



Research Article

A preliminary revised life history of Punta Laguna, Yucatan, Mexico: A persistent place

Sarah Kurnick^a , David Rogoff^b and Iliana Ancona Aragón^c

^aDepartment of Anthropology, University of Colorado Boulder, Boulder, CO, USA; ^bDepartment of Anthropology, University of Pennsylvania, Penn Museum, Philadelphia, PA, USA and ^cInstituto Nacional de Antropología e Historia (INAH), Centro INAH Yucatán, Mérida, Yucatán, México

Abstract

This article presents a preliminary, revised life history of Punta Laguna, Yucatan, Mexico, and considers in detail the site's relationship to nearby communities. More specifically, this article presents the results of a type-variety analysis of the cumulative palimpsest of ceramics excavated at the site between 2017 and 2022. Unlike initial studies conducted in the 1980s, the current study suggests that Maya peoples occupied Punta Laguna continuously or recurrently from 600/300 B.C. through A.D. 1500/1550. Punta Laguna is therefore usefully understood as a persistent place. By offering a composite life history of Punta Laguna, this article aims to augment current understandings of the complex social, political, and economic landscape of the northeastern Yucatan Peninsula. It also considers the utility of archaeological studies of persistent places to scholarship on urban sustainability and suggests that research investigating the connections between early occupation and site longevity may prove a fruitful avenue of study. Finally, this article argues that investigations of persistent places may provide a counterweight to the more common focus on collapse and thereby offer a more comprehensive understanding of the Maya past—one that emphasizes the vitality of the Maya present.

Resumen

Este artículo presenta una inicial revisión de la historia de vida en Punta Laguna, Yucatán, México, y considera la relación del sitio con comunidades cercanas. Más específicamente, este artículo presenta los resultados de un análisis de tipo-variedad del acumulado palimpsesto de cerámica excavado del sitio entre 2017 y 2022. Diferente a otros estudios conducidos en los 1980s, este estudio sugiere que los antiguos Mayas ocuparon Punta Laguna continuamente desde 600/300 a.C. a 1500/1550 d.C. Sostenemos que Punta Laguna es más útilmente entendido como un lugar persistente. Ofreciendo una historia revisada de Punta Laguna, este artículo propone aumentar el entendimiento del complejo escenario social, político, y económico de la península oriental de Yucatán. El artículo también reconsidera la utilidad de estudios arqueológicos de lugares persistentes a los estudios de sostenibilidad urbano y sugiere que estudios investigando las conexiones entre ocupaciones tempranas y la longevidad de sitios pueden ser caminos beneficiosos. Finalmente, sostenemos que las investigaciones de lugares persistentes pueden ser un contrapeso al enfoque más común de derrumbe, y ofrece un entendimiento más comprensivo del pasado Maya, uno que acentúa la vitalidad del presente Maya.

Keywords: composite life histories; persistent places; type-variety ceramic analysis; northern Maya lowlands; Yucatan

Introduction

Places are powerful. As scholars have long noted, places—which both shape and are shaped by human actions (Lefebvre 1991)—are intimately connected with social identities (e.g., Bender 1999), political authority (e.g., Smith 2003), and collective memories (e.g., Van Dyke and Alcock 2003). More recently, scholars have argued that places

are themselves vital essences and agentive forces (e.g., Jennings and Swenson 2018). To understand the power of places, several have advocated studying their life histories (Ashmore 2002). Why do particular places endure, and how have their meanings changed over time? And how, if at all, can the archaeological study of places impact the contemporary world?

This article presents a preliminary, revised life history of one specific place: Punta Laguna, Yucatan, Mexico. After considering the concepts of life histories and persistent places, the article briefly summarizes the archaeological site of Punta Laguna and recent excavations by the Punta Laguna Archaeology Project (PLAP). It then presents the

Corresponding author: Sarah Kurnick, email: sarah.kurnick@colorado.edu

Cite this article: Kurnick, Sarah, David Rogoff, and Iliana Ancona Aragón (2024) A preliminary revised life history of Punta Laguna, Yucatan, Mexico: A persistent place. *Ancient Mesoamerica* 35, 278–303. <https://doi.org/10.1017/S0956536123000093>

© The Author(s), 2023. Published by Cambridge University Press. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

results of a type-variety analysis (Smith et al. 1960) of all ceramics excavated at the site between 2017 and 2022, and considers in detail the site's occupation history and relationship to nearby communities. Initial studies in the 1980s suggested that Punta Laguna was occupied primarily, if not entirely, during the Postclassic period (Cortés de Brasdefer 1988), or that it was occupied from the Late Preclassic to the Postclassic period but with substantial hiatuses (Benavides Castillo and Zapata Peraza 1991). More extensive excavations and analyses suggest instead that Maya peoples occupied Punta Laguna continuously or recurrently from 600/300 B.C. through A.D. 1500/1550. Punta Laguna may therefore be usefully understood as a persistent place (Schlanger 1992).

The goals of this article are threefold: It aims to augment the current understanding of the complex social, political, and economic landscape of the eastern Yucatan Peninsula between 600/300 B.C. and A.D. 1500/1550. It considers the relationship between archaeological studies of persistent places and recent scholarship on urban sustainability, and it suggests that research investigating the connections between early occupation and site longevity may prove a fruitful avenue of study. Finally, it argues that studies of Maya persistent places may provide a counterweight to more common considerations of collapse and thereby offer a more comprehensive understanding of the Maya past—one that emphasizes the vitality of the Maya present.

Life histories and persistent places

Over the last several decades, archaeologists have investigated the life histories of places (e.g., Alexander 2012a; Joyce 2009; Mitchell 2008). They have, in other words, examined “evidence for human recognition, use, and modification of a particular position, locality or area over the full time span of its existence” (Ashmore 2002:1178). A life history approach affirms that past places continue to exist in the present and “articulates ancient spaces and places with their social roles today” (Ashmore 2002:1180). A life history approach also examines the tensions between the “longevity of places and the mutability of their meanings” (Ashmore 2002:1179). Although places may endure, the meanings associated with those places are often unstable. Multiple meanings may exist simultaneously or replace one another, and they may change over time and with different inhabitants.

To construct life histories of places, archaeologists often rely on material objects, particularly ceramics likely produced during specific time periods. Yet, as Geoff Bailey (2007:209) has argued, the “notion that a material object can represent a moment in time is self-contradictory.” As he explains, “material objects by definition have duration, a duration that extends from at least as early as the time when they were first created to the current moment of observation” (Bailey 2007:209). Furthermore, such durable, material objects often form cumulative palimpsests: palimpsests in which the “successive episodes of deposition, or layers of activity, remain superimposed one upon the other . . . but are so re-worked and mixed together that it is difficult

or impossible to separate them out into their original constitutions” (Bailey 2007:204).

For these reasons, life histories of places are not necessarily linear, but can also be constellations or composites (Gordillo 2014; Halperin 2017; Kurnick 2019a). In his consideration of temporal constellations, Walter Benjamin (1974), for example, argued that time periods exist concurrently instead of progressing sequentially, and that temporal moments are composed of variable impositions and erasures of physical remnants of different time periods. Laurent Olivier (2004:205), to take a second example, has similarly noted that places have “always been a composite . . . made up of elements originating in the past but continuing to exist in the present.”

Several archaeologists adopting a life history approach have suggested that certain locales are usefully understood as persistent places: “places that were used repeatedly during long-term occupations of regions” (Schlanger 1992:97; see also Koons et al. 2021; Thompson 2010; Olszewski and al-Nahar 2016). A persistent place may “have unique qualities that make it particularly suited for certain activities . . . be marked by certain features that serve to focus reoccupations . . . [or] form on a landscape through a long process of occupation and revisitation . . . dependent on the presence of cultural materials” (Schlanger 1992:97). Consequently, natural resources, such as stone outcrops and water sources; cultural features, such as houses and temples; and cultural materials, such as burials and caches, may all contribute to the persistence of places.

Originally proposed 30 years ago, the concept of persistent places is gaining renewed importance in the twenty-first century. In some instances, historical ecological studies of landscapes have led to considerations of cultural keystones and other similar locations (Fish et al. 2013; Glover et al. 2022; Lepofsky et al. 2017; Maher 2019). In other instances, scholars (e.g., LeFebvre et al. 2022; Scarborough and Isendahl 2020; Smith 2010; Turner et al. 2020) have argued that archaeological studies of persistent places can contribute to contemporary studies of urban sustainability. Because the “entire modern economic-political order is only a few centuries old,” Michael Smith and colleagues, for instance, have called for the “development of a new interdisciplinary research effort to establish scientific understanding of settlement and settlement system persistence” (Smith et al. 2021:1). Such scholars have also suggested that studies of persistence are important counterbalances to the overwhelming popular—and, the authors would argue, academic—focus on collapse (e.g., Diamond 2011; Mott 2012; Webster 2002). As Smith and colleagues (2021:3–4) note, “while the popular imagination obsesses about societal collapse, the empirical record shows the limitations of this emphasis.”

This article considers one specific location, Punta Laguna, and argues that it is usefully understood as a persistent place. To do so, it creates a composite life history based on the cumulative palimpsest of ceramics excavated at the site between 2017 and 2022.

Punta Laguna and the Punta Laguna Archaeology Project

Punta Laguna is located in the northeastern Yucatan Peninsula of Mexico, about 20 km northeast of Coba (Figure 1). The contemporary village consists of approximately 150 residents, who manage a cooperative ecotourism venture. Tourists can walk with local guides on trails through the reserve to search for spider monkeys; canoe and ride a zip line across the lagoon; and buy crafts such as needlework and jewelry from local artisans. Visitors can also participate in a Maya purification ceremony, led by a village shaman, and conducted entirely in Yucatec Mayan. This ceremony takes place around a traditional wooden altar and includes burning copal incense and drinking nonalcoholic *balché* from a gourd. Punta Laguna is a rare example of an ecotourist attraction that is created by—and that tangibly benefits—Indigenous peoples (Kurnick 2019b; see also Aguilar Cordero et al. 2012; Bonilla Moheno and García-Frapolli 2012; García-Frapolli et al. 2007, 2008, 2013).

The archaeological site of Punta Laguna, located almost entirely within the nature reserve, covers approximately 200 ha of land immediately surrounding a three-basin

lagoon (Figure 2). The site includes a cenote containing an ancient mortuary deposit of at least 120 individuals (Martos López 2008; Rojas Sandoval 2007, 2008, 2010; Rojas Sandoval et al. 2008); two small, plain, Postclassic-period stelae; a series of caves; and more than 200 mounds (Kurnick and Rogoff 2020). These mounds range in height from just above ground level to approximately 6 m, and they include both house mounds and civic-ceremonial structures built in the megalithic architectural style characteristic of the Late Preclassic period (Mathews 2001); the Peten style prominent at Coba during the Late Classic period (Con Uribe and Martínez Muriel 2002; Satterthwaite 1945; Shaw 2005:149); and in the “East Coast” style characteristic of the Postclassic period (Figure 3; Andrews and Andrews 1975; Lorenzen 2003; Toscano Hernandez 1994). Population estimates for Punta Laguna are currently unknown, and the nature of the relationship between Punta Laguna and Coba is under investigation.

In the 1980s, Fernando Cortés de Brasdefer (1988) visited and described the site core of Punta Laguna, and Antonio Benavides Castillo and Renee Zapata Peraza (1991) mapped part of the site and conducted surface collections. In their published overview of the site, however, they did not specify the number or provenience of the sherds they collected

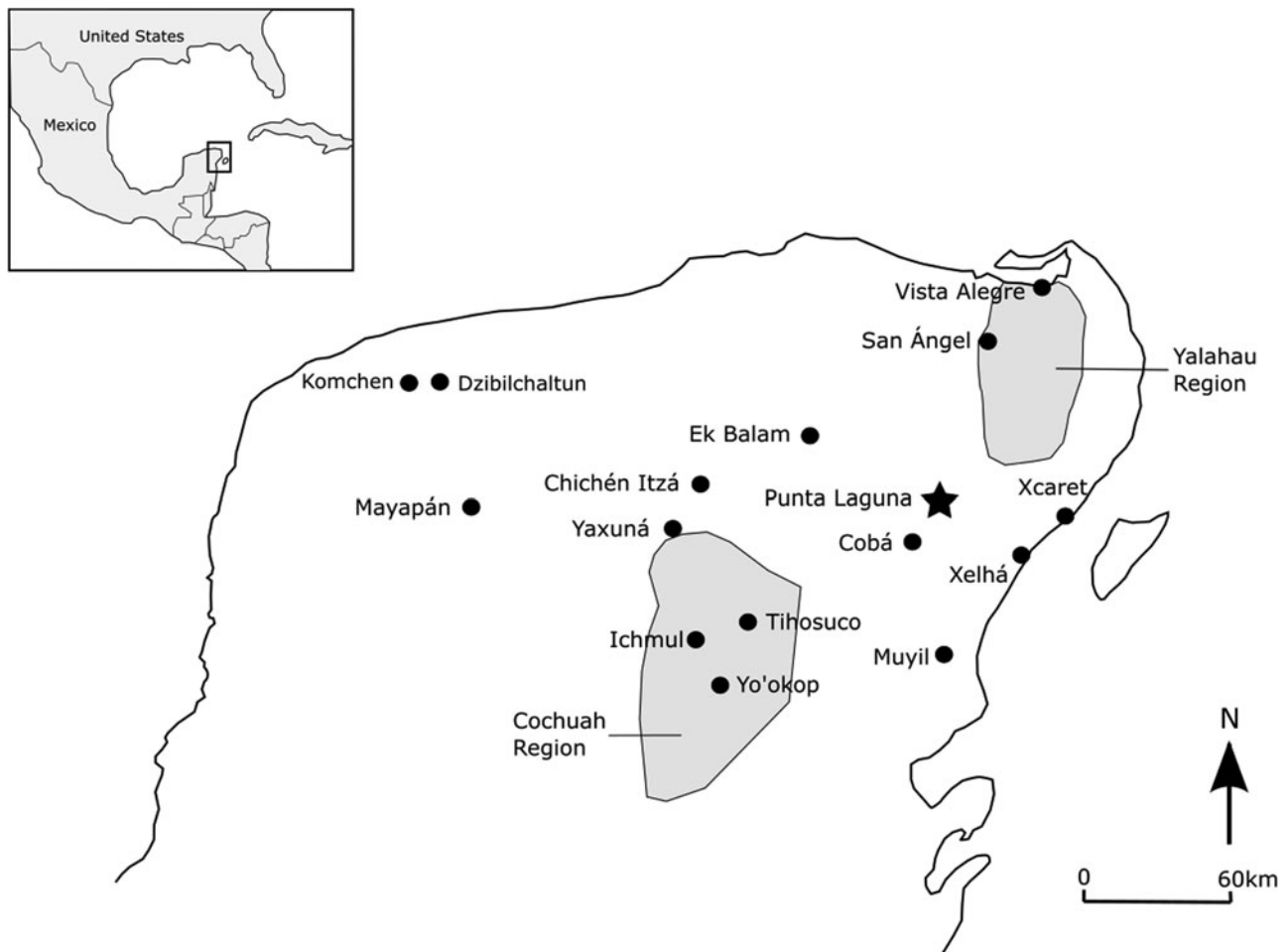


Figure 1. Map of the Yucatan Peninsula showing the location of all sites mentioned in the text. Map by Kurnick.

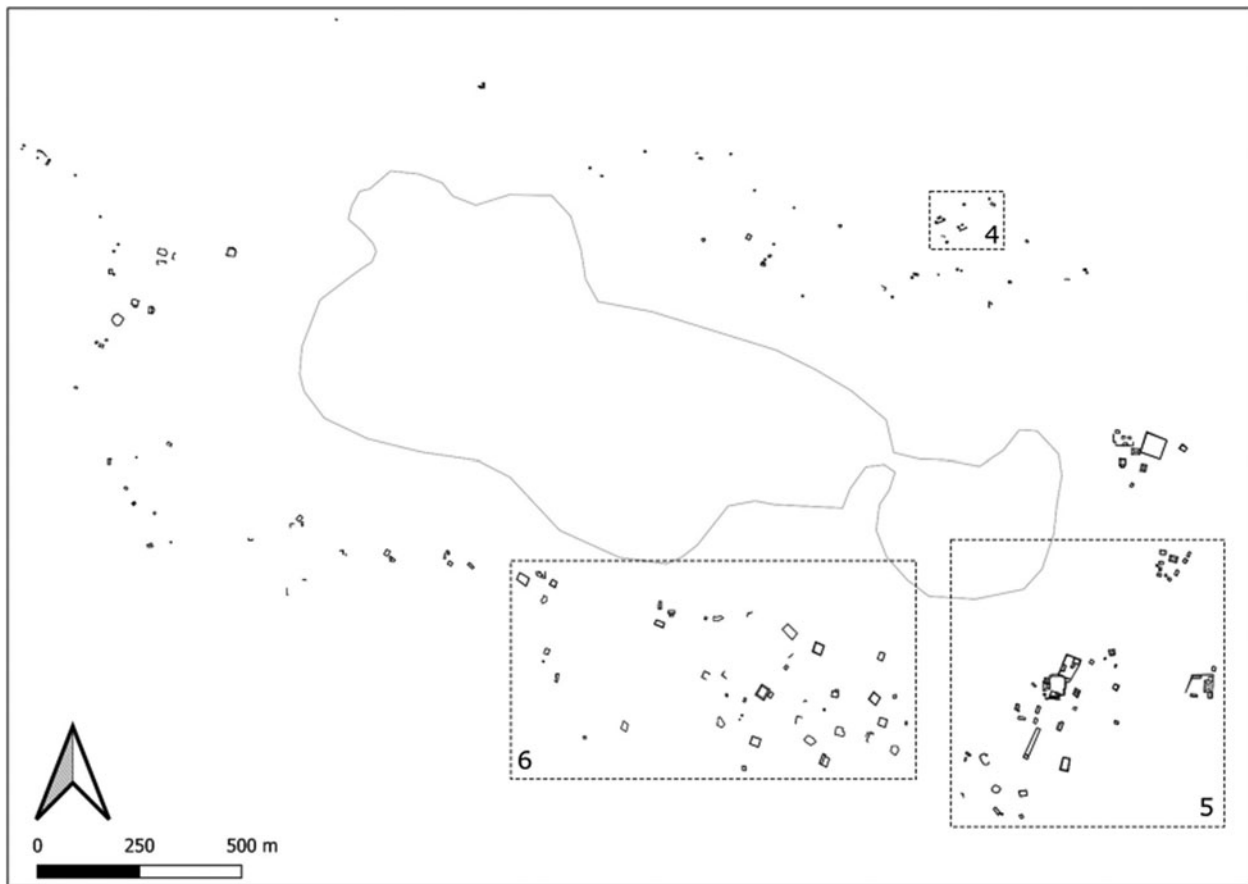


Figure 2. The archaeological site of Punta Laguna. See Figures 4, 5, and 6 for enlarged views of the areas within the boxes. Map by Rogoff.

(Benavides Castillo and Zapata Peraza 1991:46). In the early 2000s, Carmen Rojas Sandoval (2007; 2008; 2010; Martos López 2008) excavated the site's cenote and, since 2014, the Punta Laguna Archaeology Project (PLAP) has conducted fieldwork at the site (Kurnick 2019a; 2019b; 2020; 2023; Kurnick and Rogoff 2020).

Thus far, the PLAP has carried out a systematic site survey and produced site maps (Kurnick and Rogoff 2020). Although lidar is now commonly employed to map Maya sites, project members chose instead to survey on foot and spend substantial time working with and remunerating local community members (Kurnick 2019b, 2020; Kurnick and Rogoff 2020). Between 2017 and 2022, the PLAP also conducted excavations in association with 20 mounds: 311, 337, 341, 362, 376, 443, 446, 450, Coco 1, Durazno, Fresa, Guava, Habanero, Iguana, Jalapeño, Naranja, Manzana, Sandía, Toronja, and Uva (Figures 4, 5, and 6). As is conventional in Maya archaeology, project members designated all mounds with nonsense names (e.g., Coe and Haviland 1982:47–49). Those in the site core are named after plants and animals, and all others have numerical designations. The PLAP targeted these 20 mounds, in part, to better understand the function and occupation history of a variety of different types of architectural features located around the lagoon. This nonrandom sample includes only approximately 10 percent of the mounds so far mapped at Punta Laguna. Nevertheless, analysis of associated ceramics

already suggests a different chronology of occupation than originally proposed for the site.

Located to the north of the lagoon (Figure 4), mounds 443 and 446 form the central and southwestern components of a triadic architectural arrangement. Project members excavated in the fill and in the area behind each mound, and in the area in front of 443. Mound 450 is a small, low, individual mound that lacks any obvious architectural features. Excavations were carried out in the fill of the mound and in the areas just to its northeast and southwest.

Located to the east of the lagoon, near the site's cenote, Sandía, Toronja, and Uva comprise part of a larger architectural group that includes an approximately 6 m tall mound with the remains of a miniature masonry shrine on top (Figure 5). Project members excavated in the fill of the three named mounds, in the area to the north of Sandía, and in the plaza between Sandía and Uva. Mound 341, Coco 1, Durazno, Fresa, Guava, Habanero, Iguana, Jalapeño, Manzana, and Naranja are located to the southeast of the lagoon. Mound 341 is a low, irregularly shaped platform with the basal walls of two rooms. Project members excavated in the fill of the mound, and in the areas to its north, south, and west. Coco 1 and Durazno are both approximately 4 m tall mounds with miniature masonry shrines on top. The Coco 1 shrine was destroyed in a recent hurricane, and excavations were placed in the area where the shrine used to be. The Durazno mound supports both a miniature



(a)



(b)



(c)

Figure 3. Photographs of different architectural styles present at Punta Laguna: (a) Naranja, built in the megalithic style; (b) Coco I, built in the Peten style; (c) Aguacate, built in the East Coast style. Photographs by Kurnick.

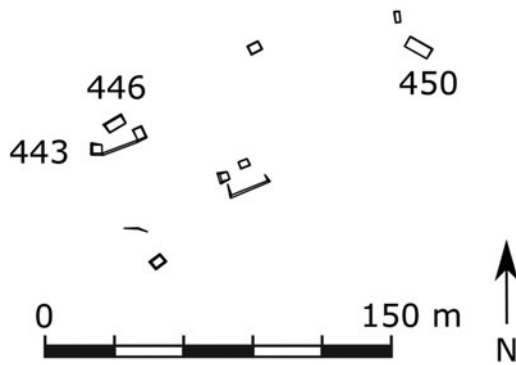


Figure 4. Enlarged view of the north side of the lagoon showing the location of mounds 443, 446, and 450. Image by Rogoff.

masonry shrine and a small, plain stela measuring 125 cm tall x 55 cm wide. Shallow, horizontal excavations were conducted in the areas adjacent to the shrine and stela. Fresa is an approximately 1 m high mound that also supports a miniature masonry shrine. Project members excavated in the areas in front and behind this mound.

Guava is a low, rectangular platform with no visible architectural features, and project members excavated in the areas to its north, south, and west. Habanero, an intrasite *sacbe* (causeway), measures approximately 72 m long x 10 m wide, with a height varying between 30 and 50 cm. Project members conducted excavations in the fill of this feature, on both the northern and southern ends. Iguana and Jalapeño are both approximately 1.5 m tall mounds with staircases on one side. A plain stela, measuring 118 cm tall x 54 cm wide, sits on top of Iguana. Excavation units were placed both in front of and behind these mounds. Manzana and Naranja are relatively small, square mounds, measuring approximately 1 m in height. Neither has obvious architectural features. Project members excavated in the fill of Manzana and in the areas to its northwest and southeast, as well as in areas to the north, east, and west of Naranja.

Finally, mounds 311, 337, 362, and 376 are located to the south of the lagoon (Figure 6). Mound 311 is a platform supporting the basal walls of two features. Project members excavated in the fill of the mound, both inside and outside these features. Mounds 337 and 376 are adjacent to one another. The former is a larger platform with the basal walls of two architectural features. The latter is a smaller platform with the basal walls of one feature. Project members placed excavation units inside each room, near the center and behind each of these two platforms. Mound 362 is a low platform with the basal walls of five rooms. Excavations were conducted inside each room, near the center of the platform, and off its west and north sides.

The life history of Punta Laguna

These excavations produced 17,633 ceramic artifacts. Fifty of these were objects such as spindle whorls and net sinkers, and 295 were highly eroded, and therefore unidentifiable, sherds. The remaining 17,288 ceramic sherds were analyzed using the type variety approach (Table 1) (Smith et al. 1960). This approach, which involves identifying and comparing

several characteristics of ceramics—including the physical composition of their paste, the Munsell color of their slip, and their method of manufacture and decoration—has been the most common method for establishing ceramic sequences at Maya archaeological sites for over half a century. To identify the ceramic materials from Punta Laguna, ceramicist Iliana Ancona Aragón used data from publications about ceramic sequences at archaeological sites in the eastern Yucatan Peninsula and the extensive physical ceramic collections housed at the Instituto Nacional de Antropología e Historia (INAH; National Institute of Anthropology and History) Yucatan office in Merida, Mexico.

Archaeologists working in different parts of the Maya world debate precise dates for major time periods, such as the Late Classic period or the Postclassic period. This article uses the dates established by Fernando Robles (Robles Castellanos 1990) for the greater Coba region. It should be noted, however, that these dates are based on stratigraphic contexts and comparisons with materials recovered at other sites in the Maya area, and not on absolute radiocarbon dates from Coba (Robles Castellanos 1990:25).

The Middle Preclassic period (600–300 B.C.)

The earliest ceramics recovered from Punta Laguna were produced during the Middle Preclassic period (600–300 B.C.). These 102 sherds, approximately 0.59 percent of the total number of identifiable sherds found at the site thus far, belong to five different ceramic groups: Achiotes, Chunhinta, Dzudzuquil, Joventud, and Pital (Figure 7). Sherds from the first four of these groups are similar to the Early Nabanche ceramics present at sites in the northern part of the Yucatan Peninsula, including Komchen and Dzibilchaltun (see Ceballos Gallareta and Robles Castellanos 2012). A single sherd from the Pital group—part of the Mamom ceramic sphere that predominated in the central and southern lowlands during this time (see Willey et al. 1967)—suggests possible connections with more distant parts of the Maya world.

Project members found sherds produced during the Middle Preclassic period in association with 11 of the 20 mounds: 311, 337, 341, 362, 446, 450, Guava, Manzana, Naranja, Sandía, and Toronja. Nevertheless, 42 out of these 102 sherds were found in the plaza between Sandía and Toronja. Archaeologists have recovered ceramics produced during the Middle Preclassic period at several nearby sites (see Rissolo et al. 2005). Yaxuna, Muyil, Vista Alegre, and several other sites in the Yalahau region, were first settled at this time (Glover 2012:274; Glover et al. 2011:70; Suhler et al. 1998:172; Tucker 2022:222–226; Witschey 1993:156–157, 2005:137–138), as were several sites in the Coahuah region, including Yo'okop (Johnstone 2005; Shaw 2015). Furthermore, Ek Balam was a “sizeable community with an expanding hinterland” (Bey III et al. 1998:107).

The Late Preclassic and beginning of the Early Classic period (300 B.C.–A.D. 300/350)

Project members excavated a substantially greater quantity of ceramics produced during the Late Preclassic and

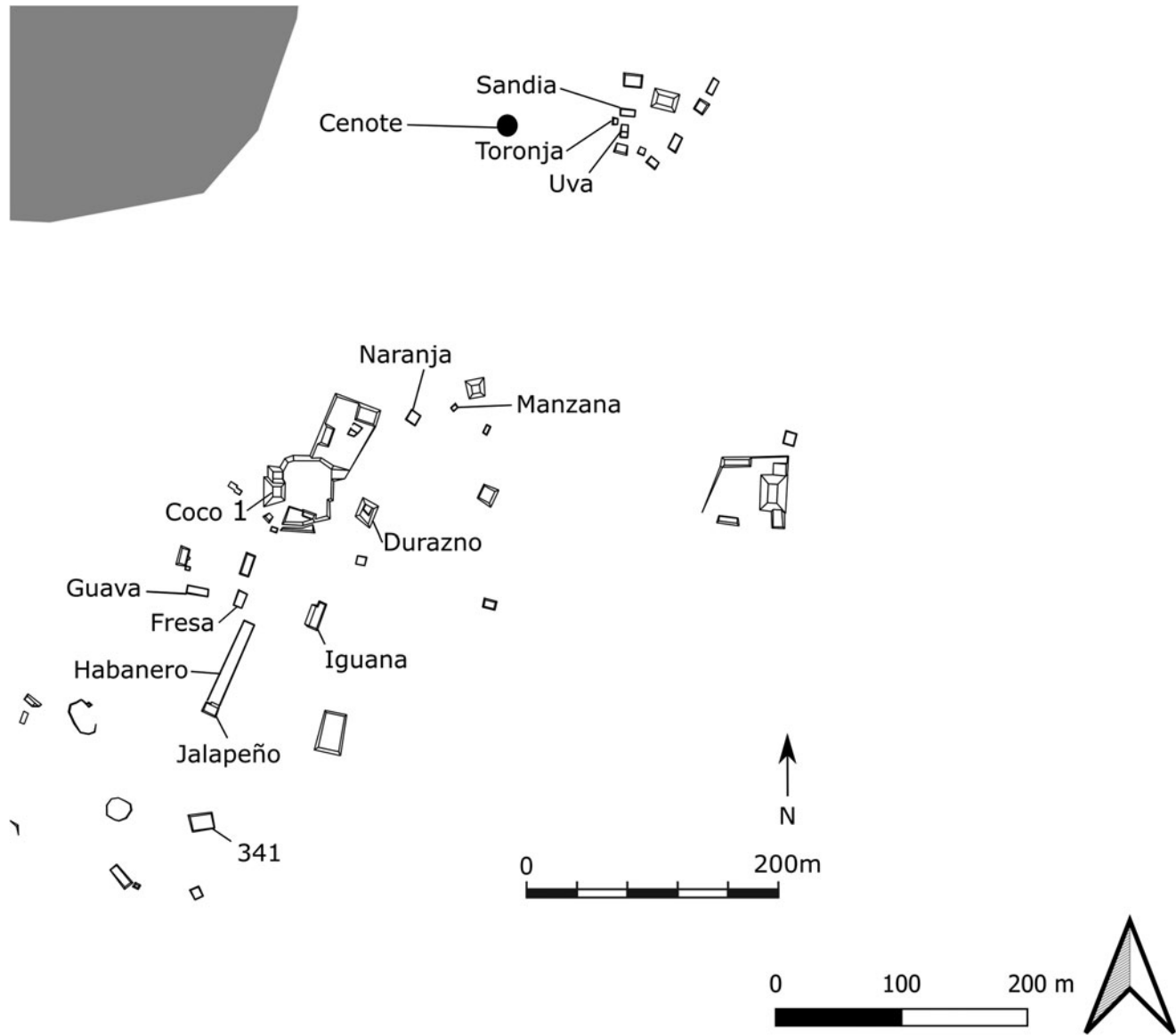


Figure 5. Enlarged view of the east and southeast side of the lagoon, showing the location of Sandia, Toronja, Uva, mound 341, Coco I, Durazno, Fresa, Guava, Habanero, Iguana, Jalapeño, Manzana, and Naranja, as well as the site's cenote. Image by Rogoff.

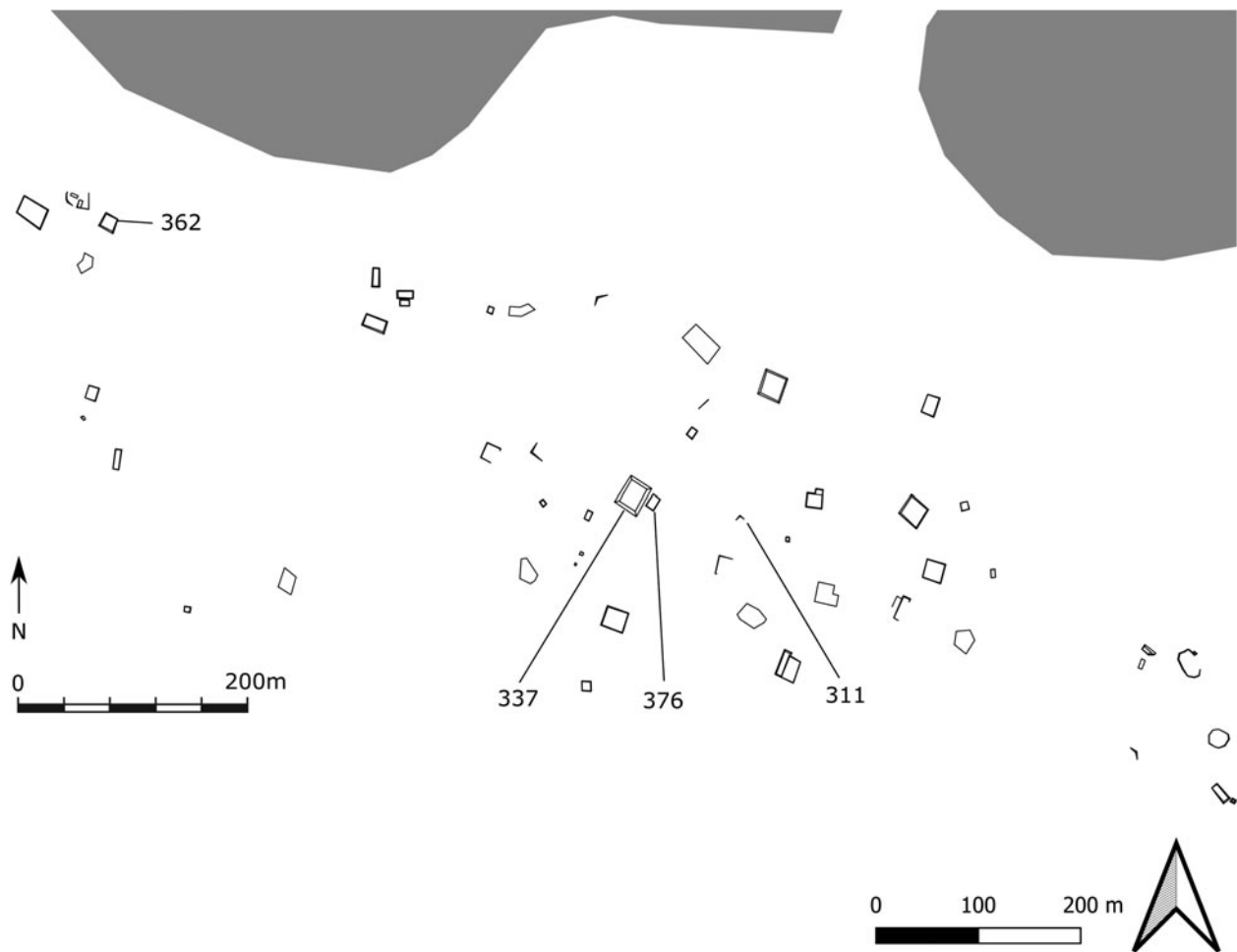


Figure 6. Enlarged view of the south side of the lagoon, showing the location of mounds 362, 337, 376, and 311. Image by Rogoff.

beginning of the Early Classic period (300 B.C.–A.D. 300/350); 6,086 sherds, 35.1 percent of the total number of identifiable sherds found at the site thus far, belong to the Achiotes, Carolina, Dzilam, Flor, Huachinango, Iberia, Polvero, Saban, Sierra, Xanaba, and Zotz groups (Figures 8, 9, 10). Sherds from the Saban and Sierra groups are the most common, together comprising 80.36 percent of the sherds produced during this period. Notably, at Punta Laguna, as at other nearby sites including Muyil (Witschey 1993, 2005), it has not been possible to distinguish between ceramics produced during the Late Preclassic, Terminal Preclassic, Protoclassic, and beginning of the Early Classic period. Many of the major ceramic groups continue throughout this approximately 600 year period (see Glover and Stanton 2010 for more information about the Late Preclassic to Early Classic transition in the northern Maya lowlands).

These sherds form part of a well-documented regional tradition, and they are similar to ceramics found at Coba (Robles Castellanos 1990), Ek Balam (Bey III et al. 1998), Yaxuna (Suhler et al. 1998), Muyil (Witschey 1993, 2005), Yo'okop (Johnstone 2005), and sites in the Yalahau region (Glover 2012; Glover and Esteban Amador 2005). Ceramics belonging to the Huachinango group, to take one example, may have been produced near Ek Balam (Bey III et al.

1998:111; Bond 1996; Bond Freeman 2007:283; Glover and Stanton 2010:66). Some sherds, however, do suggest longer-distance contacts. Within the Sierra group, two varieties have been identified. The most abundant, found at Coba (Robles Castellanos 1990:57–61) and sites throughout the eastern part of the Yucatan Peninsula, has clear slip. The other variety, designated as unspecified, has a well-adhered waxy finish similar to ceramics that form part of the Chicanel ceramic sphere in the southern lowlands (see Willey et al. 1967). Project members further recovered sherds from the Flor group, also part of the Chicanel sphere. But, because these sherds had a reddish tone to their paste and a darker slip, they may have been a local version of Flor ceramics produced within the Yucatan Peninsula.

Project members found significant numbers of sherds produced during the Late Preclassic and beginning of the Early Classic period in association with each of the 20 mounds. Ceramics from three mounds on the north side of the lagoon—450, 446, and 443—and one on the south side of the lagoon, 337, suggest that these mounds were each constructed and ultimately abandoned during this time. Almost all (98.5 percent) of the 69 sherds associated with Mound 450 were produced during this period and belong to the Sierra, Saban, or Huachinango groups.

Table 1. Ceramics excavated at Punta Laguna between 2017 and 2022.

Chronology	Coba Ceramic Complex	Group	Type	Variety	Frequency
Postclassic A.D. 1100/1200 to 1500/1550	Seco	Mama	Mama red	Mama	101
		Mama	Papacal incised	Papacal	2
		Navula	Navula unslipped	Navula	381
		Navula	Navula unslipped	Unspecified	136
		Navula	Cehac Hunacti impressed	Unspecified	3
		Navula	Chen Mul modeled	Chen Mul	816
		Navula	Chen Mul modeled	Unspecified	2,043
		Navula	Thul applique	Unspecified	14
		Navula	Yacman striated	Unspecified	8
		Navula	Chenkeken incised	Chenkeken	1
		Navula	Huhi impressed	Huhi	23
		Payil	Palmul incised	Palmul	8
		Late Classic A.D. 550/600 to 1100/1200	Oro and Palmas	Arena	Arena red
Batres	Batres red			Batres	1,355
Batres	Lakin impressed composite			Lakin	121
Batres	Oxkintok applique composite			Oxkintok	63
Chablekal	Chablekal gray			Chablekal	5
Chimbote	Moro orange polychrome			Moro	1
Dzitas	Dzitas slate ware			Dzitas	8
Dzitas	Balantun black on slate			Balantun	3
Dzitya	Dzitya black			Dzitya	5
Encanto	Encanto striated			Sacná	435
K'inich	Kinich orange			Kinich	5
K'inich	Itzimna red on orange			Itzimna	1
Maxcanu	Maxcanu buff			Maxcanu	47
Muna	Akil impressed			Akil	12
Muna	Muna slate ware			Muna	490
Muna	Sacalum black on slate			Sacalum	12
Petkanche	Petkanche orange polychrome			Petkanche	18
Saxche	Saxche orange polychrome			Saxche	1
Teabo	Teabo red			Teabo	95
Ticul	Ticul thin slate ware			Ticul	36
Vista Alegre	Vista Alegre striated			Unspecified	603
Vista Alegre	Vista Alegre striated			Vista Alegre	1,106
Polychrome					6
Unspecified	Dos Caras striated	Dos Caras	518		
Early Classic A.D. 300/350 to 550/600	Blanco	Aguila	Dos Arroyos orange polychrome	Unspecified	2
		Aguila	Aguila orange	Aguila	12
		Balanza	Balanza black	Unspecified	6

(Continued)

Table 1. (Continued.)

Chronology	Coba Ceramic Complex	Group	Type	Variety	Frequency
		Balanza	Paradero fluted	Unspecified	1
		Cetelac	Cetelac fiber tempered	Cetelac	469
		Saban	Saban unslipped	Becoob	1,268
		Sombra	Sombra coarse ware	Sombra	8
		Timucuy	Timucuy orange polychrome	Timucuy	4
		Tituc	Tituc orange polychrome	Tituc	182
		Triunfo	Triunfo striated	Triunfo	25
Late Preclassic / Beginning of the Early Classic 300 B.C. to A.D. 300/350	Añejo	Achiotes	Sapote striated	Rastro	7
		Carolina	Carolina bichrome incised	Carolina	110
		Dzilam	Dzilam green incised	Dzilam	60
		Flor	Mateo red on cream	Unspecified	14
		Flor	Flor cream	Flor	150
		Flor	Accordion incised	Unspecified	13
		Flor	Special red and cream with designs		2
		Huachinango	Fango bichrome	Fango	133
		Huachinango	Huachinango bichrome incised	Huachinango	588
		Iberia	Iberia orange	Unspecified	1
		Polvero	Polvero black	Unspecified	18
		Polvero	Lechugal incised	Unspecified	1
		Saban	Chancenote striated	Chiquilá	2,126
		Saban	Tancah coarse ware	Tancah	1,698
		Sierra	Sierra red	Clear slip	516
		Sierra	Sierra red	Unspecified	539
		Sierra	Laguna Verde incised	Unspecified	6
		Sierra	Celarain notched	Celarain	3
		Sierra	Especial ondulado		1
		Sierra	Repasto black on red	Repasto	1
		Sierra	Hongo composite	Hongo	1
		Xanaba	Xanaba red	Xanaba	5
		Xanaba	Caucel black on red	Caucel	3
		Zotz	Zotz black cream incised	Zotz	47
		Undesignated	Protoclassic red and orange with incised designs		6
		Undesignated	Petz dark orange	Petz	18
		Undesignated	Engobe buff		19
Middle Preclassic 600 to 300 B.C.	n/a	Achiotes	Achiotes unslipped	Unspecified	9
		Chunhintá	Chunhintá black	Ucu	12
		Dzudzuquil	Dzudzuquil cream to buff	Dzudzuquil	31
		Dzudzuquil	Kuche incised	Kuche	4

(Continued)

Table 1. (Continued.)

Chronology	Coba Ceramic Complex	Group	Type	Variety	Frequency
		Dzudzuquil	Majan red and cream to buff	Majan	10
		Joventud	Guitara incised	Kiba	2
		Joventud	Joventud red	Nolo	33
		Pital	Pital cream	Unspecified	1

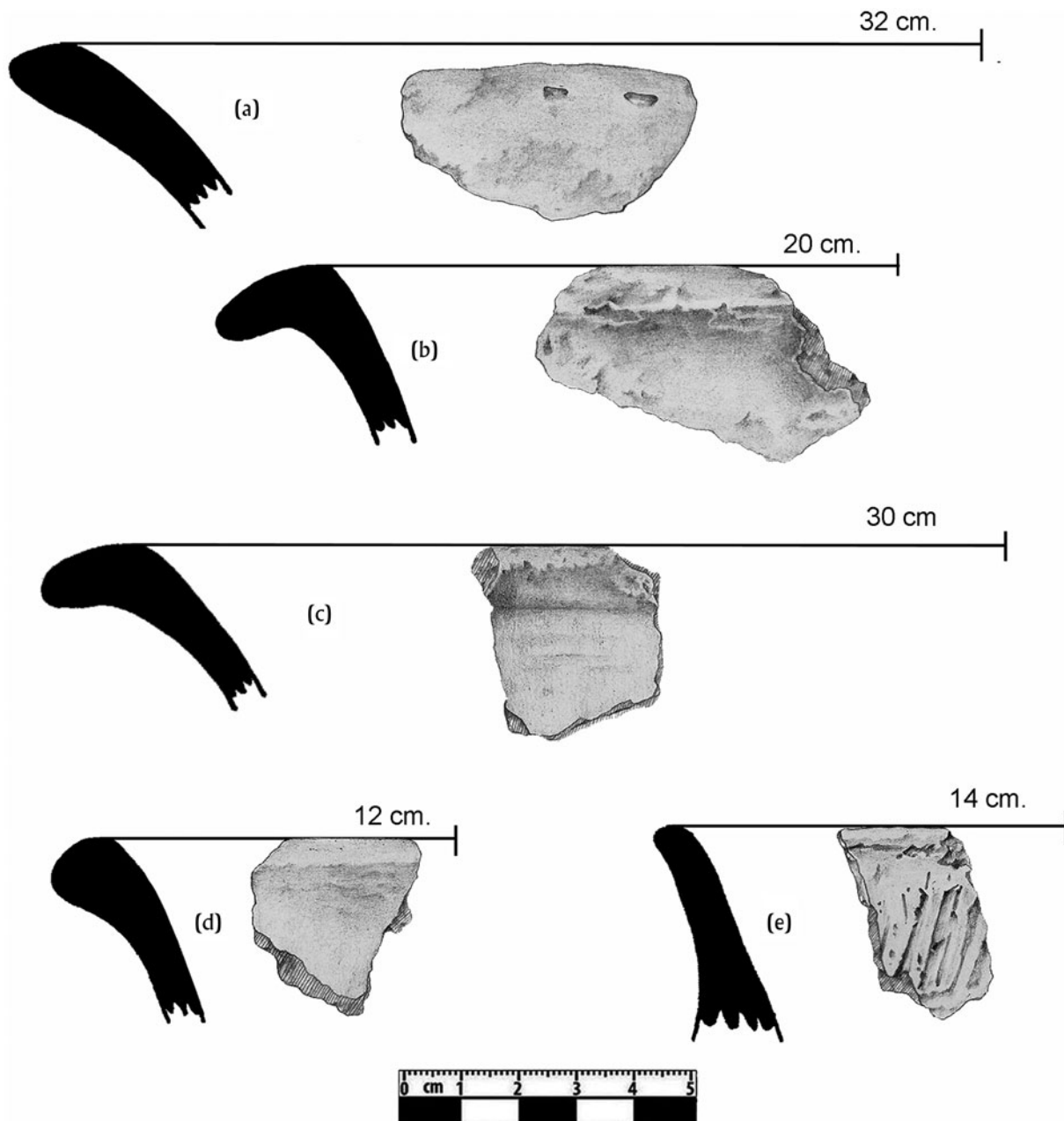


Figure 7. Ceramics produced during the Middle Preclassic period: (a–b) Joventud red: Nolo; (c) Dzudzuquil cream to buff: Dzudzuquil; (d) Achiotes unslipped: Unspecified; (e) Sapote striated: Rastro. Drawings by Aurea Hernandez.

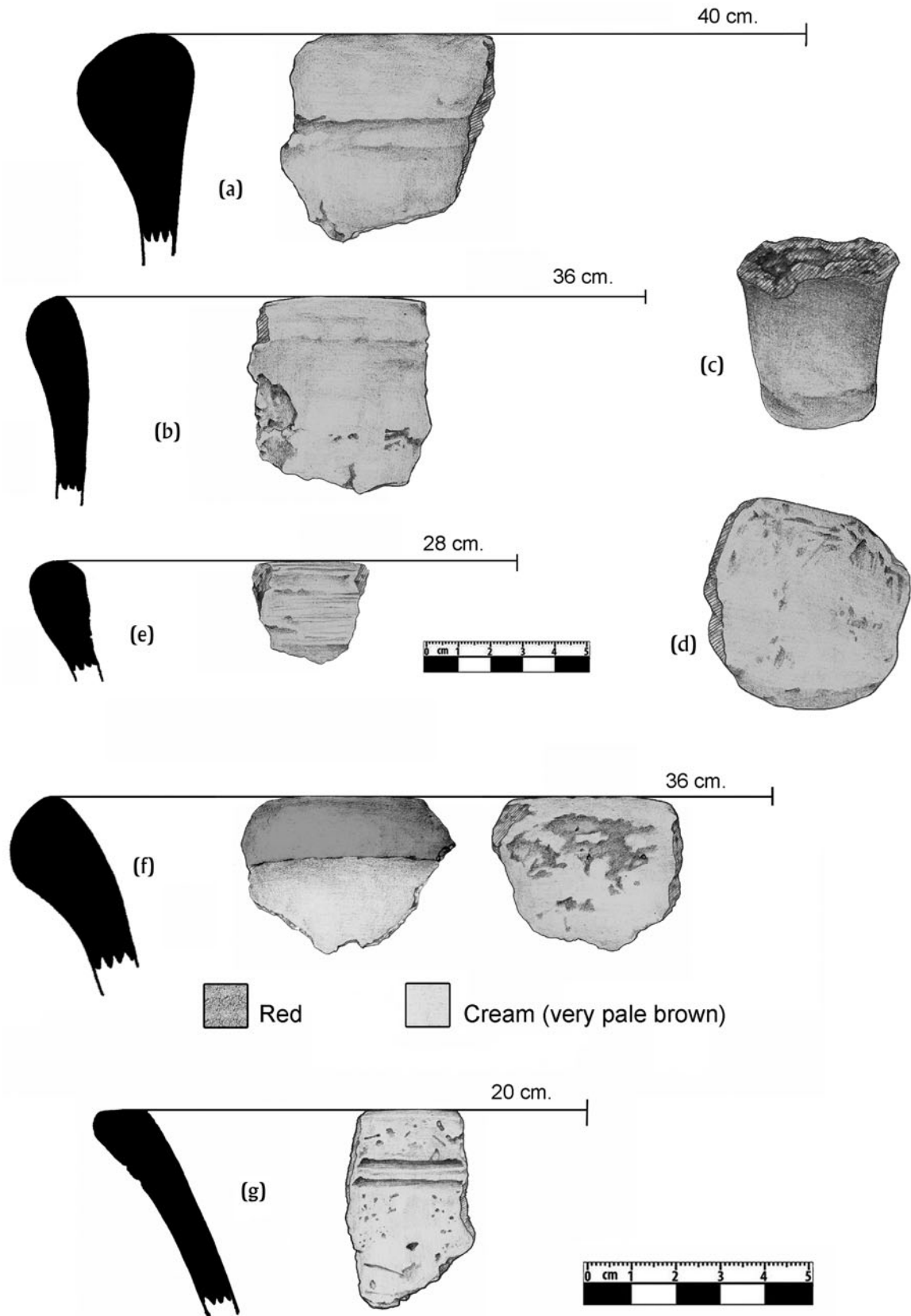


Figure 8. Ceramics produced during the Late Preclassic and beginning of the Early Classic periods. (a–d) Tancah coarse ware: Tancah; (f) Mateo red on cream: Unspecified; (g) Accordion incised: Unspecified. Drawings by Aurea Hernandez.

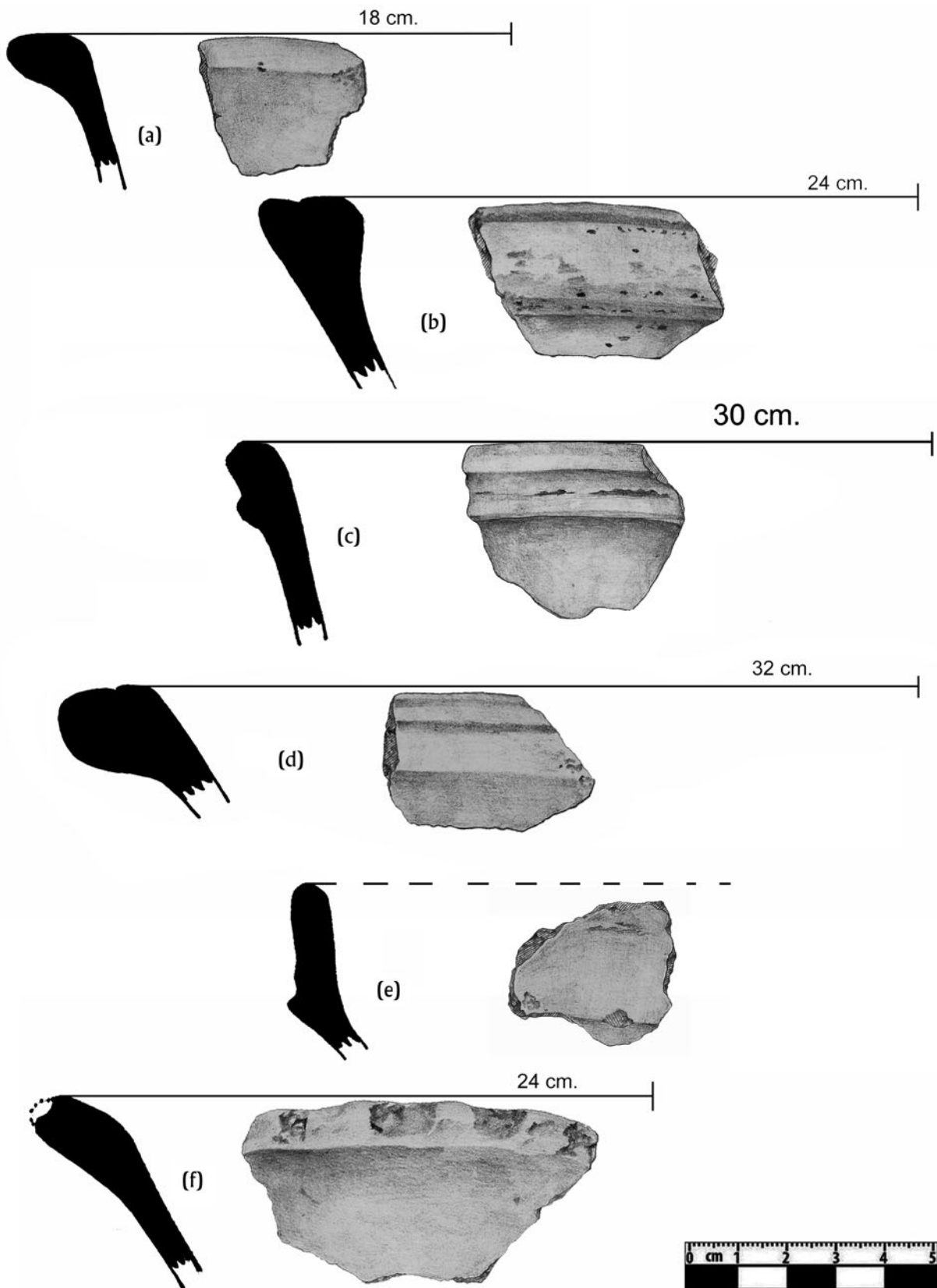


Figure 9. Ceramics produced during the Late Preclassic and beginning of the Early Classic periods: (a–c) Sierra red: Clear slip; (d) Laguna Verde incised: Unspecified; (e–f) Celarian notched: Celarain. Drawings by Aurea Hernandez.

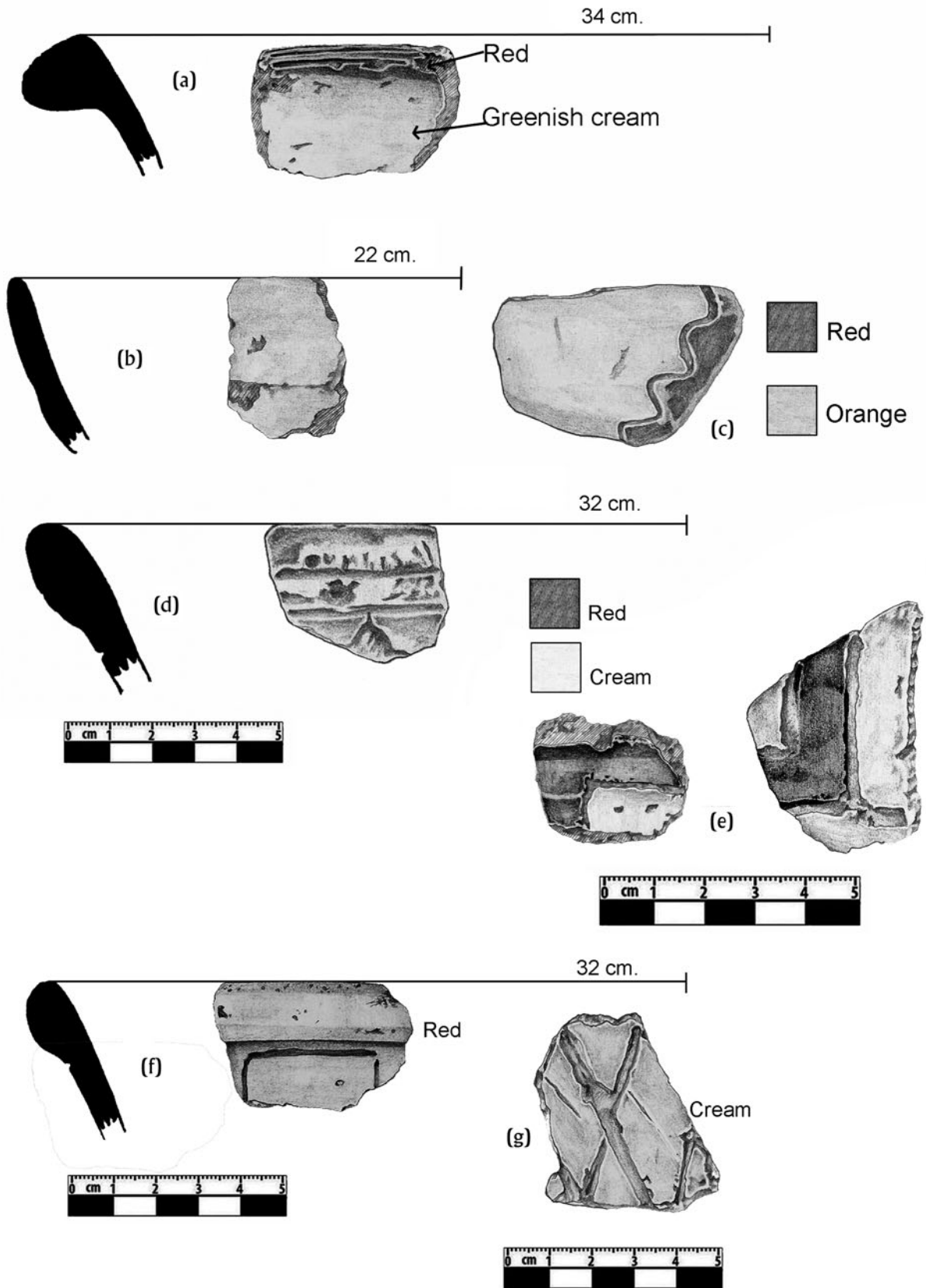


Figure 10. Ceramics produced during the Late Preclassic and beginning of the Early Classic periods: (a) Dzilam green incised: Dzilam; (b) Iberia orange: unspecified; (c) group undesignated, Protoclassic red and orange with incised designs; (d–e) Huachinango bichrome incised: Huachinango; (f) Carolina bichrome incised: Carolina. Drawings by Aurea Hernandez.

Similarly, almost all (97.8 percent) of the 282 sherds associated with Mounds 446 and 443—which form part of a triadic architectural arrangement—were produced during this period and belong to the Sierra, Saban, Huachinango, Carolina, or Zotz groups. Finally, almost all (91.7 percent) of the 328 sherds associated with Mound 337 were produced during this period and belong to the Sierra, Saban, Huachinango, Flor, or Dzilam groups.

During this time, several nearby sites experienced growth. Yaxuna, for example, was increasing in power and prestige and, “during the Late Preclassic, the site appears to have been a typical regal-ritual center in the southern lowland tradition, including architectural forms such as triadic acropolis groups” (Glover and Stanton 2010:68; Suhler et al. 1998). Similarly, sites in the Yalahau region underwent a “dramatic increase in population along with an accompanying increase in monumental architecture” (Fedick and Mathews 2005; Gallareta Negrón and Taube 2005; Glover 2012:279), and sites in the Cochuah region “experienced a dramatic increase in the number and size of sites” (Shaw 2015:10). Ek Balam (Bey III et al. 1998) and Muyil (Witschey 1993) also grew substantially, and new sites—most notably Coba—were founded (Robles Castellanos 1990). It should be noted, however, due to most excavations at Cobá being associated with large, monumental architecture, there may be an earlier, yet uncovered, occupation phase at the site.

The Early Classic period (A.D. 300/350–550/600)

Project members excavated 1,977 ceramic sherds produced during the Early Classic period (A.D. 300/350–550/600). These sherds, 11.44 percent of the total identifiable sherds found at the site so far, belong primarily to the Becoob variety of the Saban group, as well as to the Cetelac and Tituc groups (Figures 11 and 12). Project members also recovered small numbers of sherds belonging to the Aguila, Balanza, Sombra, and Timucuy and Triunfo groups. Like ceramics from previous periods, the Early Classic ceramics at Punta Laguna were primarily produced locally. Only a few sherds, such as those belonging to the Timucuy group, suggest longer-distance exchange, and in this case, with the northern part of the Yucatan Peninsula (Brady et al. 1998; Jiménez et al. 2017:87; Smith 1971).

Of the 20 mounds thus far excavated at Punta Laguna, only seven—311, 362, 376, Sandia, Toronja, Uva, and 341—have significant numbers of sherds produced during the Early Classic period, and no purely Early Classic contexts have been identified. The site may have experienced a period of stress during this time, perhaps associated with Cobá's rise as a regional power (Robles Castellanos 1990:91). At Punta Laguna, ceramics produced during the Early Classic period occurred with the greatest frequency along the south side of the lagoon and near the site's cenote.

During this time, the occupation histories of sites in the eastern Yucatan Peninsula diverged. As noted above, Coba prospered and began its transformation into a regional power

(Robles Castellanos 1990:91), and Muyil continued to expand in size and population, though slowly (Witschey 1993, 2005). Yaxuna, on the other hand, experienced a population decline, and one associated with the “reduction and reorientation of monumental construction” (Glover and Stanton 2010:70; Loya González and Stanton 2013:28). Glover and Stanton (2010:69) suggest that this demographic shift may have been associated with changes in ideology that emphasized the “cult of kingly ancestors” and “elite mortuary monuments.” Population declined in the Cochuah region at this time (Shaw 2015:11), and most sites in the Yalahau region were all but abandoned (Glover 2012; Glover and Esteban Amador 2005). Glover (2012:290) suggests two possible explanations for this demographic decline. On the one hand, individuals living in the Yalahau region may have been enticed to migrate to Coba. On the other hand, climatic factors may have made continued occupation of the Yalahau region difficult. Lake cores from Punta Laguna suggest a drying period around A.D. 250 (Hodell et al. 2001; Hodell et al. 2007), and rising sea levels and water tables may have resulted in flooding (Fedick 2014; Leonard et al. 2019). As Glover (2012:290) notes, this “climatic change may have wreaked havoc on the hydrology of the region's wetlands” and its water management systems.

The Late and Terminal Classic period (A.D. 550/600–1100/1200)

Project members excavated a large quantity and diversity of ceramics produced during the Late Classic period (A.D. 550/600–1100/1200); 5,587 sherds—32.32 percent of the total number of identifiable sherds found at the site thus far—belonging to the Arena, Batres, Chablekal, Chimbote, Dzitas, Dzitya, Encanto, K'inich, Maxcanu, Muna, Petkanche, Saxche, Teabo, Ticul, and Vista Alegre groups (Figures 13 and 14) (see Robles Castellanos 2006 for an overview of Late Classic-period ceramics in the northern Yucatan Peninsula). Notably, Robles Castellanos (1990) distinguished two Late to Terminal Classic period ceramic complexes at Cobá: the Palmas complex (A.D. 550/600–700/730) and the Oro complex (A.D. 700/730–1100/1200). Nevertheless, several ceramic groups are common to both complexes and at Punta Laguna, which lacks clear-cut stratigraphy, it is not currently possible to distinguish between ceramics produced during these two time periods. Vista Alegre, Batres Red, and Arena Red sherds occur with the greatest frequency at Punta Laguna, comprising 30.6 percent, 27.5 percent, and 11.47 percent of the Late Classic ceramics, respectively. Vista Alegre ceramics have been found throughout the eastern Yucatan Peninsula, including at coastal sites such as Muyil (Witschey 1993), Xelha (de la Cruz Canché Manzanero 1992:119–126), and Xcaret (Ochoa Rodríguez 2004:164–167). Batres Red ceramics are particularly common at Coba (Robles Castellanos 1990) and may have been produced there (see Loya González and Stanton 2013:39). These ceramics, however, are noticeably infrequent at some nearby sites, including Muyil (Witschey 1993), Ek Balam (Bey III et al. 1998), and Yo'okop (Johnstone 2005:162; Shaw 2005:150). Arena Red ceramics

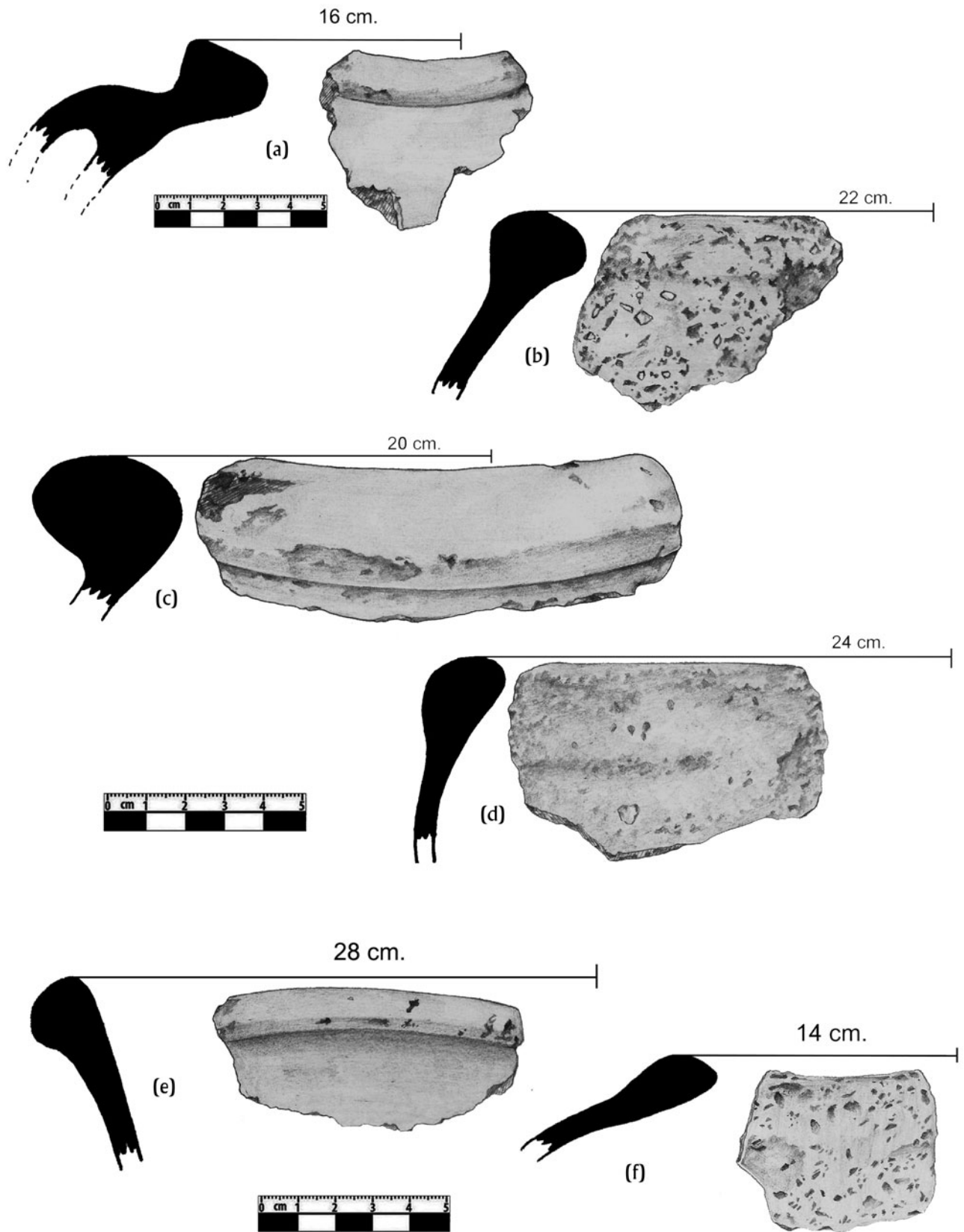


Figure 11. Ceramics produced in the Early Classic period: (a–d) Saban unslipped: Becoob; (e–f) Cetelac fiber tempered: Cetelac. Drawings by Aurea Hernandez.

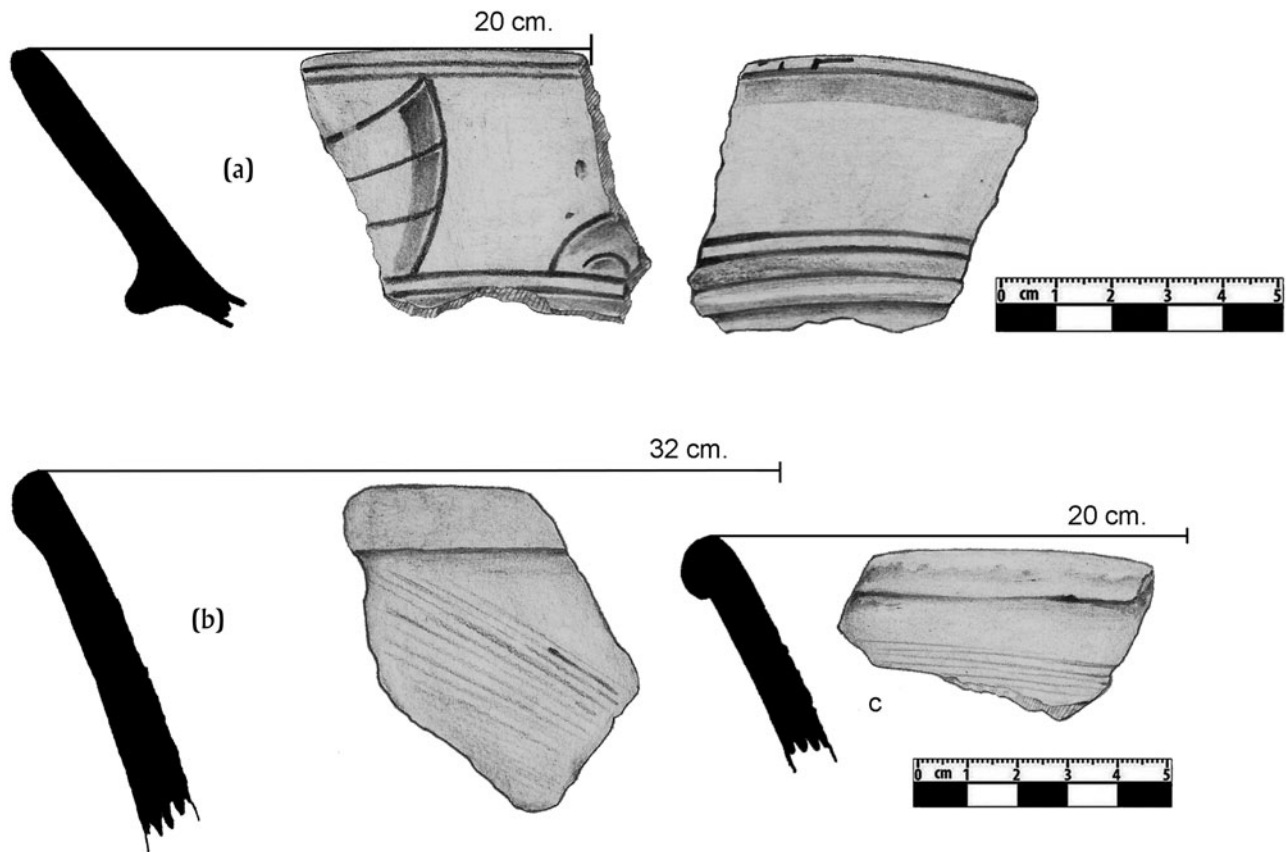


Figure 12. Ceramics produced during the Early Classic period: (a) Tituc orange polychrome: Tituc; (b–c) Sombra coarse ware: Sombra. Drawings by Aurea Hernandez.

were likely produced at Yaxuna, between approximately A.D. 600 and 700. These ceramics have been found in significant numbers at Coba (Loya González and Stanton 2013) and at coastal sites, including Xelha (de la Cruz Canché Manzanero 1992:129).

At Punta Laguna, project members recovered significant numbers of sherds produced during the Late Classic period in association with 16 of the 20 mounds so far excavated—all mounds except 450, 446, 443, and 337. Notably, during the Palmas phase, Coba no longer produced its own polychromes but instead imported them from the Peten, Belize, and Rio Bec area (Robles Castellanos 1990:258). Late Classic polychromes are also rare at Punta Laguna. The only polychromes found so far form part of the Petkanche, Chimbote, and Saxche groups, and comprise only 0.36 percent of the identifiable sherds produced during this period.

The Late Classic period was a time of growth throughout much, though not all, of the region. Muyil grew rapidly during this time (Witschey 1993, 2005) and Ek Balam “dominate[d] the landscape as the capital of a densely populated regional polity” (Bey III et al. 1998:118). Coba experienced a significant increase in size, population, and construction activity. There, Maya peoples built a profusion of new public and residential structures, as well as *sacbeob* (causeways), including a 100 km long causeway connecting

Coba and Yaxuna (Loya González and Stanton 2013; Robles Castellanos 1990:131, 177). Stelae from Coba, with inscribed hieroglyphic dates ranging from A.D. 613 to 780, further suggest that the site reached its political apex at this time (Loya González and Stanton 2013:28; see also Guenter 2014; Stuart 2010). In the Yalahau region, by contrast, sites other than Vista Alegre (see Glover et al. 2011, 2018; Tucker 2022) remained largely abandoned—“little material evidence exists in support of an occupation of any size in the region” (Glover 2012:279).

At Yaxuna, there is little evidence of monumental construction during the Late Classic period, though the site experienced a resurgence during the Terminal Classic period: Then, “population levels increased dramatically” and “many previously abandoned monumental structures were renovated” (Loya González and Stanton 2013:28). Similarly, the Cochuah region, which remained largely uninhabited during the Late Classic period, witnessed “an abrupt reversal . . . with a strong population evidenced at every site” (Shaw 2005, 2015:12). Indeed, Yo’okop experienced a Terminal Classic “population boom and invested in extensive *sacbe* networks” (Shaw 2015:13) and, at Ichmul, the Terminal Classic “seems to be when construction activity was most intense, and when the monumental buildings . . . and five *sacbeob* . . . were built (Flores Colin 2015:196).

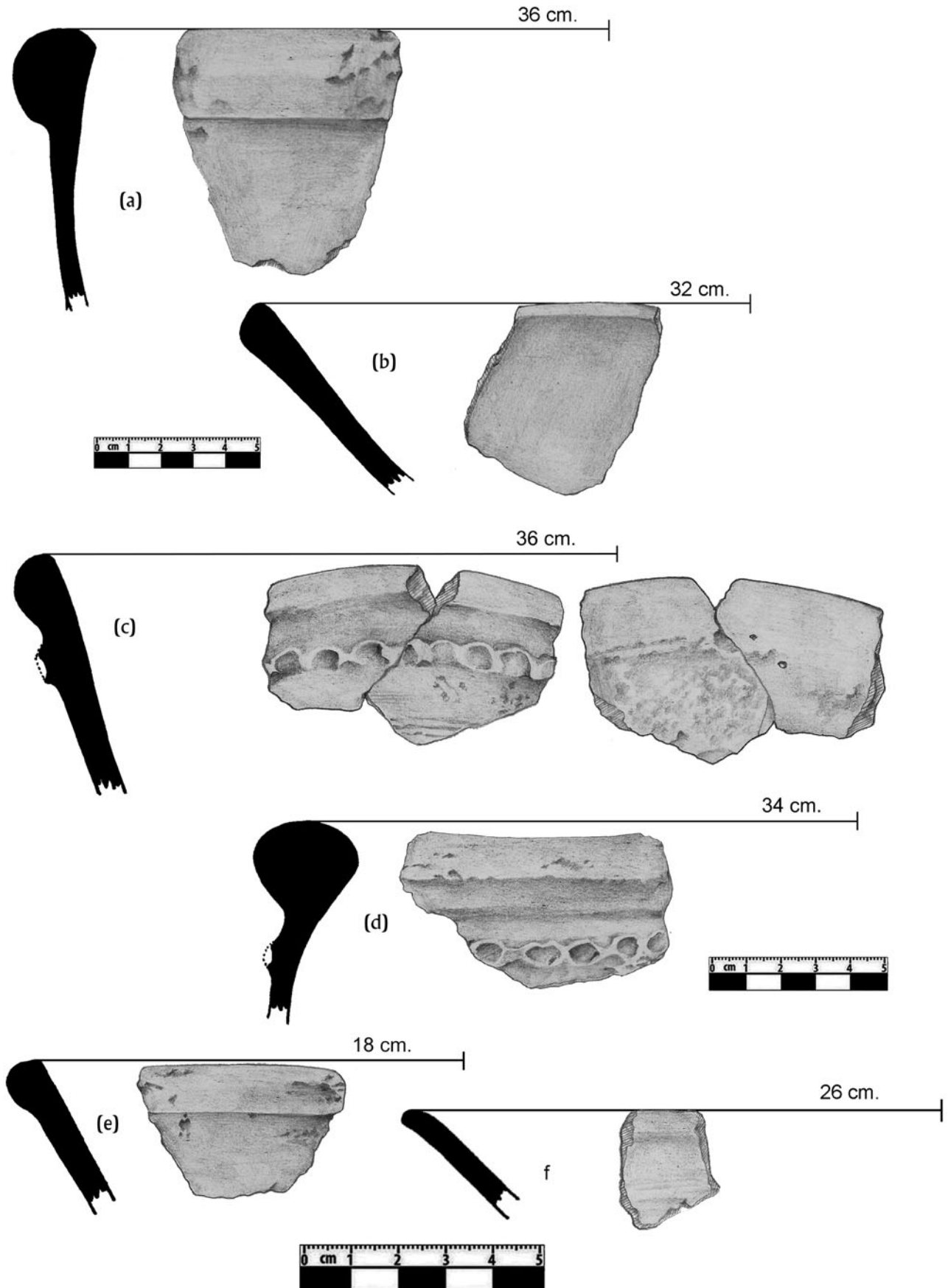


Figure 13. Ceramics produced during the Late Classic period: (a–b) Batres red: Batres; (c–d) Lakin impressed composite: Lakin; (e) Encanto striated: Sacná; (f) Arena red: Arena. Drawings by Aurea Hernandez.

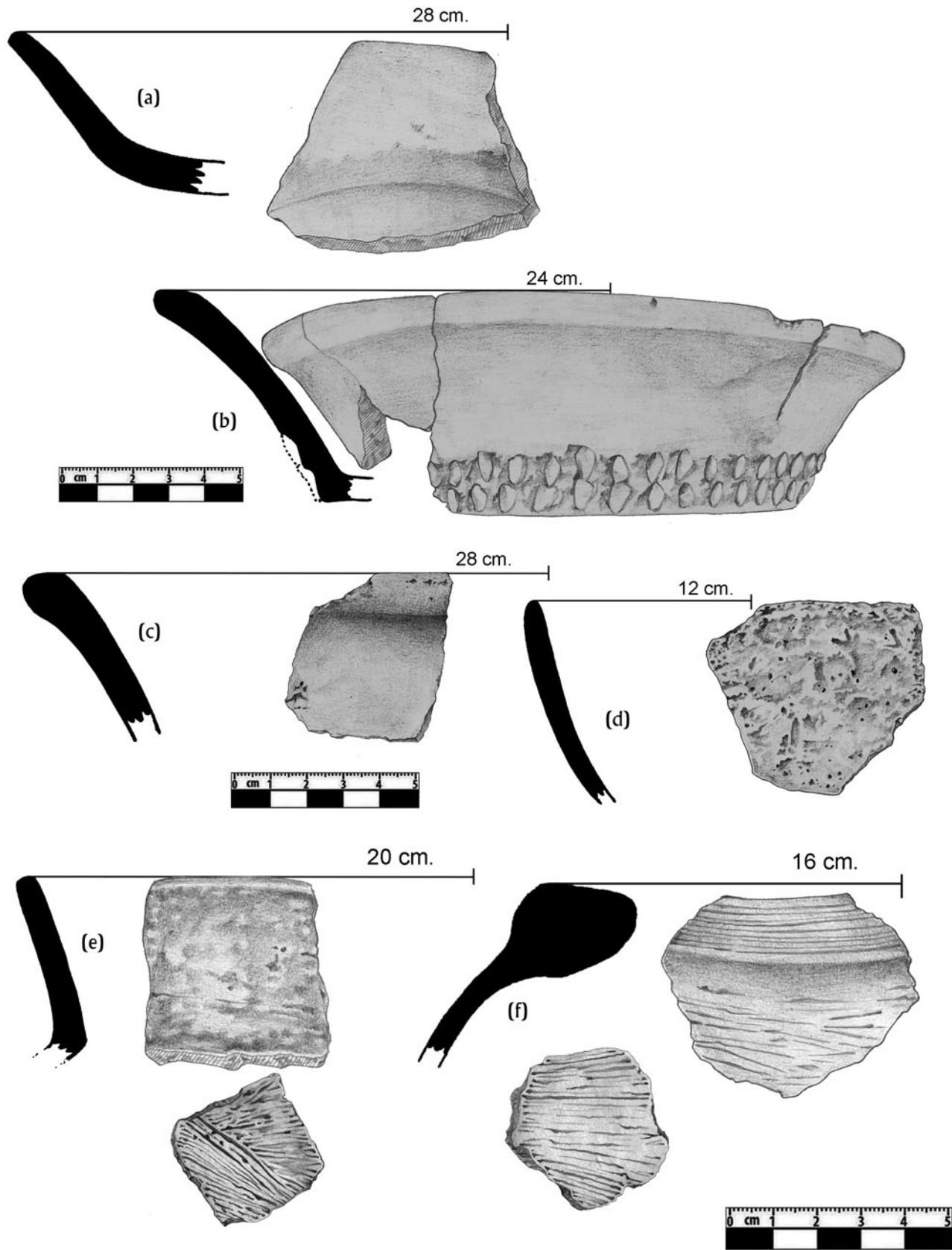


Figure 14. Ceramics produced during the Late Classic period: (a) Muna slate ware: Muna; (b) Akil impressed: Akil; (c) Teabo red: Teabo; (d) Ticul thin slate ware: Ticul; (e) Vista Alegre striated: Unspecified; Vista Alegre striated: Vista Alegre. Drawings by Aurea Hernandez.

The Postclassic period (A.D. 1100/1200–1500/1550)

Project members excavated 3,536 sherds produced during the Postclassic period (A.D. 1100/1200–1500/1550). These sherds comprise 20.45 percent of the total identifiable sherds found at the site so far. Almost all (96.87 percent) of the ceramics produced during the Postclassic period belong to the Navula group, although sherds from the Mama and Payil groups are also present (Figure 15). Within the Navula group, 2,859 sherds—80.85 percent of the total number of sherds produced during the Postclassic period—were fragments of Chen Mul Modeled vessels. Navula ceramics also included *cajetes*, and ollas; Mama ceramics include *cajetes* and ollas; and Payil ceramics consist exclusively of ollas with complex, incised designs.

Of the 20 mounds so far excavated at Punta Laguna, eight have evidence of use during the Postclassic period: Coco 1, Durazno, Fresa, Habanero, Guava, Iguana, Jalapeno, and Manzana. Only Jalapeño has evidence of residential occupation. There, project members recovered utilitarian ceramics as well as ceramic net weights, heavily used obsidian blades, and spindle whorls suggestive of Postclassic fishing net manufacture (Kurnick and Rogoff 2021). So far, all ceramics produced during the Postclassic period have been found either to the southeast of the lagoon or near the site's cenote.

Some nearby sites experienced a contraction during the Postclassic period (see Andrews et al. 2003 for a discussion of the Late Classic to Postclassic transition in the northern Yucatan Peninsula). Coba decreased in size and population, although inhabitants continued to build new structures, including those in the Pinturas group (Robles Castellanos 1990:219). Similarly, “Ek Balam’s Postclassic occupation is modest when compared to that of the Classic period” though there is “evidence of continued use of some earlier buildings . . . and limited new construction” (Bey III et al. 1998:116). At Yaxuna, activity during this period appears to have been entirely ceremonial as no Postclassic residences have yet been found (Loya González and Stanton 2013; Suhler et al. 1998). Similarly, the Cochuah region was largely depopulated, with only “minor ritual architecture” present at some sites, and most notably at Yo’okop” (Shaw 2005, 2015:14).

Nevertheless, other sites in the region prospered. Muyil reached its greatest size and population (Witschey 1993, 2005), coastal sites such as Xcaret (Ochoa Rodríguez 2004) and Xelha (de la Cruz Canché Manzanero 1992) flourished, and individuals resettled in the Yalahau region, including at San Angel where there are murals dating to the Postclassic period (Glover 2012; see also Amador Berdugo 2005; Fedick and Mathews 2005; Gallareta Negrón and Taube 2005; Glover and Esteban Amador 2005; Lorenzen 1999). But, as at other sites in the region, “when present, Postclassic architectural modifications [in the Yalahau region] were generally modest and consisted of the construction of altars and shrines” (Glover 2012:281).

The Colonial and Contemporary period (A.D. 1500/1550–today)

Maya history did not stop at the end of the Postclassic period; it continues to the present (e.g., Morgan and Fryer

2022). At Punta Laguna, project members have not excavated any ceramics produced during the Colonial period. In 1964, however, Maya *chicleros* (gum tappers) from the town of Chemax founded the contemporary village of Punta Laguna. Among other actions, they re-erected the two small, plain, Postclassic stelae at the site, both of which had fallen over in the intervening 500 years. Perhaps not surprisingly, project members have recovered recently produced artifacts—such as coins with dates from the 1970s—from the site’s surface.

Ek Balam, Xcaret, and Xelha all have strong evidence of Colonial-period occupation (see Peraza Lope et al. 2021 for a discussion of early Colonial-period ceramics in the Yucatan Peninsula). Ek Balam includes a Franciscan chapel and friary complex, and archaeologists have recovered imported Spanish ceramics as well as locally produced post-contact pottery (Bey III et al. 1998:117). Xcaret, which remained an important port during the Colonial period, includes chapels and Colonial-period ceramics (Andrews 1993; Andrews and Andrews 1975; Con Uribe and Jordán D. 1992; Ochoa Rodríguez 2004:168–171). And, Xelha includes ceramics dating from the arrival the Spanish in 1527 through the middle of the sixteenth century (de la Cruz Canché Manzanero 1992:210–216). Other sizeable communities, including Kantunilkin, Conil (Andrews 2002), and Ichmul (Flores Colin 2015) were occupied during the Colonial period. Furthermore, several places, including Tihosuco (Diserens Morgan and Leventhal 2020; Leventhal et al. 2014) and Ichmul (Flores Colin 2015), were important locations during more recent historical events, such as the Caste War (e.g., Alexander 2012b; Badillo Sánchez 2022; Sánchez 2023).

Punta Laguna as a persistent place

The preceding ceramic analysis is necessarily imperfect. As noted above, it is based on a relatively small sample size: Excavations conducted between 2017 and 2022 yielded only 17,633 ceramic artifacts, 17,288 of which were suitable for type-variety analysis. Furthermore, there is little stratigraphic integrity—or stratigraphy—at Punta Laguna. As at other sites in the region, ceramic artifacts produced during different time periods were found together in the same contexts—something not surprising given the proximity of bedrock to the surface. Nevertheless, this ceramic analysis, particularly when understood in terms of a composite life history, suggests several insights.

Preliminary studies conducted in the 1980s came to different conclusions about Punta Laguna’s occupation history. Some (Cortés de Brasdefer 1988:108) argued that the “ceramics date for the most part from the Postclassic and only rarely from the Classic period.” Others argued that Punta Laguna’s occupation history extended from the Late Preclassic to the Postclassic period, but with hiatuses: “*Los tepalcates evidencian una secuencia cronológica que se inicia en el Preclásico Tardío y finaliza en el siglo XV, aunque no se observó una completa continuidad en cuanto a los complejos cerámicos* [The sherds show a chronological sequence that begins in the Late Preclassic and ends in the 15th century,



Figure 15. Ceramics produced during the Postclassic period: (a) Chen Mul modeled: Chen Mul; (b) Palmul incised: Palmul. Drawings by Aurea Hernandez.

although a complete continuity in ceramic complexes was not observed]” (Benavides Castillo and Zapata Peraza 1991:46; translation by Sarah Kurnick). More extensive excavations and analyses have questioned these preliminary findings. There no longer exist significant gaps in Punta Laguna’s occupation history prior to the sixteenth century. Rather, ceramics suggest that Maya peoples’ presence at Punta Laguna has been continuous or recurring—with ebbs and flows—from approximately 600/300 B.C. through A.D. 1500/1550. Oral histories and nonceramic artifacts suggest that the area has been inhabited, without interruption, from the 1960s to the present.

Not all locales in the region have similar occupation histories. Several nearby sites were not occupied until later in Maya history. Xelha, for example, has no evidence of occupation prior to the Late Preclassic or beginning of the Early Classic period (de la Cruz Canché Manzanero 1992:22), and

Xcaret was not occupied until the Early Classic period (Ochoa Rodríguez 2004:44). Other nearby sites were occupied, abandoned for significant periods of time, and then reoccupied. At San Angel, for instance, as at many sites in the Yalahau region, there is evidence of occupation during the Late Preclassic and Early Classic periods, as well as during the Postclassic period, but a “virtual lack of Late Classic remains” (Fedick and Mathews 2005; Gallareta Negrón and Taube 2005:110).

Maya peoples did, however, occupy certain places continuously or recurrently from the Middle Preclassic through the Postclassic periods. Muyil (Witschey 1993, 2005), Ek Balam (Bey III et al. 1998:101), and Yaxuna (Suhler et al. 1998:167) offer prominent examples, with Ek Balam being occupied well into the Colonial period. Maya peoples have also reoccupied each of these locales in the 20th century (e.g., Taylor 2018). Such persistence

is notable given the climatic, political, and social changes in the region. Paleolimnological studies throughout the peninsula (e.g., Brenner et al. 2002; Hodell et al. 2005; Torrescano-Valle and Islebe 2015), and specifically analyses of oxygen isotope data from a sediment core from the Punta Laguna lagoon (Curtis et al. 1996; Hodell et al. 2007), demonstrate that precipitation in the region was highly variable between 600 B.C. and A.D. 1550. Ceramic, architectural, and iconographic evidence suggests that the political landscape was also in flux, and documents the emergence and decline of several prominent centers, including Coba, Chichen Itza, and Mayapan. Alterations in trade routes, religious practices, and kinds and degrees of inequality further suggest a continually changing social landscape.

The PLAP is actively investigating why certain locales, including Punta Laguna, were/are persistent places. Upcoming research will examine several factors that may have contributed to occupational longevity, including climatic and environmental considerations, relationships with other communities, and unique historical circumstances. Preliminarily, natural resources—and particularly sources of water—appear to be important although insufficient by themselves. Persistent places in the region are located near cenotes, although not all cenotes—of which there are many thousands (Fedick 2014:73; Schmitter-Soto et al. 2002)—are the site of persistent places.

Other factors, and particularly early occupation, also appear to have been important, although insufficient by themselves. In a comparison of site longevity within the Yauhtepec Valley of Mexico, Smith (2010:244) found that the “earliest urban centres, founded in Late Formative times, lasted considerably longer than any others.” Some, although not all, communities in the Yucatan Peninsula with early occupation persisted for long periods of time. Although Maya peoples first settled at several sites in the Yalahau region during the Middle Preclassic period, for example, they abandoned those sites for several hundred years during the Late Classic period (Glover 2012).

Smith (2010) suggests that the first-settled communities in a region may be long lasting because their residents occupied the areas with the best soils. Cultural factors may also have been important. In *Living with the Ancestors*, McAnany (2013:96–99) proposed the principle of first occupancy—something Blackmore (2011:88) usefully glosses as the “idea that founders retain and define a historically established status invested in the memory of their access, and re-inscribed via the ritual and social acts associated with ancestor commemoration.” It may be that the first occupied sites in a region, like the first occupied houses at a site, retained greater cultural influence through their long history and memory of veneration.

Conclusions

This article has presented a preliminary, revised life history of Punta Laguna. Using a type-variety analysis of ceramics excavated at the site between 2017 and 2022, it has offered

a composite life history and suggested—in contrast to earlier publications—that Maya peoples occupied Punta Laguna continuously or recurrently from 600/300 B.C. through A.D. 1500/1550. Punta Laguna may therefore be usefully understood as a persistent place (Schlanger 1992). Although this place has endured, the meanings associated with it have undoubtedly changed over time. In the Postclassic period, Punta Laguna was a residential community as well as the site of extensive ceremonial activities, particularly incense burning in association with stelae and miniature masonry shrines (Kurnick and Rogoff 2022). Today, although still a residential community, Punta Laguna is a spider monkey reserve and an ecotourist attraction.

Scholars have argued that archaeological studies of persistent places can contribute to contemporary studies of urban sustainability (e.g., LeFebvre et al. 2022; Scarborough and Isendahl 2020; Smith 2010; Smith et al. 2021; Turner et al. 2020). Some have suggested that archaeologists can ascertain how past peoples responded—either successfully or unsuccessfully—to crises, including overpopulation and climate change (e.g., Heitz et al. 2021). Others have suggested that, by comparing regional occupation histories, archaeologists can ascertain those factors common to persistent places in various parts of the world. As Smith (2010:246) argues, “research in the longevity of ancient cities may be one of the most useful contributions archaeology can make to the general understanding of urban sustainability.” Specifically, research focused on understanding the connections between longevity and early occupation may prove a fruitful avenue of study.

Archaeological discussions of persistent places also offer a counterweight to popular and academic preoccupations with collapse (e.g., Diamond 2011; Mott 2012; Webster 2002). For over half a century, journalists and archaeologists have unevenly focused their attention on the dramatic transformations in the southern Maya Lowlands during the Terminal Classic period (Heitz et al. 2021:130–134; Middleton 2012). Although producing a substantial amount of data and publications, this focus has also been problematic. As others have noted, collapse is a nebulous and often poorly defined concept; consequently, research on collapse is “less analytic and more driven by a priori assumptions and narratives that are then projected onto the past” (Heitz et al. 2021:134). Indeed, the notion of collapse—perhaps stemming from the “millenarianism . . . deeply rooted and ubiquitous in Western civilization” (Restall and Solari 2011, 2021)—is often invoked to understand social transformations, even when “alternative interpretations emphasizing resilience, transformation and reorganization are equally if not more plausible” (Strunz et al. 2019:1717; see also McAnany and Yoffee 2010).

Furthermore, narratives of Maya history focused almost exclusively on collapse can negatively impact contemporary Maya peoples. McAnany (2016) has encouraged archaeologists to confront haunting questions about Maya cultural heritage, including one asked by a young girl from the Yucatec Maya town of San José: “Why did all the Maya have to die?” (McAnany 2016:3). Part of confronting such

questions—involves reflection on heritage distancing—“the alienation of contemporary inhabitants of a landscape from the tangible remains or intangible practices of the past” (McAnany and Parks 2012:80). As McAnany has argued, “a popular discourse of Classic Maya ‘extinction’ in the southern lowlands of the Maya region has created a rupture between the deep past and the present” (McAnany and Parks 2012:80). Emphasizing persistent places may consequently offer both a more nuanced understanding of the Maya past, as well as one that emphasizes the vitality of the Maya present.

Acknowledgments. All the work in this article has been approved by Mexico’s Instituto Nacional de Antropología e Historia (INAH) and by members of the Punta Laguna Community. The authors would like to thank Arthur Joyce, Sylviane Boucher, Nicholas Puente, and members of the Punta Laguna community, including Serapio Canul Tep and Mariano Canul Aban. The authors would also like to thank several anonymous reviewers for their sound suggestions and astute advice. Any errors are our own.

Funding. Archaeological research at Punta Laguna has been funded by the National Science Foundation (Award No. 1725340) and the University of Colorado Boulder.

Competing interests. The authors declare none.

Data availability statement. The authors confirm that the data supporting the findings of this study are available within the article.

References

- Aguilar Cordero, Wilian de Jesús, David E. Alonzo Parra, David Canul Rosado, and Jorge Cerón Gómez
2012 Percepción social sobre los beneficios de estar viviendo en un área natural protegida: Otoch Máax Yetel Kooh. *Teoría y Praxis* 12:34–51.
- Alexander, Rani T.
2012a Prohibido Tocar Este Cenote: The Archaeological Basis for the “Titles of Ebtun.” *International Journal of Historical Archaeology* 16:1–24.
2012b Maya Collapse or Resilience? Lessons from the Spanish Conquest and the Caste War of Yucatan. In *The Ancient Maya of Mexico*, edited by Geoffrey E. Braswell, pp. 325–346. Routledge, New York.
- Amador Berdugo, Fabian Esteban
2005 *Ancient Pottery in the Yalahau Region: A Study of Ceramics and Chronology in Northern Quintana Roo, Mexico*. Ph.D. dissertation, Department of Anthropology, State University of New York, Buffalo.
- Andrews, Anthony P.
1993 Late Postclassic Lowland Maya Archaeology. *Journal of World Prehistory* 7:35–69.
2002 El antiguo puerto maya de Conil. *Estudios de Cultura Maya* 22. <https://doi.org/10.19130/iifl.ecm.2002.22.413>.
- Andrews, Anthony P., E. Wyllys Andrews, and Fernando Robles Castellanos
2003 The Northern Maya Collapse and Its Aftermath. *Ancient Mesoamerica* 14:151–156.
- Andrews, E. Wyllys, IV, and Anthony P. Andrews
1975 *A Preliminary Study of the Ruins of Xcaret, Quintana Roo, Mexico: With Notes on Other Archaeological Remains on the Central East Coast of the Yucatan Peninsula*. Publication 40. Middle American Research Institute, New Orleans.
- Ashmore, Wendy
2002 “Decisions and Dispositions”: Socializing Spatial Archaeology. *American Anthropologist* 104:1172–1183.
- Badillo Sánchez, Alejandra
2022 Traces of Power: An Archaeology of the Porfirian Armed Forces in the Military Campaign against “Rebel” Maya during the Caste War, 1899–1904. In *Coloniality in the Maya Lowlands: Archaeological Perspectives*, edited by Kasey Diserens Morgan and Tiffany C. Fryer, pp. 128–146. University Press of Colorado, Louisville.
- Bailey, Geoff
2007 Time Perspectives, Palimpsests and the Archaeology of Time. *Journal of Anthropological Archaeology* 26:198–223.
- Benavides Castillo, Antonio, and Renee Lorelei Zapata Peraza
1991 Punta Laguna: un sitio prehispánico de Quintana Roo. *Estudios de Cultura Maya* 18:23–64.
- Bender, Barbara
1999 *Stonehenge: Making Space*. Bloomsbury Academic, Oxford.
- Benjamin, Walter
1974 *On the Concept of History*. Translated by Dennis Redmond. *Gesammelte Schriften, I:2*. Suhrkamp Verlag, Frankfurt.
- Bey III, George J., Tara M. Bond, William M. Ringle, Craig A. Hanson, Charles W. Houck, and Carlos Peraza Lope
1998 The Ceramic Chronology of Ek Balam, Yucatan, Mexico. *Ancient Mesoamerica* 9:101–120.
- Blackmore, Chelsea
2011 How to Queer the Past without Sex: Queer Theory, Feminisms and the Archaeology of Identity. *Archaeologies* 7:75–96.
- Bond, Tara M.
1996 *The Distribution and Significance of Three Late Preclassic Period Ceramic Groups from the Maya Archaeological Site of Ek Balam, Yucatan, Mexico*. Master’s thesis, Louisiana State University, Baton Rouge.
- Bond Freeman, Tara
2007 *The Maya Preclassic Sequence at the Site of Ek Balam, Yucatan, Mexico*. Ph.D. dissertation, Department of Anthropology, Southern Methodist University, Dallas.
- Bonilla Moheno, Martha, and Eduardo García-Frapolli
2012 Conservation in Context: A Comparison of Conservation Perspectives in a Mexican Protected Area. *Sustainability* 4:2317–2333.
- Brady, James E., Joseph W. Ball, Ronald L. Bishop, Duncan C. Pring, Norman Hammond, and Rupert A. Housley
1998 The Lowland Maya “Protohistoric”: A Reconsideration of Its Nature and Significance. *Ancient Mesoamerica* 9:17–38.
- Brenner, Mark, Michael F. Rosenmeier, David A. Hodell, and Jason H. Curtis
2002 Paleolimnology of the Maya Lowlands: Long-Term Perspectives on Interactions among Climate, Environment, and Humans. *Ancient Mesoamerica* 13:141–157.
- Ceballos Gallareta, Teresa, and Fernando Robles Castellanos
2012 Las etapas más tempranas de la alfarería maya en el noroeste de la Península de Yucatán. *Ancient Mesoamerica* 23(2):403–419.
- Coe, William R., and William A. Haviland
1982 *Introduction to the Archaeology of Tikal, Guatemala*. Tikal Report 12. University of Pennsylvania Press, Philadelphia.
- Con Uribe, María José, and Alejandro Martínez Muriel
2002 Cobá: Entre caminos y lagos. *Arqueología Mexicana* 9(54):34–41.
- Con Uribe, María José, and Eric Jordan D.
1992 Pole: Notas Sobre un Puerto Maya. In *Memorias del Primer Congreso Internacional de Mayistas*, edited by Sylviane Boucher, pp. 497–511. Universidad Nacional Autónoma de México, Mexico City.
- Cortés de Brasdefer, Fernando
1988 Archaeological Notes from Quintana Roo. *Mexicon* 10(6):107–108.
- Curtis, Jason H., David A. Hodell, and Mark Brenner
1996 Climate Variability on the Yucatan Peninsula (Mexico) during the Past 3500 Years, and Implications for Maya Cultural Evolution. *Quaternary Research* 46:37–47.
- de la Cruz Canché Manzanero, Elena
1992 *La secuencia cerámica de Xelhá, Quintana Roo*. Licenciado en Ciencias Antropológicas, Universidad Autónoma de Yucatán, Mérida.
- Diamond, Jared
2011 *Collapse: How Societies Choose to Fail or Succeed*. Rev. ed. Penguin Books, New York.
- Diserens Morgan, Kasey, and Richard M. Leventhal
2020 Maya of the Past, Present, and Future: Heritage, Anthropological Archaeology, and the Study of the Caste War of Yucatan. *Heritage* 3(2):511–527.
- Fedick, Scott L.
2014 A Reassessment of Water and Soil Resources in the Flatlands of the Northern Maya Lowlands. *Archaeological Papers of the American Anthropological Association* 24:72–83.

- Fedick, Scott L., and Jennifer P. Mathews
2005 The Yalahau Regional Human Ecology Project: An Introduction and Summary of Recent Research. In *Quintana Roo Archaeology*, edited by Justine M. Shaw and Jennifer P. Mathews, pp. 33–50. University of Arizona Press, Tucson.
- Fish, Paul, Suzanne Fish, Paulo DeBlasis, and Maria Gaspar
2013 Monumental Shell Mounds as Persistent Places in Southern Coastal Brazil. In *The Archaeology and Historical Ecology of Small Scale Economies*, edited by Victor D. Thompson and James C. Waggoner Jr., pp. 120–140. University Press of Florida, Tallahassee.
- Flores Colin, Alberto G.
2015 Three Churches, Three Causeways, and a Miracle: Relations between Prehispanic and Colonial Settlements in Ichmul, Yucatan. In *The Maya of the Cochuah Region: Archaeological and Ethnographic Perspectives on the Northern Lowlands*, edited by Justine M. Shaw, pp. 195–211. University of New Mexico Press, Albuquerque.
- Gallareta Negrón, Tomás, and Karl Taube
2005 Late Postclassic Occupation in the Ruinas de San Angel Region. In *Quintana Roo Archaeology*, edited by Justine M. Shaw and Jennifer P. Mathews, pp. 87–111. University of Arizona Press, Tucson.
- García-Frapolli, Eduardo, Bárbara Ayala-Orozco, Martha Bonilla-Moheno, Celene Espadas-Manrique, and Gabriel Ramos-Fernández
2007 Biodiversity Conservation, Traditional Agriculture and Ecotourism: Land Cover/Land Use Change Projections for a Natural Protected Area in the Northeastern Yucatan Peninsula, Mexico. *Landscape and Urban Planning* 83(2–3):137–153.
- García-Frapolli, Eduardo, Martha Bonilla-Moheno, and Gabriel Ramos-Fernández
2013 Community Conservation in Punta Laguna: A Case of Adaptive Ecotourism Management. In *Community Action for Conservation: Mexican Experiences*, edited by Luciana Porter-Bolland, Isabel Ruiz-Mallén, Claudia Camacho-Benavides and Susannah R. McCandless, pp. 101–113. Springer, New York.
- García-Frapolli, Eduardo, Victor M. Toledo, and Joan Martinez Alier
2008 Adaptations of a Yucatec Maya Multiple-Use Ecological Management Strategy to Ecotourism. *Ecology and Society* 13(2):31–51.
- Glover, Jeffrey B.
2012 The Yalahau Region: A Study of Ancient Maya Sociopolitical Organization. *Ancient Mesoamerica* 23:271–295.
- Glover, Jeffrey B., and Fabio Esteban Amador
2005 Recent Research in the Yalahau Region: Methodological Concerns and Preliminary Results of a Regional Survey. In *Quintana Roo Archaeology*, edited by Justine M. Shaw and Jennifer P. Mathews, pp. 51–65. University of Arizona Press, Tucson.
- Glover, Jeffrey B., and Travis W. Stanton
2010 Assessing the Role of Preclassic Traditions in the Formation of Early Classic Yucatec Cultures, México. *Journal of Field Archaeology* 35:58–77.
- Glover, Jeffrey B., Dominique Rissolo, and Jennifer P. Mathews
2011 The Hidden World of the Maritime Maya: Lost Landscapes along the North Coast of Quintana Roo, Mexico. In *The Archaeology of Maritime Landscapes*, edited by Ben Ford, pp. 195–216. Springer, New York.
- Glover, Jeffrey B., Dominique Rissolo, Joseph W. Ball, and Fabio Esteban Amador
2011 Who Were the Middle Preclassic Settlers of Quintana Roo's North Coast? New Evidence from Vista Alegre. *Mexicon* 33(3):69–73.
- Glover, Jeffrey B., Dominique Rissolo, Patricia A. Beddows, Roy Jaijel, Derek Smith, and Beverly Goodman-Tchernov
2022 The Proyecto Costa Escondida: Historical Ecology and the Study of Past Coastal Landscapes in the Maya Area. *The Journal of Island and Coastal Archaeology*. <https://doi.org/10.1080/15564894.2022.2061652>.
- Glover, Jeffrey B., Zachary X. Hrubby, Dominique Rissolo, Joseph W. Ball, Michael D. Glascock, and M. Steven Shackley
2018 Interregional Interaction in Terminal Classic Yucatan: Recent Obsidian and Ceramic Data from Vista Alegre, Quintana Roo, Mexico. *Latin American Antiquity* 29:475–494.
- Gordillo, Gastón R.
2014 *Rubble: The Afterlife of Destruction*. Duke University Press Books, Durham.
- Gunter, Stanley Paul
2014 The Queen of Coba: A Reanalysis of the Macanxoc Stelae. In *The Archaeology of Yucatan*, edited by Travis W. Stanton, pp. 395–424. Archaeopress, Oxford.
- Halperin, Christina T.
2017 Temporalities of Late Classic to Postclassic (ca. AD 600–1521) Maya Figurines from Central Petén, Guatemala. *Latin American Antiquity* 28:515–540.
- Heitz, Caroline, Julian Laabs, Martin Hinz, and Albert Hafner
2021 Collapse and Resilience in Prehistoric Archaeology: Questioning Concepts and Causalities in Models of Climate-Induced Societal Transformations. In *Climate Change and Ancient Societies in Europe and the Near East: Diversity in Collapse and Resilience*, edited by Paul Erdkamp, Joseph G. Manning, and Koenraad Verboven, pp. 127–199. Springer International, Cham.
- Hodell, David A., Mark Brenner, and Jason H. Curtis
2005 Terminal Classic Drought in the Northern Maya Lowlands Inferred from Multiple Sediment Cores in Lake Chichancanab (Mexico). *Quaternary Science Reviews* 24:1413–1427.
- 2007 Climate and Cultural History of the Northeastern Yucatan Peninsula, Quintana Roo, Mexico. *Climatic Change* 83:215–240.
- Hodell, David A., Mark Brenner, Jason H. Curtis, and Thomas Guilderson
2001 Solar Forcing of Drought Frequency in the Maya Lowlands. *Science* 292:1367–1370.
- Jennings, Justin, and Edward R. Swenson (editors)
2018 *Powerful Places in the Ancient Andes*. University of New Mexico Press, Albuquerque.
- Jiménez, Socorro, Aline Magnoni, Eugenia Mansell, and Tara Bond Freeman
2017 Chunchucmil Chronology and Site Dynamics. In *Ancient Maya Commerce: Multidisciplinary Research at Chunchucmil*, edited by Scott R. Hutson, pp. 73–106. University Press of Colorado, Boulder.
- Johnstone, David
2005 The Ceramic Placement of Yo'okop. In *Quintana Roo Archaeology*, edited by Jennifer P. Mathews and Justine M. Shaw, pp. 158–168. University of Arizona Press, Tucson.
- Joyce, Arthur A.
2009 The Main Plaza of Monte Albán: A Life History of Place. In *The Archaeology of Meaningful Places*, edited by Brenda J. Bowser and María Nieves Zedeño, pp. 32–52. University of Utah Press, Salt Lake City.
- Koons, Michele L., Mark D. Mitchell, Maritza Hernandez-Bravo, Taylor Hitte, Jennifer Moss Logan, and Erin Baxter
2021 The Magic Mountain Community Archaeology Project. *Journal of Community Archaeology & Heritage* 8:213–228.
- Kurnick, Sarah
2019a Navigating the Past in the Aftermath of Dramatic Social Transformations: Postclassic Engagement with the Classic Period Past in the Northeast Yucatan Peninsula. *Journal of Anthropological Archaeology* 53:51–65.
- 2019b Creating Nature in the Yucatan Peninsula: Social Inequality and the Production of Eco-Archaeological Parks. *American Anthropologist* 121:376–389.
- 2020 The Contradictions of Engaged Archaeology at Punta Laguna, Yucatan, Mexico. *Heritage* 3(3):682–698.
- 2023 Photographic Insights from Engaged Archaeology: Yucatan and Beyond. *Cambridge Archaeological Journal* 33:39–53.
- Kurnick, Sarah, and David Rogoff
2020 Maya Cartographies: Two Maps of Punta Laguna, Yucatan, Mexico. *Journal of Social Archaeology* 20:119–143.
- 2021 Proyecto Arqueológico Punta Laguna. Informe Parcial de La Temporada 2021, Para el Consejo Nacional de Arqueología de México. Consejo Nacional de Arqueología de México, Mexico City.
- 2022 Proyecto Arqueológico Punta Laguna: Informe Parcial de La Temporada 2022. Para el Consejo Nacional de Arqueología de México. Consejo Nacional de Arqueología de México, Mexico City.
- Lefebvre, Henri
1991 *The Production of Space*. Translated by Donald Nicholson-Smith. Blackwell, Malden.

- LeFebvre, Michelle J., Jon M. Erlandson, and Scott M. Fitzpatrick
2022 Archaeology as Sustainability Science: Perspectives from Ancient Island Societies. *Sustainability* 14:9689.
- Leonard, Daniel, Sergey Sedov, Elizabeth Solleiro-Rebolledo, Scott L. Fedick, and Jaime Diaz
2019 Ancient Maya Use of Hidden Soilscapes in the Yalahau Wetlands, Northern Quintana Roo, Mexico. *Boletín de La Sociedad Geológica Mexicana* 71(1):93–119.
- Lepofsky, Dana, Chelsey GERALDA Armstrong, Spencer Greening, Julia Jackley, Jennifer Carpenter, Brenda Guernsey, Darcy Mathews, and Nancy J. Turner
2017 Historical Ecology of Cultural Keystone Places of the Northwest Coast. *American Anthropologist* 119:448–463.
- Leventhal, Richard M., Carlos Chan Espinosa, Eladio Moo Pat, and Demetrio Poot Cahun
2014 The Community Heritage Project in Tihosuco, Quintana Roo, Mexico. *Public Archaeology* 13:213–225.
- Lorenzen, Karl J.
1999 New Discoveries at Tumben-Naranjál: Late Postclassic Reuse and the Ritual Recycling of Cultural Geography. *Mexicon* 21:98–107.
2003 *Miniature Masonry Shrines of the Yucatan Peninsula: Ancestor Deification in Late Postclassic Maya Ritual and Religion*. Ph.D. dissertation, Department of Anthropology, University of California, Riverside.
- Loya González, Tatiana, and Travis W. Stanton
2013 Impacts of Politics on Material Culture: Evaluating the Yaxuna-Coba Sacbe. *Ancient Mesoamerica* 24:25–42.
- Maher, Lisa A.
2019 Persistent Place-Making in Prehistory: The Creation, Maintenance, and Transformation of an Epipalaeolithic Landscape. *Journal of Archaeological Method and Theory* 26:998–1083.
- Martos López, Luis Alberto
2008 Underwater Archaeological Exploration of the Mayan Cenotes. *Museum International* 60(4):100–110.
- Mathews, Jennifer P.
2001 Radiocarbon Dating of Architectural Mortar: A Case Study in the Maya Region, Quintana Roo, Mexico. *Journal of Field Archaeology* 28:395–400.
- McAnany, Patricia A.
2013 *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society*. Rev. ed. Cambridge University Press, New York.
2016 *Maya Cultural Heritage: How Archaeologists and Indigenous Communities Engage the Past*. Rowman & Littlefield, Lanham.
- McAnany, Patricia A., and Norman Yoffee (editors)
2010 *Questioning Collapse: Human Resilience, Ecological Vulnerability, and the Aftermath of Empire*. Cambridge University Press, Cambridge.
- McAnany, Patricia A., and Shoshaunna Parks
2012 Casualties of Heritage Distancing: Children, Ch'orti' Indigeneity, and the Copán Archaeoscape. *Current Anthropology* 53:80–107.
- Middleton, Guy D.
2012 Nothing Lasts Forever: Environmental Discourses on the Collapse of Past Societies. *Journal of Archaeological Research* 20:257–307.
- Mitchell, Mark D.
2008 Making Places: Burned Rock Middens, Feasting, and Changing Land Use in the Upper Arkansas River Basin. In *Archaeological Landscapes on the High Plains*, edited by Laura L. Scheiber and Bonnie J. Clark, pp. 41–70. University Press of Colorado, Boulder.
- Morgan, Kasey Diserens, and Tiffany C. Fryer (editors)
2022 *Coloniality in the Maya Lowlands: Archaeological Perspectives*. University Press of Colorado, Louisville.
- Mott, Nicholas
2012 Why the Maya Fell: Climate, Change, Conflict—And a Trip to the Beach? National Geographic News. Electronic document, <https://www.nationalgeographic.com/science/article/121109-maya-civilization-climate-change-belize-science>, accessed April 18, 2023.
- Ochoa Rodríguez, José Manuel
2004 *La Secuencia Cerámica de Xcaret, Quintana Roo, Mexico*. Licenciado en Ciencias Antropológicas, Universidad Autónoma De Yucatán.
- Olivier, Laurent
2004 The Past of the Present. *Archaeological Memory and Time*. *Archaeological Dialogues* 10:204–213.
- Olzewski, Deborah I., and Maysoon al-Nahar
2016 Persistent and Ephemeral Places in the Early Epipalaeolithic in the Wadi Al-Hasa Region of the Western Highlands of Jordan. *Quaternary International* 396:20–30.
- Peraza Lope, Carlos, Wilberth Cruz Alvarado, Marilyn A. Masson, and Timothy S. Hare
2021 Gradual Changes in Early Colonial-Period Maya Ceramics in Northern Yucatan. *Historical Archaeology* 55:565–596.
- Restall, Matthew, and Amara Solari
2011 *2012 and the End of the World: The Western Roots of the Maya Apocalypse*. Rowman & Littlefield, Lanham.
2021 *The Maya Apocalypse and Its Western Roots*. Rowman & Littlefield, Lanham.
- Rissolo, Dominique, José Manuel Ochoa Rodríguez, and Joseph W. Ball
2005 A Reassessment of the Middle Preclassic in Northern Quintana Roo. In *Quintana Roo Archaeology*, edited by Jennifer P. Mathews and Justine M. Shaw, pp. 66–76. University of Arizona Press, Tucson.
- Robles Castellanos, Fernando
2006 Las Esferas Cerámicas Cehpech y Sotuta del Apogeo del Clásico Tardío (730–900 d.C.) en el Norte de La Península de Yucatán. In *La Producción Alfarera en el México Antiguo*, edited by Beatriz Leonor Merino Carrión and Ángel García Cook, pp. 281–344. Instituto Nacional de Antropología e Historia, Mexico City.
- Robles Castellanos, José Fernando
1990 *La Secuencia Cerámica de La Región de Cobá, Quintana Roo*. Instituto Nacional de Antropología e Historia, Mexico City.
- Rojas Sandoval, Carmen
2007 Cementerios Acuáticos Mayas. *Arqueología Mexicana* 14(83): 58–63.
2008 Prácticas Mortuorias En Los Cenotes. *Revista de Arqueología Americana* 26:197–222.
2010 Tratamientos Mortuorios En Los Cenotes. *Arqueología Mexicana* 18(105):60–64.
- Rojas Sandoval, Carmen, Arturo H. Gonzales Gonzales, Alejandro Terrazas Mata, and Martha Benavente San Vicente
2008 Mayan Mortuary Deposits in the Cenotes of Yucatan and Quintana Roo, Mexico. In *Underwater and Maritime Archaeology in Latin America and the Caribbean*, edited by Margaret E. Leshikar-Denton and Pilar Luna Erreguerena, pp. 143–153. Left Coast Press, Walnut Creek.
- Sánchez, Alejandra Badillo
2023 Hacia la recuperación de la memoria histórica de la Guerra Social Maya en Yucatán: Creación de un portal digital al pasado. *Antropica. Revista de Ciencias Sociales y Humanidades* 9(17):117–144.
- Satterthwaite, Linton
1945 A Stratified Sequence of Maya Temples. *Journal of the Society of Architectural Historians* 5:15–20.
- Scarborough, Vernon L., and Christian Isendahl
2020 Distributed Urban Network Systems in the Tropical Archaeological Record: Toward a Model for Urban Sustainability in the Era of Climate Change. *The Anthropocene Review* 7(3):208–230.
- Schlanger, Sarah H.
1992 Recognizing Persistent Places in Anasazi Settlement Systems. In *Space, Time, and Archaeological Landscapes*, edited by Jacqueline Rossignol and LuAnn Wandsnider, pp. 91–112. Springer, Boston.
- Schmitter-Soto, Juan J., Francisco A. Comín, Elva Escobar-Briones, J. Herrera-Silveira, Jorge Alcocer, Eduardo Suárez- Morales, Manuel Elías-Gutiérrez, V. Díaz-Arce, Luís E. Marín, and Birgit Steinich
2002 Hydrogeochemical and Biological Characteristics of Cenotes in the Yucatan Peninsula (SE Mexico). *Hydrobiologia* 467:215–228.
- Shaw, Justine M.
2005 The Late to Terminal Classic Settlement Shifts at Yo'okop. In *Quintana Roo Archaeology*, edited by Justine M. Shaw and Jennifer P. Mathews, pp. 144–157. University of Arizona Press, Tucson.

- 2015 The Cochuah Region and the CRAS Project. In *The Maya of the Cochuah Region: Archaeological and Ethnographic Perspectives on the Northern Lowlands*, edited by Justine M. Shaw, pp. 3–23. University of New Mexico Press, Albuquerque.
- Smith, Adam T.
2003 *The Political Landscape: Constellations of Authority in Early Complex Polities*. University of California Press, Berkeley.
- Smith, Michael E.
2010 Sprawl, Squatters and Sustainable Cities: Can Archaeological Data Shed Light on Modern Urban Issues? *Cambridge Archaeological Journal* 20:229–253.
- Smith, Michael E., José Lobo, Matthew A. Peeples, Abigail M. York, Benjamin W. Stanley, Katherine A. Crawford, Nicolas Gauthier, and Angela C. Huster
2021 The Persistence of Ancient Settlements and Urban Sustainability. *Proceedings of the National Academy of Sciences* 118. <https://doi.org/10.1073/pnas.2018155118>.
- Smith, Robert E., Gordon R. Willey, and James C. Gifford
1960 The Type-Variety Concept as a Basis for the Analysis of Maya Pottery. *American Antiquity* 25:330–340.
- Smith, Robert Eliot
1971 *The Pottery of Mayapan Including Studies of Ceramic Material from Uxmal, Kabah, and Chichen Itza*. Peabody Museum Press, Cambridge.
- Strunz, Sebastian, Melissa Marselle, and Matthias Schröter
2019 Leaving the “Sustainability or Collapse” Narrative Behind. *Sustainability Science* 14:1717–1728.
- Stuart, David
2010 Notes on Accession Dates in the Inscriptions of Coba. Mesoweb: David Stuart’s Notes. Electronic document, <https://www.mesoweb.com/stuart/notes/Coba.pdf>, accessed April 18, 2023.
- Suhler, Charles, Traci Ardren, and David Johnstone
1998 The Chronology of Yaxuna: Evidence from Excavation and Ceramics. *Ancient Mesoamerica* 9:167–182.
- Taylor, Sarah R.
2018 *On Being Maya and Getting By: Heritage Politics and Community Development in Yucatán*. University Press of Colorado, Boulder.
- Thompson, Victor D.
2010 The Rhythms of Space-Time and the Making of Monuments and Places during the Archaic. In *Trend, Tradition, and Turmoil: What Happened to the Southeastern Archaic?*, edited by David Hurst Thomas and Matthew C Sanger, pp. 217–228. American Museum of Natural History, New York.
- Torrescano-Valle, Nuria, and Gerald Islebe
2015 Holocene Paleoecology, Climate History and Human Influence in the Southwestern Yucatan Peninsula. *Review of Palaeobotany and Palynology* 217:1–8.
- Toscano Hernandez, Maria de Lourdes
1994 *Secuencia Arqueológica de la Arquitectura Publica de Xelha, Quintana Roo*. Licenciado en Antropología, Universidad Veracruzana.
- Tucker, Carrie
2022 *The Ceramic Sequence for Vista Alegre, Quintana Roo, Mexico*. Master’s thesis, Department of Anthropology, University of Central Florida, Orlando.
- Turner, Sam, Tim Kinnaird, Elif Koparal, Stelios Lekakis, and Christopher Sevara
2020 Landscape Archaeology, Sustainability and the Necessity of Change. *World Archaeology* 52:589–606.
- Van Dyke, Ruth M., and Susan E. Alcock (editors)
2003 *Archaeologies of Memory*. Blackwell, Malden.
- Webster, David L.
2002 *The Fall of the Ancient Maya: Solving the Mystery of the Maya Collapse*. Thames & Hudson, London.
- Willey, Gordon R., T. Patrick Culbert, and Richard E. W. Adams
1967 Maya Lowland Ceramics: A Report from the 1965 Guatemala City Conference. *American Antiquity* 32:289–315.
- Witschey, Walter R. T.
1993 *The Archaeology of Muyil, Quintana Roo, Mexico: A Maya Site on the East Coast of the Yucatan Peninsula*. Ph.D. dissertation, Department of Anthropology, Tulane University, New Orleans.
2005 Muyil: An Early Start and Late Finish in East Coast Settlement. In *Quintana Roo Archaeology*, edited by Justine M. Shaw and Jennifer P. Mathews, pp. 127–143. University of Arizona Press, Tucson.