
1 ANCIENT MAYA HOUSES, HOUSEHOLDS, AND RESIDENTIAL GROUPS AT CARACOL, BELIZE

Arlen F. Chase and Diane Z. Chase

Analysis of ancient residential groups has been hampered by not fully understanding their physical and social composition. Debate exists over whether these groups were occupied by single extended families or by several social units. The heterogeneity that exists within a series of more intensively excavated Late Classic residential groups at Caracol, Belize can be categorized to provide insight as to how these units were in fact utilized. The majority of Caracol's plazuela groups were occupied by single extended-family households and within at least 70% of them there is a focus on the eastern structure as a non-residential ritual shrine for the residential unit. While Caracol's Late Classic Period occupants manifested a fairly unified social identity, the variability that exists within their residential compounds yields insight into both social status and organizational principles of the site's households.

Introduction

We sometimes move forward in a scholarly field without spending sufficient time to look back – and this is the case with Maya houses. Small mounded ruins were equated with Maya houses almost from the onset of settlement pattern work in the Yucatan lowlands. Based on the principle of abundance, the ubiquitous mounds were identified as being houses in the Northern lowlands by Edward Thompson in 1886 (Ashmore and Willey 1981:6). Haviland (1982: 121) characterized Maya residential groups (or “plazuela groups”) as follows: “the typical Classic Maya household was made up of not one but from two to five houses – single, small, isolated buildings assumed to have been residences of single nuclear or biological families (Willey 1981:388-389) – arranged around the edges of a small plaza.” Thus, each building in a residential group became equated with a nuclear family and the multiple nuclear families (or extended family) in a residential group formed the unit that is often referred to as the “household.” While the functional discrimination of distinct buildings within a residential group has been attempted (Haviland et al. 1985:79-84), the archaeological resolution is problematic – even though some Maya residential groups have been linked to Jack Goody's (1958) domestic cycle (Haviland 1988) and some eastern structures have been interpreted as “shrines” (Becker et al. 1999:144; Coe and Haviland 1982:29).

Gordon Willey (1956a, 1956b) first used settlement archaeology in the Maya area to research how people distributed themselves over

the landscape. Because of a focus on large-scale mapping and the relationships among settlements within a region (Ashmore 1981; Willey et al. 1965), settlement archaeology easily evolved into considerations of population history where the accumulated data on houses could be used to tabulate and project numbers of people that occupied a Maya site at any given point in time (Culbert and Rice 1990). Although not regional in scope, household archaeology was a logical extension of settlement archaeology and directly incorporated many of settlement archaeology's data and definitions (Wilk and Ashmore 1988; Wilk and Rathje 1982). Settlement archaeology stressed the relationships of settlements to each other within a region, but it did not usually focus on the household unit itself or on the function of individual structures within residential groups. Household archaeology focused on a Maya residential group (and its multiple structures) as the individual household of a large extended family. In contrast, settlement archaeology centered on the structure itself and viewed all mounds as potential houses, only rarely considering the actual functions of buildings within each residential group. While a certain percentage of remains were always removed from a mapped sample as being “non-residential” or in state of “disuse” for reconstructions of population history (e.g., Rice and Culbert 1990:15-16), this was generally based on a standardized percentage calculation rather than on a detailed consideration of the function of specific buildings or structural forms.

While both fields used the term “house” to mean a formally constructed residence, household archaeology analyzed social context while settlement archaeology was more likely to analyze structure count and density. A “household” was defined as a social unit that “performed some kinds of basic domestic functions” and that was not necessarily based on specific kinship or family units – although these are often assumed; households engaged in “production, consumption, pooling of resources, reproduction, co-residence, and shared ownership,” thus exhibiting “common residence, economic cooperation, and socialization of children” (Ashmore and Wilk 1988:2-3,6). Wilk (1988:138-139, 142) pointed out that both multiple-family households and extended domestic family households commonly occur in modern Yucatec towns and, after looking at archaeological, ethnographic, and ethnohistoric data, he argued that the “non-unilineal multiple-family household seems the best candidate for the normative household of the ancient Maya.”

Thus, both settlement archaeology and household archaeology were focused on the unit of residence in Maya archaeology, but at different scales. Settlement archaeology viewed structures as individual features. Household archaeology focused on structure groups as being an agglomeration of co-located people. To a large degree, then, households were the assumed occupants of residential groups and residential groups were assumed to be composed of a series of houses. But, the formal structural composition of Maya residential groups was never fully tested or defined.

Past archaeological research has demonstrated that Maya residential groups usually contain multiple structures, that they often contain deeply stratified histories, and that they frequently are associated with trash, burials, and other ritual deposits (Becker et al. 1999; Haviland 1981, 1988; Haviland et al. 1985). However, how the structures within these ancient residential groups functioned and were organized is not well understood. Yet, residential groups form one of the primary building blocks for the archaeological interpretation of ancient Maya society and our understanding of these groups is predicated both on general social theory concerning Maya family

structure (Haviland 1968; Wilk 1988) and on the archaeological recognition of Maya houses (Haviland 1966; Smith 1962; Wauchope 1934).

Maya Households

In the Maya area, the household was readily adapted to archaeologically identifiable structural units that were believed to have functioned as residential groups (e.g., Becker 1982:114-115). Yet, determining exactly how many individuals actually lived in an ancient Maya residential group remains difficult, if not impossible, to determine. Each residential group normally contains a series of structures set at roughly the cardinal points around a rectilinear plaza. The number of structures placed around a single plaza varies from one to dozens, and the number of these structures is believed to be indicative of numerical differences in residential group occupants. It has been suggested that larger residential units were occupied by extended families (Willey 1981:388-389) with relatives, offspring, and different generations in the same family unit residing together. Variant archaeological categorizations of these residential groups have focused on their astronomical orientations (Sprajic 2009), their composition and structure emphasis (Ashmore 1981), and on easily visible group alignments (Becker 1982, 2003).

As mapping of Maya sites continued (Carr and Hazard 1961; A. Chase and D. Chase 1987; Folan et al. 2001; Folan et al. 1983; Stuart et al. 1979; Tourtellot 1988), the individual structures that were recorded became the focus for estimating ancient Maya populations. Ethnographic research was used to suggest that the average size of an ancient Maya nuclear family was approximately 5 persons (Haviland 1972) with a normal range of 4 to 10 persons (Rice and Culbert 1990:17-18). A certain proportion of structures were assumed to be abandoned or to have had other functions (for Tikal, Guatemala this was 16% - see Haviland 1970), but the majority of structures were assumed to serve primarily single as family residences with the assumption being that each building represented the residence of a nuclear family (Haviland 1988; Willey 1981). Thus, simple math could be used to develop Maya

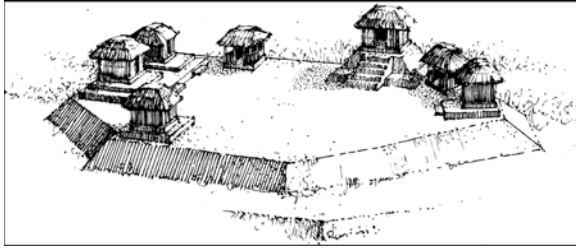


Figure 1. Reconstruction drawing of the Caracol residential group Veracruz, intensively dug during the 1995 field season (by Joseph Ballay for the Caracol Archaeological Project).

population histories for various sites (Culbert and Rice 1990).

Because much of the focus in Maya settlement archaeology was on obtaining sizes and population estimates for ancient Maya sites (for a Caracol example, see A. Chase and D. Chase 1994a), exactly how the residential group was composed and how it functioned were not the foci for most archaeological research efforts. And, when archaeological excavations were undertaken in these residential groups, they yielded several disconcerting elements. First, the plans of residential groups varied and were not fully standardized. Second, activity areas, such as kitchens, were hard to identify. Robin (2003:314) has pointed out that it is also difficult to find debris from activity areas to use in the “spatial, social, and economic analyses” of households because “ancient people often swept floors clean or removed activity debris from buildings” and “outside areas” when residential groups were being abandoned, something the Caracol research confirms. Archaeological data also demonstrated that some buildings in residential groups manifested a clearly ritual function (Becker et al. 1999) and that cosmological principles were sometimes reflected in residential groups (Ashmore 1991).

While attempts were made to correlate Maya residential groups with ethnographically defined domestic cycles (Haviland 1988, following Goody 1958), this exercise revealed other issues. Although ethnographic records described house abandonment after burial (Tozzer 1941:129-131), many ancient structures were not associated with interments and the interments that were recovered in residential units tended to be largely associated with a single building. Additionally, even the

recovered burials from extensively excavated residential groups could not possibly have denoted all the inhabitants who had once lived within these groups; at most 10-20% of these ancient inhabitants were represented (D. Chase 1997; D. Chase and A. Chase 2004:140). Thus, while variability could be identified within and among residential groups, what this meant in terms of the organization of broader social units within Maya society remained largely unknown.

Caracol Archaeological Data

In order to attempt to gain a better understanding of Maya residential groups – and by extension their households – a series of residential groups have been extensively excavated at Caracol. In fact, residential groups (Figure 1) have been one of the focal points for excavation since research began at the site by the Caracol Archaeological Project in 1985. As with other large Maya centers, an initial focus was simply on recording these residential groups and then on gaining some idea of their dating. Toward this end, early research was carried out within the southeastern sector of the site. Residential groups were systematically tested between the site epicenter and the Conchita and Ramonal Termini and along the Conchita Causeway (Jaeger 1987, 1991, 1994). These archaeological data initially served to demonstrate both the importance of eastern mortuary structures within Caracol residential groups (A. Chase and D. Chase 1994b) and their widespread appearance in the Caracol landscape after the successful Tikal star-war in A.D. 562 (A. Chase and D. Chase 1989). Over the course of the Caracol Archaeological Project, excavations within residential groups have continued in the northeast and southwest sectors of the site as well as in varied locations around the site epicenter. Most recently, it has been possible to demonstrate that not only the burials (D. Chase and A. Chase 2004), but also the face caches, found in these residential groups were associated with cyclically-timed rituals carried out by the broader household unit (A. Chase and D. Chase 2013).

Mapping efforts by the Caracol Archaeological Project have physically recorded some 988 residential groups on the ground. LiDAR has revealed the existence of 4,732

elevated residential plazas (A. Chase et al. 2011), consistent with there being some 9,000 residential groups (elevated and non-elevated) within the site of Caracol (A. Chase and D. Chase 1994a). Some 118 of Caracol's residential groups have had at least minimal below-ground archaeological data recorded for them. In some cases, this data is based on cleaning up after looters inside buildings; in other cases, it may be only the excavation of a single test-pit in a residential group. However, in many cases, a residential group has had one or more of its buildings and plaza areas extensively investigated. Most recently, the project has focused on intensively investigating a series of co-located residential groups in order to ascertain temporal and spatial relationships throughout a Maya neighborhood.

Of the 118 residential groups at Caracol that have seen at least minimal archaeological investigation, approximately 29 of these have had enough archaeological investigation undertaken so that the building forms that occur within these groups can be categorized (Table 1). An additional 6 residential groups, located in the site epicenter and presumably representing very high status occupation, can also have their buildings classified. Thus, comparative statements may be made at Caracol about the physical structure of some 35 residential groups across a broad range of social statuses. These same groups have also produced a wide variety of artifactual remains and special deposits. The spatial and temporal dimensions of these data highlight the great diversity found in Caracol's households. Developmental reconstructions of idealized physical residential group changes over time are not simple to ascertain: structures were frequently remodeled or removed; platforms were enlarged and raised; and, even the axes and orientations of residential groups could change over time. Thus, the emphasis in the following discussion and examples is on a single time period – the Late Classic Period.

Epicentral High Status Residential Group: Northeast Acropolis

The Northeast Acropolis is a high-status architectural complex located immediately east of Caana (Figure 2). Its buildings are placed atop a platform that rises over 4 meters above

adjacent plaza areas. Excavations undertaken in 2009 and 2010 demonstrated that there was no formal entry to the latest version of this residential group along its logical southern expanse; instead entry to the complex was made from its southeast and southwest corners. The Northeast Acropolis enjoyed two major periods of occupation, the first during the Early Classic and the second during the Terminal Classic Period. A centrally placed plaza interment showed that the Early Classic residents of this group had ties to the site of Teotihuacan (A. Chase and D. Chase 2011). However, the buildings atop the Northeast Acropolis date almost entirely to the Terminal Classic Period and, with the exception of the northern and eastern structures, rest upon 2.3 m of hard-packed fill that contains Terminal Classic refuse. While burials were placed within the eastern temple during the Terminal Classic Period, this structure was generally in a state of disrepair during this era and much of the substructure appears to have been stone-robbled. Two single-room range buildings with base walls and a series of “u”-shaped benches bounded the southern side of the plaza. A large raised two-tier platform that likely supported a perishable structure defined the western extent of the plaza. And an elongated, nine-room stone-walled palace, Structure B33, surmounted the earlier constructed northern substructure. All three of its central rear components and the one excavated transverse component contained raised benches, possibly sleeping areas. While the remains of a pyrite mirror were found in the rear and front rooms of Structure B33, there is no indication that any artifactual materials were manufactured in the Northeast Acropolis. There is also no indication of a kitchen in this group, although a burner or “stove” was recovered in the northern palace.

Machete Plateau High Status Residential Group: Dos Aguadas

Dos Aguadas is a high status residential group that anchors the northeastern side of the Machete Plateau (Figure 2). One large constructed reservoir is attached to the southeast side of the group and another smaller one is immediately to the group's west. Dos Aguadas was mapped in 1986 and archaeologically

TABLE 1. Structure Types and Numbers within Excavated Caracol Residential Groups

Group	Ritual Structure	Stone Structure	Range Structure	Multi-Level Structure	Single-Level Structure	Kitchen Sweatbath
NE Acropolis	1	1	2 (stone)	1	-	-
Barrio	-	3	-	1	-	-
Cent. Acrop.	3	1(2)	1	-	2	-
Caana	2	2	3(stone)	-	-	-
S Acropolis	2	2	2	-	3	-
C Group	2	3	4 (stone)	-	-	kit?/sweat
NW Acrop	1	3	-	-	1	-
Palmitas	1	1	-	2	2	kit?/sweat
I Group	2	1	2 (stone)	1	-	-
Monterey	1	1	1	2	2	kitchen
Sage	1	1	1	-	-	-
Culebras	2	-	1	3	3	kitchen?
Veracruz	1	-	-	2	4	-
A/B Vista	4 (1 stone)	-	2	1	7	kitchen
Chalpat	1	-	1	2	1	-
Ramon	2	-	1	1	4	-
S of S Acrop	1	-	1	2	2	-
B41 Group	2	-	2	1	4	-
Gateway	-	-	1	3	-	-
Hilltop	1	-	1(stone)	2	2	-
Highrise	1	-	2	3	3	-
Tabanos	1	-	-	1	1	kitchen
Barriocito	-	-	1	-	6	-
NW Group	2	-	-	1	1	-
Machete	1	-	1	2	-	-
Dos Aguadas	1 (1 stone)	2	1(stone)	-	-	kitchen
Terraza	1	-	1(stone)	2	3	kitchen
Zumba	2	-	4	2	1	-
Tango	-	-	-	1	2	kitchen?
Bimbo	1	-	-	5	3	-
Dulce	1	-	1	2	1	-
Pan	1	-	-	1	3	-
Galletas	1?	-	-	1	5	-
Migas	1	-	-	2	1	-
Tortilla	-	-	-	1	1	-

investigated in 2012 as part of our efforts to examine a Maya neighborhood. All four of the mapped structures in Dos Aguadas were axially trenched to bedrock and all were found to have once supported stone buildings. The western interior of the northern building was also areally cleared, showing the structure to be a well-constructed range building with stone base-walls, three doorways, and two or three interconnected rooms containing benches. Long tandem room buildings with stone base-walls and benches were located on the western and southern substructures. The eastern building also supported a tandem room building that once may have been vaulted; the axial trench through that building revealed a series of caches, including one with a large amount of marine material, as well as a large tomb with an entryway that contained at least 10 individuals, 26 ceramic vessels, and smaller artifacts that included jadeite. An additional line-of-stone construction, located while raking the interior of the Dos Aguadas plaza, was also areally excavated and is thought to represent a potential kitchen. While all four trenches revealed evidence of earlier constructions, nothing at Dos Aguadas appears to have predated the Late Classic Period.

Machete Plateau Middle Status Residential Group: Zumba

Zumba was another residential group examined within the Machete Plateau neighborhood (Figure 2). Its structures were set on a 2 m high raised platform and all were relatively low except for the northern and eastern constructions. Careful clearing of the plaza revealed line-of-stone constructions on some of the low building pads, resulting in an areal excavation on the western side of the plaza that encompassed one of these constructions. These investigations showed that two extensive, but barely raised, stone structures occupied the western and southern sides of the plaza; a jumble of unused building stones had been piled between them. The northern building revealed two tiers of floorings that probably once supported a perishable building; an axial trench recovered deeply buried Late Preclassic building fills. The eastern building did not support any formal construction, but it contained a tomb and

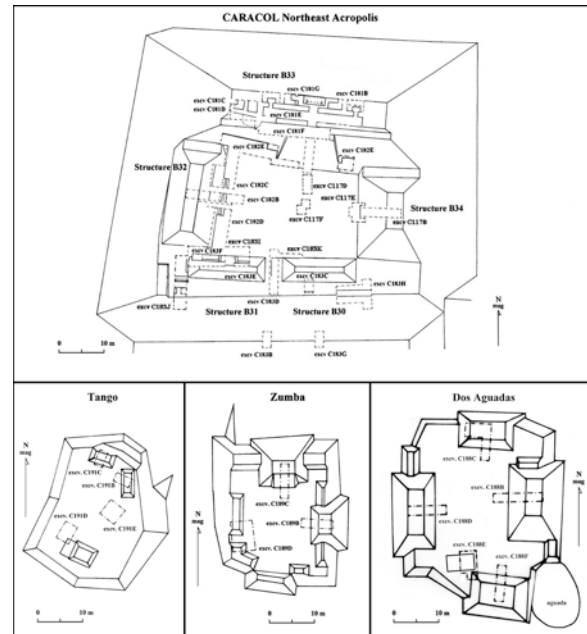


Figure 2. Different status residential groups: Northeast Acropolis, high status and royal; Dos Aguadas, high status; Zumba, middle status; Tango, lower status.

was associated with at least 10 caches, all indicative of its ritual use. The tomb contained an admixture of small artifacts including jadeite beads, human bone representing at least 8 individuals, and 40 ceramic vessels dating from the Early Classic to the Terminal Classic Periods. One of the latest vessels in the tomb, a Terminal Classic cylinder, had been placed into a bedrock hole beneath everything else, indicating that all of these materials had been placed in the tomb during the Terminal Classic Period and possibly represent the re-deposition of ritual deposits disturbed through other building efforts (during “urban renewal”). Lower range structures had been placed to either side of both the north and eastern buildings. No kitchen area could be easily located.

Machete Plateau Low Status Residential Group: Tango

Tango is located directly north of Zumba and west of Dos Aguadas (Figure 2). This elevated residential group represents a relatively low status household. As mapped in 1986, three low structures surmounted the edges of a broad plaza. A crude line-of-stone construction defined the small northern building. The small eastern structure, although taller, did not exhibit

finished facings. The low southern building was quite sizeable and its crude facings were evident on the surface after raking. Detailed cleaning of the plaza in 2012 also revealed another line-of-stone building in the center of the plaza; it was areally excavated and yielded Terminal Classic ceramic material; it could represent either a house pad or a kitchen (based on its location). No ritual activity was recovered that pertains to the latest occupation; however, an Early Classic burial was recovered on bedrock below the eastern structure.

Kinds of Structures within Caracol Residential Groups

In the past, almost all structures in a Maya residential group were assumed to represent domiciles (Haviland 1988; Willey 1981:388-389) and there was little differentiation of building function. Ritual buildings located within residential groups, like Structure 2G-59 at Tikal with its 12 burials, were viewed as residences; “the most important members of the household lived in this structure; in an extended family household, this would include the family head” (Haviland 1988:123; 2003:129). Even though auxiliary structures or “outbuildings” were recognized as existing (e.g. Haviland et al. 1985:101, 186; Wauchope 1938:128-138), they were rarely located on the ground and usually were not ascribed to building functions within residential groups (e.g. Haviland 1988). Rather, we have tended to view Maya residential groups as almost exclusively composed of residences. However, for Caracol, we can define a series of distinct structural types that repeatedly reoccur in the site’s residential groups: (1) non-residential mortuary or ritual buildings; (2) palaces and stone buildings usually associated with high status residence and reception; (3) range buildings, sometimes of stone, that must have been used for a variety of residence, reception, processing, and storage functions; (4) larger low buildings exhibiting multiple floor levels that presumably served as residences; (5) smaller, low single level structures that served a wide variety of residential and auxiliary functions, including (6) non-residential sweatbaths and (7) kitchens. As an aside, no formal bathrooms have been recovered.

Mortuary or Ritual Buildings

Most Caracol households – but not all – carried out rituals that were cyclically timed (A. Chase and D. Chase 2013) and that were associated with an eastern mortuary building, shrine, or temple (D. Chase and A. Chase 1998). This construction was usually the principle eastern building in a residential group. The construction is often squarish in form and one of the highest buildings in any residential group. Although in many cases no formal structure was located on this eastern mound, occasionally a vaulted stone building - or temple – was set atop this substructure. In some cases, shrine rooms were placed in the stairways of eastern buildings, usually directly above an interment. In other cases, the northern building in a Caracol residential group also functioned as a second ritual building. We do not see ritual buildings as having a residential function, except possibly for specific ceremonies and rituals.

Palaces and Tandem-Roomed Stone Buildings

Palaces are generally confined to the site epicenter and to some Caracol termini (A. Chase and D. Chase 2001). They are generally built of stone and usually had vaulted roofs. Their forms vary, but most palaces are actually comprised of more than one stone structure. Almost all palace buildings involve tandem room arrangements that are often complemented with transverse tandem end-rooms. Most palaces also contained benches that were either armed or flat; these benches served as both reception and sleeping areas. Although not common, completely stone buildings do occur within outlying residential groups and are usually reflective of the higher status of that group’s residents. Stone buildings in residential groups also have benches and are also usually tandem-roomed, but lack the transverse end-rooms found in epicentral palaces. A stone building could be located on any side of an outlying residential group.

Range and Single-Series Roomed Buildings

Range buildings consist of a single row of rooms that can be separated from each other or interconnected. There is great variability in this form. Some range buildings are entirely of stone; others exhibit base-walls; still others are constructed of perishable materials. Many range

buildings exhibit benches in one or more of their rooms. These benches sometimes show the same variability that is found in palace structures. It is suspected that range buildings served a variety of functions, ranging from residence to reception to processing to storage.

Larger Low Buildings with Multiple Levels

Within Caracol residential groups, large low buildings with multiple levels (as represented by floors and facings) appear to represent the most common unit of residence for a family. These structures tended to be constructed of perishable materials and are sometimes associated with benches. One or more of these buildings can appear within a single residential group. They usually do not occur on the eastern sides of plazas.

Smaller Low Buildings

By far the most common construction within residential groups are low, often single-level structures that are located along the sides of plazas. These usually supported perishable constructions and probably served multiple uses ranging from living and sleeping space to a wide variety of auxiliary uses. Wauchope (1938:128-138) noted that modern Maya households had constructions that functioned as “beehive shelters,” as “chicken houses,” as structures for “gardens and trees,” as “granaries,” as “kitchens,” as “ovens,” as “rock enclosures for pigs” or other animals, as areas for “sascab piles,” as “shrines,” as “storehouses,” as “sweat-bath huts,” as “tanneries,” and as “wash-bowl and wash-trough shelters.” Some of these functions may be extended to ancient Maya households.

Kitchens

Kitchens, when they can be identified, consist of barely raised line-of-stone building pads (Figure 3) that resemble vacant terrain structures (D. Chase 1990). What is distinctive about kitchens is that they are usually placed within plazas or at the corners of plazas in Caracol’s residential groups (see Haviland et al. 1985:183 for a potentially different situation at Tikal). Both plainware ollas and fineware ceramics are found in association with suspected kitchens. However, they do not tend to be

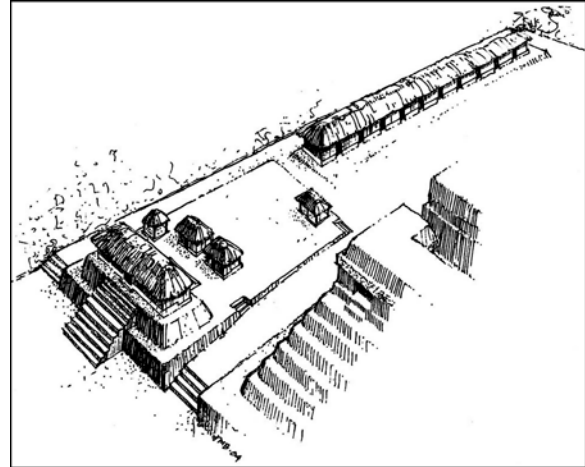


Figure 3. Reconstruction drawing of Structure B37, the “royal” kitchen immediately west of Caana (by Joseph Ballay for the Caracol Archaeological Project).

associated with the three hearth stones of Maya fame (e.g., Taube 1998). Some kitchens may have simply been placed beneath a thatched roof that would leave little archaeological evidence. Kitchens were probably located slightly away from residences in order to minimize the threat of fire. It appears that not all residential groups had kitchens, which implies that a single kitchen could sometimes function for multiple residential groups. This is particularly seen within the site epicenter where stable isotope analyses have indicated the existence of a shared palace diet (A. Chase et al. 2001). Within the site epicenter, there was a large “palace” kitchen located immediately west of the base of Caana (Structure B37); its southern end was investigated during the 2004 field season – and no cooking facilities exist on Caana itself. The peripheral location and building form for this epicentral kitchen strongly resemble counterparts at both Tikal, Guatemala (Harrison 2012) and at Kabah, Mexico (INAH 2011 news release). Whereas the epicentral kitchen had base-walls surrounding its extensive interior space, the non-epicentral kitchens are mostly located on smaller rectangular pads barely raised above the plaza floor levels.

Sweatbaths

While sweatbaths are known from a number of sites (e.g., Satterthwaite 1952), they have not often been found in association with residential groups. Two sweatbaths have been

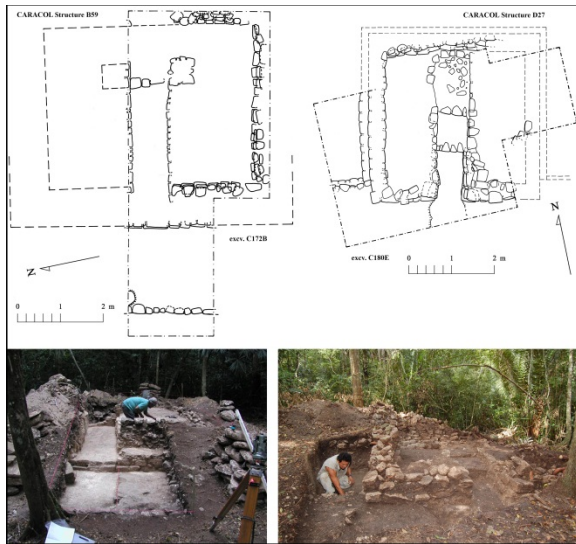


Figure 4. Caracol sweatbaths, one from the epicenter (Structure B59) and the other (Structure D27) associated with a non-epicentral residential group.

excavated at Caracol, one associated with the C Group and one in a residential group. Neither construction was a focal plaza building and both structures exhibit similar plans (Figure 4). In the C Group, the sweatbath, Structure B59, was located on the eastern side of the plaza immediately north of a long range building adjacent to a constructed reservoir. The other identified sweatbath was an auxiliary building set northwest of its residential plaza. Initially, it appeared to be a low house pad, but excavation revealed stone base-walls and interior benches with a narrow central doorway.

Bathrooms

The lack of identifiable bathroom or outhouse structures at Caracol has been taken to mean that excrement was being collected in containers (likely ceramic) and potentially used for agricultural purposes in the fields. Sanders (1981:362) noted that this would have been an appropriate use for human waste, especially if intensive agriculture was being practiced (as it was at Caracol). An alternative would be that dogs or other animals were consuming and redistributing such waste.

The “Normative” Caracol Household in Cultural Context

Having discussed the above, we can now attempt to address the composition of a

“normative” Caracol household. Most Caracol households were associated with multi-structure plazuela units and artifactual associations indicate that the buildings associated with these plazas were used for a variety of functions. Minimally 70% of Caracol residential groups contain an eastern shrine structure that was both non-residential and the focus for household ritual that incorporated cache and burial deposition. In a small portion of residential groups, a squarish northern building may have had a similar function, usually pre-dating the ritual use of an eastern building. Residential structures within Caracol groups, presumably housing a single family unit, were larger raised rectangular structures, usually with multiple floor levels. Higher status groups had stone versions of these buildings. A single residential group always contains at least one of these buildings and sometimes up to five of them. Range buildings, with one or more rooms linearly arranged, could exist as independent units within residential groups or be appended to the sides of other constructions; they had varied functions, presumably being used for storage, reception, and processing items to be used in commerce; those with benches may also have been used for sleeping. Small rectangular structures, often only line-of-stone pads of a single level, also served a wide variety of functions, being used as auxiliary buildings for storage and other purposes as well as smaller residences for parts of an extended family or even for servants or slaves (following Farriss 1984). Kitchens and sweatbaths were special purpose buildings also found in residential groups; both were placed in non-focal locations.

Translating the archaeological data from residential groups into the social realm of households is extremely difficult. Although Maya archaeologists frequently refer to commoners and elites, this dualistic division of society does not actually reflect the wide variety of other social roles, societal levels, and economic stratification that is found in ancient Maya residential groups (A. Chase and D. Chase 1992). Social status could be modified by birthright, wealth, occupation, ability, and situational contexts. There were “power” elite and “secondary” elite. There were different levels of leadership in both hierarchical and

heterarchical organizations. Occupational specialization within and among households was present; households could include crafters, merchants, and warriors, as well as farmers. At least some of these social identities were transformable. Changes in the prosperity of households are in fact visible in the archaeological record. Importantly, there also were differences in social, political, and economic structures within the various parts of the ancient Maya world. Thus, just as residential groups are not all standardized, there is no easy categorization or dichotomy of social roles or households in the archaeological past.

Caracol's dendritic market system permitted ready access to most items that were needed by residents of plazuela groups (A. Chase et al. n.d.; D. Chase and A. Chase 2014a). These included: quotidian trade items – like ground stone, chert tools, clothing, pottery, and food and fruits – long-distance items – like obsidian, ceramics, specialized spices (including salt), and even jadeite – and ritual items like cache vessels and incensarios. Each household included individuals who produced items (often perishable) for exchange in Caracol's market. Household participation in the site's market system helped to spread a common Caracol identity (D. Chase and A. Chase 2004) characterized by widespread access to a variety of non-quotidian items that were eventually deposited within the archaeological records of the site's residential groups because of specific household rituals associated with their eastern buildings (A. Chase and D. Chase 2009, 2013).

For the most part, Caracol's residential groups were self-sufficient in terms of agricultural production. Most had intensive agricultural lands in the form of terraced fields within close proximity (A. Chase and D. Chase 1998); extensive out-fields beyond the city center were also probably part of their subsistence base. Previously, we suggested that each household controlled approximately 2.5 ha of agricultural land (D. Chase and A. Chase 2004); based on the LiDAR data from Caracol, we would now suggest that this number should be placed at 2.2 ha. Because of the greater settlement density, households closer to the Caracol epicenter probably controlled less agricultural land than households located further

afield. Some households, such as those residential groups located in the immediate vicinity of the city epicenter and the causeway termini, may not have had direct access to any agricultural land; stable isotope analyses indicate that some of these individuals did not have ready access to maize (A. Chase et al. 2001), meaning that their household did not grow this crop – presumably because of their focused occupational specializations.

Besides increasing the health benefits for the general population in lessening the spread of communicable diseases (as is found in the close quarters of Teotihuacan; Storey 1992), the spacing of residential groups at the site suggests planning and agricultural self-sufficiency (e.g., Drennan 1988). Because of the dependence of family units on constructed agricultural terracing that was located in fairly close proximity to their residential groups, as the population increased, the landscape at Caracol became a locked network into which additional residential groups could not be readily added (D. Chase and A. Chase 2014b). Thus, there likely was pressure on children from large families to establish new residential groups at the site's urban limits and to improve open agricultural areas with intensive terracing. While there may have been some continuity in family units within a single residential group, there would have been an upper household population limit that made self-sufficiency impossible and that resulted in out-migration. Thus, over time there could be increased social distance between adjacent residential units.

All of Caracol's residential areas included a series of plazuela groups that existed in fairly close quarters to each other. The dietary differences that exist between adjacent residential groups demonstrate that the individuals living as neighbors did not always have access to the same foodstuffs (A. Chase et al. 2001; D. Chase and A. Chase 2004:142), supporting the suggestion that these neighboring households often contained non-kin-related family groups. The social distance between adjacent households within long-established neighborhoods would have reinforced the corporate nature of the household and may account for the independent domestic rituals found in many of Caracol's residential groups.

However, it also means that something other than family ties had to be in place to control for garbage and waste disposal, noise, and the upkeep of any shared areas.

While the overall framework for administrating the city can be derived from the site's causeways and termini, it is difficult to see the intermediate level organizational units at Caracol that are more readily visible at other Mesoamerican sites (Smith 2010). Toward this end, we have been investigating one particular "neighborhood" on the Machete Plateau to see if and how its households were integrated. These data should eventually help to better understand Maya household structure, Maya neighborhood structure (if such exists), and low density agricultural urbanism among the Maya.

While specific neighborhood organization at Caracol may not yet be clear, some commonalities are evident across the city's populace. Analysis of archaeological materials reveals that the Classic Period Maya at Caracol maintained a distinct social identity that is identifiable within the site's Late Classic Period residential groups (D. Chase and A. Chase 2004). The majority of these plazuela groups were occupied by a single extended family forming a household. These Late Classic households used the eastern building for the ritual placement of cyclically-placed caches and interments that used a standardized set of ceramic vessels. Through this practice, Caracol's Late Classic Period occupants manifested a unified social identity. Complementing these ritual activities was also a focus on dental decoration; some 22% of the recovered interments in Caracol's residential groups have produced teeth inlaid with jadeite or hematite (D. Chase and A. Chase 1996). The inlaid teeth on these individuals made statements about their social identities as individuals and as Caracolenos, especially as this practice appears to have been more restricted at other Maya sites (e.g., Becker 1973 for Tikal). Caracol's Late Classic Period socio-economic organization was characterized by shared prosperity, especially as seen in the site-wide distribution of items such as tombs, polychrome pottery, and dental modification. The ubiquitous access to such items created a "symbolic egalitarianism" that was likely used as an integrative management

strategy by the site's elite (A. Chase and D. Chase 2009).

Conclusion

Both settlement archaeology and household archaeology have succeeded in moving the field of Maya Studies forward (Ashmore and Wilk 1988). Settlement archaeology has permitted us to derive population estimates for Maya sites (Culbert and Rice 1990), to examine regional socio-political structure (Ashmore 1981), and to firmly establish that the Maya had large, spatially extensive cities that were consistent with the tenets of low-density urbanism found in other tropical areas (A. Chase et al. 2012). Robin (2003:307) has cited household archaeology for leading to "(1) understanding ordinary people; (2) understanding social diversity among households;" and "(3) understanding households in articulation with the broader social universe." Thus, household archaeology has led to a greater focus on what have been termed Maya "commoners" (e.g. Gonlin and Lohse 2007; Lohse and Valdez 2004) that complements any understanding of Maya "elites" (D. Chase and A. Chase 1992) and permits a much fuller examination of socio-economic organization among the ancient Maya. However, if household archaeology truly seeks "dynamic interpretations of heterogeneous households interacting with the broader social universe," then, as Robin (2003:334) has noted, "household form and function are an essential part of our interpretation of people, practices, and meanings of the past." Somehow, during the transition from settlement archaeology to household archaeology, we neglected to fully analyze how a Maya residential group was composed and to see how the various structures that made up this unit fit into a functioning household. This analysis of Caracol households provides an initial attempt to step back to undertake this exercise.

References

- Ashmore, Wendy
1981 Ed. *Lowland Maya Settlement Patterns*.
University of New Mexico Press, Albuquerque.

- 1991 Site Planning Principles and Concepts of Directionality among the Ancient Maya. *Latin American Antiquity* 2:199-226.
- Ashmore, Wendy and Richard Wilk
1988 Household and Community in the Mesoamerican Past. In R. Wilk and W. Ashmore, Eds. *Household and Community in the Mesoamerican Past*. pp. 1-27. University of New Mexico Press, Albuquerque.
- Ashmore, Wendy and Gordon R. Willey
1981 A Historical Introduction to the Study of Lowland Maya Settlement Patterns. In W. Ashmore, Ed. *Lowland Maya Settlement Patterns*. pp. 3-18. University of New Mexico Press, Albuquerque.
- Becker, Marshall J.
1973 Archaeological Evidence for Occupational Specialization among the Classic-Period Maya at Tikal, Guatemala. *American Antiquity* 38:396-406.
- 1982 Ancient Maya houses and their identification: An evaluation of architectural groups at Tikal and inferences regarding their functions. *Revista Espanola de Antropologia Americana* 12:111-129.
- 2003 Plaza Plans at Tikal: A Research Strategy for Inferring Social Organization and Processes of Culture Change at Lowland Maya Sites. In J. Sabloff, Ed. *Tikal: Dynasties, Foreigners, and Affairs of State: Advancing Maya Archaeology*. pp. 253-280. SAR Press, Santa Fe.
- Becker, Marshall J., C. Jones, and J. McGinn
1999 *Excavations in Residential Areas at Tikal: Groups with Shrines*. Tikal Report 21. Monograph 104. The University Museum, University of Pennsylvania, Philadelphia.
- Carr, Robert F. and James E. Hazard
1961 *Map of the Ruins of Tikal, El Peten, Guatemala*. Tikal Report 11. University of Pennsylvania Museum, Philadelphia.
- Chase, Arlen F. and Diane Z. Chase
1987 *Investigations at the Classic Maya City of Caracol, Belize: 1985-1987*. Monograph 3. Pre-Columbian Art Research Institute, San Francisco.
- 1989 The Investigations of Classic Period Warfare at Caracol, Belize. *Mayab* 5:5-18.
- 1992 Mesoamerican Elites: Assumptions, Definitions, and Models. In D. Chase and A. Chase, Eds. *Mesoamerican Elites: An Archaeological Assessment*. pp. 3-17. University of Oklahoma Press, Norman.
- 1994a Details in the Archaeology of Caracol, Belize: An Introduction. In D. Chase and A. Chase, Eds. *Studies in the Archaeology of Caracol, Belize*. pp. 1-11. Monograph 7. Pre-Columbian Art Research Institute Monograph 7, San Francisco.
- 1994b Maya Veneration of the Dead at Caracol, Belize. In M. Robertson and V. Fields, Eds. *Seventh Palenque Round Table, 1989*. pp. 55-62. Pre-Columbian Art Research Institute, San Francisco.
- 1998 Scale and Intensity in Classic Period Maya Agriculture: Terracing and Settlement at the 'Garden City' of Caracol, Belize. *Culture and Agriculture* 20(2):60-77.
- 2001 The Royal Court of Caracol, Belize: Its Palaces and People. In T. Inomata and S. Houston, Eds. *Royal Courts of the Ancient Maya: Volume 2: Data and Case Studies*. pp. 102-137. Westview Press, Boulder.
- 2009 Symbolic Egalitarianism and Homogenized Distributions in the Archaeological Record at Caracol, Belize: Method, Theory, and Complexity. *Research Reports in Belizean Archaeology* 6:15-24.
- 2011 Status and Power: Caracol, Teotihuacan, and the Early Classic Maya World. *Research Reports in Belizean Archaeology* 8:3-18.
- 2013 Temporal Cycles in the Archaeology of Maya Residential Groups from Caracol, Belize. *Research Reports in Belizean Archaeology* 10:13-23.
- Chase, Arlen F., Diane Z. Chase, and Christine White
2001 El Paisaje Urbano Maya: La Integración de los Espacios Construidos y la Estructura Social en Caracol, Belice. In A. Ciudad Ruiz, M. Josefa Iglesias Ponce de Leon, and M. Del Carmen Martinez, Eds. *Reconstruyendo la Ciudad Maya: El Urbanismo en las Sociedades Antiguas*. pp. 95-122. Sociedad Espanola de Estudios Mayas, Madrid.
- Chase, Arlen F., Diane Z. Chase, John F. Weishampel, Jason B. Drake, Ramesh L. Shrestha, K. Clint Slatton, Jaime J. Awe, and William E. Carter
2011 Airborne LiDAR, Archaeology, and the Ancient Maya Landscape at Caracol, Belize. *Journal of Archaeological Science* 38:387-398.
- Chase, Arlen F., Diane Z. Chase, Richard Terry, Jacob M. Horlacher, and Adrian S.Z. Chase
n.d. Markets among the Ancient Maya: The Case of Caracol, Belize. In E. King, Ed. *The Ancient Maya Marketplace: The Archaeology of Transient Space*, University of Arizona, Press, Tucson (in review).
- Chase, Diane Z.
1990 The Invisible Maya: Population History and Archaeology at Santa Rita Corozal. In T. Culbert and D. Rice, Eds. *Prehistoric Population History in the Maya Lowlands*. pp. 199-213. University of New Mexico Press, Albuquerque.

- 1997 Southern Lowland Maya Archaeology and Human Skeletal Remains: Interpretations from Caracol (Belize), Santa Rita Corozal (Belize), and Tayasal (Guatemala). In S. Whittington and D. Reed, Eds. *Bones of the Maya: Studies of Ancient Skeletons*. pp. 15-27. Smithsonian Institution Press, Washington, D.C.
- Chase, Diane Z. and Arlen F. Chase
1992 Eds. *Mesoamerican Elites: An Archaeological Assessment*. University of Oklahoma Press, Norman.
- 1996 Maya Multiples: Individuals, Entries, and Tombs in Structure A34 of Caracol, Belize. *Latin American Antiquity* 7:61-79.
- 1998 The Architectural Context of Caches, Burials, and Other Ritual Activities for the Classic Period Maya (as Reflected at Caracol, Belize). In S. Houston, Ed. *Function and Meaning in Classic Maya Architecture*. pp. 299-332. Dumbarton Oaks, Washington, D.C.
- 2004 Archaeological Perspectives on Classic Maya Social Organization from Caracol, Belize. *Ancient Mesoamerica* 15:111-119.
- 2014a Ancient Maya Markets and the Economic Integration of Caracol, Belize. *Ancient Mesoamerica* 25(1) (in press).
- 2014b Path Dependency in Rise and Denouement of a Classic Maya City: The Case of Caracol, Belize. In A. Chase and V. Scarborough, Eds. *The Resilience and Vulnerability of Ancient Landscapes: Transforming Maya Archaeology through IHOPE*, AP3A Papers, American Anthropological Association, Arlington, VA (in press).
- Coe, William R. and William A. Haviland
1982 *Introduction to the Archaeology of Tikal, Guatemala*. Tikal Report 12. Monograph 46. The University Museum, University of Pennsylvania, Philadelphia.
- Culbert, T. Patrick and Don S. Rice
1990 Eds. *Precolumbian Population History in the Maya Lowlands*. University of New Mexico Press, Albuquerque.
- Drennan, Robert D.
1988 Household Location and Compact versus Dispersed Settlement in Prehispanic Mesoamerica. In R. Wilk and W. Ashmore, Eds. *Household and Community in the Mesoamerican Past*. pp. 273-293. University of New Mexico Press, Albuquerque.
- Farriss, Nancy M.
1984 *Maya Society under Colonial Rule: The Collective Enterprise of Survival*. Princeton University Press, Princeton.
- Folan, William J., Laraine A. Fletcher, Jacinto May Hau, and Linda Florey Folan
2001 *Las Ruinas de Calakmul, Campeche, Mexico: Un Lugar Central y Su Paisaje Cultural*. Universidad Autonoma de Campeche, Campeche.
- Folan, William J., Ellen R. Kintz, and Lorraine A. Fletcher
1983 *Coba: A Maya Metropolis*. New York, Academic Press.
- Gonlin, Nancy and Jon C. Lohse
2007 Eds., *Commoner Ritual and Ideology in Ancient Mesoamerica*. University Press of Colorado, Boulder.
- Goody, Jack
1958 Ed. *The Developmental Cycle in Domestic Groups*. Cambridge University Press, New York.
- Harrison, Peter D.
2012 A Marvel of Maya Engineering: Water Management at Tikal. *Expedition* 54(2):19-26.
- Haviland, William A.
1966 Maya Settlement Patterns: A Critical Review. MARI Publication 26. pp. 21-47. Tulane University, New Orleans.
- 1968 Ancient Lowland Maya Social Organization. MARI Publication 26. pp. 93-117. Tulane University, New Orleans.
- 1970 Tikal, Guatemala, and Mesoamerican Urbanism. *World Archaeology* 2:186-198.
- 1972 A New Look at Classic Maya Social Organization at Tikal. *Ceramica de Cultura Maya* 8:1-16.
- 1981 Dower Houses and Minor Centers at Tikal, Guatemala: An Investigation into the Identification of Valid Units in Settlement Hierarchies. In W. Ashmore, Ed. *Lowland Maya Settlement Patterns*. pp. 89-117. University of New Mexico Press, Albuquerque.
- 1988 Musical Hammocks at Tikal: Problems with Reconstructing Household Composition. In R. Wilk and W. Ashmore, Eds. *Household and Community in the Mesoamerican Past*. pp. 121-134. University of New Mexico Press, Albuquerque.
- 2003 Settlement, Society, and Demography at Tikal. In J. Sabloff, Ed. *Tikal: Dynasties, Foreigners, and Affairs of State: Advancing Maya Archaeology*. pp. 111-142. SAR Press, Santa Fe.

- Haviland, William A., Marshall J. Becker, Anne Chowning, Keith A. Dixon, and Karl Heider
 1985 *Excavations in Residential Areas of Tikal: Non-Elite Groups without Shrines*. Tikal Report 20. Monograph 58. The University Museum, University of Pennsylvania, Philadelphia.
- Jaeger Liepins, Susan
 1987 The Conchita Causeway and Associated Settlement. In A. Chase and D. Chase. *Investigations at the Classic Maya City of Caracol, Belize:1985-1987*. Appendix 3. pp. 101-105. Pre-Columbian Art Research Institute, San Francisco.
- 1991 Settlement Pattern Research at Caracol, Belize: The Social Organization in a Classic Period Maya Site. Ph.D. Dissertation. Anthropology, Southern Methodist University, Dallas, Texas.
- 1994 The Conchita Causeway Settlement Subprogram. In D. Chase and A. Chase, Eds. *Studies in the Archaeology of Caracol, Belize*. pp. 47-63. Monograph 7. Pre-Columbian Art Research Institute Monograph 7, San Francisco.
- Lohse, Jon C. and Fred Valdez, Jr.
 2004 Eds. *Ancient Maya Commoners*. University of Texas Press, Austin.
- Rice, Don S. and T. Patrick Culbert
 1990 Historical Contexts for Population Reconstruction in the Maya Lowlands. In T. Culbert and D. Rice, Eds. *Prehistoric Population History in the Maya Lowlands*. pp. 1-36. University of New Mexico Press, Albuquerque.
- Robin, Cynthia
 2003 New Directions in Classic Maya Household Archaeology. *Journal of Archaeological Research* 11(4):307-356.
- Sanders, William T.
 1981 Classic Maya Settlement Patterns and Ethnographic Analogy. In W. Ashmore, Ed. *Lowland Maya Settlement Patterns*. pp. 351-369. University of New Mexico Press, Albuquerque.
- Satterthwaite, Linton
 1952 *Piedras Negras Archaeology: Architecture: Part 5: Sweathouses*. University of Pennsylvania Museum, Philadelphia.
- Smith, Michael E.
 2010 The Archaeological Study of Neighborhoods and Districts in Ancient Cities. *Journal of Anthropological Archaeology* 29:137-154.
- Smith, A. Ledyard
 1962 Residential and Associated Structures at Mayapan. In H.E.D. Pollock et al, Eds. *Mayapan, Yucatan, Mexico*. pp. 165-320. Publication 619. Carnegie Institution of Washington. Washington, D.C.
- Sprajc, Ivan
 2009 Astronomical and Cosmological Aspects of Maya Architecture and Urbanism. In J. Rubina-Martin, J. Belmonte, F. Prada, and A. Alberdi, Eds. *Cosmology Across Cultures*. Vol. 409. pp. 303-314. ASP Conference Series.
- Storey, Rebecca
 1992 *Life and Death in the Ancient city of Teotihuacan: A Modern Paleodemographic Synthesis*, University of Alabama Press, Tuscaloosa.
- Stuart, George E., J.C. Scheffler, Ed B. Kurjack, and John W. Cottler
 1979 *Map of the Ruins of Dzibilichaltun, Yucatan, Mexico*. MARI Publication 47. Tulane University, New Orleans.
- Taube, Karl
 1998 The Jade Hearth: Centrality, Rulership, and the Classic Maya Temple. In S. Houston, Ed. *Function and Meaning in Maya Architecture*. pp. 427-478. Dumbarton Oaks, Washington, D.C.
- Tourtellot, Gair
 1988 *Peripheral Survey and Excavation Settlement and Community Patterns: Excavations at Seibal, Department of Peten, Guatemala*. PMAE Memoirs 16. Harvard University, Boston.
- Tozzer, Alfred Marston
 1941 *Landa's Relacion de las Cosas de Yucatan*. PMAE Papers 28. Harvard University, Boston.
- Wauchope, Robert
 1934 *Housemounds of Uaxactun, Guatemala*. Publication 436. Carnegie Institution of Washington, Washington, D.C.
- 1938 *Modern Maya Houses*. Publication 502. Carnegie Institution of Washington, Washington, D.C.
- Wilk, Richard R.
 1988 Maya Household Organization: Evidence and Analogies. In R. Wilk and W. Ashmore, Eds. *Household and Community in the Mesoamerican Past*. pp. 135-151. University of New Mexico Press, Albuquerque.
- Wilk, Richard R. and Wendy Ashmore
 1988 Eds. *Household and Community in the Mesoamerican Past*. University of New Mexico Press, Albuquerque.
- Wilk, Richard R. and William L. Rathje
 1982 Household Archaeology. *American Behavioral Scientist* 25(6):617-639.

Willey, Gordon R.

1956a Problems Concerning Prehistoric Settlement Patterns in the Maya Lowlands. In G.R. Willey, Ed. *Prehistoric Settlement Patterns in the New World*. Viking Fund Publication 23. Wenner-Gren Foundation, New York.

1956b The Structure of Ancient Maya Society: Evidence from the Southern Lowlands. *American Anthropologist* 58:777-782.

1981 Maya Lowland Settlement Patterns: A Summary View. In W. Ashmore, Ed. *Lowland Maya Settlement Patterns*. pp. 385-415. University of New Mexico Press, Albuquerque.

Willey, Gordon R., William R. Bullard, Jr., John B. Glass, and James C. Gifford

1965 *Prehistoric Maya Settlements in the Belize Valley*, Peabody Museum of Archaeology and Ethnology, Papers 54, Harvard University, Cambridge.