Kukulkan's Realm

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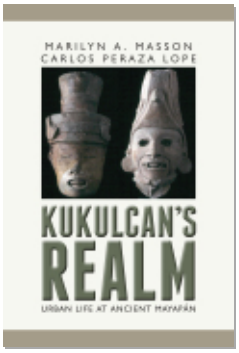

Published by University Press of Colorado

Masson, M. & Peraza Lope, C..
Kukulkan's Realm: Urban Life at Ancient Mayapán.
Boulder: University Press of Colorado, 2014.
Project MUSE., https://muse.jhu.edu/.

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Militarism, Misery, and Collapse

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> "That which came was a drought, according to their words, when the hoofs burned, when the seashore burned, a sea of misery."
>
> (The Book of the Chilam Balam of Chumayel, Roys 1967:76).

Mayapán's collapse is traditionally associated with the short-term events of factional strife and abandonment during K'atun 8 Ahau, AD 1441–1461 (Landa 1941:36–37). A longer view of the last half of the city's history reveals that its fall was the culmination of a struggle lasting at least a century against natural and social forces that would have abutted against the survival capacities of any ancient political capital. Interrelated factors that aggravated the stability of Mayapán were threefold—environmental catastrophes, factional divides, and warfare. Although these issues challenged the city's regimes throughout its history, they coalesced and were amplified during the fourteenth and fifteenth centuries AD, leading to the mid-fifteenth-century abandonment. This chapter outlines the prolonged obstacles that eroded the centralizing capacities of the confederacy government. In the face of improbable odds, the polity and city of Mayapán persevered through a series of severe disasters that would have fueled discontent by threatening the agrarian base of the city and its supporting towns. The protracted process of collapse involved at least three episodic acts of abandonment and destruction over the final 150 years, as suggested by recent archaeological findings and ethnohistorical accounts. The escalation of regional warfare was one response to political and climatic stress, although this short-term reaction contributed little toward long-term regional recovery.

DOI: 10.5876/9781607323204.c008

When the end finally came, it happened quickly. The political fractures that tore apart the Mayapán state had deep historical roots dating back to the era of Chichén Itzá. Why did the actions of the Xiu against the Cocom in the fateful K'atun 8 Ahau gain traction at this particular time? We suggest that the city was by this point brought to its knees, suffering diminished size, food shortages, and loss of political support among subject populations. The Cocom, who commanded much authority in the confederacy throughout Mayapán's history, bore the brunt of the blame for this ill fortune. It is difficult to sort out accusatory doctrine regarding poor governance from the agendas of competing factions. The Cocom were accused of tyranny, slavery, and bringing Mexican mercenaries (probably from Tabasco) into the city (Roys 1962:47–48). This testimony, however, was provided by a descendant of the Xiu family, Gaspar Antonio Chi, who was one of Diego de Landa's principal informants (Landa 1941:59–62). Some accusations, including the extent of the slave trade, were disputed (Tozzer 1941:note 178). The Xiu and their allies orchestrated the massacre of the Cocom authorities, broke down the city wall in a broad-scale attack, and brought about the collapse and abandonment of Mayapán (Landa 1941:36–37).

THE LONG DECLINE: K'ATUN 9 AHAU (1302–1323) UNTIL SPANISH CONTACT (1517)

What evidence exists for longer term strife affecting the Mayapán state? Events mentioned in Colonial Period sources are outlined below in chronological order, along with relevant archaeological data that contribute new information. Although some Colonial-era Maya documents are of questionable accuracy concerning earlier history (Gunsenheimer 2002), evaluating these accounts with empirical scientific data helps to bring greater resolution to models of the city's fall. Table 8.1 presents a selection of events suggested by interdisciplinary sources for the fourteenth and fifteenth centuries AD.

In K'atun 9 Ahau (1302–1323), there was a period of terror and war (Roys 1962:44). K'atun 9 Ahau, along with subsequent K'atuns 7 Ahau and 5 Ahau, encompassed a period from 1302–1362, characterized in general by political decentralization and factionalism, described by Ralph L. Roys (1962:45) as a "revolution." These difficulties dissipated in K'atun 3 Ahau (1362–1382). The restoration of order during this K'atun included a tumultuous inquisition in which political leaders were questioned and tortured. Their tongues were cut off, their eyes were torn out, and they were trampled and dragged while alive. Some of this purging of the nobility was seen as illegitimate (Roys

Table 8.1 Events from various sources in the K'atun history of Mayapán. Arrows indicate full two sigma AMS ranges, dark gray boxes indicate the most probable timing.

K'atun	*Ethnohistory (Roys 1962; Landa 1941)*	*Environmental (Curtis, Hodell, and Brenner 1996)*	*Archaeological AMS-dated events*		
1200–1272					
1272–1292					
1292–1302			Q-79 mass grave		
K'atun 9 Ahau 1302–1323	Terror and war			Mass grave Itzmal Ch'en	
K'atuns 7, 5 Ahau 1323–1362	Factionalism, revolution				
K'atun 3 Ahau 1362–1382	"[S]torm broke," inquisition, purging of nobility	Drought, "one of the driest periods in the 3,500 year sequence of Punta Laguna" (most probable dating)			House Y-45 ritually abandoned Q-88 Hall burned to ground (3 Ahau effigy jaguar date)
K'atun 1 Ahau 1382–1401	Order restored, some out-migration, Cocom invited Canul allies into city				
K'atun 12 Ahau 1401–1421	Benevolent leaders, peace, prosperity, abundant food				
K'atun 10 Ahau 1421–1441	Severe famine	Little Ice Age effects?			
K'atun 8 Ahau 1441–1461	Cold, famine, drought, Xiu-Cocom war, abandonment	Local droughts		Some building destruction may also date to this K'atun	
K'atun 6 Ahau 1461–1481	"[H]urricane of the four winds" (1464) decimated game, leveled and uprooted forests, destroyed tall buildings				
K'atun 4 Ahau 1480–1500	Plague (blood vomit, 1480–1485+/-), "when vultures entered the houses" (at Mayapán), lingering Xius evacuate				
Ensuing years	Warfare ravaged the land, 150,000 men died in battle				
+/– 1517	Peace established, European diseases				

1962:45). Following this interrogation, order was restored during K'atun 1 Ahau (1382–1401), although considerable out-migration may have occurred. Chichén Itzá's Postclassic town may have been largely depopulated during K'atun 1 Ahau, with occupants resettling at Champotón (Roys 1962:45). The Chumayel chronicle states that the "men of Tancah [Mayapán] were dispersed and the batabs of the towns were scattered" during this interval (Roys 1933, 1962:78). Alfred M. Tozzer (1941:note 180) suggests that these abandonments may be confused in historical accounts with the final K'atun 8 Ahau event, but archaeological evidence indicates that earlier acts of destruction and departure occurred prior to 1400 (table 8.1). During K'atun 1 Ahau, the Cocom invited more allies from Tabasco—the Canuls—into the city (Roys 1962:46; Landa 1941:61). The Canuls were not hated or penalized after the city's fall and were allowed to settle peacefully in the western peninsula after the final collapse of the city (Roys 1962:48).

Archaeological and paleoenvironmental evidence may coincide with these K'atun histories. Two mass graves are dated with AMS radiocarbon samples (of burned human bone) to calibrated ranges extending from 1271–1394 (Itzmal Ch'en) and 1200–1390 (Q-79/Q-80, epicenter), respectively (Peraza Lope et al. 2006). These two sigma date ranges coincide well with the 1302–1362 "revolution." There are indications that these mass graves were deposited earlier rather than later within these ranges. Given the bimodal probability curve for Postclassic-era dates (Bronk Ramsey 1995, 2001), there is an 86 percent chance that the mass grave in the plaza near Q-79 dates to within 1200–1320. The massacre represented by this grave best fits the strife described for K'atun 9 Ahau (1302–1323). The probabilities are about even for the early and late bimodal radiocarbon date ranges for the Itzmal Ch'en mass grave. The dates for both mass graves leave open the possibility that human interments represent victims of warfare any time between K'atun 9 and K'atun 5 Ahau (1302–1362)—or alternatively, they are potentially related to the inquisition of the nobility in K'atun 3 Ahau (1362–1382). The noble status of the victims is implied by their proximity to monumental contexts and the deposition of abundant smashed effigy censers amidst the chopped, disarticulated, and/or burned human bones.

The burning and abandonment of epicentral Hall Q-88a is also radiocarbon dated to the interval of 1271–1400 (calibrated two sigma range), and this act of destruction may correspond to the same disjunctive K'atuns as one or both of the mass graves (Peraza Lope et al. 2006). Dates come from burned thatch cinders that covered the floor of this edifice. The belongings of the hall's patrons were found beneath the roof. A K'atun 3 Ahau date inscribed on a glyphic miniature jaguar sculpture from Q-88a's floor likely refers to the

K'atun ending in 1382 (Milbrath and Peraza Lope 2003a:40), around the time when certain nobles were being prosecuted. During this same period, elite House Y-45a was abandoned after its residents smashed their fancy serving vessels, burned offerings, and buried the rooms containing these deposits with fill (chapter 3). Burned carbon from a buried offering of smashed pottery and charcoal revealed a two sigma range of 1270–1400 (Peraza Lope et al. 2006). This abandonment event probably predates 1382, the beginning of a prosperous period.

The strife experienced during the fourteenth century at Mayapán may have been aggravated by a drought detected in the Punta Laguna lake core (Curtis, Hodell, and Brenner 1996:46). Jason H. Curtis, David A. Hodell, and Mark Brenner suggest that the drought probably occurred during the last half of the fourteenth century, although a mid-fifteenth-century date cannot be ruled out (1368–1429 +/–50). This episode is described as one of the driest periods on record in the 3,500-year sequence of this Quintana Roo lake core (Curtis, Hodell, and Brenner 1996:43). Presumably a drought of this magnitude affected much of the peninsula, including the Mayapán area. Recently, more specific information on droughts from the speleothem record has been published. Between 1300 and 1400, severely dry years occurred in the greatest frequency and severity since the fall of Chichén Itzá in the eleventh century (Kennett et al. 2012:figure 2). This record shows a rebound to a period of wetter years in the first part of the fifteenth century followed by droughts of equal or greater magnitude and longer duration from the time Mayapán fell until the Spanish conquest of Yucatán (1450–1550).

The stability that may have been established in K'atun 1 Ahau (1382–1401) lasted around forty years, as the subsequent K'atun 12 Ahau (1401–1421) is described as a peaceful one in which leaders were perceived as benevolent, the populace prospered, and the food supply was abundant (Roys 1962:46). It is possible that a late fluorescence at sites contemporary with Mayapán corresponds to this interval (Masson 2000:249–64).

This reprieve was truncated in K'atun 10 Ahau (1421–1441), when severe famine struck the region (Roys 1962:46). The final K'atun 8 Ahau (1441–1461) overthrow of the Cocom-dominated confederacy involved fighting with stones, an unclear reference that may include slings or projectiles, as well as the seizure of the city wall and the dissolution of the ruling council (Roys 1962:47–48). The wall was broken down, which may explain its deteriorated condition. Destruction of the wall (9.1 kilometers in circumference) would have represented a major attack by a large military force (Roys 1962:47–48). The Xiu aggressors must have summoned their allies in the attack. This war

probably occurred in the year 1448 (Roys 1962:78). The Cocom lords were the targets of this war, and all members of this family who were at Mayapán were killed. One individual survived, as he happened to be absent on a trading expedition to Honduras, and he resettled with allies and relatives at the locality of Tibolón, in the vicinity of Sotuta (Tozzer 1941:note 178; Landa 1941:39).

The timing of the drought indicated by the Punta Laguna core and the speleothem record may signal pressures faced by the Mayapán state and its network of allied polities and trading partners in the fourteenth century. These events served as a rehearsal for the final collapse of the city. Severe or widespread shortages would have strained the capacities of regional trade systems through which food and other goods were normally distributed. While the period of 1382–1421 may have offered a reprieve, the region subsequently suffered the impacts of global volcanic activity, and possibly the Little Ice Age, in the form of local droughts (Gill 2000:289; Gill and Keating 2002:136). Approaching 1450 the state's incapacitation was probably inevitable. Traumatic testimonies of suffering in Yucatán in the Chilam Balam books regarding K'atun 8 Ahau (1441–1461) describe cold and starvation (Gill 2000:301). Notably, the central Mexican famine of the Year 1 Rabbit had its most severe effects by 1454, when Moctecuhzoma I gave his subjects in the Valley of Mexico permission to migrate to other regions in an effort to save themselves (Hassig 1981:171). Inland towns of northern Yucatán suffered pronounced shortages of food and water during K'atun 8 Ahau (Craine and Reindorp 1979:83). In too many cross-cultural instances, famine leads to greater susceptibility to disease (Davis 2001). The populations of the peninsula were weak at the time of Spanish arrival and may have suffered from indigenous epidemics only to be hit by European-introduced diseases of even greater severity.

Plagues hit the region at the time of Mayapán's fall and in the immediate decades to follow. If populations lingered in the city after K'atun 8 Ahau, they experienced further suffering. A great "hurricane of the four winds" in 1464 decimated regional game populations, uniformly reduced the height of trees in large tracts of Yucatán, and destroyed tall buildings (Landa 1941:40; Tozzer 1941:note 201). According to one account, trees were uprooted, resulting in regrowth to equal heights (Tozzer 1941:note 204). Forest resources and orchard fruits would have been destroyed. This loss of landesque capital would have resulted in impoverishment and hunger, as orchards and other multigenerational investments in agrarian development had an important role in assuring the stability of the food supply (Erikson 2006).

Approximately eighteen years later, in 1482, a great plague hit. This "blood-vomit or *xe kik*" is recorded in K'atun 4 Ahau (Landa 1941:41; Tozzer 1941:note 205). The disease was also referred to as the "general death" (*cimil*) or when "the vultures entered the houses within the fortress (of Mayapán)." This intriguing reference suggests that some level of occupation continued at Mayapán past 1441–1461; the Xiu may have remained in residence until K'atun 4 Ahau (1480–1500) (Pollock 1962:15; Milbrath and Peraza Lope 2003a:33). The epidemic may have prompted their ultimate evacuation, which probably occurred between 1480 and 1485 (Roys 1933:11, 1962:73). Warfare ravaged the land during some of the years that followed. Landa (1941:41) states that 150,000 men died in battle in this period. When peace was finally established, smallpox broke out in 1517, perhaps introduced by Spanish explorer Francisco Hernández de Córdoba (Tozzer 1941:note 207). These political, environmental, and epidemiological factors gave Postclassic Maya society in northwest Yucatán little opportunity to stabilize in the decades leading up to the Spanish conquest (Tozzer 1941:41n206).

A wider view of these effects considers the economic implications of environmental stress among interacting Postclassic polities. With central Mexico in trouble in the years bracketing the famine of 1 Rabbit that peaked in 1454, trade networks between the Maya area and its neighbors may have been interrupted long enough for Mayapán to fail. On a more regional level, trade provides one viable solution to periodic agricultural shortages (Freidel and Shaw 2000), particularly those arising from short-term, local events. The Aztec Triple Alliance bounced back from the famine of 1 Rabbit; similarly, Yucatán managed short-term recoveries between calamities of the fourteenth and early fifteenth centuries (Landa 1941:41–42), and coastal Maya towns were prospering from trade at Spanish contact (Berdan et al. 2003; Kepecs 2003). Mayapán's political and religious leaders may have sponsored a revitalization movement, probably during the fourteenth century, in response to such hardship. This movement reached and recharged hinterlands polities along the east coast of the peninsula (Masson 2000).

WARFARE AND THE MAYAPÁN STATE

Why was war undertaken by protohistoric Maya states? The goals of seizing property, children, and wives were principal motivating factors (Tozzer 1941:41n206). Taking captives was related to an escalating slave trade, which continued into the Colonial era. For example, sixteenth-century Iuit rulers of Hocabá conducted war in order to capture slaves for sale (Roys 1962:48;

see also Tozzer 1941:note 175; Roys 1940). The episodic hardships encountered across Yucatán during Mayapán's final century and a half, which continued through the Colonial Period, may have also contributed to revitalization rituals involving increased human sacrifice of children and adults that greatly disturbed sixteenth-century Spanish priests. France B. Scholes and Roys (1938) suggest that such acts may have been part of a desperate response to the social disorder caused by conquest and disease.

There are plentiful indications of the importance of warfare to the Mayapán state that began with its foundation and the construction of the first Temple of Kukulcan, which was decorated with stucco death figures and niches for trophy skulls (chapter 2, figure 2.12). Throughout the occupation, the nucleated settlement pattern, great city wall, and abundance of projectile points and knives reveal a society ever conscious of military concerns (chapter 6; Russell 2008a, 2013). Households armed themselves with projectiles, knives, and lances, and these were the most common tools in domestic assemblages, comprising a combined total of 28 percent of all stone tools, including informal unifaces (figure 6.25). Axes, seemingly benign, also sometimes served as tools of decapitation (Bill, Hernández, and Bricker 2000). At burial shaft Temple Q-95, Edwin W. Shook (1954c) observed that the upper half of the shaft deposit of human remains contained Ch'en Mul censers, but the lower half did not. This fact suggests that ritualized sacrifice preceded the onset of Ch'en Mul effigy censer rituals during the latter half of the city's occupation and were perhaps conducted from the late part of the thirteenth century onward (Milbrath et al. 2008:105; Milbrath and Peraza Lope 2013). Analysis of human remains at the epicenter reveals that violent trauma, sacrifice, and trophy taking in the context of warfare and building dedication are commonly reflected. Many of the burials in the site center's alleys, construction fill, and other features were probably sacrificial victims (Serafin and Peraza Lope 2007; Serafin 2010:200). The slave trade meant that raids were waged to forcibly capture individuals. A strong military was needed to defend Mayapán's interests in circum-peninsular and overland trade and to protect merchants (chapter 6). Postclassic codex scenes reiterate these themes of captive taking and sacrifice (Bill 1997). Military service was emphasized in corvée demands placed on subjects of the confederacy. The Report of Tekal informs us that "they did not take tribute from their vassals more than what the latter wished to give, except that they served them with their persons and arms in war, whenever the occasion offered" (Roys 1962:50).

Mass graves and sacrificial burial shaft temples point to warfare as a key activity of the Mayapán state. The extensive deposits around 30 centimeters

below the plaza floor near edifices Q-79 and Q-80, and starting at 10 centimeters below the ground surface along the platform of the Itzmal Ch'en ceremonial group, are similarly defined by extensive disarticulated human remains and effigy censer fragments (figure 8.1). The remains probably belonged to residents of Mayapán, whose bones were desecrated and dishonored in shallow graves during one of the violent upheavals of the late thirteenth or fourteenth centuries that have been described previously. Projectile points are common in the Itzmal Ch'en grave, and three knives were found in the rib cages of two individuals and near the pelvis of a third in the vicinity of Q-79/Q-80 (Adams 1953:145). At Itzmal Ch'en, the bones were intentionally chopped apart and burned (Vidal Guzmán 2011). Additional mass graves that include skulls and disarticulated postcranial elements have been found at Mayapán in an alley next to Round Temple (Templo Redondo) Q-152, between the Temple of Kukulcan and one of its sanctuaries, and other locations (Shook and Irving 1955; Serafin and Peraza Lope 2007; Serafin 2010). At least two shaft temples and one shrine (H-18) also received sacrificial victims (Chowning 1956; Masson and Peraza Lope 2007). Monumental plazas at Mayapán doubled as resting places for victims of violence at the hands of warlords of the Mayapán state. Some of these victims may have been casualties of internal strife or external raids on the city. In contrast, skulls or long bones in shrine contexts would have represented ancestral relics (Landa 1941:131). The grim realities of warfare and conflict seem to have permeated life at the city throughout much of its history.

What was the reach of Mayapán's army? Ross Hassig (1988:23) argues that armies mobilized by empires or other extensive political entities could control large territories and meet foes at borders. In contrast, city-states tended to attack a rival's political center and then sack it following victory. Although alliance networks were capable of joining together large forces during the Postclassic Period in central Mexico, warfare was not conducted on a major scale and military expeditions tended to be appropriative rather than destructive (Hassig 1988:24, 259; Pohl and Robinson 2005:28). Mayapán's confederacy was geographically extensive enough to have commanded a conscripted militia of considerable size; such units were efficient and could be rapidly mobilized (Webster 2000:79). The need for a city wall, coupled with evidence for periodic destruction, indicates that the city was not immune to deadly skirmishes at home. Aztec armies acted punitively but stopped short of wholesale slaughter in order to establish obedient tributaries (Hassig 1988:259). Raids and punitive expeditions, like those of the Aztec, seem to have been conducted by the Mayapán state, and the acquisition of captives for sacrifice, sale, or servitude was a key motive (Scholes and Roys 1938).

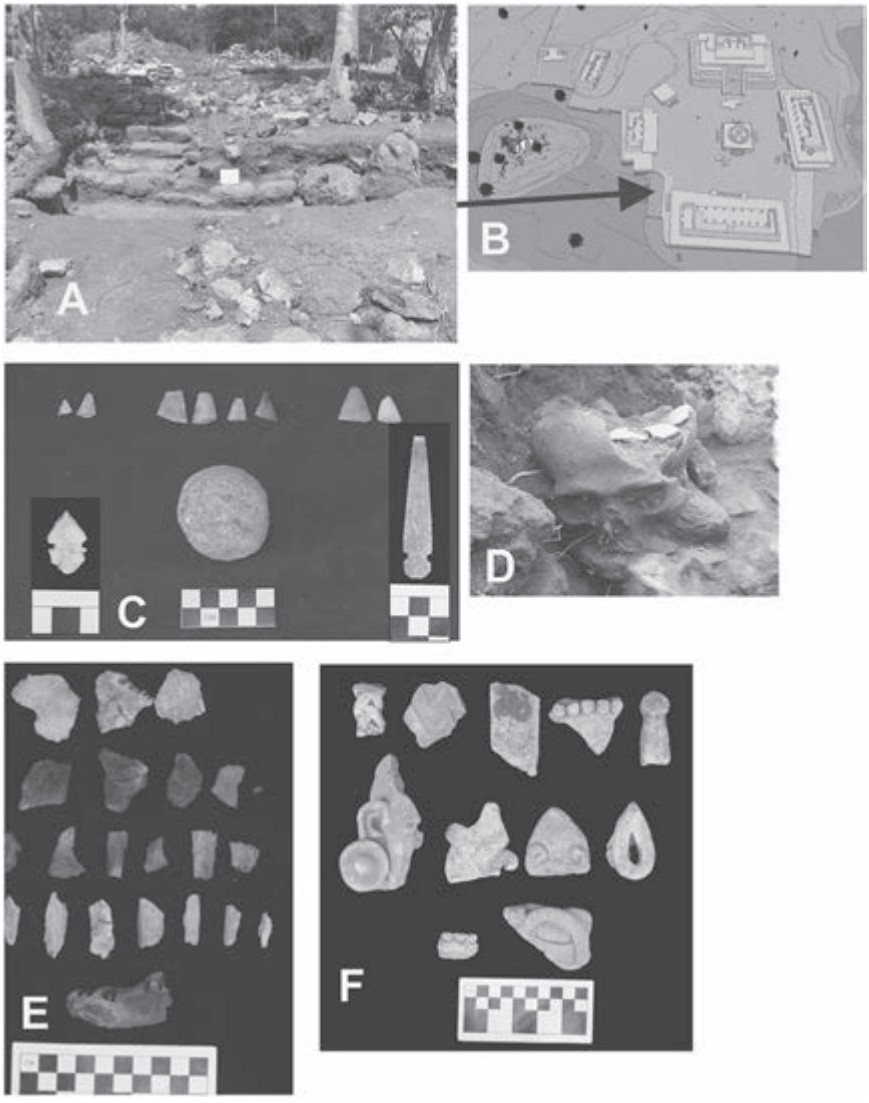

Figure 8.1. *The mass grave at the staircase of the Itzmal Ch'en group (A, B) was deposited prior to AD 1400. The feature contained projectile points (C); hammerstones (C); disarticulated, smashed, and burned human bones (D, E); and broken effigy censers (F).*

RAPID ABANDONMENT IN MAYAPÁN'S ARCHAEOLOGICAL RECORD

The archaeology of rapidly abandoned sites has received much recent attention in Mesoamerica. Some mortuary features at the Classic-era Maya city of Yaxuna were ritually desecrated (Ardren 2002; Suhler et al. 2004:475). Evidence for burning, smashing, and scattering of materials and the removal of funerary materials has been reported from this site. In central Mexico, Xochicalco was also rapidly abandoned, and although central public structures were burned and destroyed, residential structures were not widely impacted (Webb and Hirth 2003:41). This political capital ended in violent conflict, perhaps due to an internal rebellion, as is reported for Mayapán (chapter 2). At Xochicalco, artifacts were strewn on temple floors and dismembered corpses were discovered over structures (Webb and Hirth 2003:41). Abandoned Xochicalco buildings retained a large proportion of their inventories (Webb and Hirth 2003: 38–40). Takeshi Inomata (2003:46–47) also reports much burning during the rapid exodus from the Maya city of Aguateca, where metates were probably broken from fire and falling debris. Where possible, it is important to distinguish abandonment versus termination ritual (Mock 1998). At Aguateca, abandonment was inferred when there was a good fit between material assemblages and presumed building functions, suggesting that items remained in the contexts of their use (Inomata 2003:47). Termination is documented at Aguateca in cases where artifacts were burned or interred within fill (Inomata 2003:54–56). Abandonment and termination behaviors are potentially related; when the former is imminent, termination rites can be undertaken (Inomata 2003:57). As for Xochicalco, burning did not occur at structures outside of the epicenter at Aguateca, leading Inomata to deduce that outlying residences were more slowly abandoned and that their occupants had the opportunity to carry away valued possessions (Inomata 2003:57–58). Joel W. Palka (2003:126) argues that elites may be the first to leave in cases such as the city of Dos Pilas, where public buildings were dismantled and later reoccupied or scavenged. Rapid abandonment results in many usable items being left behind (Palka 2003:122). Some low-status houses at Dos Pilas had few usable items while other occupants departed more suddenly and left smashed refuse on floors (Palka 2003:128). Similarly, much burning occurred at Teotihuacan in the central precinct and at outlying temples, but only 45 of 965 apartment compounds exhibit evidence of burning (Manzanilla 2003:94).

Twenty-one contexts at Mayapán with signs of destruction are listed in table 8.2 and are plotted in figures 8.2 and 8.3 for the monumental center and the outlying settlement zone. The abandonment of Mayapán was also associated with much burning and looting prior to the collapse of some dwellings

and public buildings with masonry roofs (Pollock 1954:266, 1962:15). A variety of edifices reveal the remains of destruction and burning (Peraza Lope et al. 1997; Peraza Lope, Masson, and Delgado Kú 2008). Effigy censers and other precious goods are smashed over floors (Adams 1953; Winters 1955b; Peraza Lope et al. 1997, 2008; Delgado Kú, Escamilla Ojeda, and Peraza Lope 2012a, 2012b) and sculptures were decapitated and fell or were thrown down from their original locations (Proskouriakoff 1962a; Delgado Kú, Escamilla Ojeda, and Peraza Lope 2012a, 2012b). Care was sometimes taken to cover offerings with fill or place cherished effigies into tombs for safekeeping (Proskouriakoff and Temple 1955; Peraza Lope et al. 1997, 1999a, 2008), and some caches and burials were later looted in antiquity (Pollock 1954:266; Shook 1954c; A. Smith 1962:264). Susan Milbrath and Carlos Peraza Lope (2009:602) attribute the destruction, burning, and broken monuments of Mayapán's public buildings to the Xiu and their allies in the context of the final revolt in K'atun 8 Ahau. As table 8.1 indicates, however, some acts of termination and abandonment predate 1400 (see also figures 8.2, 8.3). Additional radiocarbon dates from terminal assemblages indicate that other destructive events may have occurred in the fourteenth century. As figure 8.2 reveals, nine other similar contexts have yet to be dated. At the minimum, the impacts of violence at the city left a number of public buildings in disrepair before the city's final abandonment, and at least one elite house was ceremoniously terminated.

In addition to the mass graves, three contexts that we have investigated are particularly illustrative of this pattern, including Q-88a, Y-45, and the Itzmal Ch'en group (table 8.1). Colonnaded Hall Q-88a, adjoined to the complex of Mayapán's central Templo Redondo group, was completely burned; cinders from its thatch roof covered the floor. It was left this way, in ruins, from an event that predates 1400 until the final departure of the city's population. Outlying elites at House Y-45a smashed all of their fine pottery in the back rooms of their house, burned some offerings, and then filled these rooms with rubble in a ceremonious late thirteenth- or fourteenth-century departure (Masson and Peraza Lope 2005; Peraza Lope et al. 2008; chapter 3). At Itzmal Ch'en, portions of the floors of an upper temple (H-17) and a colonnaded hall (H-15) were burned in acts of desecration or abandonment (chapter 3; Delgado Kú, Escamilla Ojeda, and Peraza Lope 2012a, 2012b). Termination rituals also occurred at these structures as indicated by twelve concentrations of broken pottery—mostly effigy censers—and two pieces of greenstone over the floors of the hall and temple and in front of the temple (chapter 3, figures 3.11, 3.12). If the termination deposits are contemporary with the mass grave, this event occurred prior to 1400.

Table 8.2 Evidence for the intentional destruction or termination of buildings from the Carnegie project investigations.

Structure	*Heavy burning final floor*	*Heavy burning roof, objects on floor*	*Dense surface deposits of effigy censers*	*Other abandonment rituals*	*Looted altar/shrine under roof fall*	*Contents of altar/shrine cache nearby*	*Skeleton (violent death)*	*Thrown down sculpture*
Temple T-72 (Shook 1953)	X		X					
Temple Q-58 (Shook 1954a)			X				X	
Temple Q-82 (Shook 1954a)	X		X		X	X		
Hall Q-81 (Winters 1955a)			X		X	X		
Houses J-71a and J-71b (Smith and Ruppert 1956)		X						
House S-133 (Smith and Ruppert 1956)		X (partial)						
Hall Z-50c (Pollock 1956)		X (partial)						
House Q-208 (J. Thompson 1954)		X			X			
Kukulcan Temple Q-162 (Shook 1954b)	X		X		X	X		
Temple H-17 (PEMY)	X (partial)			X				
Hall H-15 (PEMY)	X (partial)		X	X				

continued on next page

Table 8.2—*continued*

Structure	*Heavy burning final floor*	*Heavy burning roof, objects on floor*	*Dense surface deposits of effigy censers*	*Other abandonment rituals*	*Looted altar/shrine under roof fall*	*Contents of altar/shrine cache nearby*	*Skeleton (violent death)*	*Thrown down sculpture*
Y-45a (PEMY)				X				
Q-88a (INAH)		X						
Hall Q-97 (Shook and Irving 1955)			X		X	X		X
Hall Q-151 (Shook and Irving 1955)			X					
Alley Q-151/Q-152 (Shook and Irving 1955)			X				X	
Q-79 (Adams 1953)			X				X	
H-15/Itzmal Chen platform edge			X				X	
House Q-169 (Thompson and Thompson 1955)					X			
Round Temple Q-126 (Shook 1955)	X		X		X	X		X
Palace R-87/R-86 (Proskouriakoff and Temple 1955)	X	X		X	X	X		
Temple Q-80 (Winters 1955a)			X				X	

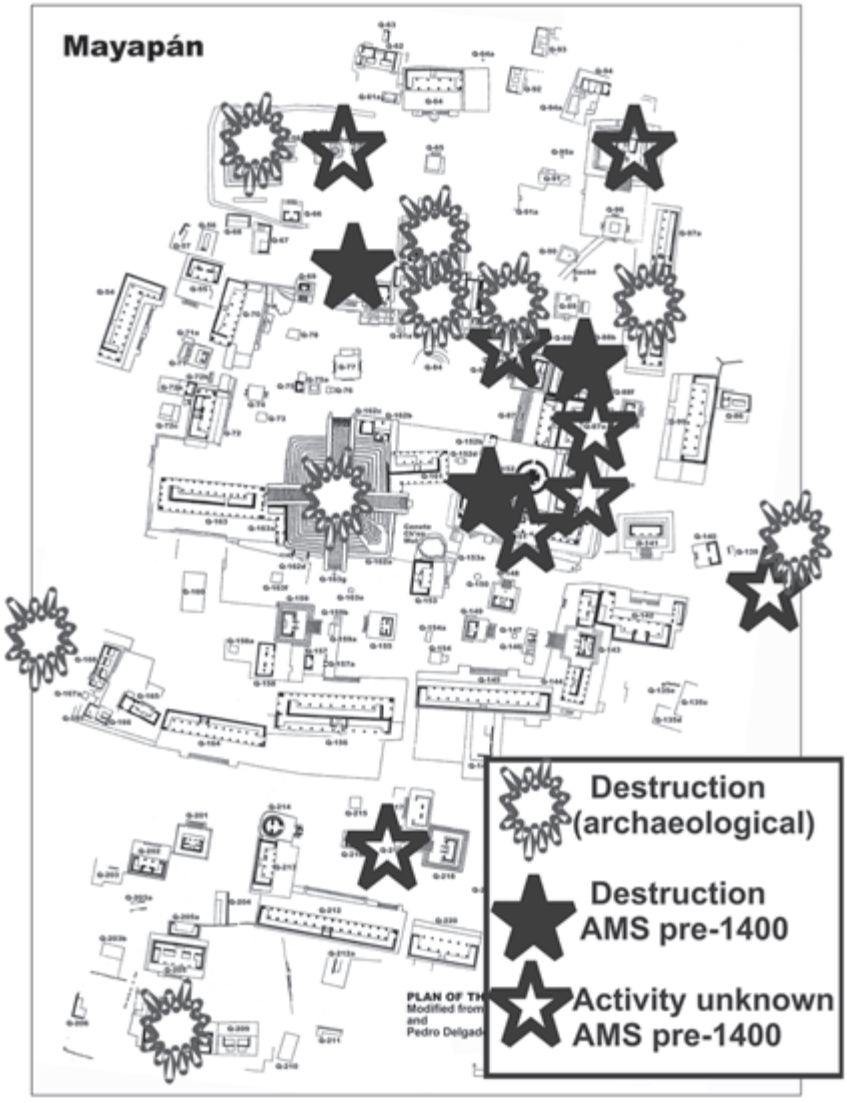

Figure 8.2. *Destruction and abandonment events recorded at Mayapán's monumental center.*

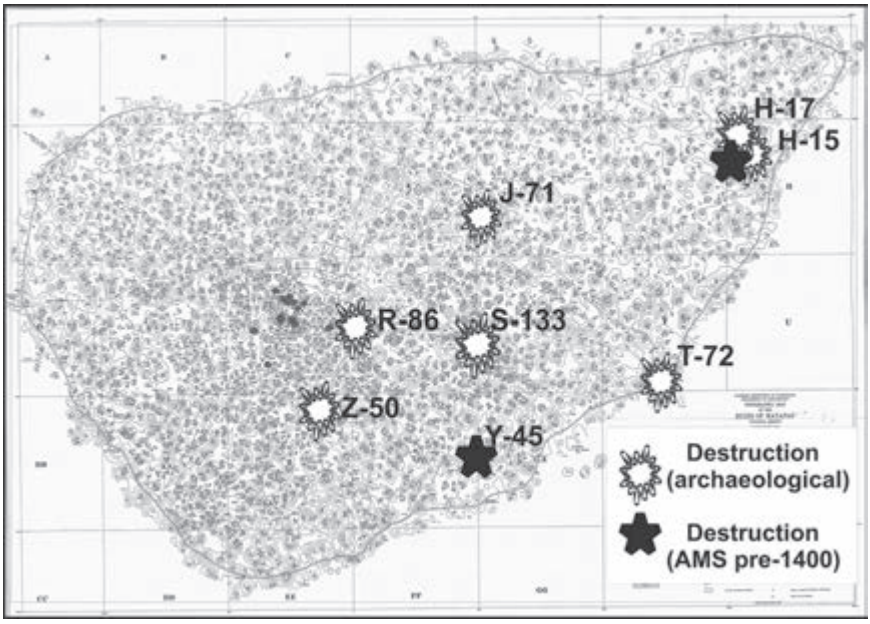

Figure 8.3. *Destruction and abandonment events recorded in Mayapán's settlement zone.*

POPULATION AND COLLAPSE

Issues of the Classic-era Maya collapse continue to be a source of scholarly debate (Turner and Sabloff 2012; Masson 2012). The abandonment of many Classic Period sites suggests that there was a dramatic decline in regional populations (Rice and Culbert 1990). Although fertility declines in mobile populations that are under stress, rapid resettlement can result in a quick recovery. Richardson B. Gill (2000:98) doubts that fertility was a factor that contributed to demographic decline in the Terminal Classic Maya lowlands. Until systematic survey is performed in well-watered zones away from Classic Period centers in areas such as northeastern Belize, it is difficult to fully document this process. Terminal Classic settlements are populous in northeastern Belize at a time when central Petén sites are abandoned (Sidrys 1983; Masson 2000; Masson and Mock 2004), but full-coverage survey has never been undertaken. The issue of population recovery during the Postclassic era is also poorly chronicled, especially as new sites are sometimes founded in locations away from conspicuous earlier centers. Coastal Yucatecan sites of the Postclassic era are numerous (A. Andrews 1977; Andrews and Vail 1990). How many small towns dotted the landscape? Settlement data is hard won in the Maya

area, and until more studies are done, arguments for the scale of demographic decline or recovery are weakly supported. We do not doubt the severe impacts that have been documented at many Classic-era sites and their immediate hinterlands (Rice and Culbert 1990), but other areas are more poorly understood. Susan Kepecs's (1999, 2003) years of survey in the Chikinchel region revealed a landscape dotted with towns occupied from Chichén Itzá's apogee into the Colonial Period.

Unfortunately, we have little demographic data for the regional settlement system associated with Mayapán. The fact that members of the city's confederacy returned to their hometowns or founded new polities after the city's fall is well known (Landa 1941; Tozzer 1941; Restall 2001). The majority of these towns were occupied when the Spanish arrived and are occupied today. Many of these longstanding localities were also settlements of the Postclassic era. Colonial churches were constructed on or near monumental architecture of Preclassic or Classic Period date that reflect long-term settlement histories for these towns. Archaeological documentation of public and domestic architecture is impaired by Spanish efforts to raze existing temples and use these materials or platforms to construct large Colonial churches at towns like Acanceh, Tecoh, Sotuta, and Mani, among many others. These towns were also reorganized according to a European grid plan, further impacting archaeological remains. Redeposited construction materials of earlier public buildings underlie central plazas in Yucatecan towns today, and in some cases ancient mounds still stand. At Telchaquillo, 1 kilometer north of Mayapán, public and domestic architecture is partially preserved, and the temple in this town's square was substantially modified during the Postclassic Period (R. Smith 1954; Ruppert and Smith 1957; Russell 2008a). Recent archaeological survey in the vicinity of Mayapán has located a number of Postclassic and earlier sites (Brown et al. 2006:7). During Mayapán's heyday, Yucatán may have had a population of 8–13 million (Stannard 1993:37). According to some estimates, 95 percent of this population may have been decimated in epidemics following European contact (Gill 2000:100). More research is necessary to assess pre-European populations, particularly for Postclassic-era Yucatán.

THE COLLAPSE OF THE CONFEDERACY

Droughts are not all alike, and we do not advocate a single cause for the collapse of Mayapán. As Gill (2000:302–4) points out, droughts were periodically experienced in Yucatán throughout the Postclassic Period. Some of the K'atuns in which they occurred did not result in political dissolution or

long-term catastrophic demographic effects. The regularity of suffering from shortages during various K'atuns suggests that, at least some of the time, effects were constrained by their short-term duration, limited geographical impact, or the ability to move food through markets (Freidel and Shaw 2000). Effects are difficult to measure from fleeting accounts in the Chilam Balam chronicles. Famines and droughts recorded by Spanish sources from the sixteenth through eighteenth centuries reflect abysmal suffering and death (Gill 2000:304–5). Sources seem to indicate that the fifteenth century was particularly severe in terms of the frequency and scale of environmental and epidemiological calamities (Kennett et al. 2012). Importantly, the fall of Mayapán is not attributable to societal failures and weak political or economic institutions, as was long assumed (chapter 1). Earlier collapses in the Maya sequence reflect oscillations of centralization and decentralization (Marcus 1993). In the forty to sixty years that lapsed between Mayapán's demise and the onset of European diseases, Yucatán towns were struggling with a barrage of natural catastrophes, shortages, and hostile regional relationships. This state of affairs was not uniformly experienced by all towns and polities across the peninsula. Well-watered agricultural zones, salt production towns, and trading centers were thriving on the eve of Spanish arrival (Chase and Chase 1988; Kepecs 2003; Berdan et al. 2003; Masson 2000, 2003b), even though Mayapán did not recover.

Mayapán's decline was prolonged. An increase in late thirteenth- or early fourteenth-century violence suggests an unstable environment and a city besieged by hostility. These circumstances provide a longer term context with which to view the final Xiu-led revolt that annihilated a large contingent of the Cocom nobility. Considering the series of catastrophes that befell the confederacy, it is remarkable that the political capital was able to maintain power to the extent that it did. The monumental buildings of the city were erected by at least 1200, and much of the following century seems to have been an interval of prosperity and growth. There are no historical accounts of disasters, and the radiocarbon sigma ranges for mass graves do not extend before 1270. The troubles of the late thirteenth or early fourteenth centuries seem to have been briefly overcome for the forty years—from 1382–1421—before they resumed. If the historical references correlate accurately with radiocarbon-dated events, then Mayapán thrived unfettered for only seventy years, from around 1200–1270, and regained some traction for forty years around the turn of the fifteenth century. A more interesting question to ponder given these indications is how the city and its polity endured until the mid-fifteenth century. The perseverance of the Mayapán state until K'atun 8 Ahau (1441–1461) attests

to the tenacity and power of political institutions and a populace sufficiently tolerant of this mode of governance throughout episodes of economic hardship and the purging of unpopular governors. In a comparative sense, the fits and starts of Mayapán's sequence are not unlike the troubled histories of the *longue durée* that are chronicled for other ancient states in which victorious, popular, leadership becomes legendary amid a backdrop of mediocre or even disastrous regimes. The dynastic legacies of the Classic Maya area are similarly punctuated and defined by exceptional, rare periods of prosperity under long-lived dynasts whose accomplishments far surpass those of their ancestors and descendants (Martin and Grube 2008). Like other ancient political capitals, Mayapán fell, but it is probable that in due course another regional center would have risen once again to unite this part of the peninsula. Some have argued that a new capital may have been developing at the large urban center of Mérida-Tihó, on the eve of Spanish arrival (Restall 1997:33–35).