

## The Materialization of Time in the Maya Archaeological Record

Examples from Caracol and Santa Rita Corozal, Belize

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The importance of time, particularly cyclical time, among the ancient Maya has long been known and studied. This focus is readily apparent in Maya hieroglyphic writing as well as in ethnographic and ethnohistoric descriptions of the Maya. The ancient Maya also materialized time in the form of their ritual offerings. These religious deposits were representative of ancient belief systems, and while they were structured by past Maya perceptions of the world, they also served to embody that worldview in the archaeological record. Where some see offerings as predominantly dedicatory to construction of houses and burials as activities and offerings primarily that coincided with the death of individuals, we would argue that these offerings must be contextualized in Maya beliefs about their cosmos and that they are materializations of time itself; they represent ancient Maya attempts to codify beliefs about time and destiny as well as to reset the counting and prognostications of time in their favor.

We posit that the archaeological records of both Santa Rita Corozal and Caracol, Belize can be analyzed to see the importance of these temporal juxtapositions. Most likely because both centers were the ritual and political seats of broader polities, the nature and quantity of archaeologically recovered deposits from these two sites permit these interpretations to be made. In both cases, history and archaeology can be conjoined. At Santa Rita Corozal, Postclassic period ritual deposits can be compared with ethnohistoric texts. We have previously shown that Postclassic period caches were deposited in accord with annual Uayeb ceremonies, probably as part of broader temporal

cycles, and that *incensarios* were used to denote sacred space and the passage of 20-year periods of time, or katuns (D. Chase 1985a; D. Chase and A. Chase 1988, 71–75, 2021). At Classic period Caracol, time is materialized in the monumental hieroglyphic record of the site and in the site's burials and caches. It was also materialized far earlier; in Caracol's epicenter in roughly 400-year baktun cycles, ritual caches were used to center the construction of an E Group beginning with the transition to the eighth baktun in 41 CE (A. Chase and D. Chase 1995, 2006). Other ritual events identifiable in the archaeological record in this E Group presumably coincided with the transitions to the ninth and tenth baktuns (A. Chase and D. Chase 2017a). The site's central monuments, particularly its Giant Ahau altars (Satterthwaite 1954; Beetz and Satterthwaite 1981), kept a record of the passage of katuns throughout the Late Classic period. But the ritual celebration of time was not restricted to Caracol's epicenter.

Archaeology in Caracol's residential groups has revealed that the general population also engaged in rituals focused on cyclical time. Plentiful ceramics that accompany household interments can be dated to show that burials were cyclically placed in residential groups, each seemingly coinciding with the passage of two katuns (D. Chase and A. Chase 2004, 2011). Similarly, the widespread caching practices found in Caracol's residential groups appear to be tied to the passage of katuns (A. Chase and D. Chase 2013a). Analysis of the archaeological contexts demonstrates that these widespread ritual offerings represent the materialization of an ancient Maya worldview concerned with cyclical time.

## Background

The archaeological concern with time has most often focused on creating chronology and documenting changes in material remains. Without a chronology that is fixed in calendric time and dating, archaeological interpretation is difficult if not impossible. Thus, from a methodological perspective archaeologists segment time into a linear form in order to gain a framework for describing and interpreting patterns in the archaeological record. Our resources for segmenting and ordering time range from methods borrowed from geology, such as those that outline the process of stratigraphy and the formation of strata (Schiffer 1987; Harris 1989), to mechanisms for seriating, ordering, and associating the material remains found in the archaeological strata, such as those based in elements of style and technology (Rowe 1961; O'Brien and Lyman 1999), to ever-refined scientific methods of using proxy elements to establish calendric time, such as radiocarbon dating and Bayesian

statistics (Ramsey 2009; Bayliss 2015). Time has also been categorized as appearing in at least three different guises that are important for analytical purposes: lengthy segments of time that may last hundreds of years, segments of time that structure shorter periods of history, and time associated with events and the actions of individuals (e.g., Braudel 1980; Bintliff 1991; Bradley 1991). Bradley (1991, 212) argues that these three time scales (which he refers to as geographical, social, and individual time) “cut across the fundamental division between ritual and mundane” and are useful for investigating fundamental societal change. While these approaches to time have potential for interpretations in the field of Mesoamerican archaeology (e.g., Smith 1992; Iannone 2002; Rice 2009b), they have not yet been fully applied.

Also recognized in the historical records are two very different ways of thinking about time. For most western societies, time and history are linear and events are not expected to repeat. Events are pegged to certain dates, and while incidents may be linked, repetition is not expected. However, for the Maya, time was embedded in a series of different cycles and actions that could be expected to replicate themselves. Thus, time could be used for prognostication. Recognizing the Maya expectation of periodicity and reoccurrences of experiences and history, archaeologists working in the Maya area have attempted to link some specifically dated cycles to particular events that have been recognized in the archaeological record, such as the correlation of Katun 8 Ahau with knowledge of the impending Maya collapse (Puleston 1979; A. Chase 1991; Haviland 1992). Other researchers have even postulated that political organization in the Maya lowlands was, in fact, based on these broader temporal cycles (e.g., Rice 2004).

While Mayanists are blessed with a historic record of time that is found in hieroglyphic form on stone monuments, buildings, and smaller artifactual materials, the absolute articulation of this record of temporal events with archaeological remains has still been difficult. However, in some cases, the tombs of individual rulers who are portrayed on the monuments and are linked to specific dated events have been archaeologically identified, as at Palenque (K'inich Janaab' Pakal: Ruz Lhuillier and Mason 1953; Tiesler and Cucina 2006b), Tikal (Jasaw Chan K'awiil: Coe 1990, 851), Copán (K'inich Yax K'uk Mo': Bell et al. 2004), Pusilhá (K'ak' U ? K'awiil: Somerville et al. 2018), and Caracol (Yajaw Te' and K'an II, interred at Tikal [Burials 195 and 123]: D. Chase and A. Chase 2017, 219; A. Chase and D. Chase 2020a; A. Chase et al. 2022). The identification that Caracol (Belize) rulers were interred in the sacred center of Tikal (Guatemala) can be construed as a prime example of the stranger-king concept (A. Chase and D. Chase 2020a, 23; see also Graeber and Sahlin 2017, 5, 124, 148) in which a “foreign” ruler was accepted by local

subjects and provided stability. These rulers had the ability to change that society because their cosmic power derived from other places. That the need for such stability was necessary at Tikal can be inferred from the timing of monument destruction at that city (Moholy-Nagy 2016, fig. 5). The existence of stranger-kings has also been noted in the Classic period archaeological record for the northern Maya lowlands (Ringle et al. 2021). While we do not have that many firm concordances between the archaeological and hieroglyphic records, epigraphers have amassed a wide range of temporal data about the individuals recorded in the monumental record and have detailed an interactive dynastic history for various sites through the Maya lowlands (Schele and Freidel 1990; Grube 1994a; Martin 2020; Martin and Grube 2000).

Yet mostly absent from archaeological discourses on time, be they theoretical or chronological, are discussions of the physical embedding of ritual time in the archaeological record (see chapter 5, this volume, for a discussion of embedding ritual time in Yucatán). Bradley (1991), for example, analyzed ritual time in terms of the linear history of Stonehenge, England, relating the development of that monument to the long-term changes that occurred in the society that used it. However, for the Maya area we find evidence for the continuous materialization of time itself in the archaeological record. Events in cyclical time repeated and thus could be predicted; because time was dynamic and animate (Stuart 2011), individuals could interact and endeavor to intervene with time to negotiate changed outcomes. It was possible to use ritual to attempt to augment positive outcomes and expectations as well as to alter or mitigate negative ones. Thus, time could be physically embedded in both daily life and in the archaeological record of the ancient Maya in an omnipresent and interactional way that is not typically characteristic of western cultures. Far more than modern “time capsules,” which are intended to be viewed in the future but not actually interact with or impact future events, Maya offerings were intentional, prescribed negotiations with time and the course of history. The Maya used time and temporal ritual to structure their sociopolitical relationships and, in their worldview, to interact with time and impact the future. Thus, a Maya offering, such as a cache vessel, could contain the remnants of a ritual that was meant both to commemorate the present and negotiate the future. As will be shown below, this can be demonstrated in the archaeological records from a wide variety of Maya sites. The Maya embedded time in various building complexes—in E Groups, twin-pyramid groups, and other public architecture and in residential groups—both through the use of monuments, symbols, and iconography and through the physical deposition of caches, burials, and *incensarios*. This embedding of time and cosmos in their archaeological remains extended from at least the

Late Preclassic through the Late Postclassic and constitutes a hallmark of ancient Maya civilization.

### **How Do We Know That the Maya Memorialized Time in the Archaeological Record?**

There are two basic starting points for documenting that the Maya memorialized time in the archaeological record: the stelae and altars of the Classic period that denote fixed periods of time, and historic references to the Maya worship of ritual time for divination when the Spaniards arrived in the Yucatán (e.g., Landa; Tozzer 1941, 168). But the Maya did not actually “worship” time, as was once claimed in the popular literature (see Becker 1979 for a summary). Rather, they contracted and negotiated with time. Time to them was animate and could function as an active agent in their lives and their societies (see chapter 7, this volume, and chapter 13, this volume, on rulers as time lords). Because of the archaeological focus on linear time to reconstruct archaeological sequences, it is possible that some of the deeper and far more significant interpretations that relate to the Maya’s ritual use of cyclical time have been missed. We also suspect that the Maya may not be unique and that the bonds that they attempted to establish with time may have been present in other nonwestern cultures but that these patterns are more noticeable among the ancient Maya precisely because of their focus on materializing the cyclical nature of time.

While both the Classic Maya stone monuments and their historic-era writings record periods of twenty years of time (katuns), a variety of other cycles were also counted, both longer and shorter. Simply referring to Maya time as cyclical does not capture the multitude of intersections and permutations of cycles that were followed. There were lunar cycles, yearly cycles, 819-day cycles, Uayeb cycles, katun cycles, baktun cycles, and the use of time to count into the past and into the future (Kubler 1974). Some constructions were built and modified in accord with temporal cycles. Complete architectural complexes, known as twin-pyramid groups, each built to commemorate a specific katun and temporal rituals associated with that katun, were constructed at Tikal, Guatemala for a span of approximately 150 years ( $n = 8$  Late Classic complexes).

At Caracol, time also was clearly important to the site’s ancient inhabitants. Its Late Classic period stone altars ( $n = 14$ ) were predominantly carved to represent Giant Ahau day signs that were representative of katuns. Through the use of the archaeological record and radiocarbon dating, it has been possible to demonstrate that Caracol’s E Group, the earliest public and ritual architecture for the site, was constructed and modified in accord with a 400-year

baktun cycle (A. Chase and D. Chase 2006). Evidence of temporal ritual is also evident in the site's residential groups in the form of caching and burial practices that accorded with katun cycles (D. Chase and A. Chase 2011, 2017; A. Chase and D. Chase 2013a). It is likely that other Maya sites also employed temporal ritual as an integrative mechanism.

### **Structuring Time: Classic Period Stone Monuments**

Researchers have long recognized that Classic period stone monuments were erected as markers of time (Morley 1917; Proskouriakoff 1950). The stelae and altars of the Maya area record a series of expansive dating cycles that combine ritual time with mundane time. Long Count dates on these monuments are situated with cyclical time focused on baktuns (400-year periods of time) and katuns that are linked to the lunar cycle and the Nine Lords of the Night. The Long Count also is linked to a Calendar Round date (a 52-year cycle) that focuses on the vague year (365 days) and the 260-day sacred almanac cycle that in turn is linked to mundane time that corresponds to events (birth, accession, war) in an individual's life. The patterning of dates on these monuments all show a focus on the 20-year katun cycle. This cycle is actually spread over 260 years. While each katun is twenty years long, in the Postclassic era the katuns are denoted by the Ajaw day on which they start, which could only be numbered from 1 to 13, thus giving parameters to a 260-year cycle and constituting what is called the Short Count (see A. Chase 1986, 101–102).

Prudence Rice (2004) has suggested that the Maya world manifested a region-wide political organization that was organized according to katun cycles. While we do not fully agree with her premise, we do believe that ancient Maya rulers were conditioned by their relationship with time and their preordained temporal cycles. The individuals that are iconographically portrayed on their carved stone monuments are literally embedded in time and carried out rituals both associated with and mandated by the specific katuns (in many cases conducting rites on half and quarterly segments of katuns as well). Thus, the stone monuments provide a temporal frame for contextualizing rulers and are themselves imbued with ritual power (Houston and Stuart 1996; Houston et al. 2006; D. Chase and A. Chase 2009, 232; chapter 7, this volume). This may explain why many of these stone monuments were ritually destroyed in later political actions (for examples of the ritual destruction of monuments, see Satterthwaite 1958 and Harrison-Buck 2016).

Certain sites were more explicit than others about the katun focus of these stone monuments. At Caracol, Giant Ahau altars (fig. 14.1; see also Beetz and Satterthwaite 1981 and Grube 1994a) record each Late Classic katun in the



Figure 14.1. Giant Ahau Altar 19 at Caracol, representing the 9.10.0.0.0 katun. The altar was later moved and paired with Stela 11 at Caracol. Source: after Beetz and Satterthwaite (1981, fig. 26).

form of its specific day sign (one of thirteen numbered Ahaus), mimicking the system that Landa noted for the Postclassic Yucatán (Tozzer 1941, 167). Fifteen Giant Ahau altars appear at Caracol: fourteen were presumably once paired with stelae (assuming a stela was once present at Chaquistero) and the fifteenth was set to commemorate the tenth baktun on the summit of Caana (Caracol Altar 16). Other Giant Ahau altars are noted from Altar de Sacrificios ( $n = 2$ ), Tikal ( $n = 1$ ), Quirigua ( $n = 1$ ), and from Caballo ( $n = 1$ ). The cartouche containing the Ahau is often in the shape of a quatrefoil, which signifies completion, forms a ritual portal (Freidel 2017, 183), and can be associated with the shell of a turtle (see the south jamb of Temple 18 at Copán; Baudez 1994, 192) and the four corners of the Maya world. Turtles

are important both in the creation of the world and in supporting the Bacabs who held up the sky (e.g., D. Chase and A. Chase 1986, 1988, 2009). Several of the Giant Ahau altars at Caracol also rested on three-stone pedestals, which were further symbolic of the three founders of the site (A. Chase and D. Chase 2012, 2017a; see also Baron 2016b for Maya patron deities) and of the Cosmic Hearth (Taube 1998; chapter 5, this volume; see also Vail and Hernández 2013 for foundation rituals in the Postclassic codices). Thus, the ties between katun ceremonies and Maya creation mythology are fairly explicit.

While many stone monuments commemorated katuns, in the Terminal Classic period some sites erected stone monuments on a quarterly system in the katun cycle. Machaquilá is a good example of this; there, seven successive stelae were erected every hotun (5 years) from 9.19.0.0.0 through 10.0.10.0.0 (Graham 1967). Caracol also appears to have followed the hotun erection cycle in the Terminal Classic, but only in relation to altars (e.g., A. Chase and D. Chase 2015). In this same Terminal Classic era, paired *incensarios* begin to appear in the archaeological record. On a front terrace of Caracol Structure B19, Altar 16, dating to 10.0.0.0.0, was associated with two flanged effigy censers, suggestive of the ethnographical evidence of the use of these artifacts as katun idols in the Postclassic period (D. Chase and A. Chase 1988, 2008).

### **The Materialization of Time and Worldview in the Archaeological Record**

That there was time depth to the Maya materialization of time and the Maya worldview can be seen by looking at two deposits separated by 1,300 years, one dating to approximately 40 CE and the other dating to approximately 1340 CE. One is a cache placed while Caracol Structure A6-1st was being built (fig. 14.2) and the other is a cache placed while Santa Rita Corozal Structure 213 was being constructed (fig. 14.3). Together, these deposits represent continuity in Maya ritual practice while illustrating changes in symbols and society. The Santa Rita Corozal cache is embedded in the broader residential community whereas the Caracol cache is set in a most important public building. Both caches represent the cosmological embodiment of time (e.g., D. Chase and A. Chase 2009, 226–227).

The Caracol cache, S.D. C8B-1, was placed in a specially constructed open-air pit covered by three capstones (A. Chase and D. Chase 1987, 12–13). It was deposited during a pause in laying the fills for Structure A6-1st, the central building for the site's E Group. Once the pit had been dug, various small shells (from both land and sea animals) were arranged at its bottom and then a large lidded ceramic barrel was set over the shells. When we found it in 1985, the



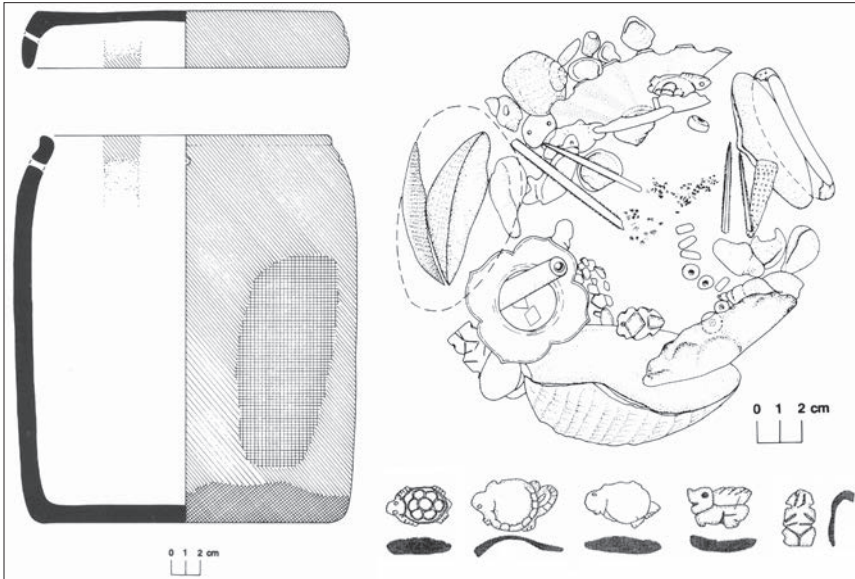


Figure 14.2. Cache (Caracol Special Deposit C8B-1) from the front core of Structure A6 dating to ca. CE 41. The lidded urn (*a*) was set in an open-air pit covered by three capstones. The upper right shows the arrangement of shells and small artifacts above malachite and mirrors (*b*). The lower right shows small shell (*d-g*) and jadeite (*c*) figures from the cache. Source: A. Chase and D. Chase (1987, fig. 8) and A. Chase and D. Chase (2006, fig. 7).

lid was intact, permitting a full understanding of the layering that occurred in the cache. Inside the urn and above the urn's lower contents, a fragile beehive had been placed that still contained some bees or wasps in the comb (see chapter 15, this volume). The beehive had been set above a layer of pine needles, some of which were still present. Although the pine needles may have been used as padding to keep the carefully positioned items in the central bottom from shifting during transport, Vogt (1969, 1976) has pointed to the sacred animating power of pine needles among the modern Tzotzil Maya. Because pine needles do not occur in the immediate vicinity of Caracol, their inclusion in this cache is suggestive of a broader purpose. Beneath the pine needles were seashells and a large jadeite earflare. The stem of upright earflare would have protruded in the center of the cache. Surrounding it were four large seashells set to cardinal directions, each properly color-coded for the appropriate Maya direction (fig. 14.2). These were bedded in a series of other objects: jadeite beads, a jadeite turtle, a jadeite "Charlie Chaplin" figure, a carved-shell fire-serpent, a pearl (possibly from the end of the earflare), four carved circular

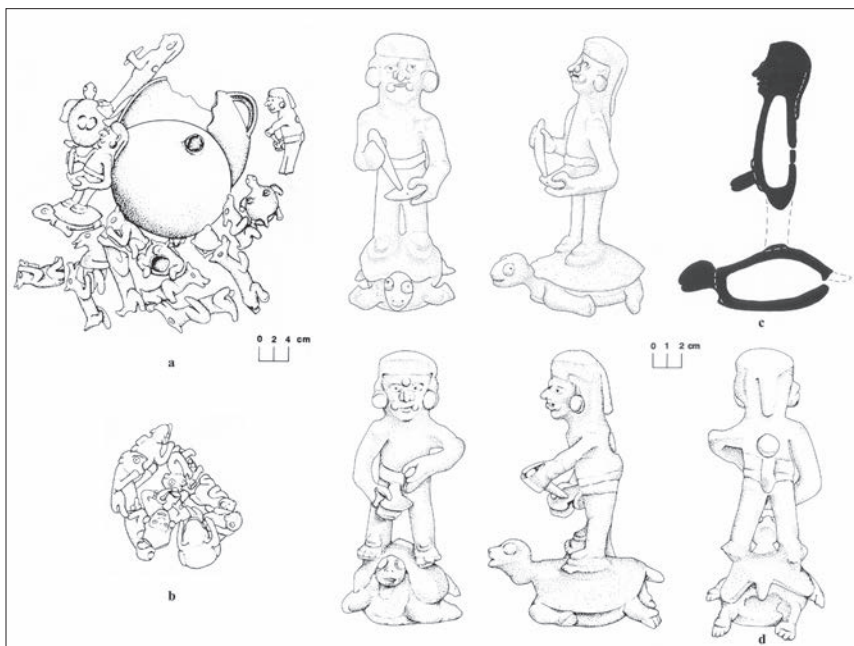


Figure 14.3. Cache (Santa Rita Corozal Special Deposit P26-3) from the core of Structure 213 dating to ca. CE 1340: overall plan of deposit in upper left (a); figures nested within urn lower left (b); two of four bacabs (c and d, each with three views of the object) on the right. Source: After D. Chase and A. Chase (1988, figs. 24 and 25).

shells with central shell inlays, four shell “Charlie Chaplin” figures, two shell turtles, worked shell points, unworked shells, pumpkin seeds, unidentifiable seeds, burnt wood, and small faunal remains. Below these items were stingray spines, stingray vertebrae, sharks’ teeth, seaweed, and coral. Finally, the eroded remains of two pyrite mirrors were at the bottom. These were likely once set on wooden backings that had not survived but that had been set above a layer of malachite pebbles. Elsewhere we have suggested that this cache represented the cosmological centering of Structure A6 and functioned as a portal connecting world levels (D. Chase 1988; D. Chase and A. Chase 1998; see also Houk and Zaro 2011 for caches as ritual engineering). A second cache placed in Structure A6-2nd immediately before Structure A6-1st was built was associated with this centering. This cache (S.D. C8B-3) was placed against the rear wall of the earlier building in a sealed geode and contained a layered deposit consisting of liquid mercury on the bottom, a textile bundle containing a carved jadeite head with other beads set in a pair of *Spondylus* shells in the middle layer, and a complete jadeite earflare with stucco backing and a pearl at

the top (A. Chase and D. Chase 1995, 2017a). Multiple radiocarbon dates for Structure A6-1st (including both caches) indicate that the placement of these two caches and the construction of Structure A6-1st took place at the start of baktun 8.0.0.0.0 in 41 CE (A. Chase and D. Chase 2006), securely placing this cache at the onset of an important temporal cycle.

The Santa Rita Corozal cache, S.D. P26B-2, was placed directly in the core of SRC Structure 213, a northern building in a Postclassic period residential group (see D. Chase and A. Chase 1988, 47–52; see also Badillo 2021 for other information about this structure). The cache consisted of a total of twenty-five modeled pottery figurines set around and in a lidded urn (fig. 14.3). Twelve figurines—four deer, four dogs, and four pisotes—were placed to the south of the urn. Four other bacab figurines were placed on the backs of sea turtles performing penis perforation positioned vertically at the “corners” of the urn. Within the urn were eight figurines—four male monkeys and four female creatures—arranged above a mitered individual seated on the throne blowing on a shell trumpet. His stool or throne was located above a central piece of jadeite flanked directionally by four small shells. As in the earlier cache at Caracol, the Santa Rita Corozal Postclassic period cache represents the materialization of Maya cosmology and the Maya worldview. Because of the figurines, the iconography of the Postclassic cache is easier to understand than the more symbolically charged Preclassic period cache. That it represents a temporal ritual can be inferred from the creation mythology in the cache, from the animals represented in the cache (e.g., D. Chase 1985a, 1985b, 1988; D. Chase and A. Chase 2008), and from the two katun idols that were buried in the front step of the building and that accompanied a Postclassic period burial (D. Chase and A. Chase 1988, 51).

While similarities in caching practices can be identified over a span of 1,300 years, we are not suggesting that Maya ritual remained unchanged for this entire period time. However, we are suggesting that the focus of ritual remained relatively constant; the consistency in structure that is seen in these caches is striking. Both the Preclassic and Postclassic buildings act as ritual containers for display. Time and the ceremony—not the building—were what were important. The caches could have acted as offerings for the buildings. However, we believe the caching and construction activities were themselves materializations of time. Thus, the broader focus is time, cosmology, and negotiation—and not the construction or destruction of a particular building episode. In both cases, the building continued to be used, as is evident at Caracol with the deposition of an Early Classic tomb at the base of Structure A6 and at Santa Rita Corozal with the deposition of two other caches and a burial in front of Structure 213.

Paired *incensarios* were recovered in association with both buildings. The ones at Santa Rita Corozal were likely placed during the katun of the cache (fig. 14.4); the ones at Caracol were placed a baktun earlier, sometime after 10.0.0.0.0 (fig. 14.5). Two paired effigy censers were recovered from the floor of the front room of Caracol Structure A6 in late Terminal Classic contexts. We suspect that these paired censers are antecedent to the Postclassic practice

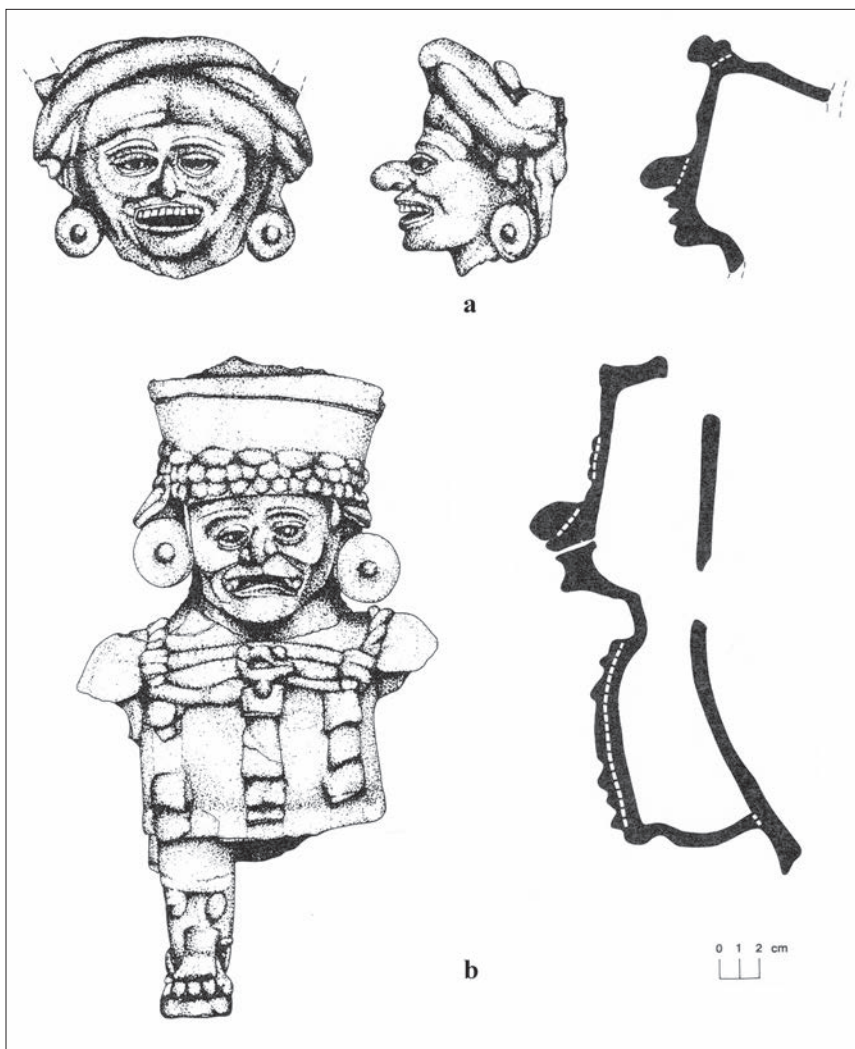


Figure 14.4. Paired Postclassic incensarios from a deposit in the front stair block of Structure 213 at Santa Rita Corozal, possibly representing katun idols. Source: after D. Chase and A. Chase (1988, fig. 26).

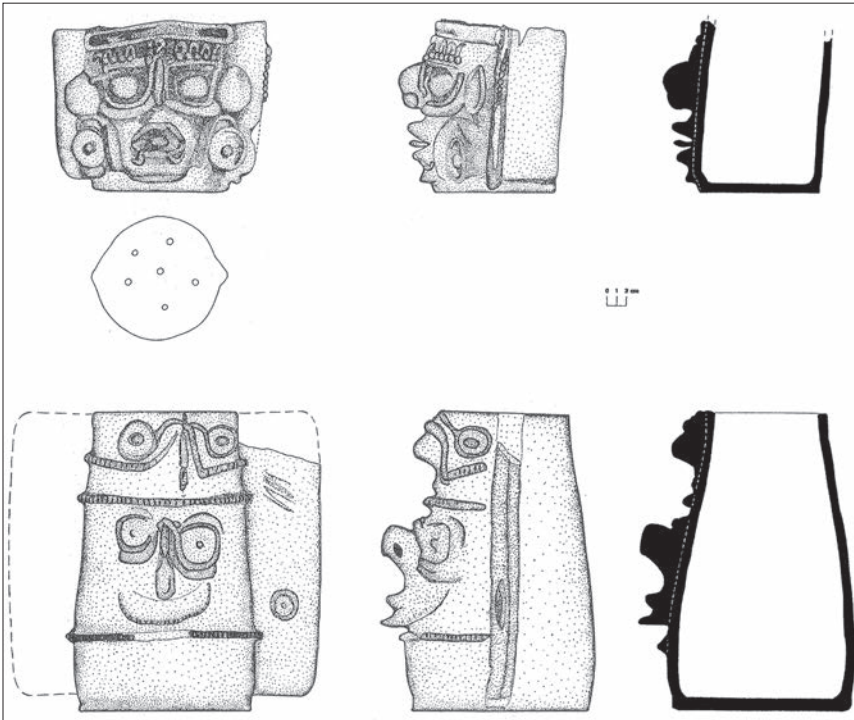


Figure 14.5. A pair of Terminal Classic incensarios that had been set on the floor in the northern part of the front room of Caracol Structure A6 (three views of each vessel; the upper incensario also has a perforated base).

of using paired effigy censers as katun idols at Santa Rita Corozal (as described below; see D. Chase 1985b, 1986, 1991; D. Chase and A. Chase 1988, 2008). Because it is likely that not all relevant ritual activities or deposits are being archaeologically encountered, even with the quantity of remains currently uncovered, we are still dealing with incomplete information.

### Idols and Earth Offerings as the Memorialization of Time

Marshall Becker (1992, 1993) argued that Maya burials and caches at Tikal existed along a ritual continuum and suggested that both kinds of deposits functioned as “earth offerings” in the buildings they were associated with. In this sense, the building forms the container for the deposit. Based on our work at Caracol, we have argued that these “earth offerings” were placed according to set temporal cycles that can be related to katuns (D. Chase and A. Chase 2003, 2004, 2011, 2017; A. Chase and D. Chase 2013a). Besides caches and burials,

there are other patterns in the archaeological record that can be related to temporal cycles, specifically paired-effigy *incensarios* found in both Classic and Postclassic contexts.

Paired *incensarios* have been specifically noted for their relationship to katun idols during the Postclassic period (D. Chase 1985a; Milbrath and Walker 2016a). Archaeological excavations at Santa Rita Corozal have recovered twelve separate contexts (SRC Structures 2, 5, 6, 7, 17, 25, 81, 92, 182, 183, 212, and 213) that yielded paired-effigy *incensarios* (D. Chase and A. Chase 1988, 72). Following Tozzer (1941, 166–169), who describes how katun idols were paired in order to transfer power from one to the other and thus maintain continuity in the katun cycle, we identified the archaeologically recovered *incensarios* from Santa Rita Corozal as katun idols (D. Chase 1985a, 1985b). In their temple or shrine contexts, these effigy censers literally “lived” sacred time and were ritually destroyed upon their “expiration,” which presumably accounts for the archaeological contexts, in which one relatively whole and one relatively partial effigy censer are recovered (fig. 14.6; see also D. Chase and A. Chase 1988, 72). The archaeological record demonstrates that these two *incensarios* and a host of other vessels holding offerings resided on the floor of their associated building for an extended period of time (A. Chase and D. Chase 2013b, 56–62). These katun idols in essence represented “living” time in that they mediated predictions and could do things to ensure the well-being of their supplicants.

The features of these *incensarios* can be used to correlate them with directionality and major Maya gods (Thompson 1957; see also chapter 13, this volume). At Mayapán, four of the ten gods that have been identified have Mexican connections (Milbrath and Walker 2016a, 213n5). Some researchers have interpreted a passage in Landa (Tozzer 1941, 161) about the creation of and renewal of idols for specific monthly rituals as referring to ceramic *incensarios* (Milbrath and Walker 2016a, 192), but Landa (Tozzer 1941, 160) had earlier made it clear that these were idols of wood. The interpretation of the “renewal” of these idols may refer to refreshing the offerings to the idols rather than to their ritual destruction (see Milbrath and Walker 2016a, 191–196). It is far more likely that the ceramic *incensarios* represented gods and prophecies for specific katuns, as Landa indicated (Tozzer 1941, 168): “The order which they used in counting their affairs and in making their divinations, by means of this computation, was this,—they had in the temple two idols dedicated to these characters [numbered katuns].” The fact that each deity had multiple aspects (Thompson 1957, 1960) and that there were thirteen different numbered katuns helps account for the diversity of Postclassic effigy *incensarios* seen in the archaeological record and the difficulty in interpreting them.

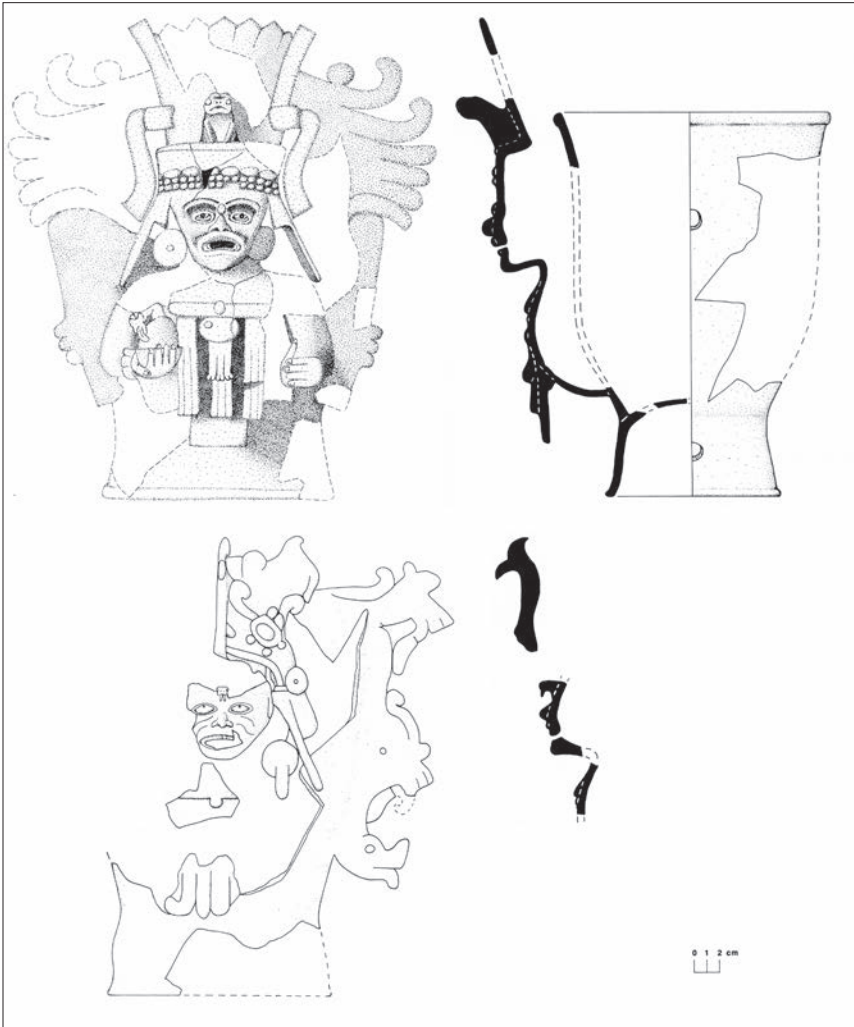


Figure 14.6. A pair of Postclassic incensarios set on the floor in front of the interior shrine in Structure 81 at Santa Rita Corozal. Source: after D. Chase A. Chase (1988, fig. 8).

It is significant that paired *incensarios* are not only a Postclassic phenomenon. The use of effigy *incensarios* not only continued into the colonial period (Chuchiak 2009) but also extended back into the Terminal Classic period. Paired *incensarios* occur in three Terminal Classic contexts in the Maya area at Caracol. Two flanged effigy burners were located Caracol Structure B19 and two in Caracol Structure A6. The third set is from Caracol Structure A3, but here the flanged effigy burner is paired with a large spiked brazier. One of

the Caracol sets of flanged effigy *incensarios* was set with a Giant Ahau altar that commemorated the baktun and katun ending of 10.0.0.0.0. Elsewhere in the archaeological contexts of Caracol, the ritual destruction of multiple flanged effigy *incensarios* was located in two ritual deposits in residential groups that were likely placed during this same baktun shift (A. Chase and D. Chase 2010). Thus, the connection between katuns and effigy *incensarios* appears to have some time depth, going back at least as far as the Terminal Classic period.

Caches are also involved in the recording of temporal events. The elaborate Postclassic caches at Santa Rita Corozal can be directly linked to Uayeb events and cycles based on the iconography and repetition of figures that was recovered from these deposits (D. Chase 1985a, 1985b; D. Chase and A. Chase 1988, 2008). It is very likely that these Uayeb events, which occurred during the five unlucky days that ushered in the new year, were part of larger temporal cycles that formed a coordinated ritual “path” that moved through both time and space at Santa Rita Corozal, helping to integrate this Postclassic community. The cache deposits embedded specific points of ritual time in communities, space, and the Maya cosmos, and these points are evident in the archaeological record.

Although at Santa Rita Corozal Postclassic caches that served the entire community were embedded in residential groups scattered throughout the site, residential caching practices did not appear in full form at Caracol until the Late Classic period. Earlier Caracol caches from the Late Preclassic and Early Classic periods were generally associated with public architecture, and it appears that temporal and “centering” rituals (D. Chase and A. Chase 1998) were more hierarchically controlled during these eras. This changed, however, with the onset of the Late Classic period at Caracol and may have been associated with the establishment of symbolic egalitarianism (A. Chase and D. Chase 2009; D. Chase and A. Chase 2017, 215–216; Adrian Chase 2021), which coincided with the spread of the ritual domain through Caracol’s residential groups.

The Late Classic period inhabitants at Caracol had access to tombs and caching practices that all levels of society shared. The caches and tombs were linked by virtue of being associated with the eastern buildings in the site’s residential groups. Caching focused on two types of deposits: face caches and finger bowls (fig. 14.7). These deposits are found throughout Caracol’s residential groups, often set in front of these buildings but sometimes also embedded in the structures. Late Classic caches have been recovered in eighty-seven non-epicentral residential groups at the site (D. Chase et al. 2024). The modeling of the face caches from Caracol range from crude to elaborate. Some clearly



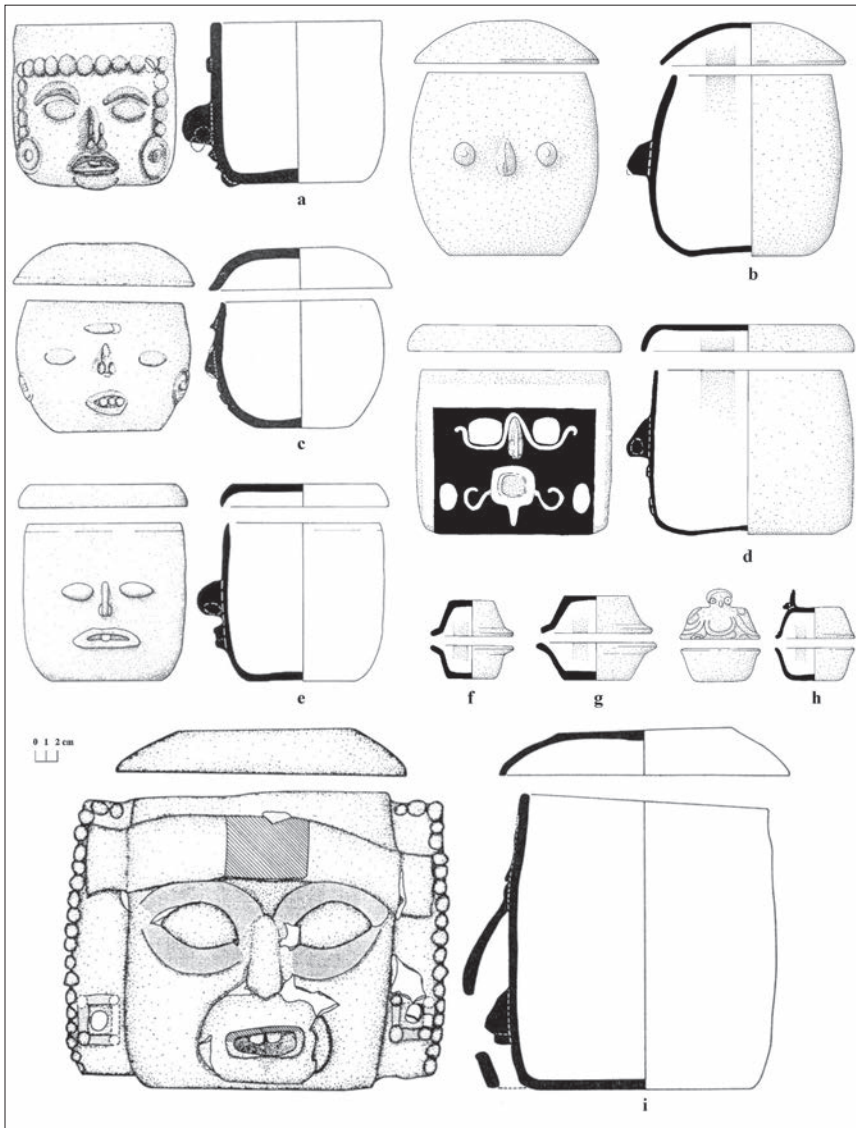


Figure 14.7. Late Classic cache containers at Caracol representing face caches (*a–e, i*) and finger bowls (*f–h*). (*a, c, e*) from Talking Trees Residential Group (Structures 3D21–3D34); (*b, f–h*) from Caana summit, buried under lower plaza floor in front of Structure B20; (*d*) from the core of Structure I28 in the Rebel Residential Group; (*i*) from Structure B34 in Northeast Acropolis, buried within an earlier stairway.

represent the Maya sun god, some a bird (Principle Bird Deity?), and others are more human in their aspects (see A. Chase 1994; D. Chase and A. Chase 1998, 2010, fig. 2; A. Chase and D. Chase 2010, fig. 2).

It was not until the excavation of extensive stratigraphic sequences from several residential groups that it proved possible to sequence the iconographic features of the face caches. The correlation of the face caches with the archaeological records of Caracol's residential groups also indicates that they were being consistently deposited over time in a cyclical fashion that appeared to correlate with katuns (A. Chase and D. Chase 2013a). Thus, we posited that Caracol's face caches were katun markers that were being used in household ceremonies (fig. 14.8). In this capacity, they were antecedent to the use of *incensarios* for katun markers that appears in the Terminal Classic period. While most face caches are empty when found in the archaeological record, some do have contents that may be indicative of their use in activities related to temporal cycles. For instance, one found in Structure I7 contained a carved limestone face of K'inich Ahau and ten eccentric obsidian blades (A. Chase and D. Chase 2010, fig.3).

Temporal cycles were also involved in the placement of interments in residential complexes at Caracol (D. Chase and A. Chase 2004, 2011). That would have been appropriate for the corporate function these deposits had of unifying the inhabitants of a given residential group. The timing of these burials was clearly significant and their placement followed a general developmental sequence. First, a tomb was built in the eastern building, often including a constructed entryway that permitted passage in and out of the chamber for some time. There are indications that while this entryway was open, the tomb may have been used, cleaned out, and then reused for various bodies. However, eventually one or more occupants were placed in the chamber and it was sealed in the core of a building. Later, additional burials were placed under the front step of the building and then even later through the front stairway or in the plaza to the front of the structure (D. Chase and A. Chase 2004, 206, fig. 1). Because more than half of Caracol's burials are accompanied by ceramic vessels (D. Chase 1998) and because six Caracol burials—all containing ceramics—are associated with hieroglyphic dates on their walls or capstones (A. Chase 1994), it is possible to gain relatively fine temporal control over the placement of the site's interments. Consistently, the ceramics in burials associated with a single structure indicated a temporal separation on the order of approximately forty years (e.g., A. Chase and D. Chase 2013a, 17, fig. 4).

Archaeological work at Tikal and Caracol has shown that only a small percentage of any residential groups' inhabitants were being buried in the group's residential area (D. Chase 1997, 25–26); most were buried somewhere

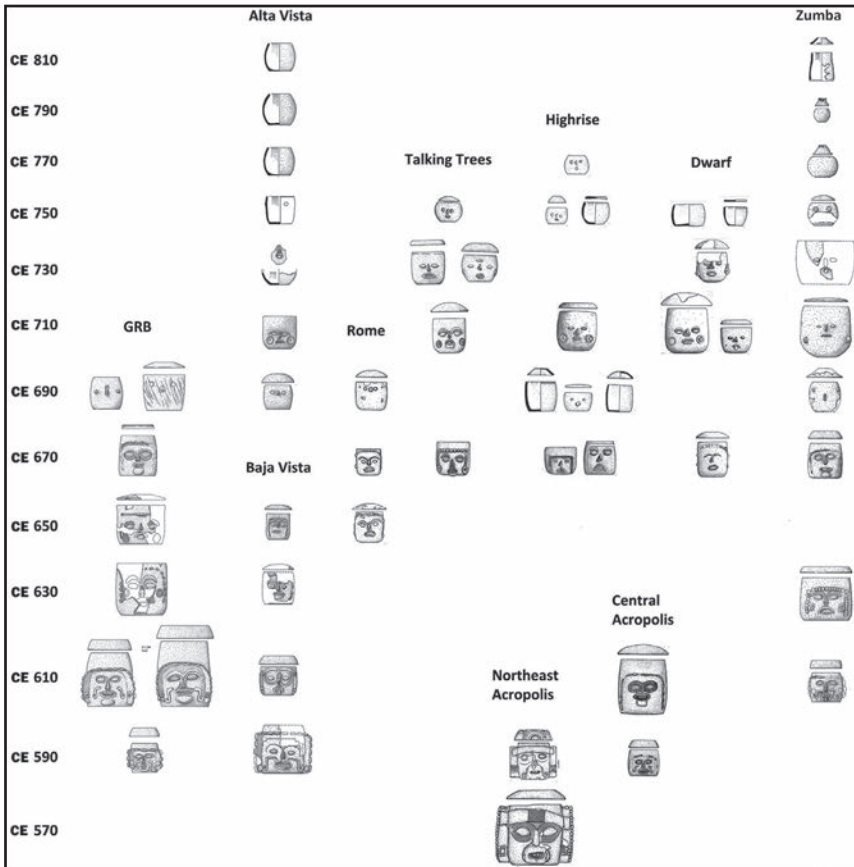


Figure 14.8. Caracol cache sequence showing use of face caches as katun markers in various residential groups. Source: A. Chase and D. Chase (2013a, fig. 5).

else. At Caracol, the six Late Classic tombs that contained recorded hieroglyphic dates indicated that the ancient Maya sought to purposefully anchor these chambers in time through the use of temporal markers. Painted textual dates in two stratigraphically sequential chambers in Caracol Structure B20 also suggested that the chambers were used based on a double katun pattern (see A. Chase and D. Chase 2017c). Because the temporal sequencing deduced from the residential group burials matches this timespan, it strongly suggests that these earth offerings were made in accord with a temporal cycle. While we originally suspected that they were being deposited in accord with a Calendar Round (52-year) cycle (D. Chase and A. Chase 2004, 221, table 1), subsequent archaeological work has strongly supported the interpretation that interments in a given residential group were made

as part of a double katun (40-year) cycle (A. Chase and D. Chase 2013a; D. Chase and A. Chase 2017).

Finally, one other cache type—the finger cache—is associated with face caches and interments in the eastern residential shrines (A. Chase and D. Chase 1994; D. Chase and A. Chase 1998). Finger caches incorporate bones from one or more fingers from one or more individuals. These finger bones are placed between two small dishes, and they are usually interred in the plaza in front of the eastern building. We believe that these deposits represent the personal offerings of human fingers from living individuals in memory of one (or more) of a residential group’s ancestors; we feel that it is also likely that they were offered according to temporal cycles. Finger caches usually occur in limited numbers in Caracol’s residential groups. They sometimes are located in tombs that were reentered (D. Chase and A. Chase 2003) and may have been deposited episodically. That occurred in four contexts at Caracol: (1) beneath the four-meter-deep earlier plaza floor in front of Structure B20; (2) in the buried earlier summit building floors of Structure B19-2nd; (3) associated with the two-meter-deep plaza floor in front of Structure B34; and (4) associated with a constructed central plaza “altar” in the Centro Residential Group associated with Structure J13. We suspect that these episodic deposits correlate with personal and temporal events, but we have not yet been able to completely fix them in time.

In summary, we argue that most formally placed Maya earth offerings that we find in the archaeological record represent the literal conjunction of time with ritual activities that were important to ancient Maya.

### **Architectural Groups and the Manifestation of Time**

Two architectural groups have been specifically suggested as manifesting time in the archaeological record: E Groups and twin-pyramid groups. Both E Groups and twin-pyramid groups involve the convergence of several temporal cycles. E Groups are characterized by a western pyramid across a plaza from a long eastern platform that is usually supporting three constructions. They form the earliest versions of public architecture that can be widely recognized across the Maya southern lowland (e.g., A. Chase and D. Chase 1995; Freidel et al. 2017) and throughout a large part of Mesoamerica (Inomata et al. 2021). Coggins (1980) specifically states that E Groups form an antecedent for twin-pyramid groups. Each E Group was involved in the cosmological founding of a Maya center (A. Chase and D. Chase 2012, 2017a) and in providing both horizon-based astronomy and a solar calendar for Maya communities (Aveni et al. 2003; Aimers and Rice 2006; Milbrath and Dowd

2015; Šprajc 2021a). At Caracol, archaeological data also demonstrate that E Groups were constructed and used in conjunction with baktun cycles of 400 years (A. Chase and D. Chase 2013a; A. Chase and D. Chase 2017a, 60). This is also explicitly visible in the architectural plans of some Maya sites such as Yaxha (A. Chase and D. Chase 2017a, 63).

The architectural form of twin-pyramid groups was recognized at Tikal in the 1950s (Shook 1957). They are characterized by quadrilateral pyramids on the eastern and western sides of a plaza, a nine-doorway structure on the south side of the plaza, and a roofless structure on the northern side of the plaza (fig. 14.9). These complexes were the subject of Christopher Jones's PhD dissertation (1969), in which he concluded that the complexes were built as a whole to celebrate specific katuns and to serve for yearly solar ceremonies. The complex is a perfect stage for such ceremonies, especially as the overall plan of the group incorporates multiple temporal cycles: katun (north), vague year (east and west), and lunar year (south). The twin-pyramid groups' symbolic directional focus on four sides and the central plaza (or stage) is similar to the quincunx layouts of many Maya caches (see D. Chase 1988; Mathews and Garber 2004; D. Chase and A. Chase 1998), adding to its layered meaning.

Clemency Coggins (1980, 736–737) noted that twin-pyramid groups formed a miniature version of the Maya cosmos laid on its side: the east and west pyramids were symbolic of the daily and yearly solar cycle; the nine-doored range building on the south edge of the complex represented the Nine Lords of the Night (or underworld); and the roofless northern structure housed an altar and stela that portrayed the ruler carrying out katun

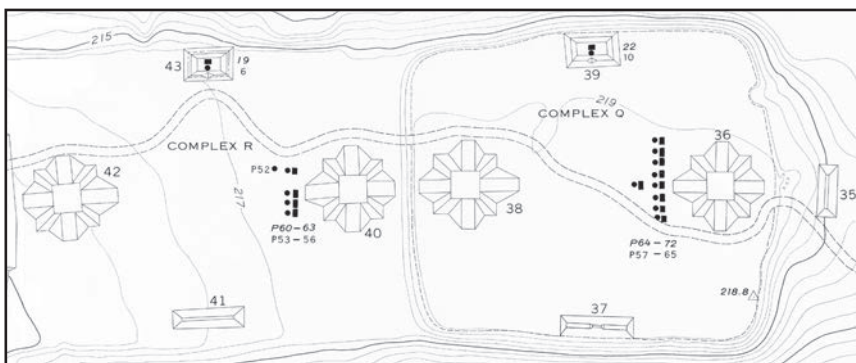


Figure 14.9. Twin-pyramid groups from Tikal: Complex R is anchored to 9.18.0.0.0 by Stela 19 and Complex Q is anchored to 9.17.0.0.0 by Stela 22. Both stelae are in the north buildings of their respective groups. Source: after the Great Plaza map sheet in Carr and Hazard (1961).

ceremonies. The Nine Lords of the Night have also long been viewed as representing the nine moons of the lunar year (coinciding with the period of human gestation; Nuttall 1904, 495, 510) and as associated with the 260-day calendar (Aveni 2001, 156–157). Wendy Ashmore (1992, 176) noted that the placement of a stela in the northern building of a twin-pyramid group “visibly and materially apotheosized” the king “by prominent placement of his portrait monument in the symbolic heavens, where he joins his divine ancestors.” Other Late Classic stelae at Tikal surmount caches that usually contain nine eccentric lithics or flints, a shorthand arrangement of the architectural expression found in twin-pyramid groups. Because these caches also contain sets of carved obsidian eccentrics, they also likely represent the Nine Lords of the Night (Moholy-Nagy 2008, 18, 26). An examination of other caches and deposits associated with the twin-pyramid complexes of Tikal related the katun cycle to the exhumation and reburial of deceased individuals (Weiss-Krejci 2010, 95–96; Weiss-Krejci 2011).

At least eight (and possibly nine) twin-pyramid groups can be identified at Tikal, all dating to the Late Classic period. The earliest two securely identified groups are dated back to the katuns representing 9.11.0.0.0 (Group 4D-2) and 9.12.0.0.0 (Group 5B-1) but are not associated with dated stelae. Six of these groups can be dated as being erected between 9.13.0.0.0 and 9.18.0.0.0 (Groups 3D-1, 5C-1, 4D-1, 3D-2, 4E-4, and 4E-3). Jones (1969, 1996, 22) identifies a potential ninth complex beneath Tikal’s East Plaza ballcourt that would have corresponded to 9.10.0.0.0 (see Moholy-Nagy 2016, 264). However, there are issues related to including these two pyramids in the series because the dating for these pyramids is Early Classic based on recovered caches and the two pyramids “are unaccountably crowded into the center of the plaza” and did not yield “the expected pit for a centerline stela between the structures.” In our estimation, the Tikal pyramids beneath the East Plaza ballcourt represent a different architectural complex than a twin-pyramid group. Given the intense political connections between early Late Classic Tikal and Caracol (e.g., A. Chase and D. Chase 2020a), which is symbolically noted in the fusion of Tikal’s only Giant Ahau altar with the twin-pyramid group built to celebrate 9.13.0.0.0, we see Tikal’s Late Classic twin-pyramid groups as linked to Caracol’s earlier focus on katun cycles and Giant Ahau altars. Twin-pyramid complexes occur at four other neighboring sites: Uolantun, Ixlu, Chalpaté, and Yaxha. These four complexes represent a new emphasis on celebrating ritual time in the eastern Petén of Guatemala during the Late Classic period.

## Conclusion

Multiple temporal cycles can be found in the archaeological record. These include cycles that approximate the sacred calendar of 260 days (associated with the Nine Lords of the Night), vague year cycles of 365 days, katun cycles (which can be quartered into segments of five years, or hotuns), Calendar Round cycles of 52 years, and baktun cycles of 400 years. As the ethnohistory notes, the Maya were preoccupied with the computation of time and embedded temporal aspects in most of their activities.

Among the outcomes of this analysis is a better understanding of Maya materialization of time. Archaeological patterns codify worldview as it intertwines with time. Material remains provide a window on that relationship. Constructions, monuments, and deposits of various sorts not only memorialized the cycles of time, they also localized it clearly in physical space. As is evident in the Postclassic period caches of Santa Rita Corozal, these episodes themselves sometimes established ritual paths on the ground that provided internal connections within communities.

Classic period caches at Caracol and Postclassic period caches and incense burner deposits at Santa Rita Corozal can be analyzed to show remarkable similarities in worldview across more than 1,000 years. Although there are clear differences in specific contents and in associated buildings, the consistency in the basic conceptions of the world as directional, layered, and associated with time is unmistakable.

It is evident that individual ritual activities and deposits are most effectively viewed together rather than in isolation. When constructions, monuments, special deposits, and on-floor remains are contextually recovered through archaeological investigation, they can be used to establish meanings that are more clear (e.g., A. Chase and D. Chase 2020b). Construction and destruction of buildings may sometimes have been correlated with cycles of time. What might be viewed in isolation as only the consecration and dedication of new space or the termination of existing space might in broader view be identified as reflections of the Maya materialization of time. Thus, the Caracol E Group, with its various caches, coincides with the establishment of a new baktun. Twin-pyramid complexes at Tikal showcase the concordance of multiple temporal cycles (e.g., daily, yearly, katun) in a single architectural complex.

This work suggests that in Maya culture the human engagement with time was dynamic. While cycles of time and the events associated with them were expected to repeat, ritual activities might be used to attempt to negotiate different outcomes or paths. In essence, for the ancient Maya, time was alive and had agency. They did not passively commemorate the passage of time; they

actively engaged with it to change or ensure the course of history. Viewing time, specifically cyclical time, as an agent explains the Maya preoccupation with time and provides a very different view of the ancient Maya than that derived from earlier conceptions of them as time worshippers and somewhat later visions of them as history-bound dynasties. It also provides a fuller example of how the ancient Maya contextualized, interacted with, and adapted to the complexities of their time and place.

### **Acknowledgments**

The research in this chapter builds on our work at the sites of Santa Rita Corozal and Caracol over more than forty-five years. We thank the Institute of Archaeology in Belize, our sponsoring universities (University of Central Florida; University of Nevada, Las Vegas; Pomona College; Claremont Graduate University; and the University of Houston), and all of the funding agencies that have enabled these investigations: the Ahau Foundation, the Alphawood Foundation, the Dart Foundation, FAMSI, the Geraldine C. and Emory M. Ford Foundation, the government of Belize, the Harry Frank Guggenheim Foundation, NASA, the National Science Foundation, the Stans Foundation, and USAID. We hope that this chapter showcases what can be gained from detailed long-term archaeological research.