16 THE ROLE OF CAVES AT PACBITUN: PERIPHERAL TO THE SITE CENTER OR CENTRAL TO THE PERIPHERY?

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For the past two seasons the Pacbitun Preclassic Project has been investigating cave sites in the foothills of the Maya Mountains. Prior to this research little attention over the past 25 years has been given by previous investigators to the caverns that were located up to four kilometers away from the site core. While archaeologists from Trent University focused much of their attention on settlement within two kilometers of Pacbitun, our knowledge of the relationship between this site and the caves beyond this distance remains unclear. To date, a total of twelve caves have been identified. In the 2009 and 2010 field seasons, we surveyed four cave sites (Actun Merech, Actun Pech, Tzul's Cave, and Crystal Palace). The primary objectives of the cave research are to: 1) ascertain the different kinds of activities that may have occurred through time within the caves; 2) determine which segment of Maya society, elite or commoner, was utilizing the caves, and where did they live (site core vs. periphery) in order to gain access to them; and 3) enhance our knowledge of the role of caves at the regional level. These investigations are compared with data from other cave sites in the area in an effort to determine whether there are any inter-regional similarities or differences in cave artifact assemblages, art, architecture, and, ultimately, function.

Introduction

As McAnany (2010:3) notes, "in non-capitalist societies, economic practice tends not to rule the day but is entangled with political, social, and cosmological frames". The ongoing archaeological survey project conducted at the ancient Maya site of Pacbitun, located in the foothills of the Maya Mountains in the Cayo District, stands as an example of these various entanglements indicative of the ancient Maya landscape, which consists of households, architecture, trade, and social stratification, usually lumped together as economics.

Therefore, when the Pacbitun Preclassic Project began investigating caves in 2009 we wanted full-scale coverage of all features (e.g., settlement, terraces, reservoirs, springs, sinkholes, rockshelters) between the core and the limestone hills in the periphery (Powis 2010). Many of these limestone hills contain one or more caves and rockshelters, and by recording all of the natural and cultural features situated in between we would be better able to reconstruct ancient Maya economics, politics, and belief systems. According to Ashmore (2008), Maya landscapes and settlement are inseparable, so why should we not try to more fully understand them through full coverage survey. Too often we tend to only focus on surface sites, caves, or other specific features in the periphery of sites instead of connecting them as the Maya viewed their relationship. Since we are working in a region where other projects are actively engaged in doing just this, we will eventually be able to compare our data with what is being recorded in other areas of west central Belize, including the Belize River Valley, the Roaring Creek Valley, and the Vaca Plateau.

Maya Cosmology

In ancient Mesoamerican religion, the landscape was a critical concept, as the earth and all of its topographic features were considered to be alive and, as living beings, to interact in human affairs (Stone 1995:21). As Moyes et al. (2009:177) have stated, caves and mountains are especially potent places of the sacred earth, which is considered to be the primordial source of all abundance and fertility in Mesoamerican thought. In various Maya myths, the earth itself was seen as the body of a divine being (Stone 1995:21). This divine being was part of a landscape which included three components, the middle world, the underworld, and the heavens. Here, the earth is depicted as the middle world, characterized in form of a crocodilian being floating in a primordial sea. The sea, as part of the underworld, is home to supernatural beings, and its presence is manifested in

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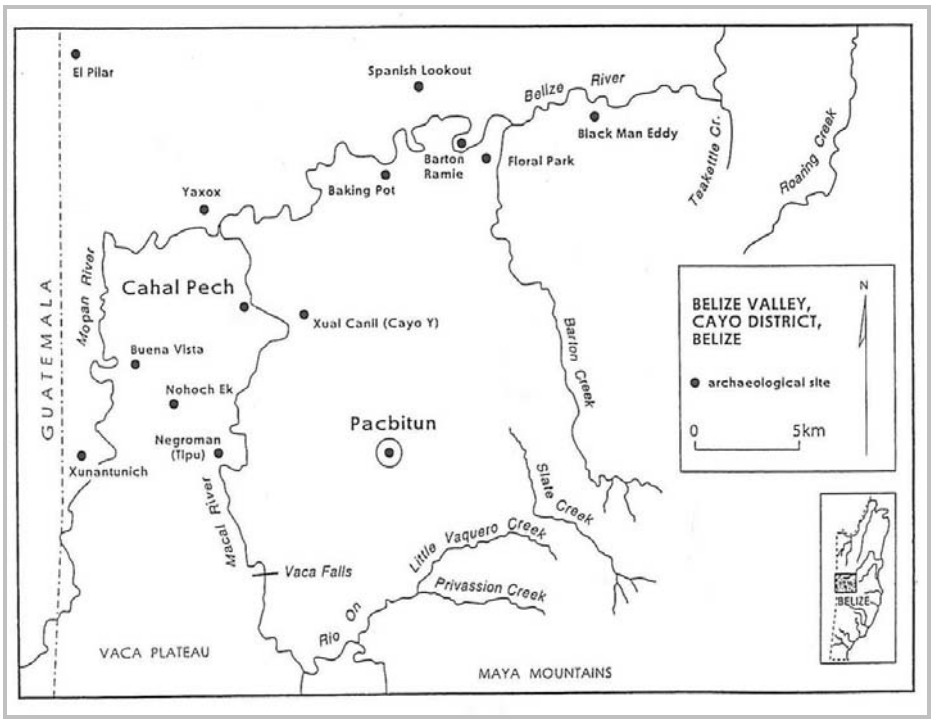

Figure 1. The location of Pacbitun along the southern rim of the Upper Belize River Valley.

lakes, oceans, cenotes, and rivers. Rivers might spill across the earth surface or flow through caves, underground. The heavens, paradise for ancestors, are also home to supernatural beings, and the Maya used the positions of the stars and planets to forecast various events like wars and alliances, and also to portray the creation myth (Ashmore 2008:171).

In association with mountains, caves were seen as houses, cosmic entry and exit points (e.g., to the underworld or Xibalba), places of transformation, and sources of fertility and material wealth, as well as sources for water (Stone 1995:34-40). The fact that many caves provide access to water sources certainly played into their significance as part of the ritual landscape. Storm clouds often emanate around mountains in which caves are located. Rain and water are very important for agriculture, particularly maize. Brady and Prufer (2005) have stated that for an agriculturally-based society, fertility is an immediate and never-ending concern in relation to crops, hence the most important elements for crops are soil and rain which, as mentioned, often occur around mountain ranges housing caves (Brady and Prufer 2005:369). Consequently, caves and mountains were believed to house rain gods and were associated with origin myths.

Socio-Political Landscapes and Settlement

It has been argued, that for the ancient Maya, access to or control over sacred spaces and associated rituals served as a fundamental strategy for displaying, legitimizing, and negotiating social power. Here, the placement of monumental architecture over or near caves implied control over these sacred areas by the elites, who provided the financial backing for the construction of the monumental architecture (Prufer and Brady 2005). For example, while caves and cave ceremonies were used by both commoners and elites, elites could (and did in some cases) construct causeways to influence the pilgrimage to the cave (Prufer and Brady 2005). An example of this might possibly be demonstrated at the site of

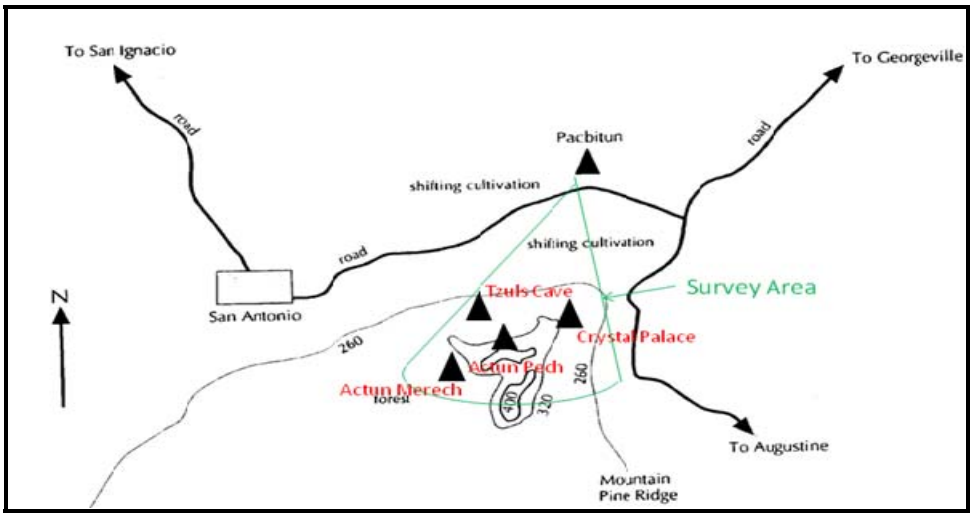

Figure 2. Survey area discussed in text (modified from Healy et al. 1996: Figure 1).

Cahal Uitz Nah in Belize. At this site, a 240 m long causeway connects the ceremonial center of Cahal Uitz Na to an associated cave named Actun Nak Beh, suggesting a controlled usage of the cave by political rule (Healy 2007). Stone (2005) argues that since caves and other topographic features have inherent powers to open communication with spirits and ancestors, and could invoke a spiritual sense of the past which could not be duplicated by the built environment, it was necessary for the elite and the commoners to renew their ties with the sources of sacred power found across the landscape. Hence, pilgrimages to these natural sanctuaries were exploited by the elite to buttress their claim of divine status (Stone 2005:135).

In addition to sacred landscape features, cave rituals can also be combined with contextual factors such as historical events or environmental conditions that may have affected ritual practice. Among the ancient Maya, ritual performances, particularly those related to water control and agricultural success, are considered to have political implications fundamental to the rise of the elite. Documented changes and characteristics of rituals in and around caves should then be able to provide information regarding the role of ritual in broader context. For example, possible external influences like political change or environmental stress on the society (Moyes 2002).

Pacbitun

The site of Pacbitun is located in the foothills of the Mountain Pine Ridge in the Cayo District, about 3 miles from San Antonio Village (Figure 1). The site is situated at the juncture of two eco-zones: the lowland tropical rainforest and the Mountain Pine Ridge. The surrounding terrain is hilly with naturally fertile soils trapped in low-lying catchment basins and valley-like depressions. First inhabited about 800 BC (Healy et al. 2004), Pacbitun reached its peak of cultural development during the Late Classic Period (AD 600-900). At this time the site likely controlled an area of nine square kilometers. Ceramic analysis indicates that the site was possibly abandoned by the beginning of the tenth century (Healy et al. 2007).

Survey

During the 2010 field season, the goal was to survey the spatial area between the site core of Pacbitun and the three previously investigated caves of Actun Merech, Actun Pech, and Tzul's Cave. In total, an estimated area of about three square kilometers was surveyed. Due to its location near to these other caves, one newly found cave, designated as Crystal Palace, was added to the area of investigation. The

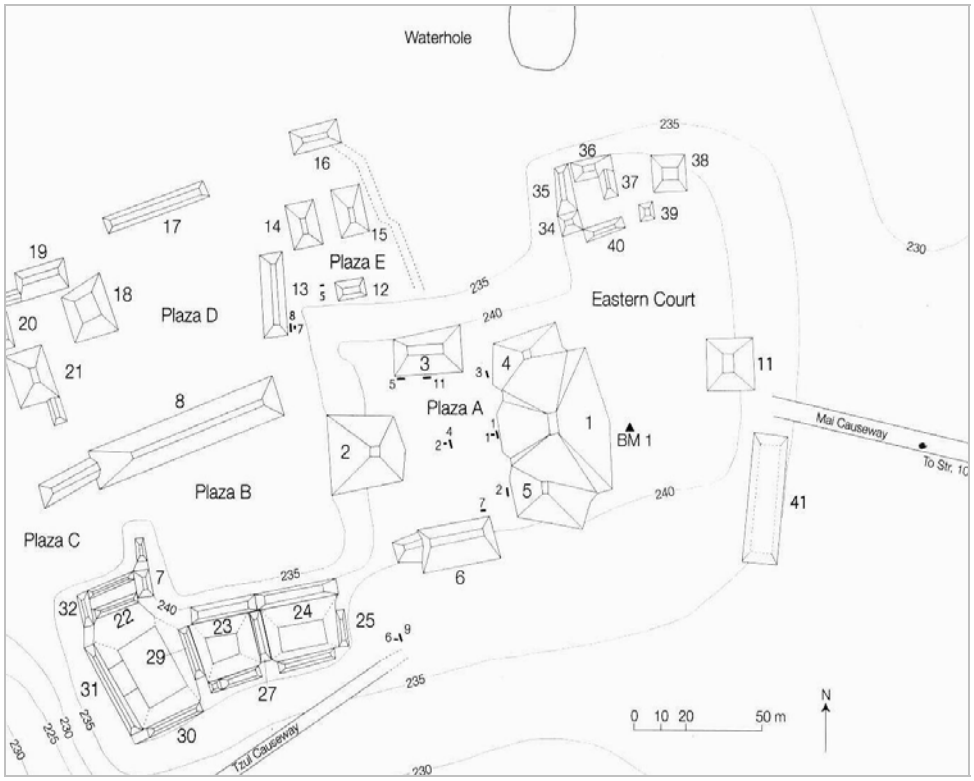

Figure 3. Pacbitun showing the Mai and Tzul Causeways to the south and east of Plaza A as separated features.

surveyed area was shaped like a pie wedge, extending from the site core towards the southwest (Figure 2). In addition to these four caves, we recorded 104 agricultural terraces, 73 housemounds, seven reservoirs, six rock shelters, four plazuela groups, two chultuns, two springs, and one sinkhole.

We also resurveyed the two causeways previously reported in the site core by investigators from Trent University (Healy et al. 2007). Healy et al. (2010) determined that both causeways, named Mai and Tzul, were separate features (Figure 3); however, the senior author was able to connect the two together. More testing still needs to be done, but, from a preliminary standpoint, it appears that the Mai Causeway changes direction from its original east-west orientation toward the southwest, passing adjacent to Structure 11 (Figure 4). Modern construction has destroyed parts of the Tzul Causeway, especially where it crosses the road, but it re-emerges clearly visible on the other side of it, as one drives back toward San Antonio Village (Figure 5). Approximately 900 meters from the site core, Tzul Causeway intersects with another sacbe, which was named Tzib Causeway (Figure 4). It then continues into the foothills, running for about 1.2 km until it terminates in front of Tzul's Cave. Overall, visibility was good (Figure 6), but at times it was difficult to see certain sections, due to erosion, blending of it into terraces, and what appears to be a drainage constructed to keep the sacbe from flooding. In total, the Tzul Causeway is approximately 2.6 km long, and extends from Structure 10, a termini complex located in the site core, to Tzul's Cave (see Figure 5). An attempt to find a possible causeway connection between Tzul's Cave and Actun Merech, which lies approximately 900 meters to the east, produced a negative result. Tzib Causeway, which intersects with Tzul Causeway, is much shorter, only about 600 m in length, and connects a plazuela group to a minor center.

As Normark (2006) notes, causeways reflect different levels of social activity and

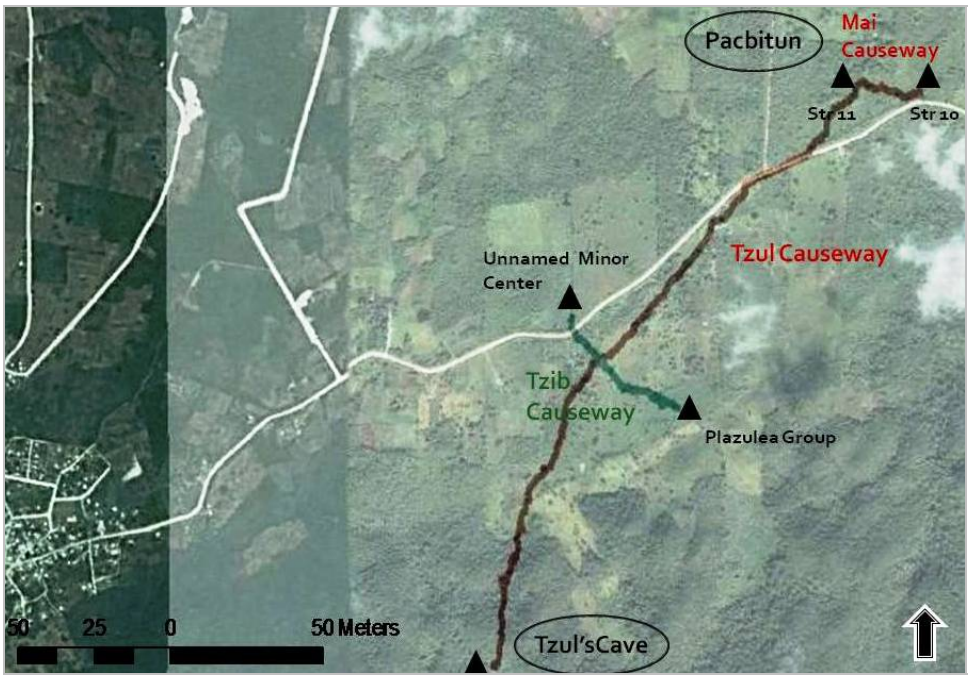

Figure 4. Map showing the recently surveyed causeway system at Pacbitun. The Mai Causeway runs from Structure 10 to Structure 11 in the site center. The Tzul Causeway runs from Structure 11 to Tzul's Cave. The Tzib Causeway runs from a plazulea group to a Termini Complex in the site core.

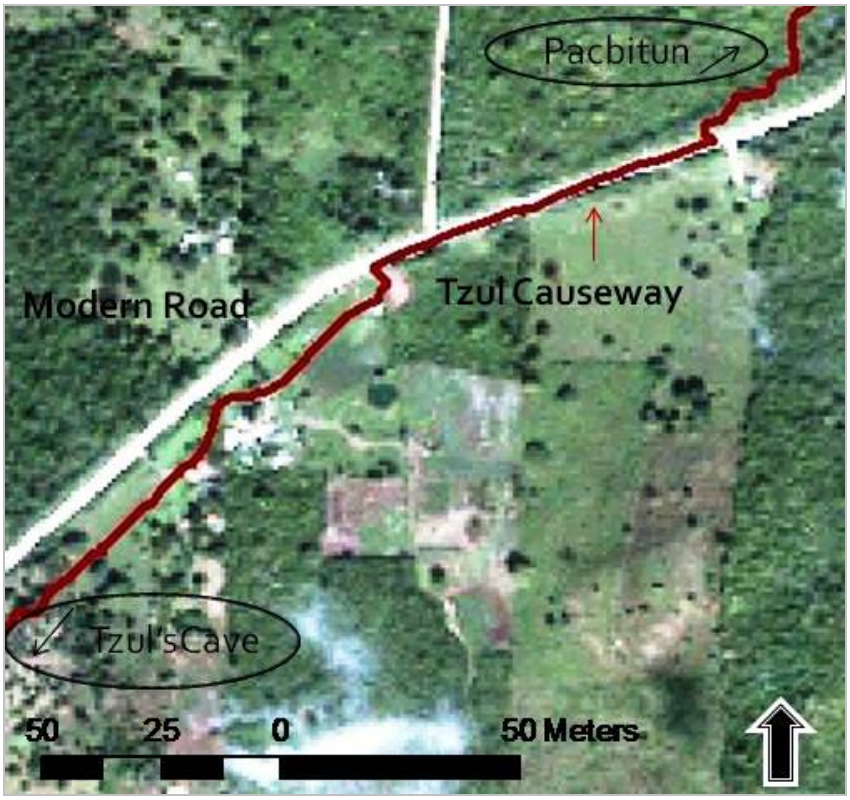

Figure 5. Map shows a portion of the Tzul Causeway which runs from the site core located in the north to Tzul's Cave located approximately three kilometers to the south.

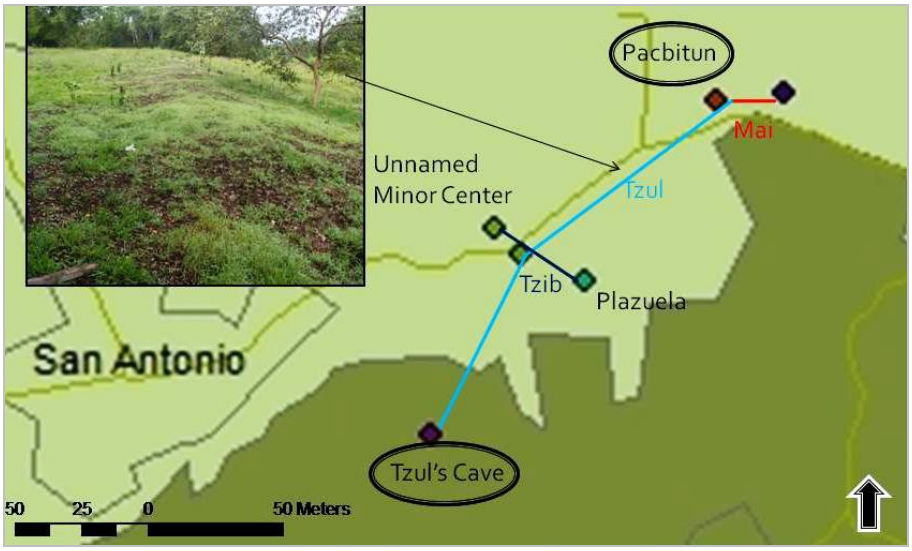

Figure 6. View of the Tzul Causeway shown re-emerging from under the San Antonio Road near the site core.

meaning in the past, as roads do today, from single human agents to hierarchical relations between centers. Studying them can provide insights into political activities, social organizations, economics structures, and cosmological values on a site and regional level (Normark 2006). The further investigation of the sacbe system in the periphery of Pacbitun will hopefully provide us with some of these insights and make a substantial contribution to our understanding of how ritual behavior and pilgrimages influenced settlement patterns or visa versa.

Cave Description

The preliminary survey results and descriptions of Actun Merech, Actun Pech, and Tzul's Cave have already been discussed elswhere (Powis 2010), therefore only a description of Crystal Palace is needed here. This cave is located to the south of Pacbitun and lies approximately 0.5 km to the northeast of Actun Pech, 0.9 km to the northeast of Actun Merech, and 1.3 km to the east of Tzuls Cave (see Figure 2).

Crystal Palace

As mentioned, Crystal Palace is located south of Pacbitun to the east of Actun Pech, Actun Merech, and Tzuls Cave. This cave has not yet been mapped and all measurements are preliminary in nature. Outside of the cave is a single housemound located 15 m to the northwest of the entrance. Surface collection on top of the mound yielded three Late Classic pottery sherds.

The entrance of the cave is relatively large compared to those already surveyed in the periphery of Pacbitun. It measures about 4 m by 2 m in size (Figure 7). Once inside, one descends two meters into a large, open main chamber. The entrance gradually slopes downward, allowing access to more than one person at a time (Figure 8). From the main chamber, one can see that the cave is v-shaped. It measures 55 m in length, with a height of about 4.5 m, and a width of 17 m. Inside, two architectural stairs were found, as well as numerous caches of vessels (broken plates, bowls, and ollas), and broken stalactites and stalagmites, suggesting a possible relation to ritual usage, as well as water collection and/or food offerings to Maya deities (Healy et al. 1996). Two caches, containing numerous Late-to-Terminal Classic vessels, were placed beneath roof collapse in two separate locations within the cave (Figure 9). Overall, this cave is covered with an abundance of stalactites and stalagmite formations, as well as sherd deposits in various different locations, including niches which are very difficult to access (Figure 10). Room names

Figure 7. View of the entrance of Crystal Palace.

Figure 9. View of cache inside Crystal Palace.

Figure 8. View of the main chamber inside Crystal Palace.

Figure 10. View of pottery deposit in niche inside Crystal Palace.

still have to be assigned to Crystal Palace; however, it can be said that the chamber system seems to be rather uncomplicated, with relative large and open rooms. A number of small ledges and niches are still to be explored. Thus far, no animal or human remains have been found.

In addition, the single housemound located immediately outside the entrance leaves us with many unanswered questions. What was its function? Does it have a religious connection to the cave or was it simply constructed for residential purposes? Did it function as a guard or watch tower, to restrict access to different segments of Maya society? As mentioned earlier, it has been argued that the placement of architecture over or near a cave can imply control over the sacred space by the elite (Prufer and Brady 2005). If this is the case at Crystal Palace, why haven't we found similar remains of architecture next to one of the other caves? What made this one different? Further archaeological investigations in and around Crystal Palace, as well as some of the other caves in the periphery, will hopefully help us to answer some of these questions.

Conclusion

In sum, we have just begun to conduct extensive research in the periphery of Pacbitun. We hope in the near future to be able to better understand the relationship between the different natural and cultural features at the site as well as between sites across this region of west central Belize. Preliminarily, we have found new minor centers, plazuela groups, agricultural terraces, and reservoirs, some of which are interconnected (meaning they drain one into another when they get overfilled). We have causeways, one extending up to 2.6 kilometers from the site core where it terminates at a cave. As Normark (2006) mentions, long causeways may have had some additional features assigned to them, for example lodging and storage areas or

shrines. Upon further investigation, it will be interesting to see if we can identify such features in association with the Tzul Causeway. Other additional research involves the relationship between causeways and caves. Some of this involves least cost analysis, as well as other predictive modeling techniques. Why, for example, is one cave connected to the site core when others aren't? How were the others caves accessed then? Where are the trails or paths leading to these other caves? Are these trails located along the base of hills? This is an interesting question since the Tzul Causeway that extends from the site core to Tzul's Cave traverses many small hills. Were there assigned trails exclusively utilized by elites and commoners?

Also, due to its close relationship to an abundance of caves (15+ in one section of a three km area), this raises the question about the role of Pacbitun in a religious context. Paul Healy (2007) has noted that the site might have been originally founded around 800 BC for its access to not only good agricultural lands, but also to granite and slate sources located nearby. However, the senior author has proposed an alternative founding of the site for religious reasons. Obviously, this is something that needs to be tested. At present, we mostly have usage of the caves around Pacbitun, dating mainly to the Late to Terminal Classic period. Actun Pech has Late Preclassic ceramics, but Pacbitun was founded around 800 BC. We will need much earlier occupation of the caves if we want to be able to state that the site was founded for religious purposes.

We are also interested in the relationship between minor centers and caves in the periphery of the site core. We have one minor center, called Pol Sac Pac, which is situated on top of a hill, the highest in the area. Below the site is a cave located halfway down the hill. Below that is a spring and below that is a series of interconnected reservoirs. And settlement is dense in this area. In conclusion, there are many areas of research to focus on in the periphery of Pacbitun over the next few years, and we look forward to comparing our results with those projects in the region with similar interests.

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