

## 18 *CASTING A LIGHT IN THE WILDERNESS: THE ANCIENT MAYA SITE OF KA'KABISH, NORTHERN BELIZE*

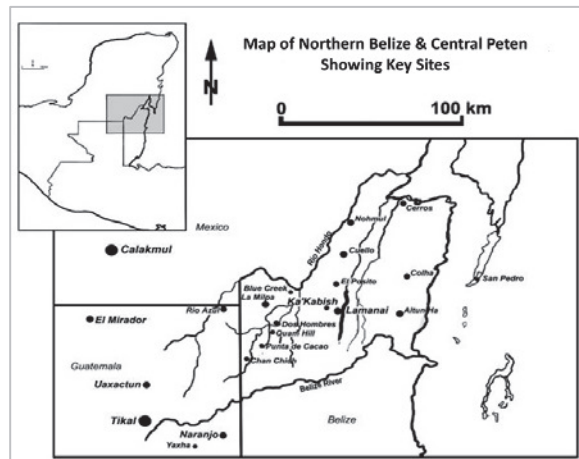
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*Investigations of the ancient Maya site of Ka'Kabish, in Northern Belize, have begun to reveal the history of this medium sized center. Excavations of the site core, along with survey and reconnaissance of settlement in the periphery has provided a means for understanding the size and chronology of Ka'Kabish. These methodological strategies have allowed archaeologists at the site to document the distribution and density of ancient structures, as well to understand the developmental trajectory of the monumental core. These investigations have revealed that the ancient Maya occupied the site as early as the Middle Formative (1000 BC – 400 BC), until its abandonment, in the Terminal Classic (AD 800 – 1000). The settlement zone remained occupied following the Terminal Classic abandonment of the site core, with evidence suggesting occupation at late as the Late Post-Classic (AD 1300 – 1542). These studies are allowing archaeologists in the greater Maya subarea to understand the variability in the rise and fall of ancient Maya polities. Investigations at Ka'Kabish add to this growing body of literature, providing yet another example of the transformations occurring during the Late to Terminal Classic period.*

### **Introduction**

During the course of the Ka'Kabish Archaeological Research Project (KARP), archaeologists uncovered several major developmental trends in the monumental center, as well as the periphery. Data was generated from a variety of approaches that included clearing and mapping of looters' trenches in key structures, excavations into two areas on the main plaza and into two structures, along with survey and reconnaissance of the settlement areas both immediately adjacent to the site as well as further out from the monumental centre.

Information gathered from the clearing and mapping of various looters' trenches and excavations into the plaza, documented the construction sequences at the site, thereby providing us with insights into the architectural, spatial, and chronological changes of the site core (Tremain 2011). While the survey and reconnaissance of areas surrounding the site yielded data on the density and distribution of residential settlements, suggesting several developmental trends for the commoners and lower echelons of society. By comparing the chronological and distributional relationships provided in previous publications, and in the research completed in the periphery, we aim to gain a greater understanding of the dynamics of the site, allowing us to provide another example of the rise and fall of particular ancient Maya polities. This analysis is largely based on settlement data that was collected over the course of three field seasons (2010-2012), as



**Figure 1.** Location of Ka'Kabish.

well as several publications that were presented during the 2011 Belize Archaeological symposium, and the 2011 Society for American Archaeology conference (Aimers and Haines 2011; Haines and Aimers 2011; McLellan 2013). In this paper we will focus our discussion on the research conducted in the settlement zone during the 2010 and 2011 field seasons. The intent of this research is to further our understanding of the chronological and spatial extent of the residential occupation of Ka'Kabish. A corollary outcome of this research is the contribution this data makes to our understanding of the relationship between the inhabitants of Ka'Kabish and the nearby site of Lamanai.

### Overview of the Site Core: Location and Chronology

The ancient Maya site of Ka'Kabish is located on a limestone ridge, near the modern day village of Indian Church, in the Orange Walk District of Belize (Figure 1). It is situated approximately 10 km from one of the largest ancient Maya sites in the region, Lamanai, which has undergone multiple seasons of study (Graham 2004; Pendergast 1981, 1985, 1986). Several other sites are documented in the region have also been the focus of archaeological investigation, such as Blue Creek, Cuello, El Pozito, Nohmul, and La Milpa; however, the nearest of these sites (El Pozito) is roughly 20 km distance, almost twice as far as Lamanai raising interesting questions about the social and political relationships between Ka'Kabish and Lamanai.

After initially reviewing the site and assessing the viability of conducting archaeological work in area 2005, the Ka'Kabish Archaeological Research Project (KARP) was created in 2007 and began mapping Ka'Kabish that same year. An earlier map created by the Maya Research Program was used as a guide to the site. This map, although functional, lacked several details due to the environmental conditions and time-constraints under which it was produced. Consequently, initial work by KARP focused on re-mapping the site core. During the course of the first two field seasons (2007 and 2009) five distinct complexes, comprised of 56 individual structures, separated by the construction of a modern road were identified (Figure 2). Over the subsequent seasons (2010-2012), survey work continued along two separate avenues of research: 1) to circumnavigate the area of the site core still under jungle cover mapping discernible mound and topographic features; and 2) survey the ploughed fields immediately adjacent to the centre as well as those along the road toward Lamanai. Additional research was done in the site core including mapping the construction sequences of several key structures that had been exposed in the numerous looters' trenched that pockmark the site along with targeted excavations into the Group D plaza and several surrounding structures to gather chronological information.

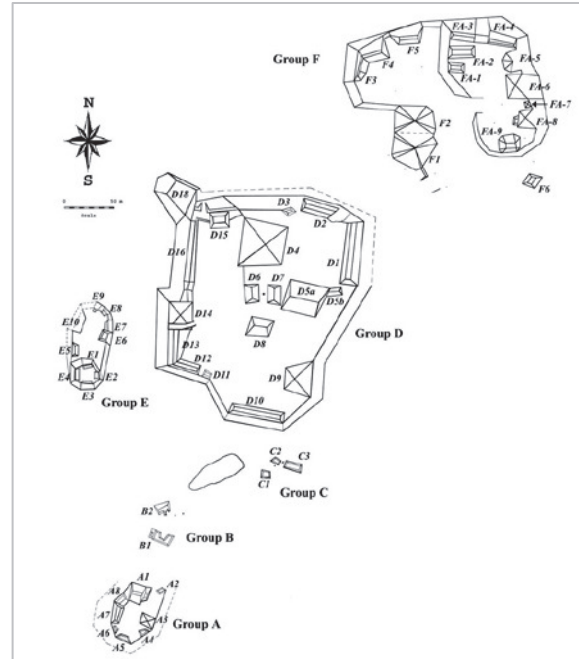


Figure 2. Map of the Epicenter of Ka'Kabish.

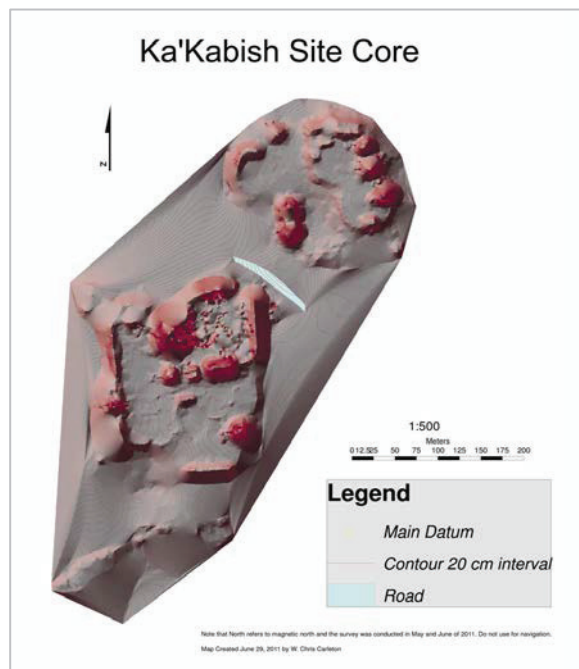
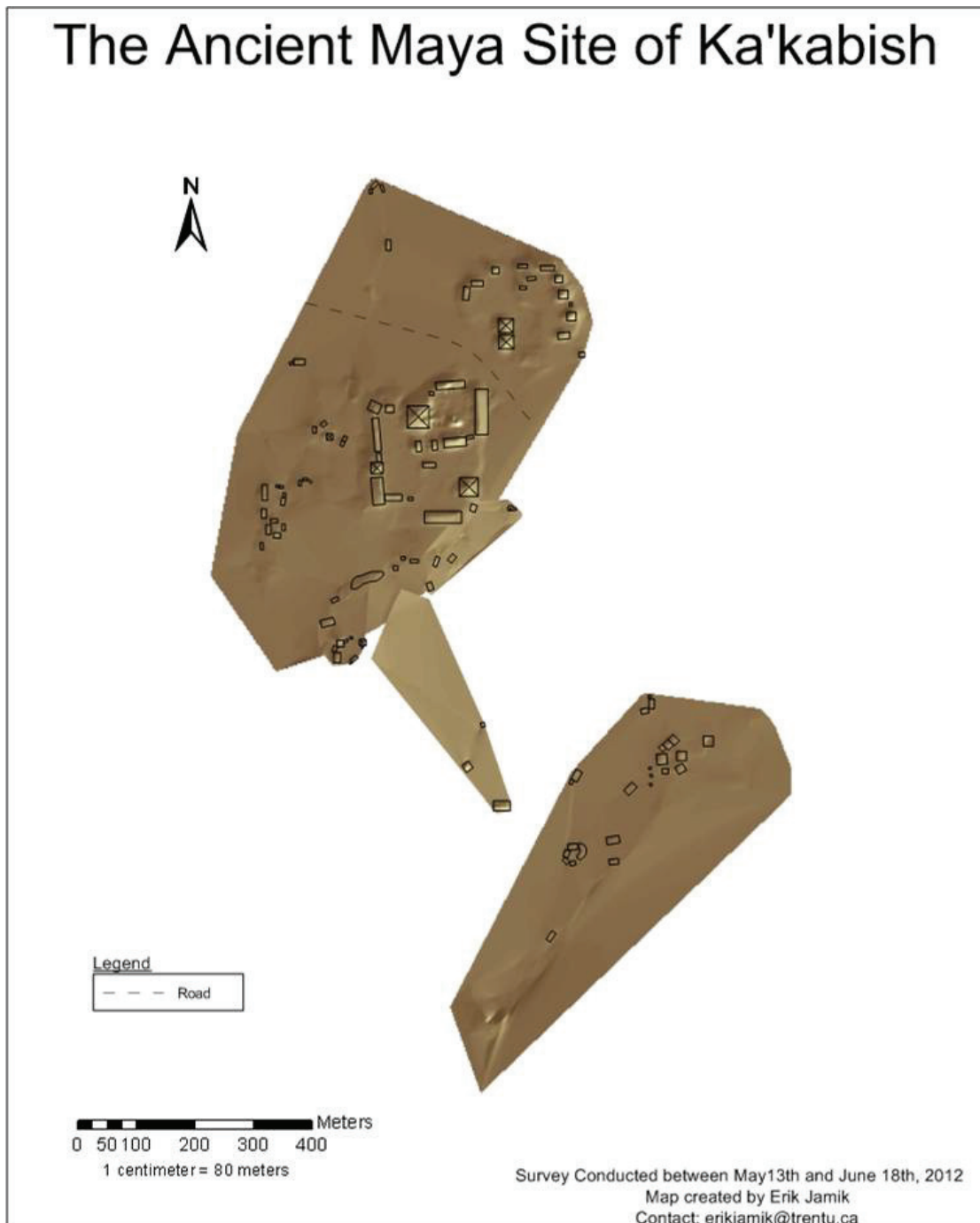


Figure 3. Shaded Relief Map of Epicenter of Ka'Kabish.

Mapping of the site core in 2011 was conducted using a Sokkia 530R3 Total Station and a Nomad data-collector with TDS Survey-Pro software and produced a detailed ArcGIS map topographic map of the known monumental core area. This topographic map allowed for a comparison of differences in the elevation of



**Figure 4.** Updated Map of Greater Ka'Kabish Settlement.

particular features, such as the height of the plaza in various areas of the site (Figure 3). Continued surveying of the surrounding region has expanded the known area further with the discovery of two additional plazuela groups and several isolated mound structure, increasing the number of structures to 96 (Figure 4).

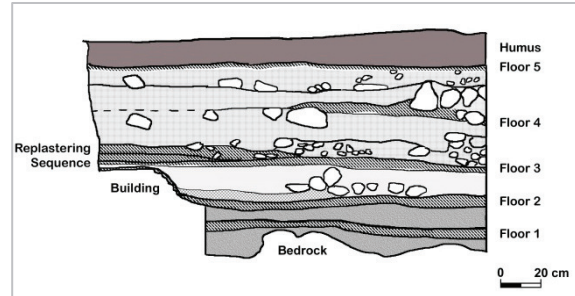
Additional mound structures likely existed, and may still exist, in the in blank areas between the two mapped zones in Figure 4, however, this area is under extensive cane farming making mapping of the area problematic.

Excavations into the Group D plaza between structures D-9 and D-5 have uncovered

the oldest deposits to date at the site. Ceramic material deposited on the surface of Floor 2 in front of a buried platform included 36 individual, broken and intact vessels (Figure 5). Ceramic analysis conducted by James Aimers identified several of these as Consejo Red vessels (Aimers and Haines 2011), which according to Kosakowsky and Pring are characteristic of the Swasey/Bladen Complexes at Cuello (Kosakowsky and Pring 1998; see also Kosakowsky 1987). Using the more conservative estimates of 800-600 BC suggested by Kosakowsky for the Bladen Complex, these materials suggest that this deposit indicates that the earliest occupation for the site core dates to the latter part of the Middle Formative period. This assumption is further supported by a series of four radiocarbon samples taken from this ceramic deposit that returned a suite of dates falling between 762-399 BC (Table 1). Two additional radiocarbon dates from this area, one from a deposit of shells on Floor 2 immediately in front of the north-east corner of the buried platform that yielded a date of 753-388 BC (AA100166), and one from below Floor 1 inside a vessel identified by Kerry Sagebiel as a Consejo Red bowl (pers. comm.) that returned a date of 799-511 BC (AA100168), support attributing the early occupation period of Ka'Kabish to the Middle Formative period.

The chronology of the site was augmented by the clearing and mapping of several looters trenches from a collection of structures in the Southern Complex. Three distinct construction phases were documented in Structure D-4, and four different construction phases were recorded in Structure D-9 (Tremain 2011). The earliest construction for both of these structures, which was based on artifact analysis, mapping, and comparative studies, date to sometime between the Middle and Late Formative Period. A radiocarbon date yielded a calibrated date of 825-417 BC +/- 66 years for the second construction sequence of Structure D-9. This Middle Formative date was supported by associated Tiger Buff ceramics (Aimers and Haines 2011; see also Kosakowsky and Pring 1998 and Kosakowsky 1987).

The latest secure date reported from the site core comes from Structure D-14. Excavations into this building uncovered a



**Figure 5.** Operation 8 West Wall Profile of Units 1 and 2.

number of Late and Terminal Classic vessel fragments, including pieces that Aimers identified as resemble the chalices at Lamanai (Aimers and Haines 2011). Additionally, a large construction episode that raised the enclosed plaza space in the north-east quadrant of Group D to the east of Structure D-4 may also date to this period (Tremain 2011).

Currently, it appears that the core area of Ka'Kabish was settled sometime during the middle or latter part of the Middle Formative period. Construction, and therefore likely occupation of the core area, continued through the Early Classic period and into the Late Classic period. In this regard the settlement history of Ka'Kabish follows a standard trajectory of many other ancient Maya site with occupation starting in the Formative period and declining during the Terminal Classic period. However, as with other sites in the area, such as Blue Creek, it appears that the area was not entirely abandoned and residential occupation continued in the areas surrounding the site.

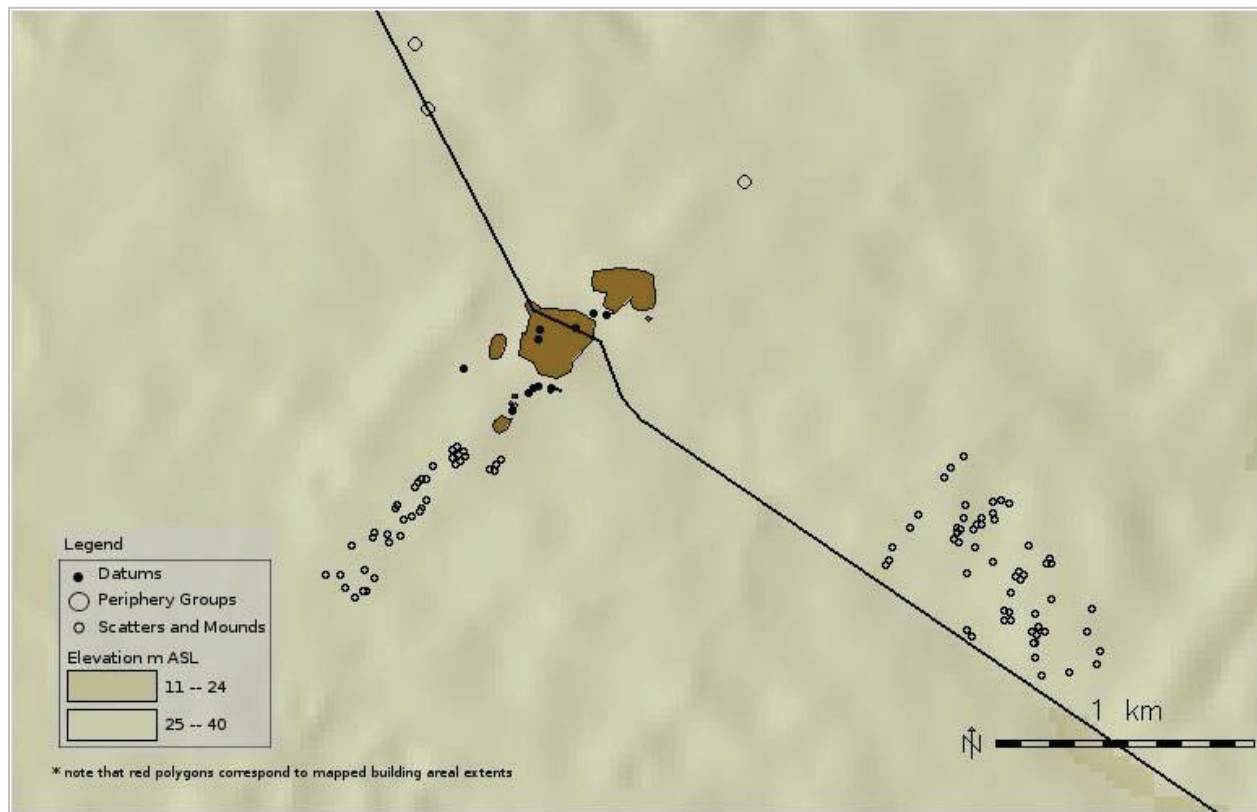
### **Discussion of the Settlement Zone**

During the 2010 and 2011 field seasons, archaeologists surveyed two areas south of the site core. The first survey location extended in a south-westerly direction, 0.8 km into the periphery. The second survey zone was roughly 1.3 km from the site core, and extended in a south-easterly direction for 1 km. The transect width varied somewhat depending on the composition of the agricultural fields, but generally averaged 0.2 km. The second survey zone was roughly 1.5 km from the site core, and extended in a southeasterly direction for 1 km. The width of the survey zone was roughly 0.92 km. In total, archaeologists found 84 ancient



**Table 1.** Radiocarbon Dates for Group D Operation 8 Plaza Excavations and Structure D-9.

AMS#	Project ID	d13C	F	14C age BP	Calibrated Date	Context
AA92052	KKB-2010-04	-16.9	0.7276 +- 0.0060	2,554 +- 66	825-417 BC	D-9 sub-IIa
AA96420	KKB-282-2011-2	-27.4	0.7374 +- 0.0034	2,447 +- 37	754-408 BC	Ceramics associated with Floor 2
AA96421	KKB-353-2011-3	-28.8	0.7372 +- 0.0034	2,449 +- 37	755-409 BC	Ceramics associated with Floor 2
AA96422	KKB-353-2011-4	-26.9	0.7400 +- 0.0034	2,418 +- 37	750-399 BC	Ceramics associated with Floor 2
AA96423	KKB-353-2011-5	-26.1	0.7357 +- 0.0034	2,466 +- 37	762-414 BC	Ceramics associated with Floor 2
AA100166	KKB-2012-520-2	-26.8	0.7424 +- 0.0048	2,393 +- 52	753-388 BC	In front of platform
AA100168	KKB-2012-438-4	-26.3	0.7308 +- 0.0038	2,520 +- 42	799-511 BC	Below Floor 1



**Figure 6.** Distribution of Structures in the Settlement Zone.

structures in an area that covered 1.08 square km (Figure 6).

**Survey Methodology**

The survey team used strategies common in Maya archaeology (see Ashmore 2007:24-36) to document the settlement surrounding

Ka’Kabish, using architectural elements (e.g., elevated terrain or mounds with high concentrations of limestone and ceramic materials), as well as the presence of sherd scatters to define sites. The purpose of this survey was multifold; along with identify the chronology and density of structures in the

**Table 2.** Definition of Types of Settlement.

<b>Designation</b>	<b>Definition</b>
Type 1	Isolated mound less than 2 m high
Type 2	2-4 mounds informally arranged, all less than 2 m high
Type 3	2-4 mounds orthogonally arranged, all less than 2 m high
Type 4	5 or more mounds informally arranged, all less than 2 m high
Type 5	5 or more mounds with at least 2 arranged orthogonally, all less than 2 m high
Type 6	1 or more mounds with at least 1 with a height between 2-5 m
Type 7	2 or more mounds with at least 1 with a height over 5 m

**Table 3.** Types of Settlement at Ka'Kabish.

<b>Settlement Zone</b>	<b>Unit Type</b>							<b>Total</b>
	1	2	3	4	5	6	7	
South-west Fields	5	2	5	0	1	1	0	14
South-east Fields	20	3	7	1	0	1	0	32
<b>TOTAL</b>	25	5	12	1	1	2	0	46

**Table 4.** Percentage of Types of Settlement at Ka'Kabish.

<b>Settlement Zone</b>	<b>Unit Type</b>							<b>Total</b>
	1	2	3	4	5	6	7	
South-west Fields	35.7%	14.3%	35.7%	0.0%	7.15%	7.15%	0.0%	100%
South-east Fields	62.5%	9.4%	21.9%	3.1%	0.0%	3.1%	0.0%	100%
<b>TOTAL</b>	54.3%	10.9%	26.1%	2.2%	2.2%	4.3%	0.0%	

settlement zone, these investigations also sought to reveal information about the organization, or distribution, of ancient Maya structures. For comparison purposes, a typology originally employed at Xunantunich by Ashmore and colleagues (1994) was used to record areas of occupation in the settlement zone at Ka'Kabish. This typology defines various forms of settlement based on the composition and orientation of structures (Table 2).

A pedestrian survey strategy was employed, with individuals evenly spaced, walking in stratified patterns across the entire survey zone. The team used a handheld Magellan Explorist 100 Water Resistant Hiking

GPS to record each mound and scatter, along with the extent of the survey zone. In the fields to the south-west of the site, surveyors also used a Total Data Station to map mounded structures and the size of the survey zone. Surveyors used sherd scatters to define sites only in specific situations, as some agricultural areas had a prolonged history of use, decreasing the likelihood that architectural elements survived. The transect survey to the south-west was conducted on heavily used agricultural fields that have witnessed repeated modern plowing and bulldozing, over multiple years.

Clearing of the area to the south-east of the site was started by Mennonites from the local

Shipyard community in 2010 and additional jungle clearing occurred only a few months prior to our 2011 and 2012 field seasons. In discussion with the local farmers we discovered that this work not only involved the expected chaining of the forest followed by subsequent burning, but also the manual collection and removal of large stones and debris. This later activity is worthy of note as it has a direct impact on any architectural material displaced by the deforestation activities. The area was ploughed prior to the survey, with plough generally disturbing the area to a depth of roughly 25 cm.

In this newly opened or cleared location, architectural elements were surprisingly well preserved, with large scatters of artefacts accompanying each mounded structure. The survey team determined the size and extent of the survey zone by following the natural boundaries of the agricultural areas under investigation, as permission was required from landowners prior to the survey. Surveyors collected ceramic, lithic, and faunal remains from the surface of noticeable material cultural concentrations and mounded structures. The team collected concentrations containing a minimum of five pieces of material for every 30 cm, as lower quantities were less likely to represent permanent occupation. Material artefact concentrations were visibly marked by flagging each individual artifact prior to collection. This allowed surveyors to visually estimate the density of materials. Collection strategies focused on “visibly diagnostic” artefacts. Ceramic objects identified as ‘visibly diagnostic’ included neck, rim, appendages, or bases of vessels, or included bichrome, polychrome, or decorated (e.g., incised, stamped) ceramic features that were larger than 5 cm in diameter.

### ***Survey Results***

Using Ashmore and colleagues’ typology, the most abundant form of settlement was characterized by Types 1, 2 and 3 (Tables 3 and 4). Generally, mounds in the Ka’Kabish settlement areas ranged in height from 1 to 3 meters, although several smaller areas of occupation were recorded with heights less than 1 meter. Also, in keeping with many other

settlement studies in the Maya subarea, surveyors noted several larger structures, over the height of 5 meters that were surrounded by clusters of smaller structures. Multiple functions have been attributed to these forms of construction, from elite households surrounded by servants and retainers to buildings serving religious functions; however, without excavations, it is difficult to interpret these forms of settlement.

When comparing these two areas of settlement without indicators of chronology, the density of structures, as well as number of ceramics surface collected, was greater in areas closer to the site core – mirroring the organization of many sites in the Maya subarea. If the number of known structures in the settlement zone is expanded and calculated so as to represent a square km, it is estimated that a total of 169 structures per square km existed in the first survey zone adjacent to the core, while 62 structures per square km were present in the second survey zone further to the east.

For chronological purposes, ceramics from the surface of structures in the settlement zone were collected and compared to existing typologies (Chase 1982; Fry 1987, 1989; Gifford 1976; Graham 1987; Masson and Rosenswig 2005). The dates provided from this analysis were used to recreate the spatial and temporal dynamics of the settlement zone. On a cautionary note, these dates will likely be revised as more data is collected, possibly changing the outcome of this reconstruction. Also, as these ceramics primarily came from surface contexts, it is possible that earlier periods of ancient Maya history are poorly represented.

With this in mind, the earliest evidence of occupation in the settlement zone likely dates to the Late Formative or Early Classic period as indicated by the presence of Sierra Red ceramics. When reconstructing the dynamics of the settlement zone in this area these two periods were presented simultaneously, as Sullivan and Valdez (1996), among others, have argued that the ancient Maya used some forms of Sierra ceramics in later periods of prehistory. This contextual overlap of Late Formative and Early Classic forms also occurs in the site core of Ka’Kabish (Aimers and Haines 2011; Haines

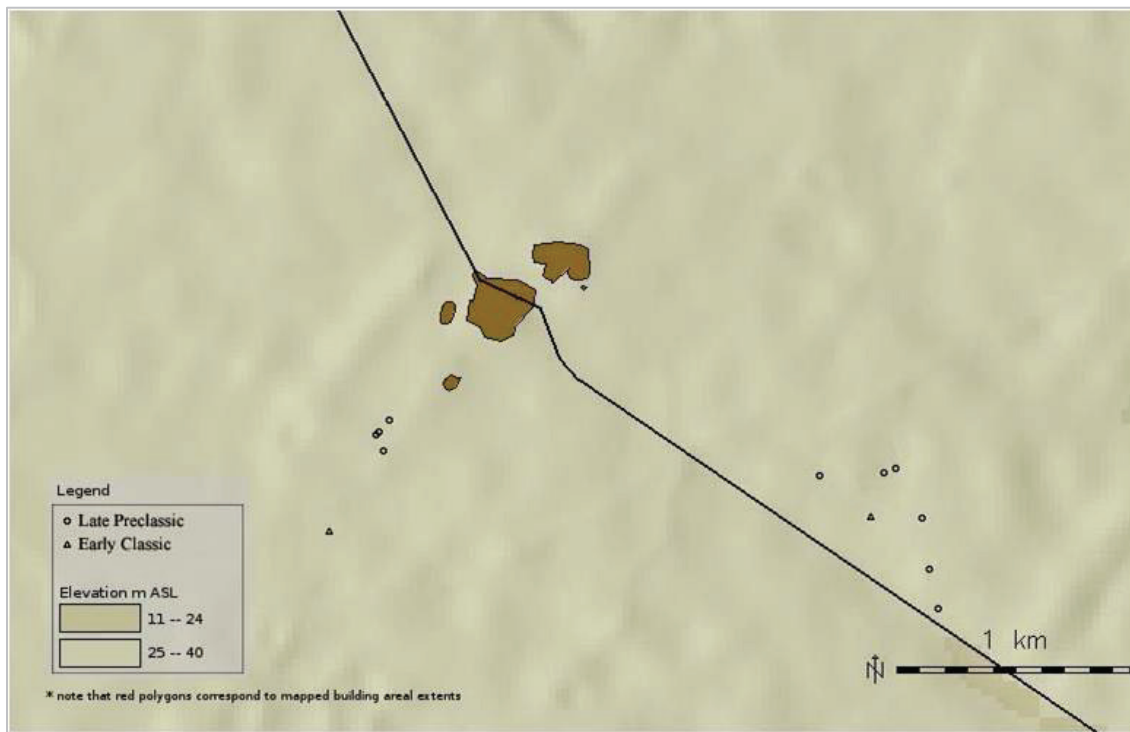


Figure 7. Distribution of Structures during the Late Pre-Classic and Early Classic.

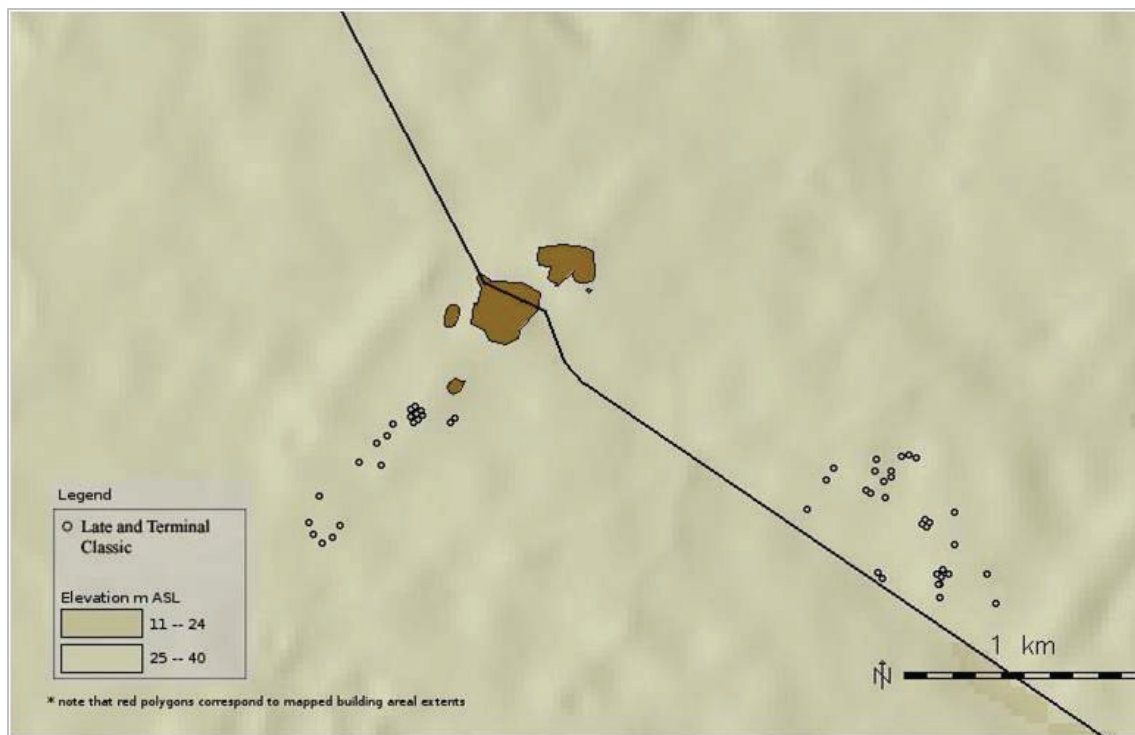
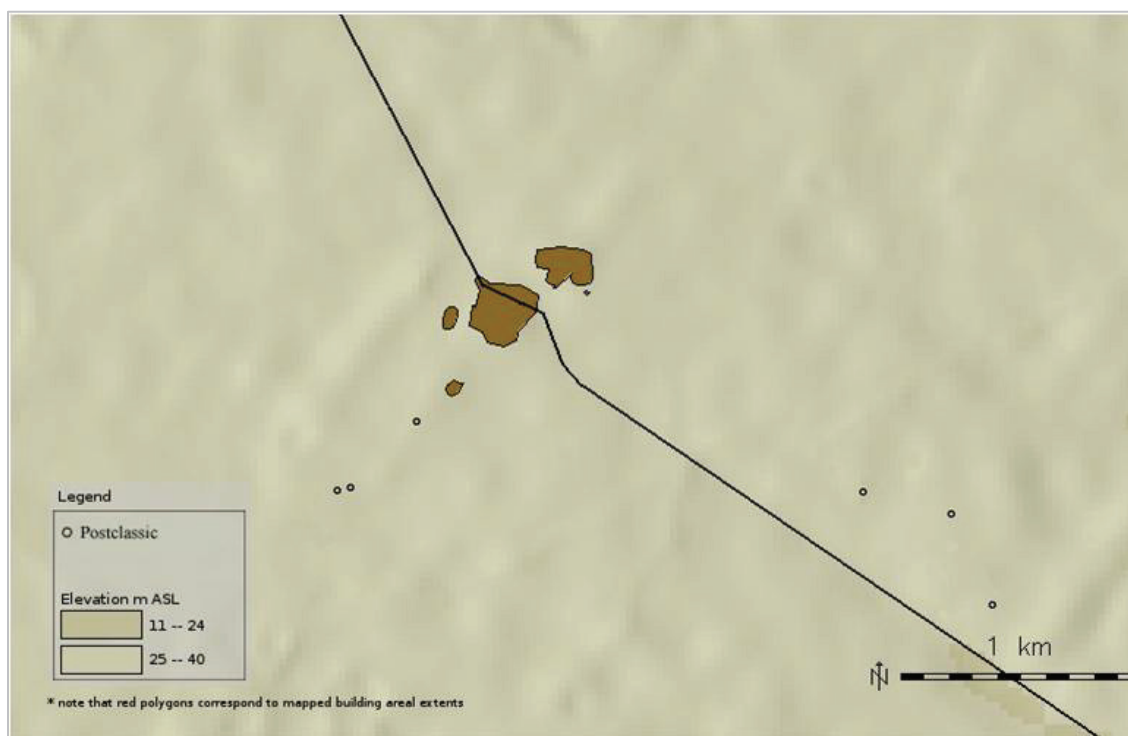


Figure 8. Distribution of Structures during the Late and Terminal Classic.





**Figure 9.** Distribution of Structures during the Post-Classic.

and Aimers 2011). Using this information, archaeologists at Ka'Kabish identified a total of 12 structures that date to these periods (Figure 7). However, the most abundant evidence of occupation in the Ka'Kabish settlement zone comes from the Terminal Classic Period. In total, surveyors found 51 structures that dated to this period (Figure 8).

The most recent materials came from a bulldozed mound in a Mennonite field east of the site. Ceramics collected from this mound included a red-slipped solid conical foot vessel, resembling Rita Red from Santa Rita, and a tripod support that also resembles Rita Red (Aimers and Haines 2011; Haines and Aimers 2011). Other objects from this assemblage included an animal effigy head, a frying pan censer handle from the Navula Unslipped system and an incised unslipped jar rim which resembles proto-historic Yglesias complex ceramics at Lamanai. These ceramic indicators suggest that the settlement zone was occupied from the Middle-to-Late-Post-Classic, possibly until the eve of European contact in the area. In total, surveyors found six structures with evidence of Post-Classic occupation (Figure 9).

In 2012, surveyors identified another 21 structures located 4 km southeast of the site core, towards the ancient Maya site of Lamanai. Although these structures have yet to be fully investigated and incorporated into the Ka'Kabish data set they appear similar to other structures located in the settlement zone. Ceramic analysis dated these constructions to the primarily Terminal Classic Period (Aimers pers. comm; Sagebiel pers. comm).

#### **Chronology of the Greater Ka'Kabish Area**

Based on the combined evidence from the site core and the two settlement areas investigated it is clear that the greater Ka'Kabish area had a long history of occupation. Settlement in the area appears to have started in or around Group D during the Middle Formative period and flourished during the succeeding Late Formative period. It appears that both of the main temples (Structures D-4 and D-9) were initiated during this period, and that Structure D-9 went through several remodeling episodes during this time and the subsequent Early Classic period.

Thus far, surveyors have yet to identify any materials that date to the Middle Formative period in the settlement zone, although future excavations in areas surrounding the site may yield earlier dates. Currently, the earliest evidence of occupation from the settlement zone dates the Late Formative and Early Classic Periods. This is not unsurprising as this corresponds to a period of intensive construction in the site core with several structures showing architectural phases dated to these periods. Both the monumental centre and the settlement areas appear to have flourished during the Early and Late Classic periods although there currently is some indication that there may have been a hiatus in construction at Ka'Kabish during the early part of the Late Classic period. This contrasts with Lamanai where Pendergast (1981) noted that during the Late Classic Period Lamanai had a very active architectural construction episode.

During the Terminal Classic period the site underwent various changes, with construction episodes and other activity at several locations occurring in the site core. In the settlement zone, the size of the community seemingly expands, as the density of structures greatly increases. Perhaps, as Tremain (2012) suggested, the site experienced a large growth of population sometime between the Late Classic and Terminal Classic, as attested by the number of structures in the periphery, and the periods of construction in the site core.

Unlike the settlement area, occupation in the monumental core zone does not last into the Post-Classic period. Construction in the core area appears to cease at the end of the Terminal Classic period. Occupation in the settlement zone persists throughout the Post-Classic area. Those areas closest to the site, however, appear to date only to the early part of the Post-Classic period, while areas further to the south-east are occupied into the Late Post-Classic and possibly early Contact periods.

The later occupation of this latter area may be linked to the settlement history of Lamanai which persisted through the Post-Classic and into the Contact period (Graham 2011; Pendergast 1981, 1985, 1986). Previously, residential structures were identified along this same trajectory toward Lamanai

approximately 6 km from Ka'Kabish (Haines and Patterson 2008; Patterson 2007; see also Baker 1995). Additionally, a small site or plazuela group called Cocochan, consisting of seven structures (five of which were identified as "major temple structures" [Baker 1995:111]) was identified roughly 5.5 km south-east of Ka'Kabish (Baker 1995:111-113, Figure 43). These findings suggest that the area between Ka'Kabish and Lamanai was continuously occupied and that it is possible that the inhabitants of the inter-site zone turned to Lamanai to provide them with ritual, political, and economic foci during the Post-Classic period.

### **Conclusions**

Work at Ka'Kabish has revealed the site enjoyed a longer history of occupation than initially thought, both in the monumental centre and in the surrounding periphery areas. Like many ancient Maya cities, the monumental centre appears to have been abandoned long before the settlement zone, indicating that commoner populations persisted in the area after the collapse of the political centre. The close geographic location of Ka'Kabish to Lamanai, coupled with the longevity of the later site and evidence suggesting that settlement areas closer to Lamanai were occupied even longer than those around Ka'Kabish suggests that populations from Ka'Kabish may have moved closer to Lamanai to take advantage of its' Post-Classic economic prosperity.

Clearly more work is required to understand how, and if, the populations of Ka'Kabish and Lamanai interacted. One area where more study is undoubtedly warranted and planned is along the survey transect between Ka'Kabish and Lamanai. Using the road as a guide for the initial part of the survey radiating out from Ka'Kabish, surveyors will use the cleared agricultural fields on the north side to map evidence of occupation using the pedestrian survey discussed above and used previously. As not all the area between the two sites has been cleared, in areas of dense jungle 100 m lines will be cut perpendicular to the main transect and test pits will be excavated at 10 m intervals to identify possible areas of occupation. Where the Ka'Kabish-Lamanai road intersects with the

Shipyard-Indian Creek road, the surveyors will continue in a direct line south-east to Lamanai, cutting transects as necessary. It is believed that this research, as with continued exploration and excavation of the core area of Ka'Kabish will help us better understand the relationship between Lamanai and Ka'Kabish, while also providing a window into the distribution and density of settlement surrounding these two cities.

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