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Scott R. Hutson
University of Kentucky, scotthutson@uky.edu

Aline Magnoni
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Bruce H. Dahlin

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Architectural Group Typology and Excavation Sampling within Chunchucmil

SCOTT R. HUTSON, ALINE MAGNONI, AND BRUCE H. DAHLIN

As the mapping described in the previous chapter progressed, excavations began. A basic goal of the excavations was to build the chronology of the site. Temporally diagnostic pottery is the cornerstone of the chronology, as we explain in the next chapter. Given that relatively few sherds are visible on the ground surface at Chunchucmil, surface collections were deployed only twice: in quads N4E2 and N3E2 of block 3 (Dahlin 1997) and in Group S2E2-F, located in block 4 (Hutson et al. 2007). Obviously we could not excavate every structure at Chunchucmil, so we needed a sampling strategy to determine where to excavate. We sought to design a strategy that would provide a systematic, representative sample of the site as a whole and, therefore, a firm foundation for the chronology. This chapter discusses the sampling strategies (opportunistic as well as stratified random) that guided the choice of where to excavate. Since we based the sampling strategy on the different kinds of architectural groups visible prior to excavation, this chapter also describes the kinds of architectural groups that are most common at Chunchucmil and how they compare to other architectural configurations in the Maya area.

ARCHITECTURAL GROUP TYPES AT CHUNCHUCMIL

During the first stage of excavation, from 1997 to 2000, sampling was opportunistic: notable architectural groups (e.g., the ballcourt [Op. 3B] and a megalithic platform in the site core [Op. 3A]) and natural resource features (e.g., an irregularly

large *sascabera* [Op. 4A] and a drain in a residential context [Op. 5A]) received test pits. Based on the findings of the test pits or the requirements of particular research questions, some tested areas received block excavations in subsequent seasons.

By the year 2000, enough of the site map had been completed to attempt a classification of architectural groups (see chapter 2 for the definition of a group). The goal was to create a classification that captured the variation visible on our map prior to excavation. We wanted to group like with like and separate different kinds of architectural groups into different types. Several other typologies of Maya architectural groups exist (Ashmore 1981; Becker 1991; Harrison 1981; Willey and Leventhal 1979), and in proposing our own typology we did not seek to reinvent the wheel. In fact, our typology shares aspects of these other typologies and we highlight these below. However, most of these typologies are based on what is found in specific regions or specific sites and they therefore do not travel well beyond the locale where they were generated. Predictably, the broadest typologies, such as that proposed by a group of Maya archaeologists at a 1977 seminar held at the School of American Research (SAR) in Santa Fe (Ashmore 1981), succeed in establishing some common terms of reference, such as *informal group* versus *patio group*, but, as we show below, these very general terms cannot be applied in a way that captures the diversity of the architecture at Chunchucmil. So we felt that it was necessary to create a typology that would allow us to grasp this variation. We stress that this typology applies to architectural groups within a site and is entirely different from the typology of sites provided in chapter 8 or in other publications (Adams and Jones 1981; Bullard 1960; Garza and Kurjack 1980; Hammond 1975)

We needed a typology not just as shorthand for referring to the variation in architectural groups at the site, but to guide the selection of groups to excavate. Put simply, we wanted to make sure that we excavated a decent sample of all of the different kinds of groups that we perceived while mapping. The variation that we perceived can be reduced to seven variables. First, some architectural groups had monumental architecture, some didn't. We defined monumental architecture as any building that stands 6 m or higher today. The second variable is the number of buildings in the architectural group: some groups have two or three buildings while others have a dozen or more. Occasionally we find a single, isolated building that does not form a group with other buildings. The third variable is the layout of buildings within a group. Most groups consist of structures arranged around one or more patios but some are broad platforms. The fourth variable is *albarradas*: most groups have them, some don't. Fifth is contiguity or lack of contiguity with other architectural groups, sixth is the presence or absence of a *sascabera*, and seventh is the number of *metates*. We understood that some of these distinctions, such as presence of *albarradas*, might in the end turn out to be meaningless. Imagine, for example,

two architectural groups that are alike in every way except that one has an *albarrada* around it and the other doesn't. Excavations might reveal no systematic differences in artifact inventories between these two groups. Nevertheless, we would have had no way of knowing this before excavation. Plus, since *albarradas* are a common feature at the site, groups without them could perhaps be special in some way. Thus, we included this variable in our typology so that our sampling strategy would ensure that a good number of groups both with and without *albarradas* were excavated.

These seven major axes of variation overlapped in such a way that we initially created 16 types. As work progressed two types (7 and 11) were eliminated. We created these two types to accommodate groups with many *metates*, but we soon found that there was no clear cutoff point between groups with many *metates* and groups with few. Also, one type was subdivided, yielding a total of 15 types. Table 3.1 presents the types and a guide to illustrated examples throughout this book (see also figures 3.1 and 3.2). Very briefly, the first five types consist of architectural groups with monumental architecture (mounds 6 m or more in height). Type 6 consists of broad platforms. Types 8, 9, 10, 12, 13, 14a, and 14b consist of houselots (domestic groups encircled by *albarradas*; see chapter 2) of different sizes and qualities. Types 15 and 16 consist of buildings not enclosed by *albarradas*. Table 3.2 presents exhaustive detail of the number of groups per type and per 1-km² block. Table 3.2 also presents data on the number of groups per type and per 1-km² block that received excavations. Table 3.3, which summarizes the data in table 3.2 by group type, shows that type 8 (houselots with five or fewer structures) had the most groups ($n = 783$), more than half of the total number of groups mapped.

RESEMBLANCES BETWEEN CHUNCHUCMIL'S TYPES
AND OTHER MAYA ARCHITECTURAL GROUPS

Many of our types resemble types already known in the literature. At the same time, the large discrepancies between established typologies and what we see at Chunchucmil justify our decision to create our own typology. We now highlight these resemblances and discrepancies. The types presented by Ashmore (1981) are worth exploring as a benchmark because they result from a consensus of the Mayanists who attended the 1977 SAR seminar. Of the different SAR types, Chunchucmil's architectural groups most resemble the *patio groups* that are common in the southern Maya lowlands and consist of "several structures sharing a single central ambient space" (Ashmore 1981:49). Figures 3.2b, 5.7, and 12.7 show textbook examples of patio groups at Chunchucmil. Nearly all members of all types at Chunchucmil except types 4, 5, 6, and 16 are either patio groups or groups with multiple patios. This is remarkable because maps of architectural groups from other

TABLE 3.1. Classification of architectural groups at Chunchucmil

Type 1 ($n = 8$)	Simple quadrangle: Compounds with a tall pyramid (usually > 8 m) on one side of a large patio; long, lower structures on each of the other three sides; a central altar; and usually a connection to a *sacbe* (see figures 3.1a and 12.5d).
Type 2 ($n = 7$)	Extended quadrangle: same as type 1 but has more than one patio and more structures (see figure 5.2).
Type 3 ($n = 28$)	Mini-quadrangle: like types 1 and 2 but with a lower pyramid (5–8 m) and usually no *sacbe* or central altar (see figure 3.1d).
Type 4 ($n = 2$)	Problematic monumental context: Large structure(s) that do not appear to be associated with a residential unit.
Type 5 ($n = 6$)	Pyramid Group: Compound that has a large pyramid (> 5 m) not associated with the kind of patio seen in quadrangles (see figure 3.2a).
Type 6 ($n = 24$)	Broad platform, usually over 1 m high and over 500 m², not encircled by *albarradas*. Often found to date to the Late/Terminal Classic periods (see figure 3.1b).
Type 8 ($n = 783$)	Small houselot/*albarrada* group: One to five structures surrounded by an *albarrada* (figure 2.4 contains several examples; see also figures 12.6, and 12.7.)
Type 9 ($n = 262$)	Medium houselot/*albarrada* group: Six to 10 structures surrounded by an *albarrada* (see group S2E1-N in figure 2.4; see also figure 5.4).
Type 10 ($n = 47$)	Large houselot/*albarrada* group: More than 10 structures surrounded by an *albarrada* (see figure 3.1c).
Type 12 ($n = 126$)	*Sascabera* group: any residential group with a *sascabera* (see figure 3.2b).
Type 13 ($n = 16$)	Isolated *albarrada* group: similar to 8, 9, and 10 except separated from the nearest neighboring houselot by at least 50 m (see figure 5.7).
Type 14a ($n = 12$)	Small houselot cluster: a pair of contiguous houselots with *albarradas* but separated from the nearest neighboring houselot by at least 50 m (see figure 3.2c).
Type 14b ($n = 14$)	Larger houselot cluster: three or more contiguous houselots with *albarradas* but separated from the nearest neighboring houselot by at least 50 m.
Type 15 ($n = 56$)	Non-*albarrada* groups: a cluster of two or more structures or platforms without an *albarrada* (see figure 3.2d).
Type 16 ($n = 10$)	Isolated building: a single structure or platform (may be accompanied by *chich* mounds) without an *albarrada* (see figure 3.2e).

northern lowland sites that predate or overlap Chunchucmil in time show that the most common residential unit is a large platform that would have supported perishable superstructures (Mathews and Maldonado C. 2006; Ringle and Andrews 1988; Stuart et al. 1979). Residential units with non-perishable buildings that face a patio are the exception, whereas at Chunchucmil they are the rule. Our recent research in other parts of the northern lowlands such as the Izamal/Ucí/Aké area
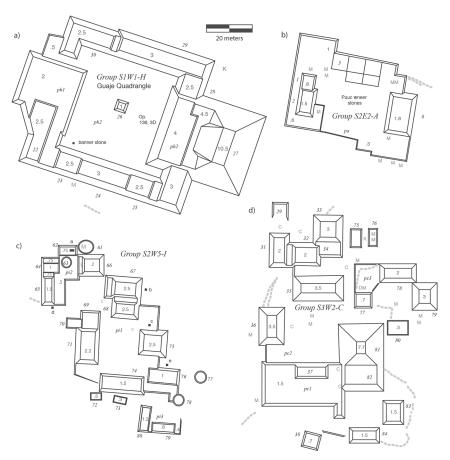
FIGURE 3.1 Examples of group types at Chunchucmil: (a) type 1 (simple quadrangle); (b) type 6 (broad platform); (c) type 3 (mini-quadrangle); (d) type 10 (large houselot/*albarrada* group).

(Hutson and Welch 2014), the Yaxuná/Yaxcabá area (Stanton and Magnoni 2014, 2015) and Cobá (Coronel et al. 2015; Magnoni 2015) constantly reminds us that Chunchucmil's (and Cobá's) architectural groups look much more like those from the southern lowlands than they do those from the northern lowlands.

Despite the many patio groups at Chunchucmil, "patio group" does not work as a type for this site because there is so much variation within Chunchucmil's patio groups. Some have monumental temple pyramids, most don't. Some have *sascaberas*, some don't. Some of this variation likely implies different functions, as Ashmore noted (1981:50), a point to which we return shortly. There is also an issue with scale.
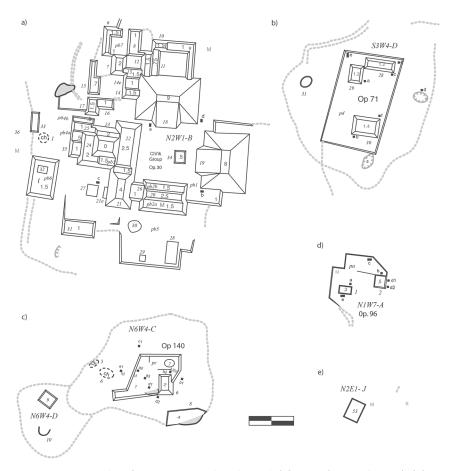
FIGURE 3.2 Examples of group types at Chunchucmil: (a) type 5 (pyramid group); (b) type 12 (*sascabera* group); (c) type 14a (houselot cluster); (d) type 15 (non-*albarrada* group); (e) type 16 (isolated building).

The patio group as defined by the 1977 seminar is one of three minimal residential units (MRUs). MRUs house a single nuclear family. In the 1977 typology, households with more than one family reside in clusters, a typological level above the MRU (Ashmore 1981). Yet while some patio groups at Chunchucmil housed single nuclear families, many housed extended family households (see chapter 5 for examples) and these are not clusters as defined in 1977. Chunchucmil is not alone here, as many archaeologists after the 1977 seminar agreed that a single patio group can house extended family households (Haviland 1988; Tourtellot 1988). To handle the

TABLE 3.2. Total architectural groups per group type (excluding discontinued types 7 and 11) and per 1-km² block within the 9.3-km² polygon, including the number of excavations per group type and by 1-km² block.

	Block 1			Block 2			Block 3			Block 4			Block 5		
	total	exc.	exc. (%)	total	exc.	exc. (%)	total	exc.	exc. (%)	total	exc.	exc. (%)	total	exc.	exc. (%)
Type 1	3	3	100	1	1	100	1	1	100	3	3	100			
Type 2	1	1	100	2	2	100	2	2	100	1	1	100			
Type 3	3		0	1		0	3		0	1		0	2	1	50
Type 4	2			2	1	50									
Type 5	1		0	2	1	50	3		0						
Type 6	8	5	62.5	7	5	71.4	1	1	100	7	4	57.1			
Type 8	97	7	7.2	116	8	6.9	127	5	3.9	89	8	9.0	28	1	3.6
Type 9	32	4	12.5	46	6	13.0	41	2	4.9	25	2	0.08	12	1	8.3
Type 10	9	3	33.3	12	2	16.7	14	3	21.4	2		0	1		0
Type 12	21	2	9.5	21	3	14.3	23	1	4.3	13	1	7.7	5	1	20
Type 13													2	1	50
Type 14a															
Type 14b															
Type 15	4		0	6		0	1		0	7	3	42.9	1		0
Type 16	3		0	3	1	33	1	1	100				1		0
unknown										4					

TABLE 3.2.—continued

	Block 6			Block 7			Block 8			Block 9			Block 0		
	total	exc.	exc. (%)	total	exc.	exc. (%)	total	exc.	exc. (%)	total	exc.	exc. (%)	total	exc.	exc. (%)
Type 1															
Type 2				1	1	100									
Type 3	8	1	12.5	1		0	6	2	33.3	2	1	50	1		0
Type 4															
Type 5															
Type 6							1	1	100						
Type 8	97	4	4.1	29	3	10.3	79	4	5.1	54	2	3.7	67	4	6.0
Type 9	30	2	6.7	4	4	100	34	5	14.7	21	2	9.5	17	1	5.9
Type 10	3	1	33.3	1		0	2	1	50	1		0	2	1	50
Type 12	15		0	3		0	11	3	27.3	6		0	8	1	12.5
Type 13	1	1	100	8	2	25				1	1	100	4		0
Type 14a				6	1	16.7				4		0	2	1	50
Type 14b				9		0				5	1	20			
Type 15	3	1	33.3	4	2	50	5	1	20	21	3	14.3	4	2	50
Type 16	1	1	100							1		0			
Unknown															

TABLE 3.3. Total architectural groups per group type within the 9.3-km² polygon, showing percentage of groups excavated per group type.

Group type	Groups per type (n)	Groups excavated per type (n)	Groups excavated(%)
Type 1	8	8	100
Type 2	7	7	100
Type 3	28	5	17.9
Type 4	2	1	50
Type 5	6	1	16.7
Type 6	24	16	66.7
Type 8	783	47	6.0
Type 9	262	29	11.1
Type 10	47	12	25.5
Type 12	126	12	9.5
Type 13	16	5	31.3
Type 14a	12	2	16.7
Type 14b	14	1	7.1
Type 15	56	12	21.4
Type 16	10	3	30
Unknown	4	0	0
Total	**1,405**	**161**	**11.5**

issue of scale, we differentiate small (five or fewer structures) domestic groups from medium-sized ones (six to 10 structures) from large ones (11 or more structures).

The large domestic groups (Type 10; they all have *albarradas*) usually have more than one patio, thus inviting a comparison to the different types of clusters enumerated by the members of the 1977 seminar. Yet the concept of the cluster also does not apply well to Chunchucmil. A cluster is an assemblage of five to 12 residential groups, representing extended family households or aggregates of households, surrounded by open space (Bullard 1960). Chunchucmil has very few clusters that are surrounded by open space, so the typology of clusters proposed at the 1977 seminar doesn't fit. Also, the average houselot at Chunchucmil has fewer than four residences, as compared to the five to 12 residential groups (which could translate to an even higher number of residences) in a cluster. Furthermore, the clusters pictured by Ashmore (see figures 3.4, 3.5, 3.6 of her 1981 chapter) consist of distinct patio groups. Though an individual architectural group at Chunchucmil may consist of

multiple patios (see figures 3.1c, 3.1d, 3.2a, and 5.2, this volume), such a group usually does not consist of distinct patio groups because the patios are linked (as in figures 3.1c and 3.2a), or a single structure opens onto two patios (as in figure 5.2), or all the structures and patios share the same basal platform. The architectural group in figure 3.1d comes closest in appearance to the clusters illustrated by Ashmore (see the bottom of figure 3.6 in Ashmore 1981). At the same time, this particular architectural group at Chunchucmil is smaller than most clusters as Bullard (1960) defined them. Most architectural groups at Chunchucmil with more than one patio are smaller than the group in figure 3.1d. Much of Chunchucmil can indeed be assigned to large aggregates of households, but these consist of multiple architectural groups that share access to the same callejuela, not clusters surrounded by open space (Hutson 2016:102–108).

As Ashmore (1981:49) notes, the term *patio* connotes enclosure, yet many patio groups all over the Maya area are not enclosed on all sides and this is very often the case at Chunchucmil. Since the word *plaza* does not imply enclosure, Thompson's (1931) term *plazuela group*, referring to structures surrounding a small plaza, would fit most of Chunchucmil's architectural groups. For those groups that are relatively enclosed, Mayanists have used the term *quadrangle*. For example, Leventhal (1981:196) defines a quadrangle as "three to four large mounds at right angles around a court closed off at two or more corners." When the PREP team began mapping the site core in the late 1990s, the largest architectural compounds did indeed conform to Leventhal's definition. Thus, we refer to these architectural groups as quadrangles (types 1 and 2 in table 3.1). In particular, the quadrangles at Chunchucmil have a large pyramid on one side of the court/patio and therefore resemble a recurring type of quadrangle noted by Harrison (1981:277) in southern Quintana Roo. Closer to Chunchucmil there are versions of quadrangles with tall temples on one side at Puuc sites to the southeast such as Dzehkabtun (G. Andrews 1985), Muluchtzekel (the North Group; Pollock 1980), Yakal Chuc (G. Andrews 1985), Uxmal (the Cemetery Group; Pollock 1980), Chac (the Grand Plaza; Smyth and Ortegón Zapata 2006), and Kabah (the Structure 2A1 group; Pollock 1980).

As mapping progressed, we found that the quadrangles with the tallest pyramids have an altar in the center of the main court/patio and connect with a *sacbe*. In other words, the quadrangle is a rather specific form at Chunchucmil. Once mapping was complete, we noticed that five of the 15 architectural groups that we named quadrangles actually had central patios/courts with fewer than two enclosed corners. Yet we continue to refer to them as quadrangles because they share other basic components: tall pyramid on one side of a large patio with long, lower structures on each of the other three sides, a central altar, and a connection to a sacbe.

Plaza Plan 2 (PP2; Becker 1991; 2003) is another architectural type defined else-where in the Maya area and present at Chunchucmil. PP2s consist of patio groups with a relatively square and tall structure on the east side. Beyond Chunchucmil these are also found at other sites in northern Yucatán, though often not referred to as PP2s (e.g., Kurjack and Garza Tarazona de González 1981). When excavated, the east structures usually contain burials and are often called shrines. This is indeed the case at Chunchucmil. Our excavations in such eastern mounds, which are often but not always higher than other structures in their respective group, show that these are shrines with burials (chapters 5 and 12, this volume; Hutson et al. 2004; Magnoni et al. 2012). In a sample of 392 houselots completely or nearly completely enclosed by an *albarrada* at Chunchucmil, 134 clearly have tall, approximately square buildings on the east side. However, we did not create a PP2 type, for several reasons. First, in 118 of those 392 houselots, we were not certain whether the layout conformed to a PP2. For example, a group might have a taller structure on the east side, but that structure might be far from square. Second, the architectural groups with the largest eastern structures (which we call quadrangles at Chunchucmil) also have central altars, which would qualify them as Plaza Plan 4 from Becker's typol-ogy. Though 12 of the quadrangles have a tall and square structure on the east, three have them on other sides of the patio. Finally, questions of scale and function com-plicate the usage of PP2 as a type at Chunchucmil. If we were to classify quadrangles that have pyramids on their east sides into the same group type as non-monumental houselots that nevertheless have probable shrines on their east sides, we would be conflating two very different entities. The size of quadrangles made them ideal for rites and ceremonies attended by hundreds of people. The range structures on the sides of the main patios in quadrangles and, for type 2 quadrangles, the additional structures found in auxiliary patios may have served as storage spaces. Like smaller houselots, quadrangles may have been residences with burials in the east shrine, but their ability to host crowds and store large quantities of goods suggest that quad-rangles were headquarters for large political factions and/or commercial enterprises (see chapters 5, 12, and 13). For all of these reasons we did not lump all architectural groups with potential eastern shrines into a single PP2 type.

The presence of PP2s at architectural groups of various sizes does highlight an important issue. Though there are qualitative and functional differences between quadrangles and other groups at Chunchucmil, many architectural groups with large eastern structures may be only quantitatively different from smaller architec-tural groups with smaller eastern structures. For example, compared to a type 1 or 2 group, a type 3 group is qualitatively (it lacks either an altar or a *sacbe* connec-tion) and quantitatively (its pyramid is usually smaller) different, but the differ-ence between type 3 groups and houselots (groups in types 8–14) might be merely

quantitative. The pyramid in a type 3 group is only a few meters taller than some of the pyramids in the largest houselots. In fact, there is formal continuity in the basic arrangement of structures from small houselots (type 8) to medium houselots (type 9) to large houselots (type 10) to type 3 monumental groups, (see also Hendon 2002; Lucero 2003). Nevertheless, we follow the logic of Willey and Leventhal's (1979) typology for Copán by splitting groups of different size into different types. The logic here is that groups with more and larger buildings likely housed groups with more people and greater access to labor and other resources.

Typologies such as that from Copán, which sort according to size, have been criticized for not looking, for example, at formal variation (Maca 2002; Pyburn 1989). However, we stress that our own typology does emphasize form: it separates quadrangles from other monumental groups, it separates broad platforms from houselots, and it separates groups with *albarradas* from groups without. We also stress that our typology is heuristic, not final, in that our database of groups gives us the flexibility to reconfigure the types depending on the particular research question. For example, houselots with *sascaberas* fall into type 12 regardless of the number of structures in the houselot. In other words, our typology would lump a large houselot with 14 structures (normally a type 10) together with a small house-lot with two structures (normally a type 8) if both houselots have a *sascabera*. The typology is therefore set by default to isolate architectural groups with sascaberas. This is helpful for research questions that focus on local economic resources, such as *sascaberas*. A research question that requires all houselots to be accurately sorted into size categories, regardless of the presence of a *sascabera*, would require resorting type 12 groups into other types. Fortunately, this can be done easily in the database, and we do precisely this for the analysis of the distribution of obsidian in chapter 11. Thus, other archaeologists with other goals could easily create a different yet equally valid typology.

EXCAVATION SAMPLING STRATEGY AND COVERAGE

The classification of groups into types represented a critical step forward in our chronological work because it enabled us to shift from an opportunistic to a rep-resentative sampling strategy for selecting groups to excavate. In other words, once we got a handle on the variability in architectural groups, we could design a sam-pling strategy that systematically tested each of the different kinds of groups. Using our typology, we deployed a stratified random sampling strategy as an attempt to acquire an excavation sample that would produce representative results for the site as a whole. The architectural groups were stratified with respect to location (using the 1-km^2 blocks described in chapter 2) and group type. For example, all of the
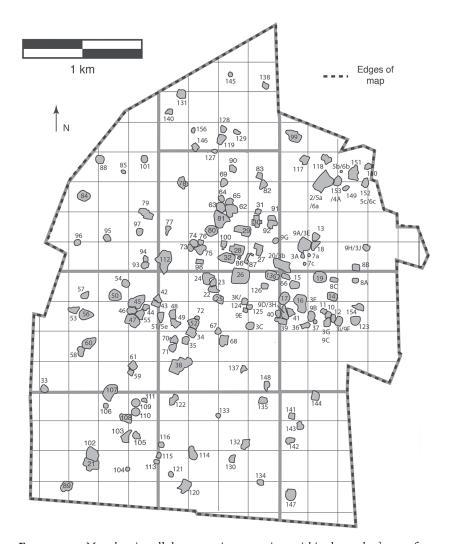
FIGURE 3.3. Map showing all the excavation operations within the 9.3-km² map of Chunchucmil.

architectural groups from a specific group type located in a specific 1-km² block were given numbers and a sample of these numbers was randomly drawn from a hat.

By the end of the project, excavations had been completed in 167 contexts (figure 3.3). These include 161 of the 1,405 architectural groups within the 9.3-km² polygon (an 11.5% sample), five of the 72 groups found on the transects (Ops. 139, 156, 157,

TABLE 3.4. Total architectural groups per 1-km² block within the 9.3-km² polygon, showing percentage of groups excavated per 1-km² block.

Block #	Groups per block (n)	Groups excavated per block (n)	Groups excavated(%)
1	182	25	13.7
2	219	30	13.7
3	217	18	8.3
4	152	22	14.5
5	52	5	9.6
6	158	11	7
7	66	13	19.7
8	138	17	12.3
9	116	10	8.6
0	105	10	9.5
Total	**1,405**	**161**	**11.5**

158, and 159), and one of the 20 *sacbes* (Op. 7, Sacbe 1; see figure 2.5). About 40 groups were chosen opportunistically before or during the implementation of the stratified random sampling strategy. Table 3.2 shows the number of excavations by group type and by 1-km² block. Table 3.3 summarizes the data in table 3.2 by group type, showing percentage of groups in each group type that received excavation. Table 3.4 summarizes the data in table 3.2 by 1-km² block, showing the percentage of groups in each block that received excavation. Each excavated group received an operation number; table 3.5 expands on table 3.2 by presenting the operation numbers for each excavation, organized by group type and 1-km² block, including the five groups excavated on the transects. Table 3.6 matches group labels (as discussed in chapter 2) with operation numbers for each of the 167 operations while also giving the surface area of excavation per operation and nicknames for operations. The exact placement of excavations, shown to scale, within each architectural group (and, of course, the plan of each group) can be found on the site map (see chapter 2).

In theory, the stratified random sampling strategy would ensure that some examples of every group type in every 1-km² block of the site would be excavated. Tables 3.3 and 3.4 show the robustness of the sample: we excavated groups from every type and groups in every 1-km² block. At the same time, table 3.2 shows that some particular group types in a particular 1-km² block did not receive excavations. In some cases this was due to limited resources. In the case of houselots (types 8 through 14), this is usually due to our tendency to exclude from the sampling universe groups

TABLE 3.5. Operation numbers for all 167 excavations (not including Op. 7: the Sacbe 1 excavation) organized by group type and 1-km² block, including the five groups excavated on the transects.

	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6	Block 7	Block 8	Block 9	Block 0	Transects
Type 1	3d/136, 25, 26	28	99	14, 16a, 17							
Type 2	38	29, 112									
Type 3	68		9a, 20	8c/19			21	45, 61	79		
Type 4		27									
Type 5		30									
Type 6	3c, 3k/124, 9c, 125, 126	31, 86, 87, 98, 100	8b	8a, 9b, 16b, 123				60			
Type 8	22, 23, 35, 49, 67, 72, 137	64, 65, 69, 74, 76, 90, 91, 92	9h, 13, 18, 117, 149, 5a/6a	9c, 9d, 10, 11, 12, 39, 40, 41	141	115, 130, 133, 134	103, 111, 113	42, 50, 53, 58	85, 94	128, 129, 131, 156	156
Type 9	24, 34, 52, 148	32, 62, 75, 77, 82, 83	150, 152	36, 154	143	120, 135	89, 102, 105, 107	44, 46, 55, 57, 59	93, 95	138	
Type 10	51, 70	80, 81	2, 118, 151, 5b/6b			132		47		119	
Type 12	48, 71				142					146	
Type 13		63, 73, 78	153	9f	144	122	104, 106	33, 43, 56	88		157, 158, 159
Type 14a							108			140	
Type 14b									84		
Type 15				37, 15		116	109, 110	54	96, 97, 101	127, 145	139
Type 16		9g	3a	66		121					

TABLE 3.6. Group labels for each operation number.

Group label			Op. number	Type	Dig area (m²)	Nickname
N3	E2	A	2	10	6	
N1	E1	H	3A	16	2	
S2	W1	N	3C	6	2	
N4	E2	G	5A/6A	8	2	
N4	E3	M	5B/6B	10	2	
Sacbe 1			7	Sacbe 1	6	
S1	E3	B	8A	6	2	
N1	E3	N	8B	6	2	
N1	E1	C	9A/3E	2	410	Pich
S2	E2	K	9B/3F	6	16	Xnokol
S2	E2	F	9C/3G	8	369	Ak
S2	E1	G	9D/3H	9	332	Kaab
S2	W2	A	9E	6	4	
S2	E3	L	9F/3I	12	70	Chiwool
N2	W1	F	9G	16	4	
N1	E3	E	9H/3J	8	12	Kuutz
S2	E2	C	10	8	249	Muuch
S2	E2	B	11	8	8	
S2	E2	E	12	8	8	Gredo
N2	E2	N	13	8	307	Lool
S1	E2	C	14	1	8	Chukum
S1	E1	H	15	15	382	Marketplace
S1	E1	G	16A, E, F, G	1	12	Picholte
S2	E1	D	16B, C	9	4	
S1	E1	F	17	1	14	Copo
N1	E2	F	18	8	4	
S1	E2	B	19	2	8	Pomoche
N1	E1	G	20/3B	2	14	Chakah
S7	W7	b	21	1	8	Ceiba
S1	W3	E	22	8	4	Ulum
S1	W3	D	23	8	8	Sina'n
S1	W3	C	24	9	4	K'ek'en

TABLE 3.6.—*continued*

	Group label		Op. number	Type	Dig area (m²)	Nickname
S1	W3	K	25	1	8	Kalkaltun
S1	W2	C	26	1	8	Chi'may
N1	W1	A	27	4	6	Yaxkach
N1	W2	C	28	1	12	Xpim
N2	W2	J	29	2	10	Kats'in
N2	W1	B	30	5	10	Ch'ik
N3	W1	O	31	6	8	Pak
N1	W2	E	32	9	8	Choc'bih
S4	W8	F	33	12	26	Balam
S3	W3	A	34	9	10	Keh
S3	W4	C	35	8	6	Xtabai
S2	E1	L	36	9	2	Holon
S2	E2	J	37	15	2	Chimes
S4	W4	A	38	2	10	Subin
S2	E1	I	39	8	2	Am
S2	E1	H	40	8	7.5	Sinik
S2	E1	E	41	8	7.5	Koxol
S1	W4	M	42	8	5	
S2	W5	D	43	12	4	
S2	W5	C	44	9	2	
S2	W5	A	45	3	9	
S2	W5	B	46	9	6	
S2	W5	I	47	10	6.5	
S2	W4	B	48	12	9	
S2	W4	I	49	8	6	
S1	W7	D	50	8	6	
S2	W4	H	51	10	8	
S2	W3	J	52	9	7	
S2	W7	C	53	8	10	
S1	W6	B	54	15	5	
S2	W5	H	55	9	9	
S2	W7	G	56	12	10	

Table 3.6.—*continued*

Group label			Op. number	Type	Dig area (m²)	Nickname
S1	W7	F	57	9	4	
S3	W7	E	58	8	9	
S4	W5	B	59	9	7	
S3	W7	D	60	6	15	
S4	W5	A	61	3	10	
N3	W2	O	62	9	9	
N3	W2	P	63	12	6	
N3	W2	K	64	8	8	
N3	W2	L	65	8	7	
S1	E1	A	66	15	4	
S2	W2	K	67	8	6	
S3	W2	A	68	3	3.6	
N3	W2	A	69	8	9	
S3	W4	B	70	10	7	
S3	W4	D	71	12	8	
S2	W3	I	72	8	7	
N1	W3	B	73	12	7	
N1	W3	A	74	8	6	
N1	W3	D	75	9	2	
N1	W3	C	76	8	5	
N2	W4	J	77	9	4	
N3	W4	C	78	12	6	
N2	W5	A	79	3	7	
N2	W3	I	80	10	8	
N2	W2	A	81	10	6	
N3	W1	B	82	9	4	
N4	W1	O	83	9	8	
N3	W7	A	84	14b	8	
N4	W6	B	85	8	6	
N1	W2	D	86	6	4	
N1	W1	E	87	6	6	
N4	W6	A	88	13	9	

TABLE 3.6.—*continued*

	Group label		Op. number	Type	Dig area (m²)	Nickname
S8	W8	A	89	9	10	
N4	W2	M	90	8	8	
N2	W1	D	91	8	6	
N2	W1	E	92	8	5	
N1	W5	F	93	9	11	
N1	W5	D	94	8	8	
N2	W6	C	95	9	7	
N1	W7	A	96	15	8	
N2	W5	I	97	15	8	
N1	W3	K	98	6	6	
N5	E1	F	99	1	11	
N1	W2	A	100	6	5	
N4	W5	F	101	15	10	
S7	W7	a	102	9	8	
S6	W6	C	103	8	8	
S7	W6	b	104	13	8	
S6	W5	b	105	9	8	
S5	W6	b	106	13	8	
S5	W6	g	107	9	8	
S5	W6	c, d	108	14a	8	
S5	W5	C	109	15	8	
S5	W5	A	110	15	8	
S5	W5	F	111	8	8	
N1	W4	D	112	2	9	
S7	W5	A	113	6	8	
S7	W3	A	114	3	8	
S7	W3	G	115	8	8	
S6	W4	B	116	15	7	
N4	E1	H	117	8	8	
N4	E2	A	118	10	8	
N5	W2	P	119	10	4	
S8	W4	D	120	9	9	

TABLE 3.6.—*continued*

Group label			Op. number	Type	Dig area (m²)	Nickname
S7	W4	E	121	16	8	
S5	W4	B	122	13	10	
S2	E3	H	123	6	4	
S1	W2	H	124/3K	6	6	
S2	W1	A	125	6	4	
S1	W1	F	126	6	3	
N5	W3	K	127	15	8	
N5	W2	A	128	8	9	
N5	W2	D	129	8	5	
S7	W2	C	130	8	12	
N6	W4	A	131	8	12	
S6	W2	I	132	10	18	
S5	W2	J	133	8	16	
S8	W1	B	134	8	12	
S5	W1	E	135	9	8	
S1	W1	H	136/3D	1	8	Guaje
S4	W2	B	137	8	4	
N7	W1	F	138	9	6	
NW transect			139	15	3	
N6	W4	C	140	14a	8	
S5	E1	E	141	8	7	
S6	E1	F	142	12	13	
S6	E1	B	143	9	7	
S5	E2	A	144	13	9	
N7	W2	B	145	15	7	
N5	W3	O	146	12	8	
S8	E1	A	147	3	5	
S4	W1	L	148	9	7	
N3	E3	A	149	8	8	
N4	E3	H	150	9	6	
N4	E3	K	151	10	10	
N3	E3	H	152/5C/6C	9	10	

TABLE 3.6.—*continued*

Group label			Op. number	Type	Dig area (m²)	Nickname
N4	E2	K	153/4A	12	30.5	
S2	E3	B	154	9	4	
easttransect			155	14b	3	
N5	W3	D	156	8	4	
SE transect			157	13	4	
SE transect			158	13	2	
east transect			159	13	3	

that are not reasonably well enclosed by *albarradas*. Why did we exclude such groups? When the *albarrada* walls of a houselot are fragmentary it is sometimes difficult to know which buildings and other features (*metates*, *sascaberas*) pertain to which architectural group. Chunchucmil's relatively high settlement density contributes to this difficulty: open spaces among buildings are often too small to serve as a guide for drawing boundaries between groups of buildings. (In areas with enough open space, usually toward the edges of the site, we could draw boundaries when *albarradas* did not exist at all, which is the case for types 15 and 16.) In areas where boundary walls were incomplete, we would not be sure which buildings pertained to which social units. In turn, excavations in such groups with unclear boundaries might not be useful because we would not understand the nature of the social group to which the excavation data pertained. Thus, within types 8, 9, 10, 12, 13, and 14, we sampled groups that were completely or nearly completely enclosed by *albarrada* walls as opposed to groups that were partially enclosed. For example, we did not excavate any of the three type 12 groups in Block 7 because these three groups were not well-encircled by houselot walls.

The opportunistic side of our sampling strategy meant that some group types were sampled more exhaustively than others. For example, we decided to test-pit each of the 15 quadrangles (types 1 and 2) since most of the site's largest buildings were part of quadrangles and we wanted to be able to speak to the chronology of construction of these large compounds. We also tested most (16 of 24) of the broad platforms comprising group type 6. Since these groups often represented the only substantial buildings dating to after the abandonment of most of the site (see chapter 4), they represented our best opportunity for understanding the drastic demographic decline of Chunchucmil (Magnoni 2008).

Once we chose which architectural groups to excavate, minimum amounts of excavation per group were systematized. As a result, 141 excavation locales received a minimum of six 1-by-1-m test pits or yielded large enough quantities of sherds

(always over 4 kg) to cease digging after completing fewer than six pits. The amount of excavation in some of the first operations (those dating to the 1990s) was low, with a few groups receiving no more than a single test pit. At the other end of the spectrum, seven groups were excavated horizontally: N1E1-C/Op. 9a (the Pich group), S2E2-F/Op. 9c (the Aak group), S2E1-G/Op. 9d (the Kaab' group), S2E3-L/Op. 9h (the Chiwool group), S2E2-C/Op. 10 (the Muuch group), N2E2-N/Op. 13 (the Lool group), and S1E1-H/Op. 15 (the marketplace). Furthermore, five groups—three of which were excavated horizontally (S2E2-F/Op. 9c, S2E1-G/Op. 9d, S2E2-C/Op. 10), two of which were not (S2E2-K/Op. 9b [the Xnokol group] and S4W8-F/Op. 33 [the Balam group; see chapter 5, this volume])—each received at least 100 50-by-50-cm shovel tests at the corners of 5-m grids placed over non-architectural space. The total surface area of all excavations at Chunchucmil is approximately 3,300 m². The total volume of excavation is likely to be about 2,000 m³, but it is difficult to calculate more precisely given that note-taking was not standardized for excavations in the 1990s.

SUMMARY

Chunchucmil's architectural groups share many similarities with architectural groups elsewhere in the lowlands, but with enough differences to merit a site-specific typology. Our typology reflects differences in form and function between architectural groups as well as differences in the status of the social groups that lived in them (usually extended family households; see chapter 5) and the physical resources available to them. We used this typology as the basis for the excavation sampling strategy, which included both opportunistic and stratified random components. The goal of the sampling was to select for excavation a set of architectural groups that was representative of the variation in the site as a whole. We therefore completed an unusually large set of excavations spread broadly across the site and across the different kinds of architecture. Few large sites (Tikal, Caracol) have been excavated so systematically. Shortcomings of the sampling strategy were mitigated in a variety of ways. As seen in the next chapter, these excavations permit the diachronic reconstruction of Chunchucmil and give us confidence in economic conclusions drawn in later chapters.