

## Dating Early Classic Interaction between Kaminaljuyu and Central Mexico

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In 1925, the polymath Walter Lehmann identified central Mexican ceramics in private collections from Kaminaljuyu (Bove 2000). But the presence of Teotihuacan-style pottery at the site remained generally unknown until 1936, when Alfred V. Kidder, Oliver G. Ricketson, and Robert Wauchope of the Carnegie Institution of Washington began excavating Mound A (Figure 3.1; Mound F-VI-1) at the behest of José Antonio Villacorta Calderón, the Guatemalan Minister of Public Education (Kidder et al. 1946:1). Excavation of this rather unimpressive earthen mound—measuring a mere 20 m across and 6 m high—was concluded in 1937 by Jesse D. and Jane C. Jennings, while Kidder commenced excavation of its larger companion, Mound B (Mound F-VI-2). In 1942, Edwin M. Shook completed the investigation of this second structure. What began as a simple three-week project with a budget of \$150 took three field seasons to finish because each mound consisted of multiple superimposed structures, the last of which were built in a local variant of the *talud-tablero* style. The mounds contained a total of twelve richly furnished tombs, eight minor burials, and two pit burials (Kidder et al. 1946:42–85).

The discovery of a large quantity of central Mexican-style ceramics—side by side with Maya vessels—in the tombs of Mounds A and B led to one of the most important breakthroughs in the history of Mesoamerican archaeology. These materials provided for the first time a way to tie directly the Classic-period ceramic sequence of the Maya region to that of the distant city of Teotihuacan, and hence, resolved a long-standing chronological puzzle.<sup>1</sup> A temporal overlap of Classic Maya and Teotihuacan cultures had been considered for several years (e.g., Joyce et al. 1927:311; Linné 1934:100, 220; Thompson 1939:225; Vaillant 1932:94), but was uncertain before the excavation of Mounds A and B. Coupled with the discovery of Preclassic, then called “Archaic” or “Middle Culture” (Vaillant 1930a, 1930b), pottery and figurines by Manuel Gamio (1926, 1927a, 1927b, 1927c) in the Finca Miraflores section of Kaminaljuyu, the Carnegie excavations demonstrated the long and essentially contemporaneous development of Maya and central Mexican



FIGURE 3.1. Kaminaljuyu, Guatemala (based on a survey by T. R. Johnson and E. M. Shook and on a plan by G. Espinoza).

societies. This had a profound effect on the diffusionist models of culture historians searching for a single Mesoamerican *cultura madre*. As Kidder et al. (1946:4) noted: "We should not think of Maya culture as the trunk of the Mesoamerican tree but merely as its most luxuriously blooming branch." Since the Maya "Old Empire" and Classic Teotihuacan were contemporaries, neither could have been the sole stimulus of Classic civilization in Middle America.

The discovery of central Mexican-style ceramics and architectural fea-

tures in Mounds A and B also led to a seemingly contradictory conclusion: that Teotihuacan had an extraordinary impact on the developmental trajectory of Kaminaljuyu. The quantity and quality of central Mexican-style artifacts found in the tombs of Mounds A and B were so impressive as to suggest that the individuals interred in the tombs were “a small group of warlike adventurers whose leaders became overlords of an already resident population” (Kidder et al. 1946: 255). The Carnegie investigators argued that the invaders came from Teotihuacan and married local women who continued to produce utilitarian pottery belonging to a local tradition. Nonetheless, Kaminaljuyu was not considered to be representative of other Classic Maya sites. In fact, the influence of Teotihuacan at Kaminaljuyu was viewed as remarkable in part because it was thought to be unique. For this reason, the Carnegie investigators did not conclude that Teotihuacan caused the rise of the Classic Maya. Only in more recent years have archaeologists proposed that the emergence of state-level society in the Maya region was stimulated by interaction with Teotihuacan (e.g., Becker 1983; Sanders and Michels 1977; Sanders and Price 1968; Sanders et al. 1979).

In this chapter, I summarize the history of archaeological research at Kaminaljuyu, concentrating on the few projects that have found evidence for Early Classic interaction with central Mexico. The goal of this chapter is to place the evidence—chiefly the appearance of nonlocal architectural traits, imported or foreign-inspired ceramics, and green obsidian from the Pachuca source—within a chronological framework. In Chapter 4, I outline several theories that have been proposed to account for the presence of these materials in the Maya highlands. I then reexamine evidence at Kaminaljuyu for interaction with Teotihuacan and other sites in northwestern Mesoamerica. I conclude that foreign cultural traits tend to be superficial in character and are visible only on certain scales of analysis. These two factors suggest to me that central Mexican artifacts and symbol sets were manipulated in native cultural contexts by local people who were either unfamiliar with, or chose not to emulate, the details of Teotihuacan technology, style, and ritual. Neither conclusion supports the hypothesis that Teotihuacanos lived in a *barrio* at Kaminaljuyu, let alone controlled key aspects of the economy or political system of the site. Finally, I turn to other possible explanations for the appearance of central Mexican cultural traits in the Guatemalan highlands.

### **Archaeological Research at Kaminaljuyu**

Few sites in the Maya area, and none in the Maya highlands save Copán, have a history of investigation that is as long and complicated as that

of Kaminaljuyu. Since the late 1950s, at least five multiyear projects and dozens of small-scale salvage operations have been conducted at the site. With the exception of the Pennsylvania State University Kaminaljuyu Project of 1968–1971, little of this work is well known outside of Guatemala. Until recently, this could be attributed to the fact that few projects adequately reported their results. Most of what we know about Gustavo Espinoza's five years of excavations in the Acropolis (Group C-II-4), for example, is due to Charles Cheek's (1977a:98–126) careful and indispensable analysis of architectural features left uncovered in the group. The Pennsylvania State University Project published an important annotated bibliography of Kaminaljuyu archaeology (Kirsch 1973), which includes many of the one- or two-page items that describe all that is known of some earlier excavations at the site. A recent bibliography, compiled by Shione Shibata (1994b:figura I.G.-III-4), contains references to many—but by no means all—projects conducted before 1994. Two short pieces summarize the history of archaeology at Kaminaljuyu and our understanding of the development of the site (Ericastilla and Shibata 1991; Popenoe de Hatch 1991).

Small-scale archaeological projects conducted at Kaminaljuyu in the past fifteen years are, in general, more adequately published than their predecessors. To a great degree this is due to the annual *Simposio de Arqueología Guatemalteca*, which since its inception has published nineteen volumes of papers delivered between 1987 and 1999. The Guatemalan directors of most salvage and investigatory operations conducted during this period have contributed to the series. Moreover, three large-scale projects—the *Proyecto Kaminaljuyú/San Jorge* (Popenoe de Hatch 1997), the *Proyecto Arqueológico en el Centro y Sur de Guatemala* (Ohi 1991, 1994c), and the *Proyecto Arqueológico Miraflores II* (e.g., Martínez et al. 1996; Popenoe de Hatch et al. 1996; Valdés et al. 1996; Valdés, Urquizú, and Castellanos 1996)—all have published monographs or filed multiple reports describing their field and laboratory research. Finally, a short but important monograph discusses the *Culebra*, one of the largest Preclassic constructions in Mesoamerica (Navarrete and Luján 1986).

### Kaminaljuyu Chronology

For many Mesoamericanists, two continuing sources of confusion are the ceramic sequence of Kaminaljuyu and the absolute chronology of the site. As their work continued, the Carnegie investigators revised and published many ceramic chronologies, often proposing new phases, new orders of phases, and new names for existing phases (e.g., Berlin 1952; Borhegyi 1965; Kidder

1961; Shook 1952). The confusion generated by these conflicting chronologies is ably summarized by Shibata (1994b), who charts the development of temporal studies at Kaminaljuyu. Unfortunately, the Carnegie ceramicists never released a final report, so it often is less than obvious which ceramic taxa they considered as forming the complexes of different phases. Nonetheless, copious illustrations provided by Kidder et al. (1946), Shook and Kidder (1952), and by the authors of numerous shorter reports (e.g., Berlin 1952) document certain key periods in the sequence.

The Pennsylvania State University Project did not resolve problems with the ceramic chronology of Kaminaljuyu. Principal goals of that project were the investigation of settlement patterns and residential architecture subject to destruction by the uncontrolled expansion of Guatemala City. A report on the archaeological ceramics was published (Wetherington 1978b), but it is not a major achievement of the project. The chronological placement of types and wares in the report is especially inaccurate, and many temporally bound taxa (e.g., Esmeralda [elsewhere called Esperanza] Flesh Color, Amatle Hard Paste, and the Usulután ceramics) are assigned to all phases from the Middle Preclassic to Late Classic periods (Wetherington 1978a: Tables 3 and 4). A large part of this confusion must be attributed to the obsidian hydration dates that were used to determine the absolute chronology of certain contexts (see Michels 1973). As Edwin M. Shook (personal communication 1990) once noted: "Nothing has messed up our understanding of Kaminaljuyu chronology more than those obsidian dates; they set us back twenty years."

Fortunately, many problems with the ceramic sequence of Kaminaljuyu have been solved by Marion Popenoe de Hatch (1997) in her San Jorge report, perhaps the most important contribution to Kaminaljuyu archaeology since the publication of the Carnegie investigations of Mounds A, B, and E-III-3 (Kidder et al. 1946; Shook and Kidder 1952). Chapters in the recent volume devoted to the Late Preclassic and Early Classic pottery of the site describe in detail the wares characteristic of each phase and place a new emphasis on ceramic discontinuities first noted by Carnegie investigators.<sup>2</sup> As they wrote, "none of the characteristic Miraflores [Late Preclassic] types continued to be made in Esperanza [late Early Classic] times" (Kidder et al. 1946:246). A revised ceramic chronology for Kaminaljuyu that incorporates Popenoe de Hatch's work is presented in Figure 1.2.

The phases that constitute the ceramic chronology are dated by ceramic cross-ties with other sites and by chronometric data from Kaminaljuyu. Fifteen carbon samples collected from Carnegie and other early excavations at Kaminaljuyu were among some of the first to be assayed from the Maya re-

gion (see Michels 1973:Table 3). None of these dates are directly relevant to the appearance of central Mexican cultural traits at Kaminaljuyu, but four, discussed below, help fix a lower bound. The Pennsylvania State University Kaminaljuyu Project ran another nineteen radiocarbon dates (Michels 1973:Table 2), principally as a calibration check for a much more extensive program of obsidian hydration dating. Problems with the ceramic typology and chronology of the project, as well as the lack of descriptions of materials recovered from radiocarbon-dated contexts, limit the utility of the dates. Daniel Wolfman (1973:177-252; 1990:Table 15.1; see also Cheek 1977a:Table 2) determined a total of sixteen archaeomagnetic dates from Pennsylvania State University and Instituto de Antropología e Historia excavations, some of which date the occupation of *talud-tablero* structures.<sup>3</sup> More recently, the Proyecto Arqueológico en el Centro y Sur de Guatemala assayed fifteen carbon samples from their excavations in Mounds B-I-1 and D-III-1 and experimented with archaeomagnetic dating (Sakai et al. 1994). The ceramic analysis conducted by members of that project is described in only four pages (Ohi et al. 1994:505-508), and there is no tabulation of the ceramic types found associated with the assayed carbon.

#### Excavations of *Talud-Tablero* Architecture and Esperanza-Phase Ceramics at Kaminaljuyu

The six decades of archaeological research since the Carnegie Institution concluded its investigations at Mounds A and B have revealed significant quantities of central Mexican-style artifacts in just one other portion of the site: the Palangana (Mounds C-II-12, -13, and -14). *Talud-tablero* architecture has been found in this group and in the neighboring Acropolis (Group C-II-4). Components of the style have also been discovered at a few more mounds dating to the Classic period, such as the Mound C-II-7 ballcourt (Borhegyi 1965:21-22; Shook and Smith 1942), Mound F-VI-3 (see Cheek 1977a:128), a nearby nonmound structure (Shook and Smith 1942), and possibly Mound D-III-1 (Miles 1963; Murcia 1994; Ohi 1994a; Rivera and Schávelzon 1984; Shibata 1994a, 1994c) and Mound D-III-13 (Berlin 1952).<sup>4</sup> With the exception of the last two, all are found in just two portions of the site: Finca Esperanza and the Acropolis-Palangana complex, located respectively in the southeastern and northern peripheries of Kaminaljuyu (Figure 3.1). *Talud-tablero* architecture and central Mexican-style pottery, then, have a very limited distribution.

*Mounds A and B.* Before turning to more recent excavations, a few points must be made about Mounds A and B in order to correctly place them within

the Esperanza phase. Cheek (1977a:154–155) astutely observes that Tombs A-I and A-II contained central Mexican-style ceramics such as Thin Orange ware, “cream pitchers,” and cylindrical tripod vessels, but date to a period *before* the first appearance of the *talud-tablero* style and construction techniques that may be derived from central Mexico. In contrast, the opposite temporal pattern has been identified at Tikal, where a local variant of *talud-tablero* architecture developed long before the first central Mexican-style vessels were placed in tombs and problematical deposits (see Chapter 7). The buildings with which the earliest Esperanza tombs were associated, Structures A-1, A-2, A-3, and B-1, were built in a local style and were constructed using local techniques. They were simple shrines or altars, for the most part made of earth, that were erected over burials (Figure 3.2a–c; Kidder et al. 1946:12–15, 28–30). Since the earliest known Esperanza ceramics appear to date to a period devoid of foreign architectural influence, we should place all examples of the *talud-tablero* style at Kaminaljuyu somewhat later than the beginning of the Esperanza phase. Cheek (1977a:Figure 62) calls this initial period of interaction the Contact phase.

Kidder et al. (1946:15–20, 30–34) noted a second architectural pattern in the three structures that succeeded Structure A-3 and the two that followed Structure B-1. These five platforms consisted of a single, large *talud*. Structures A-4, A-5, A-6, and B-3 also contained a vertical cornice, a smaller summit platform that (at least in some cases) supported a superstructure, and offset stairs with balustrades (Figure 3.2d–f). Although certain elements of the *talud-tablero* style were present, others—notably finial blocks (called *remates*) and a true *tablero*—were missing. Moreover, all five structures were earthen constructions. Because of the presence of some foreign features combined with local elements and building techniques, Cheek (1977a:Figure 62) refers to this as the Integration phase.

The final two versions of both Mound A and B were built of what the Carnegie excavators called “pumice pudding” and coated with an exterior layer of *piedrín*, a concrete made of lime and bits of black volcanic ejecta (Kidder et al. 1946:20). This material is similar to the concrete used to cover buildings at Teotihuacan. Flat slabs of stone were tenoned into the buildings and, at least in Structure B-4 (Kidder et al. 1946:36), these supported *tableros*. The facing was gone from Structure A-7, and Structures A-8 and B-5 were encountered in a highly destroyed state, so the *tableros* shown in Figure 3.2g–h are hypothetical—though highly probable—reconstructions. The presence of all these elements, particularly the true *tablero* and the use of *piedrín*, signals the fullest manifestation of the *talud-tablero* style at Kami-

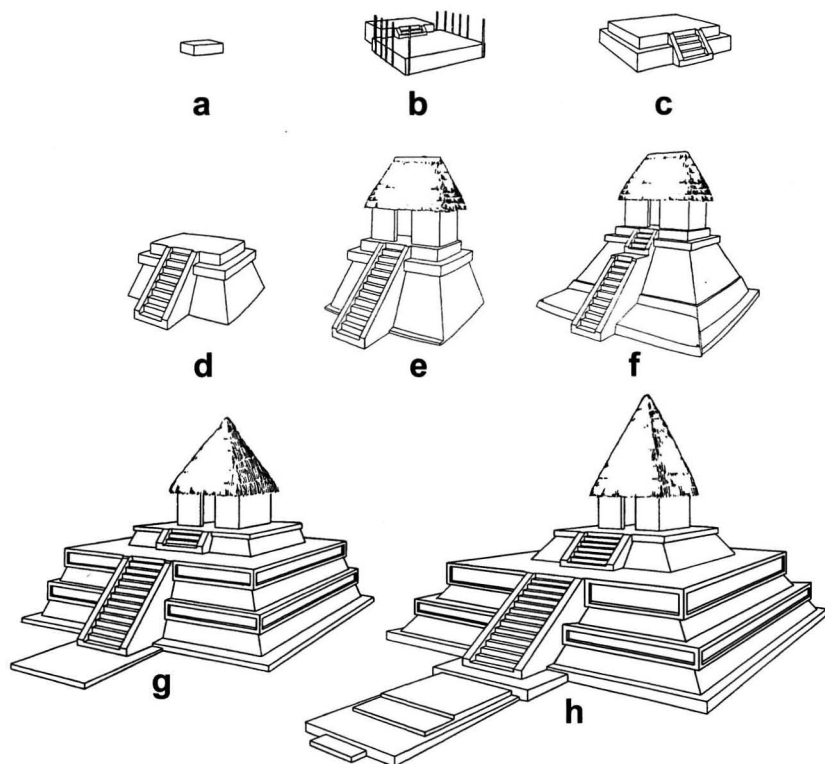


FIGURE 3.2. Construction sequence of Mound A, Kaminaljuyu: (a) A-1; (b) A-2; (c) A-3; (d) A-4; (e) A-5; (f) A-6; (g) A-7; (h) A-8 (Kidder et al. 1946:Figures 106–108; redrawn from Kidder et al. 1946:Figure 109, using information in their text).

naljuyu. For this reason, Cheek (1977a:Figure 62) calls this the Teotihuacan phase. Nevertheless, as is discussed in the next chapter, these structures differ in important ways from most of the *talud-tablero* buildings in the great central Mexican city.

Other than four unreliable obsidian hydration measurements (Cheek 1977a:146), no chronometric dates are available for the sequence of structures and tombs excavated at Mounds A and B. Because little change was observed in the ceramic contents of the tombs, Kidder et al. (1946:258) wrote: “We believe that Mounds A and B served as a place of sepulchre for not over a century and perhaps for a considerably shorter time.” But they stressed that as a ceramic temporal unit, the Esperanza phase probably lasted longer. In particular, they noted that A. Ledyard Smith’s (Shook and Smith 1942) excavations in the Acropolis produced sherds that were similar to the ceramics of Mounds A and B, but also found additional types not known from



Finca Esperanza. Moreover, certain types from Mounds A and B were not recovered from Smith's excavations (Kidder et al. 1946:258).

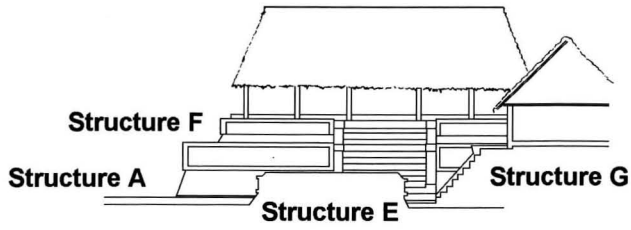
*Acropolis.* Excavations in the Acropolis were conducted by A. Ledyard Smith in 1941 and 1942 as part of his study of highland ballcourts (Shook and Smith 1942; Smith 1961). Two tenoned markers were discovered in association with an Amatlé- or Pamplona-phase ballcourt built on top of earlier Late Classic terraces. What is now called Structure E, built in the *talud-tablero* style, was found below the terraces. Arenal- or Verbena-phase pottery was found deeper still.

After a lapse of fifteen years, Gustavo Espinoza continued Smith's work in the ballcourt and expanded excavations to the north (Borhegyi 1956). During the five years of his project, he uncovered as many as twenty Early and Late Classic structures, labeled A through S and M<sup>1</sup> by Tatiana Proskouriakoff and Charles Cheek (1977a). Structures A, D, E, F, G, J, and K contain elements of the *talud-tablero* architectural style (Figure 3.3). What little we know about these excavations is due to the work of Proskouriakoff, who in 1962 drew plans and sections of some of the structures, and of Cheek (1977a:98-126), who analyzed the exposed architecture ten years later.

Correlating the construction of these *talud-tablero* buildings with the ceramic chronology of Kaminaljuyu is problematic. Only rudimentary provenience information was recorded by Espinoza, and notes explaining his recording system were lost. Cheek (1977a:101), however, did examine ceramic collections from the excavations and concludes that many are either pure Aurora- or Amatlé-phase lots. It is significant that he does not mention central Mexican-style ceramics belonging to the Esperanza complex. This underscores two points. First, the Esperanza complex, as originally identified from the ceramics recovered from Mounds A and B, differs from the preceding Aurora complex chiefly in that it includes high-status mortuary ceramics of an exotic style. That is, the Esperanza complex of Mounds A and B was as much a result of context as chronology. The Acropolis excavations apparently did not discover elite tombs, so it is not surprising that Cheek (1977a) does not mention Teotihuacan-style vessels. Fortunately, Popenoe de Hatch (personal communication 1996) has identified morphological changes in utilitarian wares that may be used to identify Esperanza-phase contexts lacking elite mortuary ceramics. Heinrich Berlin (1952) also mentioned several attributes that can be used to distinguish Aurora pottery from local-style Esperanza ceramics.

The second point is that the disappearance of central Mexican-style pottery from the ceramic inventory of Kaminaljuyu may not have coincided

a



b

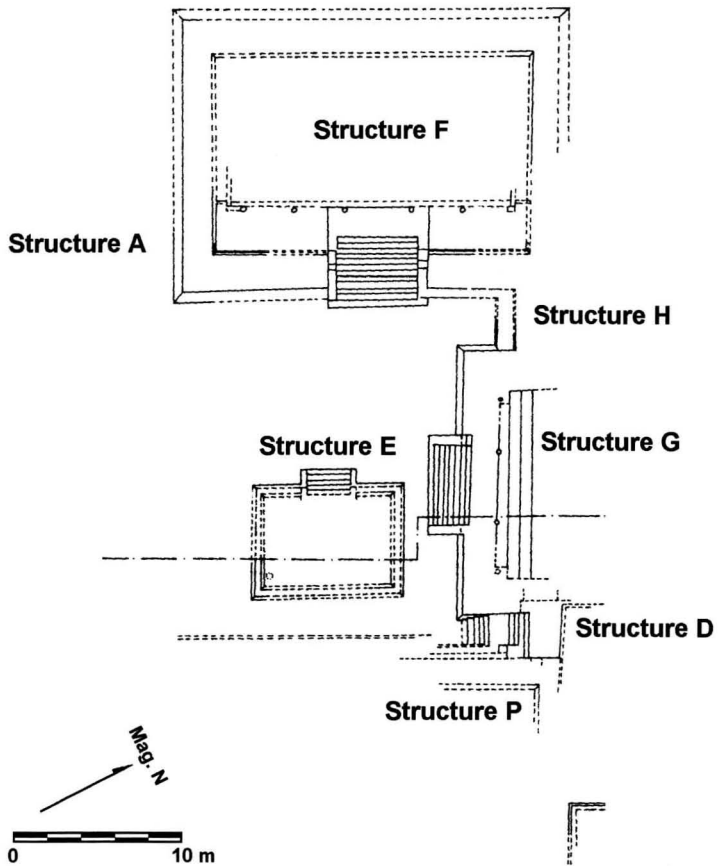


FIGURE 3.3. *Talud-tablero* architecture of the Acropolis, Kaminaljuyu: (a) section; (b) plan (redrawn from Cheek 1977a:Figures 53 and 57).

precisely with the abandonment of architectural traits adopted from Teotihuacan, if indeed that was the source of inspiration at Kaminaljuyu. The *talud-tablero* architecture of the Acropolis, therefore, need not date to the Esperanza ceramic phase, but may be associated with the succeeding Amatlé phase. At Tikal, for example, the *talud-tablero* style endured after central Mexican-style vessels ceased to appear in tombs and problematical deposits (see Chapters 6 and 7). The opposite pattern has been noted for Copán (see Chapter 5). The appearance and disappearance of central Mexican ceramic and architectural traits from the archaeological record do not necessarily coincide.

There are no radiocarbon dates from the Acropolis. In 1971 and 1972, Wolfman (1973, 1990) collected five samples from Structures A, D, and L for archaeomagnetic dating. Structure L was constructed at a time after *talud-tablero* architecture ceased to be built in the Acropolis. The two dates from Structure L, therefore, provide an upper limit for the architectural style. Sample 775 dated to A.D. 595–615, and Sample 586 to either A.D. 745–795 or A.D. 825–875 (Wolfman 1990:Table 15.1). It is likely, therefore, that the *talud-tablero* architecture of the Acropolis was built and occupied before A.D. 615.<sup>5</sup> Structure A has a *talud-tablero* façade, contains a stair with balustrades that are capped with finial blocks, and is covered with *pedrín*. It belongs to Cheek's (1977a:Figure 62) Teotihuacan phase, roughly contemporary with or later than Structures A-7, A-8, B-4, and B-5. Two archaeomagnetic samples were taken from Structure A and were dated to A.D. 490–525 (Sample 584) and A.D. 500–520 (Sample 772; Wolfman 1990:Table 15.1). Structure A, therefore, probably was constructed no later than A.D. 520. Structure D, which was built in the same general construction stage as Structure A, is covered with *pedrín*, contains a *talud*, and has a stair with a balustrade. Somewhat later, the structure was modified and steps covered with *pumidrín* (a substance containing pumice that was used later in the Early Classic than *pedrín*) were built (Cheek 1977a:108). Wolfman (1990:Table 15.1) collected Sample 585 from a baked *pedrín* floor in Structure D, which he dated to A.D. 585–610. Thus Structure D of the Acropolis probably was built before A.D. 610.

Although we have no chronometric data from the Acropolis that place a lower limit on the construction dates of *talud-tablero* architecture, it seems likely that all structures of that style were built before A.D. 615. Moreover, structures belonging to the Teotihuacan phase, which exhibit the most developed form of the style, were used heavily during the sixth century.

*Palangana.* Additional information on the chronology of both Esper-

anza ceramics and *talud-tablero* architecture comes from Sean Cárdenas and Cheek's (1977a:7-98) excavations in the Palangana (Structures C-II-12, -13, and -14), located 200 m southwest of the Acropolis. Samuel Lothrop (1926) found several sculptures in this area and excavated one between Mounds C-II-12 and -14. Carnegie investigators who gave the group its name once thought that the space where Lothrop worked was a giant ballcourt. In fact, Smith (1961) and all later researchers in the central highlands refer to many *palangana*-style ballcourts dating to the Late Classic period. Lee A. Parsons (1967-1969), on the other hand, suggested that it served as a monument plaza. Cheek (1977a) refers to the area as the Lower Plaza.

Excavations in the center of the Lower Plaza exposed a structure built in five major construction stages (Cheek 1977a:37-70). The first three of these, called Stages E1, E2, and E3, date to the late Early Classic period. Cheek subdivides Stage E2 and Stage E3 into four substages each, but the distinction will not be used here. Stage E1 was a small platform built with the shape of a sloping *talud*. There is some evidence that it contained a stair with a balustrade. The sloping platform supported a superstructure. If the reconstruction is correct, the superstructure had three walls that were flush with the edges of the platform (Cheek 1977a:37-42). The corners of the superstructure apparently were vertical columns offset out from the corners of the platform. Thus, the superstructure formed a *tablero* framed on the sides and perhaps on top (Figure 3.4a). The entire Stage E1 structure was coated with *piedrín*. Both the *tablero* and the use of *piedrín* are defining traits of Cheek's Teotihuacan phase (Cheek 1977a:Figure 62). That is, the Stage E1 structure appears to be roughly contemporary with the last two versions of Mounds A and B and with the *talud-tablero* structures of the Acropolis.

The Stage E1 structure was built above a disturbed tomb called Burial 1 (Cheek 1977a:42, 169-175). One ceramic vessel was found within the tomb, but it is neither described nor illustrated and cannot be assigned to any ceramic phase. The sole radiocarbon date from this portion of the Palangana comes from the tomb. It is  $1505 \pm 90$  BP (I-6608), which has a one-sigma calibrated range of A.D. 444-615 and a two-sigma range of A.D. 343-669 (Michels 1973:Table 2; Stuiver and Kra 1986:805-1030). If the carbon sample was not introduced at a later time, we can assert at the 84.1 percent confidence level that the E1 structure above the burial was built no earlier than A.D. 444. Since the Palangana structure was constructed in the same architectural style as the *talud-tablero* structures of the Acropolis and the last two versions of Mounds A and B, the mid-fifth century may be considered an approximate lower limit for the construction dates of these structures.

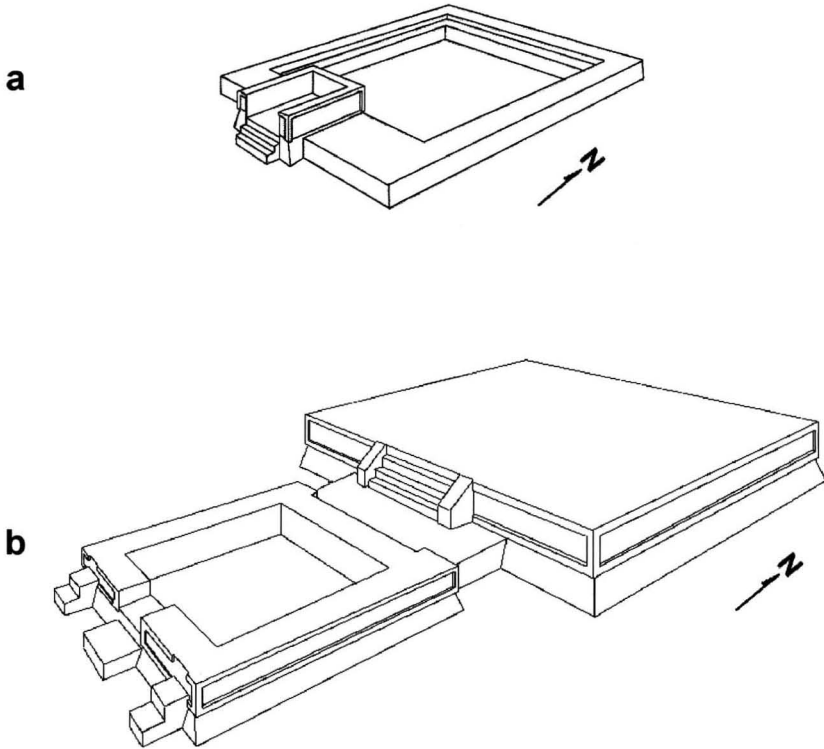


FIGURE 3.4. Construction sequence of Palangana structure, Kaminaljuyu: (a) Stage E2-a with Stage E1 visible in center of south side; (b) Stage E3-c (redrawn from Cheek 1977a:Figures 13, 14, and 22).

The Stage E1 platform was incorporated into the Stage E2 structure, a peculiar *piedrín*-coated building that Cheek (1977a:42–50) calls an enclosure. It was a rectangular sunken area completely surrounded by a parapet (Figure 3.4a). The function of the building is not known, but it contained no central Mexican architectural features other than those left exposed on the Stage E1 structure. Burial 2 was cut into the last substage of the Stage E2 structure, probably when the Stage E3 structure was built. Grave goods from the tomb include stone and limonite plaques and other items similar to those found in the Mound A and B tombs. Moreover, the deceased may have been seated in the cross-legged “tailor position” shared by the principal occupants of many of those burials. The ceramic inventory consists of four bowls, a “napkin ring,” and a possible censer (Cheek 1977a:175–177). Brief descriptions of the vessels suggest that they belong to the Esperanza complex.

Unlike its predecessor, the Stage E3 structure was built in the *talud-tablero*

style. It consisted of an enclosure, accessible in later substages by a southern stair, a small platform or step that Cheek (1977a:51) calls an atrium, and a large platform that supported a superstructure (Figure 3.4b). In its earliest substage, the *talud-tablero* on the large platform of the Stage E3 structure did not pass completely around the building. Instead, the north façade (rear of the platform) and the northern half of the sides were built in two terraces, the lower of which resembled a bench (Cheek 1977a:53). This partial *talud-tablero* is stylistically similar to some examples at Tikal (see Chapter 7). In the following substage, a partial *talud-tablero* was added to the enclosure. An archaeomagnetic date of A.D. 525–545 was determined for a sample taken from the third version of the atrium (Wolfman 1990:Table 15.1, Sample 474). The fourth version of the Stage E3 structure was coated with *pumidrín*, suggesting that it was built after the last versions of Mounds A and B and near the end of the sequence of *talud-tablero*-style architecture.

Burial 3, which was roughly contemporary with Burial 2 and the construction of the first version of the Stage E3 structure, was found within the fill of E3. Its contents are quite similar to those of Burial 2 and the tombs of Mounds A and B. Burial 3 contained seven ceramic vessels, two of which are tripod cylinders (Cheek 1977a:Figure 66). Two limonite laminated plaques were found, including one on the lap of the sitting skeleton. A dog was also interred with the deceased.

Wolfman (1990:Table 15.1) and Cheek (1977a:Table 2) mention two other archaeomagnetic dates that are relevant to the chronology of *talud-tablero* architecture in the Lower Plaza. These are A.D. 535–555 (Sample 470) and A.D. 515–530 or A.D. 550–565 (Sample 477). A reference and two brief contextual descriptions suggest that the samples came from the Stage E3 structure (Cheek 1977a:94, Table 2; Wolfman 1990:Table 15.1). These two dates, then, suggest that the Stage E3 structure was used during the sixth century.

Cheek (1977a:76–92) also conducted excavations in Mound C-II-14. The long construction sequence of this mound included several versions that were coated with *pedrín* or *pumidrín*, and at least one version contained a stair with offset balustrades. No *talud-tableros* were found, but Cheek (1977a:84) postulates their existence. A total of eleven archaeomagnetic samples were collected, and all yielded very early dates. Wolfman (1990:275, 301) attributes these erroneous dates to a possible lightning strike. A radiocarbon date of  $1175 \pm 90$  BP (I-6611), which has a one-sigma calibrated range of A.D. 740–945 and a two-sigma range of A.D. 667–1010 (Stuiver and Kra 1986:805–1030), was determined from a sample collected from Mound

C-II-14 (Michels 1973:Table 2). The radiocarbon assay suggests that the feature dates to the Amatlé or Pamplona phase.

Archaeomagnetic Sample 483, which produced a date of A.D. 525–545 or A.D. 550–570, was collected from the floor of a largely unexplored platform in the Upper Plaza (Wolfman 1990:Table 15.1). Two caches near the platform contained a number of cylindrical tripods, suggesting that the platform might date to the Esperanza phase (Cheek 1977a:94–95).

*Mound D-III-13.* Excavations in this large mound were conducted by Heinrich Berlin (1952), Joel S. Canby, and Gustavo Espinoza. In addition to the highly eroded final version (called Structure N), at least three sub-structures (Structures K, L, and M) were revealed. It was first thought that all construction dated to the Esperanza phase, but the ceramics recovered during excavations differed from those of Mounds A and B enough for Berlin (1952:17) to propose a new phase, which he called Aurora. The Aurora complex lacks the central Mexican-style vessels of the Esperanza phase. Because locally produced stuccoed tetrapod vessels and flanged tetrapod bowls were found in Mound D-III-13, but were limited to the earliest contexts from Mounds A and B, the Aurora phase was proposed as an Early Classic precursor to the Esperanza phase.

The Mound D-III-13 excavations are relevant for two reasons. First, Structure N, the last version of the platform, may date to the transition between local and central Mexican-inspired architectural styles. Structure N had a stair built of pumice blocks that may have been flanked by a balustrade (Berlin 1952:9), two features that Cheek (1977a:131–132) ascribes to central Mexican influence. Second, since earlier versions of Mound D-III-13 were older than Mounds A and B, four radiocarbon dates from the excavations may be used to define a lower limit for both the Esperanza complex and the appearance of *talud-tablero* architecture at Kaminaljuyu.

The four radiocarbon dates determined from the Mound D-III-13 excavations are  $1560 \pm 70$  (Y-629),  $1660 \pm 60$  (Y-405),  $1785 \pm 60$  (Y-378), and  $1860 \pm 60$  (Y-396) (Michels 1973:Table 3). The one-sigma ranges for the calibrated dates are A.D. 422–568 (Y-629), A.D. 285–450 (Y-405), A.D. 153–320 (Y-378), and A.D. 84–220 (Y-396) (Stuiver and Kra 1986:805–1030). If these dates all represent the Aurora phase, we may combine them in order to find an interval that probably lies within the phase. The one-sigma range for a combined calibrated date is A.D. 260–352, and the two-sigma range is A.D. 233–390. These fit rather well within the span proposed by Popenoe de Hatch (1997) for the Aurora phase (Figure 1.2).

The contexts from which the carbon samples originated are somewhat problematic. Y-629 and Y-378 were associated with Burial 1, which was in front of, rather than below, Structures K, L, and M. This suggests that it dated to a late period in the architectural sequence. A plaza floor and first step of a stair were discovered over Burial 1 (Berlin 1952:figura 1). It appears that these features pertained to a version of Mound D-III-13 built after Structure M and possibly should be associated with Structure N.<sup>6</sup> The earlier of the two dates associated with Burial 1 came from the interment itself, and the later date was determined from a sample recovered from below the burial (see Michels 1973:Table 3). The two dates do not overlap in their one-sigma ranges, but do in their two-sigma ranges (A.D. 326–385). Perhaps old charcoal was introduced into Burial 1.

The samples that yielded dates Y-405 and Y-396 were associated with various versions of Mound D-III-13. Sample Y-405 predates Structure K, and Sample Y-396 came from a posthole that was more recent than Structure M but earlier than Structure N (Michels 1973:Table 3). As with the other two dates, there is an apparent stratigraphic reversal. Y-396 and Y-405 do not overlap in their one-sigma range, but do in their two-sigma ranges (A.D. 240–315). One explanation for the apparent reversal is that Sample Y-396 could have come from an old post that was reused in a later structure.

Y-405, the later of the two dates from the core of Mound D-III-13, suggests at the 84.1 percent confidence level that the Aurora phase continued until at least A.D. 285. The sample that yielded this date came from a post within the fill of a “structure below Structure K” (Michels 1973:Table 3). That is, this unnamed structure; Structures K, L, and M; at least two major construction stages after M (represented by Floors 3, 3a, 4, and the three predecessors to Floor 4); and Structure N all were probably built after A.D. 285 (see Berlin 1952:figura 1). It does not seem likely that this long construction and occupation sequence could represent a period of less than fifty years. In sum, the Aurora phase probably continued well into the fourth century.

*Other relevant excavations.* Several additional projects exposed *talud-tablero* architecture or recovered ceramics belonging to the Esperanza complex. These include Smith’s and Stephan de Borhegyi’s brief explorations of the Mound C-II-7 ballcourt (Borhegyi 1965), Espinoza’s excavation of an exposed area south of the Palangana, Ismael Tercero and Vivian Browman Morales’ exploration of Mound F-VI-3, and Smith’s (Shook and Smith 1942) investigation of an unnamed structure east of Mound B. Detailed descriptions of these excavations have not been published.



### Dating *Talud-Tablero* Architecture and Central Mexican-style Ceramics at Kaminaljuyu

The previous section summarizes all that is known about the distribution of Esperanza pottery and *talud-tablero* architecture at the site. What is perhaps most notable is that no project conducted during the past thirty years has recovered more than a handful of central Mexican-style sherds or exposed additional examples of *talud-tablero* architecture. The reason seems to be that their distribution at Kaminaljuyu is quite limited, appearing in only the Acropolis-Palangana complex and the Mounds A and B area of the former Finca Esperanza. Locally produced Esperanza ceramics also seem to have a limited distribution. Compared to the Late Preclassic and Late Classic periods of florescence at Kaminaljuyu, the late Early Classic was one of diminished activity. I have placed special emphasis on the few chronometric dates that allow us to fix the occurrence of central Mexican-style ceramics and architecture in time, and I summarize the data in this section. Of course, any or even all of the dates may be in error. Moreover, there are always problems when different kinds of chronometric dates—in this case, radiocarbon assays and archaeomagnetic measurements—are combined.

To begin with, it is important not to equate the appearance of *talud-tablero* architecture with either the Esperanza phase or the period when central Mexican-style pottery was used at Kaminaljuyu. Central Mexican-style ceramics, which in part define the Esperanza complex, are found in tombs that predate the first appearance of *talud-tablero* architecture. Moreover, the Esperanza complex contains both central Mexican-style funerary vessels and locally produced ceramics derived from the older Aurora complex. It is possible that the presence of central Mexican-style vessels may be limited to a temporal facet within a longer Esperanza phase.

We have few dates that allow us to fix a lower bound for either the beginning of the Esperanza phase or the first appearance of central Mexican ceramics at Kaminaljuyu. The four radiocarbon dates from Mound D-III-13 suggest that much or all of the fourth century should be subsumed within the Early Classic Aurora phase. Only one radiocarbon date (Y-629, calibrated to A.D. 422–568) from excavations at Mound D-III-13 suggests that the Aurora phase might last until sometime later than A.D. 400, but the stratigraphic relationship of the sample with the mound is not clear. Moreover, Cheek (1977a:131–132) proposes that the last construction phase of Mound D-III-13, with which the burial may be associated, might date not only to the Esperanza phase but also to a period when certain features of the *talud-*

*tablero* style were used at Kaminaljuyu. In sum, the dates from Mound D-III-13 make it unlikely that either the Esperanza phase or the consumption of central Mexican-style ceramics began earlier than the middle of the fourth century.

An upper bound for the beginning of the Esperanza phase and the appearance of foreign-style pottery may be extrapolated from archaeomagnetic and radiocarbon dates from the Acropolis and the Palangana. An archaeomagnetic date (Sample 772) suggests that Structure A of the Acropolis was constructed before A.D. 520. Structure A is stylistically similar to, and hence roughly contemporary with or later than, the last two versions of Mounds A and B. If we assign at least fifty years for the construction and use of the first six versions of Mound A and the first three of Mound B—which were built in two earlier architectural styles—we may reasonably date the beginning of the Mounds A and B sequence to before A.D. 470. Since both foreign-style and locally produced Esperanza ceramics were found in the earliest tombs of Mounds A and B, a reasonable upper bound for the beginning of the Esperanza phase is the middle of the fifth century.

The end of the Esperanza phase is not clearly defined either. A radiocarbon date (I-6608) from Tomb 1 and as many as three archaeomagnetic dates (Samples 470, 474, and 477) from the Palangana sequence “sandwich” Burials 1–3 within the century A.D. 444–545. Burial 3 contains both foreign- and local-style Esperanza-phase ceramics, and both Burials 2 and 3 are similar in many respects to the tombs of Mounds A and B. It is reasonable to propose, therefore, that central Mexican-style and local Esperanza pottery continued to be used until at least the end of the fifth century. Wolfman (1990:Table 15.1) determined five archaeomagnetic dates (Samples 469, 479, 583, 586, and 775) from contexts that are said to date to the Amatlé phase. One of these, Sample 775 (A.D. 595–615) comes from Structure L of the Acropolis, constructed in a post-*talud-tablero* style. Since ceramics from the Acropolis were not studied in detail, the assignment of Structure L to the Amatlé phase seems to be based entirely on the assumption that the end of *talud-tablero*-style architecture at Kaminaljuyu coincided with the end of the Esperanza ceramic phase. The least upper bound of the other four archaeomagnetic dates is A.D. 735. Five radiocarbon dates (I-6611, -6743, -6270, -6246, and -6251) determined by the Pennsylvania State University Project pertain to the Amatlé phase (Michels 1973:Table 2). The earliest of these is 1430 ± 90 (I-6251), which has a one-sigma calibrated range of A.D. 503–672 (Stuiver and Kra 1986:805–1030). The sample was collected from the excavated superstructure of Mound B-V-11 (Webster 1973).<sup>7</sup> Recent excavations

indicate that the ceramics associated with the end of the Mound B-V-II sequence date to the Late Classic Amatlé phase (Martínez et al. 1996). Thus, we can be reasonably confident that both the Esperanza phase and the use of foreign-style mortuary ceramics ended no later than the middle of the seventh century, and perhaps one hundred or more years before that date. In sum, the Esperanza ceramic phase appears to have begun during the late fourth century or early fifth century, and certainly was over by the middle of the seventh century. The use of central Mexican-style ceramics might have been limited to a facet within the phase, but both the earliest (Tombs A-I and A-II) and the latest (Tombs B-IV, -V, and -VI, and perhaps Burials 2 and 3 of the Palangana) contexts from which Esperanza-phase ceramics have been recovered contained both foreign-style and local wares.

The earliest examples of Kaminaljuyu architecture containing elements of the *talud-tablero* style are Structures A-4, A-5, A-6, B-2, and B-3 of Mounds A and B. These were *talud*-and-cornice structures that were not coated with *pedrín*. They were not directly dated, but must be older than the *pedrín*- and *pumidrín*-covered structures containing *tableros* that were excavated in the Acropolis and Palangana. The least upper bound for the construction of this second group of structures is A.D. 520. Since we must allow a certain amount of time for the A-4 to A-6 sequence, it appears quite likely that the earliest of these was constructed before A.D. 500. But these structures could be a century or more older without breaking the lower limit set for the Esperanza phase.

We are on somewhat firmer footing when dating the end of the *talud-tablero* style at Kaminaljuyu. It seems likely that Structure D, a *pedrín*-covered structure with a stair and balustrade, was occupied at least until A.D. 585 (archaeomagnetic Sample 585). Structure L, a post-*talud-tablero*-style structure, appears to have been built no later than A.D. 615 (archaeomagnetic Sample 775). Thus it seems quite likely that the earliest manifestations of the *talud-tablero* style at Kaminaljuyu date to before A.D. 500 (and perhaps a century or more before that date), and that the style ceased to be used around A.D. 600.

### **Implications of the Dates for Central Mexican-Style Ceramics and Architecture at Kaminaljuyu**

I have discussed the chronology of both the Esperanza phase (c. A.D. 350/450-500/650) and *talud-tablero* architecture (c. A.D. 370/500-600) for several reasons. First, the earliest indications of Classic Maya/central Mexi-

can interaction—found at sites in the Pacific plains of Guatemala (Chapter 2), at Tikal (Moholy-Nagy and Nelson 1990), at a few sites in Belize such as Altun Ha (Chapter 9) and Nohmul (Hammond et al. 1985:193; Hammond, Donaghey et al. 1987:280; Hammond, Rose et al. 1987:106), and perhaps also at Becan (e.g., Ball 1979:271–272)—date to a time well before the inception of the Esperanza phase and the first appearance of *talud-tablero* architecture at Kaminaljuyu. Although Pacific Guatemala and the eastern Maya lowlands attracted the attention of Teotihuacan during the Miccaotli or Early Tlamimilolpa phases, Kaminaljuyu did not participate in this “Early Pulse” of central Mexican–Maya interaction. This may seem surprising given the proximity of Kaminaljuyu to the Pacific piedmont and the location of the site at the upper end of a major communication route connecting the south coast to the central Maya highlands. But the century surrounding the Terminal Preclassic to Early Classic transition at Kaminaljuyu was a period of great disruption: population levels dropped, construction decreased, literacy and a carved-stone sculptural tradition disappeared,<sup>8</sup> one ceramic tradition was replaced by another, and lithic technology changed (e.g., Braswell and Amador 1999; Popenoe de Hatch 1997, 1998). Given these upheavals, which probably represent the near abandonment of the site by its Preclassic inhabitants and an influx of new settlers from the western Guatemalan highlands, it is not surprising that connections with the Pacific Coast, and hence indirectly with central Mexico, were quite weak during the period A.D. 150–250.

The beginning of the Esperanza phase, and probably also the first appearance of *talud-tablero* architecture at Kaminaljuyu, is contemporary with the Early Xolalpan phase of Teotihuacan. Nonetheless, several different “Late Pulse” assignments for the period of intense central Mexican–Kaminaljuyu interaction are consistent with the available evidence. Chronological data for Kaminaljuyu are sufficiently blurry that we can rule out neither Cheek’s (1977b:443) late model nor the early models of Clemency C. Coggins (1979:259) and René Millon (1988:122). There has been much discussion regarding the transmission of central Mexican traits to the Maya highlands and lowlands, and whether or not Kaminaljuyu was responsible for introducing central Mexican–style iconography and pottery to Tikal. Specifically, it has been suggested that Yaax Nu’n Ahyiin (“Curl Nose”), who became king of Tikal in A.D. 379, was a foreigner from Kaminaljuyu (Coggins 1979). Evidence for interaction between central Mexico and Tikal that can be dated to his reign include Stela 4 (erected in A.D. 379) and the materials in Burial 10, which is thought to be his tomb.<sup>9</sup> Many of the Manik 3A problematical deposits discussed by María Josefa Iglesias Ponce de León (Chapter 6) also

date to either the reign of Yaax Nu'n Ahyiin or to that of his son. Coggins' (1979) hypothesis has been questioned on the grounds that central Mexican-style pottery appeared for the first time at Kaminaljuyu *later* than it did at Tikal. But chronological evidence for the beginning of the Esperanza phase and the earliest foreign-style pottery in Mound A is insufficient for determining if Tombs A-I and A-II precede, are contemporary with, or postdate the life of Yaax Nu'n Ahyiin. These early Esperanza tombs and their central Mexican-style pottery could date to either the late fourth century or to the early fifth century. Thus, we do not know if central Mexican-style ceramics appeared first at Tikal or earlier at Kaminaljuyu.

Tikal Burial 48 (Coe 1990, 1:118-123; Shook and Kidder II 1961), which was dedicated and sealed in A.D. 457/458,<sup>10</sup> is thought to be the tomb of Siyaj Chan K'awiil ("Stormy Sky"; Coggins 1975:193-201). In several respects, most notably the bundled and seated position of Skeleton A, Burial 48 more closely resembles the later tombs in the Mounds A and B sequence than it does the earlier tombs. In contrast, Tikal Burial 10 shares more similarities with the earliest tombs in Mounds A and B than it does with the later burials. Tombs A-I and A-II, therefore, might date to a time close to—but before, during, or after—A.D. 420. Moreover, it may be that the later tombs in the Mounds A and B sequence span the mid-fifth century.

Similarly, it is not clear if the first appearance of central Mexican ceramics at Copán precedes or postdates the beginning of the Esperanza phase. The earliest dated examples of central Mexican ceramics at Copán are from the Hunal tomb, thought to be the burial of the dynastic founder K'inich Yaax K'uk' Mo', who died in A.D. 437 (Chapter 5). This is close to the upper limit for the beginning of the Esperanza phase, but well within it. The fact that the individual in the Hunal tomb was buried in an extended position may be taken as weak corroboratory evidence that Tombs A-I and A-II of Kaminaljuyu are roughly contemporary. Thus, although we have ample evidence for interaction between Kaminaljuyu, Tikal, and Copán during the late Early Classic, temporal data do not allow us to propose any one of these sites as the point of origin from which central Mexican-style pottery spread throughout the Maya region.

The pattern of the end of the use of central Mexican-style mortuary ceramics is clearer. The end of the Manik 3A phase of Tikal, to which most foreign-style vessels are assigned, was approximately A.D. 480. In fact, only one of the vessels from Tikal Burial 48 is of a foreign style (see Chapter 6). The end of the practice of using central Mexican-style vessels at Copán is roughly contemporary with Tikal Burial 48. The last known central Mexi-

can imports and copies at Copán come from the Margarita tomb, dated to c. A.D. 445–460 (Chapter 5).<sup>11</sup> In contrast, it seems likely that the Esperanza phase continued until at least A.D. 500, and perhaps until the early seventh century.

It is clear that *talud-tablero* architecture appeared at an earlier date at Tikal than at either Kaminaljuyu or Copán (see Chapter 7). But Hunal—the only *talud-tablero*-style structure discovered so far at Early Classic Copán—was built, used, and abandoned between A.D. 427 and 437, a time that could have been before or after the first appearance of the style at Kaminaljuyu. At Copán, the end of the *talud-tablero* style, or more properly its Early Classic manifestation, dates to the death of K'inich Yaax K'uk' Mo'. In contrast, *talud-tablero* structures were built and used in Tikal throughout the fifth century. The last expressions of the full *talud-tablero* form at Tikal are three platforms dating to the second half of the sixth century (see Chapter 7). These are roughly contemporary with the last *talud-tablero* structures of the Acropolis of Kaminaljuyu.

The chronological placement of central Mexican-style ceramics and architecture at Kaminaljuyu is relevant to the timing of important events at Teotihuacan. At that site, there is little evidence for the local production of cylindrical tripods before A.D. 300 or after A.D. 600 (Chapter 12). All of the central Mexican-style vessels found at Kaminaljuyu date to a period after A.D. 300,<sup>12</sup> but a date later than A.D. 600 cannot be completely ruled out for the sixteen cylindrical tripods found in Tombs B-IV, -V, and -VI. It is not known if these vessels were imported or locally produced, but the shape and decoration of most do not suggest a central Mexican origin (Foiás 1987). The oldest examples of the *talud-tablero* architectural style at Kaminaljuyu almost certainly date to a time after the middle of the fourth century, long after the style first appeared at Teotihuacan. In particular, Mounds A and B, which are similar in some respects to the Feathered Serpent Pyramid, clearly date to a time after that structure was built. These three structures are discussed in detail in the next chapter.

Most interestingly, strong manifestations of foreign stylistic influence at Kaminaljuyu seem to date to about A.D. 500, a time later than central Mexican-style ceramics appear at either Tikal or Copán, but roughly contemporaneous with the first use of tripod cylinders and the *tablero* form in the northern Maya lowlands (Chapter 10). Although there still is considerable discussion concerning the chronology of Classic-period Teotihuacan, the early sixth century appears to be rather late in its history, falling at the end of the Late Xolalpan phase or early in Metepec times. A signifi-

cant number of radiocarbon dates suggest that the Epiclassic Oxtoticpac (early Coyotlatelco) phase dates to the seventh century (Figure 1.2), and that the burning of the civic-ceremonial epicenter of Teotihuacan probably occurred c. A.D. 600–650 (Cowgill 1997). It is quite conceivable, therefore, that Kaminaljuyu and Teotihuacan continued to interact until the beginning of Metepec times or even until the collapse of the Teotihuacan state and the burning of the city.

Wolfman (1990:295–301) collected eight archaeomagnetic samples from features fired by the burning of civic-ceremonial structures in central Teotihuacan. Because of a crossover point in the polar curve, these dates could cluster at either approximately A.D. 270–330 or A.D. 450–505. The first range is far too early for the event, but the later range—though early—is somewhat more probable. Still, it does not seem to be consistent with the chronometric data, including other archaeomagnetic dates, from Kaminaljuyu. If future chronological investigations at Teotihuacan support Wolfman's early burning hypothesis, either new dates for the Esperanza phase or a different central Mexican partner will need to be proposed for Kaminaljuyu.

### Notes

1. It is more accurate to state that the Carnegie excavations at Kaminaljuyu solved several temporal enigmas. By tying central Mexican–ceramic chronologies to that of Kaminaljuyu, which in turn could be linked to the sequences of lowland Maya sites containing hieroglyphic monuments, Kidder et al. (1946) provided the first reliable calendar dates—albeit subject to the correlation controversy—for Teotihuacan. It should be remembered that not long before, Teotihuacan was generally believed to be either the ethnohistorical Tollan or some other important Toltec city (Krickeberg 1937; Vaillant 1935, 1938). Given that the central Mexican–style vessels from Kaminaljuyu were most similar to Teotihuacan ceramics dating to long after the construction of the Pyramids of the Sun and the Moon, Kidder et al. (1946:252) proposed that those two massive structures were built during the Formative period. As they noted, this was a somewhat startling idea. In a rather casual comment, they corrected both Pedro Armillas (1944:132) and Sigvald Linné (1942), who suggested that the Xolalpan complex was older than the Tlamimilolpa complex. Finally, Kidder et al. (1946:254) were the first to propose Xolalpan as a phase name for Teotihuacan.

2. Popenoe de Hatch (1997) uses the ware system rather than the familiar type:variety-mode system. The former is a nonhierarchical approach to ceramic analysis, while the analytical language of the latter contains terms for larger units of integration. It should be stressed that the two systems of analysis use the term *ware* in very different ways.

3. Another eleven samples, all from Mound C-II-14, yielded unsatisfactory dates (Wolfman 1990).

4. Mound D-III-1 contains at least six superimposed versions that appear to span the Late Preclassic to Late Classic periods (Shibata 1994a). Substructure 1, known as

the Edificio Chay, is an earthen structure with a stepped balustrade consisting of three staggered *tablero*-like elements (see Rivera and Schávelzon 1984). These are framed by moldings on all sides but the bottom, and hence, resemble Cheek's (1977a:41, Figure 13) reconstruction of the *tablero* superstructure on the Palangana Stage E1 platform. The dating of Mound D-III-1 Substructure 1 is somewhat uncertain. Earthen masks on the façades of both Substructures 1 and 2 suggest an Early Classic date, but Shibata (1994a:420) argues that both were constructed during the Late Classic period.

5. An archaeomagnetic date indicates an episode of intense heating associated with either the use or abandonment (often because of fire) of an earthen feature. The earlier of the two burning episodes on Structure L probably was no later than A.D. 615; hence, Structure L was probably built before that date.

6. Alternatively, the floor and step may have formed part of an altar, apron, or projecting platform in front of any of the structures in the Mound D-III-13 sequence.

7. An archaeomagnetic date of A.D. 670–695 or A.D. 880–900 was determined for the burning of the superstructure (Wolfman 1990:Table 15.1). The older range is in general accord with the radiocarbon date.

8. Fahsen (2000) recently has identified central Mexican weaponry in a monument fragment. For this reason, he assigns it to the Esperanza phase. There are no other stone monuments at Kaminaljuyu that have been dated to the Early Classic period (see Parsons 1986).

9. Burial 10 is the only context at Tikal containing central Mexican-style ceramics that can be assigned securely to the reign of Yaax Nu'n Ahiyin. A text at a vassal site suggests that the Tikal ruler died in A.D. 420, which is rather late in the range of possible dates for the beginning of the Esperanza phase.

10. Stela 40 records 9.1.0.8.15 12 Men 8 Pax as the death of Siyaj Chan K'awiil, but notes that his tomb was sealed on 9.1.2.17.17 4 Kab'an 15 Xul (Valdés et al. 1997:45). A date inscribed on the wall of the tomb is 9.1.1.10.10, which falls between the dates on Stela 40. Thus, it seems probable that Siyaj Chan K'awiil died in A.D. 456, that his tomb was dedicated in A.D. 457, and that it was sealed in A.D. 458.

11. The tomb of Copán Ruler 2, which should date to A.D. 472, has not been located. It could contain central Mexican-style pottery, but given K'inich Popol Hol's propensity to de-emphasize his father's foreign connections, this seems unlikely (see Chapter 5). The cylindrical tripod form continues at Copán into Late Acbi times, but appears on types belonging to a southeastern Maya tradition (Cassandra Bill, personal communication 2000).

12. A few Late or Terminal Preclassic tripods have been found at Kaminaljuyu, which raises the possibility that the general form was known well before A.D. 300 (see Foias 1987). If these early vessels reflect foreign influence, it cannot be from Teotihuacan.