1999 and 2000 seasons the baseline/offset methodology typical of the WBRCP was augmented by the use of a theodolite (Ushikata TEO-100). The efforts in the 2001 and 2002 season remapped a number of chambers and passage segments previously mapped with the theodolite in order to provide better control of provenience information and a tighter resolution for the map by way of taking more survey shots at smaller intervals than the theodolite mapping endeavors. As mentioned above, the total length of cave passages surveyed is 812 m. The cave passages vary in width from 2-75 m, resulting in a total surface area of 25830 m² for the cave passages, ledges, and chambers surveyed by the end of the 2002. In comparison, the main chamber of Actun Tunichil Muknal measures approximately 183 m in length, and is 36 m at its widest point and 5 m at its narrowest, producing a total floor area of approximately 4450 m² (Moyes 2001; Moyes and Awe 1998, 1999). This makes the total subterranean area of utilization by the ancient Maya in Actun Chapat one of the largest in Belize systematically documented and mapped by archaeologists to date.

A map of the entirety of the cave survey was produced at a 1:500 scale (Figure 1). The survey was terminated at the eastern edge of the subterranean lake due to time constraints and due to the fact that no cultural materials were located beyond this area. Limited reconnaissance was conducted beyond the lake, however, indicating that the cave passages continue. Due to the prevalence of architecture, significant artifacts, and extensive 1999 season excavations in the Entrance 2 area (Chamber 6) and due to the rock art and limited excavations in the Mordor area (Passage 2) these sections of the cave were mapped both at 1:100 and 1:500 scales (Figures 2 and 3). All maps were subsequently scanned, rendered graphically, and reduced for publication in this report. Below is a brief description of the various chambers, passages, and ledges in Actun Chapat.

**Entrance 1 and Chamber 1**

Entrance 1 of Actun Chapat is a clamshell-shaped horizontal entrance providing entry to the cave to the east, with a seasonally dry arroyo leading out and away to the
west. The cave floor in this entrance is a travertine covered limestone shelf that is approximately 5 m above the arroyo bottom. The entrance measures 14 m wide and 9.6 m high, but the northern side of the entrance at the dripline connects with the arroyo bottom, making the maximum height of Entrance 1 14.2 m above the ground surface.

In the center of the Entrance area there is a large speleothem column that is 5.5 m in diameter at maximum at the base, tapering to approximately 2.5 m at the ceiling. There is a large breakdown boulder approximately 5 m in diameter and 3 m high to the south of this formation, which effectively makes the easiest human passage into Chamber 1 an 8.5 m distance from the light zone to the northwest around the speleothem column to the penumbral zone. The cave floor in the entrance is limestone covered with eroded rimstone dams, all of which is covered sporadically with green moss and guano. The ceiling is covered with a patchwork of stalagmites, and many of the lower formations in the northern wall of the entrance exhibit signs of breakage. On the southern wall of the entrance there is a speleothem conglomeration consisting of stalagmites, bacon formations, and flowstone. This area exhibits breakage, pecking, and abraiding to the formations, the most notable of these being a biconical hole through one of the bacon formations. Although this may be an example of monumental Modified Speleothem Sculpture further examination and evaluation of this formation is necessary in order to make a definitive determination.

Chamber 1 is 14.5 m wide and 25 m long at maximum with a ceiling height of 13.5 m at the highest point. The floor of rimstone dams is covered by large rocks, pebbles, sand, carbon flakes, guano, and limestone and speleothem breakdown material. In the approximate center of the chamber there is a large fallen speleothem column measuring 5.6 m long and 2.3 m wide at maximum. In the southern portion of the chamber there is a large breakdown boulder measuring 4.3 m by 2.9 m, which is 2.5 m tall. In the western portion of the chamber there is a concentration of speleothem columns and stalagmites measuring approximately 10 m north from the southern wall of the chamber and 4 m east-west. This effectively defines the end of the chamber and separates it from Chamber 2. On both the northern and southern sides of Chamber 1 there is a ledge (Ledge 5) that rises 4 m from the ground floor to the south (Ledge 5b) and 2.5 m to the north (Ledge 5a). The easiest access to the ledge is to the north, where there are convenient niches in the limestone karst that serve as handholds and footholds. Due to the intense human traffic in Actun Chapat over the past 50 years (Antonio Morales, personal communication) it is difficult to tell whether these niches are natural or were carved into the rock to facilitate access to Ledge 5. All of Chamber 1 is in the penumbral zone, save approximately 2-3 m of the eastern aspect near Entrance 1.

**Ledge 5**

Ledge 5 is a horseshoe-shaped ledge that winds west from the northern aspect of Chamber 1, crosses through the speleothem concentration separating Chambers 2 and 3, and then winds back east to the southern aspect of Chamber 1. The northern section of Ledge 5 (Ledge 5a) is 33 m long and 13 m wide. The surface is tightly packed brown dirt that has been hardened by heavy dripwater activity. Along the northern wall there is a
conglomeration of speleothem columns and stalagmites approximately 4.5 m long and 2.5 m wide that features a central stalagmitic column that is yellow-cream in color. There is a heavy concentration of carbon chunks around these speleothems, along with one worked, angular crystal, 12 mm in diameter. To the west of this, along the northern wall there are a series of crude steps hewn out of the dirt matrix that wind around a extensive conglomeration of bacon formations that adhere to the southern wall of the ledge. There are 6 steps that are clearly defined in this area, although based on the evidence of erosion on these there may have been more in antiquity that were covered over as a result of dripwater deluges in particularly wet seasons. The extant steps have range in the rises between 5-15 cm and the range in runs from 75 cm to 2 m.

The conglomeration of bacon formations on the southern wall, many of which reach the ceiling, exhibit signs of breakage and modification. One of the prominent bacon formations with extensive breakage appears to be a human visage in profile with an elongated “Maya” nose. This curious feature is 1 m in height, 2 m from the floor surface. Although this potentially sculpted profile face can be seen presiding over Ledge 5 from the center of Chamber 1 further investigations are necessary to determine whether or not this is a natural occurrence or a monumental Modified Speleothem Sculpture fashioned by the ancient Maya.

Ledge 5 winds through a series of complex and constricted passages in the speleothem conglomeration separating Chambers 2 and 3 (Ledge 5b), then proceeds east to overlook the southern aspect of Chamber 1 (Ledge 5c). In the western aspect of the twisting passages of area b of Ledge 5 there is a steep dropoff (approximately 4 m) down to the east side of Chamber 3. The floor of areas b and c of Ledge 5 is the same hard-packed brown dirt seen in Ledge 5a except for a 3 m wide mound on the northern wall of Ledge 5c consisting of yellow-cream limestone/dripstone underneath a 3-5 cm crust of brown dirt. This substance is quite intriguing, as when it is placed in one’s hand it becomes gelatinous and mushy. A sample of this was removed and dried in the sun, which transformed it into an extremely hard white plaster. Ledge 5c is 35 m long and 12 m wide at maximum.

**Chamber 2**

Chamber 2 measures 20 m east-west and 23 m north-south at maximum and falls entirely in the dark zone. The division between Chamber 2 and Chamber 1 is marked by a drop in ceiling as well as the speleothem conglomeration providing a constricted passage between the two chambers along the northern wall. The ceiling in Chamber 2 is low for Actun Chapat, beginning at 3 m at the east side and rising gradually to 5 m to the west side. The walls, ceiling, and floor of Chamber 2 are comprised almost entirely of flowstone and speleothem material, although there are patches of limestone karst peeking through this travertine cover. In the southern section of Chamber 2 there is a drop in the ceiling that defines an alcove approximately 3 m long and 2 m wide. This alcove contains a scatter of numerous ceramic sherds. The western aspect of Chamber 2 tapers down to a constricted passage just 2.5 m at its widest point. This narrow area is marked by a steep rise in the floor of approximately 2.5 meters that leads into Chamber 3.
Chamber 3 marks a general change in direction of the cave from east-west to north-south. This chamber is quite large, measuring 68 m north-south and 27 m east-west at maximum, and the entire chamber is in the dark zone. The ceiling in Chamber 3 is impressive as well at approximately 22 m at the highest point. Based on changes in the surface matrix, a constriction in the cave walls, a formidable barrier of breakdown rocks and speleothems, and a marked difference in cultural material Chamber 3 was divided into two sections, Chamber 3a and Chamber 3b. Chamber 3a runs 42 m east from the short restricted passage connecting it to Chamber 2 to a series of breakdown boulders in an area where the walls constrict to the narrowest part of the chamber at 6.5 m wide. Beyond this Chamber 3b continues 26 m to the south and is 21 m wide at maximum.

The floor of Chamber 3a is characterized by rimstone dams covered by large breakdown boulders ranging from 1-5 m in diameter as well as smaller rocks ranging from 25-75 cm in diameter. Along the northern wall there is a steeply sloped area 29 m long and 4 m wide at maximum leading up to Ledge 3, which is approximately 9 m above the ground surface of the chamber. Along the southern wall there is a steeply sloped area 50 m long and 14.5 m wide at maximum leading up to Ledge 4, which is approximately 12 m above the surface of Chamber 3.

The floor of Chamber 3b is characterized by hard-packed brown dirt, carbon chunks, scattered ceramic sherds, and architectural terraces or platforms (Figure 1; also see Ferguson 2001 for a description of these platforms and the excavations performed in Chamber 3b). In the eastern aspect of Chamber 3b there is a narrow slope that provides relatively easy access to Ledge 4 to the east. In the northern aspect of the chamber on the eastern wall there is a conglomeration of breakdown boulders and jagged karst material. Leading up and west from this area is a narrow passage (Passage 1) that winds through the breakdown material. In the southern aspect of Chamber 3b on the eastern wall the wall is covered by a flowstone curtain which exhibits signs of breakage resulting in two narrow portals leading into a chamber to the southwest (Chamber 4). The two portals are both approximately 1 m wide, 1.5 m high, and both are partially walled up by limestone rocks and speleothems ranging in size from 25-50 cm in diameter. It is likely that at some point the ancient Maya sealed these portals and that looters subsequently broke them down to gain access to Chamber 4.

Ledge 3

Ledge 3 overlooks Chamber 3a to the west and measures 35 m long and 8.6 m wide at maximum. The floor surface is comprised of travertine dams and hard-packed brown dirt. The floor is scattered with ceramic sherds and small limestone rocks. The easiest access to this ledge is at the southern end from Passage 1.

Ledge 4
Ledge 4 is an expansive area measuring 53.4 m north-south and 19.8 m east-west. This ledge was divided into two parts, Ledge 4a and 4b due to a linear barrier of stalagmitic formations and a drop in surface elevation that effectively divide the ledge into two discrete areas. Ledge 4a, the southernmost aspect of the ledge, is 43 m long and 19.8 m wide at maximum. To the north Ledge 4b is 10.4 m long and 8.9 m wide at maximum. Both segments of this ledge overlook Chamber 3b to the west and contain architectural platforms or terraces.

In the southwestern section of Ledge 4a there is a steep slope of hard-packed brown dirt that leads down to Chamber 3b. In the southernmost portion of ledge 4a there is an architectural platform of 3-4 courses of dry-laid limestone rocks with a surface of hard-packed dirt and ceramic sherds. This platform is 4 m north-south and 4.4 m east-west, with a rise of 50 cm above the adjacent ground surface. Above this platform there is another small platform measuring 2.9 m long and 1.75 m wide, with a rise of 25 cm above the previous platform.

The center of Ledge 4a is dominated by large columnar speleothem conglomerations, all of which exhibit signs of burning around and within the dripstone material. On the western wall in the northern section of the ledge there is a raised platform behind a series of speleothem columns and stalagmites. This area has evidence for intense burning episodes, as the walls and speleothem material are blackened, and the ground surface of hard-packed earth has high concentrations of carbon chunks and charred ceramic sherds. To the east of this area leading down to the edge of the ledge the ground surface is covered with a thin layer of sparkling white travertine from dripwater activity above. In the northern section of the ledge there is a series of stalagmites that one can pass through to gain access to Ledge 4b.

The ground surface of Ledge 4b is approximately 3 m lower in elevation than that of Ledge 4a. The surface of Ledge 4b is hard-packed brown dirt with limestone rocks and scattered ceramic sherds. There are two architectural platforms on this ledge, one dividing the ledge in half north-south, measuring roughly 6 m north-south and 3.5 m east-west. Abutting the eastern wall there is another platform measuring 4 m north-south and 2.5 m east-west. In the northernmost portion of Ledge 4b there is a speleothem column reaching the ceiling some 13 m above the ledge surface.

Chamber 4

Chamber 4 is a relatively small chamber to the southwest of Chamber 3b measuring 19 m north-south and 15 m east-west. The floor surface is comprised of soft-packed light brown dirt. There is evidence of looting throughout the chamber, which has exposed numerous ceramic sherds and human bone fragments and indicates that the subsurface component of Chamber 4 may be relatively deep. The southern and western walls of the chamber are littered with ceramic sherds.

Passage 1
Passage 1 is a chaotic passage that winds though a nexus of breakdown rocks, travertine dams, and speleothem conglomerates. The passage is 75 cm wide at its narrowest point and 5 m at its widest. This passage is often wet and slippery, and at times the travertine dams are filled with water. Passage 1 is 49 m long and the ground surface rises approximately 15 m from the easternmost point by Chamber 3 to where it meets with Passage 2. Approximately 13 meters from the easternmost point of Passage 2 there is easy access to Ledge 3 to the north and Ledge 2 to the south.

Ledge 2

Ledge 2 is a small ledge to the south of Passage 1 measuring 15.2 m east-west and 3 m north-south at maximum. The floor of the ledge is a series of level rimstone dams and dirt covered in calcite. Access to Ledge 2 is easiest between two large flowstone columns that separate the ledge from Passage 1, as the eastern end of the ledge is marked by a steep dropoff.

Passage 2

Passage 2 is a long phreatic tunnel that is 181 m in length and 32 m wide at maximum. The ground is spongy, dark brown dirt that is often wet from dripwater activity throughout the passage. At the eastern end of the passage there is a cluster of stalagmites measuring 6.2 m east-west and 9 m north-south, which effectively separates Passage 2 from Passage 1 to the east. To the west of this there is a depression or arroyo 14 m long and 3.4 m wide that is filled with jagged limestone rocks and pebbles that are free from any dirt or other matrix. During times of heavy rains this arroyo will either fill with water or the sounds of gurgling water from deep below the arroyo may be heard (William Pleytez, personal communication). Ceramic sherds and the fragments of at least one metate litter the floor just to the south of the arroyo, and on the southern end of the passage there is a sloped area leading up to Ledge 1.

Approximately 120 m from the eastern side of Passage 2 there is an area with two prominent speleothem columns in western portion of the passage, a sloped area leading to a level surface in the eastern portion of the passage, and a regular sloping “ramp” leading to an alcove in the southern portion of the passage. This area has been labeled “Mordor” by project participants due to the presence of a modified stalagmite dubbed “Gandalf” (see Rock Art below). The Mordor area of Passage 2 contains ceramic sherds, Modified Speleothem Sculptures, and human remains (Figure 3). To the west of Mordor there is a drop in ceiling and Passage 2 continues 60 meters west to a drop in ceiling marking the opening to Chamber 5a. Units 14 and 15 were placed in Mordor in the 2002 season (see Excavations below).

Ledge 1

Ledge 1 is a small ledge to the south of the east side of Passage 2 measuring 16 m east-west and 20 m north-south at maximum. This area is a series of small alcoves and
niches nestled between flowstone columns and the limestone karst cave walls. The floor is light brown hard-packed dirt with numerous concentrations of ceramic sherds.

**Chamber 5**

Chamber 5 is a large chamber measuring 108 m north-south and 75 m east-west. There is a 3 m wide seasonally dry arroyo running west to east in the middle of the chamber which effectively divides the chamber into two parts, Chamber 5a to the south and 5b to the north. The floor surface of the chamber is loose, dark brown dirt with occasional limestone rocks and pebbles. To the south of Chamber 5a there is a drop in ceiling that defines the end of the chamber and the beginning of Passage 3. To the west of Chamber 5a there is a steep slope that marks the beginning of Chamber 6c. While Chamber 5a is in the dark zone, portions of Chamber 5b are in the penumbral zone as light from Entrance 2, 130 m to the west, can be seen from the middle of the chamber.

**Passage 3 (Black Desert Passage)**

Passage 3, or the Black Desert Passage, leads 65 m south to Passage 4 and is 52 m wide at maximum. The floor of this passage is very dark brown dirt that has been ridged and ditched by hydrological activity. The southern aspect of the Black Desert Passage has a 10 m wide arroyo which abuts the southern wall. The surface of the arroyo is sandy, wet dirt that behaved like quicksand during the survey. Due to this potentially dangerous material the southern wall of the black desert passage was sketched based on eyeballed measurements from 10-15 m away.

In the southeastern corner of Passage 3 there is a drop in ceiling and a passage leading east (Passage 4). In the southwestern portion of Passage 3 there is a drop in ceiling, which marks the boundary between Passage 3 and Passage 5 to the west. The floor of the black desert passage is almost entirely comprised of dark black dirt, although limestone rocks and ceramic sherds are present throughout the passage.

**Passage 4 (Gateway to Zotz Na)**

Passage 4 is a 10 m wide passage leading east from the southeastern corner of Passage 3. This passage leads to an area dubbed the “Zotz Na” by members of the WBRCP. The Zotz Na is so called due to the high concentration of bats in this area. Due to the dangers a survey in this area would pose not only to the bats but to humans as well, this area was not mapped. However, it is important to note that there are reports of some cultural materials in the Zotz Na, namely a mano and metate, and possibly a Modified Speleothem Sculpture similar to MSS #1 and #2 in Mordor (William Pleytez, personal communication).

**Passage 5**

Passage 5 leads 58 m west from Passage 3 and is 35 m wide at maximum. The floor of this passage is a combination of pebbles, sand, and very dark brown dirt.
Throughout the passage there are numerous ceramic sherds and human remains. Following a period of heavy rains the morphology of the floor of this chamber becomes altered, and a new assemblage of cultural materials and human remains are revealed (William Pleytez, personal communication; personal observation). It is unclear whether this is due to a rise in the water level of the lake, water flowing down from the Black Desert Passage (Passage 3), or water flowing in or out of the Zotz Na. Unit 13 was placed in the western portion of Passage 5 in the 2001 season (see Excavations below).

**Passage 6 (Poo Passage)**

Passage 6 is 88 m long and 16 m wide at maximum. The floor is dark brown slippery mud mixed with limestone pebbles and rocks. A steep dropoff to the east separates Passage 6 from Passage 5, and the passage continues west with a gradual downward slope until it meets with “The Lake” at the western end of the passage. The Lake is typically crystal clear, allowing numerous ceramic artifacts to be seen poking out of the soft mud at the bottom. Although reconnaissance missions beyond the lake indicate that the cave continues well beyond this point, opening up to large chambers and long water-filled passages, the archaeological survey was terminated at the eastern edge of the lake due to time constraints.

**Entrance 2 and Chamber 6**

Entrance 2 is a sinkhole or vertical entrance measuring 5 m north-south and 3 m east-west approximately 10 m above the cave floor. There is a small karst ledge 1 m below the entrance that restricts the opening somewhat and makes the dripline for Entrance 2 roughly 3 m in diameter. Despite its small size, Entrance 2 provides a considerable amount of light to Chamber 6 below as well as a miniscule amount to Chamber 5b 130 m to the east and approximately 40 m below.

The chamber below Entrance 2 has been designated Chamber 6, and subdivided into areas A through D. Chamber 6 is 89 m east-west and 68 m north-south at maximum. While the majority of the bats in Actun Chapat spend their daytime hours in the Zotz Na, they pour out of Entrance 2 en masse approximately 7pm in the evening. Many of the bats then congregate in Chamber 6 amid their foraging missions to the outside.

Chamber 6a is the area just below Entrance 2 and the area following the north wall from this location, measuring 27 m north-south and 25 m east-west at maximum. The floor of the chamber below the entrance is loose dark brown dirt, covered with guano, limestone rocks, humic material and leaves, while the material to the north is hard-packed light brown dirt occasionally covered in calcite. The southern section of the chamber has a number of 3-4 m tall bacon formations that have biconically drilled holes in them. The southeastern section of Chamber 6a is delineated by a dry-laid retaining wall of limestone rocks and speleothems, measuring 1.5 m high. This separates Chamber 6a from Chamber 6b to the east, and indicates that the flat floor of Chamber 6a is at least partially the result of architectural modification. The northeast section of Chamber 6a
has large speleothem columns and stalactites, and is separated from Chamber 6c to the east by a steep dropoff amidst a series of formations.

Just south of the dripline in Chamber 6a there is a series of speleothems stacked together forming a small niche area with a long speleothem serving as a flat seat or altar. On one of the large rocks supporting this speleothem there is a small simple-face petroglyph facing east (Petroglyph #1). Ceramics, carbon and minimal lithic material are scattered throughout Chamber 6a.

Chamber 6b is to the southeast of Chamber 6a and measures 20 m north-south and 25 m east-west at maximum. The chamber is marked by a flat, sunken floor below the southern platform of Chamber 6a and the architectural terraces of Chamber 6d to the south. The floor is comprised of loose, dark brown dirt, limestone rocks, ceramic sherds and fallen speleothem material. In the approximate center of Chamber 6b there is a 2.5 m tall speleothem formation with evidence of a biconically drilled hole and abrading (Modified Speleothem Sculpture #4). The western wall of the chamber is a tall flowstone curtain reaching the ceiling 16 m above.

Chamber 6c extends east from Chambers 6a and 6b, measuring 45 m north-south and 63 m east-west at maximum. The western section of Chamber 6c is relatively flat, with ovoid areas demarcated by limestone rocks and speleothems. The eastern section is a steep downward slope that connects with Chamber 5b. The sloped area has a number of architectural terraces defined by dry-laid walls of large limestone rocks and speleothems that support flat floor surfaces. The floor of Chamber 6c is loosely packed dark brown dirt and black bat guano.

Chamber 6d is a steep upward slope to the south of Chamber 6b, measuring 23 m north-south and 30 m east-west at maximum. The floor is comprised of dark brown dirt, varying from hard-packed to loose, is covered by numerous limestone rocks, speleothems, and ceramic sherds. This area is marked by architectural walls and terraces on the slope that rises 16 m to eventually meet with the ceiling at the southern end of the chamber. In the southwest section of the chamber there is a steep downward slope leading to an area with a relatively flat floor surface and a small elevated alcove to the south. To the north of this area there is a drop in ceiling and a 1 m wide passage leading into Chamber 7.

**Chamber 7**

Chamber 7 is a small chamber to the north of the western area of Chamber 6d measuring 11 m north-south and 20 m east-west at maximum. This chamber is separated from Chambers 6a and 6b to the north and east, respectively, by a large flowstone curtain. The floor of the chamber is hard-packed brown dirt with travertine deposits and ceramic sherds. In the southwestern section of the chamber there is a steep slope leading upwards through a series of stalagmites. The northeastern section of the chamber is a series of narrow passages and alcoves that are defined by tall bacon formations and hollow spaces within the large flowstone curtain to the east.
Rock Art

Following discoveries in neighboring Actun Halal (Griffith et al. 2002, Griffith and Jack in press) to the north in the 2001 and 2002 seasons it became apparent that Actun Chapat contained a number of complex speleothem artforms. To date, one petroglyph, one ‘painted speleothem,’ and four Modified Speleothem Sculptures have been identified in Actun Chapat. In addition to this there are a number of formations exhibiting breakage and other modification that might also be sculptures, but further analysis is required in order to make a definitive determination. Time constraints prevented exhaustive analysis and complete measurements of Modified Speleothem Sculptures 2 and 3.

Petroglyph #1, Chamber 6a (Entrance 2)

Petroglyph 1 is located on a fallen or relocated speleothem formation just south of the Entrance 2 dripline in Chamber 6a. The petroglyph is a simple face with two eyes and a horizontal mouth. The eyes are both 3 cm in diameter and 1.5 cm deep at maximum. The mouth is 4 cm below the eyes and is 11 cm long, 3 cm high, and 1.5 cm deep. While it is likely that Petroglyph #1 was carved on the speleothem formation at its current location it is also possible that the speleothem was carved and then later relocated in Entrance 2.

Modified Speleothem Sculpture #1, “Earth Monster,” Mordor (Passage 2)

Modified Speleothem Sculpture #1 in Actun Chapat is comprised of a series of modifications to a conglomeration of flowstone 3 m in height (Figure 4). The majority of the modification is clipping evident on thin stalagmitic columns within the conglomeration. A series of individually clipped, thin columns form a group centrally located in the flowstone conglomeration, with one longer column in the middle. This feature of clipped columns appears to be either a “snout” or a nose, the smaller formations to the left and right of it appear fangs or teeth. On either side of the one central and longer column, there is evidence of clipping and shaving to other formations that effectively set the snout and fangs apart from the rest of the formation. Below the snout are stalagmitic bulbs that have been shaved or flattened. Within the formation behind the snout, the speleothem material on the underside of the formation appears deadened from burning episodes.

Inside the formation on the ground there is a small pile of broken speleothems, each ranging from 10 cm to 30 cm in length, as well as three undiagnostic ceramic sherds ranging from 5 cm to 30 cm in length. On the ground in front of the formation there is a large unslipped body sherd of an olla. Due to the gaping maw, and the large, trunk-like nose (both typical features of Itzamna), project members have nicknamed MSS #1 “The Earth Monster.”

Modified Speleothem Sculpture #, Chamber 6b (Entrance 2)
The overall scheme of Modified Speleothem Sculpture #4 in Actun Chapat is that of a face in profile (Figure 5). However, the modified undulations in the flowstone provide an interesting effect, where it becomes difficult to identify exactly which facial features the ancient Maya intended to emphasize. The area of modification appears on the lower portion of a tall stalagmitic conglomeration. There are undulations or curves that comprise an eye orbit, nose, mouth, lower lip, chin, and neck, and all these have been abraded, shaved, or smoothed. There is a hollow “eye” feature that has been biconically drilled. This eye, in conjunction with the rest of the modifications to the speleothem, make both sides of this MSS look similar when viewed from the opposite vantage point.

MSS #4 appears to be a version of a sculpted face in profile. It is conceivable that this sculpture was intended to represent a local ruler (Sahal), priest, or some other important living person who utilized the cave site. However, the smoothness of the interior of the mouth is reminiscent of the toothless mouth. Thus, it is possible that MSS #4 is another representation of an aged underworld God.

‘Painted’ speleothem, “Gandalf,” Mordor (Passage 2)

In the approximate center of the Mordor area of Passage 2 there is a small stalagmite exhibiting black marks that may be carbon residue or paint. Measuring only 60 cm tall and 22 cm in diameter at maximum the formation is quite diminutive in relation to the large size of Passage 2. The black marks appear on the eastern side of the formation and appear to have been placed in conjunction with the natural morphology of the stalagmite to yield a face. The marks are similar to torch tamp marks or the carbonized material used for negative handprints seen in Actun Uayzba Kab in the Roaring Creek Valley. There are three distinct black marks or smudges that appear to serve as an eyebrow, an eye, and a mouth, respectively, around a crooked speleothem configuration that looks like a nose (Figure 6). The overall effect of the marks and the natural morphology of the speleothem is a wizened face. Project members have nicknamed this speleothem “Gandalf” as a result.

Excavations

Three excavation units were placed in Actun Chapat during the course of the 2001 and 2002 field seasons. These units were numbered in keeping with the previous excavation sequence established in the 1999 and 2000 seasons. Unit 13 was established in Passage 5 in the 2001 season. Units 14 and 15 were established in the Mordor area of Passage 2 in the 2002 season. All excavation units were excavated with trowels and excavated materials were screened through 1/4 inch screens.

Unit 13, Passage 5

Unit 13 was a 2 x 3 m unit established in the western terminus Passage 5 over a linear series of mud-covered stones which appeared to be architectural in nature, perhaps forming a step or terrace. The numerous human remains in the area and the presence of a mano and metate in close proximity prompted the investigation to determine whether or not there was architecture as well. As excavations progressed through the dark brown
mud matrix it became clear that the linear feature was likely not architecture, as it was revealed that some of the “rocks” were actually large chunks of solid mud. The unit was dug in one level and bedrock was reached at 16 cm below surface. One undiagnostic body sherd and a feline tooth with a biconically drilled hole were the only artifacts recovered from the excavation.

Unit 14, Mordor (Passage 2)

A 1x1m unit was set up in the Mordor area of Passage 2, aligned to a North-South axis and incorporating a stalagmitic formation known as “Gandalf”. The purpose of the unit was to establish whether any cultural material could be found in association with “Gandalf”, named as such due to black markings that result in a face being present on an otherwise apparently natural formation. It was supposed that cultural material recovered during excavation would provide insight into past human activity associated with this marked speleothem, and may have aided in the establishing of a time-frame within which the possible carbon marks could have been added to the formation. This stalagmite with black markings would be considered highly significant if there was strong suggestion that the markings were ancient, whereas its value to Maya archaeologists is considerably limited if the markings are recent and potentially the result of graffiti or other forms of modern human activity.

Unit 14 was excavated as one level and ended upon reaching solid speleothem formation, a continuation of the base of “Gandalf” and other stalagmitic bulbs within the unit (Figure 7). A total of 4 undiagnostic ceramic sherds were retrieved from the surface. An additional 5 undiagnostic ceramic sherds (2-7cm length) were recovered during excavation, as well as one small faunal bone (rodent/bat bone) and another non-diagnostic bone fragment (approx. 2cm in length). On completing excavation, the profile of the unit’s west wall revealed two further levels of localized clay inclusions.

The predominant matrix of level 1 was loose orange-brown to light brown, with microstratigraphy of dripwater calcite inclusions. The first of the two types of localized clay inclusion on the western side of the unit was mid-brown in color, the second a light orange-brown. Carbon inclusions were found in large quantities throughout the level, and two arc-shaped areas of burning were visible on the speleothem material at the base of the unit in the eastern half (Figure 8). Some sections of burnt speleothem appear to have broken off the base of the unit during excavation and were subsequently retrieved.

Although the cultural material within the unit was considerably limited (total of 9 sherds including surface collection), the high carbon content is particularly significant in supporting the theory that the black markings on the “Gandalf” formation may be carbon. It is worth noting, however, that the shape of the burnt areas on the speleothem base of the unit could not easily be determined following excavation (perhaps due to the limited light of headlamps) and were more visible in digital photographs.

Unit 15, Mordor (Passage 2)
Unit 15 was a 1 m long unit established in the “mouth”/“maw” of the “Earth Monster” (Modified Speleothem Sculpture #1). The width of the unit (0.63 and 0.67 m baselines) was determined by the shape of the speleothem formation. The baseline forming the length of the unit was aligned to an azimuth of 311° due to the orientation of the formation.

The unit was opened with three objectives in mind: (1) to establish whether any cultural material could be found within the “mouth” of Modified Speleothem Sculpture #1; (2) to search specifically for any evidence of burning activity, as the broken speleothems at the roof of the “mouth” appear to be burned; and (3) to investigate the cached speleothems in the “mouth” to ascertain whether they were fragments from the broken stalactites above or if they were brought in from a different location.

A plan view drawing was made of the interior of the “mouth” before excavation (Figure 9). This was to record the location of the three ceramic sherds and an assemblage of broken speleothems, all of which were returned to their original locations after excavation and backfilling. Level 1 was comprised of a slightly moist, clay-like, friable matrix in granular clumps. The matrix was mid-brown in color with some calcite and limestone inclusions (0.2-1 cm in diameter). Some soda straws and small broken speleothem fragments (approx. 10-20 cm length) were also found within the level. Level 1 was terminated at a maximum of 6 cm below surface.

The matrix of Level 2 consisted of very compact, hardened clay with an almost plastic, waxy appearance. Towards the top of the level, the clay appeared pure with no inclusions visible to the human eye, though some small and occasional calcite inclusions (approx. 0.5cm length) were present in the bottom of the level. The level 2 clay was mid/dark brown in color with some occasional lighter streaks. From the profiles it became apparent that the two different colored clay matrices (both termed ‘Level 2’ during excavation) were in fact two different stratigraphic layers. Excavation was ended upon reaching flowstone bedrock below at a maximum of 33.5 cm below surface.

None of the three stratigraphic levels in Unit 15 appear to be cultural, and are likely natural depositional layers. A potential explanation may be dripwater activity and/or flooding, although there is no indication as to how recent or ancient such deposition may have been. It is clear that very little was revealed from the excavation of Unit 2 regarding the initial questions. First, no cultural material was recovered from the subsurface levels, despite the presence of three ceramic sherds and a potential speleothem cache at surface level. Second, there appeared to be no evidence of burning in the form of carbon flecks or burnt artifacts/objects. Third, a brief investigation of whether the pile of broken speleothem fragments matched those of the stalactites above yielded no matches. This suggests that the fragments had not simply fallen from above and were thus likely purposefully cached in the “mouth” of the Modified Speleothem Sculpture.

CONCLUDING REMARKS
The investigations presented here, while extensive, have only touched the surface of this amazing cave site. Actun Chapat has extensive architectural modification in the form of walls and terraces, rock art, human remains, and a wide range of cultural materials. Ceramic analysis to date indicates that the cave was utilized for over 1000 years, from the Preclassic to the Terminal Classic periods (Ishihara 2001, 2002). With a total surveyed length of 812 m and a surface area of 25830 m², as well as an unsurveyed area of unknown dimensions, Actun Chapat is one of the largest subterranean areas of ancient Maya activity in Belize.

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Introduction

Chechem Ha Cave has been under investigation by the Western Belize Regional Cave Project (WBRCP) under the direction of Dr. Jaime Awe since 1998. The current phase of research is a case study designed to examine changes in ritual practice through time. This project requires the introduction of new methodologies designed to investigate site formation processes within the cave. In the analyses, traditional excavations, analyses of the micromorphology of subsurface deposits, and a rigorous dating program will be used to evaluate chronology and use-frequency throughout the cultural history of the cave. The following is a report of activities conducted during the 2002 summer field season. A sampling strategy was designed to investigate changes and continuities of spatial use and to evaluate its temporal components. Excavations were carried out to provide data for the study. This research is an essential first step in articulating ritual practice within the cave to other social processes and environmental events in the region.

The Project

Practice theory has received considerable refinement in past years (Giddens 1979; Bourdieu 1977; Sahlins 1981) with fine-tuning by Sherry Ortner (1989). She characterizes the study of practice not just as a methodology to locate the point of view of agents but one that seeks to understand "the configuration of cultural forms, social relations, and historical processes that move people to act in ways that produce the effects in question" (Ibid.p.12). Unsurprisingly, Ortner notes that an historical overview is integral to the study of changes in
ritual practice. What this suggests is that despite limitations of their data, archaeologists are in a unique position to evaluate changes over considerable time scales.

Changes in ritual practice may be recognized in the archaeological record in a number of ways. It may be noted in ritual remains such as changes in architecture, features, artifacts and their configurations, or in changes of ritual venue, spatial utilization, periodicity, or frequency. These data may then be correlated with social or environmental stress to examine motivation and response (Aldenderfer 1993; Saitta 1997; Schachner 2001; Whiteley 1988).

Despite its potential, Plunkett (2002:1-4) has identified two major problems in the archaeological study of ritual. The first is the dearth of comparative descriptive data. As noted by Ruth Whitehouse (1996:10), archaeological studies of ritual and religion are not backed by a solid history of descriptive material. Joyce Marcus (1999:67) has also commented that, regarding archaeological studies of ritual in Mesoamerica, "speculation tends to outstrip solid archaeological data." This state of affairs is detrimental because, according to Marcus, without comparative data, it is impossible to document ritual manifestations through time and at different organizational levels.

The second problem facing ritual studies is that of identifying ritual in the archaeological record. In household contexts it is problematic for two major reasons. Firstly, little is known about ritual deposition or accretion processes and secondly, ritual abandonment processes can mimic other forms of cultural deposition (LaMotta and Schiffer 1999). Additionally, it has been noted that the same artifact types may function in both domestic and ritual contexts (Hayden and Cannon 1984:239; Walker and Lucero 2000; Walker 1998). Contextual analysis (Flannery 1976:333-334; Marcus and Flannery 1994) helps to solve these problems by focusing on the spatial aspects of ritual use rather than
relying on objects for interpretation. This is an important point because studies of contextually homogeneous material may inform studies of ritual conducted in other venues by isolating spatial patterns and artifact configurations from known ritual contexts.

Ancient Maya caves provide an excellent venue for the study of ritual due to their homogeneous contexts and excellent artifact preservation. All available archaeological, ethnographic, and ethnohistorical evidence suggests that in the Maya lowlands, caves were used exclusively for ritual purposes (Brady 1989). This makes sense because cross-culturally, dark zones of caves are useless for even temporary habitation (Farrand 1985:23) and are only used as ritual spaces (Faulkner 1988; Hole and Heizer 1965:47). According to Chard (1975:171), most “caves” used for refuge were actually rock shelters. Additionally, in tropical areas, caves are particularly dank and are often infested with bats and insects, which carry a number of deadly diseases including histoplasmosis, rabies, and chagas. In his survey of caves in the Maya lowlands, Brady (1989:5-6) concluded that, “habitation within the dark zone is practically inconceivable.”

Therefore, we may assume that artifacts and modifications within caves are the result of ritual performances or other related activities. This is advantageous to the archaeologist because it resolves the contextual problem. Another advantage is that many of the post-depositional formation processes that affect surface sites and plague archaeologists, such as tree growth or building collapse, do not typically occur in the dark zones of caves. Due to the restricted sediment production in cave interiors (Ford 1976), the cave environment protects artifacts, features, and modifications, often preserving them in their original spatial contexts.
Temporal dimensions of cave studies have been largely ignored, partially due to the nature of the data itself and partially to the methods employed by archaeologists. The problem with the data is that, in caves, artifacts are deposited on surfaces such as ledges or niches and sediment over burden is often absent. Therefore, stratigraphy also may be absent. When present, sediment layers may be too tiny to excavate using traditional techniques or may not be in direct association with surface deposits. Without stratigraphy, chronology in caves is difficult to establish because artifacts that are stylistically datable to a number of different time periods are often found in the same loci (Brady 1989; Helmke 1999; Ishihara 2000; McNatt 1996; Moyes 2001a; Reents-Budet 1980; Rissolo 2001). Material such as charcoal that can potentially produce absolute dates may also be expected to be temporally commingled and therefore of limited value.

Ceramic chronologies are useful in producing a relative chronology of the site, but they are prone to error and do not offer secure dates of artifact deposition. Particularly in ritual venues, objects may be curated over long periods of time and deposited at later dates, a known behavior among the modern Maya (Tedlock 1982; Brown 2000). Additionally, ceramic chronologies are not fixed by absolute dates and styles may overlap considerably in time (Jaime Awe personal comm. 2002). Finally, ceramic chronologies assume that pottery was utilized in ritual practice and does not account for the periodicity of rituals that might not have included these artifacts or their deposition.

Even if artifact deposits date from a single temporal period, they do not provide fine-grained data. We cannot assume that objects were deposited on one or many occasions within a few hundred years. Thus while conventional ceramic typologies can provide an estimate of when a ritual context might have been used, they cannot provide absolute dates,
information on the frequency of use, information on the process by which that context was used, or insight into the potential variation in the way in which it was used.

In order to evaluate commingled contexts a "high definition" (Gowlett 1997) or more fine-grained chronological approach is necessary. This can be employed in caves (or areas within caves) that have stratigraphic deposits, even if they are minimal. It requires an extensive dating program, a robust sampling strategy, and an evaluation of site formation processes (Schiffer 1987; 1995). Site formation can be studied by examining the micromorphology of subsurface deposits in thin sections. This technique has been useful in other areas in identifying anthropogenic processes and detailed changes in household floors (Matthews et al. 1996, Matthews et al. 1997) as well as trampling and compaction specific to particular activities (Goldberg and Sherwood 1994; Schiegl et al. 1996).

At Chechem Ha, the interrelationships between space, time and form will be used to analyze changes and continuities in ritual practice (Spaulding 1971). In this case, they will be assessed by evaluating: 1) spatial components of the periodicity of use, 2) frequency of usage both locally (activity loci) and globally (cave system), 3) feature construction/cave modification and 4) evaluation of the artifact assemblage. Alterations in the use of space within the tunnel system will be evaluated using excavation data coupled with radiocarbon dating and use-frequency will be evaluated using microstratigraphic analyses. Feature placement, modifications to the cave, and the artifact assemblage will be correlated with these data to create a spatial/temporal model of cave use that spans its cultural history.

Data derived from dating and laboratory analyses will be correlated with surface finds, features and modifications. These are expected to inform the study when coupled with temporal data. Placement of features and modifications to the cave will be dated and when
possible, periods of use, disuse and use-frequency of those areas evaluated. Changes in artifact assemblages and configurations will also be noted as additional indicators of change in ritual practice.

The Setting

Chechem Ha is a complex cave system located in Western Belize near the town of Benque Viejo (Figure 1). The cave is not directly associated with any settlement centers. It is located in a peripheral area between two mid-sized Maya sites, Las Ruinas to the north and Minanhá to the south. Las Ruinas dates from the Late Middle Preclassic (600-300B.C.) to the Post Classic period (A. D. 900-1225) (Taschek and Ball 1999). Minanhá dates from the Late Preclassic (300-100B.C.) until the Late Classic period (Iannone 2001). Both sites report termination events. Based on a radiocarbon date, Structure 30 at Las Ruinas was terminated between 850-950 A.D., and at Minanhá, based on ceramic chronology, a royal residential group was terminated at roughly 800 A. D.

Chechem Ha is an unlooted ancient Maya ritual site discovered in 1989 and considered by many to be one of the most remarkable finds in Maya cave archaeology. It is unique because the entire cave system was intact, whereas other undisturbed material from caves in the Maya area consisted of partial systems or single chambers (Andrews 1970; Brady et al. 1992; Awe et al. 1996, Miller 1989,1990; Moyes 2001b; Moyes and Awe 1998).

Because the cave was opened for tourism long before archaeological investigations commenced, the archaeological community has not recognized the importance of Chechem Ha. Comparative photographs taken shortly after its discovery demonstrated that although artifacts have been rearranged in a few areas, no wholesale movement has occurred. Additionally, features and constructions were undisturbed and there are no looters trenches in
the cave. Conscientious curation by the owners has preserved much of the data and the cave still offers a fruitful venue for the study of ancient ritual practice.

The site consists of over 300m of tunnels (Figure 2). Evidence of ritual activity is present in a number of discrete activity loci located throughout the tunnel system. Artifact deposits are located along the walls in niches and alcoves, and on eleven ledges ranging from 3-7m. above the tunnel floor. Additionally, artifacts are found in six elevated side passages. Four of these passages are narrow with low ceiling heights and designated as "crawls."

Artifact assemblages in various loci are distinct from one another suggesting specialty usage. For example, Elevated Passage 1 (EP1) contains a cache of large vessels measuring up to one meter in diameter. Tunnel 2 features a series of vessels with inverted bowls covering their bottoms causing them to resemble mushrooms, and Ledge 4 contains four stone circle constructions. Of particular interest is the large cathedral-like chamber at the cave's western terminus designated the "Stela Chamber" due to the presence of a miniature uncarved stela surrounded by a circle of stones (Awe et al. 1997).

Modifications are present in three areas. The first is at the entrance to the cave. According to reports by William Plytez who discovered the site, the entrance was initially blocked with large boulders and sediment. It was highly unlikely that the blockage could have occurred naturally, which raises the question as to whether a termination ritual occurred at the site. These rituals are recognized both archaeologically and ethnographically as part of a ritual cycle of creation and destruction (Mock 1998:4). Blockage of the cave entrance is what would be expected archaeologically in such an event (James Brady personal communication 2001). A similar blockage is also located at the terminus of the eastern bifurcation of the main tunnel.
A third major modification is located in Crawl 3 near the eastern terminus of the cave. It is an elevated, L-shaped, crawl space oriented on an east/west axis. A 3m long area was modified in antiquity to produce a center trench with low walls lining both sides of the passage. An intact olla rests on five smooth river cobbles, which form a hearth. Beneath the vessel, is a concentration of charcoal and ash. Based on the morphology of the space, related features, and artifact assemblage this feature has been interpreted as a symbolic ritual sweatbath (Moyes 2001a).

**Previous Research at Chechem Ha**

Work was begun in Chechem Ha by the Western Belize Regional Cave Project (WBRCRP) in the summer field season of 1998. A survey of the cave conducted by the author produced a map of the walls and major features. The cave was plotted every 25-50cm using tape and compass and was drawn at a 1:50m. scale to preserve detail. During the 1999 field season surface finds were catalogued and mapped. A 1x1m grid system was drawn over the base map and each grid was assigned a number. Grid squares were located in the cave and drawn for added detail and accuracy. Artifacts were piece-plotted on grid maps and later transferred to the base map. In situ refitting of ceramic sherds was conducted at this time and type-variety assigned for chronology (Ishihara 2000). All artifacts were left in place for future study.

**Sampling Strategy**

Work was conducted during the month of June in 2002. The crew consisted of the author, Mark Aldenderfer, and Kay Sunihara. Although a large number of test units were placed in the cave, sizes of units were kept to a minimum to preserve sub-floor deposits for future work. Six larger test units were placed near features and 22 0.5 x 0.5m shovel test
probes were positioned throughout the tunnel system. Column samples of unit profiles were removed from 25 loci. Units and probes were excavated to either bedrock or to the sterile basil clay. Charcoal samples were collected from multiple strata within each sample.

As can be seen in Figure 2, the cave is linear in form and has a limited number of travel pathways or routes through it. Branches in the system are found in eight locations and movement options at these are limited to no more than three in at any locus. Consequently, it was relatively easy to develop a testing strategy that captured how the Maya moved through the cave upon entering it from the single opening. Shovel test probes were strategically placed in the floor of the Main Tunnels just beyond tunnel branches as well as in elevated passages and crawl spaces.

Probes were also placed in the Main Tunnels below utilized ledges in lines of sight of the ledge. It was impossible to place test probes below ledges 2, 3, and 4 due to the presence of small boulders embedded in the tunnel floor, but units were placed below ledges 5, 6, 7, 9, and 10. It is assumed that activity below ledges related directly to activity conducted on the ledge. Heavy charcoal impregnation noted below ledges suggested that these were areas where ritual participants may have stood while others conducted activities on the ledge above.

**Excavations**

The following describes the six test units placed in the tunnel system (Figure 3). The purpose of four of these units was to assess modifications to the cave and the other two were to test for stratigraphy as well as to evaluate the nature of subsurface deposits.

**Test Unit 02-01** was placed in the entrance passage along the east wall at the base of the stairs running in an north/south direction. As noted above, the entrance to the cave was
initially blocked with large boulders and sediment. It is fairly certain that the blockage was intended to close the cave entrance. Upon discovery of the cave, the owners cleared the boulders to create an entrance outside of the cave. The entrance passage was completely blocked with small to medium-sized boulders and cobbles. When the cave was opened for tourism in 1995, William Plytez, the son of the owner, removed a number of the boulders and placed a stairway down the center of the passage. In the construction rocks were tossed to the sides of the stair and steps were cut into the sediment. Wood was used to as retaining walls in the staircase. Today, the entrance descends at a 16º slope into a flat area designated Chamber 1. By placing the excavation at the base of the slope, we hoped to cut into the jumble from the modern use-surface in the chamber. Our purpose was to ascertain definitively whether the rubble inside of the cave was a cultural deposit, and if so, date its initial placement, find the original floor, and determine its slope.

Test Unit 02-01 measured 0.80 x 3m. Level one consisted of loose cobbles and sediment, at least some of which must have resulted from William's stair construction. A large number of sherds (113) were present throughout and were jumbled at various angles. All diagnostic sherds that were typed (16) dated to the Late Classic period. Types included Mt. Maloney Black and Dolphin Head Red bowls, as well as Alexander's, Tu-Tu Camp Striated, and Cayo unslipped jars. Level 2 was defined by a clear sediment change. The matrix was compact and smooth with no angular or sub-angular cobbles or pebbles present. Six sherds were horizontally embedded in the top of the level suggesting that they were trampled. Two of the embedded sherds were red slipped flat-based bowls identified as Reforma Incised from the Middle Preclassic Jenny Creek phase (Jaime Awe personal
Two carbon samples were obtained from the compacted surface. The unit was closed when sterile clay was reached just below the sherds.

**Test Unit 02-04** was a salvage excavation that was undertaken during a repair to the bottom step (See Fig. 4). While clearing small boulders and cobbles, William Plytez discovered what he believed to be "bedrock." Unit 4 was established in the center of the pathway adjacent to Unit 1. The unit measured 1.4 x 1m and faced east/west. The "bedrock" was in reality a very hard compacted clay surface located 10-12cm below the modern use-surface. Two non-diagnostic jar sherds were horizontally embedded in the surface. The surface was 1-2cm. thick and the clay was a bluish gray (10B3/1) in color and coated with a white crystalline powder, probably calcite. It may have been burned but this is unclear. In order to preserve the surface for future study, only the south half of the unit was continued.

Upon removal of the surface, Level 2 was initiated. The matrix was composed of small to medium sized boulders, cobbles, and dark loose sediment. The level produced carbon, 3 speleothems, 10 jute (*Pachychilus*), one fresh water bivalve, and 52 sherds. The material was jumbled between rock and no surfaces were present. At the base of the unit 45cm below the surface, there was a change in matrix. Level 3 consisted of well-compacted clay and very little cultural material. A single post-slipped incised well-burnished bowl sherd, 2 jute, and a speleothem were found. The sherd was horizontally embedded in the clay and directly beneath it was a large piece of charcoal. The sherd had a Savanna Orange type paste and we have tentatively identified it as Reforma Incised. Another layer of rock was lifted and sterile sediment was encountered.

**Discussion**- These test units illustrate that in order to understand the site formation process of this particular area, it will be necessary to conduct a larger horizontal excavation.
It was not possible to obtain column samples from wall profiles due to the large number of boulders present in the units. The horizontally embedded sherds at the base of both units suggest that the rock and fill was introduced into the entrance after the Middle Preclassic Period. What is puzzling is the apparent lack of Early Classic material, though this may be explained as a sampling bias.

These preliminary data suggest that the boulders located outside of the cave and the jumble found in the Entrance Passage may be different ritual practices or events. The following hypotheses are suggested. The stone may have been deposited over a long period of time and the sediment represents a gradual accumulation. We know that stone piles are present at village entrances in Yucatan (Sosa 1985:423). Villagers place stones upon the pile as offerings to the *Bacabs* or Earth deities. Stone piles are found near caves as well and may represent this same practice. A very large pile of stone is present at the entrance to Cueva de las Pinturas in Guatemala and a smaller pile occurs near the entrance to Heidi's Cave near Coban. If the deposit in the Entrance Passage was a gradual accumulation, it would be difficult to observe temporal patterns since carbon and stylistically datable ceramics would have fallen between the stones.

Alternatively, the cave may have been blocked and unblocked several times over the course of its history to prevent access to the site. This is not unprecedented in Maya cave sites. Blocked cave entrances were also noted at Dos Pilas by Brady and his colleagues (1997:360) at the Cueva de Los Quetzales, Cueva de Rio Murciélagos, and Cueva de Sangre.

**Test Unit 02-03** was placed in the middle of a well-trafficked area in the center of Chamber 1 near an intermittent pool (see Figure 4). The purpose of this unit was to produce a "master" stratigraphic sample since this area was trafficked by virtually every person
entering the cave. The unit measured 1x 1m. Material from the unit was wet screened and tiny sherd and land snail fragments were recovered. The snail was considered to be naturally occurring and sherds were too small to collect.

Level 1 matrix consisted of hard compact clay with marl and pebble inclusions. Substantial amounts of carbon were present throughout the layer. The level produced 44 ceramic sherds, 1 jute, 1 speleothem, and a conch shell ring (Fig. 5). Level 2 was opened as an arbitrary 10cm. layer. The matrix remained the same but cultural material diminished within this level. A tree root ran through the northwest quadrant. The level produced carbon, 35 ceramic sherds, 1 jute fragment, and 3 unidentified bone fragments. The excavation was discontinued at 18cm. below surface when sterile clay was encountered. Two column samples were removed from the north wall of the unit and carbon sample taken.

Discussion—Although we hoped to find good stratigraphy in this area, the matrix of the unit was homogenous. What may account for the problem is that this is the wettest area of the cave. Trampling in this area, particularly after a rain may have disrupted any possible stratigraphic layering.

Test Unit 02-02 was placed at the terminus of Tunnel 1. This area appeared to have been modified in antiquity. It was first noticed because the clay floor at the terminus rose sharply upward at a 20º slope toward the back wall (Fig. 4). This did not appear to be a natural feature. Sherds were observed embedded in cracks in the matrix but it was unclear if they were placed in the cracks or were part of the deposit. Also, a stain line approximately .25-.45cm above the modern floor was noted on the walls in the area. It was suspected that matrix from the tunnel may have been used to create the deposit and possibly block the terminus. The purpose of the unit was to examine the nature of the deposit and to determine
whether it was stratigraphically layered. If the deposit were natural, we would not expect to find artifacts or carbon within the matrix.

The unit measured 1.5 x 0.6m and ran in a NE/SE direction. The matrix consisted of very heavy highly compacted clay and mixed with small amounts of marl. Mudstones (probably claystones to be more specific) were also scattered throughout. These are a naturally occurring indurated clay having the texture and compositions of shale, but lacking the fine lamination or fissility (Gary et al. 1972). They are composed primarily of mud as opposed to silt. There were absolutely no visible stratigraphic layers in the matrix.

The unit produced 4 non-diagnostic ceramic sherds, 3 small land snails, 7 bone fragments. Charcoal flecks and large pieces were present throughout. This provided enough data to suggest that the deposit was a cultural feature. At this point, the unit was closed and a trench was begun for the purpose of clearly the fill. Two workers, Armando and Jesús Morales were hired to continue the excavation.

The trench continued through a low arch in the northeast wall and into a crawl space that led further into the cave. The crawl is .75-1m wide and the ceiling height varied from .45-1.22m and was completely filled with mud. It continues on a downward slope ranging between 5°-20°. This year we were able to excavate 5.6m (Fig. 5). Progress is very slow due to the constricted workspace and hardness of the matrix.

The trench produced 30 sherds, at least one of which was a Late Classic Platon Punctated dish. Also found in the fill were one jute, one pond snail (*Pomacea flagellata*), six land snails and 16 unidentified bone fragments. It is unclear as to whether the snails are natural or cultural. Charcoal flecks were present throughout and there were a number of
large chunks that were clearly identified as charred wood. Samples were collected for dating and species identification.

At 3.1m into the crawl a void was encountered in the matrix. It was completely sealed off by the matrix forming a bubble within the clay. The void created a small platform or shelf between the ceiling and the matrix. It spanned the width of the crawl measuring 70cm across and penetrated into the matrix roughly 40cm. There was a small dome in the ceiling above the void creating a space 30cm in height. There was a thin crack in the dome, but no light penetrated. Condensation was present on the ceiling and the clay matrix was damp on the surface. Located on the shelf was a cache small objects in two groupings. Heavy burning had taken place over the entire surface. Group 1 on the north side of the shelf consisted of 10 sherds, three of which were tentatively identified as Sierra Red, 8 land snails, and 30 bone fragments (unarticulated). A dense concentration of charcoal was located between the two groups and was closely associated with the Group 1 bone fragments. Sherds were located beneath the charcoal and beside the wall. Group 2, located on the south side of the shelf, consisted of four non-diagnostic sherds, 3 land snails, a green kidney bean-shaped object that is probably a seed, two animal teeth (possibly gibnut), and some tiny bone fragments. The sherds were covered by burned sediment. Charcoal and sediment samples were collected. Unfortunately it was impossible to proceed without pulling the cached items, so they were photographed and removed. Although the ceramic material has not been positively identified, 3 of the sherd from the cache appear to be Early Classic.

Work proceeded and the crawl's direction began to turn to the north and descend at a 20º slope. We work able to continue another 2m before the season ended. Because this area
was located in the back of the cave and not on the tourist route, the trench was left open and will be continued next year.

**Discussion**—Preliminary evidence from this area raises quite a few questions. The lack of stratigraphy in the deposit suggests that it was laid down in a single event and the presence of ceramic material and charcoal throughout the matrix indicates that it is a cultural manifestation. If the clay was removed from the Dead End area, it may have contained sherds that had been previously placed in the tunnel as offerings, or sherds may have been deliberately mixed into the clay at the time of deposition. The ceramic material does not appear to have any patterning in its deposition and is found at various angles in the matrix.

Radiocarbon dating of the cache will help to determine the time period during which the feature was placed and thus date the blockage. Very tentatively the ceramics suggest that it may have been during the Early Classic period. Work will be continued in this area in 2003.

**Test Unit 02-05** was placed in Chamber 3 along the southwest wall below the eastern entrance to Crawl 3. In this area, a mound of sediment measuring roughly 3 x 6m abuts the wall beneath the Crawl 3 entrance. The mound is approximately 1.5m in height and slopes from the wall to the modern floor at a 20° angle. Loose silt identical to that found in Crawl 3 was noted on the perimeter of the mound suggesting that at least part of the mound was backfill from the ancient excavated modification to Crawl 3. The silt was a distinct color and texture and contrasted with the clay found throughout most of the tunnel system. Unit 02-05 was placed at the base of the mound to determine whether this was indeed the case and to search for material that would date the initial modification. There was a crack between the sediment and the cave wall that continued 20-25cm below the surface of the unit.
The unit was dug in 3 levels. The modern use-surface matrix was primarily tightly compacted tamped brown clay 2-4cm thick. Near the cave wall where no trampling occurred, the matrix was loose and silty. Below the modern surface, Level 1 consisted of loose, brown (7.5yr5/6), silt. Aside from a partially charred wood fragment (possibly from a pine torch), no artifacts were present in this level. Level 2 was a lighter yellowish (10yr4/6 and 7.5yr5/6) mottled matrix. A stalactite fragment was found in the matrix, but otherwise it contained no artifacts. Level 3 was very compact red/brown (7.5yr4/3) clay identical to that found on the modern use-surface throughout Tunnel 1. Four ceramic sherds and half of a well-preserved squash seed were found in the crack at this level embedded in the clay abutting the cave wall. Charcoal samples were collected from the surface of Level 3. A column sample was removed from the northwest wall of the unit. It measured 45 x 10 x 5cm.

**Discussion** Matrix samples from Levels 2 and 3 were compared with the matrix from the modified area of Crawl 3. These were identical in color and texture. The fact that no artifacts were present in either level supports the conclusion that this deposit represents backfill from the ancient modification of the Crawl. The charcoal sample collected from the surface of Level 3, which we believe to be use-surface at the time of modification, should provide a credible date for its placement.

**Test Unit 02-06** was placed in the center of Chamber 2. Other than Chamber 1, this is the only area in the cave that contains drip water formations. The chamber is relatively small measuring approximately 28 m² and is the point of convergence of Tunnel 1 and Elevated Passage 2 (EP2). Located in the northwest area of the chamber near the entrance to EP2 is an imposing stalactite chandelier measuring over 2m in diameter. Beneath the chandelier is a soft mud floor containing a large sherd scatter. An intermittent pool forms
here during heavy rains. Behind the chandelier is a high-level balcony that faces onto the chamber. Sherds line the walls of the chamber, a prismatic quartz crystal was embedded in the east wall, and a stack of speleothems lies along the north wall.

By observing "drip excavations" created by intermittent rains, it was noted that small stratigraphic layers punctuated by black lines were present in subsurface deposits. Additionally, it was suspected that this area was heavily utilized since almost 1/3 of the total artifact assemblage was located on Ledge 10, a shelf located 7m above the chamber. These factors all suggested that this would be a good place to test for culturally rich sub-surface deposits. Levels 1 & 2 of the unit were wet screened, but only tiny ceramic sherd fragments small carbon flecks were recovered. Levels 3, 4, 5, and were dry screened. Tiny sherds and carbon were recovered but not collected. We did not feel that screening was a productive enterprise in these cases.

The unit was placed in the middle of the chamber in an active pathway in a flat area adjacent to the stalactite chandelier. It was oriented N/S by E/W and measured 1 x 1m. Level 1 was 0-3cm thick and composed of dark (5yr3/2) heavily plastic clay and marl. The clay had an interesting quality in that in many areas, it could be pealed away from the surface below. The level produced carbon, 14 ceramic body sherds and 3 soda straws.

In areas where the Level 1 clay matrix could be pealed, the dense clay surface of Level 2 was smooth, shiny and pearl-like but sticky to the touch. It is roughly 3cm thick. We believe that the surface is most likely a use-surface since pebbles, charcoal flecks, and 5 non-diagnostic sherds were horizontally embedded in the top of the matrix. A soda straw was also present in this level.
Level 3 was identified by a change in matrix. The sediment was less compacted and composed of a light colored (7.5yr4/6) silt, sandy loam, and marl on top of darker clay. The layer thickness ranged from 1-6cm. The top of the level was a slightly more compacted surface. A ceramic sherd was horizontally embedded in the matrix along with carbon flecks. A depression or water channel containing pebbles ran through the south side of the unit. The unit produced 13 non-diagnostic sherds and 5 speleothems, 2 of which were soda straws. It is unclear as to whether the speleothems were natural or cultural.

Level 4 was defined by matrix compaction. The thickness of the layer ranged between 3-6cm. Ceramic sherds and carbon were embedded in the matrix at the top of the level. Eleven non-diagnostic ceramic sherds were collected one of which was a bowl rim with external fire-clouding.

Level 5 matrix consisted of dark (5yr3/2) looser drier clay. It was roughly 1cm thick. Sherds and large amounts of carbon were embedded in a compacted surface at the top of the level. Level 6 was defined by compaction of the matrix as well. Numerous sherds and charcoal flecks were embedded in the same dark clay as described in Level 5 and small area of reddish sand broke through the clay. Thirty ceramic sherds and 5 speleothems, which included 4 soda straws, were present in this 1-3cm layer. It was also noted that a considerable number of carbon chunks were also present. The amount of material in the level suggests a period of heavy utilization.

There was a very clear and distinct depositional break between Level 6 and Level 7. The Level 7 matrix consisted of a light yellow/red (7.5yr4/6) silty loam mixed with marl. In some areas it was quite loose. This level was almost devoid of cultural material and very little carbon was present. Three soda straws and two ceramic sherds, one of which was a
shoulder fragment of a jar were present. The jar sherd was Sotero-like, post-incised with a dark brown to black exterior slip. Level 8 was defined by a change in matrix and layer of compaction. The matrix consisted of dark clay, 2-3cm thick compacted on the surface and looser below. Three ceramic sherds and carbon were embedded in the surface. Ten non-diagnostic sherds were collected from the level. This was the last level in which sherds were present.

Levels 9-12 were all defined by surface compaction. All contained carbon flecks but no ceramics whatsoever. Level 9 was a 1-2cm level of dark brown clay containing a speleothem and a large amount of charcoal. Level 10 was a 3-6cm level containing few charcoal flecks. A channel of sand ran through the north end of the level. Level 11 was 2-3cm in thickness and contained a larger amount of charcoal. It was also important because 2 small speleothem bowl-like artifacts were found on this level on top of the compacted use-surface (Figure 6). Both were found in upright positions. One was located in the SW quadrant and the other in the NW quadrant. Both contained a yet unidentified black sticky residue. Although we initially thought the artifacts were modified from stone, we later realized that they were speleothem spalls, which did not require modification. The first bowl (a) was round and measured 6cm in diameter and 3cm in height. The second (b) was more triangular in shape measuring 5 x 4cm and 2.5cm in height. One more compact use-surface, Level 12 was found. A few charcoal flecks were embedded into the surface at 32cm below the modern use-surface. This was the last cultural material to be found in the unit and below this, Level 13 consisted of sterile clay and sand. Two column samples were removed from the west wall of the unit. The first measured 40 x 12 5cm and the second 35 x 12 5cm.
**Discussion** - Deep deposits located in this unit suggested that the cave was utilized for a very long period of time. This was confirmed by a $^{14}$C AMS date obtained from a charcoal sample in layer 11. The date, 2780±40 rcybp, calibrates using Calib 4.2 to cal BC 917 with a two-sigma range of cal BC 1004-831 (Beta-170518). This is contemporaneous with the early Kanocha phase (1200 cal B.C.- 850 cal B.C.) at Blackman Eddy (Garber et al. 2002) or the Cunil phase at Cahal Pech (Awe 1992). Other than the Pleistocene levels at Loltun cave in Yucatan, this is the earliest radiometric evidence of cave use in the Maya Lowlands.

The richness of the data in this unit and clear presence of compacted use-surfaces encourages future study. Wide horizontal excavations were proposed for the 2003 field season. By examining the entire chamber during each time frame, it will be possible to evaluate ritual behavior and practice in this area and note changes.

The absence of ceramic material in the lower levels also suggests that ceramics may not have been used in early cave ritual. Changes in ritual practice may have occurred sometime during the Middle Preclassic period. Radiocarbon dates from each level will allow us to determine the time range in which this may have occurred.

**Shovel Test Probes**

Besides the 6 larger units, 22 shovel test probes (STP) were excavated throughout the tunnel system floor and in loci where cultural material was present for the specific purpose of collecting column samples for microstratigraphic analyses using thin sections (Figure 7). These small pits measured no larger than .5 x .5m and ranged between 7 and 45cm in depth. Profiles of one wall in each pit were drawn and column samples removed. Most were purposefully located in the center of the tunnel floor as an attempt to pick up the most highly
trafficked material. However, STP 004 and STP 012 were placed in less trafficked areas to attain comparative data.

Of particular interest were STP 006 and STP 020. STP 006 was placed in the tunnel floor underneath Ledge 7. The probe measured .5 x .5m and was 35cm in depth. Although it could not be observed from the surface, a hearth feature was present 3cm below. The feature constructed of 2 large pottery sherds arranged in a bowl shape. It measured approximately 25cm in diameter and 10cm in depth. Large chunks of charcoal were present inside of the "bowl" and the dark clay (10yr3/3) was mottled with clumps of bright red (7.5yr5/8) clay. Below this feature there was a distinct change in matrix. The clay was much light color (10yr6/6) and of medium compaction.

STP 020 was placed in Tunnel 2 where the passage narrows and descends into the Dead End. It measured .6 x .4m and was placed slightly to the side of the path so that the workers could pass through the restricted passage. Upon removal of the top layer of silty compacted clay (2-3cm), a number of features including 2 hearths were encountered (Figure 8). The first hearth area was located on the north wall of the probe. It was roughly round and measured approximately 40cm in diameter. Like STD 006, the burned area was partially lined with large non-diagnostic pottery sherds creating a roughly bowl shaped area that was 20cm deep. Evidence of burning was recognized by the density and size of charcoal flecks within the clay matrix and by the bright orange/red (7.5yr5/8) mottling of the clay. At the base of the deposit, 20cm below surface, 2 charred seeds were recovered. They were round in shape and measured approximately 1cm in diameter. They have tentatively been identified as being from the ramon plant by our workers, but this needs confirmation. An additional area of burning was located in the SE corner of the probe. It also measured roughly 40cm in
diameter and was 20cm deep. No sherds were located in this area but mixed in with the red clay at the base of the feature were charred seeds. A total of 30 were recovered from the deposit.

Adjacent to the hearth feature in the NW wall of the probe were three stacked stones (See Figure 8). All three were limestone and white in color. They did not appear to be imported into the cave. Two were circular in shape with diameters of 5cm and the other was oblong measuring 15cm. The two smaller stones sat below the larger one supporting it. The configuration ran in an E/W direction. The soil below this feature was stained the same orange/red color as present in the hearths and heavy charcoal deposits were found in and around the feature. Due to the configuration and stacking of the stones and the presence of burning in the area, the feature may possibly be a symbolic Three-Stone-Hearth (see Moyes 2000).

Finally, along the south wall of the probe, two dark stains were encountered whose shape resembled postholes. They were 8cm apart and measured 5cm in width and 12cm in depth. Charcoal flecks were noted in and around these features. This evidence suggests that they may have functioned as stands for supporting torches although this is somewhat unclear.

**Sampling the Hearth**

Located in Crawl 3 is an intact hearth. It consists of a medium-sized water jar resting on five smoothed river cobbles (Figure 9). The exterior base of the jar is heavily charred, as are the cobbles upon which it rests. Beneath the vessel, is a concentration of large chunks of wood charcoal and ash. The ceiling above the feature is heavily charred and the limestone floor of the cave is discolored exhibiting a bluish cast, which is typical of the changes that occur when limestone is exposed to fire.
Our goal was to take a stratigraphic sample of the charcoal beneath the hearth to obtain data on the length of time it may have been utilized. However, between the 1999 season when this surface feature was first recorded and the 2002 season, the hearth had been disturbed. Therefore, we began by clearing loose soil from around the feature. Afterward, the margins of the hearth were defined. The west 1/3rd of the hearth was then excavated. The deposit was 9cm deep and at the base were sherds, which were partially lifted but not removed. Charcoal was collected from near the surface of the deposit, from the middle of the fill and from beneath the sherds at the base. A sediment sample was also collected. The feature was then reconstructed.

**Summary**

During the 2002 field season the project collected column samples from multiple venues in the cave and collected numerous charcoal samples. This material will be used to develop models of the use of space in caves that include a chronological dimension. Combined with a rigorous dating program, traditional excavation integrated with microstratigraphic analyses provides a high definition approach that will produce empirical information regarding use of individual loci within the cave as well as the system as a whole. These data may then be correlated with placement or modification of features and distinct surface finds. Evaluation of site formation processes and the sites chronology is instrumental in assessing changes and continuities of ritual practice within the cave. The study will make a significant contribution to archaeological studies by providing extensive descriptive material, offering methodological advances in cave archaeology, and increasing our understanding of ancient Maya ritual. The project will introduce microstratigraphic analyses to Mesoamerican cave studies and demonstrate its utility. Its use is instrumental in solving
chronology problems that have plagued cave studies since their inception. This is important because, if cave studies are to continue to progress, new methodology is needed to better understand site formation processes.

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Figure 1. Map of Upper Belize Valley showing location of Chechem Ha Cave (courtesy of the WBRCP).
Figure 2. Map of Chechem Ha Cave tunnel system showing areas of the cave.
Figure 3. Map of Chechem Ha Cave showing test units excavated in 2002.
Figure 4. The terminus of Tunnel 1 is the Dead End. Note the slope of the floor toward the back wall. Also note dark wall stains.
Figure 5. Map of the "Dead End" at the terminus of Tunnel 1. Shows Test Unit 02-02 and progress of trench.
Figure 6. Speleothem "bowls" found in Test Unit 02-06 Level 11.
Figure 7. Map showing location of shovel test probes.
Figure 8. Shovel Test Probe 020 showing 3 stones in situ and hearth features.
Figure 9. Photo of the Crawl 3 hearth. The jar sits atop 5 smooth river cobbles.