

# THE COLLAPSE OF THE CLASSIC MAYA KINGDOMS OF THE SOUTHWESTERN PETÉN: IMPLICATIONS FOR THE END OF CLASSIC MAYA CIVILIZATION

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## Introduction

A long-standing problem in the study of Maya civilization is the eighth to tenth century end of the Classic Lowland Maya Civilization. The so-called “collapse” of Maya civilization has been the subject of popular speculation, as well as serious study and debate throughout the twentieth century. What must be made clear at the outset is that — in keeping with the theme of this volume — this crisis in the Maya tradition was the end of only one manifestation of that tradition: it was specifically the end of the city-states in the Maya lowlands, especially the southern lowlands. The Maya tradition continued elsewhere with vigor and recovered significantly in the northern lowlands. It was one specific episode in the vast spectrum of Maya civilization discussed in this volume.

Nonetheless, the late eighth to tenth century crisis in the Maya tradition in the lowlands is of tremendous interest for comparative studies of civilizations. The end of the city-states of the lowlands can be compared to theories on the crises and transitions in other civilizations to provide insights into the general processes of the cycle of the rise and then the disintegration or transformation of states and, indeed, of all complex societies. One of the great intellectual problems of all social sciences has long been, “Why do civilizations follow a trajectory that in general fails to stabilize?”, “Why is success in complex political systems unable to achieve equilibrium or sustainability?” Studies in philosophy, history, politics, and anthropology have contemplated this question and what it also tells us about the very nature of societies. How a society disintegrates or transforms tells us much about how it was structured in the first place. Thus, archaeological and historical study of the end of civilizations allows us to begin our understanding of the institutions and adaptations of that ancient set of social, political, and ideological systems.

## What Is Collapse?

Despite many recent archaeological studies there is still disagreement as to the nature and causes of the end of the lowland Classic Maya kingdoms, just as there is great disagreement over the collapse or decline of other civilizations, states, or chiefdoms such as the Moche, Indus, Easter Island, Chaco,

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Khmer, and many others. The lack of consensus is due in part to gaps in the archaeological record. However, it is also due to preconceptions about the very concept of the collapse of civilizations, in other words, about *what is* a “collapse.”

The collapse of an ancient society does *not* mean an end to its “great tradition” such as its culture, worldview, ethics, literature, and other major characteristics. It only means a relatively rapid decline or disintegration of a specific complex political and economic system of a society (Tainter 1988; Yoffee and Cowgill eds. 1988). It is only the specific configurations of politics and economics, their legitimation and level of complexity, that change radically, decline, or disappear. Such a rapid change at the end of a civilization often can also involve warfare, destruction, and population decline. Yet, in many cases, it does not involve such traumatic events.

In the case of the Classic Maya, the term “collapse” really refers to the disappearance between AD 750 and 1050 (rapid in some regions, more gradual in others) of the specific system of complex states and alliances in the Maya lowlands of eastern Mesoamerica — taking with it the spectacular art, architecture, monuments, and writing that were part of Classic-period political ideology. While noting the continuity of the Maya cultural tradition, there was indeed a great crisis and political change in the lowland area of Maya civilization in that period. It is these metamorphoses or catastrophes that are referred to by archaeologists as “the collapse of Lowland Maya Classic-period civilization.” During those three centuries, one by one, nearly all lowland Maya city-states were abandoned or radically declined in size and complexity.

It was in the southwestern region of the Petén emphasized here that the process of change was a true rapid “collapse” where, beginning as early as AD 700 to 730, villages in some areas began to be abandoned, then major centers were destroyed, and populations displaced. While some major centers like Altar de Sacrificios and Ceibal survived into the tenth century, by AD 800 in the southwestern lowlands many city-states had been reduced to small populations, some with a few clusters of huts or no occupation at all. Meanwhile, dramatic changes were underway in other lowland regions.

### **What Collapsed? The Nature and Salient Traits of Classic Maya Civilization**

What was it then that collapsed, declined, or was transformed by the end of the Classic period? It was a specific type of political system and its material culture: a system of competitive states with most forms of power (religious, military, and political) focused on their “Holy Lords,” the *K'uhul Ajaw*. While we cannot say that the highly variable states did not have other salient characteristics, most of these states were relatively heavily dependent in their political ideology and power on religion and ritual manifest in spectacular ceremonies. These were staged in great plazas surrounded by awe-inspiring architectural settings including temples, inscribed monuments, hieroglyphic stairways, ritual ballcourts, and great palaces. In the courtyards and throne rooms of the palaces even more elaborate rituals were staged for smaller, more elite audiences of royals and nobles. Those palace settings also required patronage networks to furnish courts with sacred goods and feasting provisions (McAnany 2012). In this respect, but not all others, most southern lowland Maya centers of the Classic period were indeed like the “theater states,” as scholars call them, of the southeast Asian civilizations (Demarest 1992; Geertz 1980). In those states, for example the Khmer and Fugan, religious and political power were combined: long and lavish ceremonies were critical to draw the support of the people and hold together the bureaucracy of nobles and priests.

Such city-states and kingdoms also had powerful economies with state involvement at several levels. Nonetheless, religious ritual and political patronage were both important elements in their social configurations. Maya city-states also varied greatly in control of agricultural and hydraulic resources with mega centers like Calakmul, Tikal, and Caracol maintaining regional economic networks of considerable size (e.g. Chase and Chase 1996). Still, to synthesize, we can say that some very common characteristics of many, but not all, Classic Maya states are summarized in Table 1. This set of traits is polythetic, meaning that a majority of these features were present, but not all characteristics need be present, in this case in Classic Maya states. It is also not, by any means, a

complete set of traits of Classic Maya polities. One element that was critical to even the largest cities were ideological systems similar in function to the more famous “mandala” patterns of Southeast Asia like Angkor Wat in Cambodia. Like those centers many details were aligned with sacred geography, astronomy, and other symbolic correlations. In the Maya case, site position, architectural details, and monument placement were oriented to the sacred “color directions,” to the subterranean chambers and channels of caves, and, in some cases, with geometrical alignments of the temple-tombs of kings to those of their royal ancestors (e.g. Brady 1997; Demarest et al. 2003; Harrison 1999). This entire labor-expensive splendor served to create the settings of the great ceremonies which brought prestige, power, and patronage to hold the allegiance of lords and commoners. It must be emphasized again, however, that these traits were only part of a far more complex economic system. Yet in the southwestern Petén in particular, it was aspects of these traits and the status rivalry that they generated that appear to have been most critical to its crisis.

TABLE 1: A POLYTHETIC SET OF GENERAL TRAITS OF CLASSIC MAYA  
POLITICAL AND ECONOMIC SYSTEMS

1. Emphasis on combined ideological, ritual, political, and military power of the central figure, the *k'uhul ajaw* (“holy lord”).
2. Less segregation of roles and of power compared to the various *multepal* Postclassic systems.
3. Great investment, relative to scale of societies in massive rituals, architectural stages, monuments, esoteric writing systems (largely political and religious aggrandizement of “holy lords”). (In this sense, most Classic-period centers were “theater-states” in the *general* Geertzian sense [Geertz 1980]).
4. In *most* regions, *most* centers only weakly involved in infrastructure of agricultural production and exchange (again, with significant exceptions).
5. Local settlement patterns, in general, more dispersed, with weak urban-rural distinction.
6. Highly varied, micro-niche sensitive, agricultural systems generally sub-regionally self-sufficient in subsistence essentials.
7. With some notable exceptions, relatively few large-scale redundant field systems for *over-production* of food or commodities particularly in the south.
8. As a consequence, *primarily* sub-regional markets.
9. Thus, long distance exchange systems were generally in non-subsistence exotics or lithics for ritual and elite patronage networks.
10. Discontinuous and unstable systems of alliance between polities, usually collaborations in warfare, or for maintenance of long-distance exchange networks in exotics.
11. Warfare with limited economic consequences, sometimes with ideological goals, more often for dynastic control and elite status rivalry.
12. Warfare sometimes on a larger scale over control exchange and transport routes of exotics for ritual and elite patronage.

The ideological legitimation given by state ritual and patronage required great labor, as well as the import of exotic goods like sacred green jade, quetzal feathers, and pyrite from the highlands and conch shell and stingray spines from the coasts. The demands of the latter led to status rivalry expressed in competition for control of routes of exchange. It also fueled warfare or alliance for goods needed for display of strength and for tribute in the materials needed from distant regions especially the highlands. The Classic Maya dynastic status rivalry (O’Mansky and Demarest 2007)

was structurally similar to the competition in art, architecture, and war between the cities of Italy in the fifteenth and sixteenth centuries. The latter generated the grandeur of the Renaissance, just as the rivalry between Maya states led to the magnificence of the lowland Maya Classic.

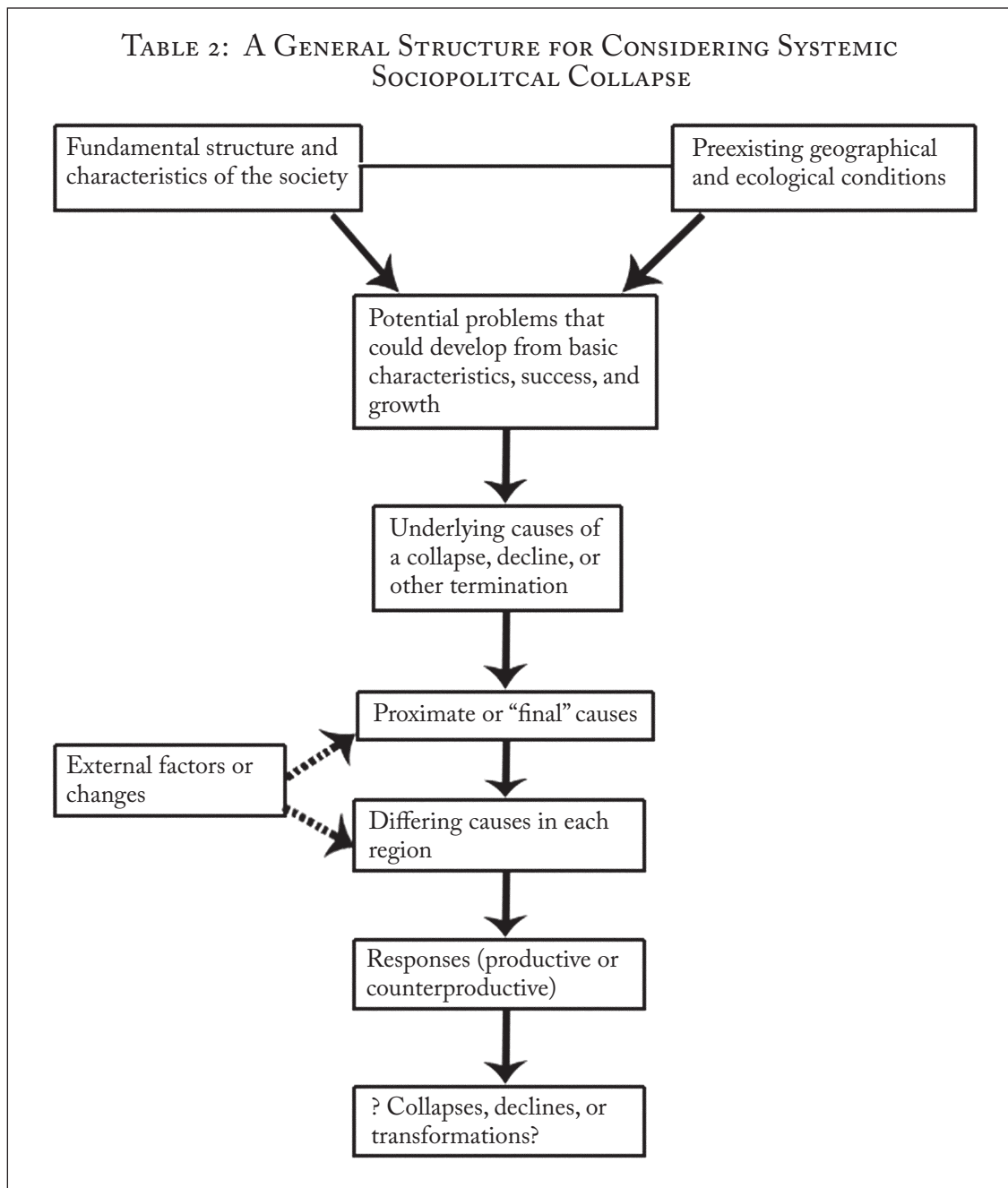
After some period of trial and error in the Late Preclassic (see below), by the Classic period the Maya *K'uhul Ajaw* system had become fairly well adapted to the ecology and agriculture of their fragile subtropical rainforest environment. That may have been due, at least to some degree, to the fact that in most, but not all, subregions of the lowlands the role of the rulers and the state in the actual infrastructure of farming was limited. While there were notable exceptions, especially at the largest centers, in general decisions about agriculture and land use may have been made at the level of communities who would have been most knowledgeable about the sensitive and fragile variation in the forest soils, slopes, and karst landscape drainage conditions of the Petén and southern Yucatán peninsula. Paleoecological studies and farm and garden excavations have revealed that in the fourth to early eighth centuries, most areas had adjusted and continued to respond interactively to their local conditions by using a wide range of different techniques, including careful swidden, terraces, stone box gardens, sunken gardens, check dams, reservoirs, seasonal use of bajos, and a mix of fallow and forests (e.g. Dunning and Beach 2003; Dunning et al. 1997, 1998; Nations 2006). A few areas and great sites did have intensive subsistence with some probable state involvement to create reservoirs, canals, zones of true *chinampas* in swamps, or extensive terrace systems (e.g. Chase and Chase 1996). However, it was the religious and political activities of the holy rulers and their courts that still held together the *specific* structure and social fabric of Classic Maya society through faith, ritual, war, and patronage.

### **Strengths Become Weaknesses: The Underlying “Root Causes” of the Maya Collapse**

These structural features that lead to the success of any complex society can also become weakness in the face of growth and internal or external change (Table 2). In the collapse or decline of civilizations this paradox is usually the case: over time the very success of the features of a society can lead to stresses and even to disintegration. Another tendency is that as societies become more complex and more highly integrated, they also become more fragile, a phenomenon sometimes dubbed “hyper integration.” The growing network of Maya states with their alliances, shared religious systems, and trade and exchange networks was increasingly complex, integrated, interdependent, competitive, and thus fragile, while the *internal* hierarchy of rulers and nobles within these states was following this same trend.

One of the strengths of Classic lowland Maya kingdoms was largely responsible for the beauty of its material culture: the reliance of the “Holy Lords” on religion, rituals, and massive ceremonies to sustain their power. This strength became one of the many sources of stress during the Late Classic period, as the royal and noble class grew through the expansion of bureaucracy, patronage, and polygamy, a process characteristic of many complex societies. This growth of the elite class was reflected in the multiplication of the number of emblem glyphs in the monuments of the seventh and eighth centuries, indicating the identification of more dynastic seats. This proliferation of smaller centers together with the growth of older major cities led to an ever-larger elite class requiring more architecture, art, tombs, and expensive supporting courts to be provisioned, the latter requiring more materials that had to be imported and crafted.

All of this beauty, ceremony, splendid art, growing courts, and architecture had an escalating energetic cost in labor for all aspects of construction, crafting, and ritual, as well as for intensification of agriculture to support the multiplying elite classes and their retainers and full or part-time specialists — whose own role in subsistence activities had been reduced or eliminated. These classes would have included royal and noble court members, artisans, priests, war leaders, architects, and court staff from cooks and fan bearers to jesters. In some centers they would also have included rowers, porters, and merchants. By the final centuries of the Late Classic many more of these may have become full-time



non-agricultural specialists.

In the southwestern Petén the most salient consequence of these same processes was more frequent and more intense warfare between the more numerous rival centers and unstable alliances. Meanwhile, there as elsewhere the expanded elite class and courts and royal marriages between states created more contenders for the many thrones. As in all warfare, there are high costs in terms of subsistence support and transport for the mobilization of forces, weapons, fortifications, and reconstruction. Yet at the same time there is a loss of farmers and a disruption of the agriculture that maintains all of those activities. Evidence from texts, art, artifacts, architecture, and site placement all indicate more numerous and more destructive warfare events in the southwest in the sixth to eighth centuries (Demarest 2004; Demarest et al. 1997; O'Mansky and Dunning 2004). As in other situations of competing and warring rival states, the leaders at all levels, from king to extended family



patriarchs would have encouraged population growth, given the need for labor and sustenance for laborers for those activities.

In a number of regions archaeological evidence indicates Late Classic growth in non-elite population, intensification of agriculture, and, in some zones, clear evidence of overuse of soils, erosion, and anthropogenic environmental deterioration. While some have viewed such unsustainable agronomic practices as a “cause” of the collapse, the real issues of causality can be seen at the deeper level of the political and structural factors (cf. Table 2) that sent leaders and followers in some regions down a path toward ecological self-destruction. The Classic-period Maya thoroughly understood their dependence on the humid tropical forest and its limestone geology, and they had adjusted to its sensitivities and subsistence challenges for centuries. Yet, short-term thinking driven by political and economic competition, war, and status rivalry, has often led the leadership of states to ignore growing environmental damage.

In many ways this is a familiar story of civilizations beginning with the success of their basic structural elements and major features, but leading to intensification in energetic demands that ultimately damaged the same system that had created success. In the end those same strengths reversed in their effects to lead to crisis. Some complex societies and states, leaders, or populations have responded to such crises to adjust their systems, but other civilizations simply rapidly collapsed or slowly declined or were absorbed by neighboring states or societies. Babylon, the Khmer, Rome, Chaco, and other civilizations followed a similar course toward their decline (Tainter 1988; Yoffee and Cowgill 1998).

### **The Earliest Regional Collapses: The Southwestern Lowland River Route**

The collapse or, if you prefer, the crisis of the *K'uhul Ajaw* system was earliest, and most violent in the southwestern Petén along the Pasión-Usumacinta river and adjacent highland valleys, the transport “super-highway” of the Classic Maya world. The scene may have been set for this collapse as early as the great wars between the loose alliances of the city-states of Tikal and Calakmul in the sixth and seventh centuries (Martin and Grube 2008). Major targets of these wars were the trade routes in sacred goods like jade, quetzal feathers, pyrite, and some non-exotic commodities such as obsidian and salt.

In considering the entire culture history of the western Petén, one factor is that “upstream-downstream” river systems have linked histories. There is unity, or at least cooperation, or there is chaos, as in the Nile’s major pharaonic kingdom dynastic periods and their intermediate periods of crises. Interruption of the river system leads to conflict and destabilization, be it interruption of the flow of water for irrigation, as in Mesopotamia, or interruption of the exchange in exotics, as occurred on the Pasión river system and its connected southern highland valley corridors. Thus, the appropriate unit of interpretation is not the site kingdom or subregion, it is the whole linked western trade route (Figures 1 and 2).

I believe that historical reconstruction of Pasión Valley history, while still in its infancy, is far more detailed and convincing than other regions since it has been studied first by two decades of Harvard projects (e.g. Willey 1973, 1990) and then by 21 field seasons of Vanderbilt research (e.g. Barrientos et al. eds. 2006; Demarest 2006a; Demarest and Houston eds. 1989, 1990; Demarest and Martínez eds. 2010; Demarest et al. eds. 1991, 1992, 1995, 2007, 2008, 2009, 2011; Inomata 1997, 2008; Valdés et al. 1993) focused on the collapse issue, as well as investigations by other institutions (e.g. Bachand 2010; Eberl 2007, 2013; Eberl and Monroy 2007; Inomata 2003; Inomata et al. 2002). These constitute a series of independent but collaborative projects that cover this contiguous, multi-regional western transport system with iconographic, historical, and laboratory research to connect chronologies and culture-historical reconstruction. We now have such linked culture histories between continuous projects of the Pasión river valley and the adjacent Verapaz highland routes (cf. Figure 2) (Demarest, Woodfill et al. 2007).

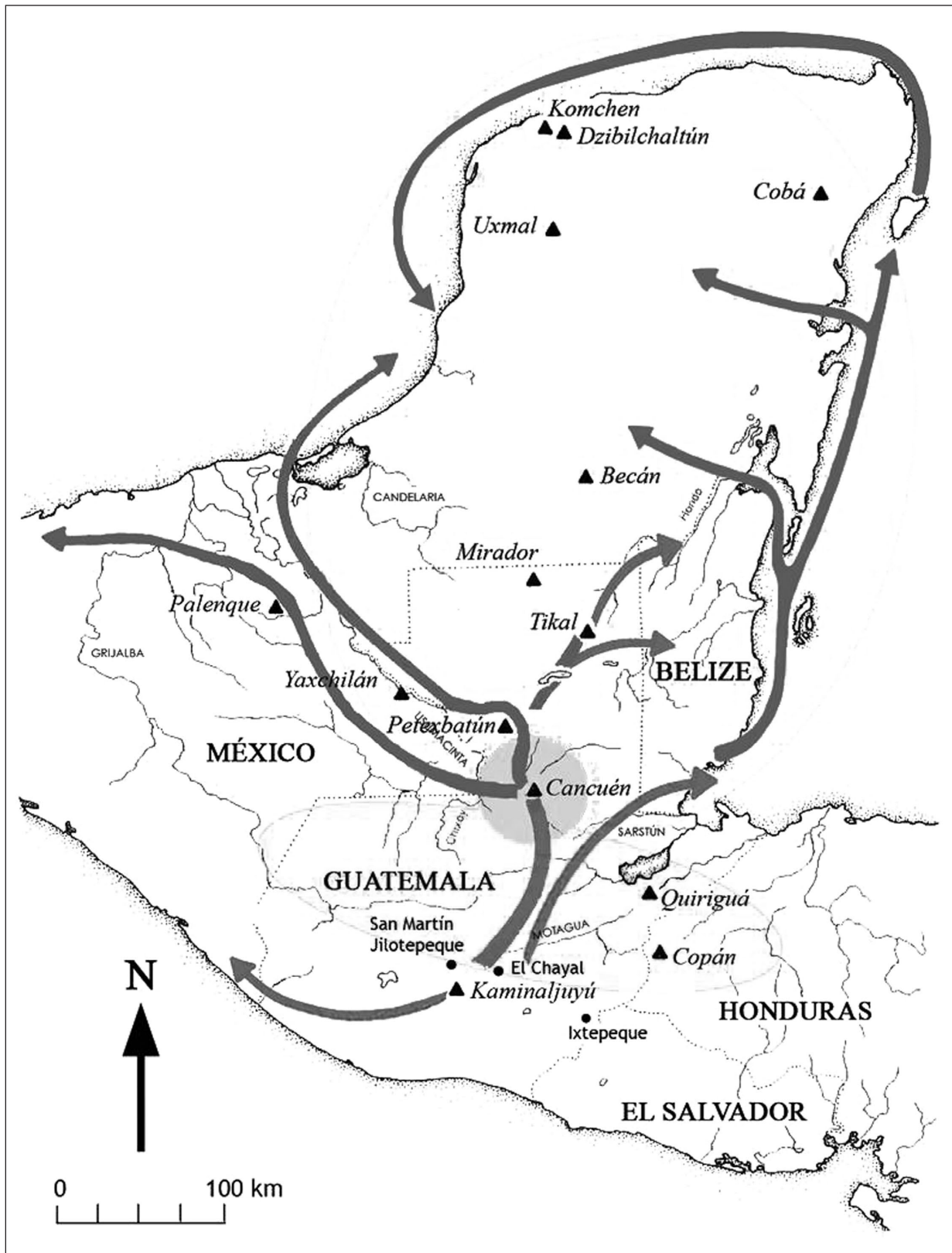


Figure 1. Major trade routes of the Classic Period.

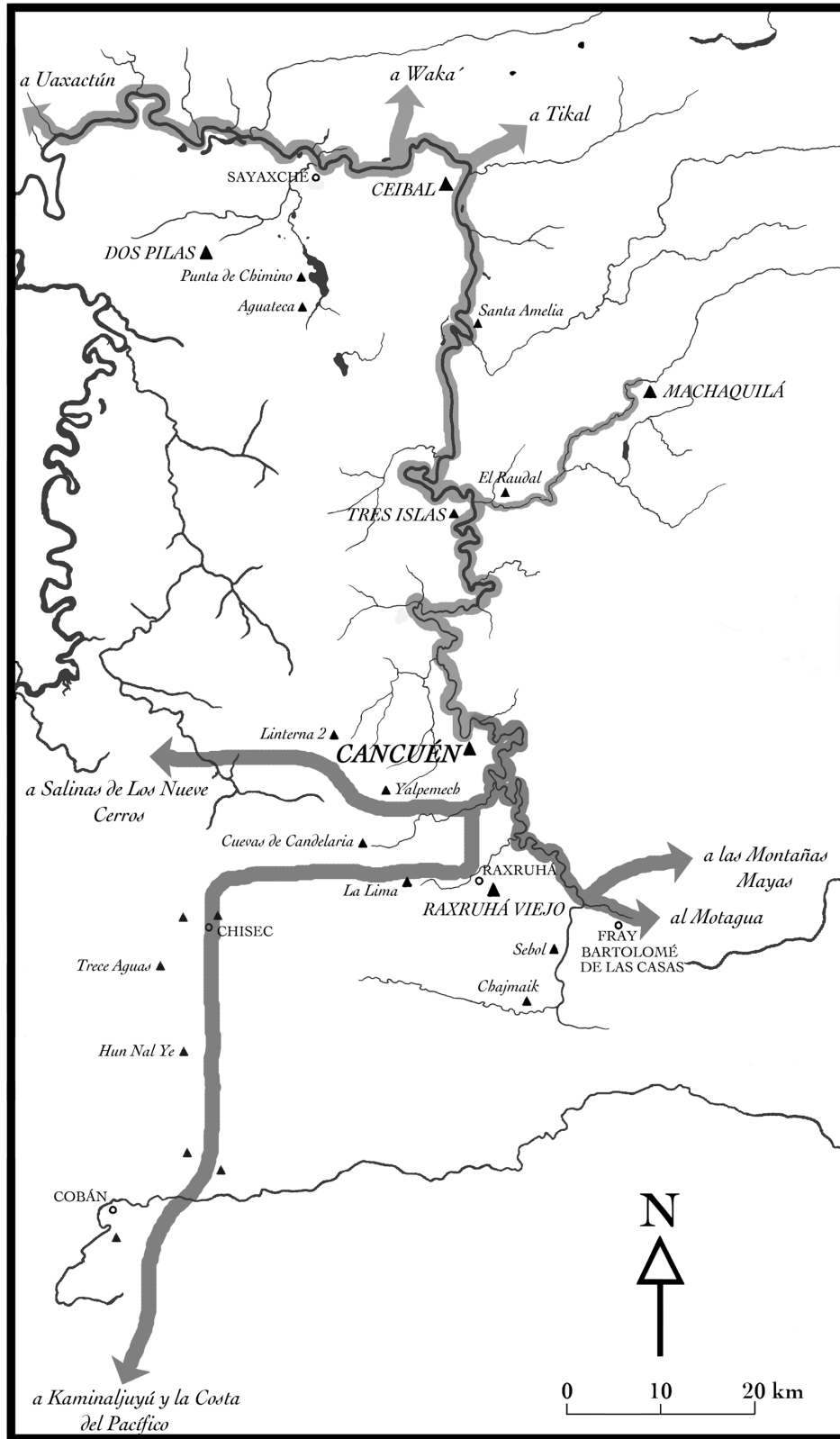


Figure 2. Pasi3n-Verapaz linear linked river and land routes.



TABLE 3: HISTORY OF THE PASIÓN-VERAPAZ TRADE ROUTE (PLEASE NOTE: GENERAL <i>SPECULATIVE</i> VIEW)	
1000 B.C. – A.D. 400/450	<i>Preclassic Period</i> <ul style="list-style-type: none"> <li>• Little evidence, but general influence of Petén</li> </ul>
400/450 – 657	<i>Period of Tikal Control (Pax Tikal)</i> <ul style="list-style-type: none"> <li>• All the way into the highlands</li> </ul>
657 – 695	<i>Period of Calakmul Control (Pax Calakmul)</i> <ul style="list-style-type: none"> <li>• Calakmul conquest of the river route</li> <li>• Defeat of Calakmul 695</li> </ul>
695 – 740 [collapse begins]	<i>Period of Dominance of Dos Pilas and Alliance of Former Calakmul Vassal States (Waka', Dos Pilas, Cancuén, etc.)</i> <ul style="list-style-type: none"> <li>• Level of war limited, but increasing</li> </ul>
740 – 800 [Full Collapse of Pasión/Petexbatún]  [Florescence of Cancuén begins]	<i>Period of War and the Collapse of the West</i> <ul style="list-style-type: none"> <li>• 743 Fall of El Perú/Waka' on the northern route</li> <li>• Wars within and collapse of the alliance of former Calakmul States</li> <li>• 740 Exodus of the Petexbatún communities</li> <li>• 761 Destruction of Dos Pilas kingdom</li> </ul>
750 – 800	<i>Period of the Florescence of Cancuén</i>
820 – 950	<i>Terminal Classic</i> <ul style="list-style-type: none"> <li>• Fall of Cancuén approx. 800</li> <li>• Militaristic and transitional states like Ceibal and Altar survive, flourish, and then slowly decline</li> </ul>

Table 3 gives a trial synthesis — preliminary and speculative if not reckless! — of the linked histories of the river states and alliances of the great western trade route. It can be criticized on many points, as can any such generalizing chart. But it is necessary to posit trial syntheses to generate criticisms and testing. It does note the differential on dramatic change between later Terminal Classic centers like Ceibal and earlier collapses like that of Dos Pilas — with Aguateca and Cancuén falling chronologically in between. The details will change with each field season of each project, but perhaps some general trends will survive future scrutiny.

Here the focus is on the AD 695 to 800 sequence of apogees, wars, and migrations that ended in the violent collapse of most kingdoms of the western exchange route. Note that all of these radical

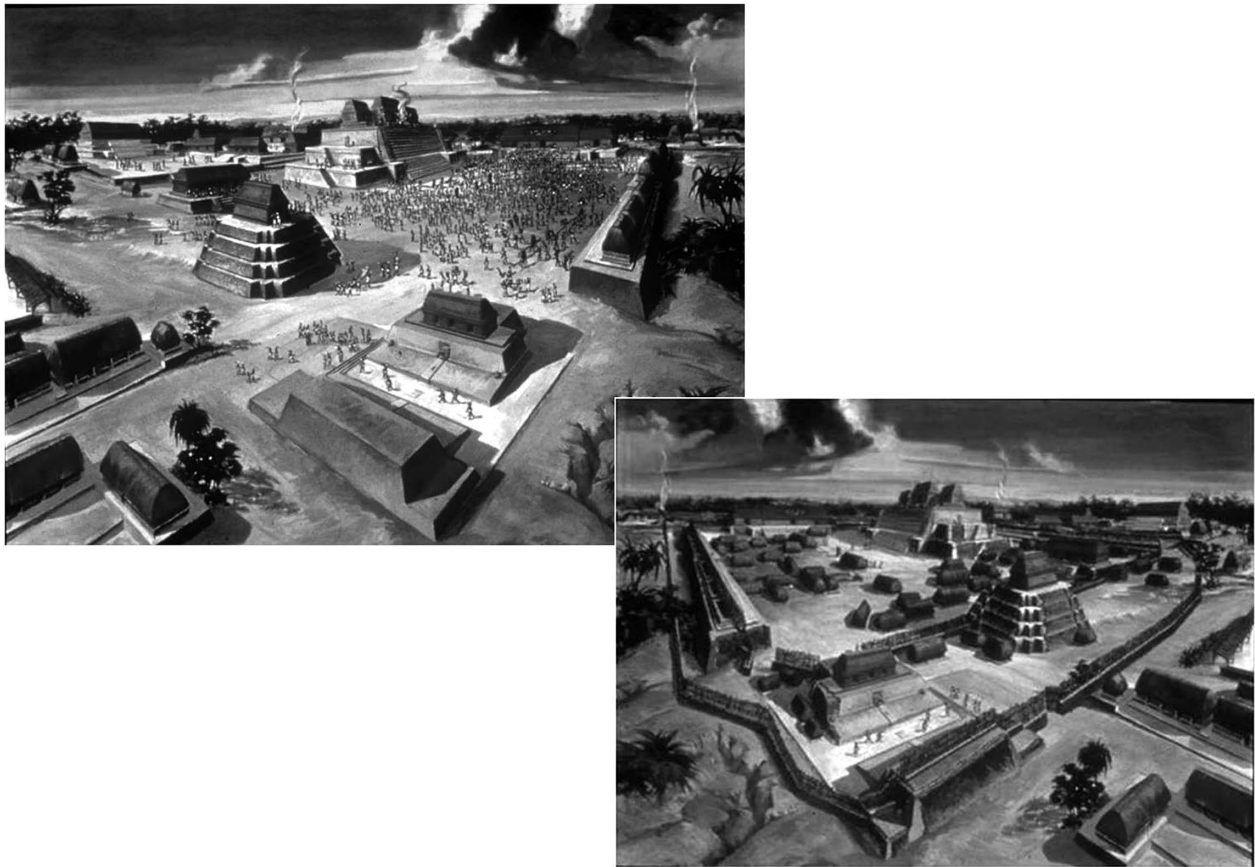


Figure 3. Dos Pilas before and after AD 761 siege and destruction.

changes occurred a full century before most proposed global, silver-bullet solutions to the collapse issues, including droughts. The Pasi3n region historical trajectory offers some insights into the general reasons for the failure of the most southerly lowland polities to join the Terminal to Postclassic pan-Mesoamerican economic and political transitions and transformation.

Work has continued in the Petexbat3n region and elsewhere along the Pasi3n since our 1989-1996 research. New ceramic microchronologies, texts, and archaeology have led to new understandings of the linked history of the Pasi3n river and highland routes. The Dos Pilas kingdom flourished under Calakmul and even more so after that state's decline after 695.

We now realize the unsurprising fact that the destruction of the royal capital of the Petexbat3n region, Dos Pilas, was not the beginning of the political disintegration, rather it was closer to the end (Figure 3). By AD 730 probably beginning at 695 some farming communities were leaving the zone completely or were abandoning their fields to cluster at defensible centers like Aguateca, Ceibal, and Punta de Chimino. Walls began going up and populations began to leave or to shift to defensible locations even at the village level (Eberl 2007, 2013; O'Mansky and Dunning 2004) (Figure 4).

By AD 743 after the defeat of El Per3-Waka', the river system began to fall apart. Centers were being destroyed by military attacks, and populations were greatly reduced in most kingdoms. At the Petexbat3n capital of Dos Pilas the besieged population dismantled much of their own temples and palaces in a desperate attempt to build stone defensive walls (cf. Figure 3), but these failed and the city was destroyed (Demarest and Houston 1990; Demarest et al. 1991, 1997; Palka 1995). Aguateca held out longer because of natural and extensive constructed defenses, but by AD 800 it was finally overrun and burned (Inomata 1997, 2001, 2008). A smaller but even more defensible site, Punta de Chimino, was located on a near-island peninsula reinforced by moats and walls (Figure 5). It was able to protect its population for another century (Demarest and Escobedo eds. 1997; Demarest,

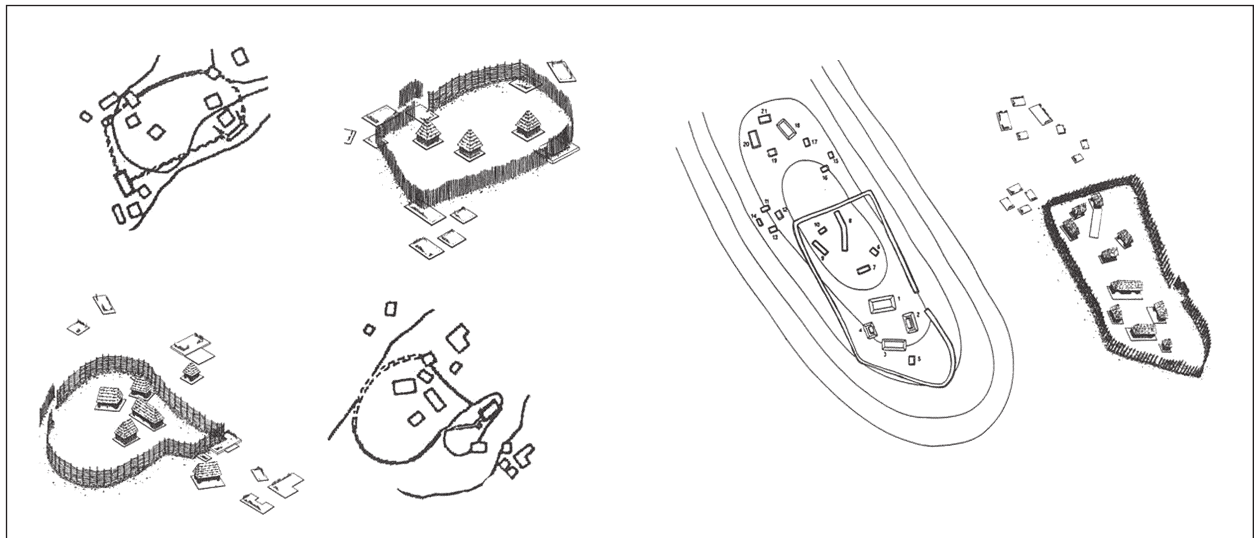


Figure 4. Walled village refuges in the Petexbatún region in the late eighth century.

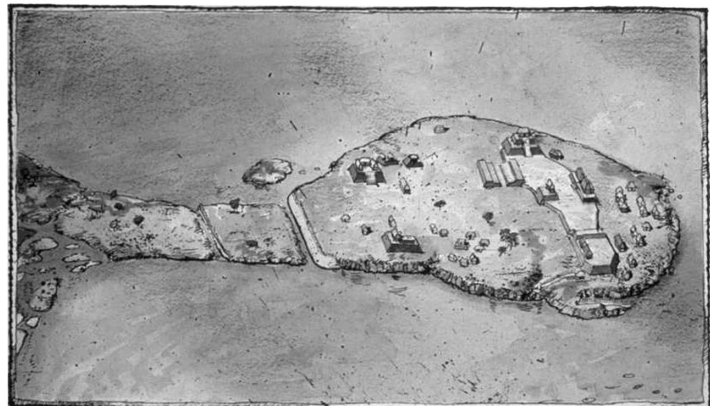


Figure 5. Punta de Chimino peninsula and defensive moats of the late eighth century.

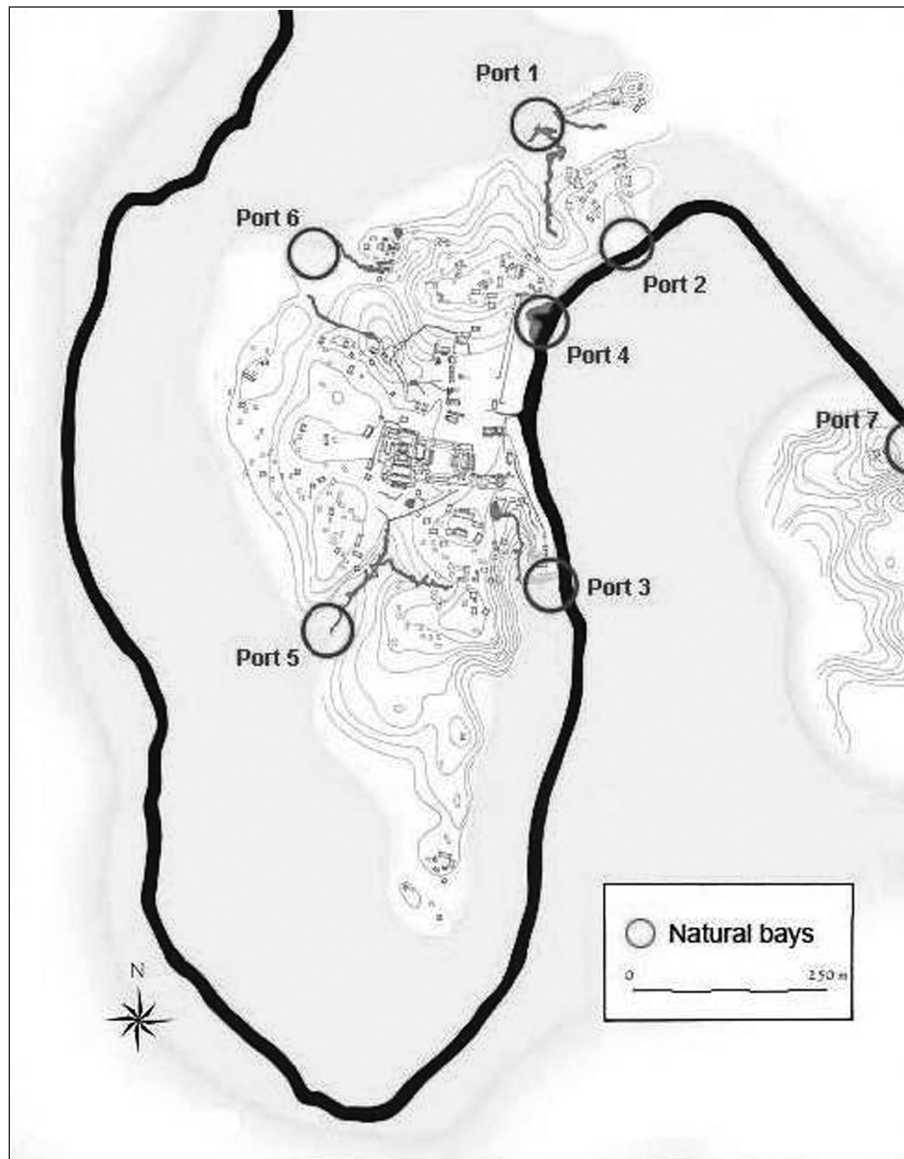


Figure 6. Cancuén showing head of navigation ports.

Escobedo and O'Mansky eds. 1996; Wolley 1993; Wolley and Wright 1990). Meanwhile, Cancuén, Ceibal, Altar de Sacrificios, and some others experienced periods of expansion fueled, in part, by the immigration of lords, artisans, and labor from the other collapsing centers and rural areas.

Further south on the Pasión river the rich trading port of Cancuén had a later 750 to 800 florescence, with the construction of palaces, splendid ballcourts, monuments, a ritual water system, and formal port facilities (Barrientos and Demarest 2007; Barrientos et al. eds. 2002; Demarest and Barrientos eds. 1999, 2000, 2001; Demarest and Martínez eds. 2010; Demarest et al. eds. 2003, 2004, 2004, 2007, 2008, 2011) (Figure 6). This extraordinary period of greatness and internationalism may have been based in part on the immigration from the collapsing Petexbatún kingdoms to the north, but was certainly based on the elimination of competing routes. Cancuén was possibly the largest southern lowland port center of Classic Maya times, located at the very beginning of the Pasión/Usumacinta river route, as well as at the intersection of the highland valley land route leading south and the "Transversal" land route leading west to Chiapas, Tabasco, and Veracruz (cf. Figure 2). This strategic position in international trade was responsible for the site's monuments, ceramics, jade workshop, and architectural features.



Cancuén's apogee shows influences from many zones of Mesoamerica including the southern highlands, Tabasco, and Veracruz. Cancuén's economy turned to long distance exchange of jade, obsidian, and other materials with ceramic imports from Veracruz and Tabasco (Forné et al. 2009, 2010). Furthermore, there was a shift to a division of power between the *K'ubul Ajaw* and a large elite hegemony as represented in its oversized political/ritual administrative, rather than residential, royal palace and a dozen smaller sub-royal elite palaces or range structures (Barrientos 2012; Barrientos and Demarest 2012; Demarest 2006b) (Figures 7 and 8). These nobles' palaces were positioned to oversee ports, a jade preform workshop, and highly segmented and coordinated production of stone tools. All of this evidence indicates an early shift at Cancuén from Terminal Classic to Postclassic economic patterns.

Nonetheless, for the same underlying reasons and limitations as other southern lowland states, Cancuén's experiment with the new western and highland economic and political order failed. The site was destroyed about AD 800 and its king, queen, and over thirty nobles were executed with great ritual, most of their bodies deposited in full regalia into a sacred cistern (Suasnávar et al. 2007) (Figure 9).

The florescence at Cancuén, later Machaquila, and then later Ceibal, and other ninth-century apogees incorporated displaced populations, artisans, and elites and were each based to some degree on the elimination of competitors. There are many examples of such population displacement "boom towns" in Somalia and central Africa.

Slightly later, further north along the Usumacinta branch of the trade route, centers like Yaxchilán and Piedras Negras waged great wars against each other, celebrated in monuments and art. New archaeological evidence by a series of smaller projects on the borders of the Usumacinta river have uncovered small fortified sites and defensive constructions to control small detours as the main river routes were closed by war (Golden and Scherer 2006; Golden et al. 2008, 2010).

Following a broad and irregular southwest to northeast trend, the polities in the central and northeastern Petén like Tikal, Uaxactún, and Naranjo already had their own problems and regional pressures on their kingdoms and agricultural base, including overpopulation, and environmental deterioration, and others. While western Petén population displacement and the end of western exchange routes initially may have led to florescences elsewhere, they also ultimately would have added to the already considerable problems in the central Petén and beyond.

### General Synthesis of the Southwestern Petén Collapses and Transformations

The radical collapse and more ordered transition at the end of Classic Maya civilization cannot be explained by any simple event or process. Rather, like the end of most complex societies, it was the gradual accumulation of problems caused by the same fundamental structural characteristics that had led to the success and the grandeur of ancient Maya civilization. Some of these were also the factors that became its weaknesses. The very success of the features of a society usually later leads to stresses and even to disintegration. Thus, in a sense, florescence *is* collapse, and continuous sustainability of political systems may be impossible.

To synthesize, I propose a very speculative trial reconstruction of the *underlying* "root" causes of the particular manifestation of the lowland Classic Maya collapse in the southwestern Petén: the basic structural characteristics of Maya civilization led over time to processes of change that by the seventh and eighth centuries had guided the Classic Maya lowland polities to the following (with factors most relevant to the final processes in the southwestern Petén in italics):

- 1) greater size and scale of centers,
- 2) growing bureaucratic complexity,
- 3) more centers and dynastic seats,
- 4) ever more elites,
- 5) increased *status rivalry* within and between centers in expensive constructions and ritual



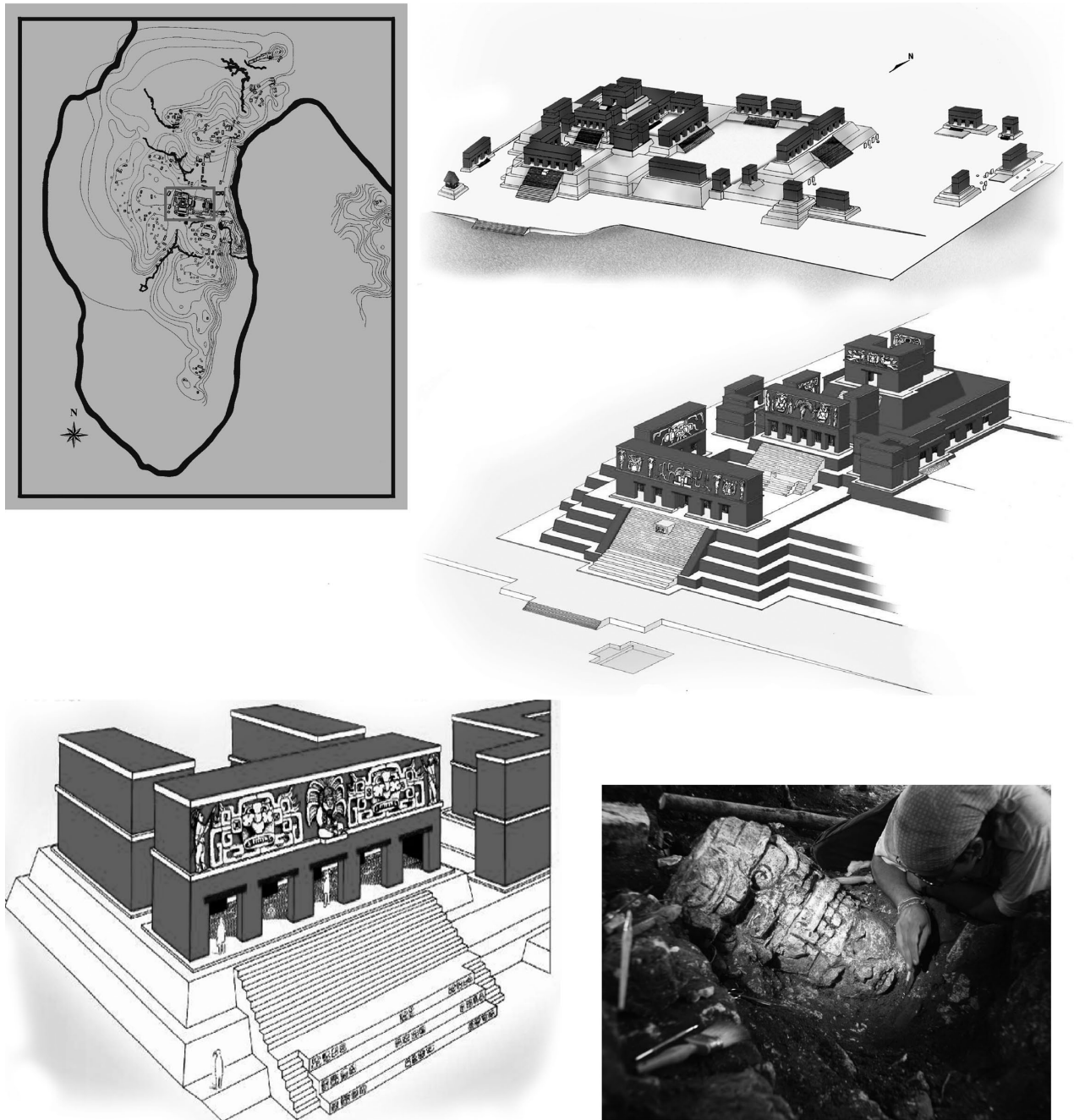


Figure 7. Views of some zones of Cancuén's ritual/administrative palace.

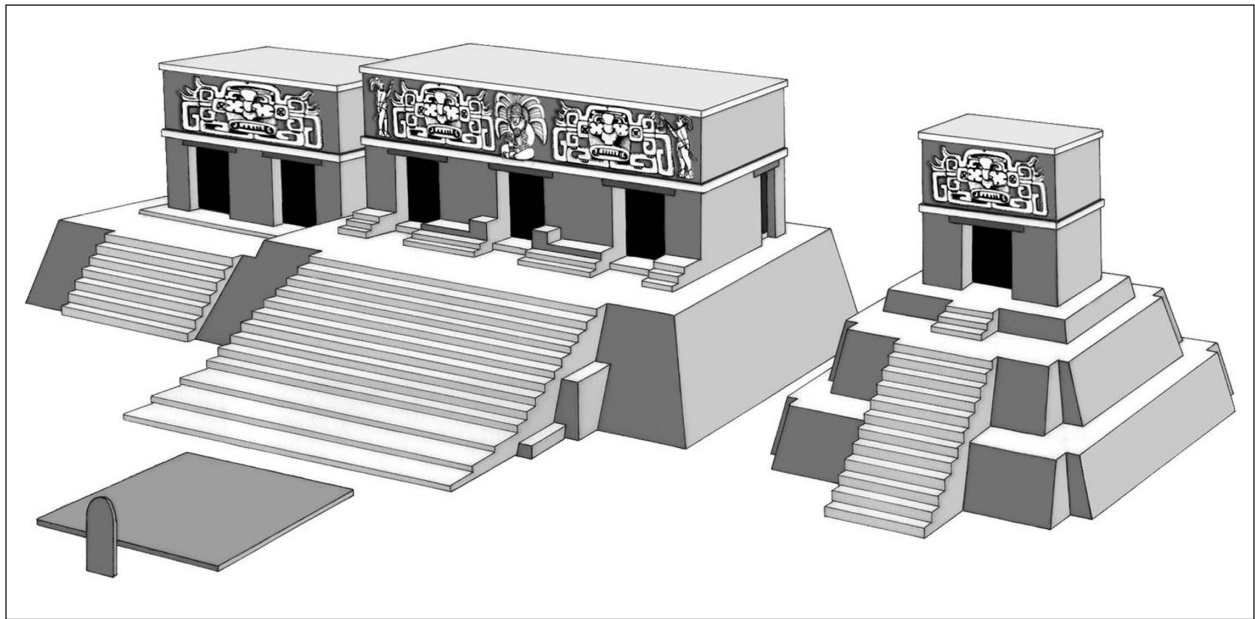


Figure 8. Sub-royal palace at Cancuén.

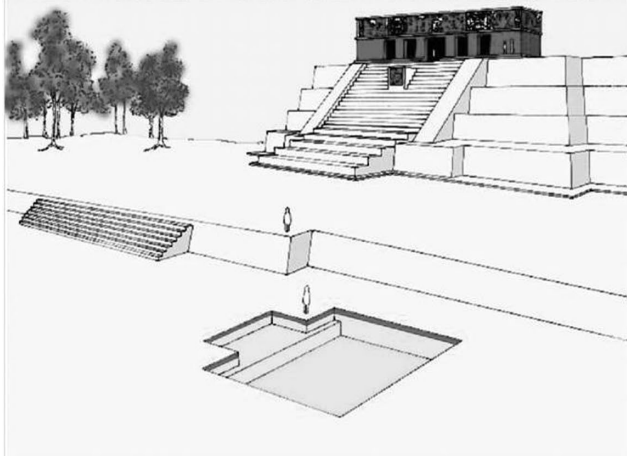


Figure 9. Scene and evidence of the royal mass assassination at Cancuén.

- ceremonies,
- 6) *generating more demand and intensified long distance trade for precious exotic imports for ceremony, display of rank, and patronage distribution,*
  - 7) *creating more direct violent competition in warfare, especially on trade routes,*
  - 8) *war probably causing short-term planning by leaders,*
  - 9) *as well as more pressure for an even larger, more expensive, and more contentious elite class,*
  - 10) *as well as pressure for growth of non-elite (warrior/farmer) populations.*

In the end, in the southwestern region this spiral of growth, intensification, and status rivalry eventually led to truly catastrophic warfare, damage to subsistence systems, and a sequence of effects that shattered the political and economic structure of the Classic Maya states of the southwestern Petén.

The above synthesis is a very broad characterization of historical changes that took place for over a century in the Pasión region and the processes of transition, collapse, and transformation, etc. over two centuries and longer in enclave kingdoms over thousands of square kilometers of the western Petén. Even this regional synthesis has glossed over details of subregional variation and many questions and concerns regarding evidence. Furthermore, the specific evidence and regional manifestations of change are different in other regions, as are proximate or final subregional causes of radical change. Nonetheless, many of these regions do share many of the underlying processes described for the west, especially the deadly spiral of success and growth.

### **Why Was There No Southern Lowland Recovery? The Contrast between Early Classic and Eighth–Ninth Century Events**

There is, of course, another major component to considerations of the historical crises of any society: the impact of other societies on the ability of a civilization to recover. Many political systems *do* recover with most features intact when leaders and populations respond to their crises sufficiently to modify their society, but still retain its basic structural features.

For example, archaeological and paleoecological evidence from a number of regions of the Maya lowlands appears to indicate that an environmental crisis occurred near the end of the Preclassic period. By AD 100 to about 250 the spread and growth of Maya populations and agricultural fields throughout the lowlands may have led to widespread deforestation, then erosion, then general ecological deterioration and a notable decline in population (Dunning et al. 1997, 1998). Studies of ancient environmental change, soils, and field systems in some regions suggest that in the subsequent centuries of the Early Classic period the lowlanders learned from these problems and adjusted better to their rainforest environment. In the Classic period they began to apply the wide range of ecological adaptations and agronomic systems described above, to protect and even enrich soils, to hold moisture, and to avoid erosion (Dunning and Beach 2000). In addition to specific garden, terracing, and water control techniques, after the crisis at the end of the Preclassic lowlanders may have had a greater awareness of the need for fallow-period timing, for more limited forms of *roza* (swidden) agriculture, for more use of household gardens with human waste and garbage as fertilizer, as well as for the use of low swampy *bajo* areas for short-season farming and for mining of swamp soils (Dunning and Beach 2000, 2003; Dunning et al. 1998). As population grew again in the Early Classic they may have exercised greater care about the problem of deforestation. They also monitored conditions responding to problems of various types of soil damage (erosion, leeching, sedimentation, etc.) with adjusted techniques and agronomic constructions (Iannone ed., in press). As a consequence of these adjustments most of the regions that had experienced decline recovered, and by the sixth century a new florescence was underway.

In contrast, in the eighth and ninth century, at the end of the Classic period there was no recovery in the southwestern Petén and many other lowland regions from their crises. Instead, there were a variety of forms of collapse or decline of most of the southern lowland states between AD 750 and 900, with a significant general reduction of population. Some zones were virtually abandoned. The



southwestern Petén was only lightly populated. In those lowland areas where there was a significant continuity or recovery (most notably the northern lowlands, Belize coast, and around the central Petén lakes) the new forms of Maya political and economic organization were significantly different from the city-states ruled by “Holy Lords” in the Classic period (Sabloff and Andrews eds. 1986). In those zones new economic spheres had been entered and Classic-period civilization had been transformed into a new system rather than having collapsed. Many cultural features continued, but the structure of politics and economy had changed. In the Postclassic, investment in status-enhancing ideology and its requisite elaborate material culture was relatively reduced, power became more distributed and divided between lineage heads, merchants, and warrior groups, while economies shifted to a significantly greater emphasis on long-distance exchange of commodities. Thus, via collapses, declines, or in some cases via transformations, the lowland Classic version of Maya civilization did not recover. Unlike the Early Classic system, they radically transformed or abandoned their political and ideological structure, not just changing subsistence practices.

### **A Second Set of “Root Causes”: Pan-Mesoamerican Changes in Politics and Economy**

Yet *why* did Classic-period southern lowland Maya civilization never recover in most areas, as it had six centuries earlier? Why did most of the southern lowlands remain very lightly populated with some regions having only small populations or virtually none? To answer that question we must consider what was occurring in the rest of Mesoamerica in the Classic Period, especially in the sixth to tenth centuries.

Like all collapses the Classic Maya eighth-century crisis in the southern lowlands did not play out in isolation, but rather in a pattern of change across most of the cultures of Mesoamerica, a change toward a different kind of economic and political system. Such a relatively new order of states had already developed much earlier in Central Mexico, Veracruz, and the highlands. During the Late Classic such a shift in governance and economies also had developed among Maya states of the coastal Chontalpa region of Tabasco. Late to Terminal Classic influences or parallel changes can be seen in the Maya sites of the western Yucatán peninsula, especially the Puuc zone of Yucatán and Campeche in the eighth to tenth centuries (Sabloff and Andrews eds. 1986). Similar changes or influences were present for a time far to the south at the river and highland port and trade center of Cancuén on the southwestern frontier of the Maya lowlands, as discussed above.

Centuries earlier, states in central and western Mesoamerica already had developed economies that were more heavily based on long distance market exchange of commodities like cotton, textiles, cacao, salt, ceramics, and lithics. Such exchange systems have been shown to exist among the Classic Maya as well, but large-scale markets, merchant classes, and probable state coordination of economic activities had been far better developed and more extensive in regions for some time in the states of central Mexico and Veracruz. Power in these states was more often shared between different institutions and individuals such as lineage heads, councils, merchant guilds, warrior classes, and other groups. Large markets, long-distance commodity exchange, and perhaps some merchant elites were growing during the Classic period in lowland Maya states as well, especially by the eighth century, but in general their scale, formality, and importance in most polities were relatively more limited prior to the Terminal Classic transformations.

Furthermore, in the Classic period power appears to have been *relatively* more concentrated in the ruler and his dynasty by the ideological mechanisms described above. The political and ideological dependency of many Maya states and their heavy reliance on focused dynastic power was a major source of instability, causing fluctuating periods of grandeur and expanding alliances, followed by periods of decline. The latter were sometimes a consequence of military defeat, internal political struggles, or may have been merely the result of succession to the throne of a less capable ruler. Such setbacks were often minor to communities in the region in terms of the economy and general population, but they had a magnified impact on Classic Maya states because of the intense identification of the state, religion, hierarchy, and patronage networks with the holy lords.

However, from Central Mexico, the Gulf coast, and the southern highlands of Guatemala the political order may have been more resilient. Their long-distance economic networks were spreading across Mesoamerica. The resplendent, but archaic, Classic Maya states particularly in the lowlands may not have been competitive with these new forms of state organization. Thus, to return to the question of why there was no southern lowland recovery, the growing internal structural problems and the internal fissures in the lowland states were also impacted by international competition. Such competition redirected exchange routes as well as cutting off lines of access to the imports needed by Maya courts. States that did survive, or even thrive generally on the coasts or in the highlands, would do so without many of the specific major traits of the *K'uhul Ajaw* political and ideological system. This change also appears to have greatly reduced the high degree of social investment in spectacular art, architecture, and inscriptions.

More speculatively, another element in the “root causes” of the disappearance of Classic Maya civilization may relate to the preexisting conditions (cf. Table 2) of the lowland ecology and geography, particularly in the southwestern Petén. It would have been difficult to shift to the new forms of Mesoamerican political economy in the physical environment of the southern Maya lowlands, where the subtropical forest is rich and diverse, but very complex. Most areas of the Maya lowland subtropical forest can be highly productive, but are also very fragile. As described for the Classic period, in general it needed to be managed with more diverse farming systems and dispersed populations. While there was a greater Classic-period population with much larger cities than we once believed, even the most densely populated Maya centers like Tikal, Calakmul, or Caracol were still dispersed over a wider area than central Mexican cities like Teotihuacan or Tenochtitlan or Postclassic Maya capitals such as Iximché in the highlands, and Classic-period cities were certainly far more dispersed than “cities” of many highly complex societies with a sharper distinction between urban and rural areas.

The Classic Maya adaptation supported great cities and large populations, but its agronomic regimes were *not* well suited to some major aspects of the long distance commodity production and exchange network that was developing in other parts of Mesoamerica. Also, in the Postclassic period in the southern Maya highlands and even the northern lowlands many centers were more defensible by being more densely concentrated and/or located in more naturally defensible positions. In the highlands, Maya centers might maintain such a settlement pattern because of the richer, thicker volcanic soils. Also, in general many coastal zones could rely more heavily on regional *over*-production of certain crops and commodities like cacao, cotton, and salt across larger areas of land, creating surplus for exchange. Meanwhile in the northern lowlands of the Yucatán peninsula and coastal Belize, centers had greater proximity to the coasts of the Gulf and Caribbean which had become the major route of long distance exchange (cf. Figure 1). These varying characteristics in some highland and coastal regions led to their greater success in export market economies and to long distance transport of commodities as tribute or for market exchange. As a result some zones had a more vigorous Postclassic.

In contrast, the thin soils and rich, but fragile, environment of much of the Petén was not as well suited to large surplus production. It also had few navigable rivers and even most of those had numerous rapids or shoals, and thus many necessary portages. The southern lowlands of the *inland* areas of the Petén, Campeche, and Quintana Roo were well suited for Classic Maya systems of economy and exchange, but they were not ideal for either the Postclassic form of economy, nor for its demands on transport systems. This shift in patterns and routes was especially negative for the southwestern lowlands of the Pasión and Upper Pasión river regions, which had no exportable resources or environments that could sustain intensified production of commodities.

Thus, as most Classic Maya states in the southern lowlands were collapsing or declining, the routes of trade shifted to the less interrupted and less demanding Gulf and Caribbean route, and the level areas along those coasts, for long-distance transport and exchange (cf. Figure 1). In the southern highlands populations grew around more defensible centers with more concentrated populations and vigorous markets supported by their thicker soils and less delicate and highly differentiated ecology.



## **Alternative Global Root Causes for the Decline of the Lowland Maya States: Drought and/or Environmental Destruction**

Some of the many pan-Maya “external” causes that have been proposed in previous studies include epidemics, earthquakes, and foreign invasions. The evidence from decades of investigations has ruled out contagious disease and geological or meteorological catastrophe, and direct foreign invasion seems increasingly unlikely.

However, theories of climatological change and drought are still among the most popular interpretations (Gill et al. 2007). The paleoecological evidence on the AD 800 to 1200 period does indicate several periods of drought in a number of regions. For that reason drought has been proposed as a “global” explanation of the collapse of Classic Maya civilization.

The problem, however, is that the droughts do not correspond well with the archaeological, chronological, or even general environmental evidence for the collapse in many areas — most notably in the southwestern region and other zones where the Classic Maya states first began to experience radical change or disintegration. Careful review of drought evidence, when correlated with well-dated eighth century events, indicates that it was a late, but important, factor in some regions, but not a general cause of the southern lowland collapse (cf. Demarest, Rice and Rice eds. 2004; Iannone ed., in press).

Another major class of collapse theories proposes environmental destruction caused by human activities, rather than climate, as the fatal flaw. Comparison of findings across the lowlands does reveal many eighth and ninth century problems of overpopulation in many regions, and that was sometimes correlated with erosion or leaching of soils.

However, was environmental destruction the “root cause,” the ultimate basic source, of the problems? In these scenarios we must explain the reasons for unrestrained population growth and the failure to respond to the problem. One possible factor is that such growth may have been encouraged in some regions by increasing status rivalry between city-states and between the multiplying kings and nobles with their needs for labor for construction, warfare, and building up subsistence surplus for all such activities. For these and other reasons, overpopulation, overuse of soils, silting of productive swampy areas, erosion, and other forms of environmental damage seem to have been significant factors in some regions. Yet, once again it is not an identified factor in many other areas, including those with the earliest major changes in the southwestern Petén. In any case, causality must include consideration of the political and social factors that might have driven overpopulation and that may have driven overexploitation in general. Such factors as well as the external changes discussed above must also be considered in terms of why there was not a successful response to anthropogenic or climatological crisis, as there had been in the Early Classic period.

## **Differing Regional “Final” or Proximate Causes of Collapse**

Such considerations return us to the importance of comparing the specific evidence from each region, especially its dating, in order to identify the “final” or “proximate” causes of collapse in that zone. These were the “last straws” or “coups de grace,” present in differing degrees of importance in each region (cf. Table 2). Thus, different theories as proposed by a number of scholars might be, in a sense, all correct as final causes for at least some regions. However, scholars tend to mistake the nature and causes of change in their own zone of research as *the* general reason for collapse everywhere in the lowlands. In the southwest it is important not to do so with warfare by positing that war, so critical in the early southwestern Petén collapse, was the universal cause of collapse in all regions or even the root cause in the southwest itself.

Projects have come to conflicting conclusions on the causes of collapse, often even in the same region. These regional disagreements involve varying interpretations of the data or contradictory sets of data. One reason that such specific regional crises (e.g. deforestation, warfare, drought, etc.) can be mistaken for pan-lowland causes is because chronologies vary greatly and most regions have inexact

chronologies, so often the specific timing of events is not carefully compared.

There have been only a few collective attempts to systematically and carefully compare evidence between regions to see exactly *what* happened in *each* region and exactly *when* it happened. One important early attempt was an edited volume on the Maya collapse over forty years ago (Culbert ed. 1973), which brought together scholars working from different regions to describe and compare their findings. However, at that time many regions were very poorly known and chronologies were too poorly defined to come to any clear conclusions. More recent collaborations have brought together many scholars working in different zones and trying to date and plot the history, nature, and sequence of the changes in each lowland area in the final centuries of Classic lowland civilization (Demarest, Rice and Rice eds. 2004; see also Sabloff and Andrews 1986). While there was still much disagreement about causes, the comparisons did provide some glimpses of geographic differences of chronology and the great diversity in the order of changes and crises at the end of the Classic period — collapses, declines, transitions, or transformations between AD 750 and 1050 (Figure 10).

Clearly, the end of Classic Maya civilization was generally not as “sudden” as many had believed. Rather, in some regions there were crises and depopulation beginning as early as AD 700 and 750 and in others between 800 and 900. In the northern part of the Yucatán peninsula collapses, declines, and transformations to the Postclassic form of Maya states were even later, and more gradual. Thus, the so-called “collapse” was actually a process that took place over a period of nearly three hundred years.

Even within the same subregion the collapse phenomenon often was complex, since as some centers collapsed others had periods of florescence as populations and power shifted. In the southwestern Petén the case of Ceibal and Altar de Sacrificios versus the Petexbatún, Aguateca, and Cancuén is one such striking example of such regional complexity. Yet even in the southwest with the irregular histories of the sites, the region as a whole still experienced an overall dramatic decline in population and number of sites. Such a general pattern of decline in size and number of sites is characteristic of all of the Petén.

A broad, general trend of the differing radical changes (collapse, decline, emigration, depopulation, transformation, etc.) is that they were generally earliest in the western Petén, especially along the great western trade route of the Pasión and Usumacinta rivers. It is not surprising that crises began earliest there since the western corridor was a zone of intense competition for control of the trade and transport route, as well as being a region that was in close interaction with the very different non-Maya polities further west.

### **Conclusion: The Terminal Spiral of Success**

Indeed, the end of the “golden age” of the Late Classic period was itself a manifestation of the impending end of Classic Maya civilization. The eighth century left a legacy of sublime architecture, monuments, and art — like the splendor of the southeast Asian theater-states that in Geertz’s terms “made inequality enchant.” However, these were also symptoms and exacerbations of a deepening and fatal political disease. As political stability began to disintegrate in most areas rulers only worsened the situation by intensifying their expensive rituals, status rivalry, and warfare leading to the death of the river route, most clearly manifested by the ritualized destruction of the controlling head of navigation at Cancuén, after their failed premature experiment in a transition to the Postclassic economy.

While there were many varied regional histories for the end in the Maya lowlands, what ended was the florescence of Classic Maya sociopolitical order ruled over by the “Holy Lords,” with its sublime material manifestations which leave us breathless at their beauty today, but which came at an ever-increasing cost to the ancient Maya states and their populations.

Of course, as emphasized throughout this volume, with the end of most southern lowland Classic-period city-states, the great Maya tradition did not end, but only began a new Postclassic cycle, one of the many impressive manifestations of the continuing Maya cultural tradition.

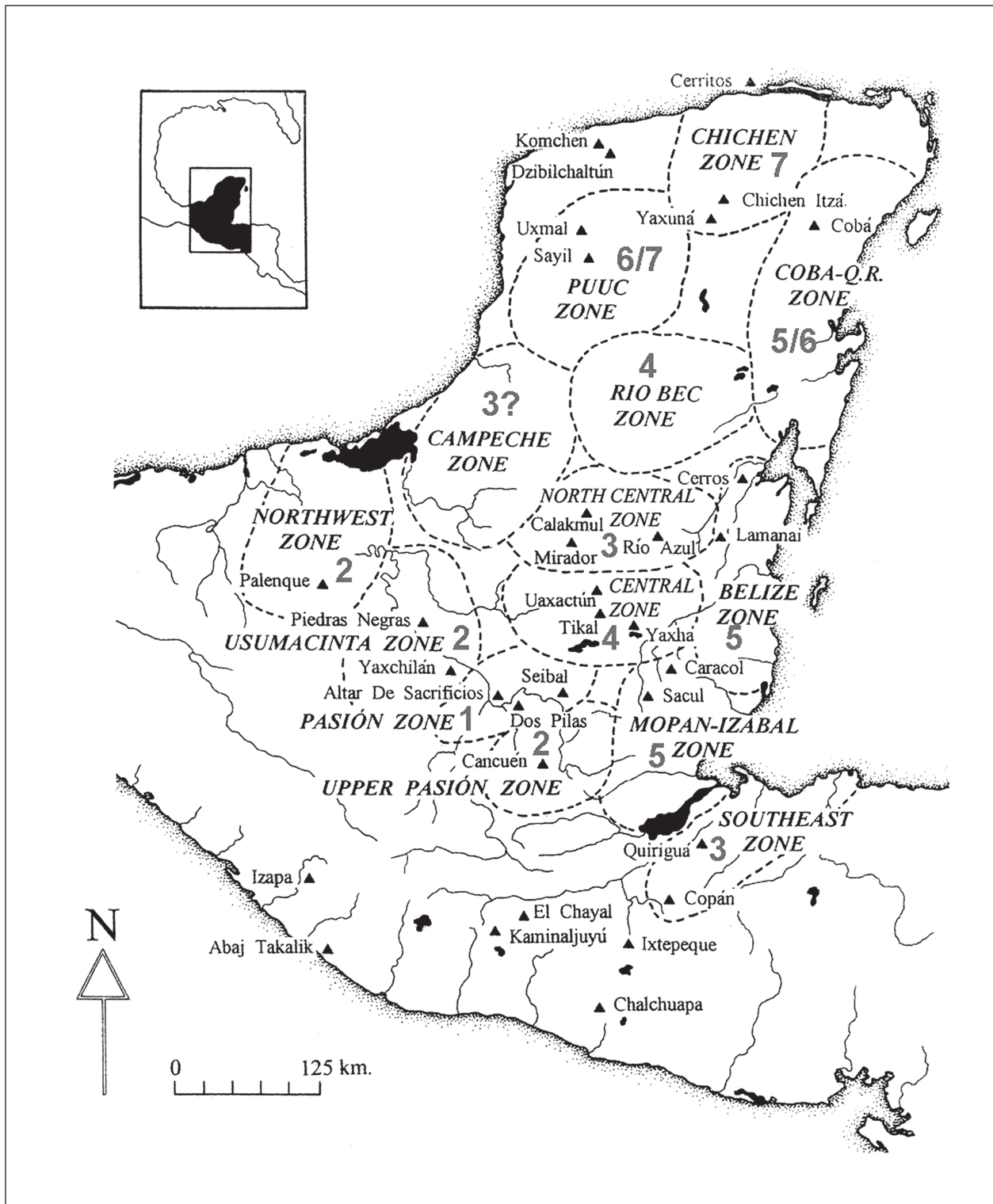


Figure 10. Speculative and approximate plotting of the variable order of beginnings of collapses, transitions, or transformations at the end of the Classic Period and Terminal Classic.

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