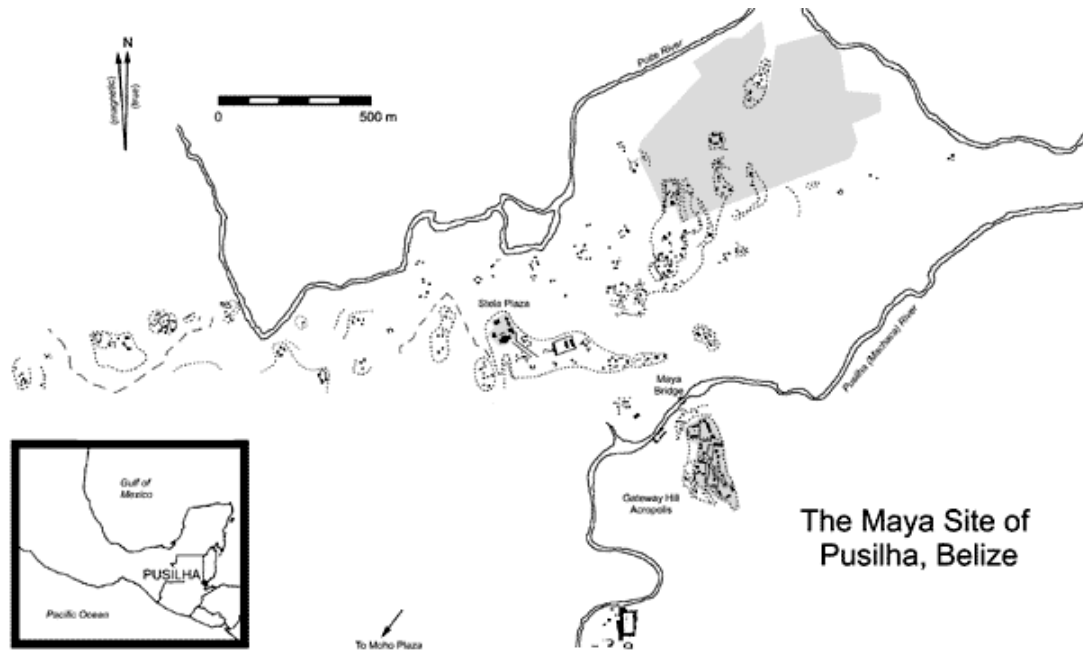


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Pusilhá Archaeological Project



Research Year: 2001

Culture: Maya

Chronology: Classic

Location: South Western Belize

Site: Pusilhá

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Introduction to the Pusilhá Archaeological Project (PUSAP)

To what degree were the economies of peripheral cities within an ancient polity assimilated with that of the core, and did the nature of economic integration change with political fragmentation and independence? How closely was the "peasant" economy tied to the political economy of the local elite? Did archaic states coalesce from and fragment into autonomous provinces as proposed in Marcus' (1992, 1993, 1998) dynamic model? Finally, how did Maya economic systems articulate with those of their non-Maya neighbors? The Classic period (A.D. 250-800) Maya site of Pusilhá is an ideal laboratory for investigating these questions and for testing specific hypotheses about political elaboration and the "embeddedness" (Polanyi 1957) of economic systems within broader political, social, and cultural realms. This report details the first season (May–July 2001) of mapping and monument documentation at Pusilhá, where we are gathering data that will help us answer these questions.

Pusilhá is a mid-size population and political center located in the extreme southwest of Belize. The site is known principally for its many carved monuments dating to the Classic period and a unique architectural feature: a triple-span bridge over the Pusilhá (Machaca) River and two artificial diversion canals. Although the site was among the first in the southeastern Maya lowlands to be subject to archaeological investigation (Gann 1928; Gruning 1930; Joyce 1929, 1932; Joyce *et al.* 1928), Pusilhá has received only sporadic and brief attention since the late 1920s (Leventhal 1990, n.d. a, n.d. b; Hammond 1975; Morley 1938; Reents n.d.; Ulrich 1982; Walters and Weller n.d.). One reason for this is its remote location. Until 2001, Pusilhá and San Benito Poité (a small Q'eqchi' village built in the residential zone of the site) were accessible only by foot or horseback from Santa Theresa and Aguacate villages (respectively four and seven hours away), and from the Guatemalan village of Río Blanco (four hours). In May, however, a new road to Poité was completed, and regular bus service has been established. Tourists, although still infrequent, are beginning to visit the site and sleep at Poité under the Toledo home stay program.

The settlement and agricultural zones of Pusilhá, approximately 6 km² in total area, are sharply circumscribed to the north, west, and south by the Maya Mountains ([Figure 1](#)). The Moho River and a narrow valley provide access from the east, and a mountain pass leads northwest from the site. The urban core and surrounding residential and agricultural zones of Pusilhá—all located within this small area—contain several hundred architectural groups situated between and near the Pusilhá and Poité rivers. Although less imposing architecturally than nearby Lubaantun, Pusilhá almost certainly was the largest population center in the region. Like most other sites in southern Belize and the southeastern Petén, the architecture of Pusilhá is relatively small in scale. The largest completely artificial platforms stand only 5-m high and supported perishable superstructures. There are no great pyramids of the sort found at Tikal, Caracol, Calakmul, and other better-known sites. The most imposing ruins at Pusilhá are found on Gateway Hill, located in the southeastern outskirts of the city. There, a series of pyramidal platforms, artificial terraces, and building façades were constructed against the natural slope of the hill. Although the architecture of Gateway Hill has been compared to a "Hollywood set" (Leventhal 1990), the skillful blend of natural and

artificial features creates an imposing acropolis similar to that of Toniná. Despite its peripheral location, it seems probable that Gateway Hill was both the royal palace and administrative center of the city. Other important groups known before PUSAP began work include the Machaca Plaza (an elite residential group or palace), the Moho Plaza (with a hieroglyphic stair and a large ballcourt containing three carved markers), two other ballcourt groups, and the Stela Plaza (containing 22 carved stelae, four zoomorphic altars, and at least four round altars).

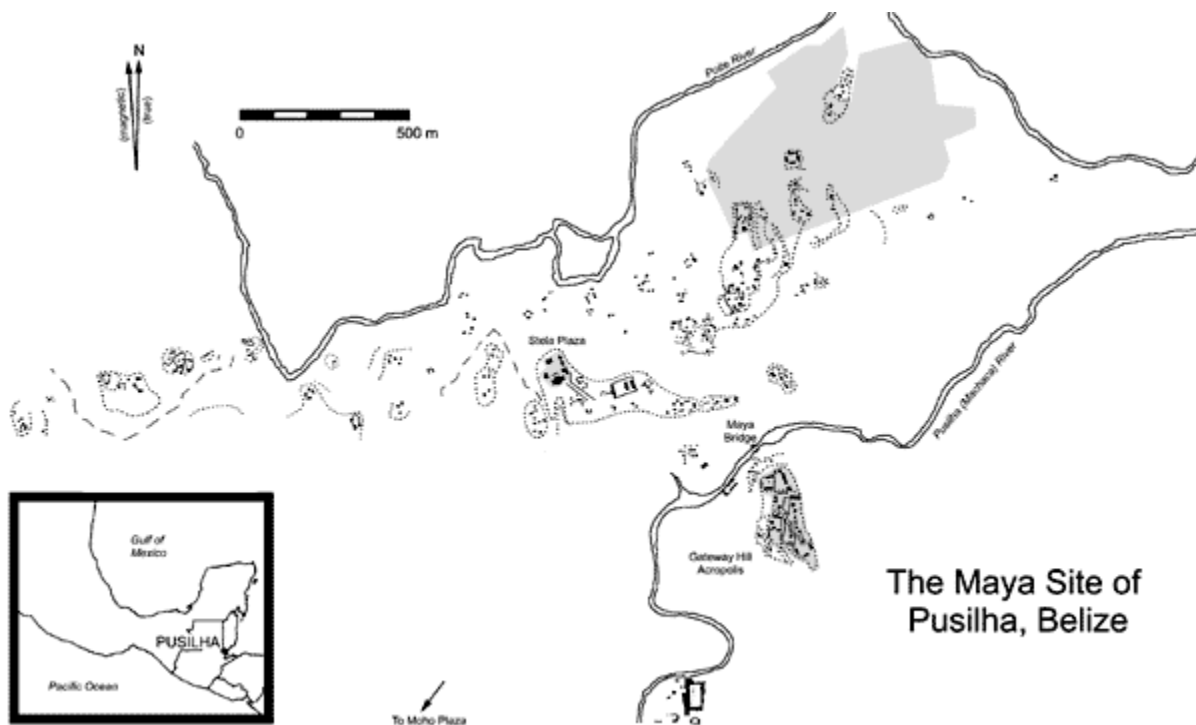


Figure 1. Sketch map of Pusilhá, Belize (from Leventhal 1990:Figure 8.1). This pace-and-compass map is based on one East-West and one North-South transect. That is, large portions of the site were not surveyed. We have found that most of the "blank" areas on this map, particularly between the two rivers, are full of structures. Shaded areas were mapped during the 2001 field season (Figures 2-6).

Although Pusilhá has been known for many years, and despite the fact that many stelae bearing hieroglyphic inscriptions were taken to the British Museum in the late 1920s, we knew remarkably little about the role of this Maya center before the beginning of PUSAP's 2001 field season. In fact, a multi-phase ceramic sequence has never been developed for Pusilhá or any other inland site of Toledo district. In brief, most of what we did know or suspect was derived from preliminary and unpublished discussions of the hieroglyphic texts in the British Museum, or from illustrations of artifacts recovered during the 1920s. Morley (1938) analyzed the chronological content of the monuments and argued that Pusilhá was occupied during both the Early and Late Classic periods.

Until the discovery of Uxbenka (Leventhal 1990), Pusilhá was the only site in southern Belize believed to have been occupied during the Early Classic period.

There are tantalizing clues that Pusilhá, at least for part of its history, was politically and economically linked with Copán. For this reason, Marcus (1992, 1994) has used Pusilhá as an example of her "dynamic model" of state formation and fragmentation (Marcus 1992, 1993, 1994, 1998). She proposes that Pusilhá began in the Early Classic period as an independent settlement, but became a politically subordinate site in the periphery of the Copán polity during the 7th century. As Pusilhá grew in the 8th century, its rulers reasserted political autonomy, as did Quiriguá. Thus, a politically independent province was incorporated into an expanding state, but later broke away and maintained many of the trappings of a state-level polity. Finally, near the end of the 8th century, the Pusilhá dynasty collapsed and power seems to have shifted to Lubaantun (Hammond 1975). We strongly suspect, however, that Pusilhá continued to be occupied during the Terminal Classic (A.D. 800-900/1000).

Our project grew out of questions raised by this interpretation of the political history of Pusilhá. If Pusilhá indeed experienced alternating periods of political independence and incorporation, what were the economic ramifications of those events? Many current models suggest that Maya economies were characterized by household-level production and exchange conducted without elite control. If this was the case, the political upheavals proposed for Pusilhá should have had little effect on the economic welfare of non-elite households. To what extent did political subordination imply the incorporation of local elites into the economic system of the greater state? Our research at Pusilhá is designed to answer these questions by testing specific hypotheses regarding ancient Maya states.

Because of the regional importance of Pusilhá and the dearth of information about the site, PUSAP began in 2001 with the support of the Department of Archaeology of Belize. Our first season of investigation was funded by the School of American Research (SAR) and the Foundation for the Advancement of Mesoamerican Studies, Inc. (FAMSI). During our eight week field season (May–June), we documented previously unrecorded monuments and monument fragments, and discovered three new stelae (making a total of 25), a fourth zoomorphic altar, and nearly 90 other sculptural fragments, many of which still contain legible hieroglyphs. In the Moho Plaza, we drew and photographed three ballcourt markers and the hieroglyphic stairs. Although these have been known for a decade (Walters and Weller n.d.), they remain unpublished. We hope that information gleaned from these monuments, coupled with our ongoing epigraphic analyses of texts now in the British Museum, will allow us to flesh out the political history of Pusilhá. During the 2001 season, we also began a systematic mapping program using total station and GPS equipment. In particular, we mapped four portions of the site: the Gateway Hill Acropolis, the Stela Plaza, Moho Plaza, and a large settlement zone northeast of the Stela Plaza ([Figure 1](#)). The map developed during this field season is important for the research design of a future program of test pitting and continued mapping.

Our work not only is timely for theoretical reasons, but also is urgent. When we began our current field season at Pusilhá, we found that the site had been severely looted since our last visit in 1998. More than 80 percent of the 200 or so platforms that we have mapped so far are significantly damaged. *All* platforms standing more than 1-m high have been significantly looted. We found open and emptied burials nearly every day. Villagers commonly discuss looting and the economic value of artifacts (including previously undocumented carved monuments) and we surprised looters on several occasions. I have seen no other site in Belize that has been—and remains—subject to this degree of relentless destruction, and know only a handful of such sites in Guatemala and México (e.g., Naranjo, Ja'ina, Río Azul, and Nakbé). It is critical, therefore, that this Maya center be studied and preserved while there still is a chance to do so.

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Summary of Previous Research at Pusilhá and other Inland Sites of Toledo District

The site of Pusilhá was rediscovered in 1927 and investigated by the British Museum Expedition to British Honduras in that year and three subsequent field seasons (Gruning 1930, 1931; Joyce 1929; Joyce *et al.* 1927, 1928; Thompson 1928). The discovery of numerous monuments bearing Long Count dates in the Stela Plaza of Pusilhá led project members to shift their focus from Lubaantun to the more distant site. During the seasons that followed, many of the Pusilhá stelae were broken up and transported to London, and structures in the Stela Plaza, Big Tree Group, Southwest Group, Pottery Cave Group, and Gateway Hill were subject to limited excavation. For the most part, researchers were disappointed with the quantity and quality of artifacts found during their investigations, but excavations in an "oubliette" (Joyce 1929:443) called Pottery Cave yielded great amounts of ceramics, including many fragments of fine polychromes (Joyce 1929:Plate XLIII-XLV; Joyce *et al.* 1928:Plate XXXIV).

Subsequent analyses of the hieroglyphic texts from Pusilhá revealed that the monuments were carved between 9.7.0.0.0 (A.D. 573; Stela O) and 9.15.0.0.0 (A.D. 731; Stela E), and a retrospective date refers to events in 9.3.0.0.0 (A.D. 493; Stela D) (Joyce *et al.* 1928; Thompson 1928). Early investigators also noted irregularities in the Lunar Series content of Initial Series dates. Morley (1938), presuming that the "blank" stelae represented continuations of the period-ending commemorations celebrated by the inscribed monuments, posited that the date sequence should be extrapolated both forward and backward in time. In this manner, it was deduced that Pusilhá was occupied in both the Early and Late Classic periods.

Pusilhá was next visited in 1970 by Hammond (1975), who collected additional ceramics from Pottery Cave and another cave. Hammond also restudied ceramics from Lubaantun and Pusilhá curated by the British Museum, but found the collections to be in disarray. Nonetheless, he was able to conclude that: (1) the pottery of Pusilhá is generally earlier than that of Lubaantun; and (2) Pusilhá probably was a regional capital abandoned in favor of Lubaantun in the late 8th century. Leventhal's (1990, 1992, n.d.a, n.d.b) Southern Belize Archaeological Project conducted two two-month seasons of fieldwork at Pusilhá during 1979 and 1980. During this time, project members: (1) relocated all the groups sketched by the British Museum Expedition; (2) discovered two enclosed ballcourts, the Machaca Plaza, and numerous smaller groups; (3) conducted a systematic pace-and-compass survey along narrow east-west and north-south transects; (4) mapped by transit several important groups, including the two enclosed ballcourts and the Machaca Plaza; and (5) conducted limited excavations in five groups (the Stela Plaza, two ballcourts, Machaca Plaza, and the top of Gateway Hill). An important contribution of the project was the first usable settlement map of Pusilhá that shows not only the principal structures of several large groups, but also their relative positions and the locations of many smaller residential groups (Figure 1; Leventhal 1990:Figure 8.1; Ulrich 1982). I stress that this map is among the best of its kind. Nevertheless, like all pace-and-compass maps, its accuracy is greatest within individual groups. The spatial relationship of distinct groups is more suspect. For example, the location of the Gateway Hill Acropolis with respect to the Stela Plaza is off by more than 400 m. Moreover, since the map was generated from narrow, orthogonal transects (as well as additional opportunistic survey), it is incomplete. The large spaces in [Figure 1](#) do not represent vacant terrain, instead they indicate that large portions of the site were not surveyed. Finally, test excavations were not designed to recover artifacts from households representing the full spectrum of social status at Pusilhá. Instead, the recovered samples came from the largest and most important ceremonial and residential groups at the site.

An important aspect of both Hammond's and Leventhal's research is the identification of southern Belize as an archaeological region within the Maya area. Hammond (1975) considered Lubaantun and Pusilhá to be sites within a large Maya "realm" (i.e., he adopted a regional perspective to the archaeology of Toledo district) and Leventhal (1990, 1992) set out to identify the traits that define the archaeological region. These include: (1) ballcourts built within walled enclosures; (2) the construction of facades on features of the natural terrain; and (3) the re-use of tombs for sequential burials (Leventhal 1990, 1992). To this list, we add: (4) incorrect or otherwise non-standard Lunar Series information (Morley 1938; Thompson 1928); (5) a lack of corbeled arches; and (6) a lack of stone superstructures (see Hammond 1975).

Reents (n.d.) conducted the first examination of the non-calendrical contents of the hieroglyphic texts of Pusilhá. In her study, she: (1) identified seven possible rulers; (2) discussed the Pusilhá emblem glyph and concluded that its apparent use at Quiriguá implies that the Pusilhá "royal bloodline" continued at that site; and (3) noted particular similarities in the unusual syntax of the Pusilhá and Nimlipunit inscriptions. Although the earliest monument (Stela 15) then known at Nimlipunit dates to 9.14.10.0.0 (A.D. 721)—representing an overlap of only 10 years with the inscriptions of Pusilhá—she suggested

that the two sites must have been contemporaries for a period longer than that suggested by the dated texts.

In 1989-1991, Walters led small teams from his Maya Cave Project to Pusilhá, and found several large groups (including the Moho Plaza, the Ik Bolay Complex, and the Northern Fortifications) two to three kilometers southwest and northwest of the groups mapped by Leventhal. These are not distinct sites, but instead represent significant portions of Pusilhá that previously were unknown. In these seasons, Walters discovered several caves in the Pusilhá region and removed ceramics from them. In 1992, Walters obtained a permit to explore Pusilhá, and left work in the hands of Weller and Gibson, two well-meaning amateur archaeologists. During this period, Weller: (1) produced a sketch map of many of the structures in the Moho Plaza; (2) discovered the largest ballcourt known in southern Belize; (3) found three carved ballcourt markers and their dedicatory caches; and (4) cleared a hieroglyphic stair. Gibson explored the hilltops circumscribing the northern and southern boundaries of the site, and rediscovered many groups in an area stretching four kilometers to the west and northwest of the village of San Benito Poité. What little is known about the 1992 season is thanks to Weller, who wrote a brief but informative report in Walters' name for the Department of Archaeology (Walters and Weller n.d.).

Connections between southern Belize, Copán, and Quiriguá.

Economic, political, and stylistic connections between Pusilhá and the Copán-Quiriguá region have been inferred from four sources of data: (1) zoomorphic altars at all three sites; (2) similarities shared by the Pusilhá and Quiriguá emblem glyphs; (3) apparent references to kings of Copán in the texts of Pusilhá; and (4) ceramics from Pottery Cave that resemble polychromes from western Honduras. Additional information suggesting a link between southern Belize and western Honduras has been found at Nimlipunit, where rulers often are portrayed wearing "turbans" similar to those of Copán's kings. A recently discovered stela seems to discuss an event at ox witik ('three root', a place name for the epicenter of Copán) attended by a king of Nimlipunit in 9.17.0.0.0 (A.D. 771) (Mexicon 1998; Wanyerka 1999). But the phrase may refer to a root used in a sacrificial event, or, alternatively, ox witik may be a title or part of the name of the ruler of Nimlipunit.

The discovery of three zoomorphic altars (representing frogs or ocelots with human-like faces) by the British Museum Expedition long ago fueled speculation of a connection of some sort between Pusilhá and Copán or Quiriguá. Moreover, similarities between the emblem glyphs of Quiriguá and Pusilhá have been known for some time (see Reents n.d.). Hammond (1986), in fact, suggests that since the emblem glyph first was used at Pusilhá 40 years before it appeared at Quiriguá, it may be that the ruling dynasty of that site came from Pusilhá. Although these scholars argue that Quiriguá and Pusilhá shared the same emblem glyph, in reality the glyphs are similar but not identical. The main signs of the two emblem-glyphs consist of what Schele and Mathews (1998) call the tzuk ('partition') symbol, but it consistently appears in different orientations at each site. Moreover, the Pusilhá emblem glyph also contains an additional element resembling a stair. Thus, a connection between the two sites is suggested by their

similar main signs, but there is insufficient evidence to propose that Pusilhá and Quiriguá were ruled by members of the same dynastic line. Perhaps the two provinces became allies in a loose confederation after each had gained independence from Copán.

The rapid advances in hieroglyphic decipherment of the 1980s and 1990s have brought Pusilhá once again to the attention of Maya scholars. Although there has been no systematic study of the Pusilhá texts since Reents' (n.d.) research, the epigraphic corpus of the site currently is the focus of much speculation. As often is the case with such research, results appear more in electronic mail, personal communications, and other "gray" sources than they do in peer-reviewed literature. One such important discovery was made by Simon Martin (personal communication to Lorington Weller, 1993). He notes references to an individual whose name resembles that of Copán Ruler 11. During his long reign, Ruler 11 oversaw the dramatic expansion of the Copán state. Since the Pusilhá king lived slightly later than Ruler 11, it is possible that he was named after the great Copán king.

Ceramics recovered by the British Museum Expedition support an economic connection between Pusilhá and Copán. Illustrated fragments of polychrome pottery show profiles of birds and monkeys executed in a Honduran style (Joyce 1929:Plate XLV). Some examples look somewhat similar to Copador Polychrome, best known from Copán and western El Salvador. In a study of the chemical composition of pottery from the southeastern Maya zone, Bishop and Beaudry (1994) analyzed paste samples from sherds in the Pusilhá collection at the British Museum. These turned out not only to be Copador Polychrome, but also are chemically identical to Copador used at Copán (see also Bishop *et al.* 1986). What is particularly fascinating about this result is that Copador Polychrome is quite rare at Quiriguá, but apparently is more common at Pusilhá. It is possible, then, that Pusilhá had closer economic ties with Copán than did Quiriguá. Nonetheless, many of the ceramic motifs illustrated by Joyce (1929) appear to be local in origin. The "twist-and-bud" motif (Joyce 1929:Plate XLIII), common on Pusilhá ceramics including some examples of Copador Polychrome, appears neither in western Honduras nor El Salvador. Bishop and Beaudry's (1994) results, therefore, seem to suggest that plain ceramic vessels produced in the Copan region were brought to Pusilhá and painted by local artists.

Ceramic influences from other regions also are found in the Pusilhá assemblage and collections from Lubaantun. Hammond (1975), for example, illustrates stamped jars that are a local variant of Pantano Impressed, known from the Pasión zone and other regions to the west. Examples from Lubaantun, however, differ in that profile monkeys and birds replace the calendrical glyphs and other motifs used elsewhere. Still other vessels illustrated by Joyce (1929) appear to be Belize Red, a common utilitarian ceramic from Cayo district. Several authors have argued that an extensive interaction network linked northern and western Belize to western Honduras, including non-Maya sites where Uluá-Yojoá Polychromes were produced (Beaudry-Corbett *et al.* 1993; Hirth 1988; Joyce 1988; Sheptak 1987; Urban 1993). It may be that Pusilhá served as a conduit for the exchange of ceramic ideas between these regions.

It should be stressed, however, that ceramic data for Toledo district are quite limited. None of the projects that have worked at Pusilhá, Nimlipunit, Uxbenka, or within the Maya Mountains have published descriptions of their pottery. With the exception of Lubaantun, where Hammond (1975) defined 14 types for a single Late Classic phase, no typological data have been published. In fact, the closest regions for which diachronic ceramic data are available are the southeastern Petén (Laporte 1995) and Stann Creek district (Graham 1995). A major goal of PUSAP, therefore, is to develop the first multi-phase ceramic chronology for a site in southern Belize.

Pusilhá as an example of the dynamic model of state formation and fragmentation.

Drawing upon these and other data, Marcus (1992, 1994) describes the political trajectory of Copán, Quiriguá, and Pusilhá in terms of the dynamic model. According to her reconstruction, Pusilhá began as an independent capital of a "province," equivalent to Hammond's (1975) "realm" and Leventhal's (1990) "southern Belize region." She suggests that during the reigns of Copán's Ruler 11 and 12 (A.D. 578-695), both Pusilhá and Quiriguá were incorporated into the expansionist Copán state. Evidence for the exchange of ceramics and the introduction of modes from the southeastern periphery during this period are consistent with some level of economic interaction with the Copán core. In A.D. 738, Ruler 13 (Waxaklajun-Ubah-K'awil) of Copán was captured and beheaded by K'ak' Tiliw ("Cauac Sky"), a lord of Quiriguá, and the Quiriguá province regained its independence. Presumably Pusilhá also reasserted its independence at about that time. Given similarities in the emblem glyphs of Pusilhá and Quiriguá, it is possible that the two provinces joined in some sort of an alliance. But within a few decades, the dynastic line of Pusilhá came to end, and the provincial capital was moved to Lubaantun (Hammond 1975). The cyclical nature of these events—initial independence (before A.D. 600 or so), incorporation into the core of an expansionist state (during the 7th century), and regained independence of the province (during the early 8th century)—are proposed by Marcus (1992, 1994) as an example of her dynamic model. Following Hammond (1975), we also propose a final stage to this sequence: the apparent end of the Pusilhá dynasty and the movement of the provincial capital to Lubaantun. The *economic effects* of all these political events, however, remain to be studied.

Current Research at Pusilhá (May–July 2001)

PUSAP began in May 2001 with the research goals of: (1) testing Marcus' interpretation of the political history of Pusilhá through a comprehensive analysis of the hieroglyphic corpus of the site; and (2) testing both centralist and decentralist models of the integration of elite and "peasant" economies. In addition to these scientific goals, we also plan to: (1) develop a regional ceramic chronology for Toledo District; and (2) document, consolidate, and preserve both architecture and sculpture still at the site.

During our first season of research, we documented previously known and new monuments, and began systematic "full-coverage" mapping of the site using total

station and GPS equipment. The first is allowing us to flesh out a more-detailed political history of Pusilhá, against which we will compare material culture data related to economic integration. The second will enable us to plan a systematic test-pitting program designed to recover artifacts from the houses of both commoners and elites living in the site center and surrounding residential and agricultural zones. In later seasons, we plan to return to Pusilhá to conduct test excavations designed to recover ceramics and other artifacts. Analyses of these materials will help us study economic connections with other sites and regions, and also will allow us to construct the first multiphase ceramic chronology for a site in Toledo district.

The Stela Plaza.

Before the beginning of the season, Project Epigrapher Christian Prager (Universität Bonn) visited the British Museum and redrew both the texts and pictorial contents of all the monuments brought to London in 1930 and 1931. Although Morley (1938) long ago illustrated many of the hieroglyphic inscriptions of Pusilhá, his figures are not of sufficient quality to conduct detailed epigraphic research. Moreover, the iconographic content of only two of the Pusilhá monuments has been published (Joyce *et al.* 1928:Plate XXVI and Plate XXXII, Figure 3). Finally, neither Morley nor members of the British Museum Expedition illustrated all of the texts found at Pusilhá, and many were left at the site. Prager's initial assessment was that at least 20 fragments carrying inscriptions were missing. Since the stelae were found *in situ*, these fragments presumably were left in the Stela Plaza.

Our work in the Stela Plaza began with brush clearing for detailed mapping of structures and remaining monument fragments. We established the site datum, a concrete marker, just north of Structure 1. The coordinates of this point are arbitrarily set as 0 m North, 0 m East, and 200 m above sea level. According to the 1:50,000 scale topographic map produced by the Military Survey, Ministry of Defense, United Kingdom, this arbitrary altitude is 50 m too high, but repeated GPS measurements suggest that it is approximately accurate. In a future season, the precise location of the datum and all permanent bench marks will be determined from high-accuracy, sub-centimeter GPS measurements.

In the course of our three weeks of investigation in the Stela Plaza, we located 88 monument fragments and plotted the position of each using CAD and Surfer software ([Figure 2](#) and [Figure 3](#)). Currently, we are analyzing their depositional pattern in order to determine to which of the previously known 21 stelae, three zoomorphic altars, and an unknown quantity of round altars the fragments belong. Each fragment has been illustrated and photographed in both natural and oblique-angle artificial light. Prager now is completing the painstaking work of comparing these illustrations with his drawings and photographs of incomplete monuments in the British Museum, using a method similar to that developed by Barbara Fash for the Copán Mosaics Project.

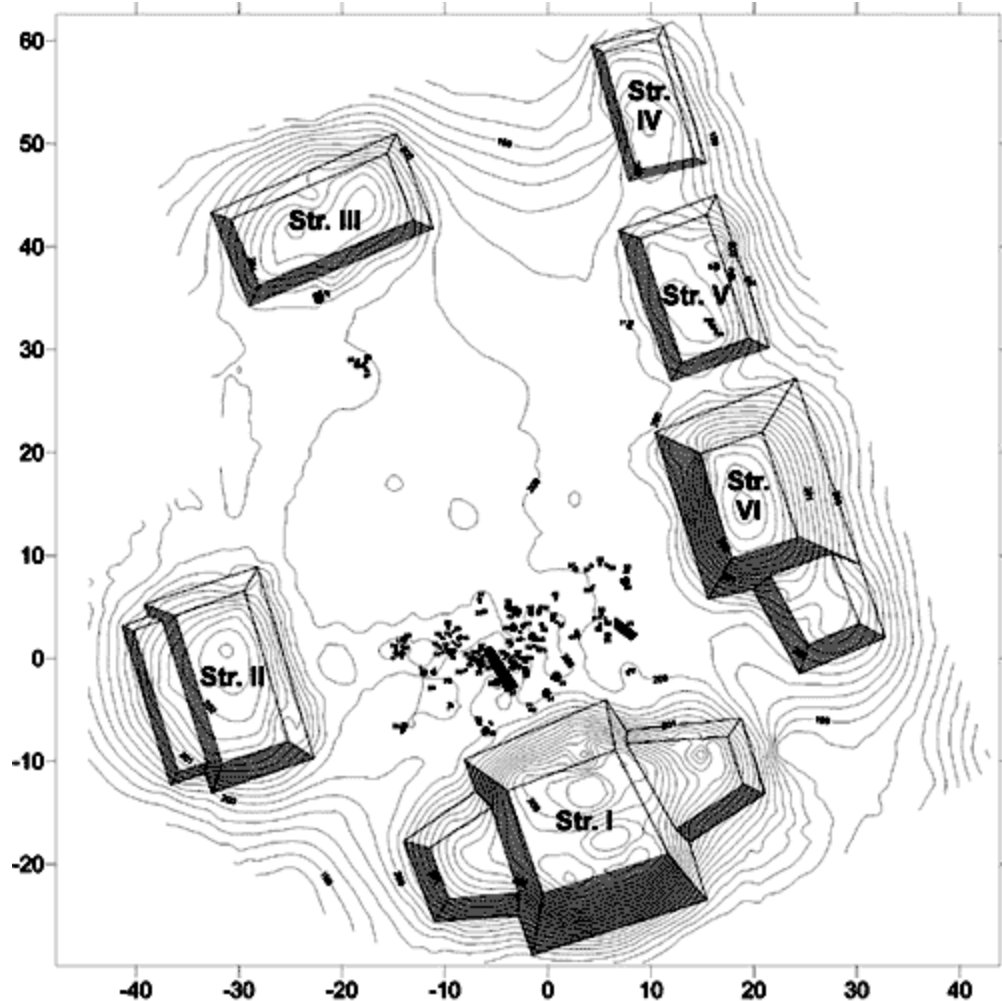


Figure 2. The Stela Group (grid labeled in meters). Black objects are monument fragments.

Although Prager's work is still underway and epigraphic analysis is continuing, several important discoveries are worthy of note. First, we found a fourth zoomorphic altar and a previously unknown stela (making a total of 22 for the group) on Structure V. The altar is different from the three "frogs" located just north of the stela row, and seems to portray an anthropomorphized turtle. Second, *all* of the stelae and round altar fragments have texts or iconographic content. Another important observation made by Prager is that Stela F, left whole in the Plaza and not illustrated by Morley because of its eroded condition, contains many glyph blocks that still are legible. The text opens with the date of 9.16.0.0.0 (A.D. 751), making it the latest monument at Pusilhá that is dated with certainty (see below). A ruler is mentioned in the text, and his name is similar to that of a Late Classic king of Naranjo.

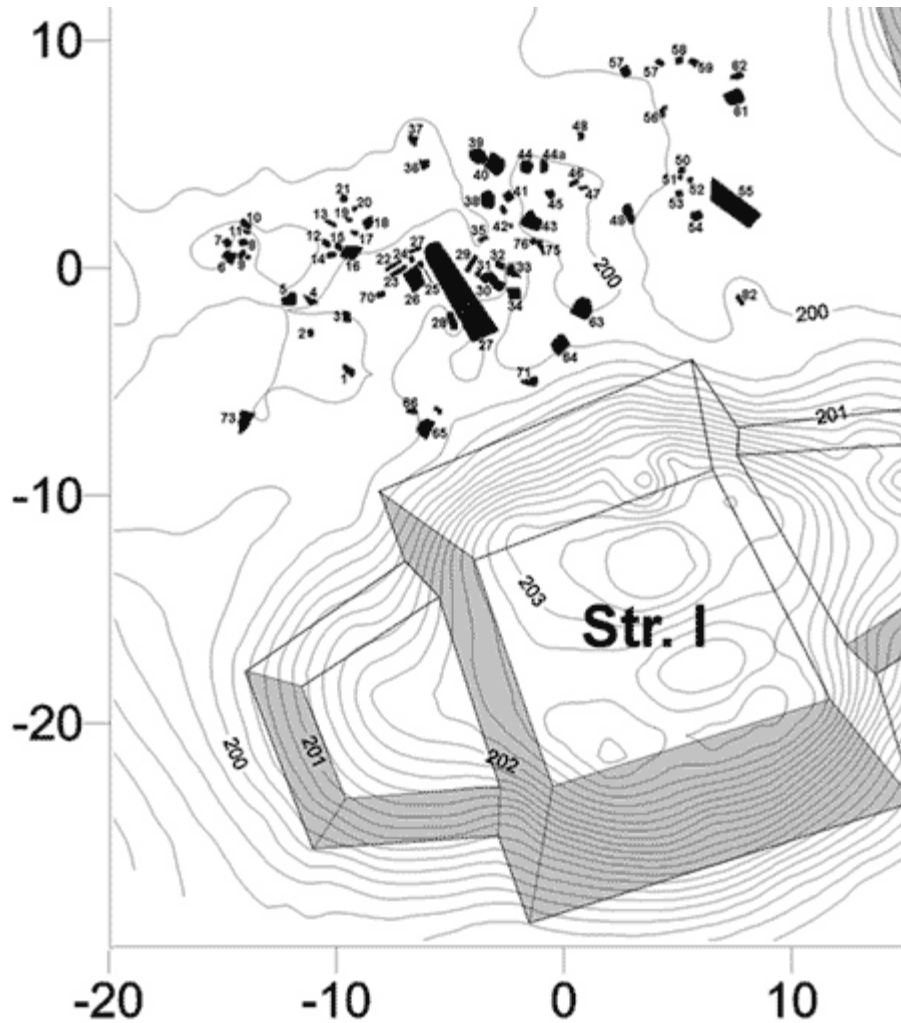


Figure 3. Monument fragments in the Stela Row.

The position of the monuments, including the now-dated Stela F, strongly suggests that they were reset in the stela row at about 9.16.0.0.0. Stelae F and G, the latest in the series, occupy the two central positions in the row of 12 monuments. Caches were found under many of the monuments (and others probably remain to be excavated), but the richest deposit of all was found by the British Museum Expedition under Stela F. The centrality of these late monuments as well as the richness of the Stela F cache both suggest that the other stelae were moved to the row around the time of the dedication of Stelae F and G. It is possible, too, that these other stela were moved and rededicated later than 9.16.0.0.0, in order to celebrate major period endings at a time after carved monuments were produced at the site. Excavations in the group should help clarify its chronology, but we now hypothesize that its construction dates to the middle of the 8th century.

Prager's analyses of the texts in the British Museum also are bearing fruit, and are worth summarizing briefly here. To date, he has identified approximately 38 individuals,

several battle events where captives were taken, and a number of interesting titles. To the list of Pusilhá rulers compiled by Reents (n.d.) and Martin (personal communication to Lorington Weller, 1993), we now can add a queen in her own right (*ix k'uhul ajaw* of Pusilhá), a dynastic founder, and several other rulers. According to Stelae P and K, the Pusilhá dynasty was founded in 8.6.0.0.0 (A.D. 159) by an individual whose eroded name ends with K'awil, a god name adopted by several Late Classic rulers of the site. Most interestingly, the founding of the Pusilhá dynasty is linked to an individual named "Leaf Ajaw" who is thought to have been a predynastic ruler of Copán. Stela I at that site contains a retrospective reference to "Leaf Ajaw" and an event that also dates to 8.6.0.0.0. It is not known if "Leaf Ajaw" was a mythical or actual ruler of Copán, but the reference at Pusilhá provides another link to that site. A separate text describes a king of Pusilhá as an *och'k'in kalomte'* ('lord of the west'), a title used by only a few rulers of the largest sites, and one that has been linked to Teotihuacán "influence" at Tikal and other sites. Similarly, Stela C depicts a ruler holding a bicephalic serpent bar with emerging images of the central Mexican storm god ("Tlaloc"). A direct connection with Teotihuacán is unlikely given the Late Classic date of these monuments, but the use of the *och'k'in kalomte'* title and "Tlaloc" imagery suggest that Pusilhá was, for part of its history, a rather cosmopolitan center.

Curiously, the full emblem glyph of no other archaeologically-known site appears in the Pusilhá corpus. Toponyms of unknown places where captives were taken are noted, as is the place name of the home of the husband of a queen of Pusilhá. One toponym (the "Water Group" site) may refer to Altun Ha, but equally could be a smaller site in the vicinity of Najtunich or near the Petexbatún region. To date, Prager has identified no unambiguous reference to Copán, Quiriguá, Nimlipunit, or other sites thought to have been intimately involved in the political history of Pusilhá. Thus, despite general ceramic and artistic affiliations, as well as a pattern of shared king names, Pusilhá may always have been an independent polity.

During sketch mapping of the Big Tree Group (located 400 m east southeast of the Stela Plaza), we discovered a fragment of a second previously unknown stela. A third new stela (making a total of 25 for the site) and altar fragment were discovered in a small residential group 400 m northwest of the Stela Group. It contains a text identifying a depicted captive. Analysis of the hieroglyphic content of these monuments, as well as continued study of the 88 new fragments and the monuments in the British Museum, will shed further light on the dynastic and political history of Pusilhá. These data will provide an important chronological tool against which models of economic integration will be tested.

The Moho Plaza.

Another focus of both mapping and monument documentation was the Moho Plaza, located some 950 m west and 1350 m south of the Stela Plaza. With the exception of the Gateway Hill Acropolis, this is the largest single group yet found at the site, measuring some 120 m to a side. Weller (in Walters and Weller n.d.) reported 10 structures in the group, and we have found three additional platforms. The largest ballcourt known in southern Belize (called Pusilhá Ballcourt 3) is located at the north

end of the Moho Plaza, and the south end is delimited by a large range structure containing a hieroglyphic stair (Str. VI). Strs. X and XI may form a fourth ballcourt. Unfortunately, they are so badly looted that it is not clear if they are two parallel structures or once formed a single rectangular mound. Simple salvage excavations would clarify this issue.

Prager has produced the first illustrations of the three ballcourt markers from Ballcourt 3, and also has drawn and re-photographed the blocks in the hieroglyphic stair. The latter contains a Calendar Round date of 4 Ak'b'al 2 Sotz', but it cannot yet be tied securely to any absolute date. Nevertheless, for a variety of reasons described below, we currently favor the date of 9.18.7.10.3, or A.D. 798.

As for the Stela Group, we have generated a detailed plan, a Malerized map, and a topographic map ([Figure 4](#)). Because of the remote location of Moho Plaza, we were unable to back-shoot to the site datum in the Stela Plaza. For this reason, the coordinates appearing in [Figure 4](#) are not tied into the master grid. Nevertheless, GPS readings suggest that the Moho Plaza bench mark is located some 1350 m south and 950 m west of the Stela Plaza datum. As we begin systematic mapping of the western portion of the site, a priority will be to extend the site grid as far as the Moho Plaza.

For several reasons we suspect that the Moho Plaza dates to a time quite late in the occupation of Pusilhá. First, the architecture is different from that of other groups. Several structures are fronted by large, monolithic stairs similar to those of Lubaantun and Nimlipunit, sites which apparently reached their apogee after dated monuments were erected at Pusilhá. Second, the ballcourt is anomalous in two ways: (1) it is oriented east-west, a pattern typical of Terminal Classic and Postclassic ballcourts; and (2) it is not built in a walled enclosure like the other two ballcourts at Pusilhá and those of Lubaantun and Nimlipunit (see Leventhal 1990). Third, the glyph blocks of the hieroglyphic stair are particularly strange, and are rendered in a style reminiscent of that of Terminal Classic and Postclassic Yucatán. Finally, the group is constructed on a low, flat plain: an occupational pattern not seen elsewhere at the site. In the 2002 season, we hope to return to the Moho Plaza to conduct test-pit operations. Our working hypothesis is that this elite group was occupied at the end of the history of Pusilhá, probably at a time after the dynastic collapse in the late 8th century.

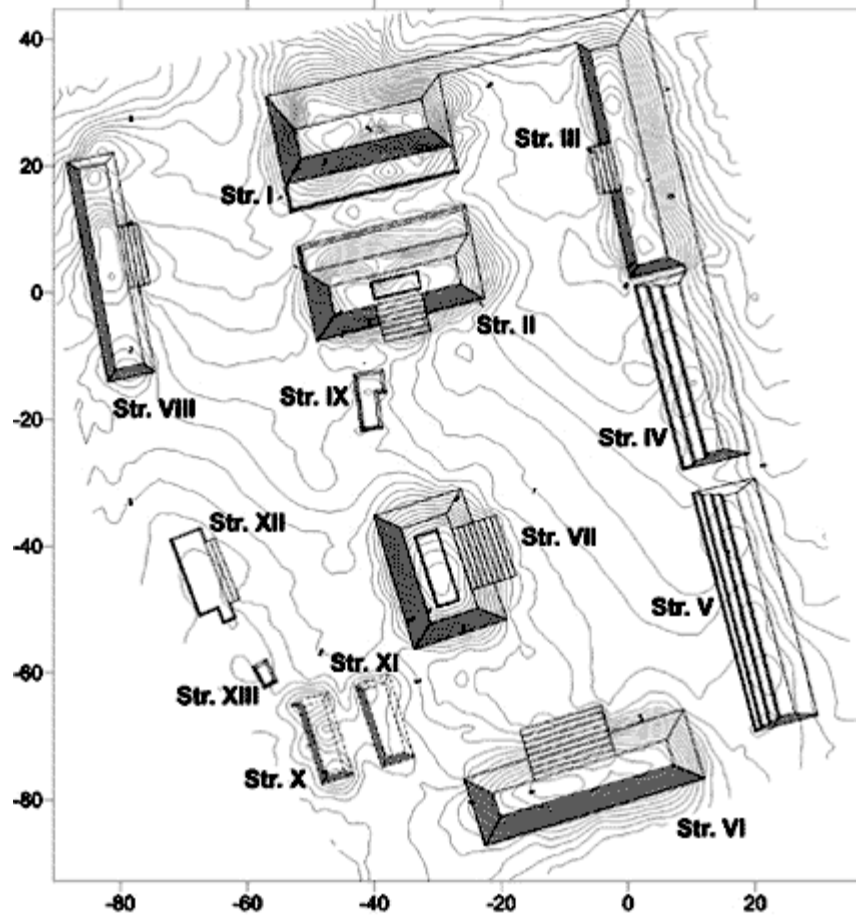


Figure 4. Moho Plaza.

Gateway Hill Acropolis.

One of our most important tasks of the 2001 season was to begin survey of the Gateway Hill acropolis, the dynastic center and palace group of Pusilhá. The simplified rendering of the acropolis is perhaps the least satisfying aspect of the earlier pace-and-compass map. The acropolis and associated groups are much larger in size than indicated in Leventhal's map, and completely fill a large oxbow in the Pusilhá River (i.e., the apparently blank region beneath the "Gateway Hill" label in [Figure 1](#)). We produced detailed, scaled sketch maps for use in total station mapping of the entire complex, but completed only the northeastern portion of the acropolis ([Figure 5](#)).

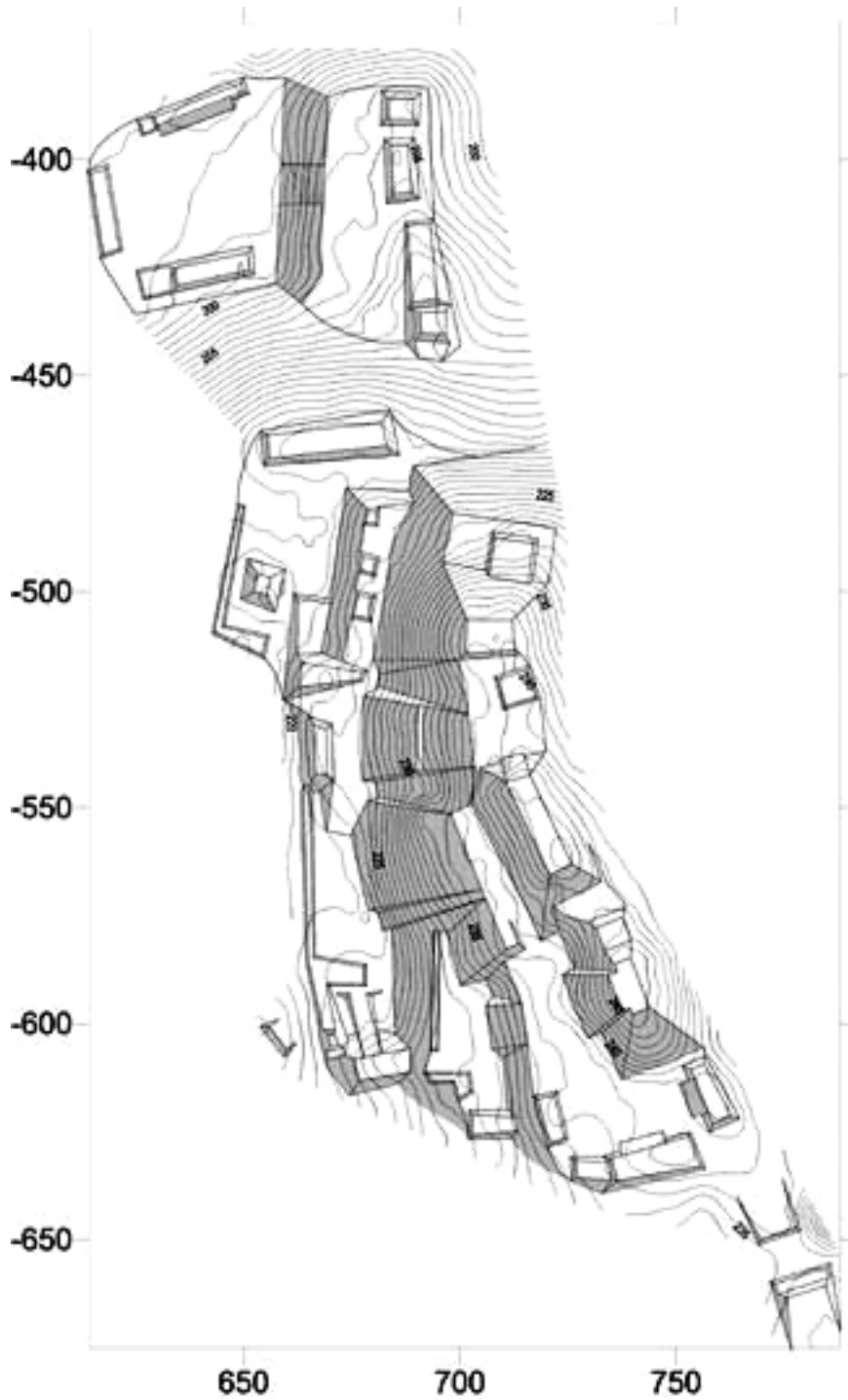


Figure 5. Gateway Hill Acropolis.

The portion of Gateway Hill that we were able to complete rises some 55 m. Overall, the top of the highest pyramid in the group stands some 80 m or more above Ballcourt 2 and the Pusilhá River. As has been noted by previous researchers, much of this rise is natural; ancient architects skillfully blended topographic features with artificial building

façades. Nevertheless, several of the structures at the top, including the southernmost in the row of pyramids, appear to be artificial, and likely were the burying place for the kings of Pusilhá. We were told by several villagers that looters located a rich tomb containing a jade mask in the northernmost pyramid (located at 530 m south, 715 m east of datum). Another looted tomb, apparently vaulted, was found in the platform located at 500 m south, 650 m east. Although looting in the group is extensive, this portion of the site is quite beautiful and impressive. In our opinion, it would be well worth the effort to consolidate several of the structures on Gateway Hill.

Systematic settlement survey.

An important facet of the 2001 season is the beginning of a systematic mapping program. As discussed above, Leventhal's (1990) useful pace-and-compass map is incomplete because it was generated from transect rather than full-coverage survey. Moreover, his western transect extended only 1.5 km west of the site center, and we already have relocated many groups 500-1500 meters further west. The last of these groups is Gibson's Ik Bolay Complex, consisting of a massive elevated platform supporting several groups linked by a sacbe. This fortification, located in a mountain pass on the Guatemalan border, seems to delimit the northwestern boundary of Pusilhá. The area to the southwest has not yet been explored in any detail, with the exception of the Moho Plaza.

During 2001, we conducted full-coverage mapping (including detailed topographic mapping) in the northeastern quadrant of the site. This region, measuring 33 hectares in area, was completely cleared in April when a plantation (milpa) fire burned out of control. Leventhal's east-west transect passed through this area, but the fire exposed many more groups and structures that do not appear in his settlement map. The old pace-and-compass map shows 25 structures. In contrast, we mapped 84 platforms and seven terrace features ([Figure 6](#)).

Leventhal (n.d.b) concluded that the apparent low structure density of this portion of the site indicates that it is outside of the urban center. But we have determined that the structure density of this portion of the site is 255 platforms per km². Standard demographic calculations used in the Maya lowlands suggest a population density of 850-1400 individuals per km², well within the range posited for the centers of large cities like Tikal and Calakmul. In other words, the urban zone of Pusilhá extends at least as far as this area. Exploration of the region northeast of the Poité River supports this notion.

The purpose of our systematic settlement survey is to understand the spatial distribution of elites and commoners in Pusilhá, and to determine how the site grew over time. We will use the results of this year's survey to plan test-pitting operations for the 2002 and 2003 seasons, with the goal of sampling residential and special-function groups occupied by different segments of the population throughout the history of the site.

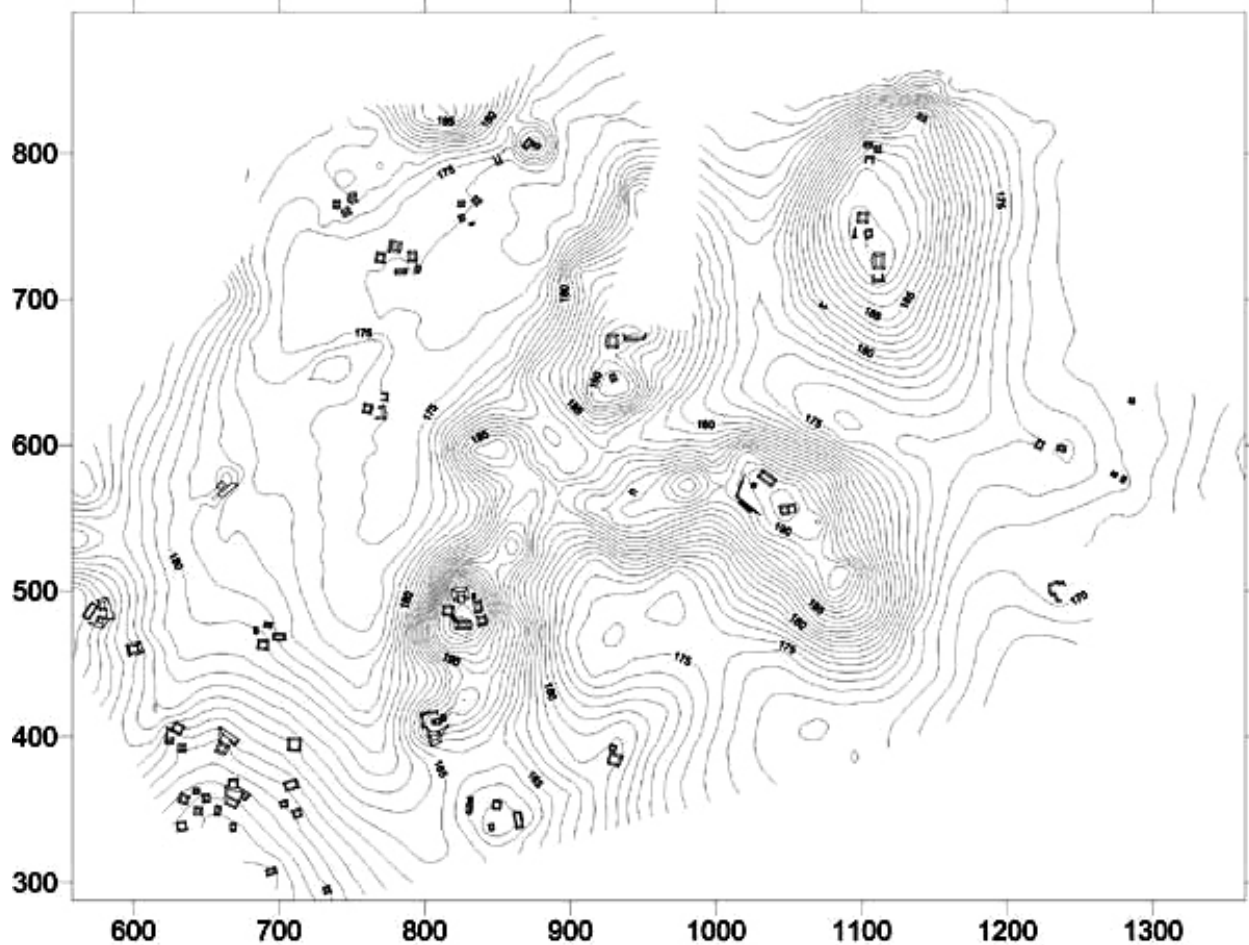


Figure 6. Structures located in the Northeast Settlement Zone.

Ceramics and obsidian.

Although we did not collect artifacts during the 2001 season, we recorded in-the-field observations of both ceramics and lithics. Such artifacts are readily seen in recently burned areas, and are even more abundant in the looters' pits that we have documented in nearly all mounds. Obsidian artifacts, quite surprisingly, are extremely abundant at Pusilhá, and appear in surface densities greater than I have seen at any lowland Maya site other than Copán. As at Copán, obsidian is much more abundant than chert. Visual inspection of obsidian artifacts from Pusilhá suggests that the majority came from the El Chayal, Guatemala source. Nonetheless, significant surface deposits of Ixtepeque obsidian (used heavily at Copán and Quiriguá, but not exploited to a great degree by Classic centers of the Petén or inland Belize) also have been found. It is not yet clear if these represent a chronological shift in procurement patterns, and if such a shift should be associated with economic incorporation with Copán or Quiriguá. Test-pitting of the features where Ixtepeque obsidian is found should help us answer these

questions. Finally, green obsidian from the Pachuca, Hidalgo source also is surprisingly common in certain portions of the site. For example, numerous green prismatic blades and biface fragments have been observed eroding out of a 50 cm high platform in the village of Poité. Morphological traits of these artifacts suggest that they date to the Early Classic, and not to a later period.

Research Objectives for the 2002 Season (February–August 2002) and Beyond

Previous work at Pusilhá and our own research at the site have enabled us to develop a program of settlement survey, test excavation, and epigraphic analysis designed to test several hypotheses. First, Prager will continue analyses of both newly discovered and previously known texts in order to flesh out the political history of Pusilhá, and to determine whether or not Marcus' dynamic model does indeed accurately describe the political trajectory of the site. An alternative hypothesis that Prager currently sees as more likely is that Pusilhá began as an independent center and maintained its authority until the collapse of dynastic rule in the late 8th century. Results of epigraphic analyses—whether or not they continue to support Marcus' model—will provide the historical background against which we will test centralist and decentralist models of the integration of Maya society. *If Maya society was weakly integrated*, politically and economically, we expect that: (1) lack of integration would be more evident at a secondary center located in a periphery (e.g., Pusilhá) than in a political and economic core (e.g., Copán); (2) changes in both political structure and economic organization would strongly affect members of the upper echelons of society, but would have relatively little impact on lower social strata; (3) there will be little evidence for specialization, particularly among households of lower status; and (4) the settlement pattern of common households in the agricultural zones surrounding Pusilhá will exhibit considerable chronological stability despite fluctuating political conditions. This last proposition is derived from the assumption that weak integration would buffer the kinds of "pull" (centripetal) and "push" (centrifugal) forces leading to substantial population movements.

In contrast, *if Maya society was more strongly integrated*, we expect that: (1) political and economic articulation would be evident both in the core and at secondary centers located in political peripheries; (2) changes in both political structure and economic organization would affect members of all levels of society, and would not be highly correlated with status; (3) there will be evidence for specialization, particularly at intermediate social levels; and (4) the settlement pattern of common households will evince instability correlated with fluctuations in the political trajectory of the center.

A third and final null hypothesis is that the political dynamics currently thought to describe the history of Pusilhá would have no archaeologically perceivable impact on the economic status of any social stratum. This may be considered an extreme decentralist model.

It very well may be that each broad model is consistent with the archaeological data for a certain facet in the history of Pusilhá. In fact, the dynamic model supposes that shifts in political organization imply changes in the level of economic integration. During an initial stage of growth and independence, for example, different social segments within a province may evince little economic integration. In contrast, during the stage of incorporation within an expanding archaic state, a centralist model may more-accurately describe a higher level of integration. During and after a period of fragmentation, provincial systems may revert to a less-integrated state, or may continue to demonstrate hierarchical or heterarchical cohesion.

In order to test these propositions, we need to: (1) divide the history of Pusilhá into successive periods of political flux; (2) develop a ceramic sequence that can be correlated with these periods, in order to understand the chronology of groups and structures that are not associated with dated monuments; (3) develop a settlement hierarchy that allows us to distinguish among the households of commoners and the residences of elites; (4) obtain material remains from contexts reflecting both the full chronological and social range exhibited at Pusilhá; and (5) compare these remains—particularly ceramic and lithic artifacts—to measure over time the degree of interaction and integration of different levels of society. To achieve these ends, we propose to continue systematic mapping of both the site center and the agricultural supporting area surrounding Pusilhá, and to conduct excavations designed to recover ceramics and other material remains adequate both for chronology building and for testing our opposing models. Because our questions focus on the expression of economic process, *our research is designed to study households of different status.*

Our research plan for the ensuing six seasons consists of three major phases. These are: (1) full-coverage archaeological survey of the 6 km² area that comprises the core, residential, and agricultural zones of Pusilhá; (2) salvage operations in looters' pits, surface collecting, and test-pitting operations conducted in off-mound contexts in groups thought to represent the full social and chronological range exhibited at Pusilhá; and (3) extensive excavation of selected residential and special-function groups in order to generate more detailed and chronologically sensitive information concerning economic integration. As part of Phase 3 work, we also will consolidate specific structures that the Department of Archaeology chooses. We believe that these should at least include the Maya Bridge and several structures on Gateway Hill and in the Stela Plaza.

Acknowledgments

PUSAP was generously funded during the 2001 season by the Foundation for the Advancement of Mesoamerican Studies, Inc. (FAMSI) and the School of American Research. I gratefully acknowledge Susan Maguire, Christian Prager, Lorington Weller, and Jennifer Braswell for their efforts in the field during the 2001 season. I also thank Commissioner George Thompson of the Belizean Department of Archaeology, and Dr. Jaime Awe and Dr. Allan Moore of the Ministry of Tourism Development Project for their

support and help. Finally, a great thanks is due to Lorington Weller, without whose support and friendship this project would not have been possible.

List of Figures

[Figure 1](#). Sketch map of Pusilhá, Belize (from Leventhal 1990:Figure 8.1). This pace-and-compass map is based on one East-West and one North-South transect. That is, large portions of the site were not surveyed. We have found that most of the "blank" areas on this map, particularly between the two rivers, are full of structures. Shaded areas were mapped during the 2001 field season (Figures 2-6).

[Figure 2](#). The Stela Group (grid labeled in meters). Black objects are monument fragments.

[Figure 3](#). Monument fragments in the Stela Row.

[Figure 4](#). Moho Plaza.

[Figure 5](#). Gateway Hill Acropolis.

[Figure 6](#). Structures located in the Northeast Settlement Zone.

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