

# Mobility and Migration in Ancient Mesoamerican Cities

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UNIVERSITY PRESS OF COLORADO  
*Louisville*

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Published by University Press of Colorado  
245 Century Circle, Suite 202  
Louisville, Colorado 80027

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Printed in the United States of America



The University Press of Colorado is a proud member of  
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The University Press of Colorado is a cooperative publishing enterprise supported, in part, by Adams State University, Colorado State University, Fort Lewis College, Metropolitan State University of Denver, Regis University, University of Colorado, University of Northern Colorado, University of Wyoming, Utah State University, and Western Colorado University.

∞ This paper meets the requirements of the ANSI/NISO Z39.48-1992 (Permanence of Paper).

ISBN: 978-1-64642-072-8 (hardcover)  
ISBN: 978-1-64642-073-5 (ebook)  
<https://doi.org/10.5876/9781646420735>

#### Library of Congress Cataloging-in-Publication Data

Names: Arnauld, Marie-Charlotte, editor. | Beekman, Christopher, editor. | Pereira, Grégory, editor.

Title: Mobility and migration in ancient Mesoamerican cities / edited by M. Charlotte Arnauld, Christopher Beekman, and Grégory Pereira.

Description: Louisville, CO : University Press of Colorado, 2020. | Includes bibliographical references and index.

Identifiers: LCCN 2020032146 (print) | LCCN 2020032147 (ebook) | ISBN 9781646420728 (hardcover) | ISBN 9781646420735 (ebook)

Subjects: LCSH: Indians of Mexico—Migrations. | Indians of Central America—Migrations. | Migration, Internal—Mexico. | Migration, Internal—Central America. | Indians of Mexico—Urban residence. | Indians of Central America—Urban residence. | Indians of Mexico—Antiquities. | Indians of Central America—Antiquities.

Classification: LCC F1219.3.M54 M63 2020 (print) | LCC F1219.3.M54 (ebook) | DDC 972.8/01—dc23

LC record available at <https://lcn.loc.gov/2020032146>

LC ebook record available at <https://lcn.loc.gov/2020032147>

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## Mobility as Resilience

*A Perspective on Coastal to Inland Migration in the Eastern Maya Lowlands*

ELIZABETH GRAHAM AND LINDA HOWIE

In the introduction to this volume, Arnould, Beekman, and Pereira highlight a feature that is critical to our understanding of mobility and migration of the cultures of Mesoamerica, which is “the physical dynamism embedded in Mesoamerican subsistence structures, economic activities, and political strategies.” As they emphasize, urban centers were formed and maintained by movement, both to and from cities. Such an adaptation to the movement of people, even in conditions of urbanism, must have deep roots. Adjusting to mobility might in part be a historical consequence of the swidden system. Among the Belize Maya who cultivated swidden in the 1970s, 1980s, and 1990s, as communities grew, new ones were established as spinoffs of the original founding community but social relationships were maintained even with distance (Graham 1994, 325). Movement in precolumbian times must have been necessary when individuals were required to fulfil a work tax, or scribes were required to reside in courts of rulers. Longer-distance movements of households were also enabled by Maya cultural and social practices. The occurrence today of a suite of Maya surnames (e.g., Pech, Cohuoj, Chi, Cunil, Cocom, Itza, Uck

[Graham 2011, xvii]) in Yucatán and Guatemala as well as in Belize suggests that patronym groups (*chibalob*) facilitated regional movements and connections (Restall 1997, 17–18). The sort of mobility, in which families, as parts of larger social groups, moved about the peninsula, is prominent in the **Chilam Balam** accounts of Tizimin and Chumayel (Edmonson 1982, 1986). From a coastal perspective, the movements of traders and merchants loom large. Merchants and merchant families who plied the circumpeninsular waters almost certainly established interregional and long-distance bonds, because they would have relied on each other to build networks and to make commercial transactions effective (Lacadena 2010). Bonds among coastal families surely involved marriage. An individual from Ambergris Caye was perhaps as likely to marry someone from Cozumel or coastal Campeche or the islands off Honduras as to choose someone from Caracol or Cahal Pech. The coastal ties created over time would have facilitated movement of both individuals and goods.

## MOVEMENT AND MIGRATION

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The movements and changes of place so far described are characterized differently by different researchers. To Tilly (1978), what we sketched out above would be examples of his local, circular, chain, and career “migrations.” Arnauld, Beekman, and Pereira (introduction to this volume) advise using *migration* more cautiously and critically (see also Leloup 1996); if mobility can be an element of *habitus*, as they attest, then a degree of mobility is essential to all the movement we have so far described. They suggest further that migration follows more disruptive events or processes. We are in accord with their analysis of terms, but we would like to add three cautionary points.

The first point is a product of the limitations of the English vocabulary. An individual defines herself as an “immigrant” to Britain because *immigrant* is the only noun that exists in English to describe this sort of change of residence. No word derived from *mobility* exists that can apply to someone who decides to move from one sedentary location to another. Therefore, despite the fact that the individual has neither moved as part of a larger social group nor as the result of a disruptive event or process, she has nonetheless “migrated.” In fact, her move is very much a feature of the mobility inherent in modern urbanized settlement systems, but a word that might reflect sensitivity to this nuance, “mobilier,” does not exist.

A second caution relates to level of analysis. The terms *mobility* and *migration* operate at different levels of analysis, and from different perspectives. Often when the term *migrated* is used, the context is one in which a larger-scale shift has already been recognized historically so that the movement of individuals is seen in retrospect as part of a larger-scale phenomenon. The many individuals who moved to the United States from Italy in the late nineteenth and early twentieth

century are said to have been part of a migration. Yet if one questions individuals, each has a different story about why he or she decided to change location. Stimuli seem to have been varied: economic, political, social, or just a plain sense of adventure. It is the passage of time that has allowed us to generalize so that individuals or families who decided to move—for whatever reasons, and not even necessarily permanently—have become part of a “migration.” This is not to say that the term is not apt as a descriptor of what we now view as having happened in history, but only that the term *migration* may not be useful as the first step in analyses undertaken to examine the details of the stimulus for movement.

The third caution is about the baggage that comes with the term. *Migration* is paired generally with a collective noun (such as *population* or *Aztec*). An individual can be a migrant, although this usage reflects, as we noted above, either the limited choice of the English language or a context in which a larger-scale shift or movement of people is already known or believed in retrospect to have taken place. In the case of the larger-scale shift, the implications of “migration” can take on a mythic dimension. The late nineteenth- and early twentieth-century movement of individuals from Naples or Puglia referred to above is attributed in the United States to the desire for both freedom (apparently unattainable in either of these places) and/or a better life in a nation that sees itself as welcoming people with open arms to fill its empty spaces. With time, and from a macro-perspective, individuals and families became “populations” and the places of origin became a single locus: “Italy.” Most families considered themselves Napolitano or Pugliese or Calabrese. They *became* both “Italian” and a united “other” in the American historical narrative. Ethnic or cultural differences recognized at the time and other potentially important factors in the decision to move become blurred by the construction of a narrative and an agenda. When narratives such as the books of Chilam Balam (e.g., Edmonson 1982) attribute movement of groups across swaths of land or sea, we have to ask—in addition to who moved, when, and where—what stimulated the telling and what the agenda might be.

Another narrative that has reached almost mythic status is the claim that populations migrated from Petén to Yucatán as a result of the Classic collapse (see the chapters in Demarest et al. 2004). We know that investment in masonry architecture diminished or ceased entirely, but there are few initiatives that have been aimed at discovering whether Postclassic communities, with their wooden structures, farms, orchards, and fields, were absent entirely from what had once been an urban landscape. Coe’s *Tikal Time Spans 1 and 2*, for example, which cover the postcollapse years from about AD 900 through the nineteenth century, provide a fascinating glimpse of a range of activities in the former urban center itself (Coe 1990, 866–874). Considering the fertility of the land and the diversity of vegetation that are associated with abandonment, especially once city

architecture began to collapse (Graham 1998, 2006a; Graham et al. 2017; Lambert and Arnason 1982; Rico-Gray and García-Franco 1991), it is highly unlikely that Petén remained uninhabited, and that people—either originally Tikal-based or from surrounding regions—would not have taken advantage of rich farm land, a diversity of plants and fruit trees, local springs, building material, and even the potential to plunder tombs (Coe 1990, 871). Populations may not have been as high or as concentrated as in the Classic period, and dynastic collapse almost assuredly initiated some measure of instability, but the scale and nature of movement have yet to be ascertained. A mass migration to Yucatán should not be so widely accepted based on present evidence, which arises from an excavation focus on masonry buildings of the Classic period (Graham 1985). If we wish to hypothesize about causes of, or stimuli to, the movement of people, the terminology we use in the first instance should perhaps exclude both *population* and *migration*. We might start by thinking about what would stimulate an individual or family to move. *Migration* in particular should not be part of the question at the first level of analysis because in a sense it is already an answer.

## APPROACHING MOBILITY AND MIGRATION

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Given the continuity of occupation at the sites of Lamanai, on the New River Lagoon in northern Belize (Graham 2004; Pendergast 1982, 1986), and Marco Gonzalez, on Ambergris Caye (Graham 1989; Graham and Pendergast 1989; Graham et al. 2017; Simmons and Graham 2017) (table 5.1) during the time of the Maya collapse, evidence from these sites has something to tell us about mobility and migration during a critical period of transition. Following on from Arnauld, Beekman and Pereira's introduction (this volume), we structure our discussion to address three broad questions: Did conditions exist that facilitated mobility and if so, what were they? What was the scale of movement? Who moved, and in what direction? The framework of our argument is presented below as Points A, B, and C, followed by detailed discussion of each and then by implications and suggestions for further study.

**Point A.** The sites taken together tell us that many types of goods and materials were transported via marine and riverine routes to and from inland locations from Preclassic to Postclassic times. The movement of goods reflects not only the economic demands of trade and exchange but also concomitant social networks of travel and communication. Merchants, markets, resources, and exchange generated conditions foundational to the ease with which people could have moved, if they chose to do so. Our working assumption for both Lamanai and Marco Gonzalez—given their intensive involvement in commerce and trade—is that a degree of mobility was the norm, not the exception.

**Point B.** At Lamanai, from at least Late Classic to Early Postclassic times (ca. AD 600 to 1250) (the period on which ceramic studies were focused), there existed

**TABLE 5.1.** Provisional chronologies for Lamanai and Marco Gonzalez\*

<i>Period</i>	<i>Lamanai</i>	<i>Ambergis Caye (Marco Gonzalez, San Pedro)</i>
Independence	1981 to present	
Self-governing Crown Colony	1964 to 1981	
British colonial period	1700 to 1964 (Activity beginning in 1630s)	
Spanish colonial period	1492/1500 to 1700	
Late Postclassic	1350 to 1492/1500	
Middle to Late Postclassic	1200/1250 to 1350	
Early Postclassic	950/1000 to 1200/1250	
Terminal Classic	750/800 to 950/1000	
Late Classic (late facet)	660/700 to 750/800	550/600 to 750/800
Late Classic (early facet)	590/600 to 660/700	
Early Classic	250/300 to 590/600	
Terminal Preclassic (late facet)	150 to 250/300	100 BC to AD 250/300
Terminal Preclassic (early facet)	100 BC to AD 150	
Late Preclassic	400 100 BC	
Middle Preclassic (late facet)	600 to 400 BC	<i>No data</i>
Middle Preclassic (early facet)	900 to 600 BC	<i>No data</i>
Early Preclassic	1600 to 900 BC	<i>No data</i>

\* The sequence is based on relative stratigraphy, ceramic typology, and epigraphic and historical records. Radiocarbon dates exist for Lamanai's Late Classic through Early Postclassic periods, and for the Early Preclassic (Hanna et al. 2016; S. Metcalfe et al. 2009; Rushton et al. 2013).

a high degree of stability in the support of a “nonelite” population (Howie 2012, 150–155, 213–214). At the same time, both ceramic-production studies and isotopic analyses indicate that some migration at the level of intraregional movement took place in the Terminal Classic period (Howie 2012; Howie et al. 2010) with intraregional mobility at the level of individuals suggested by isotopic analyses of the Postclassic population (Donis 2013). At Marco Gonzalez in the Terminal Classic period (ca. AD 750/800 to 950/1000), there is burial evidence that could be used to generate hypotheses about the arrival of a new group of people, although local adoption of new beliefs and burial patterns is also an option. Indeed, such local adoption, if it was the case, would not have taken place without some level of movement of individuals or the sharing of ideas.

**Point C.** In terms of the dynamics of change—that is, who moved, in what direction, and why—we think we can argue for movement of both commoner families and those, not necessarily noble, who were pursuing control of resources and expansion of wealth as new heads of communities. Owing to conflation of

time periods in the studies that have been carried out—the entire Postclassic in the case of Donis’s study (Donis 2013), and the combining of the Terminal Classic and Early Postclassic in the study by Howie and colleagues (Howie et al. 2010)—we cannot at this time provide more detail. Given the chronological definition that we have at both Lamanai and Marco Gonzalez, however, future work holds the promise of filling in the gaps.

### Conditions Facilitating Mobility

Data from a range of coastal sites and from inland communities on rivers near the sea support the idea that mobility was a norm among the Maya rather than an exception (Guderjan and Garber 1995; MacKinnon and Kepecs 1989; McKillop 2002, 2009; Mock 1997; Murata 2011). Figure 5.1 is modified from a previous work (Graham 1989, 144, 146), in which an attempt was made to visualize coastal-inland and intracoastal relationships in Belize. Local movement of groups of people from inland riverine communities to the coastal lagoons and near-shore cayes probably accounts for the small size of the sites on the lagoons and near-shore cayes, and the lack of evidence, such as burials (at least at the two Colson Point sites [Graham 1994]), of year-round settlement. To an individual, both locations—the village on the coast and the inland town—may well have been considered “home” or *cah* (Restall 1997, 20–40), a notion that accords well with mobility as an element of *habitus* (Arnauld, Beekman, Pereira, introduction to this volume).

The case is slightly different with regard to the barrier reef coral islands or cayes. The evidence from Ambergris Caye (Guderjan and Garber 1995; Simmons and Graham 2017) suggests that the island supported communities independent of mainland administration or civic authority; people from these communities are most likely to have been those who seasonally or periodically inhabited and exploited the atolls (Graham 1998; MacKie 1963). At some times, the cayes interacted predominantly with the mainland directly to the west; at others, the direction of trade and interaction was more intensely circumpeninsular (McKillop 1996; Simmons and Graham 2017). The “stability through change” that is said to have characterized Lamanai (Pendergast 1986) can also apply to Ambergris Caye. Changes in orientation of trade and exchange were part and parcel of a life based in commerce, and hence change can be said to have been a persistent and “stable” feature. The abundant remains of Early Classic polychromes (especially from AD 250 to about 500 but continuing to a lesser extent in the sixth century) at Marco Gonzalez and the Colson Point sites (along the coast in south-central Belize) indicate that inhabitants of cayes and coastal sites moved large quantities of goods along the coast and then to inland sites (Graham 1986, 1994, 197–234, figures 5.27–32, 5.35; Graham et al. 2017). Salt was produced at Marco Gonzalez in the Late Classic on a large-enough scale to





**FIGURE 5.1.** Locations of Lamanai, Marco Gonzalez, and sites discussed in the text as well as proposed coastal-inland spheres. (Map by Panos Kratimenos, adapted from Graham 1989, 147, figure 10.6.)

imply major inland consumption (Graham et al. 2017). A number of sites produced salt along Belize’s coast and cayes in the Late Classic (Andrews and Mock 2002; MacKinnon and Kepecs 1989; McKillop 2002, 2016; Mock 1998; Murata 2011), and the direction of movement seems to have been east–west, from the cayes to inland communities in Belize, although coastal transport to key distribution nodes was likely. A much-diminished (compared to Early Classic times) trade in pottery, mainly polychrome vases and bowls, is also in evidence, although petrographic studies of vessels’ geographic origins are still required to establish movement from specific sites or areas. In the Terminal Classic (ninth and early tenth centuries), during the heyday of Chichen Itza, salt declined dramatically as an export item in Belize and the town at Marco Gonzalez seems to have been heavily engaged in the importation—or perhaps the transshipment—of a wide range of goods: chert (present as nodules as well as artifacts), granite metates, obsidian, pottery, and shell, worked and unworked, are all present. One export item may have been worked shell (Simmons and Graham 2017). Overall, the dynamics of trade and the travel it entailed at the end of the Late Classic (end

of the eighth century) through the Terminal Classic at Marco Gonzalez were decidedly circumpeninsular, and although exchange continued with the mainland, material culture shared affinities with Chichen Itza and its sphere.

Lamanai, on the other hand, seems to have lain outside the Chichen sphere in the Terminal Classic. Based on the ceramics from caches and burials in major structures in Late and Terminal Classic times, continuity is indicated in the nature of polychrome decoration. There are some changes—for example, the red ground of the seventh century changed to orange in the eighth, but black and red lines continued to mark the rim interiors of large bowls or dishes, and the vessel interiors were marked in their centers by line-drawn animals such as felines or deer, or sometimes by an abstract flower motif (Graham 2004, 2006b; Howie 2012). Through the Terminal Classic, the decoration became simplified and sketchier, and glossy surface finishes disappeared. The dramatic change to decorated exteriors came with the Early Postclassic Buk phase at Lamanai, when polychromy disappeared and incised and gouged decoration replaced it (Pendergast 1982).

In the Early Postclassic period (AD 950/1000 to ca. 1250/1300), Lamanai stepped in to fill the vacuum left by Chichen Itza's decline in the eleventh century, possibly by AD 1000 (Andrews et al. 2003; Hoggarth et al. 2016). There are no indications at Lamanai or on the caye of the drastic decline and abandonment that characterized the major centers of the Pasión-Usumacinta regions (Demarest et al. 2004, 550–551). Central Petén during the Terminal Classic seems to have experienced demographic flux rather than abandonment, although construction of monumental architecture at sites such as Tikal ceased (Demarest et al. 2004, 554–555; Valdés and Fahsen 2004). At Lamanai, monumental architectural construction persisted into the Postclassic to some degree (Pendergast 1981), although it did not match the investment in masonry construction of the Classic period. Evidence for occupation continuity is robust, however (Graham 2004; Pendergast 1981, 1982, 1986). Pottery manufacture was marked by continuity in complex knowledge of local resources (Howie 2012), an important indicator of stability of the local nonelite population. Additionally, there was continuity from the Terminal Classic in aspects of vessel form (Graham 1987), which suggests that there was no disruption in cultural memory at one level, and hence that the local population remained stable. The overall repertoire changed dramatically in appearance, however, and was almost certainly a response to new demands and possibly new cultural values. Those making the demands were not connected politically to the old Classic dynasties, and ideologically they reinforced their positions in new ways. The extent to which mobility or migration was involved in these changes is discussed in the next section.

The nature of the trade networks in the Early Postclassic remains unclear. The ceramic inventory at both Lamanai and Marco Gonzalez is dominated

by the Zakpah ceramic group (e.g., Zakpah Orange-red and Zalal Gouged-incised [Walker 1990]), which indicates strengthening of connections between the caye and communities in northern Belize (Ting 2013) and hence sheds light on intraregional network dynamics. At the same time, on the caye both green obsidian and turquoise were imported, reflecting continuity in long-distance (circumpeninsular?) trade networks. We emphasize that at no time were networks exclusively one or the other—that is, circumpeninsular at the expense of coastal-mainland or vice versa—but commercial dynamics especially seem to have fluctuated between the lucrative and broad Mesoamerican or peninsular connections (Preclassic, Early Classic, Terminal Classic, Late Postclassic) and the pull of more localized or regional market networks based on the proximal mainland (Late Classic, Early Postclassic). In Middle/Late Postclassic times (ca. AD 1250 to 1492), the scene changed again. We have less information from this period, but the abundant remains of ancient San Pedro—where the modern town lies, about 7 km north of Marco Gonzalez (figure 5.1)—reflect intensive activity (Pendergast and Graham 1991). San Pedro was positioned, as was Marco Gonzalez before mangrove encroachment (Dunn and Mazzullo 1993), to take advantage of both windward and leeward canoe traffic, which suggests the existence of a bustling port keyed into circumpeninsular and mainland movements of people and goods.

In the Late Postclassic, as in all periods, sites on the cayes and coast were not on or very near good agricultural land, and a range of foods had to be imported, probably from sites such as Lamanai. Mobility is therefore what characterized the caye and coastal zones: people shifting from their inland communities to coastal way stations to fish and to access trade goods; people traveling to the reef and beyond to fish and collect shells; people traveling westward to the mainland to carry salt and smoked fish and to bring back supplies; and people circumnavigating the peninsula, transporting an array of goods to exchange, and establishing long-term social ties in the process. Although it has been traditional in Maya archaeology to promote the Postclassic as the time when sea trade became important, there is consensus among archaeologists who have worked in coastal areas that marine networks of trade and exchange have deep roots in Mesoamerican history (Andrews and Mock 2002; Graham 1989, Graham 1994, Graham 2011, 116; Masson 2000, Masson 2002b; McKillop 2002, 2016). Merchants and traders may well have developed a consciousness as a class or group (Graham 2006b), and by the Late Classic, they may have shared a common “international” language (Tokovinine and Beliaev 2013: 194). Bilingual coastal communities are documented for coastal Yucatán at the time of the Conquest (see Graham 2011, 121). The critical implication is that networks established under these conditions for both travel and communication would have been a major means by which mobility—and the attendant sociocultural dynamics and expectations

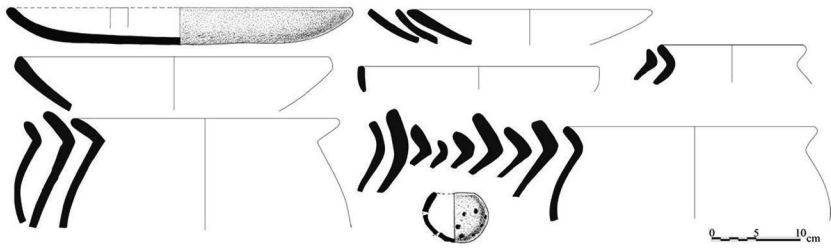
engendered by mobility—would have been facilitated since Middle Preclassic times. To reinforce the observations of Arnauld, Beekman and Pereira (introduction to this volume), regular circulation over territories partly determined larger population movements.

### **The Scale of Movement**

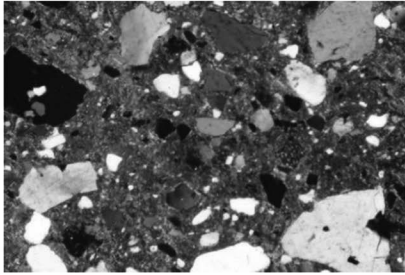
Detecting any kind of movement of people archaeologically is a challenging task. Stable isotope analysis via bone-tooth comparisons can tell us if an individual spent his or her early years in a locale different from the final place of death. In limestone-dominated northern Belize and Yucatán, however, detailed knowledge of local geological distinctiveness within the larger pattern is necessary to permit differentiation among sites as concerns the geographic origins (i.e., provenance) of material goods. Aside from the work that has been done at Lamanai (Howie 2012), connecting sites to resource zones is not the norm. New types of pottery reflect change, but details of paste composition and production must be known if we are to be able to determine whether the change is the result of actual transport or import of vessels by immigrants to the community, or of adoption of new styles by local potters. To date, stable isotope analysis geared specifically to exploration of the movement of people has been carried out only on a sample of Lamanai skeletal material (Donis 2013) and not on skeletal material from Marco Gonzalez. Petrographic study, too, has a longer history at Lamanai and has encompassed a wide sector of the ceramic collection (Howie 2012), but a significant start has been made on Early Postclassic material at Marco Gonzalez (Ting 2013).

#### **LAMANAI: A CASE FROM CERAMIC PETROGRAPHY FOR IMMIGRATION ON THE GROUP LEVEL**

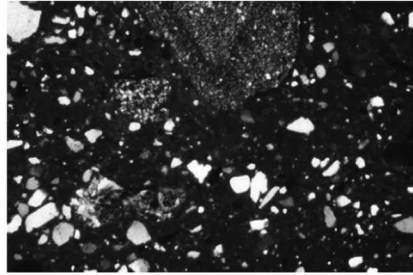
At Lamanai, knowledge of the details of ceramic production from the Late Classic through the Postclassic periods has produced evidence of potential immigration. Even if the detailed knowledge of ceramic production cannot always be linked directly to immigration, however, cognizance of the variety of approaches used in a community to make pots is essential for assessing the context in which changes take place and hence for hypothesizing about the possible sources of change. The Lamanai study (Howie 2012) tells us three important things. The first is that different potters working in the vicinity of Lamanai made pottery using distinct sets of local raw material ingredients and different forming, finishing, and firing methods, and the distinct paste technologies apparent in the Late Classic period can be traced back to at least Late Preclassic times (Howie et al. 2016). The second is that local potters, informed by longstanding local traditions of technical and environmental knowledge, were the primary producers of ceramics for both ceremonial and utilitarian purposes. The third is



a



b



c

**FIGURE 5.2.** *Lamanai new sandy-paste manufacturing tradition: (a) vessel forms; (b) quartz-rich, sandy fabric ( $\times 25$ ) identical to local clays; (c) sandy fabric ( $\times 25$ ) containing large amounts of chert and chalcedony, mineralogically typical of pine-ridge savannah areas to the east, close to Altun Ha and Colha. Field of view = 3mm. (Pottery illustrations by Louise Belanger and Rebecca Curran; photomicrographs from Howie 2012, 155, figure 8.6a, b.)*

that, although paste preparation methods for fineware production changed significantly by the Early Postclassic period (e.g., the use of grog temper), potters continued to exploit the same local raw material resources as their predecessors. Recipes, although they changed, reflect complex knowledge of local component materials and their manufacturing and firing properties and behaviors. Certain surface-finishing techniques and firing methods also continued to be used in the manufacture of fineware alongside new techniques and a different approach to embellishment (Howie 2012, 208–211).

Why is this sort of knowledge essential in detecting immigration? At Lamanai, a new local tradition of coarseware manufacture appeared in the Terminal Classic and continued to at least the Late Postclassic (Howie 2012, 172; Wiewall and Howie 2010). Sandy, quartz-rich clays, common to areas of Pleistocene alluvium and sand that occur in northern Belize, distinguish raw-material resources that had not previously been exploited by Lamanai potters (figure 5.2). At Lamanai, the clays can be found in the area of “pine ridge” (savannah) that lies across the lagoon, forming its eastern shore. Large storage jars are the most common form of coarseware, but other forms were also produced. The jars are similar

stylistically and petrographically to Late Classic jars at Altun Ha but with mineralogical and textural differences related to the use of local Lamanai resources. One hypothesis to explain the new tradition would be an influx of people into Lamanai from coastal areas to the east and/or northeast of the city. The putative immigrants seem to have integrated well with *Lamaneros*, but they retained aspects of their pottery-making traditions. They chose to use the quartz-rich sandy clays located across the lagoon instead of the limestone-derived raw materials in and around Lamanai because they had prior experience using them and understood well their properties and behaviors. The stimulus seems, however to have been a shift from the coast to inland areas, and we have to ask what sorts of conditions would explain this direction of movement when collapse is widely seen to have stimulated movement from Petén northward.

#### LAMANAI: STABLE ISOTOPE ANALYSES, CERAMIC PETROGRAPHY, AND INTRAREGIONAL MOBILITY

Stable isotope analysis geared specifically to explore movement of people at Lamanai was carried out by Donis (2013). A total of 63 individuals were included, with oxygen isotope values of a further 24 Lamanai individuals obtained by Howie and colleagues (Howie et al. 2010) as part of a study of the provenience characteristics of serving and drinking vessels placed in burials under residential building floors in the Terminal Classic through Early Postclassic periods. Donis's sample comprised Postclassic (36) and Historic or Spanish colonial (21) populations (Donis 2013, 52). Only the Postclassic results are discussed here. Methods comprised analyses of phosphate-oxygen isotopes of bone-tooth pairs, collagen carbon- and nitrogen-isotopes (diet); and examination of cranial and dental modification (Donis 2013, 117; Howie et al. 2010).

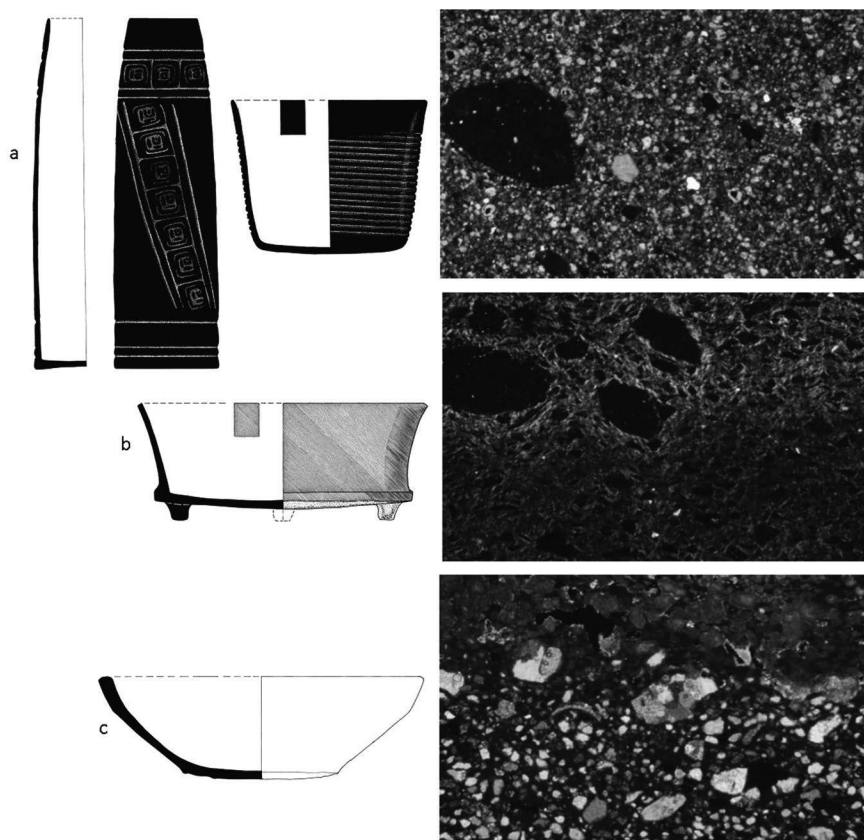
As reported by Donis (2013, 98, 121) and supported by Howie and colleagues (2010), the phosphate-oxygen isotope values of the Lamanai Postclassic dataset (and Terminal Classic to Early Postclassic dataset, in the case of the Howie study) are continuous, with no identifiable outliers. As a result, no individuals with geographic origins outside northern Belize could be specifically identified. However, the samples analyzed have a range of phosphate-oxygen isotope values more than 1.5 times larger than the expected Mesoamerican intrapopulation variability (Donis 2013, 121). When Donis compared the Postclassic and Historic results, she found that Postclassic-period bone and tooth enamel have a higher mean phosphate-oxygen value, and the mean difference is statistically significant (Donis 2013, 81). The Postclassic bone sample also has a larger range than the Historic-period sample, and the difference in variation between the two is statistically significant, with the Postclassic having a more than 1.5 times larger coefficient of variation (Donis 2013, 81–82, 99–100). According to Donis (2013, 100), the range of variation in phosphate-oxygen isotope values in the Postclassic,

when compared to her Historic-period sample, suggests within-lifetime mobility, particularly intraregionally—that is, within the areas around Lamanai. Climate fluctuation cannot yet be ruled out as causal, however (Donis 2013, 99–100); more of the Lamanai skeletal sample needs to be analyzed before firm conclusions can be drawn. As regards sex-related patterns, Postclassic females from Lamanai exhibit larger differences between their enamel and bone phosphate-oxygen isotope values than males, which suggests greater within-lifetime mobility for females than males (Donis 2013, 123), a phenomenon that may reflect marriage practices.

Lamanai's material culture, such as the metal artifacts (Pendergast 1981; Simmons and Shugar 2013; Simmons et al. 2009), and dietary practices (White 1997; White and Schwarcz 1989) certainly indicate inter- and intraregional connections. A small sample of burials points to the kind of mobility that facilitates such connections. There is a burial of two individuals, N11-5/7 (the "Loving Couple") (Pendergast 1989; White et al. 2009), who were originally reported as having phosphate-oxygen isotope enamel values that were higher than bone by 1–2 percent, and it was suggested that they came to Lamanai separately at an early age—perhaps from West Mexico, based on the style of the bronze artifacts associated with the burial (White et al. 2009). Donis's analysis of the enamel of one of the molars indicates instead that the individuals spent the first few years of their lives at a site isotopically similar to Lamanai (Donis 2013, 89–90, 99). The cultural markers of West Mexico could mean that they were descendants of immigrants maintaining homeland traditions. If this was the case, it would suggest that Lamanai was a cosmopolitan community not so different from Teotihuacan, albeit on a smaller scale.

Other individuals display non-Lamanai traditions or cultural markers. The woman in Burial N10-4/9A exhibits lambdoidal cranial flattening not found in other burials at Lamanai during the Postclassic; where it occurs, the standard cranial modification at Lamanai is fronto-occipital (White 1996). The woman's dental modification is also inconsistent with dental modifications displayed by other individuals at the site (Howie et al. 2010; Williams and White 2006, 140). In her case, however, unlike the "Loving Couple," her oxygen isotope composition suggests that she was born elsewhere before moving to Lamanai at least 10–15 years before she died (Donis 2013, 115; Howie et al. 2016; White 1996).

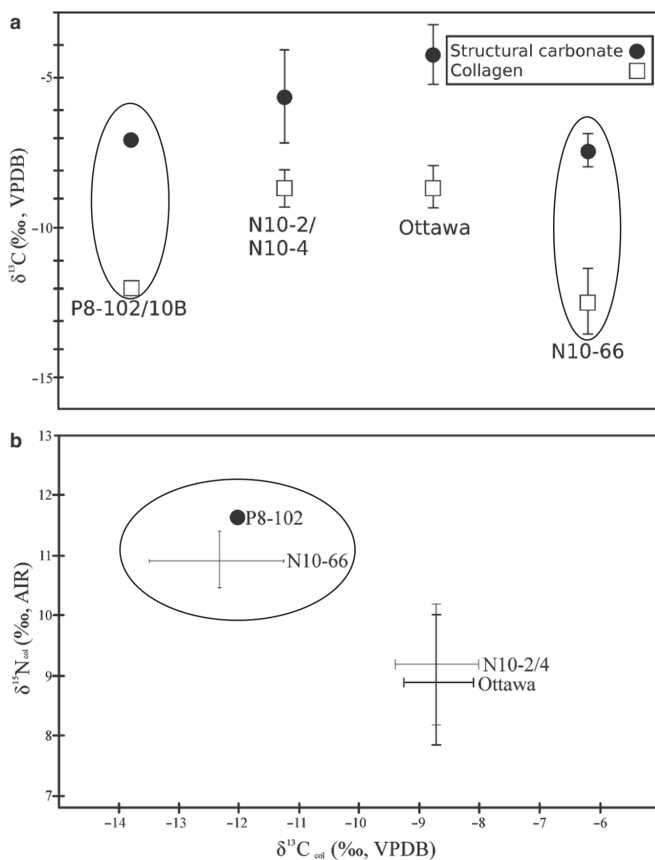
Of the 34 vessels from Terminal Classic and Postclassic burials interred in residential building groups examined petrographically by Howie and colleagues (Howie et al. 2010), eight were identified as geologically inconsistent with local raw-material resources and hence were manufactured elsewhere. The petrographic characteristics of one vessel reflect a riverine inland source in northern Belize; six vessels derive from raw-material resources situated adjacent to the coast in east or northeast Belize, extending into southern Yucatán, with three petrographically distinct production localities represented; and one vessel, which contains volcanoclastic material (ash and crushed pumice), derives from a production locality outside the northern Belize region (figure 5.3). The



**FIGURE 5.3.** Examples from Lamanai of nonlocal pottery included in burials within residential buildings. The vessels drawn on the left have pastes depicted in the photomicrographs on the right. (a) dolomitic marl-based fabric deriving from the coastal area of northeast northern Belize ( $\times 25$ ); (b) fabric containing volcanoclastic temper (ash and crushed pumice) derived from source outside of northern Belize ( $\times 25$ ); (c) crystalline calcite-tempered fabric containing snail shell and polycrystalline quartz derived from riverine clays in inland areas of northern Belize ( $\times 25$ ). (Pottery illustrations by Louise Belanger; photomicrographs from Howie 2012, 146, figure 8.1g; 148, figure 8.3b; 157, figure 8.8c.)

individuals interred with nonlocal pottery are also distinctive in other respects. In one case the individual exhibits a style of dental modification not recorded elsewhere; in another, traces of red powder (cinnabar or red ochre) were found on the teeth. In both instances, the  $\delta^{18}\text{O}$  values for enamel versus bone samples suggest relocation within the region since childhood, and dietary measures indicate atypical diets for Lamanai characterized by restricted consumption of marine resources (Howie et al. 2010) (figure 5.4). Other individuals interred within





**FIGURE 5.4.** Isotope values for enamel versus bone samples: means and standard deviations for (a)  $\delta^{13}\text{C}$  values of Lamanai collagen and bone bioapatite structural carbonate, and (b)  $\delta^{15}\text{N}$  versus  $\delta^{13}\text{C}$  values of Lamanai bone collagen. Residential groups with atypical diets for Lamanai are circled. (Howie et al. 2010, figure 3, 382.)

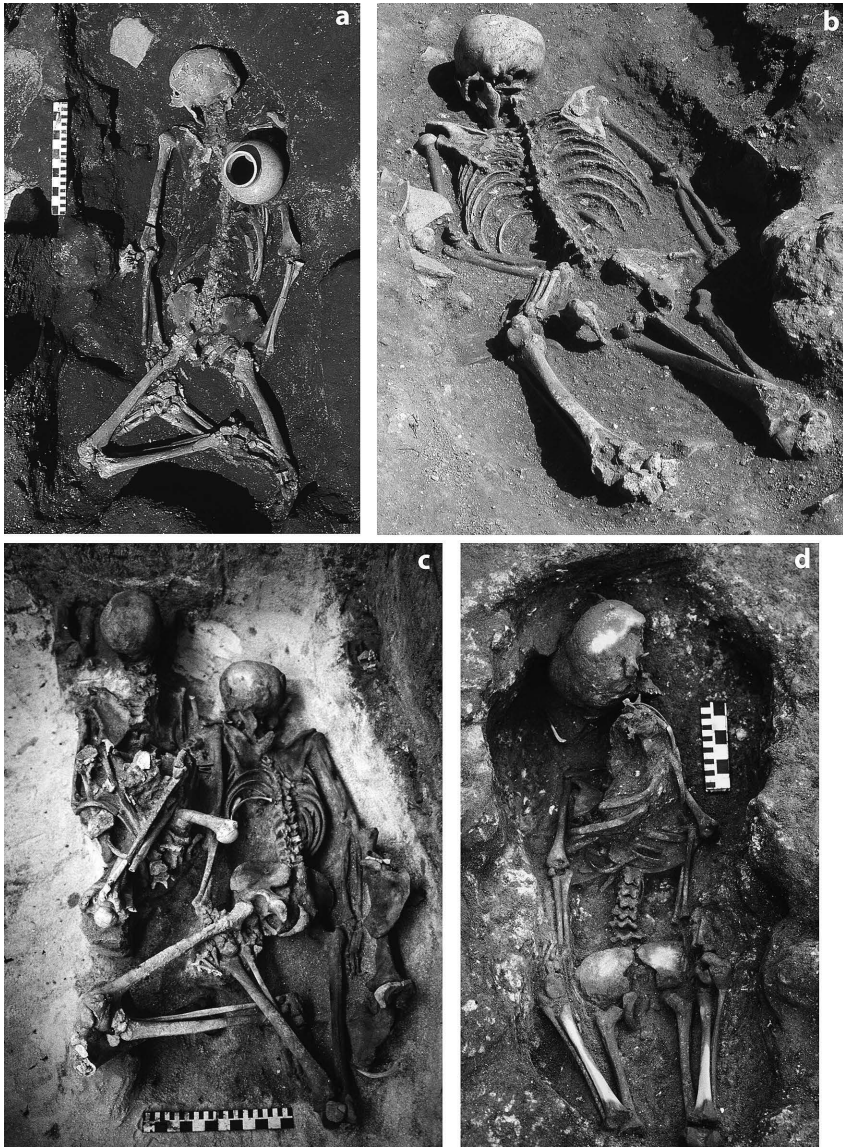
the same residential building groups were buried with locally produced stylistic imitations of the “foreign” pottery and had the same atypical diets. Taken together, the evidence strongly suggests the presence of immigrants within these residential units and an active attempt on the part of household members to maintain homeland traditions, as reflected in diet and grave goods. To date, therefore, evidence at Lamanai points to intraregional mobility of individuals in the Late/Terminal Classic and Early Postclassic, with movement of a group or population—those using sandy clays to make pots—initiated in the Terminal Classic but from that time becoming part of Lamanai cultural traditions.

The independence of the caye communities from the mainland is especially in evidence at the end of the Late Classic and throughout the Terminal Classic (end of the eighth through ninth centuries), when a new kind of burial dominated at Marco Gonzalez (Simmons and Graham 2017, 174). The excavations of Guderjan and colleagues (Guderjan and Garber 1995) on the north of Ambergris Caye (Chac Balam, San Juan, Ek Luum, Laguna de Cayo Francesa) recovered a greater chronological range of burials than is the case for Marco Gonzalez, but preservation of skeletal material in general was poor. Nonetheless, there is enough evidence to show that the burial positions of the Terminal Classic period in the north of the island seem to be more varied than those so far discovered at Marco Gonzalez.

In the interments at Marco Gonzalez, the individual was buried face down, with the lower legs flexed and bent backwards, and with the feet either over the buttocks or crossed between the thighs. This type of burial has been termed *VPLF* by Donis, for “ventrally placed, legs flexed” (Donis 2013, 112; Wrobel and Graham 2015, 87) (figure 5.5A). Out of 38 subfloor burials from Structures 14 and 12 at Marco Gonzalez, 30 were *VPLF*; four were supine with legs flexed in the manner of the *VPLFs*; and four were highly fragmented and incomplete (Simmons and Graham 2017; Wrobel and Graham 2013, 2015). In the excavations of Guderjan and colleagues in the north of the caye, there is only one certain *VPLF*—Burial 15 at Chac Balam—and two possible *VPLFs* from Chac Balam Burial 26 and Laguna de Cayo Francesa, Burial 1. None, however, had diagnostic artifacts (Glassman 1995).

The *VPLF* burial position does not appear on the mainland at Lamanai until the Early Postclassic Buk phase (late tenth to eleventh century) (Graham 2004; Pendergast 1982), where it is only one of a range of burial positions (Wrobel and Graham 2013, 2015) (figure 5.5b). *VPLF* burials at Lamanai generally occur along with Zakpah group ceramics. In fact, *VPLF* burials are either associated with Zakpah ceramics or have no ceramics at all, although there are sometimes other artifacts in these aceramic burials, such as shell objects (*Spondylus* or *Oliva* sp.), a jade pendant, or a chert blade. Of the total of 39 Buk-phase burials with *VPLFs*, five contained two individuals. One of the five had two *VPLF* interments; the other four each had a *VPLF* interment accompanied by an individual that was either extended and dorsally placed (2 instances); extended, ventrally placed (1 instance); or flexed on the right side (1 instance). Thus, the total of individuals laid out as *VPLFs* was 40.

Zakpah group ceramics are distinctive (see Pendergast 1982 or Buk-phase vessels in Graham 1987), with a distribution most commonly known from northern Belize inland and coastal sites, although examples are known from southern Belize (Howie 2012; Ting 2013; see Wrobel and Graham 2015, 86, figure 8.1).



**FIGURE 5.5.** Examples of VPLF burials from (a) Marco Gonzalez, Burial 14-27; (b) Lamanai, Burial N10-4/19; (c, d) San Pedro, from salvage excavations, Elvi's Restaurant. (Photos courtesy of Lamanai and Marco Gonzalez Projects.)

Despite the changes in decorative techniques from Classic practices—incised or gouged as opposed to polychrome decoration, preference for a particular range of motifs (John 2008) and the use of grog temper—Zakpah-group ceramic

production at Lamanai seems to have evolved locally, involving potters working within different technological traditions of manufacture; for example, different potters or groups of potters exploited traditional raw-material resources (Howie 2012, 139–178). As regards changes, a single approach to vessel manufacture replaced the multiple, internally consistent approaches of the Terminal Classic and Classic periods. By “single” we mean that Zakpah-group pottery exhibits a degree of stylistic and technological uniformity in that it shares stylistic, decorative, and petrographic characteristics, yet this “uniformity” is not standardized. Techniques instead are highly variable owing to differences in the technical procedures employed in production. Multiple tempers were employed in addition to the new use of grog, and raw-material ingredients were more rigorously processed to produce finer-textured fabrics than was the case in the Terminal Classic. In addition to incised and gouged decoration, the body geometry of vessels became more complex, with composite forms and hand-modeled elements (Howie 2012, 209–211).

Zakpah-group ceramics occur in abundance at Marco Gonzalez, although to date they have not been found in a primary context and hence not (yet?) with burials or caches. Petrographic analysis of Zakpah ceramics from Marco Gonzalez (Ting 2013) suggests, as does Howie’s work at Lamanai (Howie 2012), that there is some sort of regional production specialization based at several communities in northern Belize. Lamanai burials with Zakpah ceramics have produced data from both ceramic and dietary analyses that suggest that the individuals interred were on the upper end of the social scale or at least had ample access to resources (see details in Howie et al. 2010; J. Metcalfe et al. 2009). The suggestion is based on the presence of copper/bronze artifacts (only two VPLF burials are associated with metal artifacts, however), dental modification traits, some distinctive cranial modification, and dietary variation. Only five VPLFs provide evidence through bone and enamel comparisons of having moved intraregionally, with one of these individuals (N10–4/9, Individual A), definitively born outside Lamanai, having come to the community after adolescence (Howie et al. 2010, 392–393). Of these five, only three—including N10–4/9, Individual A—are VPLFs. VPLFs along with Zakpah-group ceramics in burials are also found at Chau Hiix (Wrobel and Graham 2015, 87–88). Dietary isotopes suggest that all 10 individuals from the Chau Hiix burials except one (interred in an “urn”—probably one of the large Zakpah or Zalal pedestal-based, flanged jars) were distinct from those at Lamanai and were most likely from the coast (J. Metcalfe et al. 2009).

Both the dietary analyses of skeletal material and ceramic petrography carried out on Buk-phase samples at Lamanai provide evidence that the site’s inhabitants had strong ties to communities on or near the coast (Howie et al. 2010; White 1997). We can therefore propose with some degree of support that

there existed a coast-to-inland communication flow, with the attendant idea that people moved from the coast to inland communities and back fairly frequently. Can we also say that innovation in ideas about ritual and mortuary customs came to Lamanai via people traveling inland from the coast? Travel seems to have been the order of the day, and a well-developed degree of mobility—that is, regular movement of people across the land—characterized the Terminal Classic/Postclassic transition. A framework therefore existed that would have supported migration (at the level of the movement of families or groups) into Lamanai. What we know so far suggests largely intraregional mobility at the level of individuals, perhaps reflecting marriage patterns. There is also evidence to suggest migration in the Terminal Classic of people with a tradition of making pottery with sandy clays. In almost all cases, the movement is from east to west, or from coastal areas inland.

On the caye, we know from the burials salvaged from construction work in San Pedro that the VPLFs continued into Late Postclassic times (Pendergast and Graham 1991) (figure 5.5 c, d), whereas the burial practices at Lamanai in the later Postclassic would continue to be varied. This suggests that the island communities were integrated culturally in a way that was not characteristic of the mainland. With regard to the first appearance of the VPLF practice at Marco Gonzalez at ca. AD 800, the situation remains intriguing. Is it possible that enough people (foreign to the caye?) settled on the southern end of the island at the end of the Late Classic period to be termed a new population? (The presence of polychromes in two burials suggests that the town was built when polychromes were still being made and circulated.) At this point it is impossible to say. Although we have one burial from an Early Classic level with a supine interment (which has not been analyzed isotopically), we have no burials from the Late Classic with which to compare the later prone burials. Excavations by Guderjan and colleagues, however, show no VPLF individuals in burials dated to the Late Classic period (Glassman 1995).

The dramatic change from intensive salt processing on the island in the Late Classic period (ca. AD 600–750/800) to the building of a town (by ca. AD 800) reflects a renewed focus, at the time of the southern lowland Classic collapse, on circumpeninsular trade in items other than salt (Graham et al. 2017; Simmons and Graham 2017). A parallel to the appearance of the VPLFs in Maya history can perhaps be found in the sociopolitical and religious upheaval and warfare that characterized the Spanish Conquest, when a similarly dramatic change in burial practice occurred, accompanied by economic, social, and political change (Graham et al. 2013). If the VPLFs do not represent a new population on the caye, they could be the daughters and sons of an island generation that underwent conflict and lost, or that was accommodating to a new generation of merchant groups controlling trade, or that had adopted new cultural beliefs that entailed

new mortuary practices—or any and all of these factors. Future extensive excavation as well as further dietary studies of the skeletal material (Williams et al. 2009) should go some way toward resolving this issue. We should also consider, however, that if conquest and/or conversion took place, and if the sixteenth century is any guide, then such phenomena can trigger movements of people on a relatively large scale. These movements need not have been of large scale in terms of the sizes of the groups moving, but may have been large in terms of the frequency and nature of the moves, thus deeply affecting the peninsula's historical trajectory and cultural continuity.

### **Who Moved, and in What Direction?**

The question of who moved cannot be answered, but the evidence presented so far allows us to propose hypotheses that can be tested in future investigations at both Lamanai and Marco Gonzalez. The new tradition of coarseware manufacture at Lamanai in the Terminal Classic period (Howie 2012, 139–178) can perhaps best be explained by the east–west movement of small groups of people who once lived in communities on the plain, such as Altun Ha or Colha. Why people moved is another question, but evidence is beginning to emerge of a shift of some groups from the coastal plain to inland locations. The people practicing the new tradition of coarseware manufacture seem to have integrated without difficulty into the Lamanai community as witnessed by the facts that (1) the new tradition added to but did not replace other traditions and (2) the new tradition became part of local cultural practice and continued into at least the Late Postclassic. The toppling of Stela 9, with its early seventh-century dates, in the late eighth or early ninth century (Pendergast 1988), suggests some sort of turnover of the ruling stratum at ca. AD 800. There were implications for material culture: pottery slips lost their gloss, polychromes became sketchier, forms evolved, and civic buildings began to be constructed of wood. At the same time, there was continuity in caching and burial practices (Lentz et al. 2016). Given the combination of continuity of some cultural traditions with the loss of cultural value placed on glossy slips or masonry architecture, the “new” ruling elites may well have been local—or, from the region around Lamanai who settled locally—but not royal. The decreased emphasis on monumental masonry architecture could reflect an inability to call on the necessary labor, or it could simply show that priorities lay elsewhere. We hazard that population movements took place in the Terminal Classic, but were manifested in local shifts of small numbers of people, perhaps families, who moved as an effort to adjust to new conditions.

The VPLF burials seem to reflect a new mortuary ritual—and possibly a new belief related to death and dying—at both Marco Gonzalez and at Lamanai. Studies geared specifically to explore the movement of people have not yet been

carried out at Marco Gonzalez. Initial stable isotope analyses were carried out by Donis at Lamanai (Donis 2013, 112–120), and a study of genetic relatedness among Early Postclassic groups in northern Belize was carried out by Wrobel, who compared the Lamanai and Chau Hiix material using dental morphology (Wrobel and Graham 2013, 2015). Results of both studies show that the VPLF burial position crosscuts other criteria, even those of status. The Lamanai burials represent different demographic groups; nonlocals or immigrants might be present but they are in the minority (Donis 2013, 119). On the caye at Marco Gonzalez, VPLFs represent a more sweeping change, but at this stage we have not compared the sample isotopically with burials from earlier periods. The fact that the VPLF mortuary practice is earlier on the caye than at Lamanai, is, however, highly significant. We do not yet know its origin, but the pattern of occurrence so far implies incremental dynamics rather than large-scale migration.

If the new mortuary practice was brought to Marco Gonzalez in the Terminal Classic period (beginning in the late eighth and continuing through the ninth and early tenth centuries) and then to Lamanai in the Early Postclassic (beginning in the late tenth century) by nonlocal individuals yet to be detected, they were a new kind of “nonelite” elite, and the practices were maintained (at Lamanai among other burial practices) by a broad population base. What is interesting is that the burials at Marco Gonzalez in the Terminal Classic period fit Classic-period practices in all but the VPLF position. At Lamanai, the Early Postclassic interments contained individuals, among them the VPLFs, all of whom could be said to have replaced the Classic-period elites and to have eschewed the symbols of Classic-period elite status.

## **WHERE TO GO FROM HERE?**

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Perhaps all we can propose at this stage is that the mortuary practices associated with VPLFs are part of a larger dynamic of change that characterized the Terminal Classic in parts of the eastern Maya lowlands. The overall direction of cultural change, at least in the eastern lowlands—as suggested by the new sandy-clay coarseware tradition at Lamanai and the earlier appearance of the VPLFs on the caye—was east to west, from the coast to inland locations. Migration is manifested in the movements of individuals and perhaps families or small groups, but such movements were facilitated, and adjusted to, owing to a resilience afforded by a long history of mobility. By and large, such movements were also intraregional.

In the Early Postclassic, the Zakpah group pottery at Marco Gonzalez seems to reflect the presence of a new kind of power base at Lamanai, and hence suggests the existence of a mainland-to-coast trajectory to complement the coast-to-mainland dynamic reflected in the arrival of the VPLF burial tradition at Lamanai. Zakpah-group pottery was produced at Lamanai and at other

locations in northern Belize, possibly including Marco Gonzalez. As pointed out by Howie (Howie 2012), there was adherence to local traditions and practices at the same time that design elements, forms, and decorative technology were new. The new elements were a response to new demands that did not conform to Classic-period aesthetics. In addition, the widespread presence at Lamanai of Zakpah-group pottery in burials and caches in both ceremonial and residential contexts suggests the cessation of the Classic-period dynastic appropriation of luxury goods, and the decline of Classic-period values. The new demands and tastes, in the circumstances described, could have been generated by nonlocals, or perhaps by locals who had adopted, by one means or another, nonlocal values. If this hypothesis can be supported—and at present it is highly speculative—then migration of power-seekers with non-Classic Maya values must have taken place by the late tenth or early eleventh century. That these “power-seekers” came to dominate suggests that generating conflict against traditional elites, and overcoming them, was the mechanism of change. Given Mesoamerican rules of engagement (Aoyama and Graham 2015), such conflict did not necessitate large armies but instead could have been instigated by aggressive *nouveau-elite* factions. If conflict and competition were more or less confined to the non-commoner level, this would help to explain the population stability evidenced in the persistence of local manufacturing traditions.

The foregoing discussion is highly preliminary and by no means proven. It is intriguing to hypothesize, however, that the dynamic population movements in northern Belize and the cayes in the transition to the Postclassic period were a response to movements of power seekers or *nouveau elites* who either generated instability through conflict or took advantage of it. Although it is often said that we need to expand our studies of commoners, it is the individuals seeking wealth and power (and not royal status) in the late eighth through ninth centuries who were the harbingers of change. With their demands, values, and expectations, and very possibly with new rules of engagement in warfare and aggression, they seem to have had the potential to disrupt and undermine longstanding traditions of rulership and governance. At the same time, they encouraged, and took advantage of, stable community practices, particularly the practices of communities such as Lamanai and Marco Gonzalez, whose members were long successful in building flexible commercial and social networks tied to trade and exchange.