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Archaeology and Bioarchaeology of Population Movement among the Prehispanic Maya

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Introduction

No society is static. Movement and migration has always been an intrinsic part of human nature, bringing about exchange, replacement, innovation, and, simply, change. Mobility itself has always been dictated by a wide array of factors, which span from family and community strategies to more encompassing political and economic measures. Also specific circumstances, such as ecological crisis, war, and famine can trigger individual or collective relocation. These dynamics and conditions also predispose to the distance of movement, whether local or interregional, and its extent. Movement can involve only few people or affect entire populations settling in new territories (Rouse, 1986).

Due to their intrinsic complexities and antagonisms, stratified societies tend to harbor a larger array of incentives that can bring about population movement than less hierarchical sedentary groups. As the title of this volume indicates, the effort is addressed specifically to the Prehispanic Maya, characterized by diversified, highly ranked social systems (Sharer, 2006). During the Classic period, city-states governed over large regions, establishing complex ties of alliance and commerce with the region's minor centers and their allies, against other city-states within and outside the Maya realm. The archaeological evidence highlights ties between the Maya and Teotihuacan in the Mexican Central Highlands (Brasswell, 2003). Raw materials or finished goods, commodities for the elite, or goods of vital importance (like salt, for example) were distributed through maritime as well as inland, internal trade networks through so-called port of trades, in a market redistribution model (Chapman, 1957). The fall of the political system during the Classic period (the Maya collapse) led to hypothetical invasion of leading groups from the Gulf of Mexico into the northern Maya lowland at the onset of the Postclassic (a view that, at least for Chichen Itza, Cobos will call into question in this volume). Even considering that an external power might have taken over the northern Maya Lowlands, it is not yet clear whether it came along with actual movement of populations into the region as well as the extent of such immigration.

As the title of this volume indicates, it will treat its capital topics, i.e., population movements in the Maya area, by combining different (bio)archaeological thematic approaches. Like every other lines of research, archaeology and bioarchaeology tend to infer specific dynamics resting upon concrete sets of variables. Such is the case of trade networks, which are usually interpreted on the base of the presence of exogenous (foreign) material and objects coming from afar (imported pottery, jadeite, obsidian, and so forth) (Earle, 2010). Yet, exchange of goods or the presence of foreign architectural patterns, by itself, do not necessarily imply the genetic admixture between groups, because human beings may migrate for reasons that may not be related only to trading (Crawford & Campbell, 2012; Manning, 2005). Population movement can only be assessed directly when the biological components of ancient communities are analyzed (i.e., the human skeletal remains). Nonetheless, the biological evidence per se, i.e., extrapolated from its cultural context, is not capable of explaining such a complex systems as a region's population dynamics by itself but needs complementation with culturally derived datasets.

The whole picture can slowly emerge only when all the pieces of the puzzle are put together in a holistic and multidisciplinary fashion, leaving behind the extreme academic specialization that makes us blind of the whole context (Rouse, 1986). It is a very complex task, since sampling in (bio)archaeology is by convenience: we rarely can decide what to study and obtain the right samples that allow to fill specific geographical or chronological gaps. In the case of the ancient Maya, their lack of cemeteries does not permit the recovery of skeletal collections that are always representative of the whole ancient population. The aggressive tropical environment strongly affects good preservation, limiting even further (bio)archaeological research. For such reasons, even though my field of interest is dental morphology, this book is not (only) about dental morphology.

The present edited volume represents the English version of the Spanish edition published in 2013 by the Universidad Autónoma de Yucatán Press (Cucina, 2013). Both books have grown out of the editor's many years of research on dental morphology to assess population dynamics in the Maya realm and the awareness of the complexity and the limitations of morphological dental traits in explaining populations' affinities without better understanding the overall cultural picture. The contributions of this volume reflect the spirit of the multidisciplinary (bio)archaeological investigation in bringing together a team of experts in archaeology, archaeometry, paleodemography, and bioarchaeology. They gathered in Merida in November 2010 to participate in the First International Congress of Bioarchaeology in the Maya Area to discuss about population dynamics and movement, each from his/her own field of expertise. With the exception of Duncan's chapter, which did not form part of the Spanish version, the rest of the contributions are the same as in the Spanish volume, updated to respond to new evidence or interpretation or completely reorganized and presenting new data, as in the case of Cucina's chapter.

Despite the object-derived limitations, all the contributors (each from his/her own field of expertise) have managed to provide interesting and valuable information that sheds more light on the complex and entangled biocultural dynamics in Prehispanic Maya society. Together, such contributions provide an initial account of the dynamic

qualities behind large-scale ancient population dynamics, and at the same time represent novel multidisciplinary points of departure toward an integrated reconstruction and understanding of Prehispanic population dynamics in the Maya region.

In closing, I wish to acknowledge my gratitude to all participants in the conference that led to this compilation and specifically those, who have accepted to share their expertise and information in this volume. I thank my colleague and wife Vera Tiesler for her suggestions, ideas, and comments that came up on a daily base. Ivonne Tzab's help has been instrumental with the time-consuming editorial corrections. Finally, the editorial process of the volume was carried out under the auspices of the CONACyT sabbatical grant I0010-2014 n. 232831, and the UC MEXUS program at the University of California Riverside.

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Chapter 1
Xcambo and Its Commercial Dynamics Within the Framework of the Maya Area

Thelma N. Sierra Sosa

Introduction

The site of Xcambo lies along the northern coast of the State of Yucatan, and was the most important economic center in the Early and Late Classic northern Maya Lowlands (Fig. 1.1). Located 1.5 km from the coast, in a peten surrounded by marshland, the site was provided with the infrastructure required by this socioeconomic entity basically for the administration of salt production and trade (Fig. 1.2).

The archaeological site of Xcambo dates to the Classic period and has a surface area of 150 m wide by 700 m long. The settlement offers a series of characteristics that define it as a commercial port, such as: (1) its advantageous position on the coast; (2) a center characterized by outstanding constructions, suitable for governing activities (administrative, commercial, religious, etc.); (3) a residential area that was used principally by the families of rulers and the elite; (4) it allowed transboarding of goods from coastal trade; (5) a system of routes, both overland and maritime, appropriate for moving merchandise; (6) extensive support areas (e.g., for salt production); (7) places that were used for storage; (8) both regional and supraregional importations (especially luxury goods); and (9) the existence of people dedicated to trade (Sierra 2004:41) (Fig. 1.2).

The Xcambo site presents two outstanding periods of occupation, each defined by a different distribution pattern (Table 1.1).

By the Early Classic period (AD 350–550) the site shows a central complex with buildings belonging to the Xtampu Complex that are relatively modest, established in the middle of the peten. These must have been administrative, religious, civic,

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Fig. 1.1 The north of the Yucatan Peninsula showing the location of the Maya Port of Xcambo, in the geopolitical context of the Classic period. The black circles indicate the coastal sites that participated in the Canbalam Ceramic Sphere (AD 550–750)

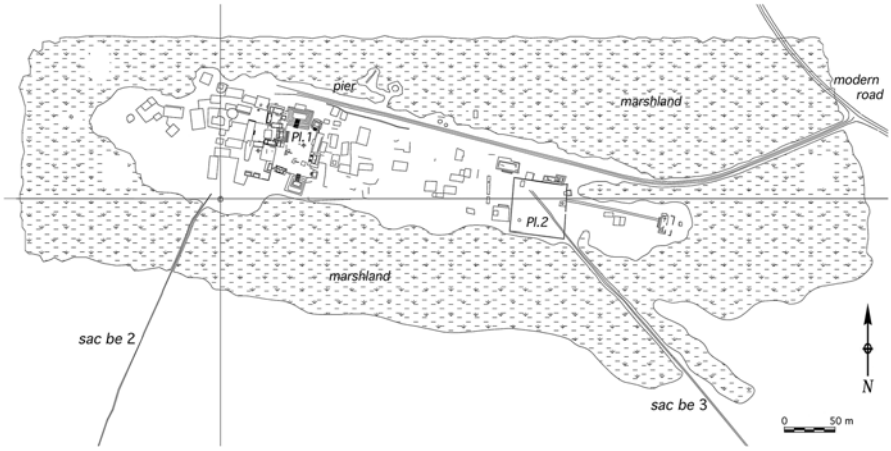

Fig. 1.2 Drawing of the port of trade of Xcambo, Yucatan

and residential buildings with broad foundations raised for dwellings and numerous storage areas or deposits.

The site must have been physically linked to at least one important interior center, as indicated by the presence of a walkway or *sac be*, located in the southern

Table 1.1 Ceramic complexes of the Port of Xcambó, Yucatán (based on Jiménez Álvarez 2002 and Ceballos Gallareta 2003)

Ceramic complexes (periods)	Groups	Horizons	Sphere	Origin	
Middle Preclassic (c. BC 800–300)	Dzudzuquil, Chunhinta, and Muxanal	Mamón-Nabanché		Southern Lowlands, Komchén	
XTAMPÚ Early Classic (c. AD 350–550)	Sapote, Sierra, Flor, Caramba, Sabán, Hubilá, Unto, Tipikal, Polvero, Habana, Huachinango, Shangurro, Timucuy, Águila, Balanza, Pucté, Tituc, Triunfo, Holol, Cetelac, Oxil	Cochuah Tzakol II–III		Central and Northwestern Yucatán; Northern Quintana Roo; Petén Campechano-Guatemalteco; Belize	Early Xolalpan Phase Teotihuacan (AD 450–550)
XCAMBÓ Late Classic (c. AD 550–750)	Koxolac, Baca, Tenabo, Nimun, Dzibalché, Suma, Cui, Ich Kanzihó, Vista Alegre, Blanquillo, Muna, Dzitás, Ticul, Teabo, Dzibiac, Batres, Hunabchén, Chencoh, Kinich, Charote, Arena, Dzityá, Kanachen, Chuburná, Maxcanú, Acú, Chencán, Holactún, Ixkipché, Chomul, Tinaja, Infierno, Egoísta, Sayán, Saxché, Petkanché, Sonaja, Azcorra, Palmar, Zacatel, Cimatán, Nonoalco, Punta Piedra, Chablekal, Dsicul, Comalcalco, Jalpa, Paraíso, Huimangüillo, Zuleapa, Balancan, Silhó, Calatraba, Poza Rica, Cocoyoles, Huanal, Jilón, Tejar	Cehpech Tepeu I–II	Coastal Sphere Canbalan Mescalapa	Campeche-Yucateco Coast; Northern Peninsula of Yucatán; Southern Campeche and Northern Guatemala, Southeastern Tabasco, Laguna de Términos; Atrasta Region; Central Veracrúz Region	Early Xolalpán Phase Teotihuacan (AD 550–600)
KAYALAC Postclassic (c. AD 1100–1543)	Navulá, Mama, Polvos, Kukula, Matillas	Tases		Western Yucatán, Mayapán, San Gervasio, El Meco, Cobá	

Fig. 1.3 *Sac be* that connects Xcambo to Misnay

side of the peten, which extends to the Early Classic/Late Classic site of Misnay, approximately 1.2 km south of Xcambo (Fig. 1.3).

The ancient road leads from here towards the interior until it is lost in the underbrush. During this period Xcambo must have controlled the salt mines of Xtampu and the surrounding coastal sites producing salt and marine resources.

During the Late Classic period (AD 550–750), known as the Xcambo Complex, the physiognomy of the previous period was completely transformed. The main plaza covered a greater area (Fig. 1.4) and residences, probably of a different type, were built over the previous constructions, covering the storage areas or deposits.

A small square or public plaza was established with two roads or *sac be'ob* extending from it—one to a residential unit located at the eastern edge of the site, and the other inland towards Dzemul (the ancient Cemul). During this period Xcambo also maintained a type of pier, located north of the main plaza on the edge of the marsh (Fig. 1.5).

During this period salt operations increased and bonds with the coastal communities tightened from Xtampu to Providencia, a coastal site located 18 km east of Xcambo. A widespread salt production area was also established in this period in the northwestern sector of Xcambo. It is important to point out that the site was densely populated.

Fig. 1.4 Panoramic view of the northern side of the main square

Fig. 1.5 Pier or dock