

Kingship and Collapse:
Inequality and Identity in the Terminal Classic Southern Maya Lowlands

By

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A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy
in the Department of Anthropology, Brown University

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May 2014

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ACKNOWLEDGEMENTS

I didn't decipher Maya hieroglyphic writing. I didn't excavate at most of the sites discussed in this dissertation. I only dug in one small part of the one site where I did, and even there I mostly left the actual digging up to other people and spent my time making educated guesses—mostly wrong at the time, as it turned out—and drawing things—not as well as I could have drawn them. It's a wonder I ever finished this dissertation at all, what with one thing and another. That I eventually did so is due mainly to the kindness of other people.

Foremost among them, of course, are the members of my dissertation committee: Stephen Houston, Thomas Garrison, Charles Golden, and Andrew Scherer. During my time at Brown University, Prof. Houston has been a tireless and generous mentor and advisor, ever alert to learning and career opportunities for his students, and an inexhaustible source of information and ideas. I applied to and chose Brown specifically in order to work with him, and the years have confirmed that that was the right decision. As directors of the El Zotz Archaeological Project, he and Thomas Garrison gave me an opportunity to learn field archaeology by doing it. Each of my committee members, scholars and gentlemen all, provided invaluable advice on how to structure this dissertation, present viable arguments on a wide range of topics, and tie them all together into a coherent whole. I am grateful to them all for their assistance and counsel.

This dissertation was completed during a Junior Fellowship at Dumbarton Oaks Research Library and Collection. I am indebted to the whole Dumbarton Oaks

community for the chance to work with a priceless and unmatched collection of scholarly resources, published and otherwise, against the daily experiential backdrop of the library's famous gardens (expertly overseen by Gail Griffin) and Hector Paz's culinary creations. In inviting me to work there, the Director, Jan Ziolkowski, and the Senior Fellows in Pre-Columbian Studies—Barbara Arroyo, Elizabeth Boone, Thomas Cummins, Leonardo López Luján, Charles Stanish, and Gary Urton—placed a degree of trust in my abilities which I hope the present work will to some extent vindicate.

Particular gratitude is due to Colin McEwan, the Director of Pre-Columbian Studies, who warmly welcomed me into the ranks of Pre-Columbianists at Dumbarton Oaks, and who has been generous with encouragement and practical advice on current and future projects. Bridget Gazzo, Librarian for Pre-Columbian Studies, made sure I had the books I needed and helped me learn my way around the stacks. Program Coordinators Emily Jacobs and Kelly McKenna kept everything running smoothly in our part of the Dumbarton Oaks world.

This dissertation draws heavily on the work of the El Zotz Archaeological Project, a large and always changing cast of characters united in the cause of advancing human knowledge. It was a privilege and a pleasure to be part of that project. Contributions by Timothy Beach, Alyce de Carteret, Ewa Czapiewska, Thomas Garrison, Arturo Godoy, Alejandro Guillot Vassaux, Stephen Houston, Zachary Hruby, Melanie Kingsley, Joshua Kwoka, Sheryl Luzzadder-Beach, Elizabeth Marroquín, Sarah Newman, Fabiola Quiroa, Alexa Rubenstein, Andrew Scherer, and Caitlin Walker, in particular, are reflected here. Yeny Gutiérrez deserves special commendation for hiking up to the Las Palmitas Group each morning in order to excavate there with me—and then, incredibly, doing it again the

next year. We were joined there by Federico Alvarado, Wilmer Gonzales, Oliverio Rodrigo Mo Tux, and Byron Torres, who moved earth and stone in furtherance of our research.

This dissertation has also benefited from the questions, recommendations, and contributions of other scholars. Kate Blankenship, Zachary Chase, Bryce Davenport, Jamie Forde, Elodie Dupey Garcia, Katharine Lukach, Simon Martin, Carlos Pallan, Kent Reilly, Alejandra Rojas, Franco Rossi, Donald Slater, and David Stuart each read portions of it or talked over ideas contained in it, offering welcome critiques and suggestions. Any errors remaining herein are of course my own fault. Keith Eppich, Thomas Garrison, Stephen Houston, Takeshi Inomata, Justin and Barbara Kerr, Damien Marken, Simon Martin, and Colin McEwan generously contributed maps and figures. Other illustrations are included by the kind permission of the British Museum, the Corpus of Maya Hieroglyphic Inscriptions (whose Director, Barbara Fash, was most accommodating in facilitating photographic research), the Foundation for the Advancement of Mesoamerican Studies, and the University of Pennsylvania Museum. Juan Carlos Meléndez, then Director of the Museo Nacional de Arqueología y Etnología, permitted me to examine and photograph several objects in the museum's collection. At Brown, Mathilde Andrade, Mariesa DelSesto, Katherine Grimaldi, and Marjorie Sugrue kept the machinery of the Anthropology Department running smoothly during my time there.

The El Zotz Archaeological Project was made possible by grants and other forms of support from the Fundación Patrimonio Natural y Cultural de Guatemala, the National Aeronautics and Space Administration, the National Endowment for the Humanities, the

National Science Foundation, the Tinker Foundation, and the Waitt Foundation via the National Geographic Society. It operates by the permission and with the cooperation of Guatemalan governmental and educational institutions, including the Centro de Estudios Conservacionistas of the University of San Carlos, the Departamento de Monumentos Prehispánicos y Coloniales, the Dirección General de Patrimonio Cultural y Natural, and the Instituto de Antropología y Historia.

Special thanks go to my family. My parents, Joseph Carter and Rosemary Poole-Carter, encouraged my childhood interests in archaeology and ancient writing systems and raised me to be, for better or worse, the kind of person who dedicates eight years of his life to pursuing advanced degrees in those subjects. My sisters, Dorothy Carter and Robin Carter, also gave freely of their encouragement and support during that time. More than ten years ago, Katharine Lukach saw in my underweight person raw material worth fashioning into a functional adult. She encouraged me to turn our shared interest in ancient Mesoamerica into a career, and has since, by thousands of small choices, put my career ahead of her own. I'm glad she's my wife.

DEDICATION

This dissertation is dedicated to Katharine Willa Lukach and Cora Rose Carter.

TABLE OF CONTENTS

Signature page.....	iii
Curriculum vitae	iv
Acknowledgements	xiii
Dedication.....	xvii
Table of Contents	xviii
List of Tables	xxiv
List of Illustrations	xxv
 1. Introduction	 1
<i>The Terminal Classic period in the central and southern Maya</i>	
<i>lowlands</i>	3
<i>Investigating hierarchy, inequality, and political disintegration</i>	9
<i>Identifying Terminal Classic Maya elites</i>	13
<i>Methods and organization</i>	18
2. The Terminal Classic Maya Collapse in Context	23
<i>Early and Late Classic central and southern lowland Maya</i>	
<i>societies</i>	25
<i>The background of the Terminal Classic collapse</i>	32
<i>Central and southern lowland populations at the end of the</i>	
<i>Late Classic period</i>	33

<i>Late Classic administrative complexity</i>	38
<i>Environmental and anthropogenic explanations for the collapse</i>	41
<i>Agriculture and abandonment</i>	43
<i>Drought and collapse events</i>	46
<i>Drought at the end of the Preclassic period</i>	46
<i>Reconsidering sixth-century hiatuses</i>	49
<i>Drought in the Terminal Classic period</i>	52
<i>Discussion</i>	56
3. The Archaeology of Elite Status in the Terminal Classic Central and	
Southern Lowlands: Comparative Evidence from Eight Sites	60
<i>Aguateca</i>	62
<i>The Palace Group</i>	63
<i>Sub-royal elites at Aguateca</i>	65
<i>Elite material culture at Aguateca</i>	67
<i>Piedras Negras</i>	69
<i>Caracol</i>	74
<i>Terminal Classic ceramics at Caracol</i>	81
<i>Copan</i>	84
<i>Ceramic chronology and the culture history of Terminal Classic</i>	
<i>Copan</i>	84
<i>Genteel poverty among Copan's high elites</i>	89
<i>The fall of the ?Xukuup dynasty</i>	96
<i>Post-royal elites at Copan</i>	99

<i>El Perú-Waka'</i>	103
<i>Abortive remodeling at the Acropolis</i>	103
<i>The contested legacy of the Waka' dynasty</i>	107
<i>Non-royal elite households</i>	109
<i>Tikal</i>	112
<i>An interregnum in the early Terminal Classic period</i>	113
<i>Treatment of monuments in the Terminal Classic period</i>	117
<i>Status and faction at Terminal Classic Tikal</i>	120
<i>Ceibal</i>	121
<i>Terminal Classic interaction with monuments</i>	129
<i>Terminal Classic burials at Ceibal</i>	131
<i>Nakum</i>	134
<i>Terminal Classic material culture at Nakum</i>	135
<i>Discussion</i>	137
<i>Summary</i>	144
4. Terminal Classic Maya Elite Self-Presentation: Iconography and	
Epigraphy of the Central and Southern Lowlands	163
<i>Style in the Terminal Classic period</i>	165
<i>Foreign and innovative stylistic elements in Terminal Classic art</i>	
<i>and writing</i>	169
<i>Royal and courtly ranks and titles</i>	180
<i>Courtly hierarchy at Bonampak</i>	183
<i>Sub-royal elites at other courts</i>	187

<i>Holy “Banded Birds,” kan ek’, and “district” titles</i>	191
<i>K’uhul “Banded Bird” lords in the Petexbatun region</i>	191
<i>The kan ek’ title, Itza’ lords, and Terminal Classic sociopolitical change</i>	193
<i>Counts of lands</i>	205
<i>Political relationships</i>	207
<i>Ancestry, succession, and power-sharing</i>	207
<i>War and captive-taking</i>	211
<i>Alliances and patronage</i>	213
<i>Rituals and supernatural beings</i>	216
<i>The Paddler Gods</i>	217
<i>Quirigua and Copan</i>	219
<i>Wind and water in the Petexbatun region</i>	221
<i>Summary and discussion</i>	224
5. El Zotz: The Trajectory of a Maya Kingdom in the Terminal Classic	
Period	266
Archaeological work at El Zotz	267
Late Classic elites at El Zotz	269
Royal activity in the early ninth century A.D.	274
El Zotz Stela 4	275
Str. M7-1	276
The El Zotz Acropolis deposit: an abortive renovation	279
Post-royal elite activities at El Zotz	283

<i>The Northwest Courtyard</i>	283
<i>Las Palmitas</i>	285
<i>Elite households in the Terminal Classic period: evidence from middens</i>	289
<i>Discussion</i>	292
6. Conclusions	318
<i>Terminal Classic kings and courtiers</i>	319
<i>Material culture and bioarchaeological evidence</i>	319
<i>Elite self-representation</i>	322
<i>Kings and alliances</i>	322
<i>Nobles</i>	325
<i>Code-switching in Terminal Classic art and writing</i>	326
<i>Sociopolitical inequality after the collapse of divine kingship</i>	327
<i>Material culture</i>	328
<i>Communication, performance, and post-royal elites</i>	330
<i>The ajaw in society: Terminal Classic elites in context</i>	331
Appendix A: Excavations at the Las Palmitas Group	335
<i>Operation 4: Las Palmitas</i>	336
<i>Sub-operation A: test units in the plaza</i>	336
<i>Sub-operation B: test units in the palace patio</i>	338
<i>Sub-operation C: Structure M3-4</i>	343
<i>Sub-operation D: Structure M3-7</i>	346

<i>Sub-operation E: Structure M3-1</i>	360
<i>Sub-operation F: Structure M3-6</i>	370
<i>Sub-operation G: Structure M3-8</i>	389
<i>Sub-operation H: Structure M3-9</i>	398
<i>Sub-operation I: Structure M3-5</i>	418
<i>Sub-operation J: Structure M3-11</i>	433
<i>Sub-operation K: excavations in the basin west of the palace</i>	436
<i>Sub-operation L: Structure M3-3</i>	438
<i>Sub-operation M: excavations in the southern platform</i>	441
<i>Sub-operation N: Structure M3-2</i>	443
<i>Chronology and stratigraphy</i>	444
Appendix B: Ceramics from the Las Palmitas Group	516
Appendix C: Monuments considered in the epigraphic and iconographic survey ...	639

LIST OF TABLES

Table 3.1	Ceramic phases relevant to the Terminal Classic period at the eight sites discussed in Chapter Three	147
Table 4.1	Historical characters discussed in Chapter Four	230
Table 4.2	Names and titles of foreign potentates from <i>Wat'ul K'atel's</i> Str. A-3 monumental program.....	236
Table 5.1	Ceramic phases at Tikal (after Culbert 1993), Uaxactun (after Smith and Gifford 1996), and El Zotz (after Czapiewska 2012)	297
Table A.1	Time spans at the Las Palmitas Group	444

LIST OF ILLUSTRATIONS

Figure 1.1	A map of the Maya Lowlands showing major centers and other sites mentioned in the present work	22
Figure 2.1	Royal architectural space corresponding to gradations of rank, status, and condition, as rendered by an ancient Maya artist (Kerr 2012: K767)	59
Figure 3.1	Sites discussed in Chapter Three	148
Figure 3.2	The site center of Aguateca, showing the Palace Group, the Causeway, and the chasm used as a natural fortification	149
Figure 3.3	Aguateca's Palace Group	150
Figure 3.4	Plan views of (a) Aguateca Str. M8-4; (b) Aguateca Str. M8-8; (c) Aguateca Str. M8-10; (d) Aguateca Str. M8-13	151
Figure 3.5	(a) An incised human cranial bone and (b) an incised shell ornament from Aguateca Str. M8-10	152
Figure 3.6	The Acropolis and site center of Piedras Negras	153
Figure 3.7	Piedras Negras Court 4	154
Figure 3.8	(a) Composite drawing and (b) photograph by Dorie Reents-Budet of an Ahk'utu' molded-carved vessel	155
Figure 3.9	Aerial view of epicentral Copan, showing Group 10L-2	156
Figure 3.10	Copan Group 9J-5	157
Figure 3.11	A carved bone pectoral ornament from the Copan Str.	

	9K-88-1st midden	158
Figure 3.12	The site center of El Perú- <i>Waka'</i>	159
Figure 3.13	The site center of Tikal	160
Figure 3.14	The site center of Ceibal	161
Figure 3.15	Ceibal Group A	162
Figure 4.1	Tikal Stela 11 (A.D. 869), a late monument which adheres both to pan-southern Lowland canons of royal costume on period ending monuments and to a format established by the eighth-century ruler <i>Yik'in Chan K'awiil</i> of Tikal	237
Figure 4.2	Piedra Quebrada Stela 1	238
Figure 4.3	A polychrome vessel in the Señor del Peten style depicting a ballgame	239
Figure 4.4	Jimbal Stela 1	240
Figure 4.5	Scenes of interaction between two deities on a Classic-period carved stone box from Veracruz	241
Figure 4.6	Grammatical inscriptions including square day signs: (a) Ucanal Stela 4, A1 – E1; (b) Jimbal Stela 1, A2 – B9; (c) Jimbal Stela 1, Y1 – Y3; (d) Jimbal Stela 2, C1 – B2	242
Figure 4.7	Non-Maya-style day signs from Terminal Classic vessels: (a) 1 or 6 Alligator and 4 Serpent (drawing after a photograph in the Dumbarton Oaks Precolumbian Photographic Archive, PC.M.LC.cb4.34.6); (b) 1 Water (drawing after a photograph by Justin Kerr; Kerr 2012: K319); (c) 1 ?Road (drawing after a	

	photograph by Justin Kerr; Kerr 2012: K319)	243
Figure 4.8	Nominal sequence from a polychrome drinking vessel in the Señor del Peten style (Kerr 2012: K6437): <i>u baah Wuk</i> <i>Chapaht Meen K'in Ajaw</i> 11 ? 12 “Crossed Bands” ? <i>T’ul</i> <i>Tol ochik'in kaloomte' baahkab</i>	243
Figure 4.9	(a) Ceibal Stela 13; (b) torch-handed entity depicted on an unprovenanced molded-carved vessel (Kerr 2012: K6668)	244
Figure 4.10	Jimbal Stela 2 with arrows showing proposed reading order	245
Figure 4.11	The Josefowitz Stela	246
Figure 4.12	Ixlu Altar 2	247
Figure 4.13	Name and titles of <i>K'iyel Janab</i> from Sacul Stela 1	247
Figure 4.14	Ceibal Stela 6	248
Figure 4.15	<i>Kan ek'</i> people named in Late and Terminal Classic inscriptions: (a) Edzna Stela 18; (b) Pusilja Stela D; (c) Yaxchilan Stela 10 (after a photograph by Teobert Maler); (e) Chichen Itza, Las Monjas Building, Lintel 1; (f) unprovenanced vessel from the Xultun area (after a photograph by Justin Kerr; Kerr 2012: K4387); (g) unprovenanced vessel from the Xultun area (after a photograph by Justin Kerr; Kerr 2012: K4909); (h) Yaxchilan Stela 10 (after a photograph by Teobert Maler); (i) Ceibal Stela 9 (after a photograph by Ian Graham); (j) unprovenanced carved-incised vessel (after a photograph	

	by Justin Kerr; Kerr 2012: K8732); (k) Ceibal Stela 10 (after a photograph by Ian Graham); (l) Ceibal Stela 11 (after a cast in the Peabody Museum, Harvard University); (m) stela now in Flores, perhaps from Motul de San José; (n) and (o) unprovenanced vessel from the Motul de San José area (after photographs by Justin Kerr); (p) Chichen Itza, Great Ballcourt, South Building, Pillar 5 249
Figure 4.16	Passage from Ceibal Stela 11 recounting the arrival of <i>Wat'ul K'atel</i> 251
Figure 4.17	Ichmul de Morley Panel 2 251
Figure 4.18	Detail of Dzilam Stela 1 252
Figure 4.19	<i>Itza'</i> people named in Early and Late Classic Maya inscriptions: (a) unprovenanced black ware vessel from northern or central Peten (<i>yunen Itza' ajaw</i> , “the child of the <i>Itza'</i> lord,” after a photograph by Justin Kerr); (b) Motul de San José Stela 2 (<i>Juun Tzak To'k', k'uhul Itza' ajaw</i> , after Tokovinine and Zender 2012: Fig. 2.1a) 252
Figure 4.20	Uaxactun Stela 13 253
Figure 4.21	Detail of Uaxactun Stela 13 254
Figure 4.22	Details of Terminal Classic monuments mentioning <i>Olom</i> : (a) Uaxactun Stela 7; (b) Jimbal Stela 1; (c) Jimbal Stela 2 254
Figure 4.23	Numbered territory titles from pre-Terminal Classic inscriptions: (a) Tikal Stela 31; (b) Tikal Stela 13; (c)

	Palenque House C; (d) Aguateca Stela 1, after a photograph by Ian Graham (Graham 1967: Fig. 2); (e) Naranjo Stela 12; (f) unprovenanced vessel from the Río Azul area (Kerr 2012: K1383); (g) unprovenanced vessel from the Río Azul area (Kerr 2012: K2914); (h) unprovenanced vessel from the Los Alacranes area (Kerr 2012: K7524); (i) unprovenanced vessel from the Oxkintok area (see Boot 2010: 2)	255
Figure 4.24	Caracol Stela 17	256
Figure 4.25	Caracol Altar 10	257
Figure 4.26	Caracol Stela 18	258
Figure 4.27	Caracol Altar 13	259
Figure 4.28	Excerpt from the inscription on Naranjo Stela 32, recounting <i>Papamalil</i> 's gift of a palanquin to <i>Waxaklajuun U Baah K'awiil</i>	259
Figure 4.29	Ceibal Stela 11	260
Figure 4.30	Ceibal Stela 1	261
Figure 4.31	(a) Ceibal Stela 18; (b) detail of an unprovenanced painted ceramic vessel, probably produced in the <i>Ik'</i> polity in the eighth century A.D. (Kerr 2012: K1004)	262
Figure 4.32	Ceibal Stela 20	263
Figure 4.33	Inscription on the back of Copan Stela 11	264
Figure 4.34	Ceibal Stela 19	265

Figure 5.1	El Zotz in its regional context.....	298
Figure 5.2	The El Zotz site region	299
Figure 5.3	Site map of El Zotz with major architectural groups labeled	
Figure 5.4	El Zotz Lintel 1	300
Figure 5.5	Captions from El Zotz Lintel 1	301
Figure 5.6	Polychrome vase naming a lord of El Zotz, recovered from a looted burial at El Perú-Waka’	303
Figure 5.7	Polychrome vase recovered from an elite tomb in Uaxactun Str. A-1	303
Figure 5.8	Texts on the polychrome vase from Uaxactun Str. A-1: (a) main text; (b) caption naming <i>K’uk’ Chan</i> , the <i>sajal</i> ; (c) caption naming <i>Yax Ajaw</i> , he of Calakmul	304
Figure 5.9	<i>Pa’chan</i> and “Earspool” lords named on unprovenanced, early seventh-century polychrome vases in the El Zotz style	305
Figure 5.10	Locations of early and mid-eighth century construction activity in central El Zotz	306
Figure 5.11	The Las Palmitas Group	307
Figure 5.12	(a) Reconstructed eighth-century form of the elevated palace patio in the Las Palmitas group; (b) reconstructed plan of Str. M3-6; (c) reconstructed plan of Str. M3-7	308
Figure 5.13	El Zotz Stela 4.....	309
Figure 5.14	Location of Str. M7-1 in the East Group of El Zotz	310
Figure 5.15	Profile of excavations in Str. M7-1 showing two-phase	

	construction of auxiliary platforms	311
Figure 5.16	Foci of ritual depositional activity in the Acropolis	311
Figure 5.17	Griselda Pérez Robles excavating part of the ritual deposit in the Acropolis	312
Figure 5.18	Ceramic sherds from the ritual deposit in the Acropolis	313
Figure 5.19	Map of the Acropolis and Northwest Courtyard	314
Figure 5.20	Vessels included in Burial 8	314
Figure 5.21	(a) Reconstructed ninth-century form of the elevated palace patio in the Las Palmitas group; (b) reconstructed plan of Str. M3-8	315
Figure 5.22	Rim and body fragments of (a) Chaquiste impressed and (b) Chinja impressed incurved-rim bowls	316
Figure 5.23	(a) Sahcaba molded-carved sherds and vessels: (a) from the midden immediately north of Str. M3-8 in the Las Palmitas Group (drawing by Nicholas Carter); (b) excavated near Str. L8-22 by Alyce de Carteret (photograph by Alyce de Carteret; (c) from Uaxactun (photographs by Nicholas Carter)	317
Figure A.1	Excavations in the Las Palmitas Group	452
Figure A.2	EZ-4A-1, south and west profiles	452
Figure A.3	EZ-4A-2, north profile	453
Figure A.4	EZ-4B-1, north profile	453
Figure A.5	EZ-4B-2, plan view	454
Figure A.6	EZ-4B-2, west and north profiles	454

Figure A.7	EZ-4B-1 and EZ-4B-3, west profile	455
Figure A.8	EZ-4C-1, north profile	456
Figure A.9	EZ-4C-2, plan view	456
Figure A.10	EZ-4C-2, south profile	457
Figure A.11	EZ-4D-1, EZ-4X-1, and EZ-4X-2, north profiles	458
Figure A.12	EZ-4D-2, west and north profiles	459
Figure A.13	EZ-4D-3, west and north profiles	459
Figure A.14	EZ-4D-4, EZ-4D-5, and EZ-4D-9, plan view	460
Figure A.15	EZ-4D-4 and EZ-4D-9, south profiles	461
Figure A.16	EZ-4D-5, south profile	462
Figure A.17	EZ-4D-6 and EZ-4D-7, plan view	463
Figure A.18	EZ-4D-6 and EZ-4D-7, south profiles	464
Figure A.19	EZ-4D-8, south profile	465
Figure A.20	EZ-4X-14, south profile	466
Figure A.21	EZ-4E-1, west and north profiles	467
Figure A.22	EZ-4E-2, south and west profiles	467
Figure A.23	EZ-4E-3, east profile	467
Figure A.24	EZ-4E-5, east profile	468
Figure A.25	EZ-4E-6 and EZ-4E-7, plan view	469
Figure A.26	EZ-4E-6, north profile, and EZ-4E-6 and EZ-4E-7, east profiles ...	469
Figure A.27	EZ-4E-9, east profile, and EZ-4E-10, west profile (reversed)	470
Figure A.28	EZ-4E-10, east and west profiles	471
Figure A.29	EZ-4X-3, EZ-4X-4, EZ-4X-5, EZ-4X-6, EZ-4X-7, and	

EZ-4X-8, plan view	472
Figure A.30 EZ-4X-3 and EZ-4X-4, east profiles	473
Figure A.31 EZ-4X-3 and EZ-4X-4, west profiles	474
Figure A.32 EZ-4E-8	475
Figure A.33 EZ-4X-7, east and southeast profiles	475
Figure A.34 EX-4X-8, south profile	476
Figure A.35 EZ-4F-1, EZ-4F-2, EZ-4F-3, EZ-4F-4, EZ-4F-5, EZ-4F-6, EZ-4F-7, EZ-4F-8, EZ-4F-9, EZ-4F-10, and EZ-4F-11, plan view	477
Figure A.36 EZ-4F-1, EZ-4F-2, and EZ-4F-6, north profile	478
Figure A.37 EZ-4F-2 and EZ-4F-4, west profile	479
Figure A.38 EZ-4F-3, west profile	480
Figure A.39 EZ-4F-5, west profile	481
Figure A.40 EZ-4F-6, west profile	482
Figure A.41 EZ-4F-9, east and south profiles	483
Figure A.42 EZ-4F-12, north profile	483
Figure A.43 EZ-4F-13, south profile	484
Figure A.44 EX-4X-9, east profile, with a section of the west wall of Str. M3-6	485
Figure A.45 EX-4X-10, north profile	486
Figure A.46 EZ-4G-2, EZ-4G-5, EZ-4G-6, EZ-4G-10, EZ-4G-13, EZ-4G-15, EZ-4G-16, and EZ-4G-18, plan view	487
Figure A.47 EZ-4G-1, plan view	488

Figure A.48	EZ-4G-1, east profile	488
Figure A.49	EZ-4G-2, EZ-4G-6, EZ-4G-10, and EZ-4H-3, east profiles	489
Figure A.50	EZ-4G-5, EZ-4G-13, EZ-4G-15, EZ-4G-16, and EZ-4G-17, east profiles	490
Figure A.51	EZ-4G-5, EZ-4G-13, EZ-4G-15, EZ-4G-16, and EZ-4G-17, west profiles	491
Figure A.52	EZ-4G-18, west profile	492
Figure A.53	EZ-4H-1, north profile	492
Figure A.54	EZ-4H-2, east profile	493
Figure A.55	EZ-4H-4, EZ-4H-5, EZ-4H-6, EZ-4H-7, EZ4H-8, EZ-4H-9, EZ-4H-10, EZ-4H-11, and EZ-4X-15, south profiles.....	494
Figure A.56	EZ-4H-12, west profile	495
Figure A.57	EZ-4H-13, north profile	496
Figure A.58	EZ-4I-1, EZ-4I-2, EZ-4I-3, EZ-4I-4, EZ-4I-5, EZ-4I-6, EZ-4I-8, EZ-4I-10, and EZ-4I-11, plan view	497
Figure A.59	EZ-4I-1 and EZ-4I-2, west profiles	498
Figure A.60	EZ-4I-3 and EZ-4I-5, west profiles	499
Figure A.61	EZ-4I-4, east profile	500
Figure A.62	EZ-4I-6, east profile	500
Figure A.63	EZ-4I-7 and EZ-4I-9, west profiles	501
Figure A.64	EZ-4I-8, east profile	502
Figure A.65	EZ-4I-10 and EZ-4I-11, west profiles	503
Figure A.66	EZ-4X-11, east profile	504

Figure A.67	EZ-4X-12, east profile	505
Figure A.68	Composite section of Str. M3-5: EZ-4I-1 and EZ-4I-2, west sections, and EZ-4I-4 and EZ-4I-8, east sections	506
Figure A.69	EZ-4J-1 and EZ-4J-2, plan view	507
Figure A.70	EZ-4J-1 and EZ-4J-2, south profiles	508
Figure A.71	EZ-4K-2, northwest and southwest profiles	509
Figure A.72	EZ-4L-1 and EZ-4L-2, north profiles	510
Figure A.73	EZ-4X-13, plan view	511
Figure A.74	EZ-4X-13, north profile	512
Figure A.75	Composite section of Str. M3-3: EZ-4L-1, EZ-4L-2, and EZ-4X-13, north profiles	513
Figure A.76	EZ-4M-1, north and west profiles.....	514
Figure A.77	EZ-4M-2, north and west profiles.....	514
Figure A.78	EZ-4N-1, north profile	515

CHAPTER ONE

INTRODUCTION

For the globalizing world of the early twenty-first century A.D., inequality and the possibility of civilizational collapse are live and inseparable concerns. At the same time that industrial civilization is faced with the potentially existential threats of anthropogenic climate change and resource depletion, there is a growing awareness that the political structures even of representative democracies primarily and increasingly empower economic elites (Gilens and Page 2014), and may prevent those challenges from being adequately addressed. In this historical context, the fates of past civilizations perceived to have collapsed—however “collapse” is conceptualized—take on particular popular interest.

While current circumstances are historically unique, all complex societies have been characterized by hierarchies and disparities of wealth, rank, and political power. Yet inequalities are not simply brute facts, but are constituted through everyday practices of representation and action. Ruling groups in ancient and modern polities alike represent themselves and their activities in ways that naturalize and legitimate inequality and that obscure actually existing power relationships and decision-making processes. Such representations are hegemonic, in Antonio Gramsci’s (1999: 145) sense, but need not involve deliberate secrecy or deception: they are simply a matter of how people in particular historical situations think about the social and natural world, their own identities, and the fields of practice in which they interact. They are, furthermore,

inseparable from the learned, habitual ways in which persons of all ranks perform social roles, engage with the world of material objects, and mediate and construct their relationships with one another through those objects (Inomata 2006: 807; see Bourdieu 1977).

What, then, happens to inequality *qua* inequality when inegalitarian political systems begin to break down? The present work investigates the question of how hierarchy is constituted through overt representation and other meaningful practices, in societies with traditions of sacred kingship and weakly bureaucratized governing institutions, during times of political disintegration. Whatever environmental exigencies might plague a political system, its collapse is by definition a political event in which competing political agents are key (Golden and Scherer 2013: 417). A salient question, given that such events do involve challenges by lower-ranking actors to the effective power and authority of higher-ranking ones, is how ruling groups respond through representation. Do they make rhetorical room for the upstarts, coopting potential challengers by incorporating them into the image of the ruling group, or do they attempt to rule out alternative power arrangements by representational fiat? How do representations that are explicitly about inequality (e.g. elite rhetoric or portraiture) and semiotically meaningful practices that imply or help to construct inequality (e.g. the production and use of highly valued goods) change when specific hierarchical relationships and structures are in flux?

This dissertation focuses on one test case: the Terminal Classic period (ca. A.D. 800 – 1000; see below) in the central and southern Maya lowlands (**Figure 1.1**). Its objective is to identify patterns in the way royal and elite status changed, in

representation and material practice, during the transition from the Classic to the Postclassic period. That transitional period, the Terminal Classic era, is of anthropological interest because it saw a variety of significant shifts in political, social, and economic structure and action. Those events included the end of divine kingship, a key feature of Late Classic lowland Maya society (see Chapter Two, this volume). The cessation of kingship accompanied the disintegration of the polities and political networks Late Classic kings had headed, and, at most centers, significant demographic decline (Demarest et al. 2004: 547 – 562). Elite culture underwent changes besides the termination of kingship, but inequalities of status and wealth continued to characterize societies in the area affected by the collapse.

This work explores the nature of Terminal Classic Maya elite status as constituted through behaviors including but not limited to the manipulation of monumental art, inscriptions, and architectural spaces. To accomplish this, it draws on epigraphic and archaeological evidence from the southern lowlands, including new findings from the site of El Zotz, Guatemala. A site of modest size with a few hieroglyphic inscriptions, built in a strategically important location and drawn over its Classic history into alliances and conflicts with larger neighbors, El Zotz presents a useful case study in the unraveling of kingship and courtly life over the Terminal Classic period.

The Terminal Classic period in the central and southern Maya lowlands

First defined in 1965 at the Maya Lowland Ceramic Conference in Guatemala City (Willey et al. 1967), the Terminal Classic is variously treated as beginning with the appearance of the Tepeu III ceramic phase at Uaxactun and its equivalents at other sites

ca. A.D. 850 (Culbert 1973: 16 – 18, 89; see Smith 1955: 106 – 108), by the end of the tenth *bak'tun* in A.D. 830 (Foias and Bishop 1997: Fig. 1), and by cultural processes that began as early as A.D. 750 at some sites (Forsyth 2005: 7 – 8). It is generally agreed to have ended in the Central and Southern lowlands by A.D. 1000 (e.g. Sabloff 1990: 18, 130; Tourtellot and González 2004: 60), if not before (Foias and Bishop 1997: Fig. 1), with transitions to Early Postclassic material cultural assemblages. Yet George Bey and colleagues (1997: Table 1) call “Terminal Classic” the period from A.D. 900 to 1100 in the Northern Lowlands. Inconsistent applications of the term derive from scholars’ divergent goals (establishing macro-regional chronologies or working out local culture historical sequences) and data sets (inscriptions or ceramics). Following Norman Hammond and Gair Tourtellot (2004: 288), the Terminal Classic is defined for present purposes as a chronological period—not a temporally variable developmental stage (Forsyth 2005: 7)—extending from A.D. 800 to 1000. Such a definition distinguishes the concept of the Terminal Classic period from more specific and locally variable events. At the same time, it encompasses those events throughout most of the Maya world south of the northern Yucatán Peninsula and north of the Guatemalan Highlands.

The Terminal Classic period throughout the Central and Southern lowlands was broadly characterized by demographic decline and political disintegration, but these processes varied across that area in their timing, intensity, and historical causes. Indeed, the events of the Terminal Classic were so regionally diverse that archaeologists have largely given up trying to identify one all-important key factor behind the Maya “collapse.” In the Petexbatun region, the fall of the *Mut* court at Dos Pilas in A.D. 761 touched off a period of political fragmentation and warfare, with petty kings operating

from fortified sites and armed groups targeting population centers (Demarest et al. 2004; Inomata 2008; O'Mansky and Dunning 2004). By the mid-ninth century, the major power center in the region was Ceibal, an ancient site formerly subject to Dos Pilas; there, elites continued to raise hieroglyphic monuments until nearly A.D. 900 (see Chapters 3 and 5), but the site was virtually depopulated by the early tenth century (Tourtellot and González 2004).

In the south, an unfinished altar at Copan commemorating the accession of an otherwise unknown king dates the end of royal power at Copan to ca. A.D. 822, perhaps the culmination of increasing aristocratic power relative to the site's rulers (Fash 2005: 94 – 101). Debates about when and how quickly Copan's substantial Late Classic population dwindled away hinge on perceived breaks in material cultural traditions and on the reliability of obsidian hydration dating, with some archaeologists favoring a rapid drop following the end of kingship (e.g. Andrews and Fash 2005; Manahan 2004) and others arguing for a more protracted decline (e.g. Webster et al. 2004). In either case, environmental degradation caused by deforestation and agricultural overexploitation of the valley slopes likely exacerbated sociopolitical dysfunction and placed the Late Classic commoner population under nutritional stress (Rue 1987; Storey 1999; Whittington 1999).

The last royal monument in northern Petén dates to A.D. 889, placing the end of kingship there about as late as at Ceibal. Yet the episodic nature of the monumental corpus in that region, with a crucial break in Tikal's sequence of stelae at the important tenth *bak'tun* ending in A.D. 830, suggests that the Terminal Classic was a politically turbulent period. This impression is reinforced by the use of the Tikal Emblem Glyph at

multiple sites and evidence for the looting and subsequent refilling of royal tombs (see Chapters 3 and 5). Differences between Late and Terminal Classic ceramic assemblages indicate significant changes in the production and circulation of high-value ceramics, but not of utilitarian wares, implying shifts in the semiotic practices of elites (Aimers 2007: 335 – 336; Forsyth 2005: 10). Whatever transpired among elites in the area, those events were accompanied by overall depopulation beginning as early as A.D. 830; by the Early Postclassic period, Tikal had only a tiny fraction of its former population, El Zotz was home to only a few households, and Uaxactun may have been wholly depopulated (Valdés and Fahsen 2004: 158; Webster 2002: 174, 264).

While early proposals concerning large-scale invasions from other parts of Mesoamerica (e.g. Cowgill 1964: 79 – 80; Culbert 1973: 80) have not been borne out by subsequent investigations, architectural and other material cultural evidence from the Petén Lakes region does suggest some amount of contact between the northern Yucatán Peninsula and areas south and east of northern Petén. Although population in the Petén Lakes area declined during the Terminal Classic period, that decline was not as dramatic as in the area around Tikal, perhaps in part because of migrations from the Northern lowlands and more restive Southern Lowland regions (D. Rice 1985: 321; P. Rice 1987; P. Rice and D. Rice 2004: 130). In other parts of the Maya Lowlands—the Puuc hills, the Three Rivers region of Belize, and the northern Yucatán Peninsula—populations actually grew, likely augmented by emigration from Petén (Adams et al. 2004: 331 – 332; Cobos Palma 2004: 533 – 542; Santley 1990). Sites including Chichen Itza, Ek' Balam, Uxmal, and Oxkintok flourished during the Terminal Classic period before undergoing population declines of their own in the eleventh century A.D. (Andrews et al. 2003; Bey

et al. 1994; Carmean et al. 2004). For these centers, the Maya “collapse” was anything but.

In past research, inequality has been central to explanations for the events of the Terminal Classic period, whether or not it was an overt focus of investigation. J. Eric S. Thompson (1954) offered a proposal based explicitly on ideas of class conflict: ancient Maya peasants overthrew a hypothesized theocratic elite perceived to have lost religious legitimacy. More recent models which extrapolate from the Balkanization of the Petexbatun region amid endemic war in the late eighth century also treat Late Classic political structures as the driving forces behind their own collapse (e.g. Demarest 2004, Demarest and Valdés 1995). In these accounts, the interests of predatory elites contending for status within economies of prestige impelled ever-greater intensification of warfare, ultimately overburdening the fragile farming economies which potentiated the existence of a nonproductive fighting class. Prudence Rice’s (2004) improbable claim that the Terminal Classic depopulation of major centers was motivated by commitment to prophecies of decline or the transfer of ritual authority likewise rests on the power of an elite class able both to coordinate the hypothetical “seating” of calendrical periods at different cities and to persuade masses of Classic Maya commoners to abandon the “seat” of the previous epoch. Even proposals which foreground non-anthropogenic factors such as drought (e.g. Gill 2000) rest implicitly on the quite justified presumption of unequal access to land and water (see Lucero 2002). With growing evidence that different polities followed different trajectories during the ninth and tenth centuries A.D. (Webster 2002a), careful attention to local differences in power dynamics during the Terminal Classic period takes on particular importance.

Productive work has been done on that subject in recent years, as scholars have turned from models of systemic equilibrium and destabilization to investigations of political practice. Some such efforts have focused on the role of material culture in constructing and negotiating social arrangements during periods of political turmoil or decline. For instance, archaeologists working at Xunantunich and its satellite sites have interpreted Terminal Classic architecture as reflecting a growing division between elites and commoners (Ashmore et al. 2004). Lisa LeCount has focused on practices of commensality and everyday foodways, using their material correlates—ceramic food preparation and serving vessels—as evidence for how such practices might have mediated relationships among lineages and helped to produce a collective “Xunantunich” identity (LeCount 2001; 2010).

A recent article by Charles Golden and Andrew Scherer makes clear the potential for studying past social and political change of taking a practice-theoretical approach to epigraphic and archaeological data at different scales. Calling for political explanations for political collapse, the authors emphasize the role of generalized trust in rulers and institutions, as opposed to outright coercion, in producing and sustaining effective state organizations, and they suggest that breakdowns in such trust were key to the disintegration of Late Classic Maya polities (Golden and Scherer 2013: 399 – 417). Specifically, they propose that the delegation of official power from kings to vassals, which facilitated the territorial expansion of administratively integrated states ruled from Piedras Negras and Yaxchilan during the seventh and eighth centuries, also undermined the “images” of those monarchs as uniquely holy lords, eventually resulting in political

fragmentation. This fragmentation precipitated emigration and demographic decline, not the other way around (Golden and Scherer 2013: 415 – 417).

Investigating hierarchy, inequality, and political disintegration

Scholars interested in political complexity have historically been especially interested in the disintegration of governments: the fall of empires, the end of kingship, the cessation of state activity. Such radical political changes can easily be conflated with “collapse” in the sense of demographic disaster, the debasement or annihilation of civilizational traditions, or both—but calamities of that magnitude are highly unusual (Cowgill 1988: 255 – 257; Yoffee 1988: 14 – 15). Addressing the problem of inequality in the context of political collapse, in which general cultural foundations persist even as structures of governance and domination are demolished or reorganized, requires clarity about what those structures are and are not.

Political anthropology cannot study states in the Weberian sense of “communit[ies] that (successfully) [claim] the *monopoly of the legitimate use of physical force* within a given territory” (Weber 1991: 78) because all actual state systems deviate in material ways from this ideal type. Positing such a type means that those deviations can only be described as deficiencies of one sort or another: as qualities like “weakness” or “corruption” that prevent particular states from performing to the standard of an ideal state (Migdal 14 – 15). Anthropological approaches grounded in philosophical nominalism and pragmatism must start instead from actually existing variation, constructing types as terms of convenience useful for particular purposes and based on

the regular—but not necessarily invariable—co-occurrence of relevant characteristics (Adams and Adams 1991: 67 – 68).

At its best, neo-evolutionist anthropology represents a range of nominalist approaches to political typology. From these perspectives, states as functioning, organic systems include certain organizational features, like multi-tiered, bureaucratized hierarchies of control and decision-making, which have archaeologically detectable correlates in the physical world, like palaces and hierarchies of settlement size (e.g. Flannery 1999; Wright and Johnson 1975: 267). Statehood thus becomes not a matter of proximity to an ideal, but of the possession or lack of specific traits. Social systems without some of those traits are not defective states, but another type of thing, perhaps “chiefdoms.” Yet a checklist approach to states as systems made up of institutions runs the risk of dehistoricizing practices and organizations with very different trajectories and obscuring real differences among “state societies” (Yoffee 2005: 228). Even with careful attention to contingency and variation, an insistence on states as institutions gets in the way of studying human behavior because it means positing that there is such a thing as a state which decides and acts apart from specific human actions and decisions (Pauketat 2007: 40).

What anthropologists can do instead is to study actual practices of domination, including the public representations of social and political power that “[conceal] the real history and relations of subjection behind an a-historical mask of legitimating illusion” (Abrams 1988: 77). From this perspective, the real object of investigation becomes inequality in everyday action, with states and other institutions conceptualized foremost as mystifying representations of relationships among people. A relevant concept here is

Joel Migdal's (2001: 15 – 16) practice-theoretical model of states as “field[s] of power marked by the use and threat of violence and shaped by (1) *the image of a coherent, controlling organization in a territory, which is a representation of the people bounded by that territory*; and (2) *the actual practices of its multiple parts*.” What is essential here is a representation of coherence and control which corresponds incompletely to practical power relations among individuals and groups, whether or not that representation involves claims about territoriality, administrative efficacy, or ties to particular publics. Such representations, whatever their details, serve the same function: to make historically contingent power relations seem natural, inevitable, and morally right.

In studying political complexity and hierarchy in ancient societies, then, anthropologists need to ask not whether a given society was a “state society” or a “chiefdom,” but what concrete practices of domination characterized it, and what images, what representations, clothed those practices in legitimacy. That means taking representations themselves seriously as tools for establishing inegalitarian relations and as constraints on the forms those relations could take. It means that the idea of the state as an analytical tool may not be applicable to some very complex social and political systems. It may be necessary to focus instead on other kinds of hierarchical organizations—royal courts, religious institutions, paramilitary or “terrorist” organizations—in past and present societies, on the interdependence between such organizations and other domains of social activity, and on how power inequalities of all kinds are constituted through representation. Furthermore, historical periods of radical demographic and political disequilibrium, like the problematic category of “collapse”

events, need to be studied not just in terms of ecological factors—as important as they unquestionably are—but also as crises of representation and social practice.

The question of how social inequality is represented and constituted during times of political disintegration, as such, is too broad to be addressed in any one work. Very likely there is no one answer. The nature of inequality itself, the semiotic tools that accomplish the work of its legitimation, and the way power dynamics alter will surely look very different in societies with complicated administrative organizations and globalized supply chains than in agrarian societies in which personal identities and loyalties are fundamental. Yet one might well expect to see real similarities in the breakdowns of political systems that had been organized in similar ways during their more stable periods. A question like, “How is inequality practiced and represented during the weakening and collapse of political institutions in which ritual, religious cosmology, heritable rank, and sacred or divine kings are key to existing social hierarchies?” can more persuasively and profitably be answered. Cases in which complex social systems of this kind rapidly and completely gave way to egalitarian societies which rejected the exercise of special political authority by restricted groups must be rare indeed in human history. Far more often, the same basic concepts that had underlain kingship and aristocracy—hierarchy, opposition, aesthetics of preciousness—persisted after the partial disintegration of political structures. Inequalities of power and status persisted with them, altered but not abolished.

The survival of such concepts over generations, and of inequality *per se* (apart from historically particular political situations), is fundamentally a matter of signification, of tacit and explicit discourse about legitimate power and right behavior. As such,

anthropological investigations into political action in past societies—including the collapse or disintegration of complex polities—must be concerned with semiotic practice. Without necessarily expecting to discover “covering laws” of human behavior, close, comparative investigations into specific situations in which such polities collapsed in the past can be expected to expose real, cross-cultural commonalities in how power inequalities are constituted and negotiated during times of political crisis.

Identifying Terminal Classic elites

This dissertation assumes the existence in Terminal Classic Maya society of persons of high social status, who may appropriately be spoken of as an elite class. It is further assumed that elite status, as used in the present work, more or less closely approximates an emic category or categories of people recognized by the southern Lowland Maya living in the ninth and tenth centuries. As a practical matter, membership in that category probably required both kinship connections to other elites and an education in the values, attitudes, habits of deportment, and bodies of specialized skills and knowledge considered appropriate for elite persons of the relevant gender. Members of the elite monopolized socially recognized positions of political and ritual authority connected with southern Lowland urban centers and courtly seats. Subsets of the elite class include kings (*ajaw*, “lord,” in early Maya texts, later specifically *k’uhul ajaw*, “divine lord”) and what Sarah Jackson (2005: 15) calls “courtly elites,” high-status people bearing a variety of titles who were active in royal courts. As used here, elite status as used here is conceived as extending to the immediate families of most such people.

Identifying members of the Maya elite in the hieroglyphic corpus is, if not exactly easy, relatively straightforward, since ancient Maya inscriptions deal mainly with the activities of royalty and the high nobility. Titles denoting heritable ranks (e.g., *ajaw*, “lord”), and others indicating elevated political and ritual statuses and offices (e.g., *k’uhul ajaw*, “holy lord,” and *yajaw k’ahk’*, “lord of fire”) are accordingly common in the epigraphic record. Less common, but equally informative, are genealogical and succession statements indicating that the lords who commissioned stone monuments were typically the offspring of a parent with an explicitly lordly title, and were often the latest members of long lines of hereditary officeholders. This was true not just for kings, but also for subordinate nobles (see, for instance, Miller and Martin 2004: 191). While epigraphic mentions, and likely the actual numbers, of Maya nobles proliferated during the eighth century A.D. (Jackson 2013: 82 – 85), and while there are a few attested references to new dynastic foundations, the hieroglyphic record gives the impression of a great gulf between elites and commoners.

The practical reality, of course, could have been quite different, and anthropologists could not uncritically accept ancient Maya texts as accurate pictures of ancient Maya societies even if such texts were much greater in numbers and more varied in their subject matter. Additional evidence for the positions of Terminal Classic Maya royalty and aristocrats relative to the rest of society thus has to be sought in the archaeological record. Here, a crucial theoretical and interpretive problem arises: distinguishing evidence for wealth, in the sense of practical control and ownership of economically valuable goods and resources, from evidence for high social status. Although Maya kings sought to present themselves as materially wealthy on carved

monuments and painted vessels, archaeological evidence suggests that this was not always really so; the cases of the royal Piedras Negras 5 and 13, which respectively contained ceramic replicas of *Spondylus* shells and jade beads in place of the genuine articles, make that point (Barrientos et al. 1997: 9 – 11; Houston et al. 2003: 122). Conversely, Colonial accounts from Central Mexico indicate that Aztec *pochteca*, merchants and long-distance traders without noble status, could accumulate great wealth which they were supposed to conceal—smuggling their goods into Tenochtitlan under cover of darkness, observing strict sumptuary laws—and periodically to convert into food and clothes to be given away (Durán 1971: 200 – 201; Sahagún 1950 – 1982:9: 43). Late Classic mythological narratives about the wealthy God L, with his traveler’s hat and staff, seem to reflect a similar ambivalence on the part of Maya elites towards people who grew rich through travel and trade (McAnany 2013: 235). At the same time, Brigitte Kovacevich suggests that non-elites living outside the epicenter of Cancuen may have acquired some elevated level of prestige, reflected in their burial furniture, by carrying out lapidary work for the site’s elites (Kovacevich 2007: 89 – 90). A longer-term example of social mobility has been proposed at the site El Perú-Waka’, where a residential group was interpreted as continuously occupied from the sixth to the ninth century A.D., transforming over that time from a humble cluster of perishable buildings to an elite compound whose inhabitants lived in masonry buildings and owned polychrome ceramic vessels with texts and palace scenes (Eppich 2011: 306 – 330).

Status, then, needs to be understood separately from wealth, in terms of social relationships to other people conceived to exist in a hierarchy of higher or lower rank. It might well be marked by or derived from possessions, but also by birth, behavior, and

ascribed privileges. However status inequalities are socially marked, they must *be* marked in order to be status inequalities; they come about through people speaking, dressing, acting, and building about inequality.

If presumably valuable material possessions are not unquestionable markers of elite status, particularly during the troubled Terminal Classic period, in what ways might material artifacts without inscribed texts point to that estate? Maya elites' intense concern with public performances of hierarchy, evident from Classic texts and iconography, offers one possibility. When artifacts in their depositional contexts can most plausibly be interpreted as the material residues of some person's knowledgeable participation in the kinds of performative behaviors that typified and helped to constitute exalted status, that fact is herein considered to suggest the existence of sociopolitical elites.

A few examples will suffice to illustrate how that proposition is put into practice in subsequent chapters. Among the most pervasive aspects of ancient Maya elite power was the ability of royalty and aristocrats to induce lower-ranking people to work for them, by whatever means. One especially archaeologically visible trace of that ability is monumental, masonry architecture. Major constructions requiring the coordinated labor of large numbers of workers can thus be more or less securely interpreted as evidence of elites—especially when those constructions appear primarily to have served the interests of one family or line, as in the case of residences or mortuary temples. Yet status as understood here has less to do with quantifiable numbers of labor-hours than with relationships and signs; a poor king with few subjects is still king relative to those subjects. Sheer architectural scale is thus not an uncomplicated index of occupants' social status. Other factors matter as much or more in interpreting architecture, including other

kinds of material evidence for how a building was used; the structure's relationships to other buildings; and—though this last is not always obvious—what kinds of human acts, interactions, and performances it would have facilitated or constrained. For instance, late, not notably labor-intensive structures might be interpreted as evidence for social inequality if they were built in existing monumental spaces, if they fit well into those older spatial layouts, if they are associated with evidence for ritual activity, and if their formats would have better served public performances in which elevation and centrality were factors than the diversity of domestic functions required of a commoner house. Presumably high-value artifacts would strengthen such a case, but the question is ultimately one of how to interpret a building as a sign.

To take another example, a laboriously decorated ceramic vessel is not by itself evidence that the household which owned it was of high social rank, even if the vessel itself is interpreted as having been more desirable or valuable than others lacking such ornamentation. The archaeological record of Xunantunich in the Late and Terminal Classic periods illustrates this point: there, a clear correlation existed during the late seventh and most of the eighth century A.D. between the presence of polychrome ceramics and other features taken as indices of elite status (epicentral location, architectural scale, and architectural format), while such vessels were distributed more equally among apparently elite and non-elite households during the Terminal Classic period (LeCount 1999: 239).

With these considerations in mind, subsequent chapters take a holistic approach to inferring the existence of Terminal Classic elites from the available data. Monuments depicting or mentioning such persons are taken as conclusive evidence, of course, but

equally naturally, the actual behavior of those elites can best be suggested by the archaeological data. There, relevant evidence will include the location and scale of architecture, the presence of ornaments or decorated ceramics, and evidence for ritual activity that in some way privileged a particular person or faction. Since status is constructed through communication, identifying high-status people in the archaeological record will require attempts at understanding the material residues of communicative acts and the contexts in which those acts occurred.

Methods and organization

The present work does not aim to establish a single cause for the Maya collapse. Nevertheless, investigations of Terminal Classic hierarchy require some preliminary discussion of matters which have been, and remain, contentious. These are addressed in Chapter Two and include the questions of what kinds of systems and arrangements fell apart in the Terminal Classic period, what “collapse” entailed at sites where it occurred, and what the driving mechanisms behind those collapses were. Underlying all three of these questions are two closely related problems: how many people there were living in the area affected by the collapse, and how those populations were sustained. Chapter Two cannot address all of these questions in ideal detail, but a brief overview of the relevant problems and evidence will lay the groundwork for subsequent chapters. Incorporating archaeological and epigraphic evidence from published sources, it describes how disparities of rank were constructed in the Late Classic period through the manipulation of sign systems and semantically charged material objects, ranging in scale from inscribed ornaments to massive architectural complexes. Its consideration of Late

Classic Maya political organization sets the stage for later discussions of how polities and alliances disintegrated and coalesced during the turbulent ninth and tenth centuries A.D. Further context for those discussions comes from critical assessments of widely accepted claims about Late Classic Maya demography and explanatory models for the Terminal Classic collapse. Some of the ideas advanced in Chapter Two—especially that peak southern Lowland populations were smaller than some authors propose, and that drought was a significant but not the only direct cause of abandonment at many sites—will be unpalatable to some readers. Nevertheless, those claims are well supported by currently available data and are not original to the present work.

The third, fourth, and fifth, chapters draw on three principal sources of data about hierarchy and inequality in representation and practice during the Terminal Classic period. First, in Chapter Three, a comparison of published data from eight sites in the Central and Southern lowlands assesses the range of variation in archaeological evidence for the trajectories different royal dynasties and aristocracies took in the ninth and tenth centuries A.D. Some courts collapsed early in the Terminal Classic period, while others persisted or even flourished. When collapse did come, the forces behind it—outside attack, aristocratic rebellion, large-scale emigration—were highly variable and historically contingent. Chapter Four identifies local trends and regional patterns in royal and elite rhetoric and visual representation on stone monuments throughout the same region. Supplemented by comparisons and contrasts with ceramic corpora and relevant monumental works from the northern Lowlands, the chapter covers the period from the Maya Long Count date 9.18.0.0.0 (October 12, A.D. 790¹) to the dedication of the last

¹ This dissertation uses the 584286 correlation between the Long Count and Gregorian calendars (Martin and Skidmore 2012).

dated monument from the region, San Lorenzo (Campeche) Stela 1 (10.5.0.0.0, A.D. 928) (Thompson 1953: 229 – 230). Monumental corpora are not “real-time” records of changes in governance and hierarchy as they were actually practiced, any more than they transcribe changes in oral languages as they were actually spoken (Carter 2010). They are more likely to present ideal visions of royal and elite authority, with a special emphasis on official rank and the ultimate sources of perceived legitimacy, than to shed much light on everyday political practice. “Propaganda” may be an inapt descriptor for such monuments, implying a kind of technocratic duplicity that seems alien to the Classic Maya milieu (cf. Marcus 1992), but it is clear that monumental, public Classic Maya art reflected and helped to reproduce elite consensus about the social and natural order. Always the products of multiple agents, monuments are an obvious site for investigations into royal and aristocratic self-representation.

Presented in Chapter Five, original research by the author and other scholars on the Terminal Classic period at the site of El Zotz, in the northern Department of Petén, Guatemala, provides a range of information about changing, inequalitarian practices in that time and place. Home to the *Pa’ Chan* (probably “Fortified Sky”) dynasty since the fifth century A.D., El Zotz preserved the institution of divine kingship well into the ninth century (Houston et al. 2011). Later Terminal Classic occupants displayed sociopolitical inequality in an attenuated form, perhaps without the centripetal figure of a king. Data from Terminal Classic contexts at El Zotz point to the production of new monuments; the destruction and re-use of existing monuments; and the termination, modification, and continued occupation of elite architectural precincts. They also include evidence for elite participation in local and long-distance networks of trade or other forms of exchange in

high-status goods. Evidence indicates parallels and contrasts between the sites discussed in Chapter Three and El Zotz in the construction and contestation of status and power in the centuries before their near-total abandonment. Finally, Chapter Six synthesizes the dissertation's findings, presenting an integrated picture of changing Terminal Classic material and representational practices of inequality.

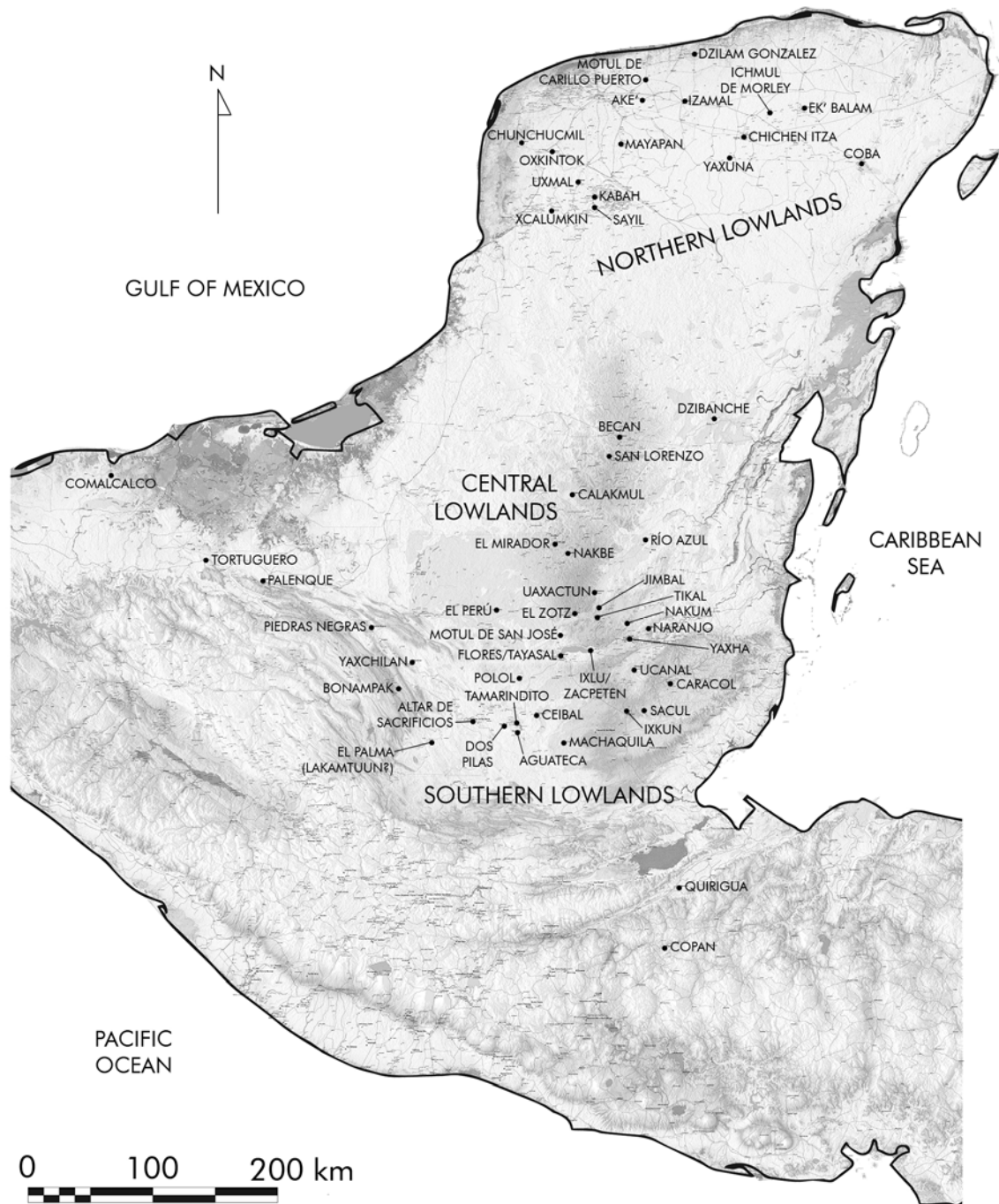


Figure 1.1. A map of the Maya lowlands showing major centers and other sites mentioned in the present work. Topographic and outline maps © Walter T. Witschey and Clifford R. Brown. Courtesy of the Electronic Atlas of Ancient Maya Sites (mayagis.smv.org).

CHAPTER TWO
THE TERMINAL CLASSIC MAYA COLLAPSE IN CONTEXT

The idea of a “Maya collapse” is ambiguous to the extent that it encompasses two related yet distinct phenomena: the cessation of divine kingship, courtly life, and associated aesthetic and ritual practices; and the substantial or total depopulation of the civic centers where those courts were based (Aimers 2007: 330 – 331). In the central and southern Lowlands, these processes took place over two centuries or more, arguably beginning in A.D. 761 with the royal abandonment and commoner depopulation of Dos Pilas (Demarest 2004: 110). The concept of the collapse as a unitary phenomenon also obscures the diversity of proximate causes for both types of abandonment at various Maya centers, implying that all such sites had more or less the same historical trajectories in the Terminal Classic period when that is to be proven rather than assumed. Finally, framing the events of the ninth and tenth centuries primarily in terms of collapse risks eliding the survival and growth of population centers, and the emergence of new structures of elite authority, in the northern lowlands and along the Gulf and Caribbean coasts.

Nevertheless, for the interior central and southern Lowlands, and for culturally related courtly outposts in the highlands like Tonina and Copan, the Terminal Classic collapse was a real phenomenon in the sense used by Dunning et al. (2012: 3652): “a fundamental and pronounced decline in sociopolitical complexity taking place within two or three generations.” Within that area, no dynasty lasted past A.D. 909, if dated

inscriptions can be used as proxies for functioning royal courts. The iconography of Classic-style divine rulership disappeared even from undated monuments and portable objects, although such iconography outlasted monumental texts in the form of certain scenes on molded-carved vessels (see Chapters Three and Four). The Terminal Classic period also saw drastic reductions in the scale of public or monumental architecture and the decline and disappearance of Late Classic polychrome ceramic traditions (Morris et al. 2007: 6). Farming populations at beginning of the Terminal Classic period were nowhere near as high as has been frequently assumed (see below), but substantial demographic decline at most southern centers during this period is also incontrovertible. The timing of commoner site abandonment relative to dynastic collapse varied: Aguateca was permanently abandoned very shortly after a disastrous raid on the site around A.D. 810 (Inomata et al. 2004: 807), while Tonina remained occupied for at least a century after its latest monument was erected in 909 (Martin and Grube 2008: 189), and the descendants of its people—the *po' winiko'b*—may still have been living in the area at the time of the Spanish conquest (Ayala 1995: 247 – 278).

Depopulation of the southern lowlands was never total (cf. Acuna-Soto et al. 2005: 406). Even in the Peten heartland, elite high culture persisted—or returned—in the Early Postclassic period, albeit in altered form. A Postclassic stela from the town of Flores, formerly *Nojpeten* or *Taitza*, depicts a supernatural being (perhaps *K'uk'ulkan*), descending from the sky, accompanied by eagles or quetzals (see Martin and Grube 2008: 30). An accompanying text records a period ending, probably in either A.D. 1071 (contemporary with late Chichen Itza) or 1327 (contemporary with political florescence at Mayapan), and both text and image appear stylistically connected to northern Lowland

art (Boot 2005: 63 – 264). Even before the end of the Terminal Classic period, non-Ch’olan-speaking populations may have arrived in the areas most affected by the collapse, implying that parts of the region were not only still suitable for agriculture, but were preferred destinations for migrants “pushed” out of their homelands by environmental or political factors or “pulled” into the southern lowlands by perceived opportunities there. As is discussed in Chapter Four, there are good epigraphic reasons to posit Terminal Classic migration between northern and central Peten and the area around Chichen Itza, including the site of Ichmul de Morley, and to think that those processes involved travel by northern lowlands people south into Peten as well as movement from south to north.

Early and Late Classic central and southern Lowland Maya societies

In order to understand how Maya hierarchies changed during the Terminal Classic period, it is important to distinguish among the earlier Classic offices, institutions, groups, and places that together made up what scholars describe today as Classic Maya “kingdoms” or “polities.” At the apex of such systems were kings, “holy lords” (*k’uhul ajaw*), apparently drawn from singular royal lineages or houses in each kingdom. Classic Maya kings engaged in a range of practices that distinguished them from ordinary men and other elites. On accession to the throne, they augmented or replaced their “youth names” (*ch’ok k’aba’*) with regnal, “headband-tying names” (*k’alhu’nil k’aba’*) (Eberl and Graña-Behrens 2004: 107; Stuart 2005: 131; Stuart 2012: 124 – 125). They enjoyed a special relationship with the divine, claiming descent from deities and embodying them as the chief ritual actors in Long Count period ending ceremonies. A king’s right to rule

was bound up with his responsibility to nourish the gods with sacrificial offerings, and monumental and ceramic art depicts rulers, with varying emphases at different sites, as paragons of military and religious virtue. At the same time, certain transgressive practices marked kings as outside of ordinary behavioral norms: painted ceramic vessels from northern Petén and southern Campeche emphasize kingly influence over *wahy*, supernatural beings that may have been omens of disaster or personified diseases.

In most cases, holy lords had to be the sons of previous kings. Kingship could pass from father to son, but also, at least at some sites, from older to younger brothers (e.g. Houston 2012: 155; Stuart and Stuart 2008: 162; see Roys 1943: 164 and 1957: 95 for fraternal succession in contact-period Yucatán). The coexistence of transgenerational and intragenerational succession may have presented high elites with some choice in selecting the “best”—the most competent, or the most pliant—king from a small pool of potential successors, yet such ambiguity surely led to conflicts rarely hinted at in the hieroglyphic record. Especially in the Late Classic period, living rulers at some sites commissioned monuments showing their chosen heirs participating in royal rituals (e.g. Houston 1993: 114 – 115; González Cruz and Bernal Romero 2004: 264 – 267; Stuart 2005: 40) or asserted that their own accessions had been sanctioned by previous rulers (Stuart 2005: 152 – 153).

Below kings and their immediate families were lords of varying rank and power, who likewise passed on their high status through descent. As in other societies with hereditary aristocracies, Classic Maya nobles played distinct yet complementary roles. “Territorial” lords (e.g. *sajal*, “governor”) oversaw subject towns far from royal residences, perhaps exercising a special kind of autonomy based on extensive land

holdings, while “curial” aristocrats (e.g. *aj k’uhuun*, “one who obeys” or “one who keeps”) derived their status from their service and proximity to kings as attendants and administrators in royal courts (Houston and Inomata 2009: 166 – 167; Jackson and Stuart 222 – 226). Lords bearing a range of titles, including *yajaw k’ahk’* (“lord of fire”) and *sajal*, had martial responsibilities, serving their kings in war and presenting them with captives. While these observations are generally applicable, Classic Maya political organization was not homogeneous; the epigraphic record indicates considerable local variation in the use and prominence of noble titles.

Nonroyal nobles are present, but almost invisible, in the epigraphic corpus of the Early Classic period. They are more prominent in the Late Classic record, with the greatest number and variety of noble titles concentrated in monumental and ceramic texts produced between ca. A.D. 675 and 775 (Jackson 2005: 175 – 173). Such titles and offices probably developed well before their appearance in the hieroglyphic corpus, with their Late Classic proliferation resulting from growing elite and commoner populations and a consequent need for finer distinctions of rank and gestures of royal favor (Houston and Inomata 2009: 171 – 172).

Classic Maya kings and nobles met physically and functionally in the setting of royal courts: a *k’uhul ajaw* plus his relatives, aristocrats, retainers, artisans, and servants, convening and often living in bounded architectural spaces where their interactions were governed by marked rules of behavior (Inomata and Houston 2001: 3 – 11). Just as kings acted as paramount intermediaries with the divine, favored nobles had special ritual duties; there is no evidence for religious institutions or orders with economic and symbolic power bases independent of royal courts. Nor is there evidence for formalized

bureaucracies, although here again some courtiers probably specialized in the management of tribute or the curation of royal property. Indeed, with the exception of war, Classic Maya nobles and kings had little to say, on monuments or painted ceramics, about what we might think of as the civic functions of their offices. Instead, the emphasis in such representations is on display, ritual, tribute, and decorous comportment. Maya courts were meant to exemplify ideal behaviors, even reflecting divine courts, while at the same time deviating conspicuously from ordinary households by their elaborate ceremonial, their inclusion of physically unusual people (dwarves, hunchbacks, and perhaps eunuchs), and especially the presence of the unique and unaccountable king (Inomata 2004: 39 – 40; Miller and Martin 2004: 50 – 91). In a very practical sense, Classic Maya kings and courtiers specialized in performing difference and inequality (Houston and Inomata 2009: 165).

Such performances had material correlates, attested in visual representations and in the archaeological record. Most obviously, courts required courtly facilities: royal palaces, usually masonry structures on platforms arranged around central patios, in sturdier and more labor-intensive imitation of ancient Maya commoner households (Kowalski 1987: 82). Royal dwellings and venues for courtly functions, these spaces shaped behavior through architectural techniques of display and concealment. Plazas could hold crowds of people of all social statuses, assembled to watch ritual performances or pageants (perhaps *cha'nil*, “something to see” [Tokovinine 2003]). Towering over them, stepped pyramids at once made the acts of ritual specialists highly visible and physically inaccessible to the throngs below; some special events, perhaps, took place inside the shrines at their summits, observed only by one or a few direct

participants. Patios could serve as work spaces for production activities, or accommodate gatherings of guests or petitioners. Access to the royal presence could be mapped onto paths of movement and especially onto vertical space, controlled by narrow passages and stairways and by successions of increasingly restricted courtyards or landings. Depictions of royal gatherings on murals and painted ceramics indicate that hierarchical rank corresponded to participants' vertical height, seated or standing posture, and proximity to the person of the king (**Figure 2.1**; Stephen D. Houston, personal communication). Steps, benches, and platforms facilitated such arrangements, as did symmetrical constructions drawing visual attention to the centrally seated ruler (Houston 1998: 341 – 344; Houston and Stuart 2001: 63 – 64; Jackson 2009: 74).

Spanish colonial histories and *relaciones* state that the display and consumption of prestigious goods—elaborate cotton clothing, jewels and feathers, certain foods—were tightly regulated in Late Postclassic Central Mexican and Oaxacan societies (e.g. Durán 1967: 211 – 214; Zárate 1905 [1581]: 200). In theory, consumption and dress corresponded to ascribed social rank and individual achievements. Yet while sumptuary laws were real factors in constraining behavior, such accounts probably reflect the ideals of aristocratic informants more than the practical realities of pre-Conquest life (Anawalt 1980: 43). Similar tensions between theory and practice, control and subversion, and disparity and aspiration probably characterized Classic Maya society as well, with spatial and diachronic variations in the ways in and extent to which luxury items marked status. Here, status or rank must be conceptually separated from wealth: like Postclassic Aztec elites, Late Classic Maya nobles at some sites seem to have had special access to certain prestige goods, but not always to have monopolized them in practice (e.g. LeCount

1999). For instance, some Maya commoners had access to jade, especially in the form of beads and in colors with less social prestige than the apple green favored by Classic Maya elites, although jade objects of any kind are rarer and more restricted to elite settings in Late Classic than in Early Classic archaeological contexts (Kovacevich 2006: 147; see Rathje 1970). Given distributional patterns of debitage and objects in various stages of preparation, Maya aristocrats at many sites may have appropriated not just the consumption but at least the final production stages of high-status items including polychrome ceramic vessels and ornaments of jade and shell (Halperin and Foias 2010; Kovacevich 2007; Reents-Budet et al. 2000; Aoyama 2009). Signatures on monumental sculptures, concentrated along the Usumacinta River Valley in the Late Classic period, leave most sculptors' class origins unclear; based on archaeological evidence from Aguateca (Inomata et al. 2010) and scribal signatures on painted vessels (Miller and Martin 2004: 121 – 122; Stuart 1989: 157), Late Classic sculptors and calligraphers were probably members of royal courts, but not of royal families. Elite mastery of the technical skills and esoteric knowledge needed to produce the objects worn, displayed, and venerated by Classic elites likely both denoted high social status and helped to constitute it.

It is unclear whether broader political images or ideals played a significant role in legitimating and producing social inequality for the Classic Maya, as they do in modern nation-states. Ancient Maya rhetoric, at least, yields no evidence for political concepts like territorial states or even for cities as political communities, as distinct from places ruled by dynasties. The hieroglyphic corpus contains abundant references to the names of cities, smaller settlements, precincts within sites, and occasionally broader areas (Stuart

and Houston 1994; Tokovinine 2008: 91 – 99). Many Maya dynasties derived their royal titles from the settlements where they or their ancestors ruled: *k'uhul Yaxa' ajaw* (“holy Blue Water lord”), *k'uhul K'anwitznal ajaw* (“holy Yellow Mountain Place lord”), and so on, or from specific locations within those sites (e.g. Stuart 2005 [1985]; Stuart and Houston 1994: 20 – 21; Tokovinine 2008: 193 – 207). In practice, their dominion must often have extended beyond those centers, encompassing in some way nearby villages and agricultural lands. The conceptual territory of Copan, for instance, might have entailed only the part of the Copan Valley delimited by a seventh-century program of stelae (Spinden 1975: 96 – 97; Fash 2001: 101, 104; Webster 2005: 59 – 60), but the site’s rulers exercised authority over other lords and their settlements. Extensive Early Classic earthworks partially surrounding Tikal likely represent a more substantial, defensible claim to territorial control (Puleston and Calendar 1967; but see Silverstein et al. 2009). Still, coordinated efforts at circumscribing and surveilling larger territories that incorporated multiple sites seem to have been confined to a few regions—particularly the upper Usumacinta River area—during the seventh and eighth centuries A.D. (Golden and Scherer 2013: 398, 410 – 411). Possible examples of royal titles incorporating names for larger regions are rare and often ambiguous², nor do titles interpreted as ethnonyms by some scholars correspond consistently to political affiliation (Beliaev 2000: 76 – 77). Instead, relationships of political inequality are described in terms of personal loyalty: royal families supplied one another with marital partners, princes were fostered at

² For instance, Alexandre Tokovinine (2008: 103) proposes that *Chiik Nahb* refers to the city of Calakmul, while another toponym, *Uxte'tuun* or *Huxte'tuun*, denotes a larger area encompassing Calakmul and its neighbor Oxpeul. There is not yet enough evidence to confirm or reject this or alternative possibilities, such as that *Chiik Nahb* pertained specifically to an area or complex within Calakmul, or that late titles at Oxpeul like *Uxte'tuun kaloomte'* indicate authority derived from Calakmul, analogous to *k'uhul Mut ajaw* at Dos Pilas.

prestigious foreign courts, and subject nobles and kings could be possessed by overlords (e.g. *yajaw*, “his [vassal] lord”) who might “witness” (*ilaaj*) their actions or “oversee” (*kab*, literally “to manure [the ground]”) their accessions to power.

Some kings and courts moved, on a seasonal or permanent basis, from one site to another within the territories they governed (e.g. Ball and Taschek 2001: 165; Houston 1993: 116 – 121). Still, as David Webster (2001: 131 – 132) points out, most Maya rulers were far more bound to specific sites than their counterparts in other premodern kingdoms, like Renaissance England or ancient Japan. No doubt the small size of the regions under their direct control was one factor here: many such territories would have contained only one civic-ceremonial center suitable for courtly occupation, even though some kings possessed rural “country houses” in addition to their epicentral palaces (Garrison et al. n.d.). Another factor was the extent to which royal legitimacy rested on the veneration of ancestors buried in tombs within such centers, and of gods tied by myth and tradition to local landforms. Over generations, Classic Maya urban landscapes acquired layers of monuments and constructions with politically significant meanings from which rulers would have found it difficult to extricate themselves.

The background of the Terminal Classic collapse

In order to contextualize the development of Terminal Classic elite practices of self-representation and performative action, it is necessary first to explore here the idea of the Maya collapse in the Terminal Classic period as archaeologists have conceived it. A number of controversies surround collapse models which, while they would each require an entire dissertation to adequately address, deserve some discussion here. Among these are questions having to do with peak southern and central lowland populations and the

impact of environmental changes, particularly climatic drying, on agricultural productivity in the area affected by the collapse.

Central and southern lowland populations at the end of the Late Classic period

Part of the mystery surrounding Terminal Classic developments has to do with the image of vast populations disappearing suddenly and unpleasantly. Consider the following dramatic passage from Richardson Gill's influential presentation of climate catastrophism as applied to the Terminal Classic period:

The Maya Lowlands, around the year 750, were clearly densely populated with well developed urban nuclei, and as we have seen, estimates of the overall population range from 3 million to 14 million. Between AD 790 and 910, a demographic catastrophe, unparalleled in known human history, devastated the Maya and destroyed their Classic civilization. Millions of people died, major urban centers were abandoned forever, and the richest, most densely populated rural areas of the Petén were never repopulated ... Assuming the surviving population numbered no more than 1,000,000 people, the die-off that occurred during the ninth century was between 67 and 93 percent (Gill 2000: 320).

Connections among ecological settings, agricultural practices, population, and political organizations in the Maya lowlands have long been recognized, even though claims about past conditions in each of those areas have differed (e.g., Morley 1947: 312 – 316; Thompson 1954; Culbert 1989: 140 – 145; Rice and Culbert 1990: 27). Intuitively, large, dense populations would seem to have both required and facilitated the development of complex bureaucracies tasked with managing resources and ensuring the smooth operation of societies involving a significant amount of interpersonal anonymity. Conversely, smaller, more diffuse populations appear more compatible with political structures which—while not “simple,” in the sense that the epigraphic evidence clearly testifies to ritual specialization and hierarchical gradations of rank—could have involved

little top-down agricultural management. Furthermore, whether investments in agricultural infrastructure were made primarily by farming families or by political authorities, larger populations heavily reliant on that infrastructure would likely have been less flexible and mobile in times of ecological stress than smaller populations with fewer such investments.

Maya lowland demography in the mid- to late eighth century A.D. is thus directly relevant to the question of what happened during the Terminal Classic period. The presumption that the population of the central and southern lowlands was exceptionally high by comparison to other pre-industrial, agrarian societies—perhaps peaking at between 2,663,000 and 3,435,000 individuals at the end of the eighth century (Whitmore et al. 1990: 35)—lends itself naturally enough to catastrophic explanations of the Terminal Classic collapse. Equally naturally, the more catastrophic a proposed cause for the collapse is, the more appealing becomes the prospect that it was the only significant cause in every site region.

Estimating such populations is complicated by the question of how to translate counts of structures to plausible numbers of inhabitants. Robert Wauchope reported an average of 5.6 people per household for the Yucatec village of Chan Kom, derived from ethnographic work there by Robert Redfield and Alfonso Villa Rojas (1934), but also reported an average of 3.8 persons per house for seven houses in three other villages (Straight 2012: 47 – 48; Wauchope 1938: 145). Much higher numbers per structure come from Colonial accounts of Itza and Ch'ol buildings that housed between 10 and 25 people (Puleston 1973: 177; Villagutierre Soto-Mayor 1933: 136, 480). Reasoning that each individual would need an average of 10 m² of covered space, Dennis Puleston (1973)

estimated an average of 5.4 people per house, with an average (non-palatial) house covering 54.1 m² (Rice and Culbert 1990: 18). Not all archaeologically identifiable structures would have been sleeping spaces; for instance, Wauchope (1938: 134) noted that rural Yucatec houses frequently included separate kitchens (structurally identical to main houses) and storehouses. For ancient Maya sites, estimates of non-residential structures as a percentage of all small platform structures range from 6.6% to 30% (Rice and Culbert 1990: 15). Temporary abandonment of residences is another factor, surely real but difficult to detect archaeologically even with ceramic evidence on the scale of a century-long phase. Culbert et al. (1990: 115) assumed that 10% of residences at Tikal were unoccupied at any given time, and that 16.5% of platforms supported non-residential structures. Using those figures, they arrived at an estimate of 62,000 people for the area inside the Tikal earthworks (Culbert et al. 1990: 115 – 117), which may at one time have marked the conceptual boundaries of its territory³.

Further complications derive from practical difficulties in detecting rural residential structures and agricultural improvements like terraces, irrigation channels, and raised fields in seasonal wetlands. Neither Puleston's (1973) survey nor a more recent survey of peripheral Tikal by a Pennsylvania State University project revealed terraces or agricultural infrastructure in bajos, but even extensive raised field systems in bajos could be virtually undetectable due to argilloturbation. The existence of raised wetland field beds may nevertheless be implied by high population densities in upland zones, where such densities can be demonstrated by archaeological evidence (Thomas Garrison, personal communication). Radial transect survey—used to estimate settlement density in

³ Survey work by Kirk Straight (2013: 142) found that, at least by the Imix ceramic phase (ca. A.D. 700 – 850), settlement no longer dropped off sharply beyond the northern earthwork, if it had ever done so.

intersite areas including around Tikal (Puleston 1973) and between Dos Pilas and Aguateca (O'Mansky and Dunning 2004)—produces valuable data, but is nevertheless flawed in that the areas sampled are chosen based on cartographic rather than environmental considerations (Garrison 2007: 101 – 108). Such surveys also place high demands on the labor, resources, and time of archaeological projects. An alternative approach, in which square samples of land dominated by microenvironments known from previous work to correlate with ancient Maya settlement are randomly selected for survey and test excavation, relies on remote sensing data checked by ground truthing and produces comparable results to more labor-intensive surveys (Garrison 2007: 108 – 157; Garrison 2010).

Recent remote sensing work by the Caracol Archaeological Project presents a large-scale picture of the relationship between agricultural intensification and settlement density at one Classic Maya capital. Lidar scanning revealed that a 70-square-mile area (112.654 km²) encompassing Caracol's epicenter and outlying settlement was subject to intensive agricultural modification in the form of hillside terraces, nearly ubiquitous within the study area, which would have reduced erosion and opened up new land to farming (A. Chase et al. 2010). Reporting on their findings, Arlen Chase and colleagues used the figure of 115,000, derived from earlier work (A. Chase and D. Chase 1994: 5) as a minimum estimate of greater Caracol's total population, including areas outside the survey region. Bearing in mind that the area subjected to lidar scanning is about 36% smaller than the 117 km² metropolitan area cited in A. Chase and D. Chase (1994: 5), and reducing the minimum population estimate accordingly, that estimate implies an approximate population density for the scanned area of 73,600 people inhabiting 113

km², or about 651 people per km². By comparison, Taiwan was home to 644 people per km² in 2012 (Directorate-General of Budget, Accounting, and Statistics, Executive Yuan, Republic of China 2013), a figure which by itself calls the Caracol estimates into doubt.

Lidar images published by the Caracol project (e.g., A. Chase et al. 2010: 27 – 28) reveal a minimum of 4,732 detectable residential compounds scattered throughout the study area. If all such compounds were inhabited simultaneously by an average of five people each, the total population of the survey area would have been 23,660 (≈ 209 people per km²). In the far more likely event of only 80% contemporaneous occupation, an average of five people per household yields a population within the survey area of 18,928 (≈ 168 people per km²). Higher numbers and densities can be achieved by assuming the existence of vast numbers of “invisible” structures not detected by lidar or ground survey. Yet even if contemporaneous occupation of all household groups at five people per household is assumed, the 73,600 inhabitants which the Chases’ minimum population estimate implies for the 113 km² in the lidar survey zone would have needed 9,988 additional household groups besides the 4,732 identified by remote sensing. The optimistic suggestion that additional ground survey could double the number of residential compounds is still insufficient to achieve the authors’ demographic estimates. 9,464 compounds in the 113 km² survey zone implies 12,871 in the 177 km² comprising Caracol and its suburbs if the average density of structures on the landscape remains the same for the whole area. If all those household compounds were contemporaneously occupied by five people per household, that means 64,355 people in total, or almost 364 people per km². Assuming 80% instead of 100% contemporaneous occupation of the same number of structures, one arrives at a population of 51,484 inhabitants at Caracol’s

demographic peak. For all of greater Caracol, that is a density of just under 291 people per km². Those numbers may be much too high, since research by William Sanders and colleagues indicates that the Basin of Mexico never achieved a population density higher than about 200 people per km² even under the Aztec Triple Alliance (Sanders et al. 1979: 219).

To the extent that Caracol can be understood as demographically typical of large Maya centers in the mid- to late eighth century A.D., the period of peak population for most such centers (Rice and Culbert 1990: 23), there may be reason to believe that the total ancient population of the central and southern lowlands never reached 2,000,000. David Webster (2014) recently proposed that the region's eighth-century demographic peak could have been as low as the high hundreds of thousands, an estimate informed by his view that seasonal wetland cultivation was probably less significant than swidden agriculture in Late Classic subsistence strategies. More likely, hard-to-detect agricultural improvements supported a peak population of over a million people. Still, extrapolations from structure counts appear consistent with smaller and, when necessary, more mobile populations than some models propose.

Late Classic administrative complexity

The issue of population articulates with the question of whether southern lowland Maya courts tended to function more as managerial institutions or as fields of ritual performance. From a quantitative perspective, Late Classic hieroglyphic texts focus principally on ritual activities—especially period-ending rituals—and the dedication of venerated objects, like buildings, ornaments, or stelae, produced in the ritual-economic

context of royal courts. Martial activities finish in a distant third place in the inscriptions of most sites, although prisoners were commonly depicted on period-ending stelae whose texts did not explicitly discuss war. The number of inscriptions potentially dealing with courtly management of more mundane economic matters is tiny, and the texts themselves are ambiguous. Presentation scenes showing tribute in the form of cloth, quetzal plumes, cacao, and ornaments are common on polychrome painted vessels from northern Peten (McAnany 2013: 239 – 241), but “Our beans, our beans, three [sackfuls] are our beans,” on a vessel from the Río Azul area (Kerr 2012: K2914) is about as explicit as such representations ever get concerning courtly involvement in agriculture (Law et al. 2013: E40). Late Classic Maya kings and their courtiers represented themselves as warriors and ritual specialists, not as bureaucrats. If those representations elided a significant role in civic administration or the management of quotidian economic activity (as opposed to the ritual economic behavior typical of Classic Maya courts), the evidence must be sought in the archaeological, not the epigraphic record.

One area in which Classic Maya elites may have filled such a role is water management (Lucero 2002). Monumental construction projects required considerable amounts of limestone for fill, masonry, and stucco. The quarries from which that stone derived, often located in monumental centers themselves, could then be plastered over and used as reservoirs in which to catch and store rainwater, while more elevated zones could be modified to direct runoff (Scarborough 1993: 41 – 62). Such reservoirs were undoubtedly vital to the residents of site centers as sources of water for non-agricultural purposes: drinking, cooking, bathing, washing clothes, and so on. During the period of population movement and political transformation that typified the transition from the

Late Preclassic to the Early Classic era (Grube 1995), the presence of functioning, well-maintained reservoirs meant the difference between flourishing and abandonment for many dynastic centers (e.g., Garrison and Dunning 2009: 539 – 540). Tikal's six central reservoirs alone could hold between 100,000 and 250,000 m³ of runoff, assuming an average 1,500 mm of rainfall per year, and the reservoirs located within the site's central 9 km² could together hold more than 900,000 m³, or 900,000,000 L (Lucero et al. 2011: 483; Scarborough and Gallopín 1991: 659). For a peak population of 60,000 people in the Tikal realm, that works out to 15,000 L of water per person. If each person required 4.8 L of water per day (Lucero et al. 2011: 483), the volume of water in the reservoirs alone could theoretically have sustained that population for 3,125 days, or about eight and a half years. In practice, seepage, evaporation, and bacterial contamination consequent upon receding water levels during long dry spells (see Hansen et al. 2002: 275) would have reduced the available water supply, but in normal years the dry season would have lasted only about six months and been followed by replenishing rains.

Not all residents of the Tikal site area would have lived close enough to the epicenter to make daily trips to central reservoirs to supply their water needs. Smaller household reservoirs located in the residential zone outside the site center and in Tikal's rural hinterland supplied the need for water (Scarborough and Gallopín 1991: 660). More dispersed populations able to maintain household or community reservoirs would have meant less reliance on centralized water management, reducing—though not eliminating—the importance of water control as a practical basis for royal power (cf. Lucero 2002: 815 – 818). Indeed, reservoirs managed at the neighborhood level were foundational to Calakmul's hydrological infrastructure (Gunn et al. 2002: 302),

potentially strengthening the position of sub-royal community leaders relative to the city's kings.

Environmental and anthropogenic explanations for the collapse

Scholarly explanations for the Terminal Classic collapse can broadly be divided into environmental and anthropogenic accounts. Among the former suggestions (which have decidedly anthropogenic elements) are epidemics of hemorrhagic fever (Acuna-Soto et al. 2005); exhaustion of soil fertility as growing populations outstripped sustainable agricultural practices (e.g., Morley 1947: 71 – 72); and climatic drying, either in the form of a single, intense “megadrought” (Gill 2000) or of multiple and regionally variable drought episodes (Hodell et al. 2005: 1426 – 1427). Social explanations have typically focused on conflict, either competition among elites escalating into endemic warfare (e.g., Demarest 2004) or class conflict culminating in revolts by aristocrats (Fash 2001: 175 – 183) or peasants (Thompson 1954) against the ideologies and institutions of divine kingship. Other conflict-centered models propose invasion by “foreigners”—i.e., non-Mayan speakers from highland Mexico, or “Mexicanized” Chontal and/or Yucatec speakers from the Gulf Coast and northern lowlands (e.g., Thompson 1990: 25 – 47). An outlying anthropogenic account posits that the rise and fall of dynasties and populations followed the “seating” of 13-*k'atun* periods known as *may*, and that demographic changes and spatiotemporal patterns of monument dedication in the Terminal Classic period can best be explained in terms of ideological commitment to the scheduled transfer of ritual authority (Edmondson 1979; Rice 2004).

The *may* model is unsupported by textual evidence, since neither the term in the sense in which Rice (2004) uses it nor the managed political-ritual transitions the model predicts are anywhere attested in the Classic hieroglyphic corpus. Indeed, the political structures Rice identifies, in which a *may* “seat” served as the capital of a larger realm with subsidiary sites as the “seats” of *k’atuns*, correspond neither to the actual distribution of *k’atun*-ending monuments nor to epigraphic and archaeological evidence for political interactions among Classic royal courts (see, for instance, a comment by Grube in P. Rice 2013: 706 – 707). Invasion by non-Maya warriors is no longer seen as a plausible explanation for the Terminal Classic collapse, even though it may have happened to a limited extent as part of ninth- and tenth-century migrations. Despite some changes, Terminal Classic elite and utilitarian material culture is stylistically continuous with earlier traditions, and in any case invasion models do little to explain why commoner populations should have sharply declined in the south rather than being left in place or replaced by immigrants (D. Webster 2002: 229 – 230).

The most plausible explanations for the abandonment of many centers between the late eighth and tenth centuries A.D. are thus ecological or conflict-centered in nature. The partial or total abandonment of some royal capitals, including Dos Pilas (Houston 1987: 295 – 296) and Aguateca (e.g., Inomata 2008) was demonstrably due to attacks by enemy kingdoms. Osteological data from Piedras Negras show no evidence for a significant decline in health in the years prior to the collapse of its *Yokib* dynasty, as might be expected were environmental stress at fault (Scherer and Golden 2014: 214). As discussed in Chapter Three of this dissertation, internal conflict probably led directly to the downfall of dynasties at other sites, including El Perú-*Waka’* and Copan. Yet there is

nothing mutually exclusive about war and ecological degradation, and at some sites, nobles' revolts and catastrophic military defeats are plausibly the last links in causal chains connecting environmental changes to the collapse of dynasties and the abandonment of settlements.

Agriculture and abandonment

One potential environmental change which must be taken seriously in reconstructing specific collapse events is the degradation of agricultural lands. In most areas of the Maya Lowlands, upland soils are thin and nutrient-poor, so that about three-quarters of the nutrients stored in a given area of land are present in living vegetation (D. Webster 2002: 253), although A horizons more than a meter thick are attested for low-lying areas subject to alluvial or colluvial sediment deposition (Johnston 2002: 26). In upland environments, burning or charring living biomass to release those nutrients is essential to agriculture unless manure or other fertilizers can be introduced on a large scale. "Conventional," low-intensity milpa agriculture as now widely practiced in the Maya region involves burning a wild or long fallow plot of land (*k'áax* in Yucatec), planting it in maize, and weeding it two or three times in the cultivation cycle. Subsequent growth of weeds necessitates another hot burn after the harvest before the field can next be sown. This approach permits a milpa to be farmed for a maximum of three years before needing to be left fallow (Ford and Nigh 2010: 184). In traditional milpa cultivation as practiced by the Lakandon Maya, plots surrounded by mature forest are chosen for clearing in order to ensure a supply of arboreal seeds for forest succession. Fields are weeded much more often, with weeds either burned and scattered or simply

left to decompose in the field. In Lakandon and other “high performance” methods of milpa cultivation, “cool burns” of biomass are aimed at reducing leaves, brush, and dead vegetation to ash, while tree trunks and larger branches are only charred, enriching the soil over the long term (Nigh and Diemont 2013: e49 – e51). Plots managed in this way can continuously produce maize for five to eight years, after which succession by intentionally selected tree species can reduce the regeneration period required to bring the soil back to peak fertility (Ford and Nigh 2010: 186)

The full Lakandon milpa cycle is notably sustainable over the long term, but it takes about 25 years (Nigh and Diemont 2013: e50). It also requires small, sparse, populations of farmers able to move around through a mostly forested landscape. At Classic Maya sites where agricultural infrastructure like terraces or irrigation systems are not in evidence, one possibility is that something like swidden agriculture was practiced, whether it was more like Lakandon or low-intensity milpa cultivation. As long as populations remained small and only site centers were very densely inhabited, outfield swidden agriculture could have been a viable strategy at many centers. Yet as populations grew in the late sixth, seventh, and especially the eighth centuries A.D., soils could have been seriously degraded by erosion and insufficient fallow periods (Webster 2002: 252 – 255). Increasing numbers of non-farmers, certainly including the courtly and warrior elite but also perhaps full-time craft specialists, would have placed further demands on the agricultural system. Bringing fallow fields back under cultivation too soon might temporarily increase supplies of maize and beans, but at the cost of diminished fertility. Particularly where farmland was limited to begin with, as in the Copan Valley, such a situation would inevitably have led to conflict over access to it.

An alternative possibility is that Late Classic southern lowland farmers may have made larger investments in agricultural infrastructure than has been widely recognized. Slope terracing is hard to detect in archaeological survey, as the Caracol lidar scan showed, and could have been more extensive than it appears today. Terrace construction is compatible with swidden cycles, which could have served to maintain soil fertility over the long term even where terraces reduced the impact of erosion. Terraces along bajo margins—documented for the intersite area around Xultun and San Bartolo (Garrison and Dunning 2009: 543)—could also have been fertilized with organic muck brought up from the nearby wetlands. In at least some parts of the lowlands, wetlands themselves were cultivated. Relict fields, indicated by the aggraded remains of rectilinear drainage channels, have been identified in bajos and floodplains in Belize (e.g., Beach et al. 2009; Luzzadder-Beach et al. 2012) and northern Peten (e.g., Garrison and Dunning 2009: 543). Because southern lowland bajos are highly environmentally variable, with markedly different soil quality, not all wetland zones would have been equally suited for cultivation (Dunning et al. 2002: 271). Nevertheless, raised-field agriculture was probably a significant component of agricultural strategies in some site areas (Thomas Garrison, personal communication), and could have supported larger populations than extensive upland cultivation. Wetland fields would have presented Maya farmers with a different set of challenges, including canal aggradation and the contamination of standing water by gypsum in bajo soils (Beach et al. 2009: 1721). In years with sufficient precipitation, dilution by fresh rainwater would have ameliorated the latter problem, but evidence from wetland agricultural sites near Blue Creek in Belize suggests that such systems may have

been vulnerable to disruption in times of drought (Luzzadder-Beach et al. 2012: 3650 – 3651).

Drought and collapse events

It is now beyond dispute that the Maya lowlands in the ninth and tenth centuries A.D. saw a significant increase in climatic aridity. The questions remain, however, of how much impact drought *qua* drought had on local trajectories of political collapse and emigration, and to what extent other factors contributed to the Terminal Classic collapse. The claim that widespread drought was the sole significant cause of the collapse derives perceived support from correlations between earlier droughts attested in environmental archaeological data and other events understood as collapse-like. These are the transition from the Late Preclassic to the Early Classic period (the “Late Preclassic Collapse”) and the period from A.D. 535 to 593 (the “Maya hiatus,” encompassing the transition from the Early to the Late Classic period) (Willey 1972). Both phases of social transformation need to be understood in order to evaluate monocausal, climatic explanations for the fall of divine kingship in the Terminal Classic period.

Drought at the end of the Preclassic period

A strong case can be made for the role of climate change in precipitating the abandonment of some centers at the end of the Late Preclassic period. While the environmental history of the Preclassic central and southern lowlands is highly complex, certain broad outlines hold true for most site regions. Farmers equipped with a package of engineering and agricultural skills for survival in interior geological basin environments

settled the area no later than the early Middle Preclassic period, beginning ca. 1000 B.C. Some sites which later grew to become major civic-ceremonial centers, among them El Mirador (Hansen et al. 2002: 290) and Yaxha (Dunning et al. 2002: 277), were located near perennial lakes or aguadas. Yet others, including Tikal (Dunning et al. 2006: 88; Scarborough and Gallopín 1991: 658 – 661) and Calakmul (Gunn et al. 2002: 302 – 314), lacked natural year-round water supplies, requiring water collection and management systems to be improvised. As populations grew over the Preclassic period, the practice of clearing forests for agriculture and fuel, the latter exacerbated by the profligate use of stucco in construction, led to accelerating soil loss on slopes and sedimentation in wetlands by the Late Preclassic period (Dunning and Beach 1994: 52; Dunning et al. 2003: 18 – 27). Formerly perennial wetlands, including at El Mirador, Yaxha, and La Milpa, silted up to the point that they no longer contained sufficient fresh water to sustain those sites' inhabitants (Dunning et al. 2002: 274, 277; Hansen et al. 2002: 290). Local ecologies were highly variable, as were the adaptations of farmers at different sites (Dunning et al. 2006: 97 – 98), but in general, sites where reservoir systems supplemented or substituted for natural aguadas survived into the Early Classic period. Large centers which lacked such modifications or where they were insufficient, most notably El Mirador, were largely abandoned by the end of the second century A.D. Demographic growth at better prepared urban centers, Tikal and Xultun among them, very likely reflects relocation during this period (Garrison and Dunning 2008: 33).

Important to discussions of the Terminal Classic collapse is the fact that many sites in the northern Lowlands, including the Chenes and Puuc regions, were depopulated during the Preclassic-to-Classic transition. Abandonment in those areas and along the

coast may have been spurred by salinization and insufficient recharge of aquifers in a period of drought (Dahlin 1983: 258). Yet inland sites including Izamal, Yaxuna, and Aké survived these difficulties. In fact, the inland center of Izamal underwent explosive growth, with a system of causeways linking it to other sites whose public architecture shared a similar, megalithic construction technique. While the presence of a royal court at Izamal is not directly attested by archaeological or epigraphic evidence, its architecture and road system suggest that it was the capital of a territorial polity, and there were certainly dynasties in place at Oxkintok and Yaxuna by the Early Classic period (Maldonado Cárdenas 1979; Stanton 2012: 276 – 277). The northern Yucatan Peninsula is considerably drier than the southern lowlands even in normal years, and, all other things being equal, a prolonged period of drought would have made life more difficult for Maya farmers there than for their counterparts to the south (Dahlin 1983: 246).

Increased aridity is a highly plausible trigger for demographic decline at many sites, El Mirador among them. In the absence of a more resilient infrastructure, underlying, anthropogenic problems—deforestation, erosion, and sedimentation—would have made El Mirador’s peak populations unsustainable over the long term even if there had been no drought. Population decline and political disruption at centers in northern Peten and southern Campeche were accompanied by demographic growth and the florescence of elite culture at other sites, including Tikal and centers in Belize. Terminal Preclassic aridity likely delivered *coups de grâce* to already unstable agricultural ecosystems, precipitating migrations and political reconfigurations, but it did not arrest population growth in the lowlands or bring about a civilizational collapse.

Reconsidering sixth-century hiatuses

Analysis of sediment cores from Lake Salpeten (Rosenmeier et al. 2002: Figure 4) and Punta Laguna (Curtis et al. 1996: 40 – 46) showed spikes in $\delta^{18}\text{O}$ between A.D. 500 and 600, corresponding to spikes in gypsum density in sediments from Lake Chichancanab (Hodell et al. 2005: 1417 – 1426), although a strong $\delta^{18}\text{O}$ peak was not detected in sediments from Lake Peten Itza (Rosenmeier et al. 2002: 187). In the Peten Lakes samples, these increases could have been due to greater aridity and/or temporary forest regrowth in the watershed after a period of anthropogenic deforestation, although the Lake Salpeten core reveals a steady increase in pollen from disturbance taxa as a percentage of all pollen during this time (Rosenmeier et al. 2002: 188 – 189, Figure 3). An increase in $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ in growth layers dated to ca. A.D. 517 in a stalagmite from Macal Chasm in western Belize, near the site of Naranjo, was likewise interpreted as indicating a period of drier and possibly cooler climate (Webster et al. 2007: 12 – 13).

Nevertheless, there are serious problems with interpreting the “Maya hiatus” of A.D. 535 – 593 as a “rehearsal for the Collapse” in the sense of an across-the-board decline in population and the fortunes of Maya elites brought on by the same environmental factors that led to the Terminal Classic collapse. Indeed, the idea that there was a *Maya* hiatus, as opposed to interruptions in dated monument production at certain sites, is an artifact of insufficient data, given weight principally by a break in Long Count dates recorded at Tikal and nearby sites (Willey 1972: 417 – 418). Maya elite civilization did not cease to function, and some centers did very well during the mid- to late sixth centuries. Naranjo itself flourished under the rule of *Aj ?Wosal Chan K’ihnich*, who reigned from A.D. 546 to ca. 615 and erected at least seven stelae and an altar, while

three generations of powerful rulers at nearby Caracol oversaw ambitious monumental programs and significant population growth from the mid-sixth to the late seventh century (Martin and Grube 2008: 72, 86 – 95). Only two dated stelae survive from the “hiatus” period at Copan, both erected by the ruler “Moon Jaguar,” who reigned from A.D. 553 to 578, but his predecessor *Wi’ Yohl K’ihnich* oversaw the construction of the sumptuously decorated Rosalila Structure (Stuart 2004: 232).

The site center of Río Azul, an ally of the *Mut* dynasty, was attacked and burned in the mid-sixth century. Elites were then absent from the site for nearly a hundred years, while the already thin rural population of the site region also declined (Adams 1999: 144 – 145, 172 – 173). Rather than the outcome of local drought, this attack marks the early stages of a campaign by the *Kan* court at Dzibanche to encircle and subjugate the *Mut* capital, probably with an eye to controlling overland trade routes to western Mesoamerica (Garrison 2007: 341 – 342). This strategy—and the lack of impediment posed by drier conditions to the geopolitical ambitions of sixth-century kings—contributed to monumental hiatuses which came at different times to different sites, and were not all of the same length. At Tikal, the ruler *Wak Chan K’awiil* erected a stela in A.D. 537, oversaw the accession of a Caracol ruler in 553, fought a war against the same site in 556 following its king’s defection to the *Kan* alliance network, and was finally defeated by a joint *Kan*-Caracol army in 562 (Martin 2003: 23 – 24). It is that defeat, coming nearly three decades after the proposed “demographic disaster” of ca. 535 (Gill 2000: 318), which marks the beginning of a genuine hiatus in Tikal’s monumental record.

This site-specific hiatus in surviving, dated, monumental texts lasted from A.D. 562 to 692. Yet the *Mut* court continued to produce monumental architecture and

elaborately decorated polychrome ceramics during that time. There is no indication of demographic decline, and a true reduction in Tikal's resources—perhaps the result of *Kan* tribute demands—seems limited to the early part of the hiatus. As many as three twin-pyramid groups with blank stelae were built during the latter part, for the *k'atun* endings of A.D. 652, 672, and perhaps 633 (Moholy Nagy 2003: 80 – 81). El Zotz presents a contrast to Tikal: its *Pa'chan* rulers, allied with the *Kan* and *Waka'* dynasties, erected stelae and commissioned substantial monumental architecture in the mid- to late sixth century, either shortly before or during the inscriptional hiatus at Tikal. The *Pa'chan* court's contributions to Classic elite culture during this time included a distinctive calligraphic tradition, a new emphasis on *wahy* in ceramic art, and perhaps the earliest sculptors' signatures on monumental art (Stephen D. Houston, personal communication). It is not plausible that a drought should have prevented Tikal's kings from commissioning carved stelae, but not from building much more labor-intensive twin-pyramid groups, while the lords of nearby El Zotz could produce such stelae, and while scribal ateliers flourished at both sites.

These patterns are far more consistent with historical contingencies and politically determined restrictions on royal action than with a regional drought. Far from confirming a strong correlation between drought and breaks in monumental production, a consideration of the Tikal hiatus in its full context demonstrates that—at least in the sixth and seventh centuries, when they operated below the maximum carrying capacity of their territories—Late Classic political institutions were resilient in the face of climatic stress. The depopulation of Río Azul and constraints on royal monumental projects at other sites were primarily anthropogenic, and only attest to the growing demographic and political-

economic strength of the *Kan* alliance. If twentieth-century epigraphic and archaeological research had happened to focus on the *Kan* dynasty's successive capitals of Dzibanche and Calakmul and on the capitals of its allies and vassals, and if scientific excavations at Tikal had only begun in 1982, it is doubtful whether the idea of a sixth-century Maya hiatus would enjoy the same currency it now does.

Drought in the Terminal Classic period

Unambiguous epigraphic testimony of a late eighth-century drought appears on an incised stingray spine from the burial urn of a priest at Comalcalco: "On [13 Ajaw] 18th Kumk'u was the stone-seating, the seventeenth *k'atun*. There was drought (*k'intuun*), there was famine (*wi'naal*) in the thirteenth year" (Marc Zender, personal communication). The year in question corresponds to A.D. 783, within one of the periods of aridity identified by David Hodell et al. (2005: 1426) and James Webster et al. (2007: 14), discussed below. Clearly, if the paleoclimatological data indicate that there was a drought near the end of the eighth century, and if the hieroglyphic record explicitly agrees, there can be little reasonable doubt that droughts occurred and were perceived as significant. The difficulty lies in establishing how intense and long-lasting dry conditions were at specific sites, and what the specific historical effects of those conditions were. The royal court of Comalcalco, for instance, prospered at the end of the eighth century despite climatic and agricultural stress (Stuart and Stuart 2008: 234).

Comalcalco's better-known rival Palenque, 150 km to the southeast, had a buffer against drought in the form of springs that provided water for irrigation even when rains failed. Based on computer simulations of the Palenque watershed, Kirk French,

Christopher Duffy, and Gopal Bhatt suggested that the springs that supplied the city never ran dry enough to force its abandonment (French et al. 2012: 45 – 46)—although, problematically, those simulations relied on climatic data at a global scale, not climatic evidence local to the Palenque region (Thomas Garrison, personal communication). Even with sufficient water, an influx of climate refugees from areas affected by drought might conceivably have destabilized Palenque’s political order. In fact, the Balunté ceramic phase (ca. A.D. 770 – 850) saw the site’s population nearly double, with its spatially restricted urban core reaching a peak population of 4,147 to 6,220 and clusters of low-status residences springing up along the Río Michol on the fertile plains below (Barnhart 2001: 77; Liendo Stuardo 2000: 37). Waterborne diseases could have been a serious problem at the beginning of the ninth century, especially for the humbler folk cooking with runoff from the city above (Stuart and Stuart 2008: 237). A sharp decline in its *Baakal* dynasts’ ability to commission monuments and the rise to prominence of rival claimants to the *Baakal* name based at Comalcalco suggest that Palenque’s royal court was in serious trouble well before the drought of the early ninth century. The latest accession date recorded at Palenque is that of 1 Death *Janab Pakal*, but the relevant inscription appears on a carved-incised fine gray ceramic vessel of a type believed to have come from the Tabasco plains (Stuart and Stuart 2008: 233). Though the vessel was found in Palenque’s Murciélagos Group, its origin raises the question of whether 1 Death *Janab Pakal* was a Comalcalco king who prevailed over the Palenque branch of the family. If so, Palenque would join Aguateca as a western site for which dynastic failure was verifiably the direct result of interpolity conflict.

Considered by itself, paleoclimatic evidence from central Peten for Terminal Classic drought would be equivocal because hotter, more arid conditions and reforestation of agricultural landscapes abandoned for other reasons would both produce higher $\delta^{18}\text{O}$ values in lakebed sediments (Luzzadder-Beach et al. 2012: 3648). Analysis by Rosenmeier et al. (2002) of lake cores from Lake Salpetén revealed such an increase in sediment strata dated to the ninth century A.D. using radiocarbon data and layer counting. The authors attribute those elevated levels to a combination of both aridity and reforestation, based on comparisons to paleoclimatic records from other parts of the Maya world and on higher organic content and increased proportions of pollen from forest taxa relative to pollen from disturbance taxa in strata dated to after A.D. 850 (Rosenmeier et al. 2002: 186 – 189). Speleothem studies from western Belize and Yucatan strengthen the case for drought in the Peten Lakes region. J. Webster et al. (2007: 13) found evidence for a series of dry periods centered at A.D. 780, 910, 1074, and 1139 in the $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ levels, color, and luminescence of lamina in the Macal Chasm stalagmite. Another stalagmite, from a cave in the town of Tecoh near Mérida, Yucatán, provided evidence for eight periods of drought during which rainfall was reduced by between 36% and 52%, centered on A.D. 806, 829, 842, 857, 895, 909, 921, and 935 (Medina-Elizalde et al. 2010: 259). $\delta^{18}\text{O}$ levels in sediment cores from Lake Chichancanab in Quintana Roo, near the border with Yucatán, also attest to a long-lasting period of overall greater aridity in the northern lowlands relative to earlier conditions. Hodell et al. (2005: 1425 – 1426) interpreted changes in those levels as evidence for two discrete phases of drought (ca. A.D. 770 – 870 and 920 – 1100) separated by a half century of wetter conditions.

The combination of these lines of evidence strongly indicates that the Lake Salpetén data do indicate drought, not just reforestation. That drought was less of a problem for people living around the Peten Lakes than for sites to the north is suggested by the fact that the lake district was never subject to the same kind of depopulation as northern Peten and southern Campeche. Unlike Tikal, the area around Lake Peten Itza has been occupied without a break until the present day, despite migration and the area's eventual conquest by Spanish forces (Aimers 2007: 337). In the context of a severe drought, the presence of a reliable water supply could have been a powerful inducement for the exiled faction of Tikal's *Mut* dynasty to establish a court at Ixlu and Zacpeten. Even so, dry conditions may have been a significant impediment to farming in the area. It was not the lake district, but areas of the northern Lowlands—usually much drier and hotter than Peten—that saw explosive population growth in the Terminal Classic period, surely fueled in part by migration from the south.

Population in the Puuc region peaked in the eighth and ninth centuries, before most centers declined abruptly after A.D. 870. The decline of other centers in the area coincided with the rapid growth of Uxmal, which was itself abandoned in the middle of the tenth century (B. Andrews 2004: 605 – 609). Much of the Puuc florescence thus coincided with the first drought phase identified by Hodell and colleagues for Belize (Hodell et al. 2005: 1425 – 1426), while the rise of Uxmal and the depopulation of other Puuc centers coincided with a series of droughts in the northern Yucatan Peninsula centered at A.D. 895, 909, 921, and 935. The timing of these developments points to considerable climatic variability throughout the Maya Lowlands. In addition, a study by Bradford Andrews indicates that soils in the area would have been highly productive for

about 75 years under the apparent agricultural practices of the area's Terminal Classic inhabitants. Yet agricultural productivity would have sharply declined by no later than 100 years under such a regime (B. Andrews 2004: 606 – 609). This analysis corresponds well to the Puuc region's actual occupational history and strongly suggests that moisture was not the only factor, or even the only ecological factor, precipitating site abandonment in the Terminal Classic period.

Discussion

Late eighth-century populations at many sites overshot the carrying capacities of the agricultural landscapes they inhabited. Yet outside of central zones, those populations were probably not as dense as has been believed hitherto, and the total population of the central and southern lowlands was probably only about half to a third of long-accepted totals (Whitmore et al. 1990: 35), or somewhat over a million people (D. Webster 2014). One implication is that local carrying capacities could have been lower than earlier population estimates required, making regions at their demographic peak vulnerable to both climatic and political threats. Agricultural systems dependent to any great extent on rainfall and swidden or fallow-field cultivation would certainly have been susceptible to disruption by droughts like those attested in the paleoclimatological record. But as populations grew and plots of land were left fallow less often or for less time, soil depletion would eventually have become serious problems for swidden farmers even with sufficient rainfall and infrastructural measures to check erosion. Drought could very easily have disrupted raised-field cultivation in seasonal or perennial wetlands, contributing to salinity or concentrations of gypsum inimical to agriculture.

Another implication of low populations is relatively weak administrative and infrastructural control, as opposed to moral authority, for Late Classic Maya political leaders. Maya elites' command of high intellectual and artistic culture, their martial training, and the divine descent of royal families all surely counted for much at the end of the Late Classic. Still, farmers who did not depend on elite-managed infrastructure or provisioning mechanisms needed dynastic kings and their courts far less than those courts needed them. Small, largely agriculturalist populations—considerably fewer than 100,000 people even at major centers like Tikal—would have been able to relocate more readily in times of ecological stress than the closely-packed populations of hundreds of thousands of people envisioned by some scholars. Moreover, people who made a living from easily portable agricultural techniques would have been more mobile than full-time craft producers who provisioned themselves through market exchange, and farmers with substantial investments in agricultural improvements. Such investments may explain why the population of Tikal, where terracing has not been documented, declined much sooner in the ninth century A.D. than did that of Caracol, where terraces were evidently important to agricultural production. When it occurred, migration is likely to have followed existing kinship, trade, and political connections which provided migrants with information about opportunities elsewhere and offered them the hope of a favorable reception (Anthony 1990: 903). Southern lowland elite families, who maintained long-distance relationships of kinship and exchange, were probably especially mobile as long as they could draw on those relationships, and could have played an important role in organizing population movement.

The collapses and transformations of the Terminal Classic period were caused to a real and significant extent by two periods of widespread drought (Hodell et al. 1426 – 1427), without which they would not have taken the form they did. Other factors also played important causal roles, notably warfare and overpopulation relative to local agricultural carrying capacities. The immediate causes of abandonment and dynastic collapse at each site surely differ to some extent in their nature and relative importance. But whatever they were, they did not involve the premature deaths of millions of southern Lowland Maya for the simple reason that there were never that many people living in the southern Lowlands. The people who did live there were not inextricably bound to complicated infrastructures requiring the intervention of technocratic elites and essential to the survival of populations far denser than those of comparable civilizations. When ecological stress made it infeasible for people at a given site to keep doing what they had been doing, they did not lie down *en masse* to die in the dust; they started doing something that worked better in their altered circumstances, even when that meant abandoning their rulers and their homes. The two centuries of the Terminal Classic period did not correspond to a sudden demographic catastrophe, but rather—like the Preclassic-to-Classic transition—encompassed a complicated series of migrations, wars, and revolts, amid which some centers, dynasties, and kinship groups prospered. Those processes involved significant changes to concepts of rank and to power relations in practice. The rest of this dissertation is concerned specifically with those changes.

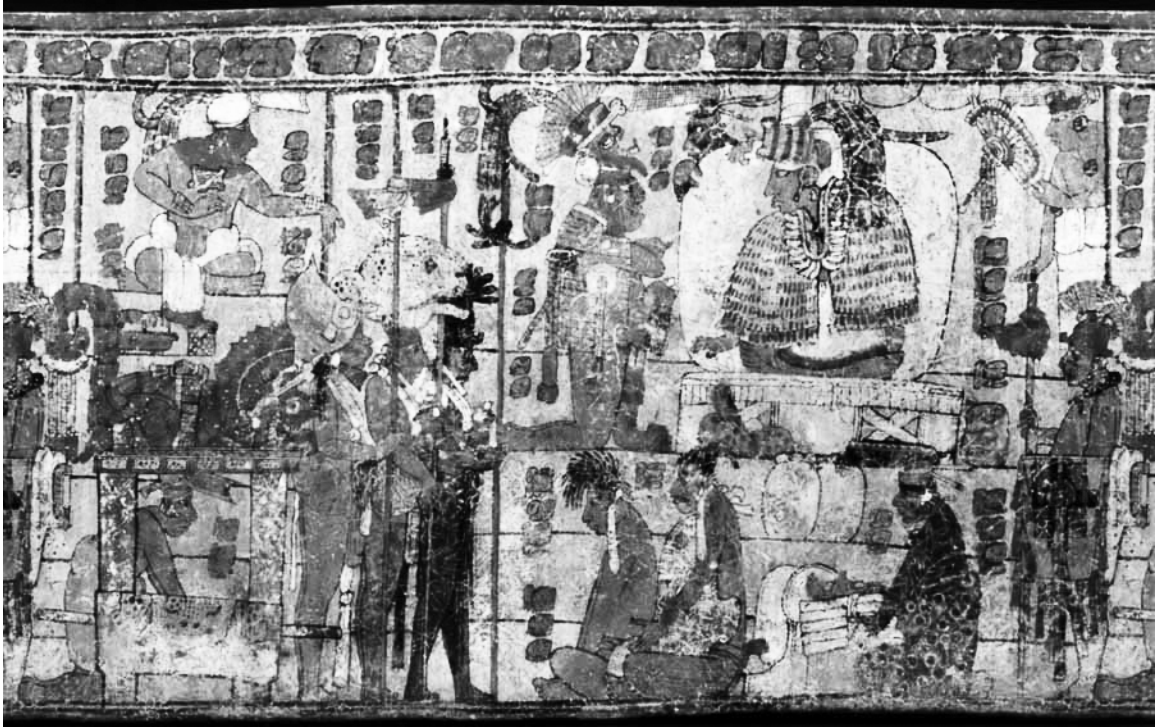


Figure 2.1. Royal architectural space corresponding to gradations of rank, status, and condition, as rendered by an ancient Maya artist (Kerr 2012: K767). Courtesy of Kerr Associates (www.mayavase.com). © Justin Kerr.

CHAPTER THREE
THE ARCHAEOLOGY OF ELITE STATUS IN THE TERMINAL CLASSIC CENTRAL AND
SOUTHERN MAYA LOWLANDS: COMPARATIVE EVIDENCE FROM EIGHT SITES

The present chapter considers the material correlates of royal and elite activity at eight sites from the end of the eighth century A.D. until their eventual abandonment. It has two purposes. First, it aims to sketch out a picture of daily life and material culture among Terminal Classic elites, to serve as a comparison to the epigraphic and iconographic information in Chapter Four. Second, in so doing, this chapter will provide a comparative context for the investigation of Terminal Classic archaeological data from the site of El Zotz, presented in Chapter Five. The sites discussed here—Aguateca, Caracol, Ceibal, Copan, El Perú-*Waka'*, Nakum, Piedras Negras, and Tikal (**Figure 3.1**)—were selected because of their wide geographical distribution and the wealth of published information about their Terminal Classic archaeology. A further consideration was that, because of those same factors, they might exhibit both diversity and commonalities in the paths their elite classes took towards oblivion.

Given the diversity of content and emphasis in publications on these eight sites, extracting comparable data from the relevant publications was not always a straightforward process. At a minimum, however, it was possible to draw some tentative conclusions about royal and non-royal elite activity at each site in the domains of architecture and the acquisition and use of ceramics. These data sets were especially useful because they tend to comprise the most durable and archaeologically visible indicators of ancient households' ability to obtain desired goods and to mobilize labor. To

facilitate comparisons in the field of ceramics, a list of named ceramic phases relevant to the eight sites discussed in this chapter, together with their (sometimes contentious) dates, is presented in **Table 3.1**. Often, additional information about craft production, the distribution of artifacts other than ceramic vessels, and diet among different social groups permitted further comparisons. These kinds of comparisons furnished additional hints about Terminal Classic courtly economies and provisioning mechanisms, considerations directly relevant to the nature of authority and its breakdown. Evidence for a special domain of activity connected to courtly collapse events—acts of termination aimed at royal and elite residential and ritual facilities—was particularly variable and suggested that not all “termination rituals” aimed at the same outcome. Since rhetoric and imagery on most Terminal Classic monuments reflected exclusively royal concerns (see Chapter Four, this volume), evidence for the social dynamics leading up to and following such crises has to be sought in the archaeological record.

As discussed below, that evidence confirms that elites at the eight sites did pursue different strategies of governance and came to different sorts of ends during the Terminal Classic period. Yet it also permits the same sites to be grouped together into four categories based on the trajectories of their kings and nobility. Piedras Negras and Aguateca both fell to outside aggressors in the early years of the ninth century, leading directly to the end of the *Mut* dynasty at the latter site and striking a blow to the *Yokib* dynasty at Piedras Negras from which it never recovered. Caracol’s royal and sub-royal elites carried on in an integrated and increasingly exclusive social system until later in the ninth century, when—as evidence discussed below suggests—dynasty and nobles alike were forced out or killed in a sudden event. Copan and El Perú-*Waka’* show another

pattern: decisive attacks on the royal family, probably led by local noble factions, were followed by periods during which commoner-elite divisions persisted in the absence of kingship, with surviving elites manipulating dynastic-era monuments and structures in an effort to stabilize their own positions. At Tikal, an attenuated nobility gradually dwindled away over the course of the ninth century, despite an unsuccessful attempt at restoring the *Mut* court around A.D. 869 after a decades-long interregnum (see Chapter Three, this volume). Finally, and in contrast to all the other sites discussed here, Ceibal and Nakum both underwent brief but substantial population and architectural growth, with Late Classic style royal courts and subordinate aristocracies flourishing over a few generations before their fortunes waned in turn around the end of the ninth century.

Aguateca

Discovered by Jesús Segura in 1957, Aguateca was visited and documented by Ian Graham two years later (Graham 1967: 3). Subsequently excavated in the 1990s by Arthur Demarest and Juan Antonio Valdés with the Proyecto Arqueológico Regional Petexbatún, and subsequently by Takeshi Inomata's Aguateca Archaeological Project, Aguateca (**Figure 3.2**) constitutes an exceptional archaeological resource because of the circumstances of its abandonment. The seat of the Petexbatun branch of the *Mut* dynasty after the abandonment of Dos Pilas, Aguateca fell to outside attackers around A.D. 810, the probable date on the unfinished Altar M (Inomata et al. 2004: 807). Until that event, the site's ruling class lived an essentially Late Classic lifestyle, albeit under increasing political stress. Although the royal family itself fled sometime before the final attack, sub-royal elite and commoner households remained behind. When that attack came, the

invading forces quickly terminated Aguateca site as a functioning capital by burning its Palace Group and noble residences in much the condition in which they had been left, after which the bulk of the population abandoned the site either voluntarily or under duress (Inomata 2008: 280 – 281). As a result, on-floor assemblages from the aristocratic houses along the Causeway south of the Palace Group present archaeologists with a unique picture of elite domestic and economic life in the early Terminal Classic period in the Petexbatun region.

The Palace Group

The Palace Group itself (**Figure 3.3**) consists of nine named structures arranged around a large central courtyard about halfway along a section of the site separated from the rest by a deep chasm. Its principal multi-roomed buildings, Strs. M7-22 and M7-32, were extensively excavated by the Aguateca Archaeological Project and confirmed to have served as royal residential and courtly facilities (Inomata 2010a: 13). Both structures were made of limestone blocks, with vaulted masonry roofs, stone cornices, and wooden lintels. Both also had central rooms containing stone benches interpreted as thrones (Inomata and Ponciano 2010: 24 – 25, 39 – 44). The large central room of Str. M7-22, probably an audience chamber, is situated on the axis of the main causeway, not on the axis of the Palace Group itself. The effect would have been to make a person sitting on the bench in the central room visible to people both in the plaza and in the northern part of the causeway, integrating the Palace Group into the performative landscape of the settlement (Inomata and Ponciano 2010: 51).

Except for its easternmost room, Str. M7-22 was almost completely emptied of artifacts when the royal family fled, leaving spatial organization of activities there difficult to infer. Storage jars and grinding stones found in elite residences south of the Palace Group were interpreted as evidence for food storage and preparation in those structures (Triadan 2000). Their absence from the Palace Group does not itself indicate that food was not stored or prepared there, but soil studies suggest that the court may have had a dedicated kitchen facility separate from the residential and reception buildings (Inomata and Ponciano 2010: 51).

The easternmost room might usually have been used to store perishable goods, as suggested by thick coats of stucco on its walls, a feature missing from other rooms in the building (Inomata and Ponciano 2010: 36 – 37). This room was sealed off by a wall of limestone blocks and roughly shaped stones two courses thick, evidently intended to protect its contents during the ruler's absence. These consisted of high-value items giving a good idea of the kind of wealth possessed by early Terminal Classic kings. Among them were at least 17 ceramic vessels, assorted greenstone ornaments, and various ritual objects: long bones and a conch shell incised with hieroglyphic inscriptions, nine pyrite mosaic mirrors, two masks made of cloth impregnated with clay, three drums, and three bone bloodletters. The sealed doorway showed signs of having been broken open in antiquity, prior to the burning of the building, presumably by attacking forces (Inomata and Ponciano 2010: 37 – 38).

Apparent termination deposits in and around Strs. M7-22 and M7-32 included black, ashy soils mixed together with artifacts including valuables perhaps taken from the storeroom in the latter structure. Among these were broken alabaster vessels with

hieroglyphic texts, pyrite mosaic pieces, and greenstone and shell jewelry (Inomata and Ponciano 2010: 38, 47 – 48). Deposits around Str. M7-32 included broken human bones, some of them burned, pertaining to multiple individuals (Inomata and Ponciano 2010: 48). Disarticulated and widely scattered, these human remains might have been curated—for instance as mummy bundles—by Aguateca’s elite prior to the attack. Tools used in book production were also included in the Str. M7-32 deposits, raising the possibility that members of the royal household—not just sub-royal elites living along the Causeway—were involved in scribal work (Aoyama 2009: 71).

Sub-royal elites at Aguateca

South of the Palace Group, sub-royal elite residences stood along a Causeway connecting the royal court to the natural bridges crossing the chasm. These residences evince a standard architectural format: typically three rooms, each with a bench, separated from each other by walls but all opening onto a shared patio area (**Figure 3.4**). One or two auxiliary rooms or storage structures were often at either end of the building. Unlike the Palace Group, these residences were not cleared of valuables in anticipation of an attack, and their contents provided a detailed picture of daily life and economic activity in a sub-royal elite household in the early years of the ninth century.

One such building, Str. M8-4, was completely exposed by the Aguateca Archaeological Project. Based on the artifacts recovered from use-floors, its rooms served specialized purposes. The north room contained storage and serving vessels, grinding stones, and spindle whorls, suggesting its use in food preparation and spinning. Decorative or ritual objects found in the same room included a large ceramic figurine of a

high-status man, possibly an ancestor (Inomata et al. 2010: 74 – 75; Triadan 2007: 283). Small stone mortars, potential shell ink pots, and two chert pestles point to the central room's use in scribal work; ritual objects including incense burners and a badly deteriorated cloth-and-clay mask were also found (Inomata et al. 2010: 74). The south room was also used for the crafting of high-value artifacts, some of which were left behind. These included an alabaster “Jester God” (*hu'nal*) ornament of the kind depicted in monumental art at Aguateca and elsewhere (Eberl and Inomata 2001: 134 – 135), along with more than three hundred pieces of polished pyrite. Probably all of these pieces originally pertained to mirrors—at least one fragmentary mirror was found—but some of them were in the process of being reworked into rectangular ornaments, while a few finished pyrite rectangles were found beside the *hu'nal* diadem. Miscellaneous siltstone, ceramic, and bone ornaments were also recovered; these probably belonged to one or more composite headdresses of the kind used in Classic Maya royal ritual (Inomata et al. 2010: 76 – 77). The patio in front of the building, and largely perishable annexes built onto its north and south ends, were evidently also used as work spaces, and the two annexes may have served as storerooms as well (Inomata et al. 2010: 77 – 78).

A similar three-roomed elite residence on the Causeway, Str. M8-8, also contained grinding tools, spindle whorls, and vessels for food storage in its northern room. The central and southern rooms lacked such markedly (for the Classic Maya) feminine tools, and probably served as reception spaces, craft working areas, and/or sleeping chambers for male members of the household (Inomata et al. 2010: 86 – 91). Here again, annexes were built onto the northern and southern ends of the building; a set of 11 polished stone axes of different sizes found in the northern addition probably

constituted the tools of a monument carver (Aoyama 2009: 85 – 90; Inomata et al. 2010: 90 – 91).

Elite material culture at Aguateca

Artifact assemblages recovered from their residences indicate that early Terminal Classic sub-royal elites at Aguateca were integrated into the economy of the royal court, producing monuments and regalia for their king. Artifact assemblages from the Palace Group and lower-ranking households, especially the *hu'nal* diadem from Str. M8-4, conform sufficiently to representations of Aguateca's last king to suggest a close match—at least at that site, at that period—between monumental representation and physical reality.

Economic variation among households plausibly classed as “elite” on the basis of their location on the Causeway, close to the Palace Group, may be evident in the artifact assemblages from a patio group formed by the three-roomed Strs. M8-10 and M8-13. The former building, a well-made masonry structure, was closely comparable to Strs. M8-4 and M8-8. On-floor artifacts recovered from Str. M8-10 included scribal tools and ornately decorated ornaments. Among these were a necklace of *Oliva* shells carved to resemble human skulls, an inscribed human skull which refers to the Aguateca ruler's attendance at another lord's accession ceremony, and a shell ornament whose carved text includes the title *itz'aat*, “sage” and the Aguateca Emblem Glyph (**Figure 3.5**) (Aoyama 2009: 103; Houston, personal communication, cited in Inomata and Stiver 1998: 437). The building was interpreted as the home of a high-ranking, wealthy scribe, personally and economically involved with the royal family (Inomata and Stiver 1998: 437 – 438).

Str. M8-13, on the other hand, was smaller and less finely built, made with roughly worked blocks. While the household's domestic artifact assemblage was similar to those of high-ranking elite residences, it was comparatively poor in luxury items like shell and jade ornaments (Inomata et al. 2010: 94 – 106). One appealing interpretation of the contrast between Strs. M8-10 and M8-13, given that they shared a patio, is that the inhabitants of the latter were poor relations of the scribe who lived in the former structure (Aoyama 2009: 103). Another possibility, however, is that M8-13 was home to the scribe's wife—he might have had more than one—since the central room of the building, apparently reserved for masculine craft work and reception in high-status homes along the Causeway, contained spindle whorls (Inomata et al. 2010: 106).

Architectural and ceramic evidence indicates cultural, perhaps ethnic, differences between social elites, whatever their economic rank, and the of the site's lowest-ranking households. Architecture associated with Aguateca's elites is strikingly similar to elite buildings in central Peten, while utilitarian ceramic types are nearly identical to those at other sites in the Pasión/Petexbatun region. Combined with the epigraphic evidence of inscriptions commissioned by members of the Dos Pilas *Mut* dynasty, the implication is that an aristocratic class with family and cultural ties to northern and central Peten, perhaps accompanied by lower-ranking families, coexisted with local lineages (Inomata 2008: 278 – 280).

A final point of note is that molded-carved ceramics were absent from the sample excavated at Aguateca (Inomata 2010b: Table 7.1). Their importance in the prestige economy of the western lowlands thus postdated the fall of that center. Instead, Late Classic-style polychrome drinking vases were the luxury ceramics of choice. A

particularly fine example was found in another elite residence—perhaps reserved for a ritual specialist—in association with other vessels, obsidian lancets, and an imitation stingray spine carved from bone (Inomata and Stiver 1998: 441 – 442).

Piedras Negras

Another victim of a devastating external attack in the early ninth century, Piedras Negras presents a useful contrast to Aguateca because occupation and some kind of differences in rank persisted long after the assault—although the latter may have been more ephemeral than the former. The *Yokib* court of Piedras Negras appears to have been politically unstable in the late eighth century, as one king “abandoned the rulership” (*yaktaji ajawlel*) (Houston et al. 2000: 107; Houston et al. 2001: 70). Analysis of human remains by Andrew Scherer, Lori Wright, and Cassady Yoder (2007) showed that, unlike at Caracol, there is no statistically significant isotopic evidence for major dietary differences between elites and commoners at Piedras Negras during the Late Classic Yaxche ceramic phase (A.D. 625 – 750). At least within the site center, people of high and low social status, including members of the royal family, had basically the same access to maize and to protein from mollusks and/or land animals—a contrast with Early Classic status-linked differences in access to maize (Scherer et al. 2007: 98). During the Chacalhaaz phase (A.D. 750 – 830), encompassing the last years of the *Yokib* dynasty, something changed in Piedras Negras’ food supply system such that lower-status people consumed less maize and more fish from the Usumacinta river in place of other sources of animal protein, while higher-status individuals ate much the same diet as their forebears. Since substantial settlement persisted at smaller sites near Piedras Negras

following the end of its royal line, large-scale environmental degradation is a less likely explanation for this change than disruptions to putative practices of tribute and/or exchange that had supplied the city with maize and game (Scherer et al. 2007: 98 – 99). Unlike Aguateca, Piedras Negras (**Figure 3.6**) continued to be occupied long after the fall of its royal court, until at least ca. A.D. 930 (Kingsley et al. 2012: 110). Instead of a snapshot of elite life at the moment of an attack, Piedras Negras thus presents a picture of life among the ruins following such a disaster. As discussed below, the evidence for a surviving elite class in the Terminal Classic period is equivocal at best.

Destructive termination events targeting the wealth and authority of the *Yokib* dynasty can be dated to A.D. 808, when the Yaxchilan king *K'ihnich Tatbu Joloom* attacked Piedras Negras and took captive the last hieroglyphically attested *Yokib* lord, Ruler 7 (Golden and Quiroa 2001: 184; Stuart 1998: 389). The invaders targeted royal facilities and monuments in the Acropolis, perhaps precipitating the collapse of stone vaults by destroying the wooden lintels and masonry piers of some palace buildings (Houston et al. 2001: 73; Satterthwaite 1935: 30). A particular focus of destruction was Ruler 7's throne room, Room 1 of Str. J-6. There, the attackers removed the king's intricately carved throne (Throne 1) from its niche and smashed it, scattering its pieces across the floor; several missing pieces may have been removed by the attackers or, centuries later, mistakenly cleared from the room by workers with the University of Pennsylvania project (Houston 2014). After damaging the throne, the Yaxchilan warriors may have ordered the undermining of one of the stone piers of the room's central doorway in order to bring down the vault (Satterthwaite 1935: 23 – 31).

On nearly all royal monuments exposed at the time of the attack, royal faces were targeted for mutilation (Golden et al. n.d.). At the pyramidal Str. J-4, an older monument, Panel 15 (A.D. 706), was damaged by axe or hammer blows to the face of its central figure (Ruler 2, or 'O' *Chahk Itzam K'an Ahk*) and to selected glyphs in the accompanying text, then torn from its position near the summit of the pyramid and cast down its steps (Houston et al. 2000). This act was likewise a symbolic blow to *Yokib* authority in several senses. Ruler 2's memory was evidently important to the authority of Ruler 7, who referred to him on his own Panel 3 (ca. A.D. 795), and Str. J-4 likely contains his tomb (Houston and Arredondo Leiva 2001: 217). Monuments dating to his own reign and to that of Ruler 7 present Ruler 2 as suzerain over lords of Yaxchilan (Miller 1991). In defacing the probable funerary temple and its carved panel, the invaders announced not just the fall of the *Yokib* dynasty, but specifically the discrediting of a king who had earlier brought Yaxchilan under his sway.

Following this attack, an attempt at continuing or replacing the *Yokib* dynasty seems to be represented by a single carved altar, Altar 3 (Houston et al. 2003: 228). This monument was probably dedicated for the 9.19.0.0.0 *k'atun* ending in A.D. 810 (Morley 1938: 284), although its degree of erosion prevents certainty on that question. In any event, kingship at Piedras Negras was effectively over by the latter half of the ninth century, and distinctions of status and wealth among the site's post-royal inhabitants are difficult to establish clearly from the archaeological record.

During the Late Classic period, the hill slope northwest of the Acropolis was home to a residential courtyard—designated Court 4—built on a terrace protruding from the hillside. In its eighth century iteration, Court 4 consisted of three buildings, Strs. J-24,

J-26, and J-34, arranged around a central, open space (**Figure 3.7**). These structures were built of masonry but had perishable rather than vaulted roofs (Golden and Quiroa 2001: 157, 186). Immediately below the court, and accessible from it via a stairway, was a second terrace containing a single building platform, Str. J-27, probably an unfinished Late Classic pyramid (Golden 2002: 304). Prior to the Yaxchilan invasion, Court 4 served as a residence for people associated with the *Yokib* court, but their role and status are unclear. The complex was not targeted for destruction during Yaxchilan's attack on the city, and it continued to be occupied after the evident end of kingship at Piedras Negras. Its post-royal occupants had access to small quantities of high-value goods, including jade figurines and shell earspools, but ninth-century burials associated with Court 4 do not clearly point to high social rank for its residents (Golden 2002: 248, 268, 303). It is unclear whether such objects or their raw materials were obtained by trade, or whether they were simply collected from the ruins of the *Yokib* palace (Child and Golden 2008: 83).

Terminal Classic residents of Court 4 removed cut blocks from Strs. J-24 and J-34 to construct new buildings, Strs. J-25 and J-33, in the middle of the patio; the rest of the stone used in their construction were crudely worked or unworked river cobbles. A series of minor modifications to Str. J-33's architecture and the accumulation of substantial midden deposits around and behind the building indicate that it was occupied for several decades. None of these constructions were so ambitious as to have required more labor than a single extended family could have supplied. Ceramics recovered from Str. J-25 clearly belonged to the Kumche (post-A.D. 830) ceramic phase, while Str. J-33 yielded only sherds identified as Chacalhaaz. However, since the distinction between the two

phases is primarily based on a few high-value ceramic types, the whole of Court 4 may have been abandoned at once, in Kumche times (Golden 2002: 272, Note 6; Golden and Quiroa 2001: 184 – 185). Meanwhile, Str. J-24, which had long been unstable, ceased to be maintained. Artifacts recovered from the surface of its floor—two deer antlers with worn points, a broken ceramic vessel, and a chert bifacial blade—suggest that it was used as a work space after partial dismantling and structural instability had rendered it unsuitable for habitation.

Contemporary with developments at the Acropolis, other constructions, in the South Group Court, represent an attempt at producing new public architecture used in performances of status and political authority. An L-shaped building constructed inside a patio also containing a sweatbath and a ballcourt, Str. R-8-1st, featured open rooms with stuccoed floors, benches, and stone columns, in imitation of earlier royal architecture at Piedras Negras. In contrast to the area around Court 4, Str. R-8-1st and its immediate environs were kept scrupulously clean, and its last occupants—whoever they were—left no domestic artifacts behind them. Garbage was removed to Ballcourt R-11 nearby, which now served as a midden instead of a venue for the ritual ballgame. The presence of stone benches, the architectural style and the royal setting of the building identify Str. R-8-1st as a setting for elite activity after the disastrous Yaxchilan attack. With an estimated construction date of ca. A.D. 810 – 840, its occupants might have included the same claimant to kingship who commissioned Altar 3. Yet the quality of the construction was poor, with roughly worked stones and a roof of perishable materials. A lack of associated inscriptions makes its builders impossible to securely identify, and the building was

abandoned by the late ninth century (M. Child and J. Child 2000: 389 – 404; Child and Golden 2003: 84 – 86).

In sum, there is very little to suggest that a sociopolitical elite survived the collapse of the *Yokib* court by more than two or three decades. Aside from the questionable Altar 3, the principal evidence of a public works project that might have been coordinated by post-royal elites in the absence of a centralized court comes Str. R-8-1st and from Str. O-13, a temple on the East Group Plaza. The final coat of stucco on the exterior of the latter building's superstructure incorporated late Chacalhaaz or Kumche sherds (Hruby 2006: 75; Muñoz 2006: 166). However, a date in the first quarter of the ninth century for this project is more consistent than a later one with the quality and nature of architecture elsewhere at the site. A midden excavated behind the building yielded abundant late Chacalhaaz ceramics, not Kumche (Muñoz 2006: 166). The replastering of Str. O-13 may simply represent a minor repair project carried out under Ruler 7, or undertaken by his failed successor, and so cannot confidently be called post-royal.

Caracol

A third site whose dynasty met its end in a sudden attack by foreign or domestic enemies, Terminal Classic Caracol may informatively be compared to Piedras Negras and Aguateca in terms of the deposits associated with that destructive event. Because Caracol's royal dynasty lasted much longer than the dynasties of either of those other sites, its archaeological ceramics, elite architecture, and other material remains offer a longer-term picture of the course sociopolitical inequality took there in the Terminal

Classic period. In remaining the capital of a functioning royal court until late in the ninth century A.D., Caracol presents parallels to Ceibal and Nakum, whose own archaeological materials are discussed later in this chapter.

In the ninth century, Caracol supported several epicentral “palaces,” domestic compounds inhabited by high-ranking families with markedly greater access to luxury goods than the majority of the site’s population. These complexes included the towering Caana pyramid with its associated structures—the presumed focus of royal courtly activity—as well as smaller patio groups, adjoining Caana or situated nearby. The façade of Caana was refurbished in the first half of the ninth century, during the reign of *K’ihnich Toobil Yopaat* (D. Chase and A. Chase 2002: 44). This same king had the floor of the summit raised by four meters, added new masonry rooms to the complex, and refurbished the superstructure of Temple B-18 (A. Chase and D. Chase 2005: 344; Martin and Grube 2008: 99). Either *K’ihnich Toobil Yopaat* or one of his two successors limited and channeled access to Caana by the construction of low buildings around Plaza B. At least immediately prior to Caana’s abandonment, two restricted, multi-roomed structures at the back of the Caana summit were used to store perishable but presumably valuable goods in large ceramic vessels whose fragments were found *in situ* on the building floors (D. Chase and A. Chase 2002: 44). Other architectural projects, including the expansion of the Northeast Acropolis, confirm the impression that the city’s elite commanded substantial labor power (A. Chase and D. Chase 2009a).

The latest monument known from Caracol, Stela 10, was erected in A.D. 859, but the site’s palaces continued to be occupied for another thirty or forty years. Elite occupation of the epicenter apparently ended in violence: in most high elite residential

buildings, strata of burned organic material covered domestic artifact assemblages apparently left behind when their owners were abruptly forced to leave. Pointing to an actual attack, not simply the threat of one, is the body of a five-year-old child found in the doorway of one building. Radiocarbon dates from the burned layers cluster in the final decade of the ninth century (D. Chase and A. Chase 2002: 43). Artifacts abandoned in these terminal palace contexts included vessels for serving and consuming food and drink (especially tripod plates and incised, gouged-incised, or molded-carved drinking vases; see below) as well as worked jade, shell, and bone (A. Chase and D. Chase 2005: 348 – 359). Bone awls, needles, and deer antler tines recovered from these abandonment contexts point to domestic cloth production in Caracol's Terminal Classic palaces, but—except for one locus of *Oliva* shell working in the Barrio group—debitage from shell and lithic work is absent from those settings (A. Chase and D. Chase 2001: 132). At the moment of abandonment, a number of caches of ceramic vessels, intrusive into the floors of temple superstructures (e.g., Strs. A6 and B19), remained open. It is unclear whether these caches were intended to be sealed, or whether they represent innovative ritual practices specific to the last years of the Caracol dynasty. Ceramic censers in a wide variety of forms were likewise abandoned where they were used, discovered *in situ* in the superstructures or at the bases of temples in the epicenter (e.g., Strs. A3, A6, and B19) and in outlying groups (A. Chase and D. Chase 2004: 352 – 361). Abandoned building projects are also in evidence, in the form of unused construction materials left next to Str. A7 and a massive, unfinished block of trash and rubble fill (Str. B71) presumably intended as the platform of an elevated architectural complex (A. Chase and D. Chase 2004: 346).

During the seventh and eighth centuries A.D., the common people of Caracol appear to have been, on the whole, relatively prosperous. While epicentral elites lived and worked in larger, more elaborately decorated architectural compounds than their subordinates, non-elites had the economic ability and socially sanctioned right to participate in many of the same material-cultural behaviors as higher-status families: they buried their dead in family tombs, often had their teeth inlaid with hematite or jade, and owned painted polychrome ceramic vessels. Such vessels, in fact, form about the same proportion of commoner and elite domestic assemblages in Late Classic contexts (A. Chase and D. Chase 2009b: 18 – 19). Nevertheless, status-linked differences between the everyday lives of people associated with the Caracol royal court and those outside of it are evident in the $\delta^{13}\text{C}_{\text{collagen}}$ and $\delta^{15}\text{N}_{\text{collagen}}$ values of individuals buried in palatial compounds and those buried elsewhere. The Late Classic “palace diet” involved more maize and protein than that of the bulk of the population (A. Chase and D. Chase 2001: 128 – 130). Interestingly, this pattern contrasts with that observed by Andrew Somerville and colleagues (2013: 1551) at Altun Ha, Lamanai, and Pacbitun, where maize, marine fish, and/or maize-fed animals decreased in importance for Terminal Classic elites. Arlen and Diane Chase (2009b) see Late Classic homogeneity in consumption patterns at Caracol as part of a political strategy of “symbolic egalitarianism,” in which generations of rulers and nobles moderated (but did not abandon) earlier royal practices of conspicuous consumption and kept tribute demands on the population low enough that farmers and craftspeople could afford luxury goods. Importantly, this model posits a central role for markets, as opposed to centrally managed distribution, in supplying Caracol’s commoners with such goods (A. Chase and D. Chase 2009b: 19). Markets very

likely did play a role in the distribution of utilitarian and luxury goods at large Maya centers (e.g., Dahlin et al. 2010; Halperin et al. 2009). Still, the degree to which access to decorated ceramics and pinhead-sized bits of jade and hematite represented even a spurious social equality between Caracol's rulers and its common people is questionable, especially since there is no hint of symbolic egalitarianism in the site's Late Classic monuments.

During the Terminal Classic period, elites continued to consume high-value ceramics, but lower-status households had sharply limited access to such wares (A. Chase and D. Chase 2005: 81 – 88). The concept of “high value” for certain Terminal Classic ceramic types has to be used with care, especially given the technical switch from polychrome painting to molding, yet the spatially uneven distribution of molded-carved ceramics, which are concentrated in epicentral, palatial contexts, suggests that the term is not inappropriate. While some such vessel types (e.g., Ahk'utu' molded-carved; see below) may typically have been given as gifts within southeastern Lowland networks of elite relationships, others—Pabellón molded-carved and other fine paste wares—came from such a distance, and are so widely distributed across the southern lowlands in the ninth century, that trade is a more likely mechanism for their distribution. Furthermore, while the new luxury types are rare in non-epicentral settings, a few examples have been recovered from domestic compounds several kilometers from the site center (A. Chase and D. Chase 81 – 87, Figures 5, 6, 8, and 9). Diminished buying power for commoners is thus a more likely explanation for this material-cultural divergence than official interdiction in the form of sumptuary rules. That in turn implies differences in economic value for molded-carved vases as opposed to monochrome slipped vessels, whatever

other meanings may have been attached to them. Meanwhile, isotopic signatures indicate that courtly elites continued to consume more meat and maize than the rest of the population (A. Chase and D. Chase 2004a; 2004b: 347, 363). Caracol's royal court, like later, ethnohistorically attested Mesoamerican courts, may have obtained a significant proportion of its foodstuffs through demands placed on the commoner population—for instance, by obliging servants or occasional work crews to farm royal fields, or by taxing non-royal households in maize. If those demands remained constant as the absolute wealth of non-elites diminished in the Terminal Classic period, Caracol's commoners would have fallen further behind the ruling class in their access to luxury items.

Economically and socially, then, Caracol in the ninth century was more unequal, and more overtly so, than it had been in the Late Classic period. Elites' and commoners' relative access to desirable foods did not substantially change, but high-value ceramic vessels became almost unobtainable for most households. At the same time, the royal court engaged in trade or exchange with producers of new and expensive ceramic types, while dramatizing and enacting their social separation from the rest of the population by constructing physical barriers around courtly spaces.

A. Chase and D. Chase (2009b: 17) propose that these changes in Caracol's social order strained the social fabric and were directly linked to the site's collapse. Previous internal conflicts may be evident in the selective breakage of some earlier Classic monuments and their subsequent resetting, discard, or incorporation into architectural fill (Beetz and Satterthwaite 1981: 11 – 12, 52, 56, 62, 97). Some late monuments were likewise moved or intentionally damaged following the end of kingship or during the reigns of the site's last kings. One altar, Altar 12 (9.19.10.0.0, A.D. 820) was found

flipped upside down in front of Str. B5, very near to Stela 19 and Altar 13, which commemorate the same date. Carl Beetz and Linton Satterthwaite (1981: 89) suggest that the unusual position would have aided in transporting the altar, since its carved top surface is relatively flat and the underside is irregularly shaped. Yet the faces of both human figures on Altar 12, one of them a ruler of Caracol, appear deliberately damaged. On Altar 13, which also depicts a conference scene, only the Caracol king was targeted for such mutilation. Stela 4 (perhaps 9.18.0.0.0, A.D. 790), a slate monument, was broken into pieces, some of which were removed (Beetz and Satterthwaite 1981: 23 – 25). Although the economic and political changes of the ninth century ultimately ended in disaster for Caracol's royal court, there was never a period—unlike at Tikal and El Perú-Waka'—during which post-royal or interregal elites appropriated the monumental legacy of the old dynasty. Indeed, there is so far no evidence of a large population at Caracol in the tenth century A.D., although two radiocarbon dates (A.D. 1166 and A.D. 1221) from epicentral temples point to at least occasional ritual visits during the Postclassic period by people who may have been living nearby (A. Chase and D. Chase 2004: 350).

Instead of post-royal reuse, the physical placement of monuments at Caracol and a subordinate site hints at changing relationships between rulers and lesser elites. Most of *K'ihnich Toobil Yopaat's* monuments were erected in the epicenter: in Court A1 (Stela 8) in Plaza B1, between Caana and Str. B5 (Stelae 18 and 19, Altars 12 and 13), or atop Caana itself (Altar 16) (Beetz and Satterthwaite 1981: 68 – 69, 89 – 93, 98). However, he probably also dedicated Altar 2 (A.D. 810) at the satellite site of Mountain Cow, ca. 13.6 km to the northeast. His successor "K'an III" ([...]n *Ohl K'ihnich*) dedicated another altar

(Altar 1, A.D. 835) at Mountain Cow and a stela-altar pair (Stela 17 and Altar 10, A.D. 849) in a residential complex ca. 350 m southeast of Caracol's epicentral Group B (Beetz and Satterthwaite 1981: 64). Martin and Grube (2008: 99) see the Mountain Cow monuments as evidence that late Caracol kings had to deal with increasingly assertive vassal lords. The location of Stela 17 and Altar 10 is more puzzling, but since both monuments depict "K'an III's" heir apparent, the choice may have been intended to buttress the prince's claim to the throne in some way.

Terminal Classic ceramics at Caracol

As at other sites, the most obvious ceramic markers of Terminal Classic occupation were relatively highly valued types, while more utilitarian types exhibited little change from their Late Classic forerunners. At Caracol, presumably highly valued (see below) molded-carved types are concentrated in epicentral residential contexts. While rare, diagnostic Terminal Classic sherds were recovered from a sufficient number of residential complexes outside of the epicenter to suggest that at least a quarter of known residential groups at the site were occupied during the ninth century (A. Chase and D. Chase 2005: 81 – 87). The presence of such sherds dated associated ceramics to the ninth century, thus permitting a clear contrast to be drawn between assemblages pertaining to high-ranking elites and those belonging to everyone else. Outside the site center, even households interpreted as relatively wealthy ("secondary elites") had very limited access to molded-carved and fine-paste vessels, suggesting that, in practice, there were some social or economic limits on their distribution. For the highest-ranking Terminal Classic elites, living in and around the Caana palatial complex, molded-carved

vases—especially the Ahk’utu’ molded-carved type well attested throughout the southeastern Lowlands—largely replaced earlier polychrome types in daily life, as inferred from the rarity of polychrome vases in on-floor palace assemblages from the final occupation phase of the epicenter. Additionally, cooking vessels are absent or nearly absent from palace contexts, unlike the situation at late eighth-century Aguateca. Instead, serving vessels predominate, suggesting that Caracol’s palaces were not major loci for the storage or preparation of food and drink (A. Chase and D. Chase 2005: 76; Triadan 2000: 49 – 51).

In contrast to elite domestic settings, some special epicentral contexts—burials and one ritual cache—dated to the Terminal Classic period did yield polychrome painted ceramics. Ceramic effigy censers used in temple rituals also show continuity with older styles (A. Chase and D. Chase 2005: 88). Only at the very end of the site’s occupation did caching practices shift away from Late Classic conventions, as plain vases and cups replaced lip-to-lip dishes containing finger bones and barrel-shaped vessels with modeled faces (A. Chase and D. Chase 2004b: 346 – 347, Fig. 2; A. Chase and D. Chase 2005: 85 – 86). For Classic Maya elites, the principal functions and social meanings of polychrome drinking vessels had to do with their everyday use in courtly consumption, while caching and interment were decidedly secondary uses. At Caracol, ceramic distributional evidence suggests that the concept of “marked” and “unmarked” categories (see Waugh 1982) could usefully be extended from linguistic and linguistic anthropological studies as an interpretive tool for thinking about material culture. In this case, innovative, molded-carved form of a culturally salient semiotic type—“high-value drinking vessel”—became the unmarked category, while the older, polychrome form of that same semiotic type took

on a special meaning as the marked category and may thus have been slower to be replaced by the new molded-carved wares. Ceramics used in ritual contexts by the high elite seem to exhibit slower typological and modal change than those used in domestic contexts by that same group, either because they continued to be produced just for such purposes or because the vessels used in Terminal Classic ritual contexts were actually heirlooms chosen for their antiquity. Favoring the latter possibility, decorative modes on painted bowls and vases excavated in late ninth-century contexts at Caracol are consistent with Late Classic motifs (A. Chase and D. Chase 2005: 76 – 81).

Like their contemporaries throughout the southern Maya Lowlands, Caracol's Terminal Classic elites used and displayed Altar fine orange and Pabellón molded-carved serving and drinking vessels, produced in the Usumacinta River region. But like elites in northern Petén, they also participated in a local sphere of exchange or trade in another molded-carved type. At Caracol, local molded-carved vessels belong to the Ahk'utu' type (**Figure 3.8**), identified by Christophe Helmke and Dorie Reents-Budet (2008; see Chapter Three, this volume). Some vessels belonging to this type may have been produced, perhaps using new molds cast from old vases (Helmke and Reents-Budet 2008: 41; Ting and Helmke 2013: 6), as late as the mid-tenth century A.D., after *Olom*, the *kaloomte'* named in their typical dedicatory texts, was no longer living. The variable position of calendrical day-names in otherwise identical molded scenes on Ahk'utu' vessels from Altun Ha further complicate the technological and social picture of their production (E. Graham et al. 1980: 165). Yet those recovered from palace abandonment deposits at Caracol belonged to members of a functioning royal court, who would presumably have been cognizant of their textual content. A. Chase and D. Chase (2005:

88) suggest that the geographically broad but socially restricted distribution of Ahk'utu' molded-carved ceramics corresponds to the incorporation of elites across the southern Lowlands—not just at Caracol—into a loosely integrated “pan-Maya hegemony,” an economically-focused successor to the Tikal- and Calakmul-centered alliances of the earlier Classic period. However, the regionally specific distribution of Sahcaba and Ahk'utu' molded-carved types more probably indicate smaller, local alliances or exchange networks, not a political arrangement encompassing the whole southern Lowlands.

Copan

At the three sites discussed above, royal courts were violently terminated by external enemies. While their archaeological records furnish valuable information about Terminal Classic practices of inequality, there is little to suggest that those inequalities played a primary role in bringing down their dynasties. The case of Copan (**Figure 3.9**) is different: as discussed below, its royal family and many epicentral aristocratic households were overthrown in the early ninth century. Subsequently, different—but still recognizably Maya—material practices connected to unequal status are visible in the archaeological record, even before later, potentially non-Maya occupations at the site. The published data thus support an internal revolt at Copan, in contrast to events at previously considered sites.

Ceramic chronology and the culture history of Terminal Classic Copan

Any discussion of elite material culture at Copan in the Terminal Classic period is complicated by ongoing debates surrounding the site's late chronology. In one scenario, the end of divine kingship at Copan ca. A.D. 822 was followed within about 150 years by the breakdown of other social institutions and the abandonment of the Copan Valley, which was subsequently re-occupied by non-Maya groups. In the other, the valley's population dwindled gradually over centuries, with culturally Maya people—among them the descendants of the kingdom's Late Classic inhabitants—continuing to live in the area around Copan into the fourteenth century A.D. The controversy centers on the reliability of obsidian hydration dating (see Anovitz et al. 1999; Ridings 1996), which has been used to support the protracted decline scenario (e.g., Freter 1992; Webster and Freter 1990), and on the related issue of ceramic chronology.

In the first of two ceramic sequences for Copan, René Viel identified an eighth- and ninth-century ceramic complex (Coner), distinguished by the presence of Copador polychrome and types in the Surló group (including Surló orange-brown and Madrugada modeled-carved), and by the absence of Fine Orange and related types (Viel 1983: 520 – 525, 537 – 538). In this sequence, Coner was succeeded by an Early Postclassic Ejar phase, represented by funerary offerings and a few sherds from the surface of Ballcourt B in the El Bosque zone, and identified primarily by the presence of Tohil plumbate. Viel's revised sequence moved the beginning of the Coner phase back to ca. A.D. 600 and defined an "Epiclassic" or Terminal Classic facet (Coner 2) spanning the period from ca. A.D. 830 to 950 and identified by the co-occurrence of typically Coner types with Fine Orange vessels, including Pabellón molded-carved (Viel 1993: 16-17). At the same time, Viel divided the Ejar phase—defined as "a heterogeneous assemblage including anything

obviously post AD 800 and non-Coner”—into pre- and post-Tohil plumbate subcomplexes, Ejar 1 and 2. Somewhat confusingly, Ejar 1 and Coner 2 were proposed to be contemporaneous on the basis of Fine Orange pottery associated with both Coner and Ejar materials (Viel 1993: 17). In this sequence, Ejar 1, defined solely by non-utilitarian, imported ceramic types, represents high-value vessels believed to have co-existed with utilitarian and non-utilitarian Coner types. Except that Ejar 1/Coner 2 was not formally distinguished as a separate complex, these revisions brought Copan’s ceramic sequence more or less into line with those of other southern Lowland Maya centers.

These proposals received support from evidence at other sites. In a dissertation widely regarded as the definitive summation of Copan’s ceramic chronology, Cassandra Bill (1997: 14 – 15) suggested a starting date for the Coner phase of not later than A.D. 650, and probably closer to 600. This suggestion derived from the fact that vessels of the Copador polychrome ceramic type, typically considered the main diagnostic marker of the Coner phase, were recovered from the site of Cerén in El Salvador. There, Copador ceramics were associated with contexts whose average 1σ radiocarbon date was A.D. 500 – 680 (Sheets 1992: 110). Meanwhile, radiocarbon dates from Group 10L -2, the residence of the final effective king of Copan, fell between A.D. 810 and 910. If it is accepted that the political changes marking the end of Classic kingship at Copan coincided with transitions from Late Classic to Postclassic ceramic types and modes, the Coner phase should thus have concluded by ca. A.D. 900 (Bill 1997: 15).

If the chronology proposed by Webster and Freter (1990) is correct, however, utilitarian Coner types—at least as those types are presently constituted—would have continued to be produced into the Early Postclassic period. What Viel identified as Ejar 2

is in their model redefined as a subcomplex within a post-A.D. 950 ceramic complex that also included pottery derived from Late Classic Coner forms, analogous to the relationship between Ejar 1 and Coner 2. Webster and colleagues (2004) compared occupation dates derived from obsidian hydration for 11 small, residential sites in the Copan Valley with 16 dates obtained by accelerator mass spectrometry from bone collagen recovered from burials at those sites (Webster et al. 2004: 238 – 241). They found a close fit between dates obtained by the two methods, concluding that obsidian hydration dating is generally reliable in the Copan Valley. Some of the authors' radiocarbon dates are in themselves relevant to the nature of Terminal Classic society at Copan. The 1σ range of one calibrated radiocarbon date from a residential group with almost exclusively Coner (and no Ejar) ceramics, Site 99A-18-2, was A.D. 985 – 1029, after the end of the Coner phase in Viel's (1993) revised ceramic sequence and in Bill's (1997: 15) sequence, which places the end of Coner at ca. A.D. 900. The 2σ date of the sample was A.D. 897 – 1154. A burial from the same complex was dated to cal. 1σ A.D. 1288 – 1393 (2σ A.D. 1278 – 1411). These findings are suggestive, although they do not conclusively prove that Coner or Coner-derived pottery was still being produced after 950 (Webster et al. 248 – 250, 254).

The Copan Postclassic Archaeological Project carried out additional radiocarbon testing of nine samples (five pieces of burned wattle and daub, three samples of human bone, and one sample of burned cotton seeds) recovered from Ejar-phase occupation at El Bosque (Manahan and Canuto 2009). Calibrated dates from these samples clustered between A.D. 970 and 1085, with one outlying date of cal. A.D. 1260 (Manahan and Canuto 2009: 566). The buildings from which the samples were retrieved represent a

distinct architectural style from Late Classic residential structures, facing onto a shared open space instead of being clustered around smaller patios. Their platforms were faced with cut stone taken from earlier buildings in the vicinity and included such blocks in their fill. Similar structural and settlement layouts are attested for Early Postclassic settlements in central Honduras and El Salvador (e.g., Baudez and Becquelin 1973: Figures 33 and 42; Dixon 1989: Figures 6 and 8). Diagnostic Ejar ceramics were recovered from middens, construction fill, and burials associated with these structures, as were utilitarian ceramics of types previously not described at Copan. Comprising a complete assemblage in themselves, these non-Coner utilitarian ceramics were proposed to make up the missing component of the Ejar ceramic complex (Manahan and Canuto 2009: 566). Possibly made from the same clay source as Coner-phase Zico ceramics, Ejar utilitarian vessels evince different production techniques in that their temper tends to be much coarser, while their forms have more in common with central Honduran ceramic complexes than with Coner (Manahan 2004: 114 – 115).

While the two competing models for the Terminal Classic Copan Valley are incommensurable as regards the “big picture” and the obsidian hydration data, some details of events might be reconciled based on radiocarbon dating alone by dispensing with the presumption that non-Maya groups who imported Ejar 2 fine wares and made Honduran-like utilitarian pottery need to have found the Copan Valley deserted when they arrived. A situation in which declining numbers of Coner-using Mayan speakers coexisted with culturally non-Maya people at least until ca. A.D. 1000 could account for the overlapping radiocarbon dates from El Bosque and the rural residential group 99A-18-2. For present purposes, something like this scenario is tentatively presumed to have

obtained. As discussed below, the material evidence may best support a gradual decline in the fortunes of Copan's ruling family, punctuated by a single episode of monument and building destruction soon after A.D. 822, and followed by a post-royal period during which some peripheral elite compounds continued in use and socioeconomic inequality persisted among a diminished and perhaps increasingly non-Maya population.

Genteel poverty among Copan's high elites

The final effective ruler of Copan, *Yax Pahsaj Chan Yopaat*, probably lived with his extended family in Group 10L-2, a domestic compound including two courtyards (A and B) surrounded by masonry buildings and an attached complex of humbler structures that could have functioned as servants' quarters (Andrews and Bill 2005). Home to a high-status household since the Early Classic period, Group 10L-2 became the residence of Copan's royal family in the mid- to late sixth century A.D. (Andrews and Bill 2005: 306 – 307; Sharer et al. 2005: 185). The royal status of its inhabitants during the reign of *Yax Pahsaj Chan Yopaat* is confirmed by the presence of a *wite'naah* (Str. 10L-29), identified as such by mosaic glyphs on its southern façade, which was constructed in A.D. 738, under that king's predecessor (B. Fash 2009: 157 – 161; W. Fash et al. 2009: 215).

By the end of the eighth century, Group 10L-2 had undergone a series of renovations which increased the enclosed architectural space available to its inhabitants, but which simultaneously restricted access to those spaces. Its two previously open courtyards were enclosed by expanded structures and other barriers (Andrews and Bell 2005: 309). Late in the group's occupational history, probably early in the ninth century,

its residents—perhaps including *Yax Pahsaj Chan Yopaat* himself, who lived until ca. A.D. 820—allowed trash to build up in middens behind buildings and in patios. Although the picture of a garbage-strewn residential compound has been taken as a breakdown in the ability of Group 10L-2's royal residents to organize trash removal (e.g., Andrews and Bill 2005: 301 – 302; Andrews and Fash 1992: 86), earlier generations of residents were not notably more fastidious.

As defined by William Doonan⁴, Early Coner (ca. A.D. 650 – 750) and Late Coner (ca. A.D. 750 – 820) garbage was also never cleared out from many of the areas where it accumulated, principally between building platforms and other architectural features, but also on the surfaces of the group's two courtyards (Doonan 2010: 6 – 7, Figures 4, 5, and 6). Terminal Coner (ca. A.D. 820 – 900) middens analyzed by Doonan averaged 3.334 m³ in volume, while Late Coner middens averaged 2.975 m³ and early Coner middens averaged 1.874 m³ (Doonan 2010: 155 – 162). Because the three periods have different durations in Doonan's proposed chronology, the volume of the midden deposits from each period needs to be divided by the number of years in that period in order to permit meaningful comparisons among them. This is not to imply that the middens accumulated at a constant rate per year, or were not subsequently modified or cleared out. Using Doonan's proposed durations, Early Coner middens associated with Group 10L-2 had an average volume per year of 0.01874 m³/year, Late Coner middens an average volume per year of 0.0425 m³/year, and Terminal Coner middens an average volume per year of 0.041675 m³/year. In other words, average midden volume per year was slightly greater for Late Coner contexts than for Terminal Coner ones, and the

⁴ Doonan (2010) divides the Coner phase into Early, Late, and Terminal facets, corresponding to an earlier division into Early, Middle, and Late facets (Bill 1996; Doonan 1996). Doonan's 2010 nomenclature is used here.

average volume per year for both Late and Terminal Coner middens was a little over twice than that of Early Coner middens. This difference may be best accounted for by the increased prosperity of the compound's inhabitants beginning around A.D. 700, while the most telling feature of the Terminal Coner deposits in Group 10L-2 is not that they exist, but how they compare to earlier middens.

Doonan (2010) found significant differences in use-wear patterns on obsidian blades deposited in late Coner midden contexts in the two courtyards of Group 10L-2 and the attached El Cementerio group. Wear patterns on Late Coner blades in Courtyard A were consistent with the space having been used mainly for ritual activities, perhaps including feasts, and perhaps for the stockpiling of fresh blades, while El Cementerio could have been a locus of food preparation given higher than expected marks from hard sawing on blades found there. Late Coner blades from Courtyard B, meanwhile, showed wear consistent with woodworking (Doonan 2010: 60 – 64). The inhabitants responsible for the Terminal Coner midden deposits seem not to have observed these same distinctions in use function for the three areas, and fewer unused or minimally used blades appear in those middens (Doonan 2010: 71). These diachronic differences plausibly reflect changes in the kinds of activities in which the group's inhabitants engaged following the effective end of kingship ca. A.D. 822, but before the destruction of its buildings. A decrease in the number of unused blades discarded in and around Courtyard A is also consistent with trends noted by Kazuo Aoyama for discarded obsidian recovered from late middens in the Acropolis: there, the quantity of obsidian decreased over the Late Classic period, perhaps indicating a protracted decline in royal political and economic power (Aoyama 2001: 355 – 356). By contrast, purpose-made

spindle whorls, a less ambiguous signature of yarn and likely cloth production than perforated potsherds, were found in Terminal Coner middens from both courtyards. The same is true of Late Coner middens, suggesting that yarn production, unlike woodworking and butchering, was consistently carried out in both courtyards over the Late and Terminal Classic periods.

Meanwhile, personal adornment in the Terminal Classic period was sufficiently rare or highly valued that no ear ornaments of any material—jade, bone, or ceramic—made their way into securely dated Terminal Classic middens at Group 10L-2. Their absence represents the culmination of a trend in the material cultural record that differs from the distribution of obsidian. Of 192 such ornaments from Group 10L-2, 165 came from contexts dated to the Acbi ceramic phase (A.D. 400 – 650), 32 from Early or Late Coner contexts, and none from Terminal Coner middens (Doonan 1996: 150 – 151). The economic decline of Copan’s late elites is also evident from the ceramic record: Terminal Classic middens in elite precincts, including Group 10L-2 and other architectural groups, show smaller percentages of high-value ceramics, and a decrease in the variety of decorative modes, relative to middens from the Early and Late Coner phases (Bill 1997: 538 – 539; Viel 1993: 17).

To judge from isotopic data, for most ninth-century inhabitants of the Copan Valley, maize comprised between 68% and 86% of dietary intake, even though zapote, coyol palm, nance, chayote, squash, beans, and avocado were also cultivated (Lentz 1991). People living in elite residential compounds appear to have had more variety in their diets than lower-status individuals, but—in contrast to the situation at Caracol (see above), even elite children at Copan in the Terminal Classic period suffered from poor

nutrition leading to physiological stress (Webster et al. 1997: 58; Storey 2005: 336 – 338). Although servants and lower-ranking members of *Yax Pahsaj Chan Yopaat*'s extended family would likely have been among the residents of Group 10L-2, Doonan (1996: 197) proposed that the absence of chert chopping blades at the group suggests that they were not involved in clearing fields for cultivation. If this interpretation is correct—and it is not necessarily so, since the storage of agricultural tools near fields may be a more parsimonious explanation—then, even in decline, the royal family could have been provisioned mainly or entirely through tribute or by using the labor of other households to cultivate its own estates.

Until at least A.D. 822, Copan remained a kingdom presided over by a sacral ruler whose ability to lead depended in large part on costly and ritualized performances of authority. Material artifacts directly tied to the person of its last fully effective king, *Yax Pahsaj Chan Yopaat*, can thus be thought of as representing the best of what Copan's elite class was capable of producing in the site's latter years. This ruler's late monumental works are strikingly limited, especially considering his long life and the projects of earlier rulers. Instead of stelae, he commissioned stone incensarios (*saklaktuun*) for the 9.18.15.0.0 *k'atun* ending of A.D. 805 and his two-*k'atun* anniversary in office three years earlier (Stuart 2002). These were displayed on the terrace of Str. 10L-19, in the Acropolis, a less accessible location than the Great Plaza where the monuments of the earlier kings *K'ahk' U Ti' Witz' K'awiil* and *Waxaklajuun U Baah K'awiil* are concentrated. His burial shrine, Str. 10L-18, is more substantial, if still relatively modest. Its vaulted, masonry superstructure consisted of two rooms, an inner and an outer, with the inner room situated above the tomb (accessible, at first, via a

stairway that was sealed off when the king was interred) and connected to the outer room via a doorway obstructed by a bench or altar (Baudez 1994: 189). The jambs of the two doorways are each carved with a scene of *Yax Pahsaj Chan Yopaat* performing a martial dance (*u baah ti ak'ooot*), each dance differently named, at four distinct places represented by elaborate toponymic registers beneath his feet. He carries weapons and paraphernalia associated with the Jaguar God of the Underworld, and in at least two of the scenes wears a Teotihuacan-style balloon headdress. The side walls of the outer room are each inset with a T-shaped niche surrounded by a hieroglyphic text (Baudez 1994: 196). These are now eroded and incomplete, but a reference to a *wite'naah k'awiil* and the date 9.18.10.17.18 can be made out in one text. The inscription may continue on Stela 11 (9.19.10.0.0, A.D. 820), most likely a pillar that once supported the lintel of the wide outer doorway (Martin and Grube 2008: 212; Proskouriakoff 1950: 143; cf. Baudez and Dowd 1983: 491). As discussed in Chapter Five, this monument also mentions a *wite'naah*. Str. 10L-18 thus either described itself as a *wite'naah* or indicated a second such building, Str. 10L-29 in Group 10L-2.

When *Yax Pahsaj Chan Yopaat* died, sometime in the two years following the dedication of Stela 11, he was interred in the tomb previously prepared as part of the construction of Str. 10L-18. This consisted of a vaulted upper chamber with a sunken crypt in the floor, accessible by four steep steps. The burial was looted in antiquity, sometime before the collapse of the vault; as Baudez (1983: 413) notes, the total absence of ceramic vessels and the paucity of human bone suggest that the intent was not simply to recover valuable jade objects, as was the case at Tikal, but to remove everything from the tomb. The objects that remained behind to be discovered by the Proyecto

Arqueológico Copán were precisely those small enough to escape the looters' attention, but they nevertheless give some idea of the kind of material culture available in life to the last effective ruler of the polity. Recovered from the tomb were two small fragments of eccentric flints, more than 50 fragments of obsidian blades and lancets, and pieces of a flat-bottomed calcite bowl incised with a ritual scene. Also present were four polished pyrite or hematite tesserae, formerly part of a mirror; two jade beads and four broken pieces of other small jade ornaments; and six fragments of thin speleothems, none longer than 6 cm.

Shell ornaments were more abundant than jade. Among these ornaments were more than 100 *Olivella dealbata* and *Oliva porphyria* shells, probably once part of a dance belt; one or more necklaces comprised of 82 perforated *Prunum apicinum virgineum* shells; and more than 140 other plaques, pendants, beads, and flat rings of mother-of-pearl. These last, of which 30 were recovered, resemble the ornaments depicted in *Yax Pahsaj Chan Yopaat*'s Teotihuacan-style headdress on the southern doorjamb reliefs. A minority of shell items exhibited burn marks, especially the nacre rings (15 of 30) and some circular shell plaques (24 of 62). Worked human and faunal bone objects were also found, among them a fragmentary, carved human cranium and pieces of an engraved scepter made from a human long bone (Baudez 1983: 413 – 420). The body of at least one young child was associated with the tomb, presumably as a sacrificial offering, but this was plausibly interred above the chamber itself, since two deciduous teeth and two fragments of a child's cranium were found included in the rubble of the vault collapse rather than buried beneath it (Becker and Cheek 1983: 412).

All together, these artifacts point to an appropriately regal burial assemblage including finely-crafted vessels and expensive costume elements. Nevertheless, the small scale of Str. 10L-18 itself hints that labor and material resources available for the project could have been more limited than might be expected for a royal mortuary shrine. These limitations are all the more striking if that shrine was also intended as a new *wite'naah* meant to establish *Yax Pahsaj Chan Yopaat* as a major source of dynastic legitimacy for future kings, analogous to *K'ihnich Yax K'uk' Mo'*. As discussed below, these efforts failed in fairly short order after the ruler's death.

The fall of the ?Xukuup dynasty

Copan Altar L, the sole known monument commissioned by *Yax Pahsaj Chan Yopaat*'s successor, *U Kit To'k'*, commemorates his accession to the throne on 9.19.11.14.5 (February 6, A.D. 822) (see Chapter Four, this volume). Never completed, the altar does not provide its own dedicatory date, but it was probably begun soon after that event. The decisive end of the ?*Xukuup*⁵ dynasty thus came sometime in the early A.D. 820s.

Evidence for the intentional destruction of buildings in the Acropolis and Group 10L-2 indicates that that end was a violent one. Excavations by E. Wyllys Andrews and Cassandra Bill in Group 10L-2 showed that the lintels above doorways and niches in Strs. 10L-29 and 10L-33 had been burned, leading to the collapse of their vaults. Other buildings—Strs. 10L-31, 10L-41, 10L-43, and 10L-44B—were also intentionally brought down, presumably in the same event. The destruction targeted ritual and domestic

⁵ See Chapter Four, note 7 for an explanation of this tentative reading, which is not original to the present work.

structures alike. The cleanliness of the floors underneath the fallen vaults is consistent with two quite compatible possibilities: that the buildings were occupied and maintained up to the time of the attack, and that the buildings were emptied of their contents immediately prior to demolition. In either case, deposits of smashed and scattered vessels and musical instruments, like those characterizing ritual termination/renovation deposits at the El Zotz and El Perú-*Waka'* Acropoli, are absent from these contexts (Andrews and Fash 1992: 84 – 86). When vault and wall stones collapsed towards the outsides of the buildings, they covered the middens around them, confirming that most midden deposits had built up before the royal family's abandonment of the compound.

At least six altars (Altars F' and I' and CPN 2843, CPN 19222, CPN 19469, and CPN 23748), and probably a seventh (Altar W, found by the Peabody Museum expedition in 1892) were found broken on terraces or on top of midden deposits in Group 10L-2. All date to *Yax Pahsaj Chan Yopaat*'s reign. Several of the altars were likely kept on benches in the superstructures of the buildings by which they were found, and fell when the buildings' back walls collapsed. At least one small, round altar, CPN 19469, lay exposed for long enough that trash and earth accumulated on top of it, only later being covered by the collapsing north wall of 10L-30 (Andrews and Fash 1992: 74 – 86). This same episode likely saw the toppling of Stela 11, which could have precipitated the collapse of Str. 10L-18's outer lintel and vault. The stela broke in half; one piece was found at the base of the structure by the Peabody Museum expedition, and the base was later uncovered by the Proyecto Arqueológico Copán (Baudez and Dowd 1983: 491).

Older royal projects were attacked as well, not just buildings directly connected to *Yax Pahsaj Chan Yopaat*. In the Acropolis, the ritual buildings Strs. 10L-22 and 10L-

22A, built under *Waxaklajuun U Baah K'awiil* and his successor *K'ahk' Joplaj Chan K'awiil*, probably both had their lintels burned (Andrews and Bill 2005: 302 – 303; Trik 1939: 103). Here, too, Terminal Coner trash had built up at the bases of the structures before their vaults fell (Andrews and Bill 2005: 303). The sub-royal elite residential complex Group 9N-8, in the Las Sepulturas residential enclave, was also targeted. Str. 9N-82 was the focus of special attention: its elaborate sculptured façades, depicting maize deities seated on benches or emerging from the jaws of centipedes, were partially dismantled and burned (W. Fash 1989: 52 – 54). Another burned building in the same group, Str. 9N-81, also bore figural sculptures, jaguar heads wearing bat headdresses, set with tenons into the walls to either side of the door. Paraphernalia associated with the ritual ballgame were found on the floor of Str. 9N-82, where they had apparently fallen from storage locations high on the building's walls or in its rafters. They included one complete stone yoke, fragments of another, and two sculpted hachas depicting a skull and a macaw head (Webster and Abrams 1983: 292). For late Copan elites, such objects were apparently prized possessions that could be owned by individuals or families.

Previous readings of Stela 11 as describing the destruction of buildings (e.g., Grube and Schele 1993; Wagner 1995) suggested that this occurred in A.D. 820. That would mean that *U Kit To'k'*'s attempted succession to the throne took place after the burning events and a two-year interregnum (Doonan 2010: 6). The alternative interpretation advanced in the present work is compatible with a different and more parsimonious scenario: that the burning occurred only after *U Kit To'k'* had taken the throne, and that it coincided with the cessation of work on Altar L. This possibility is consistent with a radiocarbon date of cal. 1 σ A.D. 780 – 895 for a burned midden just

south of the platform wall of Str. 10L-22, suggesting that Group 10L-2 could have remained occupied for about a generation after *Yax Pahsaj Chan Yopaat*'s death, while still being burned and abandoned before A.D. 900 (Andrews and Fash 1992: Table 1). It also accounts for the fact that Stela 11 itself was targeted for breakage, without needing to posit a second episode of widespread destruction.

Post-royal elites at Copan

Not all elite compounds in and around Copan were affected in the same way by the disaster which overtook Groups 10L-82 and 9N-8. Group 9J-5 (**Figure 3.10**), a residential group with six courtyards or patios located in the foothills northwest of the Principal Group, presents a picture of elite life at Copan after the end of the ?*Xukuup* dynasty. Excavated by the University of Pennsylvania and Harvard projects, the group's late occupation is discussed by Allen Maca (2002). The complex was partially remodeled, and perhaps repurposed, during the ninth century A.D. A masonry building on Plaza B, Str. 9K-88, was razed to the lowest courses of its substructural platform, bringing it to the level of Plaza B to the north, in preparation for new constructions. Maca (2002: 248 – 250) dates this event on ceramic grounds to the years around *Yax Pahsaj Chan Yopaat*'s death. Unlike at Groups 10L-2 and 9N-8, this demolition did not involve large-scale burning and did not result in the abandonment of the compound. The dismantling event was likely contemporaneous with the blocking-off of existing access routes to Plaza B using piles of trash. Based on their ceramic contents, both deposits date to the Terminal Coner facet, but one (in the space between Strs. 9J-33 and 9J-34) appears to be household trash relocated from its primary context, while the other (on the stairway

of Str. 9J-38E-1st) could represent one or more episodes of large-scale feasting, perhaps by the work party that undertook Str. 9K-88's demolition and rebuilding (Maca 2002: 242 – 246).

With the superstructure and platform razed, a thin stucco floor was laid down over Plaza B and the remains of Str. 9K-88-3rd's platform, and a new superstructure (Str. 9K-88-2nd) was built. This building was made of perishable materials, with the important exception of a central stone bench, and was supported by posts penetrating the new stucco floor. A second line of postholes seems to indicate that the designation Str. 9K-88-2nd conflates two successive perishable structures occupying the same space (Maca 2002: 249 – 251). An entirely new building, Str. 9K-90, was constructed at the southeast corner of Str. 9K-88-3rd's footprint, overlapping the corner of the old platform (Maca 2002: 258). The platform of Str. 9K-90 was made of well-cut blocks of tuff, including sculptural façade elements, presumably taken from older buildings. Str. 9K-88-3rd is an obvious candidate for the source of these reused materials. A drain channel running along the north side of Str. 9K-89, incorporating two courses of cut stones on each side, is stratigraphically subsequent to the dismantling of Str. 9K-88-3rd and may also have used materials from that building (Maca 2002: 266 – 267).

The second iteration of Str. 9K-88-2nd was eventually dismantled in its turn, although the bench remained in place and must have been incorporated into still a third perishable superstructure. This last version of the building, Str. 9K-88-1st, is indicated only by a low retaining wall, not more than 0.5 m high, running east-west along the former north edge of the Str. 9K-88-3rd substructural platform. This wall, which covered the postholes of Str. 9K-88-2nd, was comprised of masonry seemingly scavenged from

Str. 9K-88-3rd, including vault stones and fragments of its sculpted façade. It likely served to reinforce the fill of the substructural platform and to support the superstructure (Maca 2002: 252). A Terminal Coner midden covering 60 m² then accumulated on the north side of Str. 9K-88-1st and over the final floor of Plaza B. (Maca 2002: 251 – 253). The midden covered a deceased person (Burial 6) at the junction of Strs. 9K-88 and 9K-38E, who was laid on a bedding of tuff cobbles on top of the plaza floor, sprinkled with cinnabar, and then covered over directly by the midden deposit. Burial 6 has at least one contemporaneous counterpart, Burial 4, diagonally opposite at the corner of Strs. 9K-88 and 9K-90. Together with a third interment, Burial 2, south of Str. 9K-88, and a hypothetical fourth burial somewhere near the corner of 9K-89, these graves could have held cosmological significance as marking the cardinal directions (Maca 2002: 258). Burials 4 and 6 were each associated only with a single stone or shell bead, but the midden itself contained about 17% fine ware vessels, a fine-paste figurine, and a fragment of a circular pectoral ornament carved from a cervid cranium which depicts a ruler holding a Serpent Bar (**Figure 3.11**) (B. Fash, personal communication, cited in Maca 2002: 257; Maca 2002: 257 – 258, 272). As with the midden from the stairway of Str. 9J-38E-1st, these contents were interpreted as more consistent with the byproducts of feasting or ritual activity, perhaps sponsored by a wealthy household, than with an ordinary domestic assemblage (Maca 2002: 256).

One last midden deposit covered the floor of Str. 9K-88's final superstructure. Its contents included Coner-like utilitarian vessels and imported Terminal Classic fine wares (Maca 2002: 269), indicating continued participation in long-distance exchange by groups using Group 9J-5. While Maca (2002: 268 – 271) sees this deposit as sufficiently

different from Terminal Coner and Ejar assemblages to warrant the creation of a specifically Terminal Classic ceramic phase, Coaj, there seems little reason to regard it as anything other than a functionally specific variant of Terminal Coner given the variety of types and forms already well attested for that facet (Bill 1997: 31 – 396). In any event, the presence of a midden inside the superstructure itself is hard to square with a continued residential use for the building, and the lack of whole vessels argues against votive deposition. A deposit of carbon underneath an inverted metate returned dates of cal. 2 σ A.D. 779 – 995 (1 σ A.D. 785 – 977) (Maca 2002: 270, Table 7.4), so a nearby household with some access to imported fine wares may simply have used the building as a dump site after its abandonment by the high-ranking group that organized its remodeling.

Maca (2002: 254 – 255) dates the midden covering the north side of Str. 9K-88-1st to ca. A.D. 830 on the basis of its ceramic types and a single radiocarbon date. The implication is that all the construction events discussed above happened within about a ten-year span, provided that the destruction of Str. 9K-88-3rd was in some way related to the end of the dynasty. In particular, Strs. 9K-90 and 9K-88-1st were proposed to be contemporary because of their incorporation of mosaic blocks from Str. 9K-88-3rd (Maca 2002: 262). While the contemporaneity of these two structures is plausible, the proposed A.D. 830 cutoff date is too specific to confirm such a short chronology for the above construction sequence: the sample's 1 σ and 2 σ ranges are A.D. 778 – 892 and 693 – 964, respectively (Maca 2002: Table 7.4). The midden inside Str. 9K-88-1st does very likely postdate the exterior midden, and a date in the early tenth century is highly plausible.

El Perú-Waka'

The capital city of the *Waka'* dynasty, the site of El Perú-Waka' (**Figure 3.12**) presents useful archaeological comparisons to the other sites considered in this chapter. As at Copan, there is compelling archaeological evidence for a revolt by one faction of El Perú-Waka''s aristocracy and for the persistence of social inequality after the end of kingship. To an extent, Terminal Classic developments at El Perú-Waka' parallel processes at the northern Peten sites of Tikal (discussed below) and El Zotz (Chapter Five, this volume), including the interruption of royal building projects. Yet the archaeology also suggests ninth-century political dynamics unique among the centers discussed here. The last *Waka'* ruler may have faced the unenviable combination of domestic insurgency and external aggression, both recorded in modifications to royal architecture at the site. The fall of the royal court was followed by a period of at least three or four generations during which noble families clung to power, continuing to engage in symbolically important ways with earlier royal monuments and buildings. This post-dynastic period coincided with El Perú-Waka''s highest population—every domestic compound excavated so far yielded substantial evidence of Terminal Classic habitation—although, like other sites in northern Petén, the center was basically abandoned by the end of the tenth century (Eppich 2007: 4). Archaeological data from El Perú-Waka' provide a picture of what material culture was like for elite households, on both the monumental and domestic scales, before and after the end of the *Waka'* dynasty.

Abortive remodeling at the Acropolis

El Perú-*Waka*'s Acropolis was home to the *Waka*' royal family during the Late Classic period, and the instability and eventual fall of that dynasty are evident in architectural modifications to the complex. The east side of the Acropolis' southern courtyard was bounded in the eighth century A.D. by a long range structure, Str. L12-4B, whose masonry walls supported an elaborate sculpted stucco façade (Lee 2012: 53 – 54). Another long structure, Str. L11-38, stood across the courtyard on the western side, although the two buildings were not mirror images. Near the beginning of the Terminal Classic period, both structures were substantially modified, probably as part of a single construction program. Ceramics associated with these constructions pertain to the transitional Late-to-Terminal Classic Morai phase, ca. A.D. 770 – 820 (Eppich 2011: 131 – 135; Lee 2012: 44).

In this project, a gently sloping ramp was added to the eastern side of Str. L11-38, facing the courtyard. The surface of the ramp was formed by paving stones atop architectural fill, covered with plaster and supported at the base by a low retaining wall made of two courses of stones. Attested in several Morai contexts within the Acropolis, such ramps, which structurally resemble and may have alluded to the banks of a ballcourt, are highly unusual in Maya palatial architecture and might have been an innovation specific to that time and place. The ramp would have been walkable, and, in the absence of attested steps, may have served as an access route to Str. L11-38's range superstructure. The top of the retaining wall, and thence the ramp, was accessed via a low outset stairway which initially consisted of a single step and was built up slightly later in the Terminal Classic period. The ramp covered a Late Classic stairway, probably built near the end of the eighth century A.D. Unlike Str. L12-4B, the superstructure of L11-38

does not appear to have been significantly modified during the ninth century (Lee 2012: 44 – 50).

Probably around the same time, Str. L12-4B was partially demolished. The process began with a ritual of deactivation involving burning, musical performance, and the smashing of instruments and vessels, much as occurred at El Zotz (Lee 2012: 59; see Chapter Five, this volume). These activities left a 30 – 40 cm thick layer of gray ash on the floor of at least one chamber of the structure, some or all of which might have derived from ritual fires outside the building given the fineness of the ash and the uniform thickness of the layer. Broken ceramics, including vessels, were included in the deposit, as were a broken flute and a turtle carapace. Unlike at the El Zotz Acropolis, these objects were deposited whole rather than being smashed and scattered (Lee 2012: 58 – 59).

Following the deposition of the ash layer, builders began dismantling the range structure, starting with its sculptural façade. Excavations in two chambers of the superstructure recovered hundreds of pieces of modeled and painted stucco representing decorative elements and parts of human and supernatural figures. The characters depicted on the façade appear to have included a ruler wearing a green-painted pectoral ornament, a seated figure in a beaded skirt, and an unidentified deity (Lee 2012: 163 – 164). The builders also demolished the vault, removing its stones for use elsewhere, and walled up the doors to transform the range structure into a congeries of construction pens (Lee 2012: 56 – 57). A ramp of rubble fill in a matrix of earth and marl, capped with rough steps of stone, was then built up against the eastern face of the Acropolis platform and the Str. L12-4B superstructure. The first few courses of an outer face made of dressed stones

were laid down over the base of this construction ramp or stair, but the process was never completed (Lee 2012: 160).

The footing stones at the base of the new ramp included two carved blocks taken from a Late Classic hieroglyphic staircase, situated on the axis of the building (Lee 2012: 60). The blocks depict two lords playing ball. One of them is probably the El Perú-*Waka'* ruler *K'ihnich Bahlam* II; the other is labeled as *Yuknoom Yich'aak K'ahk'*, a king of Calakmul who took office in A.D. 686. Since a new king was in power at Calakmul by A.D. 702 (Martin and Grube 2008: 112), the panel was probably produced at the end of the seventh century. Another block, found where it had fallen on the slope above the footing, bears the title *ix kaloomte'*, known to have been applied to *K'ihnich Bahlam's* wife *K'abel*, herself a princess from Calakmul's *Kan* dynasty (Freidel and Escobedo 2006: 6). The demolition of Str. L12-4B, and the construction of ramps below it at Str. L11-38, thus appear as aspects of an ambitious, labor-intensive project begun under royal patronage. The re-use of sculpted blocks emphasizing a previous king's close relationship with the *Kan* court would have recalled a period when Calakmul flourished in military might and the *Waka'* dynasty prospered as its ally (Lee 2012: 234 – 35).

That the project was not finished in its originally intended form constitutes a further similarity with the remodeling effort at El Zotz. The presence of stones taken from an earlier hieroglyphic stairway suggests that the goal had been to produce a stairway, as opposed to a steep platform face or a ramp like that on Str. L11-38. In the event, however, the builders instead constructed two low walls of minimally worked stone, one near the base and the other near the top of the ramp. These were not limited to the eastern side of Str. L12-4B, but extended along the whole perimeter of the Acropolis.

Their most likely function is as supports for wooden palisades, and the abrupt transition from one architectural project to the other points to an external threat (Lee 2012: 205 – 206). Since the Acropolis was not subsequently remodeled, the end of the *Waka*' dynasty itself probably occurred not long after the palisade was erected.

The contested legacy of the Waka' dynasty

During the earlier Classic period, Str. M13-1, a conglomeration of pyramidal platforms and ritual buildings, served as an ancestor temple for the *Waka*' royal family (Navarro Farr et al. 2008: 116). With construction beginning at least as early as the Early Classic period, by the early ninth century Str. M13-1 included a multi-roomed structure on the northern platform, a high central temple, and a smaller shrine on a platform projecting to the south (Navarro Farr et al. 2008: 118 – 119, 128). Beginning early in the ninth century, these buildings and the plaza to the west were the focus of both ritualized desecration and acts of veneration, perhaps organized by competing factions within El Perú-*Waka*'s Terminal Classic society.

Massive termination deposits on the western side of the building contained ornaments of *Oliva* shell and nacre; broken and burned projectile points; ceramic ocarinas and figurines; fragmentary grinding stones and stelae; the remains of intense, localized fires; and, all told, probably several hundred thousand ceramic sherds. Materially similar deposits were found in the superstructural shrines (Navarro Farr et al. 2008: 124 – 131). These deposits would have impeded access to Str. M13-1's temples, but more importantly, they constituted an attempt to symbolically deactivate both the building as a religious site and the *Waka*' royal line. This was achieved in part by the inclusion of

shattered monuments in the termination deposits, but also by the burning and scattering of previously curated human long bones and crania—perhaps the ancestor bundles proposed by Olivia Navarro Farr (2009: 426 – 427; Navarro Farr et al. 2008: 126 – 127, 136 – 137) to have previously been kept in the building’s superstructural shrines. The proceedings also involved the sacrifice and butchery of living people, whose limbs and severed heads were left, still articulated and fleshed, in temple rooms and the plaza below (Navarro Farr et al. 2008: 129).

Besides smaller fragments, two substantially complete Early Classic monuments, Stelae 9 and 10, were found in association with termination deposits. Stela 10 was discovered standing in place adjacent to Str. M13-1’s northern platform, facing out onto the plaza, with termination debris were heaped up around its base (Navarro Farr et al. 2008: 137). Its highly eroded condition suggests that it might have stood exposed there for many years before the temple was deactivated, although its relief portrait of a king was also likely mutilated at that time. Found about 5 m south of Stela 10, Stela 9 was more badly broken, with fragments of its base piled up together with dirt and debris. Nevertheless, its sculptural details are better preserved, suggesting that it could have been kept in an interior space—likely one of Str. M13-1’s shrines—before being broken and hauled out. Surviving details of the figure’s Teotihuacan-style headdress on Stela 10, and a hieroglyphic reference to a *wite’naah* on Stela 9, associate both monuments with the political order established by *Sihiyaj K’ahk’* in A.D. 378 (Navarro Farr et al. 2008: 137 – 141).

Interestingly, Str. M13-1 continued to be the site of additional ritual acts, apparently aimed at venerating the ancestral and/or supernatural entities associated with

the building and the *Waka*' royal line. These included the caching of a sculpted stucco head, likely depicting the Maize God, taken from a façade either at Str. M13-1 or elsewhere at the site. The care with which the head was placed in a small niche at the base of a wall suggests reverence rather than desecration. Another reverential act following the initial desecration of Str. M13-1 was the burial of an adult male in one of the partially collapsed rooms of the northern superstructure. The grave (Burial 36) was relatively crude—a simple cist dug into an existing termination deposit and partially sealed with plaster, then covered by fallen vault stones—but the occupant may have been of high status, since he had undergone both cranial and dental modification and was buried with a bone ring and a greenstone bead. Still a third act of veneration was the deposition of a Chablekal fine gray bowl, which was inverted over a fragmentary grinding stone. These objects were placed on a bed of soft, fine earth and covered over by stones from the room's collapsed vault, carefully placed so as not to damage the vessel (Navarro Farr and Arroyave Prera 2005: 22 – 23; Navarro Farr et al. 2008: 132 – 135).

Non-royal elite households

A decline in population and a contraction in settlement are evident at El Perú-*Waka*' at the end of the eighth century—some outlying settlements were completely abandoned by elite and commoner inhabitants alike (Eppich 2012: 305 – 306)—but a significant population with pronounced political and economic inequality persisted well into the ninth century. The Tolok Group, a high-status residential compound in the southeastern part of the epicenter, presents one example. Situated on an artificial mound of limestone and bajo mud, the Tolok Group was built in the mid- or late eighth century

A.D. The group is surrounded by a low wall of dressed stone blocks that must have served as the base for wooden fortifications. Keith Eppich (2012: 278 – 279) proposed that the wall and the rest of the group's initial-phase architecture were designed and constructed as a unit, in contrast to the defensive wall hurriedly constructed around the Acropolis. While the initial construction phase included masonry-walled buildings, at least one with a stone vault, later modifications to those buildings were modest. Refuse excavated at the base of the wall and in midden contexts includes abundant sherds belonging to the early facet of the Terminal Classic Rax ceramic phase, indicating occupation in the ninth century A.D. Surface collection yielded sherds from the later Rax complex, pointing to abandonment by not later than the tenth century. Since the diagnostic markers of both facets included imported ceramic types (Altar orange and Tohil plumbate), the group's inhabitants may have remained relatively affluent, at least by the declining standards of the Terminal Classic period, until the very end (Eppich 2012: 278 – 290).

Another lineage compound, designated the Paal Group, is an even more pronounced example of how high social status was constituted at El Perú-*Waka'* after the end of kingship. Located between Plazas 2 and 3, on a massive platform constructed around the beginning of the Early Classic period, the complex consists of a residential patio group, a shrine (Str. L13-22), and an undetermined number of outbuildings (Eppich 2012: 306). The final phase of the patio group dates to the eighth century A.D., although the shrine is very plausibly later (see below), and the earliest structures clearly belonging to the Paal Group as such date to the Early-to-Late Classic transition (Eppich 2012: 317 – 318, 329). In its earlier years, the group contained only perishable structures, which were

partially replaced by masonry constructions in the eighth century, pointing to elevated status and increased wealth for its inhabitants (Eppich 2012: 330). Another episode of reconstruction occurred at the end of the eighth century or early in the ninth, around the time that kingship at El Perú-*Waka'* came to a functional end. The people who used Str. L13-22 in the Terminal Classic period dumped large quantities of ceramics, household implements, and faunal remains into Plaza 2 behind, indicating that that plaza was no longer in frequent use; the shrine, along with the rest of the Paal Group, was abandoned by the end of the ninth century (Eppich 309 – 310, 331).

The architecture and use-history of Str. L13-22 indicate that the *Waka'* dynasty's monumental legacy remained important to elite social status at El Perú-*Waka'* even after the functional end of kingship there. The shrine was built in a single phase sometime between A.D. 750 and 850. Eppich (2012: 312 – 313) tentatively favors a date in the earlier part of that range because of the quantity of trash accumulated behind the building's platform in Plaza 2, but the extensive reuse of royal monuments in its construction may be more consistent with a date after the fall of the dynasty, that is, not before A.D. 801. Four Early Classic stelae, all of them concerned with events surrounding *Sihyaj K'ahk'*'s entry into the central lowlands in the fourth century A.D., were removed from their original settings and re-erected in front of Str. L13-22. Pieces of other stelae were used to construct the steps of the building's platform, which were subsequently the site of ritual deposits including ceramic vessels and burnt sacrifices (Eppich 2012: 312). Insofar as Str. L13-22 represents an effort by the inhabitants of the Paal group to assert their own elite status and ritual authority, connections to a regal past—and perhaps especially to the political order established by *Sihyaj K'ahk'*—were

essential to that effort. Their special interest in monuments dealing with the Teotihuacan entrada raises the question of what role the evidently powerful residents of the Paal group played in the treatment of Str. M13-1. Did a high-ranking member of this household play a leading role in the revolt that toppled the *Waka'* dynasty, appropriating part of its royal legacy for himself? Alternatively, this family might have wished to be seen to venerate the old dynasty in a way analogous to an attempt at Tikal, discussed below, to restore the *Mut* court after a temporary collapse of kingship.

Tikal

By comparison to the sites discussed above, where discrete catastrophes leading directly or in short order to the disappearance of kingship are evident in the archaeological record, the data from Tikal sketch a more ambiguous picture of how royalty and other elites related to one another and to the common people during the Terminal Classic period, as well as of how courtly institutions finally disintegrated. Sharply diminished but continuous occupation into the Postclassic period is evident in the ceramic record, where molded-carved types are present which were also represented at Caracol, El Perú-*Waka'*, El Zotz (Chapter Five, this volume), Ceibal, and Nakum (see below). As at El Perú-*Waka'* and El Zotz, architectural evidence for disruptions to royal power takes the form of interrupted construction projects. Yet in contrast to other archaeological features at El Perú-*Waka'*, and to the cases of Aguateca, Caracol, and Copan, that architectural evidence also takes the form of excavations in royal mortuary pyramids instead of ritual termination deposits targeting royal facilities. Along with ceramic and architectural evidence, other material cultural residues from Terminal

Classic Tikal, before and after a proposed interregnum, provide additional details about the condition of the site's elites—an increasingly problematic conceptual category late in the Terminal Classic period

Of all the sites considered in this chapter, the Terminal Classic decline of Tikal and its elites may be the most dramatic. Where its late eighth century rulers had waged war against powerful kingdoms like Naranjo and El Perú-*Waka'*, the ninth century saw the *Mut* dynasty fragmented and exiled from its capital. Tikal's peak population, at the turn of the ninth century, reached about 45,000 inhabitants in the site's central zone (**Figure 3.13**) and the hinterland bounded by bajos and a defensive earthworks (Culbert 1973: 72; Haviland 1970: 190). Noting that substantial accumulations of Eznab-phase (ca. A.D. 850 – 980) ceramics were found at only 14 loci, as opposed to more than 200 for eighth-century Imix deposits, T. Patrick Culbert proposed that Tikal's population declined by about 90% during the Terminal Classic period. Because utilitarian Eznab pottery could usually be identified by modal differences even within types shared with the Imix complex, this estimate is unlikely to be seriously distorted by the socially limited distribution of diagnostic luxury types like Pabellon molded-carved or Sahcaba molded-carved (Culbert 1973: 67 – 73). As discussed below, this same period saw a temporary interruption, and later a final end, to the *Mut* dynasty that had ruled at Tikal since the Late Preclassic period. Nevertheless, archaeological evidence indicates that differences of social rank and wealth persisted, both during the early Eznab interregnum and, for a while, after the end of kingship.

An interregnum in the early Terminal Classic period

The failure of Tikal's *Mut* dynasty to erect period-ending stelae between 9.19.0.0.0 (A.D. 810) and 10.2.0.0.0 (A.D. 869) is discussed in the next chapter. Several lines of archaeological evidence suggest that this lacuna in the monumental record corresponds to serious disruptions in the life of Tikal's courtly elites. In fact, it is doubtful whether the city was home to a functioning royal court at all during much of that period. Not only was no one at Tikal able to commission stelae during that time (much less twin-pyramid groups or other major constructions), but the honors and protection normally due to the royal and elite dead could no longer be maintained.

Tikal Str. 5D-11-1st, in Tikal's West Plaza, was excavated by the University of Pennsylvania project and found to consist of a substantial, pyramidal mound of fill, evidently intended to support a temple superstructure but never completed. Trenching revealed a tomb, excavated to bedrock in the platform of an older structure (Str. 5D-11-2nd). The chamber contained the remains of a high-ranking elite or royal adult, buried together with six ceramic vessels belonging to the Imix complex (ca. A.D. 700 – 850), six pearls, *Spondylus* shells, feline pelts, and a greenstone pendant depicting the head of a lord wearing a Principal Bird Deity headdress. The body had been sprinkled with cinnabar and the wooden roof of the chamber covered first with reed mats and then a layer of obsidian and flint debitage (Coe 1963: 48 – 50, Figure 3; Harrison 1963: 13).

Despite the 150-year span encompassed by the Imix complex, the burial is here suggested to have occurred between A.D. 810 and 830—that is to say, the latest date at which a fully functioning king is known to have lived at Tikal and the earliest date at which one cannot be said to have done so. It thus serves as an example of elite mortuary practice in Northern Petén at the beginning of the Terminal Classic period even though

the decedent cannot be identified with any historically attested individual. The pyramid is ambitious but unfinished, lacking facing stones, a stairway, or a shrine (Coe 1963: 49 – 50). Its unfinished condition parallels the early Terminal Classic disruption in monumental construction at Tikal, but does not by itself confirm a late Imix date. Support for such a date does come from the pendant recovered from the tomb. This is carved in a Late Classic style, but the four glyphs incised on the back were found nearly completely effaced by wear, consistent with an heirloom that had seen long years of active use (Coe 1963: 49).

If this early Terminal Classic mortuary construction was interrupted by courtly collapse, older such facilities were actively targeted by ancient excavators. Such events are all the more striking because there is generally little evidence for “treasure hunting” excavations during the Terminal Classic period at most sites despite the breakdown of royal power. One can speculate that royal wealth might often have been appropriated in the context of war or rebellion at the end of the Classic period, but to whatever extent they occurred, such acts must typically have targeted objects then in use, not the grave goods buried with long-dead kings. Tikal presents a major exception to this pattern, notable both for the scale of looting operations and for the incongruity between those events and the former power of the *Mut* dynasty.

Other structures in the North Acropolis display formation patterns which, while differing from that of Str. 5D-11-1st, are strikingly similar to one another. Among them are Strs. 5D-22-1st and 5D-26-1st (Coe 1990: 271 – 416). In each case, a group of people entered the superstructure, often following a lengthy period of disuse suggested by accumulations of bat and rodent feces and bones, and spent considerable time and effort

digging for tombs and caches. Based on the kinds of objects left behind, items of jade and *Spondylus* shell seem to have been targeted for removal when the search proved successful. Jade objects are very rare in Terminal Classic contexts, and jades removed from royal tombs may have been traded out of the site (Culbert 1973: 78). Following these excavations, some years evidently went by—indicated, again, by accumulated animal refuse—before anyone repaired the damage that had been done to the buildings. When such repair work did take place, again requiring a significant investment of time and energy, it tended to be followed by ritual activities indicated by burning.

A synthesis of the archaeological and epigraphic data thus points to an interregnum at Tikal in the early to mid-ninth century. Mention of the *Mut* lord *Uuh K'awil* on Ceibal Stela 10 (A.D. 849) is compatible with this proposal, since there was certainly a *Mut* ruler at Ixlu by A.D. 859. During this *de facto* interregnum, whether or not a person living at Tikal called himself a *k'uhul Mut ajaw*, no central authority was able to erect stelae, complete an already-started mortuary pyramid, or protect existing pyramids from excavation. At the same time, some group or faction was not only able to muster the labor power necessary to dig for tombs and caches, but also to intimidate or overcome any opposition to their doing so. The social dimension of such a project must be seen as a more serious logistical barrier than a few meters of floors and fill. Social factors, too, must have been behind the effort: the choice to dig, and the choice of which grave goods to appropriate, point to a still-functioning economy within which those goods had value.

When a ruler at Tikal was at last able to commission a stela-altar pair (Stela 11 and Altar 11, for the 10.2.0.0.0 *k'atun* ending in A.D. 869), those monuments made clear

his concern with restoring Tikal's glorious past (see Chapter Three, this volume). *Jasaw Chan K'awiil* II took the regnal name of an especially successful predecessor. His stela portrait closely conforms to those of *Jasaw Chan K'awiil* I and his son *Yik'in Chan K'awiil*, including the same "Firefly" headdress, depicting Tikal's supernatural founder, that those kings favored. The monument's eroded text even mentions a *wite'naah*, a lineage shrine of the kind associated with Teotihuacano kingship. It is therefore likely that the mortuary shrines in the North Acropolis were looted after A.D. 810, and that *Jasaw Chan K'awiil* II had them repaired as part of his larger, and ultimately unsuccessful, program of royal restoration. Because no monuments are known for the half-*k'atun* endings before and after Stela 11, this last king's effective control of the site—and hence the large-scale repairs to mortuary shrines in the epicenter—can be assigned to a period of no more than 20 years, from A.D. 859 (10.1.10.0.0) to 879 (10.2.10.0.0).

It is notable that no large constructions at Tikal date to the Terminal Classic period, before or after *Jasaw Chan K'awiil* II. Stela 11 and Altar 11 were set up in front of the North Acropolis, not in a dedicated twin-pyramid complex. The platform added to the base of the stairway of Str. 7F-30, covering Burial 1, may be the most substantial Eznab structure at Tikal. Other small platforms built on top of the latest floor of the North Terrace may date to the ninth century as well, although since they lack diagnostic ceramic samples they could have been built during the later Caban phase (Culbert 1973: 73).

Treatment of monuments in the Terminal Classic period

Their textual content aside, the condition and find-spots of Tikal's monuments point to a complicated history. Many of the site's Early Classic monuments were intentionally broken, but the disposition of fragments large and small varied considerably: some were reverently buried in filled rooms or benches or under stairways, while others were reset in new locations. Several monuments were found in an apparent dump site west of the West Plaza, and one—Stela 4, related to *Sihiyaj K'ahk*'s entrada—was reset upside down in the North Terrace. Most such modifications clearly date to before the ninth century A.D., so that by the Terminal Classic period the practices of mutilating, repurposing, and moving but continuing to venerate ancient monuments were well established in the social memory of Tikal's inhabitants. It is in this context that the condition of Tikal's eighth- and ninth-century monuments should be interpreted.

Stelae, altars, and other monumental works commissioned by *Jasaw Chan K'awiil* I and his successors *Yik'in Chan K'awiil*, Ruler 28, and Yax Nuun Ahiin II rarely if ever seem to have been intentionally damaged in antiquity, although a few (e.g., Stelae 5 and 19) are heavily eroded (C. Jones and Satterthwaite 1982: 9 – 105). No monuments can be attributed to the next king, *Nuun U Jol K'ihnich*, unless he is identical with Ruler 28 (Martin and Grube 2008: 50). The two stone monuments erected by the final king before the proposed interregnum, “Dark Sun,” received different treatment. His Stela 24, associated with Temple III (Str. 5D-3), was badly mutilated in antiquity, with most of the sculpted front side intentionally removed. Its companion altar, Altar 7, was also broken up, a piece of it being found in a nearby Eznab-phase midden (C. Jones and Satterthwaite 1982: 52). The outer of two wooden lintels in the superstructure of Temple III had long since collapsed, but W. Coe (1958: 76) observed that the remaining lintel, which depicts

“Dark Sun,” had suffered some vandalism. Coe attributed hack marks on the lintel to a machete, yet a systematic comparison of those marks to marks on other lintels believed to have been made in antiquity with stone axes has yet to be done and could prove informative.

Stela 23, an Early Classic monument, was moved from its original position and reset, propped up by unworked stones, in front of a low Terminal Classic platform built in front of Str. 7F-30. Only the upper half of the monument was found in that context, and its fragmentary and mutilated condition suggests that it, like other Early Classic stelae, was damaged in some earlier episode of monument vandalism. A cache buried under the stela when it was reset contained eight eccentric flints; nine whole and one fragmentary eccentric obsidians; various fragments of polished jade, pyrite, and hematite; 39 small pieces of unpolished jadeite, five single valves from bivalve mollusk shells; and two fragments of *Spondylus* shell broken off from carved objects (Coe and Broman 1958: 44 – 45). Since eccentric flint blades evidently ceased to be produced at the end of the Late Classic period, and eccentric obsidians even earlier (Moholy-Nagy 2008: 24 – 25), this cache may include some of the contents of the excavated Early and Late Classic caches discussed above (Culbert 1973: 79). The platform covered an Eznab-phase burial, Burial 1, which was intrusive into the floor and fill underneath the platform. 1.4 m deep, the pit grave had been covered over, at a depth of 0.65 to 0.78 m, by seven rectangular stone blocks (Coe and Broman 1958: 37 – 38). The grave contained the remains of an adult male, at least 50 years old, accompanied by a finely made Zacatal cream polychrome bowl and a Tinaja red incurved-rim basin with an irregularly shaped lip and a

fire-blackened underside (Coe and Broman 1958: 41 – 42, Figure 15; Culbert 1993: Figure 98).

Status and faction at Terminal Classic Tikal

Tikal presents an especially interesting case study in the nature of Terminal Classic Maya social and economic inequality because of the evidence for a ninth-century interregnum. During this period, one elite faction moved south to the Ixlu/Zacpeten area; another may have headed to northern Yucatan a generation or so before the break in royal rule (see Chapter Four). Subsequent royal monuments at Tikal and Jimbal may represent two additional, competing lines claiming the *Mut* throne. Inter-elite factional struggles are implicated here because of the different treatment accorded “Dark Sun’s” monuments as opposed to those of earlier kings. During the interregnum and the restoration that followed it, which cannot have been of long duration, social and political leaders of some kind operated at Tikal, in the sense that there were people able to organize labor-intensive excavations in royal shrines, confident of their ability to overawe any objectors and to appropriate the material wealth they found. It is tempting to ascribe these activities to a temporarily victorious sector of Tikal’s nobility, like those evident at Copan or El Perú-Waka’ (see above). That case is strengthened by the use of what were quite plausibly royal grave goods in Terminal Classic monumental caches. These events, however, went unrecorded at Tikal, and the identities and ascribed ranks of those social leaders remain uncertain.

The same mortuary shrines that had been excavated during the break in rulership proved important loci at which *Jasaw Chan K’awiil* II could perform royal piety and

authority through a program of restoration paralleling the restoration of what this ruler claimed to be the legitimate *Mut* line. These architectural activities did not, however, translate to *Jasaw Chan K'awiil* II's long-term political success. Damage to that king's own stela-altar pair could indicate a second rejection of his dynasty, although the evidence is on the whole much more equivocal than that some other sites. A good analogy may be the situation at Ceibal (see below), where a royal restoration—longer-lasting and more complicated than that at Tikal—likewise failed to last into the tenth century A.D. In the case of the *Mut* dynasty, the centrifugal pull of rival courts outside the traditional royal center could have exacerbated other social and environmental tensions to such an extent that neither rebellious local nobles nor would-be royal restorers could exercise effective control over populations that had, in any event, become too small to support their claims.

Ceibal

Where elites at most of the sites discussed above contended with declining populations and diminished resources beginning early in the ninth century, the kings and elites of Terminal Classic Ceibal (**Figure 3.14**) experienced both prosperity and political disruption. Aspects of the site's Terminal Classic architecture parallel developments at Nakum (see below), and the introduction of molded-carved ceramics as a Terminal Classic analogue to earlier polychrome types is consistent with patterns observed across the Lowlands. As at Tikal, a ninth-century interregnum can be convincingly proposed for Ceibal (Inomata and Triadan 2013)—but, in contrast to the Tikal interregnum, royal architecture at Ceibal subsequently flourished, if inconsistently over the long term. Late

constructions in the Terminal Classic palace resemble similar structures at El Zotz (see Chapter Five). Unlike at Copan and El Perú-*Waka'*, Ceibal's architecture during the period of its active Terminal Classic royal court does not point to substantial numbers of materially prosperous sub-royal elites with their own residential compounds. Meanwhile, ceramic evidence hints at diminished economic disparities between royal and commoner households, in direct contrast to the ceramic assemblages of Caracol.

Royal ritual and residential activities at Ceibal were concentrated in Group A (**Figure 3.15**), an architectural complex in the western part of the site area. As at Nakum (see below), these Terminal Classic elite spaces were largely built on Late Preclassic foundations which had been virtually abandoned during the Early and Late Classic periods. Terminal Classic constructions were by no means confined to Group A, however; Group C, along the causeway connecting Group A to the Late Classic regal-ritual facilities of Group D, was a focus of lower-status settlement, as well as of ritual activities attested to by a ballcourt and a round dance platform (Str. C-79) of the type associated with worship of the Wind God (A. Smith 1982: 164 – 173; Szymański 2010: 56 – 61; Taube 2001). Almost unoccupied between about A.D. 270 and 500, Group A was extensively remodeled under the direction of Ceibal's late kings. A local ruler named *Ich'aak Bahlam*, a vassal of the Dos Pilas *Mut* lord *K'awiil Chan K'ihnich*, may have begun this process around A.D. 745 by commissioning Str. A-14-sub, a possible range structure separating royal residential spaces to the east from the Central Plaza to the west⁶ (A. Smith 1982: 75). If so, this mid-eighth-century ruler could have been responsible for much of the palace architecture of Group A which was subsequently used by generations

⁶ The inscribed blocks of Hieroglyphic Stairway 1, which date to his reign and deal with *Ich'aak Bahlam*'s ritual activities and relationship with his overlord, may well have been taken from Str. A-14-sub when the building's final phase, Str. A-14, was constructed later in the Terminal Classic period.

of Terminal Classic kings and courtiers. In either case, those later rulers made their own substantial contributions to Group A.

Among the first major construction projects carried out by *Ich'aak Bahlam's* successors in the years following the royal abandonment of Dos Pilas was the final phase of Str. A-10, a pyramidal structure 18.5 m high on the east side of Group A's Central Plaza. *Ajaw Bot* had this building constructed or remodeled, and all three of his known monuments were found there. Despite its impressive height, Str. A-10's summit lacks a surviving superstructure, which was probably made of perishable materials (A. Smith 1982: 95 – 97). Facing the plaza, a wide staircase with five steps leads up to the bottom terrace. *Ajaw Bot's* two ballgame panels, Stelae 5 and 7, were set into the walls to either side, and Stela 6 was erected at the foot of the steeper central stairway leading up the pyramid from the lowest terrace. The *wak ehbnal* ("Six Stair Place") toponym on Stela 5 may refer to the lowest steps of this building (perhaps five stairs plus the plaza floor) as a physical instantiation of a mythic location. Excavations by the University of Arizona project (Palomo 2012: 58 – 59; Pinzón González and Román de León 2010: 79) dated this construction phase to the Tepejilote ceramic period. Ceramic evidence likewise places Strs. A-9 and A-12, which flank the pyramid, in the late facet of the Tepejilote phase, and they are probably contemporaneous with Str. A-10 (Méndez Bauer 2012: 72).

Ajaw Bot's successor *Wat'ul K'atel* may have made his own modifications to the royal residence, but the only ritual structure that can be securely attributed to his reign is Str. A-3, a radial pyramid in the south part of the Central Plaza. This building is notable not for its size but for its elaborate ornamentation and for an architectural format new to Ceibal. In its initial form, Str. A-3 possessed a square, stepped substructure with three

terraces, rising to 3.2 m in height, with the lowest terrace 17 m on a side. Excavations by the Peabody project revealed three interior terraces with evidence of ritual burning, carried out as part of the construction process, on their eastern sides. Four stairways, one on each side of the substructure, led to a flat-roofed superstructure whose floor plan combined cruciform plan with three vaulted, north-south rooms.

Above the doorways and the medial molding, all four sides of the building bore a stucco frieze, sculpted in the round, depicting elite men, deities, and anthropomorphic animals. The vaults themselves were still standing as late as 1895 (A. Smith 1982: 10 – 13), but the frieze must have fallen in antiquity. As reconstructed by Tatiana Proskouriakoff, one larger-than-life human figure stood above each doorway, with twelve life-sized figures at the corners and halfway between the doorways and the corners of the building (Willey 1982: 30 – 33). Some or all of the larger-than-life sculptures may have depicted *Wat'ul K'atel*, since at least one of them was rendered with a squared haircut and facial hair like that worn by *Wat'ul K'atel* on Stelae 10 and 11. Some of the smaller human figures may depict other historical individuals, being molded naturalistically and with attention to details of clothing and facial painting or tattooing. Conceivably these represented members of *Wat'ul K'atel*'s family or court. A sculpted glyph band mentions the 10.0.0.0.0 *bak'tun* ending in A.D. 830, and the temple itself could have been constructed to celebrate that event. The five stelae associated with it—one in the superstructure and one at the base of each stairway—all commemorate the following *k'atun* ending in 849. A low platform which expands the footprint of the temple by 8 m on each side stratigraphically postdates the earlier construction, and could have been built when the stelae were erected (A. Smith 1982: 19). Another building made of finely

dressed limestone blocks, Str. A-16, probably served as *Wat'ul K'atel's* personal residence. Str. A-16 faced westward onto the northernmost patio of Group A's East Court, opposite Str. A-14. Its masonry walls were covered with an elaborate stucco façade which, like that of Str. A-1, included sculptures of gods or Maya elites (Inomata and Triadan 2013: 63 – 65).

Wat'ul K'atel's own successor was responsible for at least four stelae. Stela 1 (10.2.0.0.0, A.D. 869) was erected northeast of Str. A-3, at the entrance to the Central Plaza from the South Plaza, facing south towards the latter group (J. Graham 1990: 43). The most “Classic” of this king's stelae, Stela 1, gives his royal titles—*yax kaloomte'* and “holy ‘Banded Bird’”—but not his personal name. Stela 17 was planted on the landing midway up the stairway of the Terminal Classic remodeling of Str. A-24, a large pyramid on the west side of the South Plaza. Classed by J. Graham with the “non-Classic” monuments of the site, this monument nevertheless records the same *k'atun*-ending date as Stela 1. A personal name spelled **wo-ko-te-?TELES** comes from Stela 14, which, together with its nearly destroyed companion Stela 15, was found where it had been planted: on Str. C-18, a low, wide platform at the crossroads of Causeways I and III, in an area with substantial Terminal Classic commoner habitation. These two monuments do not bear surviving dates, but considerations of style and portraiture make it highly probable that they belong to the second “Banded Bird” king (J. Graham 1990: 53). Stelae 1, 14, 15, and 17, along with the final phase of Str. A-24—a mere shell of masonry on top of a massive Late Preclassic core (Castillo Aguilar and Sal Ávila 2011: 125; A. Smith 1982: 100 – 103)—can thus all be attributed to *Wat'ul K'atel's* immediate successor, whose personal name was something like *Wok ?Teles*. The ballcourt composed of Strs.

A-19a and A-19b is stratigraphically posterior to the final phase of Str. A-20 and so could very plausibly have been constructed by *Wok ?Teles*. Also on stratigraphic grounds, the smaller buildings sharing the refurbished Late Postclassic platform with Str. A-24 (Strs. A-22, A-23, and A-25) can be attributed to that ruler. At Str. A-18, an elevated platform just north of the palace, Late Classic superstructural platforms were partially demolished and replaced with three long, low structures—perhaps mostly perishable, but with stone foundations (Castillo Aguilar 2011: 59 – 61). These constructions could not be more finely dated than to the Tepejilote phase, and so could have been commissioned by *Wat'ul K'atel* or any of his successors.

Four stelae with “non-Classic” motifs (Stelae 3, 18, 19, and 20) either mention or allude to the 10.3.0.0.0 *k'atun* ending of A.D. 889. Another, Stela 2, lacks an inscription but can be placed within about ten years on either side of that date on stylistic grounds. Stela 20 has the clearest connections to projects securely attributed to *Wok ?Teles*: it was planted at the base of the Str. A-24 stairway, and the “Toltec” costume of the figure it depicts closely resembles that of one of the characters on Stela 17 (J. Graham 1990: 48 – 50). The other four, discussed in Chapter Four of the present volume, are iconographically and epigraphically farther afield. Stelae 2 and 3, along with several plain companion stelae, were erected across the South Plaza, in front of Str. A-6, a smaller pyramid probably built or remodeled in the Terminal Classic period (A. Smith 1982: 90). Stela 19 was placed in front of an even smaller pyramid nearby (Str. A-5, a 6.3 m tall platform without a masonry superstructure), along with two plain stelae. Stela 18 was erected amid the bottom two steps of the upper stairway of Str. A-20, another pyramid on the west side of Group A’s Central Plaza (A. Smith 1982: 98). The third

k'atun ending, then, came at a time of intense architectural and sculptural activity of the kind that, based on earlier Classic precedents, one might expect to have been commanded by an ambitious and powerful ruler. Yet none of the ca. A.D. 889 monuments unambiguously name a living king.

Later Terminal Classic elites seem to have been less wealthy than *Wat'ul K'atel's* generation, as suggested by the scarcity of shell and greenstone ornaments in a palace midden excavated by the Ceibal Archaeological Project. Insofar as royal access to such goods depended on a court including elite craft producers, *Wok ?Teles'* court may have been too small and too impoverished to provide him with many such goods (Inomata and Triadan 2013: 64). Tenth-century palace constructions at Ceibal were positively unimpressive. Str. A-15, a C-shaped building on the northern side of the East Court, exemplifies the reduced architectural capabilities of palatial elites in the late ninth and early tenth centuries A.D. The building is 24 meters long by 8 deep, and stands about 1.5 meters high in its present, collapsed state. Excavations revealed that this structure, or rather its footprint, underwent three phases of construction, all corresponding to the Terminal Classic Bayal ceramic complex. The first phase involved the construction of a retaining wall in the fill of the patio floor underneath the southern part of the building, apparently as part of an early Terminal Classic renovation and expansion of the East Court. This platform floor is thick and of high quality, consistent with constructions like Str. A-3.

The second phase was the construction of Str. A-15 properly speaking. At this stage (Str. A-15-sub-1), the building consisted of a back wall and perhaps two short side walls, made of minimally worked masonry blocks extending to a height of less than 2

meters above the patio floor. The upper parts of the walls, as well as the roof, would have been constructed of perishable materials. There is no evidence for a stone front wall; instead, the south side of the building would have been open, with posts supporting the roof. The interior floor of the building was raised to about half a meter above the existing patio floor by a layer of fill capped with a thin, poor-quality stucco floor, stratigraphically posterior to the walls. A single access step, revealed by excavations near the axis, may have run along much of the front of the building. After the floor was laid down, a bench was constructed against the center of the back wall. This was half a meter high and about 2.3 meters deep, made from two courses of crudely cut stone blocks covered in a thin layer of poor-quality stucco. Excavators discovered a second, lower bench, only a single course of stones high, abutting the central bench to the west, and there may have been another to the east. These benches were installed in a single construction event, which may have followed the construction of the rest of the building by some years, since a niche in the back wall was closed off by the construction of the western bench. Their fill included dressed stones taken from the collapsed vault of another building, perhaps the nearby Str. A-16 (Inomata et al. 2006: 3.6). Both the C-shaped plan of the building and the reuse of earlier ninth-century building materials parallels late Terminal Classic and Postclassic architectural practices at other sites throughout the northern and southern Maya lowlands (e.g., Bey et al. 1997: 250; D. Rice 1985: 313 – 314).

Later, the corpses of three adults were interred in shallow cist graves cut into the early Terminal Classic stucco floor which ran beneath Str. A-15, between 5 and 11 meters south of the building's southern edge. One grave, Burial CB101, lacked offerings, while a badly eroded polychrome bowl was recovered from another, CB102. Following

these interments, a final floor of stucco was deposited over the graves. A renovation floor inside Str. A-15 marks that building's final construction phase; while discontinuous with the patio floor over the burials, it may date to the same construction event. The final floors inside and outside the building are thinner still than the original interior floor of Str. A-15. Since most or all of the latest original stelae at Ceibal—that is, excluding Stela 22 (see below), and bearing in mind that Stela 13 is not securely dated—were contemporaneous with skillfully executed, labor-intensive architectural projects, these relatively shoddy constructions likely date to the very end of the ninth century and/or the early part of the tenth. The building was used in this condition until the final abandonment of the site (Román et al. 2008: 12 – 13). That abandonment involved the ritual termination and demolition of royal buildings, including Strs. A-14, A-20, and A-16, which was by that time already in disrepair (Inomata et al. 2006: 3.6; Inomata and Triadan 2013: 64).

Terminal Classic interaction with monuments

Unlike at El Perú-*Waka'* and Tikal, there was little reuse, mutilation, or repurposing of monuments at Ceibal during the Terminal Classic period. Even though *Ajaw Bot*'s Stela 5 was never completed, implying a sudden end to his reign followed by a long interregnum, neither it nor its companion Stela 7 were intentionally damaged (Inomata and Triadan 2013: 63). Nor did the people who dismantled and burned Ceibal's royal residences turn their attentions to royal monuments. The major exception involves the all-glyphic Stela 6, which was modified very late in Ceibal's history. Commissioned by *Ajaw Bot* in A.D. 771, the monument stood on the lowest landing on the west side of

Str. A-10 (J. Graham 1990: 16; Maler 1908: 19), plausibly its original location. At some point prior to the abandonment of the site, the top part of the stela, including four rows of glyphs, was broken off. Either immediately or some time later, this upper portion was reset, upside down, in the plaza in front of Str. A-10. The new stela (designated Stela 22 by the Peabody Museum expedition, which quickly recognized its origin) was accompanied by an altar made of two pieces of stone, at least one of them a reused fragment of an existing altar (J. Graham 1990: 16 – 17). Smith (1982: 155) suggested that at least the replanting of the upper part occurred near the end of the Bayal phase. Planting a stela would of course have been a king-like act, and the reuse of a broken monument for such a purpose is consistent with late Bayal modifications to Str. A-15 using fallen stones from nearby buildings. The resetting of Stela 22 may very well correspond to the last gasps of kingship at Ceibal, although the lack of a new inscription makes this possibility impossible to confirm.

There is nothing to suggest that the breakage of Stela 6 was meant as an act of desecration by a later king, whether or not that king was also responsible for planting the upper fragment. *Ajaw Bot*'s other monuments, "Stelae" 5 and 7, were not deliberately damaged. In fact, aside from this instance of breakage and reuse, the only other intentional injury to a monument at Ceibal in the Terminal Classic period was to the four central glyphs of the text on Stela 19. J. Graham (1990: 57) proposed that this damage, which effaced two of the four tzolk'in day-signs, was related to some controversy over calendrical correlation, but this seems unlikely given the interpretation of the text advanced in Chapter Five.

Terminal Classic burials at Ceibal

Although at least three generations of Terminal Classic monarchs are represented in the monumental record (see Chapter Three, this volume), their tombs have not been identified. Nevertheless, other burials in and around Group A give some idea of the range of economic inequality at Ceibal during the Bayal period. Burial 1, a cist grave atop Str. A-14 in the Bayal-phase palace complex, contained the body of a young adult woman with tabular oblique cranial deformation and no evidence of dental modification. The cist was intrusive into the fill of the platform, on the axis between the two range superstructures, not part of the building's original construction. Stratigraphically, it was associated with the latest remodeling of Str. A-14, which may not have been finished (Tourtellot 1990: 87), placing this grave at the end of elite occupation of Group A.

Buried with the woman were six ceramic vessels probably representing an ideal domestic assemblage for use by high-status Ceibal women, among them a Poite incised grater dish, a Tumba black-on-orange barrel-shaped vase, and a Pabellón molded-carved vase with a pedestal. The presence of a well-used cooking pot suggests that some or all of these items may have been selected from among the decedent's actual household goods. Personal jewelry was also present: a pair of two-piece shell ear ornaments, carved to resemble flowers and painted red, and an assortment of beads in jade, bone, and red stone. Tourtellot suggests that the woman may have been sacrificed, but the positions of the skeleton and grave goods are consistent with the burial of a mummy bundle laid on its side (Tourtellot 1990: 87 – 88). Taken all together, the grave site, the tailor-fashion arrangement of the limbs, and the burial furniture point to a valued member of the royal

household who was buried with goods important to her social identity, not to a sacrificial victim.

Another late Bayal burial from Group A, Burial 4, is clearly sacrificial. The burial consists of a pit in the center of Str. A-13, located in the middle of the Central Plaza, east of the ballcourt Str. A-19. A-13 is a square platform, 1 m high and 7.5 m on each side, with four stairways oriented to the cardinal directions. The pit contained the skulls and mostly disarticulated bones of 11 or 12 individuals, probably all adult males and mostly relatively young. The pit is not obviously intrusive to the fill, so the sacrifice could have been part of the construction process. The scattered, broken, and burned condition of most of the postcranial bones in the grave suggest defleshing and possibly cannibalism shortly before interment. Radiocarbon dating of one burned bone fragment placed the interment between 1000 and 1200 years B.P., calibrated to A.D. 930 (Tourtellot 1990: 90 – 91). If this date is accurate, some group of people at Ceibal might have remained interested in and able to carry out ritualized violence, directed against military-aged males, in conjunction with monumental (if relatively modest) constructions, even after the end of the stela cult, since the latest securely datable monuments were erected in A.D. 889 (see Chapter Four). While it is unclear whether the organizers of the event were affiliated with a Classic-style royal court, the form of Str. A-13—reminiscent of *Wat'ul K'atel's* Str. A-3—cannot avoid being seen as a reference to earlier practices of kingship and calendrical observance at Ceibal.

Burial 1 is the richest Bayal-phase interment yet excavated at Ceibal, and Burial 14 is clearly a special case. Comparisons to more quotidian burial practices come from residential groups and isolated graves both inside and outside of the Group A regal-ritual

complex. Out of the 21 other skeletons excavated from such contexts by the Peabody project, 17 were accompanied by grave goods of some kind, generally one or a few ceramic vessels. This is actually a higher proportion than in the Late Classic Tepejilote ceramic phase, and the average number of vessels per grave also increased relative to Tepejilote burials (Tourtellot 1990: 138). Burials at some commoner domestic compounds were covered over with altars—essentially pyramids in miniature—and subsequent burials could be placed near the altar (Tourtellot 1990: 96 – 100, 136 – 137). Such relatively labor-intensive constructions were connected with ancestor veneration, and at Ceibal are specific to the Bayal phase (Tourtellot 1990: 139). To the extent that burial furniture can be taken as an indicator of economic status in life, then, non-elites at Ceibal during much of the Bayal phase may have been, on average, materially better off than their Tepejilote ancestors. Although nothing can yet be said about Terminal Classic kingly burials, at least one member of the royal household—the occupant of Burial 1—was buried with vessels that differed more in quantity than in quality from those found in other interments. This royal lady was the only Bayal-phase decedent found with personal jewelry, but such adornments were always rare in Classic-period burials at Ceibal (Tourtellot 1990: 138). Other graves associated with the palace during its late Bayal occupation, like Burials CB101 and CB102, were more modest than earlier Bayal-phase commoner burials. The mortuary evidence points not just to increased prosperity for non-elites, but to decreasing economic disparities between elite and commoner families over the course of the Terminal Classic period, at least prior to whatever socioeconomic downturn precipitated the site’s abandonment.

Nakum

As with Ceibal to the southwest, architectural, monumental, and ceramic evidence from Terminal Classic Nakum points clearly to a ninth-century renaissance for the site's royal court. This evidence is all the more striking for contrasting with that from other sites in northern Peten, notably Tikal (see above) and, farther west, El Zotz (Chapter Five) and El Perú-*Waka'* (see above). In their ability to commission monumental architecture and inscribed texts on stone, Nakum's Terminal Classic elites better resemble those at Caracol. Unlike at Caracol, however, acts of termination aimed at royal spaces are not attested at Nakum, suggesting that, like *Jasaw Chan K'awiil* II's court at Tikal and the late court at Ceibal, Nakum's royal house fell neither to an attack from outside nor to a revolt from within.

Not only did elites at Nakum command substantial labor power in the Terminal Classic period, indicating a robust commoner population relative to contemporary sites like Tikal, but the number of wealthy households living at the site seems to have increased. Perhaps fueled by migration from other northern Petén centers or from distant trading partners, this growth in the well-off population necessitated the construction of new masonry palaces and the conversion of some older structures to residences. In the North Group of the site's northern sector, a courtyard group consisting of a five-roomed range structure and two auxiliary buildings was built atop Structure 99. This massive platform had been built in the Late Preclassic and remained unoccupied during the Early and Late Classic periods (Zrałka and Hermes 2012: 174 – 175). This reuse of long-abandoned, Late Preclassic architectural spaces parallels Terminal Classic royal projects at Ceibal (see above), and may indicate changing attitudes towards ancient buildings.

The whole Nakum Acropolis was remodeled during the Terminal Classic period, taking on its final form of twelve patio groups comprised of range structures and pyramidal temples (Zrałka and Hermes 2012: 166). That most of its buildings underwent at least three phases of renovation—some were rebuilt four or five times—suggests that these projects began fairly early in the ninth century, and that a royal court may have been active at Nakum for about a hundred years (Zrałka and Hermes 2012: 172). Architectural modifications to the Acropolis restricted access to courtyard groups and palace structures, especially the Central Acropolis, perhaps the primary royal residence (Zrałka and Hermes 2012: 164). Stylistically, they showed similarities to contemporary constructions at Ceibal and in the northern Lowlands: flat roofs and square columns are common features of these buildings, and one platform, Str. 12, at the foot of the Acropolis on the southern side of the Central Plaza, exhibits the circular plan characteristic of Terminal Classic dance platforms associated with wind gods (Zrałka and Hermes 2012: 171). The spatial organization of the Acropolis in its final form, with multiple, spatially discrete palace structures facing onto more or less enclosed patio spaces, is consistent with the possibility that the complex housed multiple kinship groups. If Terminal Classic Nakum's high elite households dwelt very close to the royal palace, that residential pattern would contrast with the more dispersed distribution of aristocratic compounds in places like the Copan Valley.

Terminal Classic material culture at Nakum

Terminal Classic ceramic assemblages from Nakum parallel those of other sites in northern Petén. Among high-value vessels, polychromy decreased in popularity, with

Zacatal cream polychrome ceramics almost completely replacing Saxche/Palmar orange. Zacatal cream polychrome vessels were typically flat-bottomed, four-footed dishes painted with geometric designs, generally of indifferent quality. Drinking vases were barrel-shaped, with pedestal bases, and belonged either to the fine-paste Altar group (especially Pabellon molded-carved) or to Petén- or Belize-made molded-carved types (Sahcaba or Ahk'utu') (Zrałka and Hermes 2012: 165 – 166).

Twenty-three excavated in Terminal Classic contexts, out of a total of almost forty from all periods at the site, furnish a picture of elite life and mortuary practices in the ninth century. Seventeen of the twenty-three were located within the Acropolis itself, and many of these were deposited during episodes of renovation or new construction (Zrałka 2008: 92 – 102). One of the decedents (in Burial 1, under the floor of the courtyard in front of Str. F) was beheaded and buried with his head placed on his abdomen, making him plausibly the victim of human sacrifice (Zrałka 2008: 102). Yet most of the other burials probably belong to members of the royal family or other elite households residing in the Acropolis. Even though the architectural evidence makes clear that Nakum's Terminal Classic elites were far wealthier than their contemporaries at most other sites in northern and eastern Petén, the contents of these graves were typically not ostentatious. The richest burial found at Nakum by the Proyecto Triángulo Yaxha-Nakum-Naranjo, Burial 5, was actually located outside the Acropolis, in Patio 16 just to the south. It contained the body of a young man buried with two vessels (an Azote incised tripod bowl and a Pabellon molded-carved drinking vase) and assorted ornaments: a necklace of snail shell, an alabaster pendant, a worked bone ornament, and 17 fragments of greenstone. Traces of a successful trepanation in his well-preserved

cranium raise the possibility that this individual was a warrior who had suffered a blow in battle (Zračka 2008: 95). Two burials in palace structures inside the Acropolis were more modest. A man of about 60 was interred, probably bundled, under a floor in Str. R, accompanied by a Cambio unslipped olla covered by an inverted Cambio unslipped bowl. An adolescent boy buried under the terrace just west of Str. G was buried with a single Tinaja red dish and eight ceramic figurines which may well have held religious significance (Zračka 2008: 98 – 99).

The latest community leaders residing at Nakum may have organized termination rituals targeting certain structures in the North Group (Strs. 99A, 99B, and 99C). The evidence for such acts takes the form of deposits of ceramic vessels, whole and fragmentary chert bifacial blades, broken grinding stones, and figurines, which partially covered the floors of the buildings (Zračka and Hermes 2012: 174). Unlike at the other sites discussed above, this ritual—if ritual it was—did not involve burning or the dismantling of architecture, and the royal facilities of the Acropolis were not thus terminated.

Discussion

This chapter set out to find contrasts and commonalities in royal and non-royal elite material culture and behavior at eight sites in diverse geographical settings and with varying historical trajectories. It sought evidence particularly in the typically well-preserved domains of architecture and ceramics, but also, when possible, drew on data about other kinds of material culture and diet. Of particular interest was archaeological evidence about how, in physical terms, particular royal courts had come to their ends:

whether royal and elite facilities were deliberately terminated, in acts of aggression or reverence, with or without evident plans for rebuilding—or, on the other hand, whether they were simply abandoned by dwindling populations. The larger aim was to establish what, in practical terms, it meant to be a king or an aristocrat at the sites considered here. What did such people wear, what did they eat out of what sorts of vessels, and how did they make or obtain from other people the material things their condition required?

At most of the sites considered here, the ninth century was a time of diminished material wealth for royal and sub-royal elites relative to their Late Classic ancestors, at least as measured by the quantity of luxury items associated with elite households and burials. Even at Nakum, which saw explosive architectural growth directed by elites, burials within the Acropolis were not notably richer than some interments outside of it. At Ceibal, despite major architectural projects in Group A early in the Terminal Classic period, both elites' personal wealth and their capacity to organize labor diminished near the end of the ninth century. The very latest "palatial" constructions in Group A used materials from older Terminal Classic royal buildings, suggesting both the social irrelevance of those earlier structures and a shortage of available labor. At least at that site, however, declining elite wealth corresponded to an increase in commoners' economic power, again as measured by grave goods. This situation contrasts sharply with a third site where a royal dynasty commissioned major monumental projects, Caracol. There, social classes appear to have become more unequal in the ninth century, as indicated by ceramic assemblages and isotopic evidence. The survival of a meat- and maize-rich "palace diet" in the Terminal Classic, even as commoners' access to high-value items was diminished but not eliminated, could indicate that the royal court

provisioned itself largely through taxation, in labor or goods, of a larger population for whom market activity was the principal means of acquiring luxuries. Analogous tribute systems may be reflected in isotopic evidence from Piedras Negras for dietary divergence between elites and commoners in the final decades of the *Yokib* dynasty.

Regardless of relative equality or inequality of wealth, increasingly marked social inequality is evident in the architecture of most of the sites discussed here whose royal courts survived well into the ninth century. Courtly and elite residential spaces at Caracol, Ceibal, Copan, and Nakum were all rendered less visible and less accessible by Terminal Classic remodeling episodes. Renovation projects at El Perú-*Waka'* may have been intended to achieve a similar effect, but were interrupted by the exigencies of war. Tikal's failure to conform well to this pattern very likely resulted from the troubles of its Terminal Classic dynasts, who evidently had more pressing concerns than home improvement. Yet there, too, royal architecture was a major factor in constructing royal power, since repairs to previously looted mortuary temples can most plausibly be attributed to *Jasaw Chan K'awiil* II's attempt at restoring the *Mut* court.

The relationship between Terminal Classic kings and sub-royal elites has received scholarly attention since the 1980s, with widespread (though not universal) agreement that the proliferation of nobles not belonging to the main line of royal succession contributed in some way to the instability and eventual collapse of many Maya dynasties (e.g., Houston and Stuart 2001:76; W. Fash 1983: 287; W. Fash 2005: 98 – 101). As discussed in Chapter Four, the epigraphic contents of late monuments do generally support the growth and increasing status of the nobility, even though, at sites including Copan, aristocrats were less epigraphically visible late in the eighth century than they had

previously been. Archaeological evidence for sub-royal aristocrats' role in weakening or terminating dynastic rule, at least at the eight sites considered here, is highly variable, compelling in some cases and absent in others. Clearly, the fatal blows to royal power at Aguateca and Piedras Negras were struck by other kings. Conceivably, pre-existing structural instabilities within the Piedras Negras court could have prevented more than the half-hearted attempt at restoring the *Yokib* dynasty potentially evident in Altar 3, but the archaeological evidence suggests that Yaxchilan's attack was nearly as disastrous for sub-royal elite power at that site as it was for the royal family. At Caracol, the placement of some of *K'ihnich Toobil Yopaat's* monuments suggests that vassal magnates and local lords required careful handling. Yet there, too, on-floor ceramic assemblages from epicentral palaces suggest a swift, external attack, not a revolt by aristocrats with the time to organize elaborate termination rituals. More than likely, Caracol's Terminal Classic nobles were as deeply invested in the royal system as those of Aguateca before its collapse.

Copan, Tikal, and El Perú-*Waka'* all present strong evidence for breakdowns in royal-noble relations, which would not have been apparent from the hieroglyphic record alone. At Copan, this evidence takes the form of the thorough, labor-intensive, and ritualized destruction of royal residential facilities in the years after *Yax Pahsaj Chan Yopaat's* death, followed by a long period during which some aristocratic compounds continued to house sociopolitical elites and to serve as venues for public rituals. This contrasts with the evidence for sudden and total or near-total elite collapse at Caracol, Aguateca, and Piedras Negras. That other noble house groups in the Copan Valley were also targeted for destruction points to a factional split rather than a simple rejection of the

royal house by a unified nobility. Processes at Tikal were more protracted and, perhaps, less violent. The reign of “Dark Sun” ended in an interregnum, the mutilation of his period-ending monuments, and possibly the exile of a dynastic faction to Ixlu/Zacpeten. Fractures within the ruling class are an appealing explanation. Yet in this case, royal facilities were not put to the torch, and leaders of a declining population organized work parties to obtain jade ornaments that retained significant value in a functioning economy of prestige goods. *Jasaw Chan K’awiil II*’s dynastic restoration, although ultimately a failure, must have had support from sub-royal elites, since his monuments were never intentionally damaged. Late monuments at nearby Jimbal—Stelae 1 and 2 and Altar 1, discussed in Chapter Four—date to ten and twenty years after *Jasaw Chan K’awiil II*’s Stela 11 at Tikal, but ?*Kuchtal*, the *Mut* king at Jimbal who commissioned those works, was the son of a different monarch. There is thus no clear continuity of lineage between *Jasaw Chan K’awiil II* and ?*Kuchtal*, making the relationship between the two courts unclear, yet it is telling that Jimbal Stela 1 explicitly acknowledges an aristocrat’s support. At El Perú-*Waka’*, a royal ancestor shrine with connections to the Teotihuacan entrada was terminated, and the ancestor bundles kept there were desecrated. Following these acts, elite residential compounds continued to be occupied, probably by the same high-ranking lineages who had inhabited them in the eighth century, until the end of the ninth. El Perú-*Waka’* thus presents an example of a site whose noble families could and did function for several generations without a Late Classic-style royal court, and did so on a somewhat grander scale than those of Copan.

Despite changes in royal self-representation on monuments in the Terminal Classic period, discussed in Chapter Four, the limited evidence available from burials and

middens does not point to substantial differences in the kinds of imperishable personal ornaments preferred by Late and Terminal Classic elites at the sites considered here. Such ornaments do seem to have been reduced in number at some sites whose elites persisted past the first decade of the ninth century, for instance Copan and Tikal, but personal adornments did not undergo significant typological changes of the kind that occurred with ceramics. Where royal ornaments can be compared with contemporary portraits of the kings who owned them, they confirm at least some of the content of those representations. Such is notably the case with the alabaster *hu'nal* diadem from Str. M8-4 at Aguateca, and perhaps also with the shell discs recovered from the tomb of Str. 10L-18 at Copan.

It is in the domain of ceramic vessels that Terminal Classic elite material culture shows the most stylistic change, as opposed to simple impoverishment. Molded-carved ceramics, whether Pabellon, Sahcaba, or Ahk'utu', are ubiquitous markers of post-A.D. 830 Terminal Classic ceramic complexes across the central and southern Lowlands. To a greater extent than stone monuments, such vessels depict persons wearing "non-Maya" costume elements, especially including transverse nose bars. These ornaments have not been reported for Terminal Classic burials or middens at any of the sites discussed in the present chapter. That does not mean that nose ornaments were not worn, or even that they were rare; they might, for instance, have been made of perishable materials like wood or bone. The possibility also exists, however, that the portraits on molded-carved ceramics, which were especially widely circulated, simply did not correspond closely to usual sartorial practice at many of the sites where they ended up.

This same widespread distribution indicates significant changes in one aspect of Terminal Classic prestige economies, that of high-value drinking vessels. During the Late Classic period, if not earlier, producing polychrome vessels for sale, as gifts, or under royal patronage were ways for non-royal elite households to gain status and wealth (Halperin and Foias 2010: 206). Like other crafts pursued by Maya nobles, making such vases required a combination of technical skill, esoteric knowledge, spare time, and sometimes access to costly mineral colorants. Almost every trait of the new molded-carved types represents a significant departure from earlier practices. Since new molds could be made from old vessels, identical vessels could be produced by multiple people of varying artistic ability, reducing the role of individual master craftsmen. Surface treatments emphasizing texture over color minimized the need for exotic or specially formulated slip paints. At least within the Sahcaba and Pabellon molded-carved types, the scenes such vessels depicted tended towards generic tableaux of ballgames, military confrontations, or conferences among deities, not courtly scenes depicting living individuals or myths tied to specific dynasties (Werness 2003: 13 – 53). The use of pseudoglyphs in rim texts on Pabellon and Sahcaba vessels, and of Veracruz-style day-signs in Pabellon scenes, likewise reduced the quantity of esoteric information needed to produce such vessels, while devaluing Maya hieroglyphic literacy in favor of a more open, cosmopolitan script.

The appeal of these vessels to Terminal Classic Maya elites probably had to do with several factors: diminishing populations left fewer elite households with the resources to produce highly skilled painters, while western Mesoamerican peoples with whom southern Maya courts were in contact were seen as authoritative and prestigious.

They penetrated local ceramic complexes unevenly, and the social meanings of molded-carved vessels may have varied substantially from site to site: they coexisted with finely-made polychrome vases for decades at some centers (e.g., El Perú-*Waka'*, Uaxactun, and Caracol; see Eppich et al. 2005: 326), but, at least at Caracol, older types may have survived specifically as a marked category. Once molded-carved types became accepted as the standard luxury ware, however, demand for them would have substantially altered economies of elite craft production. The technical characteristics of mold-made pottery, in combination with overall demographic decline, suffice to explain the virtual replacement of the southern Lowlands' diverse, local polychrome vase traditions by three ceramic types, without needing to posit a single political hegemony encompassing Ceibal, northern Petén, and the Belize River Valley. Nevertheless, it is clear from the epigraphy that complicated, long-distance relationships of patronage, trade, and gift exchange did exist among Terminal Classic elites. The spatially limited extent of Ahk'utu' and Sahcaba molded-carved vessels probably correspond in a rough way to two such networks.

Summary

In summary, the kinds of kingly and aristocratic behavior visible in the Terminal Classic archaeological record and considered in this chapter can be described as the production and manipulation of material signs of status and identity. Decorated ceramic vessels served as social currency, links to the past, and implements in ritualized performances of consumption. New production techniques extended elites' ability to display favored designs, but diminished the role of courtly craftsmen in producing high-

value vessels, and with it one way of performing aristocratic erudition. New constructions proclaimed and enacted community solidarity under royal leadership, just as they had in previous generations, but—in the form of circular platforms and radial pyramids—also pointed to departures from older, Late Classic religious practices. The production of inscribed monuments and smaller artifacts likewise enacted structures of rank and command, as tribute and epigraphically unacknowledged commoner labor provided basic materials to be worked by aristocratic artisans into finished objects whose destinies and distribution would be decided by kings. Not coincidentally, the production of such objects lasted only as long as the institution of kingship itself.

Larger populations, too, participated in these performances of power, if usually from a position of disadvantage and even abasement. Such participation included the provision of labor, raw materials, and craft items to their lords, and, crucially, witnessing and joining in public performances that affirmed royal authority and aristocratic rank. When royal subjects at sites like El Perú-*Waka'* and Copan, including some nobles but also a significant part of the common people, felt themselves pushed too far by circumstances, rebellion was the result. Consistent with the performative nature of royal power, its rejection too had strongly ritualized, symbolic dimensions aimed at materializations of royal identity: the destruction of building façades, the mutilation of royal visages on monuments, the appropriation of royal objects by new community leaders. Following such events, material practices expressing identity and rank focused on public involvement rather than the persons of kings and great lords.

Many vital dimensions of Terminal Classic Maya social inequality are lost forever. Social standing and practical power must have rested in large part on personal

relationships, oral traditions and courtly gossip, and life histories not recorded in hieroglyphic texts. That kind of information would rarely have outlasted a human lifetime. Practices of land tenure, fundamental to inequalities of wealth and status both in any agriculturalist society, remain largely unknown. As variable as the archaeological residues of Terminal Classic Maya elite activity are, the distinctive, archaeologically visible characteristic of elite and especially royal status—as distinct from wealth as such—thus appears as the production and public display of the symbols of ritual and political authority.

Table 3.1: Ceramic phases relevant to the Terminal Classic period at the eight sites discussed in Chapter Three. All dates A.D. Dates for Aguateca (AGT) after Inomata (2010b: 165 – 169); for Caracol (CAR) and Nakum (NKM) after Žračka (2008: 14 – 15); for Copan (CPN) after Bill (1997: 14) and Manahan and Canuto (2004: 554); for El Perú-*Waka'* (PRU) after Eppich (2011: 124 – 141); and for Tikal (TIK) after Culbert (1995: 4).

TIK	Ik' 550 – 700	Imix 700 – 850		Eznab 850 – 950	Caban 950 – 1200
PRU	Q ² eq ¹ 600 – 700	Q ² eq ² 700 – 770	Morai 770 – 830	Rax ¹ 830 – 900	Rax ² 900 – 1000
PNG		Balche 630 – 750	Chacalhaaz 750 – 850	Kumche 850 – 925	
NKM	Late Classic A 600 – 700	Late Classic B 700 – 800	Terminal Classic 800 – 950		
CPN	Acbi- Coner 600 – 650	Early Coner 650 – 700	Middle Coner 700 – 800	Late Coner 800 – 950	Ejar 950 – 1100
CEI	Tepejilote 650 – 830		Bayal 830 – 950		
CAR	Late Classic A 550 – 700	Late Classic B 700 – 780	Terminal Classic A 780 – 900	Terminal Classic B 900 – 1000	
AGT	Nacimientio Early and General 600 – 760			Nac. Late 760 – 810	

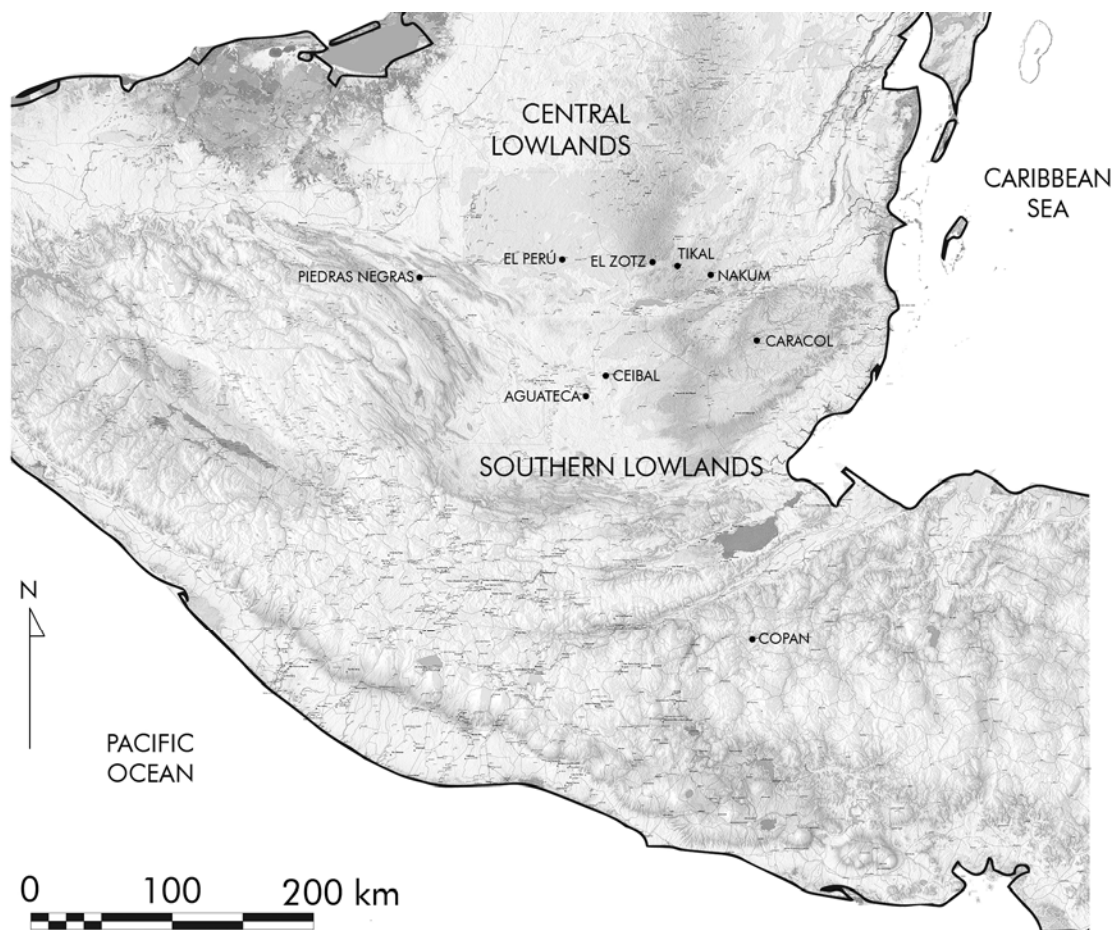


Figure 3.1. Sites discussed in Chapter Three. Topographic and outline maps © Walter T. Witschey and Clifford R. Brown. Courtesy of the Electronic Atlas of Ancient Maya Sites (mayagis.smv.org).

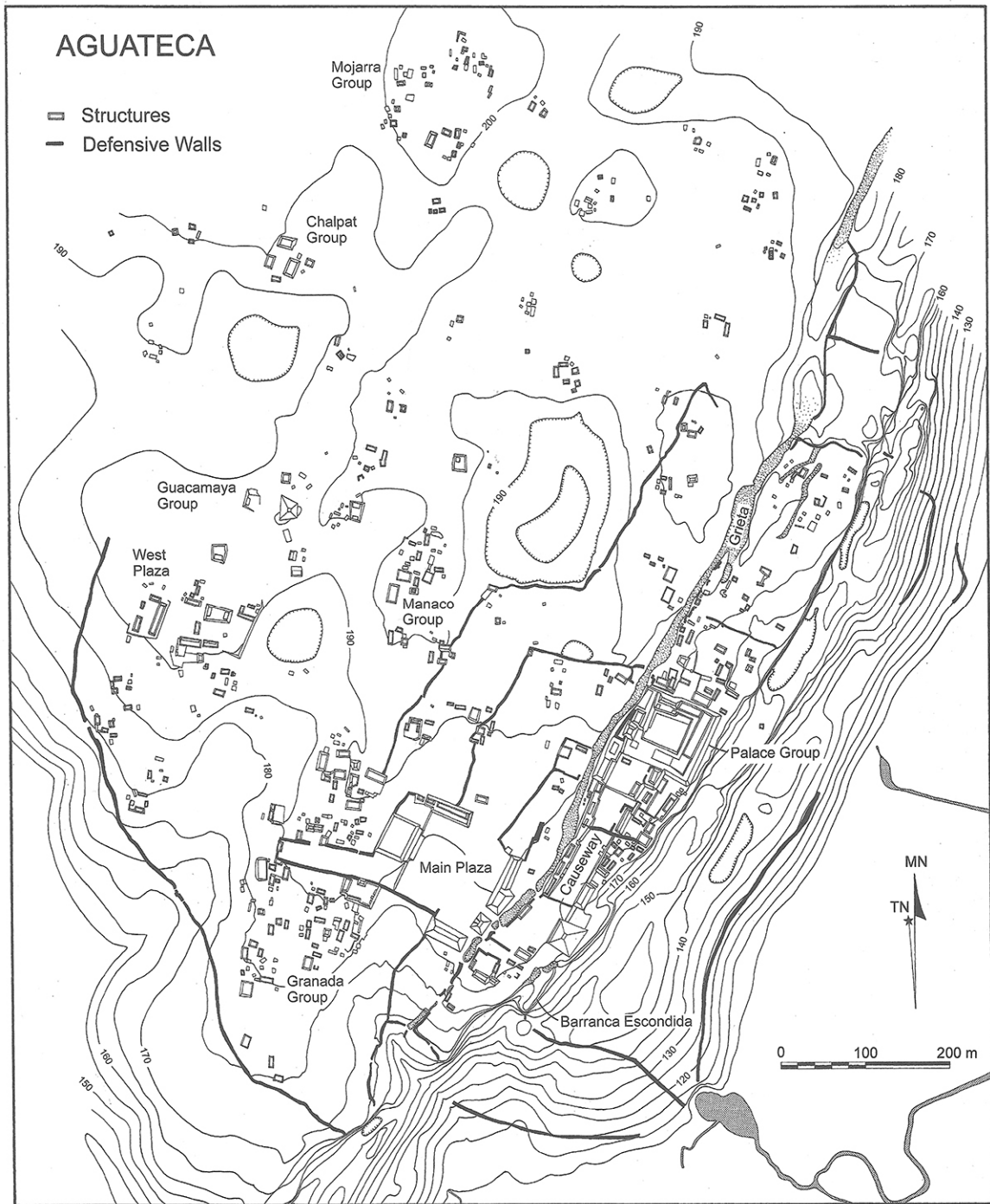


Figure 3.2. The site center of Aguateca, showing the Palace Group, the Causeway, and the chasm used as a natural fortification. 5 m contour intervals. Map courtesy of Takeshi Inomata.

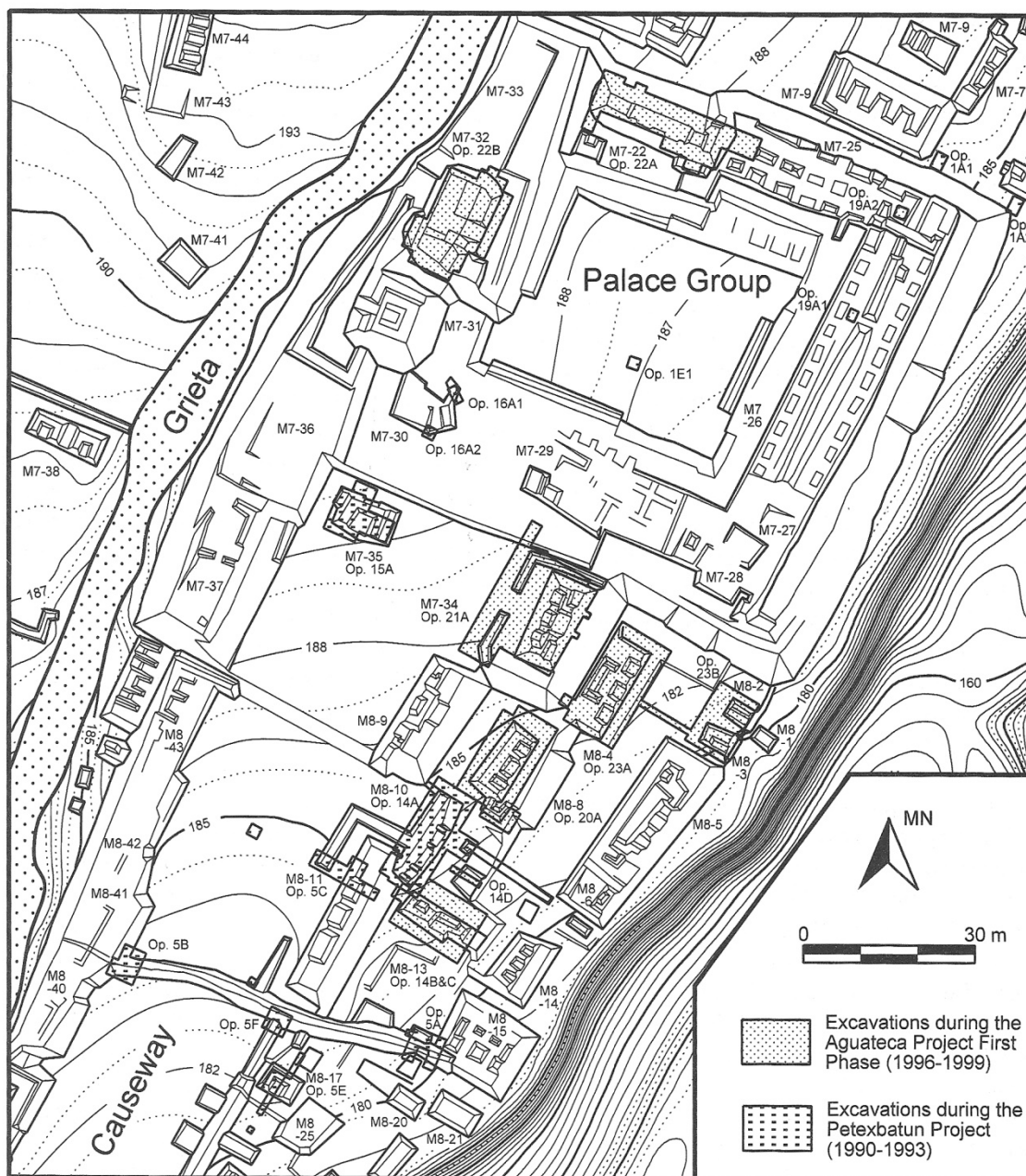
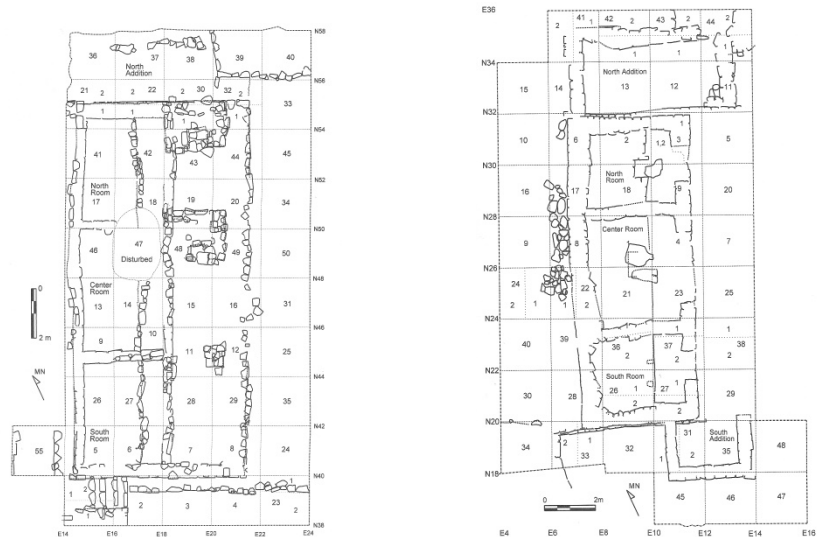
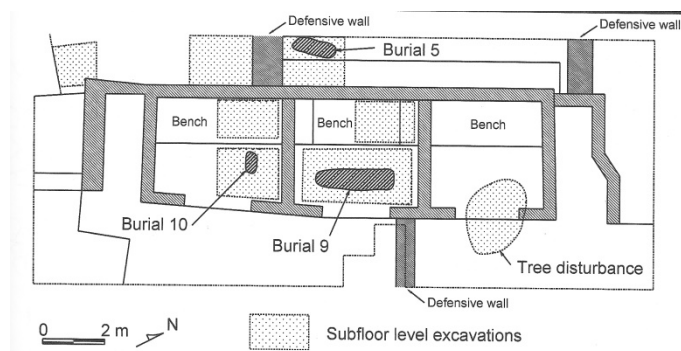


Figure 3.3. Aguateca's Palace Group. Map courtesy of Takeshi Inomata.

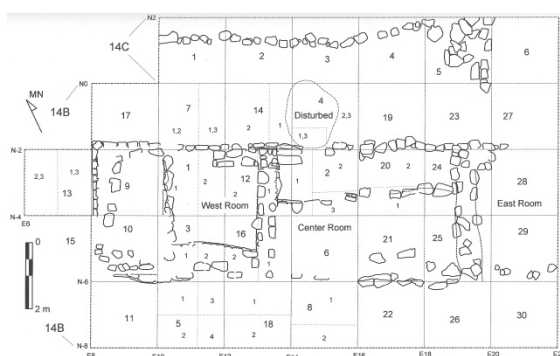


(a)

(b)



(c)



(d)

Figure 3.4. Plan views of (a) Aguateca Str. M8-4; (b) Aguateca Str. M8-8; (c) Aguateca Str. M8-10; (d) Aguateca Str. M8-13. Courtesy of Takeshi Inomata.

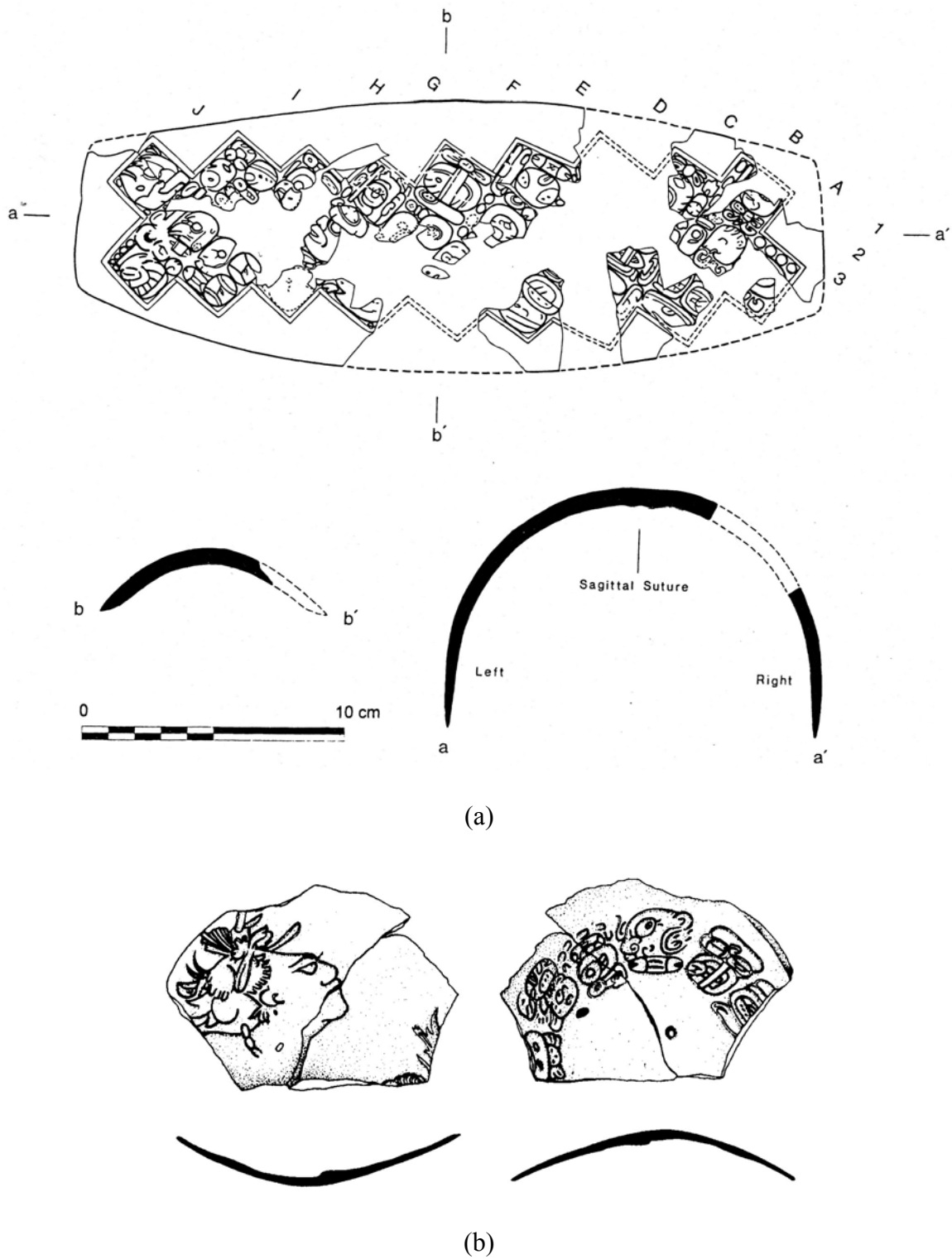


Figure 3.5. (a) An incised human cranial bone and (b) an incised shell ornament from Aguateca Str. M8-10. Courtesy of Takeshi Inomata.



Figure 3.6. The Acropolis and site center of Piedras Negras. Digitized map by Perry Hardin with additions by Zachary Nelson, after Parris and Proskouriakoff in Satterthwaite (1943). Courtesy of Charles Golden.

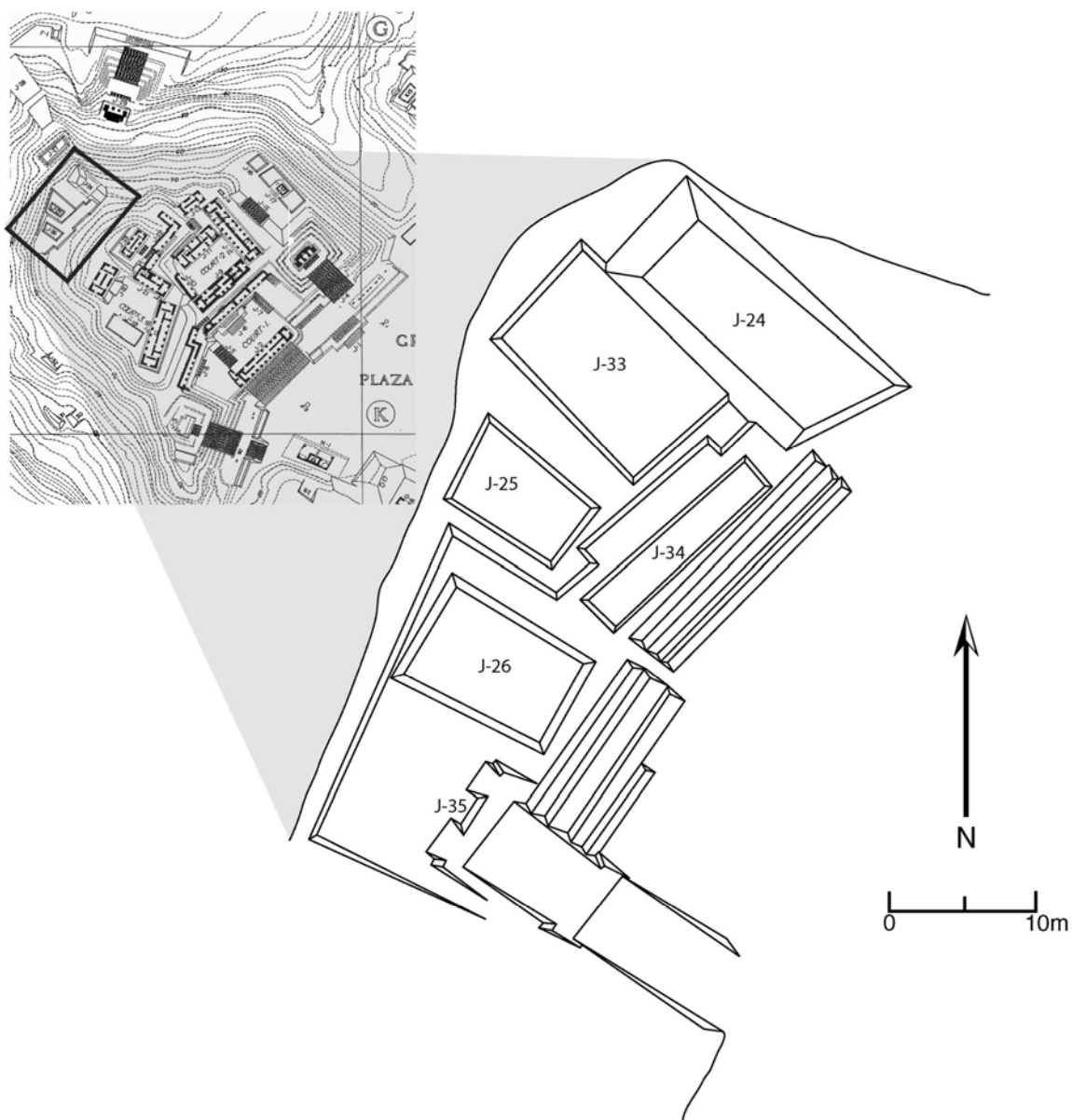
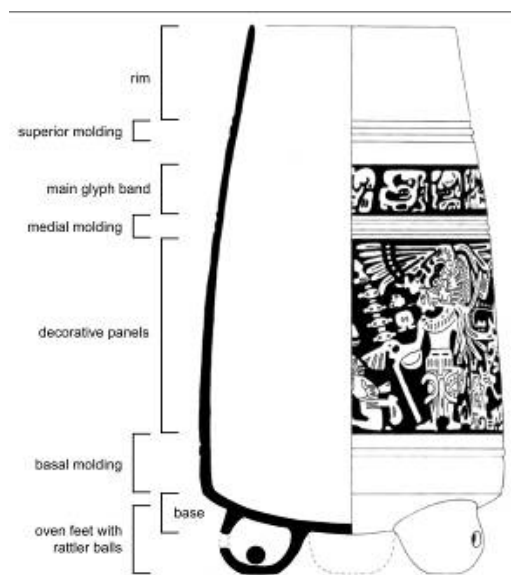


Figure 3.7. Piedras Negras Court 4. Courtesy of Charles Golden.



(a)



(b)

Figure 3.8 (a) Composite drawing and (b) photograph by Dorie Reents-Budet of an Ahk'utu' molded-carved vessel. Courtesy of Christophe Helmke.

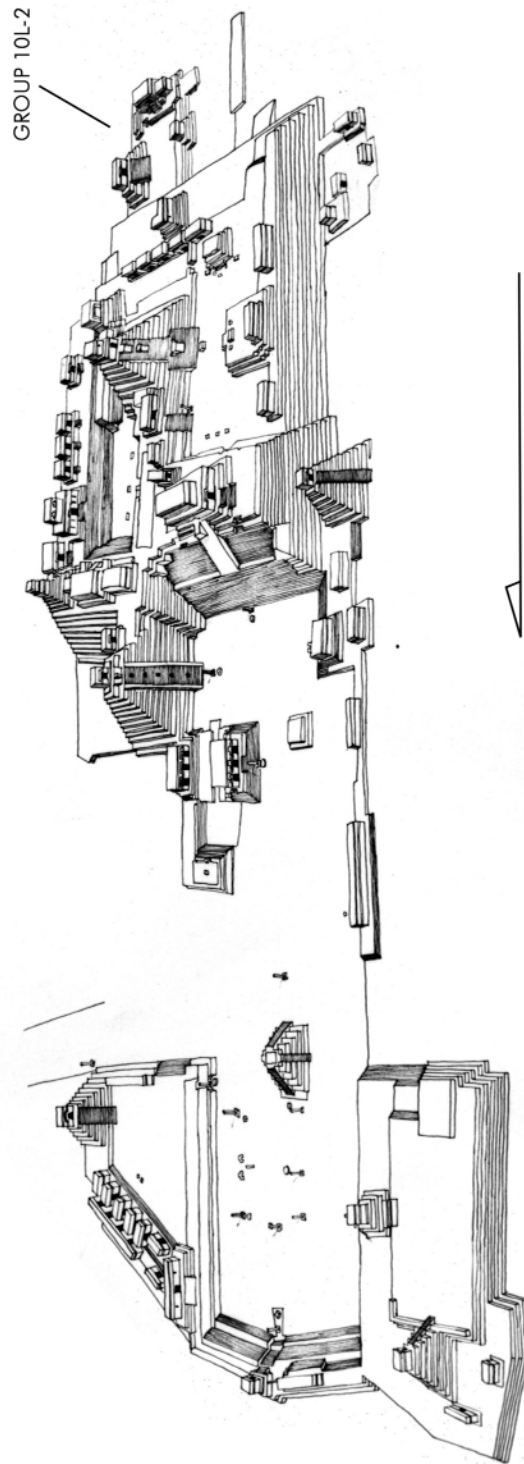


Figure 3.9. Aerial view of epicentral Copan, showing Group 10L-2. Drawing by Linda Schele, modified by Nicholas Carter.

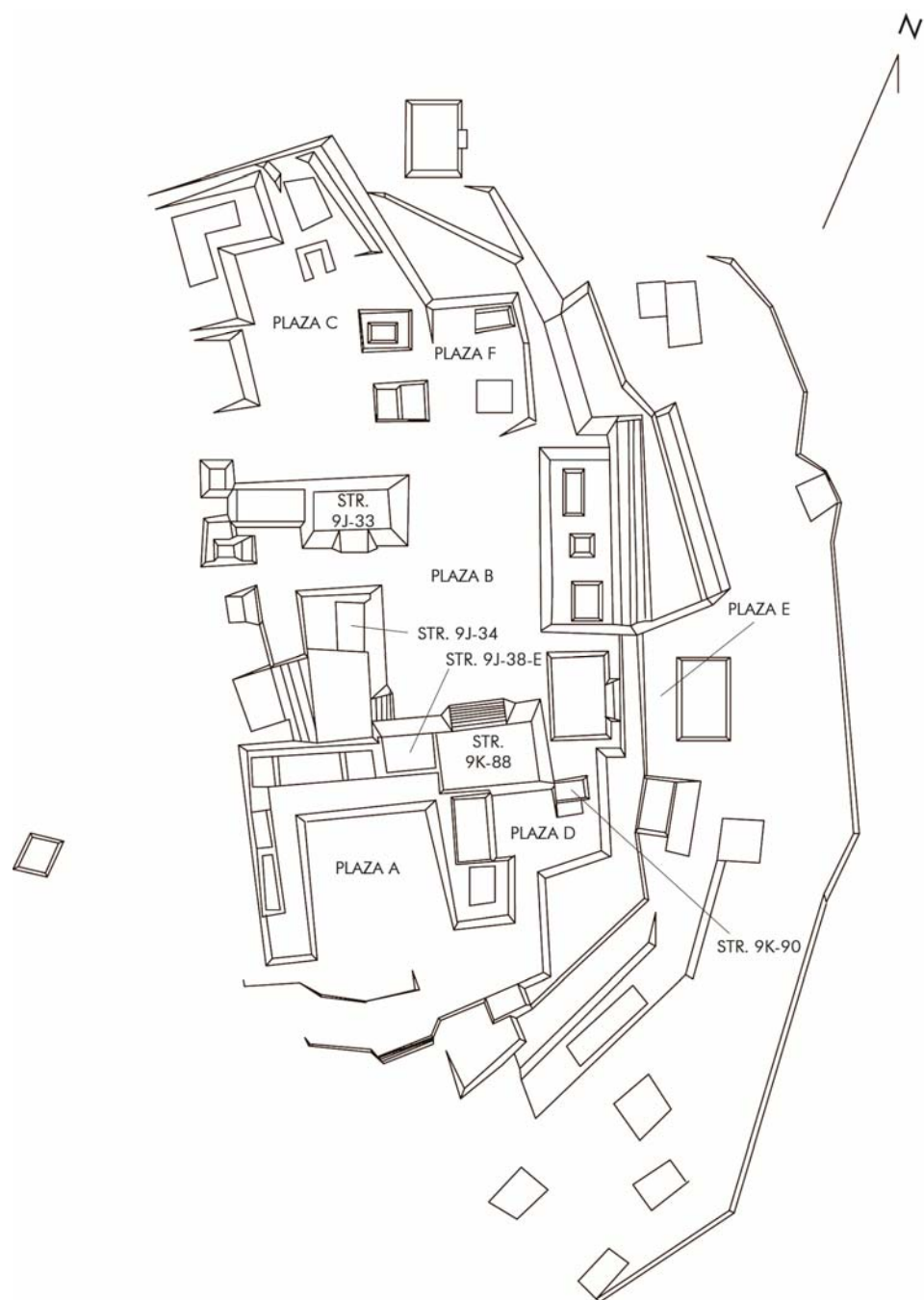


Figure 3.10. Copan Group 9J-5. Map after Maca 2002: Figure 8.6.

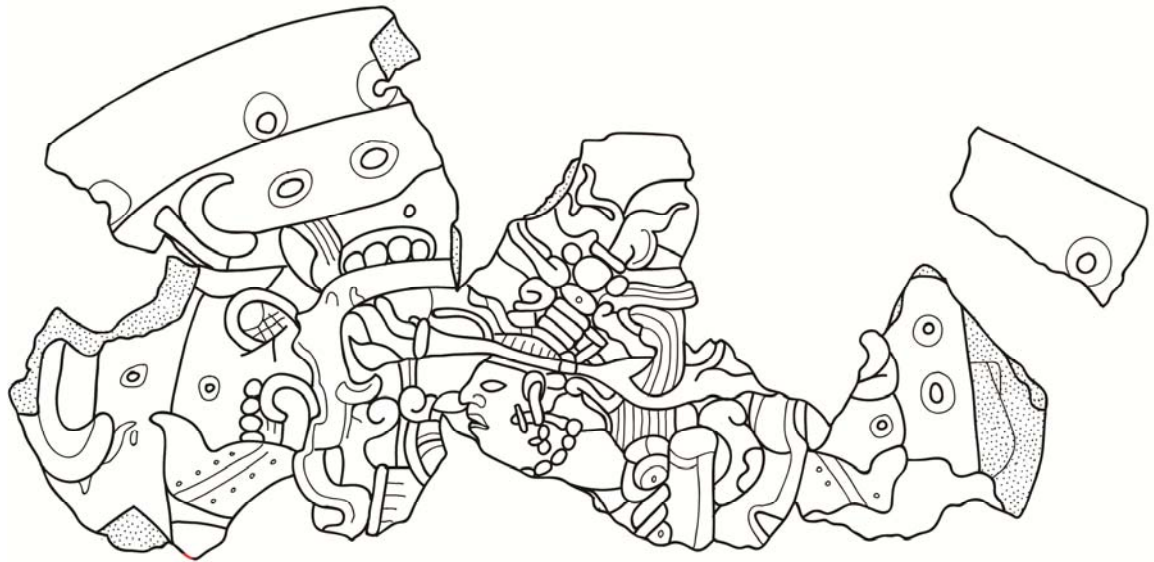


Figure 3.11. A carved bone pectoral ornament from the Copan Str. 9K-88-1st midden. Drawing after Maca 2002: Figure 12.13.

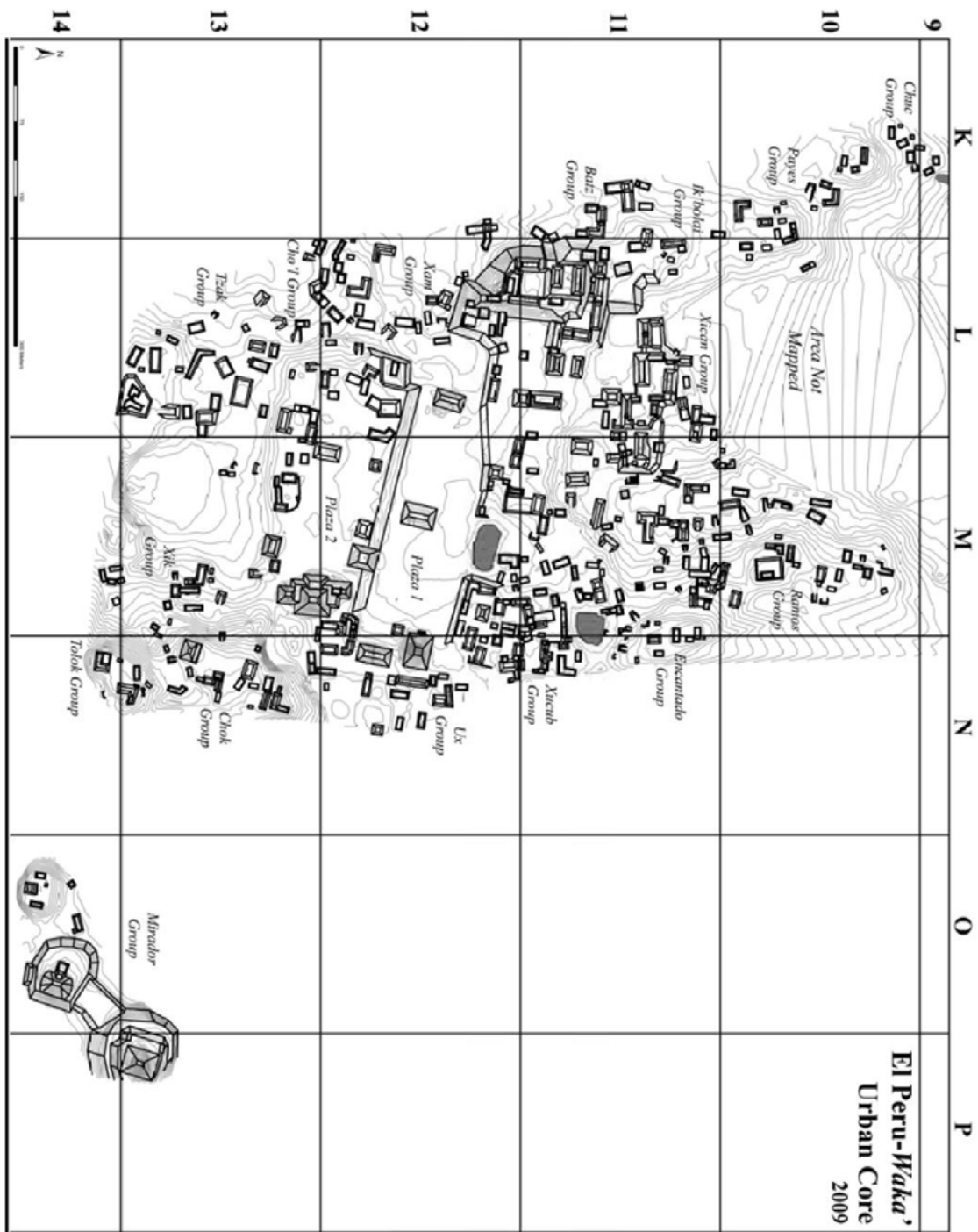


Figure 3.12. The site center of El Perú-Waka'. Map by and courtesy of Damien Marken.



Figure 3.13. The site center of Tikal.



Figure 3.14. The site center of Ceibal. Courtesy of Takeshi Inomata.

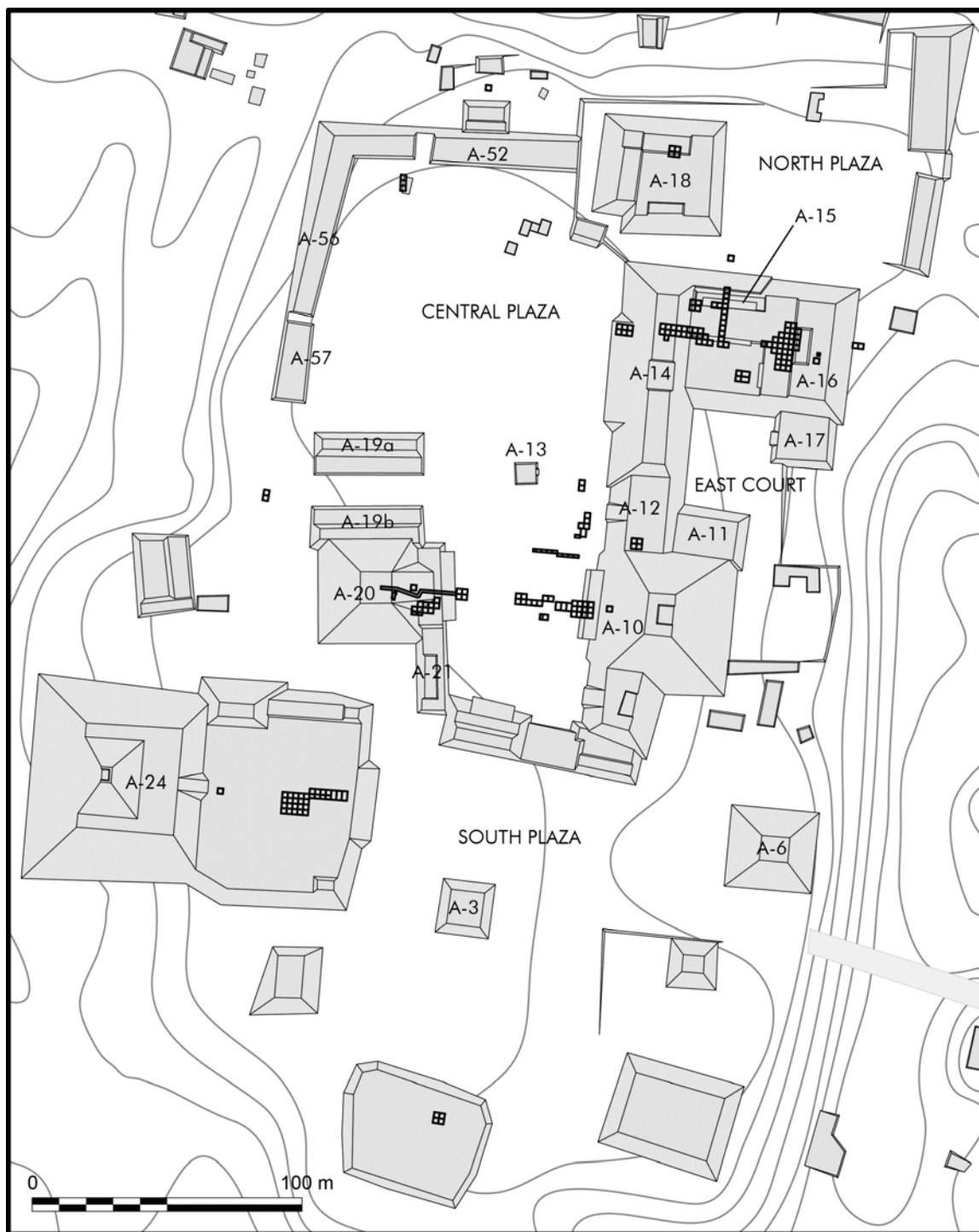


Figure 3.15. Ceibal Group A. Courtesy of Takeshi Inomata.

CHAPTER FOUR
TERMINAL CLASSIC MAYA ELITE SELF-PRESENTATION:
MONUMENTAL ICONOGRAPHY AND TEXTS OF THE CENTRAL AND SOUTHERN LOWLANDS

Classic Maya royal power was, as much as anything else, the power to represent events authoritatively, in precious, long-lasting, and often publicly visible media. The production, circulation, display, and ritual destruction of such objects—jade or shell ornaments, decorated ceramic vessels, and stone monuments among them—were at least as central to the practice of Classic Maya politics as were war, diplomacy, and succession. In-depth studies of specifically Terminal Classic portraiture and rhetoric are rare in the literature, and because of the often bewildering diversity of variations on a few standard representational themes (along with a few true outliers like late monuments at Ceibal; see below) considerable descriptive groundwork is required.

To assess Terminal Classic transformations in royal representation and rhetoric, a broad, though not exhaustive, assemblage of monuments from the area most directly impacted by the Maya collapse of the ninth century was surveyed and analyzed. The survey focused on sites in the central and southern Lowlands, from the Mirador Basin southwards, including upland centers like Copan and Tonina linked to central Peten by a shared elite culture. Its most pertinent results are presented here.

In order to capture changes relative to earlier works at the beginning of the Terminal Classic period, the survey encompassed monuments dating to between A.D. 790 (9.18.0.0.0 in the Long Count calendar) and the date on the latest securely dated Classic-style monument in the study area, A.D. 928 (San Lorenzo Stela 1). Where the

previous chapter examined common evidentiary classes—architecture, ceramics, and, when possible, other kinds of artifacts and deposits—at each of eight sites in turn, the monumental material called for a different approach. Here, themes in the epigraphic and iconographic record are examined in an intelligible order: a general consideration of representational style in the Terminal Classic period, followed by investigations into what Terminal Classic kings and nobles called themselves, how they described their relationships with other lords, and how they described their relationships with the supernatural. At each stage, case studies highlight the issues in question. Epigraphic arguments are at times advanced to support particular interpretations; to assist readers in following these discussions, a list of all monuments examined in the survey is contained in Appendix C of this dissertation, while the historical personages mentioned in this chapter are listed in **Table 4.1** with their dates of activity and pertinent biographical notes. A discussion and a summary of the information presented herein then highlight key points and set the stage for subsequent chapters.

The present chapter assumes that monumental inscriptions cannot be treated as transcripts of political processes ongoing in the Terminal Classic period, whether the movement of cultural groups across the Lowland landscape or changes in the power of kings relative to their courtiers. Instead, they must be understood both as sacred, venerated objects and as the product of courtly politics. Nevertheless, some broad trends are evident in how central and southern Lowland Maya kings chose to represent themselves and their contemporaries during the Terminal Classic period. The case is made here that some of those trends may reflect the growing significance of social networks constituted on a larger scale than local ruling dynasties and their courts, with

representational corollaries in the monumental record. These networks facilitated the movement of people and ideas, including the introduction of “non-Maya” paleographic and iconographic elements which actually reflect Lowland Maya ideas about foreign lands and peoples perceived as prestigious. Their adoption and deployment in the Terminal Classic period had some parallels to the traditional Maya use of Teotihuacano imagery—which, where they were adopted, they largely replaced.

Style in the Terminal Classic period

As noted in Chapter Three, there is no evidence for continued production of monumental texts by non-royal elites in the aftermath of dynastic disintegration at southern and central Lowland sites. Monumental art in the Terminal Classic central and southern lowlands is thus inseparable from kingly authority, yet its production involved multiple roles. Following Erving Goffman (1981), we can think of the rulers who commissioned monuments as their “principals,” socially perceived as authorizing and speaking through them. “Authorship” is another matter: did Terminal Classic rulers themselves lay out the scenes they wished to see, and compose the texts that would accompany them? Finally, the scribes and sculptors who actually executed the monuments can be thought of as the “animators” of those messages in stone. From Late and Terminal Classic sculptors’ and painters’ signatures, it is clear that such persons were rarely or never the same as the principals. Each person and step involved in the process required choices about what messages to encode, including through portraiture, textual content, and visual style—this last a broad category encompassing everything from the layout of a panel to the curves and proportions of carved lines. Constraining such choices

were religious traditions of long standing, immediate political considerations, and the need for artists and their audiences to be “literate” in shared systems of representational conventions (see Houston 2004).

The great majority of monuments in the study sample were stelae erected for period endings in the Long Count, often accompanied by sculpted altars. Of these stelae, most adhere to a standard format depicting a single, male ruler, standing and facing left, holding one or more ritual objects and wearing a highly conventionalized set of costume elements (**Figure 4.1**). These included an elaborate type of headdress comprised of wicker or matwork “wings” lined with quetzal plumes, worn at the back and sides of the head; often a “tail” of the same materials; and almost always a mask depicting some supernatural being, frequently the Principal Bird Deity or the *witz*’ serpent associated with rushing water. Such headdresses would have resembled a bird perched on the head of a ritual performer and animated by his movements, an effect the Maya surely intended (Stephen Houston, personal communication). They may have represented an avian avatar of the beings their masks depicted, or a conflation of those beings with the Principal Bird Deity (Stuart 2012: 133; see Bardawil 1976).

The standard ensemble was completed by dance belts hung with *Oliva* shell tinklers, jade celts, and ancestor masks, along with a kind of stiff skirt or apron reinforced with strips of bark or wood. This basic format encompassed distinct local traditions which persisted well into the ninth century. For instance, *Mut* rulers at Tikal and Ixlu/Zacpeten commissioned stelae adhering closely to a format established by *Yik’in Chan K’awiil* with Tikal Stela 21 (A.D. 736; see **Figure 4.1** for a later example). They depict rulers holding a cloth- or paper-wrapped rod (perhaps a conventionalized fire drill)

in the crook of the left arm, scattering pellets of incense with the right hand. Their headdresses feature the name glyphs of a mythic founder or ancestor. Rulers at Xultun, 35 km distant, favored the display of sacred effigies, while Calakmul's late rulers were depicted with *K'awiil* scepters and shields. Meanwhile, Serpent Bars were *de rigueur* at Naranjo. Each of these representational alternatives had roots in Early Classic or Late Preclassic portrayals of elite ritual, and together comprised the conventional standard from which semiotically "marked" monumental scenes sometimes diverged.

As a general rule, visual representations on stelae are confined to a single figural panel taking up most of a stela's front surface. The major exception was in the depiction of captives, who, when they appear at all, are more likely in every part of the central and southern lowlands to be shown in a separate panel below the ruler's feet than to crouch beside him or be trampled directly underfoot. Yet monuments at Naranjo (ca. A.D. 849), Ixlu (ca. A.D. 849), and Ceibal (A.D. 889) present other formats, with ancestors or higher-ranking elites looking down on the main proceedings from upper panels, or seated gods shown in frames above and below the primary scene. Early and mid-ninth-century stelae and altars at Caracol and Ceibal depict conferences between local lords and with visitors from other sites (see below). Governed by Classic conventions of courtly decorum known from the ceramic corpus, their poses are still less rigid and more varied than those encompassed by the period-ending standard. These formats find corollaries at northern sites, including multi-paneled monuments at Edzna, Oxkintok, and Uxmal. An earlier precedent may be represented by a broken stela from the minor site of Piedra Quebrada, near La Rejolla and Caracol by the Guatemala-Belize border (**Figure 4.2**). The monument's two panels both depict scenes of court life, and their format closely matches

that of eighth-century polychrome vases portraying such vignettes (Chocón 1999: 71 – 74, Figure 2).

A few monuments, produced early in the study period, depict lords participating in the ritual ballgame. Visual and textual references to the ballgame on monuments are concentrated in the Usumacinta River and Petexbatun regions and Petexbatun regions (Ceibal “Stelae” 5 and 7, A.D. 800; La Amelia Panels 1 and 2, A.D. 807; Yaxchilan Lintel 10, A.D. 808). The all-glyphic Yaxchilan Lintel 10 connects the ruler *K’ihnich Tatbu ?Joloom*’s performance on the ballcourt with his military victories over other sites. By contrast, the other monuments show peaceful encounters. In these scenes, rulers wear costumes scarcely less elaborate than the outfits appropriate for period ending rites, distinguished mainly by simpler skirts and protective gear. Such depictions contrast with those on a genre of ceramic vases produced in northern Peten during the early Terminal Classic period. Some of the latest examples of the painted polychrome tradition in the central and southern Lowlands, these vessels combine a spare, unelaborated aesthetic with an emphasis on players’ vigorous movements (**Figure 4.3**).

The assumption that changes in Terminal Classic Maya art, even the appearance of elements and compositional styles resembling those in other cultural zones, are best explained by mass migrations or military invasions from other parts of Mesoamerica (e.g., Sabloff and Willey 1967; J. Graham 1973: 211) has basically been put to rest (Stuart 1993: 337 – 343; Webster 2002a: 228 – 230). Nor is it sufficient to speak in vague terms of “influence” exerted, as if automatically, by one abstract culture on another (Baxandall 1985: 58 – 60; Just 2007: 37). At the same time, the Terminal Classic period was certainly characterized by population movement within and out of the central and

southern Lowlands. As discussed below, the monumental record does provide strong reasons to believe that some of the high-status people responsible for commissioning and producing monuments did travel widely, including between the northern Yucatan Peninsula and southern regions like the Petexbatun and Lake Peten Itza areas. Travel by elite patrons and artisans, who innovated or communicated new ways of representing and constituting exalted status, is well supported by the Terminal Classic hieroglyphic corpus.

Foreign and innovative stylistic elements in Terminal Classic Maya art and writing

Such innovations and exotic motifs co-occur to a limited extent, and always in the context of compositions which primarily use traditional, Late Classic-style iconography and rhetoric. These “non-Maya” or “non-Classic” elements did not originate exclusively in one center or region outside the southern Lowlands, but incorporate motifs shared with Yucatec, Chontal, and non-Maya Veracruzano cultures along the Gulf Coast, as well as with inland western Mesoamerican centers like Tula and Xochicalco. Some such elements, like transverse nose bars, may better be understood as stylistic innovations shared in the northern and southern lowlands during the ninth century, rather than as specifically foreign motifs introduced to the south. Thus, even though such elements became prominent in Maya art during a period of intense interaction with distant areas, facilitated in large part by marine travel along the Caribbean and Gulf of Mexico coasts, neither they and the people who employed them should necessarily be thought of as invaders or intruders (in contrast to J. Eric S. Thompson’s “Putun hypothesis,” for which see Thompson 1990: 25 – 47). Maya-style iconography in monumental works at western sites including Xochicalco (López Luján et al. 1995: 46 – 137), Cacaxtla (Foncerrada de

Molina 1993: 105 – 112), and El Tajín (Koontz 2008: 339 – 344) make it clear that such intellectual exchanges, and whatever movement of living people made them possible, were bidirectional.

In no single work do all these elements appear together; instead, one or a few are combined with conventional Classic-style glyphs and visual compositions. Relevant elements of portraiture include transverse bar ornaments worn in the nose; hair worn short and stiff in the front; short capes covering the shoulders; scarves covering the head and tied at the back of the neck; and large, circular or square earflares instead of the long-bead composite earflare assemblages favored in conventional eighth-century portraiture. Representations of *K'awiil*, whether as costume elements, as logograms, or in toponymic registers, emphasize a short ruff of hair or corn silk and an ornate take on the god's long lip. Stela 1 from Jimbal (A.D. 879; **Figure 4.4**) provides well-preserved examples of several of these elements. Two warrior gods not depicted in earlier Classic art also appear on a few monuments (Ixlu Stelae 1 and 2 and Ucanal Stela 4). Paralleling the later Aztec contrast between *Tezcatlipoca* and *Quetzalcoatl*, one warrior wears a feathered serpent headdress, while one or more flaming torches project from the head of the other. Visual oppositions or conferences between deities—usually shown singly, if at all, on earlier Classic period ending monuments—appear both on Terminal Classic monuments and in scenes on ninth-century molded-carved vessels. These parallel certain developments in Veracruzano religious art (see **Figure 4.5** for one monumental example, a stone coffer carved with scenes depicting interaction between two deities), yet many ceramic examples and all monumental examples of such scenes in the southern lowlands retain substantial Maya stylistic content.

Prominent among Terminal Classic paleographic innovations are non-Classic-Maya-style *tzolk'in* day signs enclosed in square or circular cartouches (see **Figure 4.6** for examples). These are attested in texts on carved monuments; on molded-carved, incised, and painted ceramic vessels; on a stone palma for the ritual ballgame, recovered in El Salvador but potentially produced in parts north (Shook and Marquis 1996: 229); and on an unprovenanced shell plaque photographed by Justin Kerr (2012: K7498). A consideration of the grammatical and compositional contexts in which they appear permits a hypothesis concerning their function to be proposed.

Two Terminal Classic southern Lowland monuments (Calakmul Stela 84, A.D. 874, and Ceibal Stela 18, A.D. 889) display Maya-style Ajaw day signs inside square cartouches, graphic allusions to a non-Maya way of writing. The Ceibal example is part of an isolated Calendar Round date, not a grammatical sentence, and the damaged Calakmul text may be similarly ungrammatical. Monuments displaying truly non-Maya square day signs are Ucanal Stela 4 (A.D. 849), Jimbal Stelae 1 (A.D. 879) and 2 (A.D. 889), and Ceibal Stela 3 (A.D. 889) and 13 (A.D. 889 or later). The inscription on Ceibal Stela 13, which opens with the day name “9 Jar” (perhaps 9 Water), is grammatically problematic (see below). On Ceibal Stela 3, “5 Alligator” and “7 Alligator” function straightforwardly as nominal captions labeling two *Tlaloc*-style rain gods in the monument’s upper register. In just the same way, on an incised alabaster vessel (Kerr 2012: K319), non-Classic-style day signs in circular (not square) cartouches correspond transparently to evidently human figures seated below them.

The three remaining monuments with square day signs (Jimbal Stelae 1 and 2 and Ucanal Stela 4) all bear grammatical inscriptions (**Figure 4.7**). The interpretation

advanced here is that, in these three texts, the square day signs do not record historical dates connected to the events described in those texts, but instead function as names or titles. In these three inscriptions, at least, they specifically name human beings, not deities invoked as part of period ending rituals. Since, as will be explained, at least some of these calendrical names were acquired by different means than was the custom for other Mesoamerican societies, they may very well have been deity names taken by human kings. In that case, they would be analogous to widely attested components of royal names like *Chahk*, *K'ihnich*, and *Yopaat*. This is not, however, testable on present evidence, since the only two non-Classic-Maya-style calendrical names which unambiguously refer to gods are not attested elsewhere in the Terminal Classic Maya corpus.

The human nominal interpretation of these particular non-Classic day signs is not universally accepted (Stephen D. Houston, personal communication). However, the case that these signs do name human beings on Jimbal Stelae 1 and 2 and on Ucanal Stela 4 is about as strong as the case for a nominal interpretation of most other logographic spellings widely acknowledged to function as human names or titles. That case rests on the syntax of the texts in question, in which the square day signs—transcribed in boldface below—appear to belong to coherent nominal phrases:

... he binds the stone, he casts incense, [...] *U Mu* [...], **10 Stone**, **13 Bird**, the holy *K'anwitznal kaloomte'*, and [...] *Sihiyaj K'in Chahk*, **7 Crossed Bands**, [...] *Chan* [...], the holy *K'anwitznal* lord ... (Ucanal Stela 4, A1 – E1)

... he binds the stone, he casts incense on the half-*k'atun* ending, **12 Serpent**, **13 Death**, **1 Deer**, *?Kuchtal* [...] *K'awil* [...], the captor of [...]. He himself is the cherished one of [...] **8 Alligator**; he is the son of *Olom Jaatz'*, the western *kaloomte'* ... (Jimbal Stela 1, A2 – B9)
His companion is **10 ?Rain**, the *ti'hu'n* (Jimbal Stela 1, Y1 – Y3)

He casts incense, [...] *K'awiil*, the holy *Mut* lord, **12 Serpent, 13 Death, 1 Deer**. He himself is the cherished one of the [...] lady; he is the son of *Olom* ... (Jimbal Stela 2, A1 – A2, D4 – C7; see below for a discussion of the reading order)

On Jimbal Stela 1, 10 ?Rain is immediately followed by the title of *ti'hu'n*, applied elsewhere in the hieroglyphic corpus to human aristocrats but never to deities. With only three glyph blocks in the small incised text at positions Y1 – Y3, there is no syntactic ambiguity. In the parentage statement on the same monument, the name 8 Alligator follows closely on the “son of mother” expression *u baah u juun tahn* (“he is her cherished one”) and immediately precedes the widely-attested “son of father” expression *u ?mihiiin*. According to the conventions of such statements, 8 Alligator should thus name a human woman; if, in that setting, it were instead a date in the narrative or a deity name, it would be unique in the Maya hieroglyphic corpus. The syntactic evidence is even stronger on Jimbal Stela 2, where the sequence 12 Serpent, 13 Death, 1 Deer is sandwiched between the human titles of *k'uhul Mut ajaw* (“holy *Mut* lord”) and *u baah u juun tahn*. And on Ucanal Stela 4, the sequence 10 Stone, 13 Bird is directly followed by another human title, *k'uhul K'anwitznal kaloomte'* (“holy *K'anwitznal* overlord”). These contexts seem inconsistent with references to gods or narrative dates, leaving human names or titles a more grammatically plausible interpretation in these specific cases.

Although rare, *tzolk'in* day-names are attested as personal names in earlier Classic Maya texts, especially in the vicinity of Palenque (Stuart 2005b: 117) and at least once at Uaxactun (5 ?Ben, on Stela 2, A.D. 751). Their use in the southern lowlands in the Terminal Classic period is nevertheless innovative in several respects. First, their non-Maya visual forms assert a foreign identity of some kind for the persons who bear them in a way that Late Classic Maya names like “4 Ajaw” and “5 K'an” did not. Second, the

sudden proliferation of day names throughout the central and southern lowlands is unusual for any paleographic mode, corresponding to a real cultural trend.

Most striking, however, is the use of multiple day names to denote the same individual. This is also the strongest argument against the interpretation advanced here, since such a practice is not attested for the Maya in any other time or place, or indeed for any other Mesoamerican people. In societies which favored calendrical names, a child was named for the day of his birth. If that is what they are, the multiple names of the rulers on the Ucanal and Jimbal stelae point to an alternative naming practice whereby people could receive more than one calendrical name in infancy or at some later point in life. In either case, these names point not to a truly non-Maya onomastic custom, imported from the west by a population of immigrants or invaders, but rather to the intentional adoption by Maya people of names and nominal glyphs which signified “foreignness” in some way despite not conforming to the attested naming practices of any specific foreign group.

The square day signs on monuments find parallels in a Fine Orange ceramic type produced along the Usumacinta River and widely distributed across the Maya lowlands during the Terminal Classic period: Pabellon molded-carved. Characterized by bowls and barrel-shaped drinking vases with pedestal bases, Pabellon vessels exhibit a few standard figural scenes, including battle scenes and tableaux of deities conferring. Their rim texts are rarely intelligible and may be pseudoglyphic (see Calvin 2006: 53 – 168) in the majority of cases, but include a regular sequence of graphs (see Wyllie 2002: 300 – 302 for Peter Keeler’s findings on these sequences). Square day signs on Pabellon vessels include “Serpent,” “Death,” “Vulture,” and perhaps “Crocodile,” although the

identification of several signs remains problematic (Werness 2003: 64 – 70). The Serpent day sign on Pabellon vessels is stylistically non-Maya, depicting an entire snake instead of a snake's head or the “bite marks” of the typical Chicchan logogram, but Death signs use both the pan-Mesoamerican convention of a human skull and the typically Classic Maya “percentage sign,” with a diagonal line and two dots. Whereas bar-and-dot numerals accompanying square glyphs on Terminal Classic monuments adhered to Classic Maya conventions in their placement relative to the main sign, numerals on Pabellon vessels could be placed to any side or even inside the cartouche. Like the nominal glyphs on the Jimbal stelae, the square glyphs on Pabellon vessels can sometimes be interpreted as naming sequential days, like “5 Serpent, 6 Death” (Werness 2003: 66). Such signs are not confined to molded-carved types, although such types do predominate among intensively decorated Terminal Classic ceramic vessels. One polychrome painted vase, executed in the spare style typical of Terminal Classic ceramic art from the area of Señor del Peten, attributes its owner a mix of Classic Maya-style names and titles as well as a pair of probably sequential square day-names (**Figure 4.8**).

Outside of the Central and Southern Lowlands, square day signs resembling those in the monumental and molded-carved corpora are attested on a few of the embossed golden disks and carved jade plaques recovered from the Cenote of Sacrifice at Chichen Itza (Lothrop 1952; Proskouriakoff 1974: 208 – 209; Wyllie 2002: 217 – 218). Further afield, an unprovenanced stone palma reported to have been found in Piedras Gordas, El Salvador bears an inscription—not particularly legible—incorporating Classic Maya-style hieroglyphs and three day signs in square cartouches (Shook and Marquis 1996: 229). The Piedras Gordas palma was surely produced somewhere in the Maya region,

reaching its find-spot by obscure channels of gifting or exchange. The golden disks, on the other hand, were likely produced in northern Yucatán, probably at Chichen Itza itself, but no Mexican-style day signs or square cartouches are attested in the monuments of that site.

Aside from square cartouches, the Terminal Classic monumental corpus of the Southern and Central lowlands contains two other noteworthy cases of highly aberrant scribal practice. One of these, Ceibal Stela 13 (**Figure 4.9a**), depicts a standing figure whose hairstyle, transverse nose bar, and skirt fashioned of living serpents have contributed to proposals that he represented a foreign person (perhaps from Veracruz or the Acalan Chontal-speaking region of coastal Tabasco) or a local lord who symbolically appropriated the power of Veracruzeña female elites or supernatural beings (Wyllie 2002: 315). Certainly, as Jeremy Sabloff (1970) pointed out, the figure on the Ceibal stela has features in common with the reclining rulers or gods commonly depicted on Pabellon molded-carved vessels. The torch replacing his left hand parallels that of a *K'awiil*-like entity depicted on an unprovenanced molded-carved vessel (Kerr 2012: K6668) whose texts are themselves aberrant but use exclusively Maya-style glyphs (**Figure 4.9b**). The text on Ceibal Stela 13 offers little guidance; the initial “7 Jar” Mexican-style day sign is presumably a name, and the final glyph block reads *ochik'in kaloomte'*, but the middle part of the text—transcribable as **?t'u-pu-?-?-ba e-?je-ke-ni-ta**—is opaque. It has been interpreted alternatively as recording some non-Maya language (Mathews and Willey 1991: 58) and as evidence of “deepening scribal ineptitude” in the final years of the Classic monumental tradition, intended to signal “Mayaness” rather than to cue a specific utterance (Just 2007: 36).

A second unusual Terminal Classic inscription is Jimbal Stela 2 (A.D. 889) (**Figure 4.10**). Commissioned by ?*Kuchtal*, it bears his nominal phrase, including the sequence 12 Serpent, 13 Death, 1 Deer. The rightmost of the inscription's two double columns is read first, then the leftmost, in contrast to the usual reading order. Within the first double column, the reading order switches irregularly from right-to-left to left-to-right and back again. The *k'atun* coefficient in the Long Count date is included in the initial glyph block with the *bak'tun* date, and the phonetic complements in the names of the Paddler Gods, in the left double column, are written to the left of their logograms instead of in their usual positions below or to the right. Some paleographic details of the stela may refer to contemporaneous scribal practices at Chichen Itza or other sites in the Northern Lowlands. Among them are the separation of signs typically grouped together, the crowding together of numerous signs into single glyph blocks, and the forms of some signs: **CHOK** at D7 (compare to **chi** at F1 on Lintel 3 from the Temple of the Four Lintels at Chichen Itza) and the rightward-facing head glyph at A7 (head signs virtually always face left in Classic Central and Southern Lowland texts, but the opposite orientation is not uncommon at Chichen Itza).

Stela 2's anomalous inscription could be seen as evidence that hieroglyphic literacy at Jimbal was degenerating during the ninth century—that the scribes responsible for the monument had forgotten old conventions, or were simply not very good at their jobs. Yet several factors militate against such an interpretation. First, elites at Jimbal and Uaxactun were in close contact with each other, as evident from the sites' proximity and the mention of a ruler named *Olom* on monuments at both centers (see below). Second, despite the inconsistent reading order, the Jimbal text is more or less grammatically

complete. The structure of its legible part adheres to Late Classic rhetorical practices: it opens with a Long Count date, proceeds to an incense-casting expression and the names and title of the protagonist, then provides a standard parentage statement. The scribes' violations of Late Classic conventions do not seriously interfere with the inscription's legibility. Instead, like the square day signs, they may allude to a non-Central Lowland Maya ethnic identity, at least as it was conceived of in Northern Petén.

Jimbal Stela 2 and other texts incorporating "Mexican-style" day signs thus recall the ways in which earlier Classic Southern Lowland Maya artists engaged with the symbols and aesthetic conventions of Teotihuacan. The most apposite comparison may be to an eighth-century inscription at Structure 10L-26 at Copan, in which columns of Classic Maya hieroglyphs alternate with glyphs apparently repeating the same information but rendered in a script that incorporates Teotihuacano iconography (Stuart 2005b: 387 – 390). Each sign in the Maya text corresponds to another in the "Teotihuacan-style" inscription, but corresponding elements in the two texts usually do not share iconic origins or iconographic meanings. Nor are the "Teotihuacano" glyphs true examples of Central Mexican writing—in fact, they record Classic Ch'olti'an grammar, although not particularly well. Clearly, some Maya scribes, likely the people who produced the text, invented a "font" drawing on a small range of motifs that, to them, stood for Teotihuacano identity. In just the same way, late ninth-century elites asserted ties to other parts of Mesoamerica through stylistic choices connected to script and nomenclature, without directly importing other peoples' ways of speaking and naming, and without abandoning the traditional themes of period-ending monuments.

Tellingly, Terminal Classic foreign and innovative stylistic elements do not co-occur with an older set of motifs, adopted and developed by Early Classic Maya artists, which refer to the prestige and ritual authority of Teotihuacan. References to *wite'naah* buildings, lineage shrines where kings were invested with power, are conspicuously absent from Terminal Classic monuments with square day signs or other innovative motifs. The continued use of *ochik'in kaloomte'*, “western overlord,” presents a borderline exception to this pattern, but the title no longer appears as a “marked” indicator of Teotihuacano connections, and in any event, many of the polities and peoples to which non-Teotihuacano foreign elements allude were themselves located west of the Maya world. The goggle-eyed *Tlaloc* deities on Ceibal Stela 3 (A.D. 889) are rendered in a coastal Veracruzeño style, with wild hair, rather than in Teotihuacano style. Terminal Classic stylistic innovations thus apparently refer to alternative sources of legitimating, non-Maya authority. Given the diversity of such elements, their purpose may have been to present Terminal Classic rulers as possessing far-flung cultural, personal, and economic connections, in contrast to the emphasis on lineage and sacred war evident in earlier Teotihuacan-style iconography.

Foreign and innovative Terminal Classic stylistic elements should be understood as examples of code-switching, whereby members of one group (kings and other elites at some southern Lowland sites) sought to associate themselves with other groups by adopting communicative practices they perceived to pertain to the target group. A Late Postclassic parallel, of which some documentary evidence is preserved in Colonial-era documents from northern Yucatan, is the so-called “Language of Zuyua.” According to the *Book of Chilam Balam of Chumayel*, knowledge of this language was necessary to the

legitimate authority of pre-Conquest Yucatec noblemen (Roys 1967: 89, 192). Office-holders would periodically be interrogated as to their ability to recount lineage histories stretching back to a semi-mythical homeland of Zuyua, somewhere on the Gulf Coast to the west, as well as to answer riddles which may best make sense as puns in a Mixe-Zoquean language (Stross 1983). Esoteric knowledge, and the capacity to switch into an esoteric code in order to interpret and express it, was thus tied to a perceived foreign origin for a high-status social group who defined themselves in opposition to people who lacked that knowledge. Similar principles were probably behind the valorization of “foreign” day-signs in Terminal Classic material high culture.

Royal and courtly ranks and titles

New calendrical signs were far from the only informative feature of the Terminal Classic hieroglyphic corpus examined in the study. Trends and patterns in the use and distribution of royal and aristocratic titles were more directly informative concerning political structures and dynamics, even though monumental inscriptions of course tended to reflect specifically royal perspectives and interests. As was the case earlier in the Classic period, Emblem Glyphs (see Berlin 1958) of the format *k’uhul* “X” *ajaw* (“holy ‘X’ lord”) were the most common titles used by the royal principals of monumental inscriptions. Their distribution in the Terminal Classic corpus reflects some political disruption, notably to the *Mut* dynasty of Tikal. There, no surviving monuments were erected between the 9.19.0.0.0 (A.D. 810) and 10.2.0.0.0 (A.D. 869) *k’atun* endings, an interval proposed to correspond to an interregnum at that site (see Chapter Three, this volume). The 9.19.0.0.0 monuments erected by the ruler known to epigraphers as “Dark

Sun,” Stela 24 and Altar 7, were intentionally mutilated, while those of his immediate predecessor *Yik’in Chan K’awiil* were spared. Beginning during the Tikal interregnum, the *Mut* Emblem Glyph was used by one or more generations of kings at Ixlu and Zacpeten between A.D. 830 and 879. These kings were likely claimant to the throne who established a court in exile to the south, not recipients of devolved royal authority (cf. Valdes and Fahsen 2004: 151). The reappearance of the *Pa’chan* Emblem Glyph on an A.D. 830 stela at El Zotz probably corresponds to newfound political independence for that site’s court (see Chapter Three, this volume). Following *Jasaw Chan K’awiil* II’s short-lived restoration of kingly rule at Tikal ca. A.D. 869, *?Kuchtal* claimed the status of *k’uhul Mut ajaw* in the inscription on Stela 2 at Jimbal (A.D. 889).

The *Kan* dynasty, the *Mut* kingdom’s historical archrival, may no longer have been based at Calakmul by the Terminal Classic period. The *Kan* Emblem Glyph does not survive on any ninth-century monuments from that site, despite the mention of a *k’uhul Kan ajaw* on Ceibal Stela 10 in A.D. 849. Its latest attestation at Calakmul comes from a set of *k’atun* ending stelae dated to A.D. 731, and the “Bat” Emblem Glyph of the dynasty that had ruled at Calakmul before the *Kan* ruler *Yuknoom* “Head” moved his court there in A.D. 635 began to be used again at Calakmul only ten years later (Martin 2005: 5 – 6; Stuart 2012b). A series of little-known rulers of uncertain dynastic affiliation continued to erect stelae until A.D. 909 or even later, the latest of which combine stylistic and paleographic innovations with diminished artistic skill (Martin and Grube 2008: 114 – 115).

Other royal titles, especially *baahkab* and *kaloomte’*, continued to be used alongside or (as at Ceibal after *Wat’ul K’atel*; see below) in place of traditional Emblem

Glyphs. *Ochik'in kaloomte'* ("western overlord"), with its roots in the Early Classic encounter between Teotihuacan and Tikal, was the most widespread iteration of the *kaloomte'* title, but kings at Zacpeten and Ceibal called themselves *yax kaloomte'* ("new overlord"). *Baahkab*, perhaps "first in the land" or "head overseer," was almost entirely restricted to lords who commissioned monuments in their own domains, or to members of their families. With two exceptions, the title was not applied to foreign lords during the study period, unlike Emblem Glyphs and *kaloomte'*. The implication may be that, at least for Terminal Classic scribes, *baahkab* connoted specifically a kind of local paramouncy—"first in *this* land"—considered inappropriate to extend to foreign kings. The exceptions—Piedras Negras Stela 12 (A.D. 795) and a caption on the mural painting of Str. 1, Room 3 at Bonampak (ca. A.D. 791)—both come from the Usumacinta region, date to the end of the eighth century, and refer to rulers in hierarchical relationships with local lords. The former monument applies *baahkab* to a vassal lord from another site, while the Bonampak text attributes it to the king of Yaxchilan and other allies of the Bonampak ruler.

Far more evidence about the internal structures of late southern and central Lowland Maya courts comes from sculptures and inscriptions dating to the turn of the ninth century than from later works. This pattern is in keeping with a trend noted by Sarah Jackson (2013: 82 – 85) wherein hieroglyphic references to sub-royal elites peaked in the mid-eighth century, declining precipitously in the Terminal Classic period. That trend reflects a sharp decrease in the number of monuments erected in the ninth century, but also derives in part from long-standing regional differences in representational and political practice. At one extreme, Tikal's Late Classic kings almost never shared visual

or textual space on their monuments with their subordinates. At the other, monuments at western centers like Palenque, Piedras Negras, and Yaxchilan, as well as their subordinate sites, highlighted subordinate lords to a considerable extent beginning in the seventh century A.D. For instance, Piedras Negras Stela 12 (A.D. 795) depicts two lieutenants of Ruler 7, at least one of whom was himself the king of *Pe'tuun* (La Mar) and bore the title of *baahkab*. With courts in the west typically collapsing sooner than those in central Peten, sub-royal elites were correspondingly less well represented in the hieroglyphic corpus. Across temporal and spatial boundaries, however, texts dealing with wars are by and large more informative about courtly hierarchies than are inscriptions dealing with ritual matters. Very late monuments commissioned by *Mut* dynasts with courts outside of Tikal—Jimbal Stela 1, Ixlu Altar 2, and Ixlu Stela 1—do name or depict non-royal elites,

Courtly hierarchy at Bonampak

The most abundant evidence for the structure and representation of courtly hierarchies at the end of the Late Classic period comes from the mural paintings of Str. 1 at Bonampak. Frescoes in the building's three rooms depict the Bonampak court's preparations for war against another kingdom; the clash of the two rival armies and the sacrifice of prisoners; and the dénouement of the conflict, in which Bonampak's lords celebrate their victory with ritual bloodletting and exuberant dance (Miller 1986: 149 – 151). These vignettes of tribute presentation, dressing, and ritual dance provide a picture of royal performance as process and semi-public spectacle that is missing from most monumental depictions of kings in the Terminal Classic or any other period of ancient

Maya culture (Miller and Brittenham 2013: 113 – 142). On the south wall of Room 3, no fewer than ten lords, members of the royal family and nobles with the rank of *sajal*, dance around a scene of heart excision, each wearing a sumptuous and elaborate costume including a descending bird headdress. This scene, like a more restrained dance tableau on the east wall of Room 1, depicts the musical accompaniment to such performances. The contrasting composition of the two orchestras—one emphasizing wind instruments, the other dominated by maracas and percussion instruments—informs the murals' viewer that the dances sounded quite different when performed (see Houston et al. 2006: 256 – 260).

In these ritual performances, the men bearing the highest-ranking titles wear the most labor-intensive and valuable clothing. Yet this pattern is reversed in a scene stretching across three of the inward-sloping upper walls of Room 1. There, the king *Yajaw Chan Muwaan*, his wives, and his young children, all wearing elegant yet relatively simple garments, look down from an elevated platform at a line of tributaries. Laden with jade and shell jewelry, cloth mantles, and ornate headdresses, these emissaries acted as walking tribute bundles, displaying and then divesting themselves of clothing and ornaments sent to the king of Bonampak by subordinate lords (Houston 2012c: 164 – 165). The remaining upper wall of the same room links such messengers and the goods they bear to the royal spectacles those objects potentiated: servants dress *Yajaw Chan Muwaan*'s three young adult sons in elaborate dance costumes rich with jade, quetzal feathers, and jaguar or ocelot hides. Below them, other court attendants (*anab*) remove similar items from their storage containers.

Dress closely tracks status distinctions even in the battle scene on the south wall of Room 2. *Yajaw Chan Muwaan*, his heir *Chooj* or *Kooj*, and other highly ranked warriors (some with royal titles) are richly dressed for battle, with tall, plumed headdresses. Those of the king and his heir tower above the rest, and both royal bodies are shown protected by visually arresting jaguar-skin jackets. Lower-status combatants wear less clothing and simpler headgear, while subjugated enemies are shown nude or nearly so, some with strips of paper already replacing their ear ornaments (Miller and Brittenham 2013: 100 – 104). Similar distinctions of dress obtain in the “arraignment” scene on the room’s north wall: royal men wear jaguar pelts and quetzal plumes; lower-ranked warriors wear animal headdresses and finely worked cloth, but little feline skin; and royal ladies are dressed austere in white cotton and jade (see Miller 1986: 152 – 161). The torture and execution of near-naked prisoners constitutes a more than usually explicit representation of the homicidal basis of royal authority.

The Bonampak murals also present unique information about the materials involved in royal display at the end of the eighth century. Pectoral ornaments with tripartite elements “sprouting” from either end, common in royal period ending costumes on stelae, are revealed in Room 3 to be temporary constructions of cloth or paper wrapped around scarlet plumes. The dressing scene in Room 1 provides a rare glimpse of how the components of royal ceremonial dress were curated and assembled. The brilliance of quetzal plumes and jade jewelry can be assumed from monumental representations, but the use of polychromy in the Bonampak mural paintings reveals a richly colored world of dyed and painted textiles, leathers and hides, and masks perhaps made of papier-mâché. The importance of wood and gourds in courtly spectacle is

evident in the staves and standards held by courtiers, the wooden frames donned by the princes in Room 1, and the trumpets and other wind instruments played by the musicians. Human body parts were also brought into service as costume elements: a freshly severed head, resting on a bed of leaves, awaits transformation into one of the preserved trophy heads worn by *Yajaw Chan Muwaan* and his son.

In captions accompanying those scenes, members of the royal family take a range of titles familiar from other Classic inscriptions, including a surprising number of Emblem Glyphs. The primary Bonampak Emblem Glyph, *k'uhul Ak'e ajaw*, applies not just to the highest-ranking royal, the king *Yajaw Chan Muwaan*, but apparently to his three sons as well. *Chooj*, the eldest son, is called *k'uhul Usiij Witz ajaw*, a reference to the architectural core of Bonampak (*Usiij Witz*, “Vulture Hill” [Stuart 2006]). A third such title, attributed to *Yajaw Chan Muwaan*, derives from a building called **“BAT”-ka-la-NAAH**, perhaps located within the site core (Houston 2012c: 167). Still a fourth Emblem Glyph is borne by *Yajaw Chan Muwaan*’s second son, *?Yaxuun Bahlam: k'uhul Tz'am ajaw*, “holy Throne lord.” The rank of *k'uhul ajaw* was thus no longer restricted to reigning monarchs at late eighth-century Bonampak, indicating a broadening and consequent degradation of its once exclusive privilege. At the same time, its extension to the three princes may reflect a need, connected to questions of succession, to distinguish between members of the king’s immediate family and more distant relatives. The same concerns may lie behind the ascription of the martial, priestly title of *yajaw k'ahk'*, “lord of fire,” to *?Yaxuun Bahlam* (Houston 2012c: 169).

Houston (2012c: 164 – 168) identifies several categories of subordinate titles in the Str. 1 murals. One status, *yebeet* (“the messenger of”), identifies nobles acting on

behalf of the lords of other sites, notably the tribute-bearers of Room 1. *Sajal*, loosely translatable as “governor,” and a probably related term *saaj* are attested for several lords—but also, perhaps, as part of a personal name in the nominal phrase of a royal lady (*Ix Ahkal Pat ?Ha’ Ix Sajal*). Other titles, pertaining to nobles presumably resident at Bonampak, derive either from achievements in battle or from specialized roles in the life of the court. These include *aj jol* (“he of the head,” perhaps a successful headhunter) as well as a set of titles incorporating *baah* (“head,” “first”) and martial or ceremonial items: *baah tz’am* (“head throne”), *baah te’* (“head staff” or “head spear,” evidently a bailiff charged with presenting war captives), *baah took’* (“head flint,” responsible for letting blood from prisoners’ fingers), and *baah pakal* (“head shield”). Another title, *ti’hu’n*, refers to the bark paper headband of Maya rulership, and may well denote a royal spokesman or herald with priestly duties (Houston and Stuart 2001: 68-69; Zender 2004: 210-221). Still other subordinate statuses take their names from actions: *k’ayoom* (“singer”), *tikoom* (perhaps “unwrapper,” describing an attendant who dresses the prince *?Yaxuun Bahlam* in one scene), and *anab* (a widespread but obscure title, possibly “runner” or “one who facilitates running,” from a verbal root *an* or *ahn*).

Sub-royal elites at other courts

Other late central and southern Lowland monuments are less informative about the internal structures of royal courts. “Skyraiser” *Yopaat*’s inscriptions at Quirigua mention the military support that king received from the vassal rulers of smaller towns or regions, but omits members of the Quirigua court itself. This situation differs from that at Copan in the mid- to late eighth century, when noble households undertook domestic

constructions including elaborate stone sculptures and inscriptions stressing their high rank, and lords of outlying centers claimed the title of *ajaw* (Andrews and Bell 2005: 311; Schele 1991: 209 – 217; Webster 2002a: 303 – 304). Nevertheless, the latest texts at Copan give little attention to sub-royal elites. David Stuart identified personages called *Nuun Yajaw Chan Aj Jol* and *Yax K'amlay* [...] *Chan* as the patron gods of the ruler *Yax Pahsaj Chan Yopaat*, not as his human allies (Andrews and Fash 2005: 414; cf. Fash et al. 1992: 427). One inscription, on Altar U, calls *Yax K'amlay* a *k'uh*, “god,” “holy [entity].” Another possibility is that *Yax K'amlay* was *Yax Pahsaj Chan Yopaat*’s relative, perhaps his chosen successor, who predeceased *Yax Pahsaj Chan Yopaat* and was apotheosized (Rossi 2014). This possibility would account for some perplexing details of inscriptions mentioning *Yax K'amlay*: his titles of *k'uhul ?Xukuup ajaw* and *yax ?Xukuup ajaw* attributed to him in some inscriptions, his “seating” on the day of *Yax Pahsaj Chan Yopaat*’s enthronement, and his ritual scattering of incense. Either possibility, that *Yax K'amlay* and *Nuun Yajaw Chan Aj Jol* were patron gods or that they were members of the royal family, is compatible with a reduced prominence for non-royal elites in late texts at Copan which contrasts sharply with earlier eighth-century trends.

Courtiers do feature on late eighth-century monuments in the eastern lowlands and the Petexbatun region. Naranjo Stela 12 (A.D. 800), badly eroded, may name one or more subordinate lords of Naranjo (*aj Sa'aal*) responsible for successful engagements in the *Sa'aal* court’s victory over Yaxha. These may, however, simply be references to the Naranjo ruler, *?Itzamnaaj K'awiil*. A later Naranjo monument, Stela 12 (A.D. 820), records two gifts of precious, bundled objects (*yak'aw ... ti ikaatz*) presented to the young ruler *Waxaklajuun U Baah K'awiil* by a person named *K'uk' Bahlam*. *K'uk' Bahlam*

bears no titles of origin or office, but this very lack may mean that the stela's audience would have been expected to know of him, so that he was plausibly local to Naranjo. Cancuen Panel 1 (A.D. 795) depicts the ruler *Taj Chan Ahk* attended by two kneeling aristocrats: one, a *sajal*, is probably a vassal with his own power base, visiting his liege; the other, an *aj k'uhuun*, is more likely a courtier, in full-time service to *Taj Chan Ahk* (Carter and Houston 2010: 87). Later monuments in the Petexbatun region make no textual mention of sub-royal elites, although some of the stucco sculptures on *Wat'ul K'atel's* Str. A-3 could depict members of his court.

A carved mortuary panel in a private collection (the "Josefowitz Stela"), produced in the *Sak Tz'i'* polity somewhere near the Usumacinta River, confirms the survival of Late Classic traditions of courtly hierarchy and ancestor veneration even in that troubled part of the Maya world until at least A.D. 864, the date of the monument. Its composition (**Figure 4.11**) closely adheres to a format established by earlier Classic monuments dedicated to the venerated dead at other sites along the Usumacinta River Valley (e.g., Piedras Negras Panel 15, A.D. 706; El Cayo Panel 1, A.D. 772, and an unprovenanced panel in the Dumbarton Oaks collection, A.D. 773). The text on the panel stresses the status of the lord it honors, *Bahlam Chil Uy K'uk' Maax*, as the *sajal* of a higher-ranking lord, the ruler of *Sak Tz'i'* (Miller and Martin 2004: 191). Not yet identified with a known archaeological site (Plan de Ayutla is one possibility; see Martin and Grube 2008: 146), *Sak Tz'i'* was located in the upper Usumacinta River region (Anaya et al. 2003; Biró 2005). Its eighth-century rulers exercised dominion over other centers in that area during the eighth century A.D. As the Josefowitz Stela illustrates, the importance of such

hierarchical relationships for political organization and elite self-representation outlasted the region's two preeminent kingdoms, Piedras Negras and Yaxchilan.

During the mid- to late ninth century, sub-royal nobles attained unprecedented prominence on the few monuments erected at sites in northern Peten and the Peten Lakes region. In particular, aristocratic support seems to have been important to both factions of the *Mut* dynasty that ruled outside of Tikal. Ixlu Stela 1 (A.D. 859) depicts a richly dressed nobleman seated behind the king, next to a jaguar-pelt throne or a heap of tribute items. Ixlu Altar 2, of uncertain date, shows Ixlu Ruler A and two other elites seated with a bound prisoner (**Figure 4.12**). Eroded captions beside the figures once gave their names, of which only Ruler A's can be identified. To the north, at Jimbal, Stela 1 (A.D. 879) bears a small caption, incised between the body of the incense-scattering king and the main text: "His companion is 10 ?Rain, the *ti'hu'n*." The title of *ti'hu'n* or *ti'sakhu'n* denoted an especially high political and priestly rank, perhaps a royal spokesman (Zender 2004: 210 – 221), although one fifth-century *ti'sakhu'n* appears to have served as regent for an underage queen of Tikal (Martin 2003: 21).

Sculptors and painters, who would have been members of royal courts (though not, on present evidence, of royal families) show another pattern. In the last decade of the eighth century and thereafter, sculptors' signatures are attested only at Naranjo (Stela 12, A.D. 800, and Stela 7, A.D. 810), possibly at Xunantunich (Stela 9, A.D. 830), at Piedras Negras (Stela 12, A.D. 795), and in the territory of *Sak Tz'i'* (the Josefowitz Stela, A.D. 864). Since signatures were relatively common at the Naranjo court and sites along the Usumacinta earlier in the Late Classic period, this pattern represents the dying out of a tradition in the places where it had been practiced, without its transfer to a new region.

Holy “Banded Birds,” *kan ek*’, and “district” titles

Several late eighth- and ninth-century texts in the survey sample contained new royal appellations or emphasized previously attested titles to a novel extent. These include a variant of an aristocratic title known to epigraphers as the “Banded Bird” status, titles giving counts of “districts” (*pe’t*) or other areas of land, and the name or title *kan ek*’ (perhaps “serpent star,” “sky star,” or “four stars”). Although the details of these titles and the motivations behind their late use remain murky, the “Banded Bird” variant and *kan ek*’ cross-cut political and dynastic boundaries, while *kan ek*’ and the “district” titles tended to appear within the survey sample in contexts connected to foreign patronage and long-distance travel.

***K’uhul* “Banded Bird” lords in the Petexbatun region**

A new royal title, derived from an undeciphered title of courtly rank written with a logogram depicting a predatory bird wearing a headband, was used in inscriptions at Aguateca and Ceibal in contexts which suggest that its meaning was broader than that of an Emblem Glyph *per se*. Royal use of the “Banded Bird” title in the southern lowlands more generally dates to the latter half of the eighth century A.D. On Sacul Stela 2 (A.D. 761), the *Juluup*⁷ ruler *K’iyel Janab* used a variant of the title—*Naah Jo’ Chan* “Banded Bird” (**Figure 4.13**)—which refers in other texts to the Paddler Gods (Stuart 2005: 133 –

⁷ Rulers at Ixkun and Sacul used an Emblem Glyph which, as Stephen Houston (personal communication) pointed out, sometimes shares a **-pi** suffix with that of Copan, perhaps cueing a toponymic ending of some kind. The Copan Emblem Glyph’s main sign is usually written **xu-(ku)-pi**, but a few inscriptions (e.g., a carved step from Copan Temple 11, possibly dedicated by *Wi’ Yohl K’ihnich* in the mid-sixth century A.D.) spell it **?xu-(ku)-pu**, implying a sound shift from *?xukuup* to *?xukup* in the spoken language which subsequently found inconsistent expression in scribal practice. Since the Ixkun/Sacul and the Copan dynastic names both share the same **Cu-Cu-pi** pattern, it is not clear whether **-pi** cues an *-uup* suffix in these cases because of vowel disharmony, or whether it acts as a morphosyllable (**-UUP** or **-VVP**) in these contexts.

136). That text also assigns *K'iyel Janab* the kingly titles of *k'uhul Juluup ajaw* and *chan ta ajawlel* (“fourth in the lordship”). The title appeared later in the inscriptions of *Ajaw Bot*, who established a court at Ceibal under the patronage of the *Mut* ruler at Aguateca, *Tahn Te' K'ihnich*. His earliest monument, Ceibal Stela 6 (A.D. 771; **Figure 4.14**), recounts a military action by the Aguateca king against enemies identified as “the ‘Lake Tamarindito’ lord(s), the lord(s) of the 28, and he/they of *Mutul* (? *ajaw*, *waxakwinik ajaw*, *aj Mutul*). *Tahn Te' K'ihnich* is given the typical royal titles of *k'uhul Mut ajaw* and *baahkab*, but also the innovative title of *k'uhul* “Banded Bird.” The same “holy” variant of the “Banded Bird” title was used of *Ajaw Bot* himself on a pair of carved panels, “Stelae” 5 and 7 (A.D. 800), which depict the Ceibal lord playing ball. In addition to *baahkab* and the “Banded Bird” title, these monuments assign *Ajaw Bot* the title *aj bolon ha'btal*, used by lords of Aguateca (e.g., *Tahn Te' K'ihnich* on Aguateca Stela 19, A.D. 775) and also attested at Chichen Itza (Boot 2005: 140 – 141). Neither Stela 6 nor either ballgame panel attributes *Ajaw Bot* the “Hearth” Emblem Glyph of the kings who had ruled at Ceibal before the site’s conquest by Dos Pilas (Houston 1987: 294; Stuart and Houston 2004: 26 – 28).

Ajaw Bot’s program of inscriptions ended suddenly—“Stela” 5 was never finished (Inomata and Triadan 2013: 63)—and no further monuments were erected at Ceibal for more than 20 years, corresponding to a period of courtly florescence at Machaquila (Just 2007: 9 – 19). His eventual successor, *Wat'ul K'atel*, revived the old “Hearth” Emblem Glyph. As discussed below, some of *Wat'ul K'atel*’s non-ruling contemporaries also held the rank of *k'uhul* “Hearth” *ajaw*. *Wat'ul K'atel* was succeeded in turn by another ruler,

Wok ?Teles, who eschewed the “Hearth” title in favor of *yax kaloomte’* and *k’uhul* “Banded Bird” on his Stela 1 (A.D. 869).

Because of its use by *Ajaw Bot*, it is tempting to think of *k’uhul* “Banded Bird” as a subordinate title, ranked somewhere between *k’uhul ajaw* and the ordinary “Banded Bird” status. However, its compatibility with kingly titles and its exclusive contrast with *k’uhul* “Hearth” *ajaw* in the inscriptions of Ceibal suggest that there is more to it than that. Not all of Ceibal’s late kings were holy “Hearth” lords, and some holy “Hearth” lords were not kings. Moreover, two lords who took explicitly royal titles—*Wok ?Teles*, the *yax kaloomte’*, and *Tahn Te’ K’ihnich*, the *k’uhul Mut ajaw*—were also holy “Banded Birds.” The latter king reigned at Aguateca, not Ceibal, and was *Ajaw Bot*’s overlord. In other words, in the limited sample of inscriptions in which it appears, *k’uhul* “Banded Bird” behaves unlike an Emblem Glyph. Since it could be shared by lords of unequal status, it may denote membership in some kinship group or ritual status. Whatever the case, the sudden appearance of the title in the Petexbatun region at a time of political upheaval, when rival petty kings claimed holy *Mut* lordship, likely reflects alliance-building by one elite faction.

The *kan ek’* title, *Itza’* lords, and Terminal Classic sociopolitical change

Another title or name, *kan ek’*, is prominent in texts from the beginning of the tenth *bak’tun*. Evidence that *kan ek’* denoted some kind of group or shared status in Classic contexts, rather than functioning purely as a personal name or a title of office, is somewhat more suggestive than that for the “Banded Bird” title, and comes both from later ethnohistoric accounts and from Late and Terminal Classic inscriptions. First, *Kanek’* clearly functioned as a family name among the Colonial-period Itza of central

Peten. When Hernan Cortés passed through the area in A.D. 1525, the ruler of the Itza kingdom based at Nojpeten or Ta Itza (“Tayasal” to the Spanish, now the city of Flores) bore the name *Ajaw Kanek’* (“Lord *Kanek’*”). The same regnal name belonged to the last king of Ta Itza, who surrendered his kingdom to Martín Ursua y Arizmendi in 1697. *Ajaw Kanek’*’s cousin, the highest-ranking priest of the kingdom, was called *Aj K’in Kanek’* (“Daykeeper *Kanek’*”). Other historically attested Itza leaders, like *Aj Kan Kanek’* and *Aj Bak Kanek’*, belonged to the same lineage group (G. Jones 1998: 60, 80, Table 3.1). Living under house arrest in Guatemala, *Ajaw Kanek’*, now baptized under the Christian name of don José Pablo Canek, testified in 1702 that the lords of his dynasty had always been known as *Kanek’*. According to the Franciscan friar Bartolomé de Fuensalida, who spent time at Nojpeten in 1618 and 1619, the Itza had fled south from Chichen Itza in a *k’atun* 8 Ajaw, although don José’s nephew *Aj Chan* claimed that his mother (the king’s sister) was herself from Chichen Itza, so that Itza elite families lived both at Chichen Itza and Nojpeten (G. Jones 1998: 11).

The Classic epigraphic record provides some hints that *kan ek’* denoted a category of people during earlier centuries as well, although it must be stressed that there is no evidence for its use specifically as a family name or an ethnonym. In inscriptions from Yaxchilan (Stela 10) and Ceibal (Stelae 9, 10, and 11, in a single monumental program), multiple individuals take the *kan ek’* title (**Figure 4.16c, h, i, k, l**). *Kan ek’* could be attributed to women (see Pallán Gayol 2009: 69, 523; 2012: 93 – 97) or men. While a detailed study of the subject has yet to be made, Classic Maya personal names do appear in most cases to be gender-specific. The title also proliferates in Terminal Classic inscriptions at widely separated sites in a way that personal names tend not to do in

earlier inscriptions. Probably the latest instances of *kan ek'* in the hieroglyphic record come from Chichen Itza, where it appears as a title on Lintel 1 at the Las Monjas building (ca. A.D. 880; **Figure 4.16e**) in reference to a lord of *K'ahk'nal* (Boot 2005: 140, 324, 333 – 334). *Kan ek'* also appears as an epithet, rendered in pseudo-Mexican style with a full-body rattlesnake logogram instead of a Classic Maya sign, above a portrait of a warrior on Pillar 5 of the South Building at the Great Ballcourt of Chichen Itza (Boot 2005: 139; Schele and Mathews 1998: 244 – 245; **Figure 4.16p**).

Kan ek' is not limited to the Terminal Classic period, although *kan ek'* people were evidently pivotal in sociopolitical transformations of that era. Its earliest known appearance is on Pusilha Stela D (A.D. 647; **Figure 4.16b**). That inscription records a military victory by a person called *kan ek'*, *aj yok'*, *baah k'ik'il* (perhaps “head bloodletter”), whom the narrative presents in a favorable light. A roughly contemporaneous reference in the northern lowlands comes from Edzna Stela 18 (ca. A.D. 650; **Figure 4.16a**): a royal lady from the southern site of Itzan, *k'uhul ixik Jut Kan Ek'*⁸, is named as the mother of the ruler *Janab Yok K'ihnich* (Pallán Gayol 2009: 69, 523; 2012: 93 – 97). Other Late Classic references to *kan ek'* appear on unprovenanced polychrome vessels whose painted texts and stylistic properties tie them to Xultun and Motul de San José (Garrison and Stuart 2003: 851 – 862; **Figure 4.15f, g**). Stelae 24 and 25 from the former site show a ruler holding an effigy of a supernatural snake (*kan* or *chan*) decorated with star (*ek'*) signs, an apparent emblem of his ritual authority. Further associations between *kan ek'* and Motul de San José may be attested at Yaxchilan. Two vassals of *Yaxuun Bahlam* IV, depicted on Yaxchilan Stela 10, bear the *kan ek'* title as

⁸ Here, **ju-tu** could be an underspelling for *Jutuuw*, given the example of the later king *Chak Jutuuw Kan Ek'* named at Ek' Balam; see below.

part of their name phrases. One vassal's partially eroded Emblem Glyph may be that of the *Ik'* polity (Boot 2005: 43 – 44; **Figure 4.15c, h**).

In Terminal Classic inscriptions, *kan ek'* people are important in accounts of interdynastic relations, especially the inscriptions of *Wat'ul K'atel* at Ceibal. *Wat'ul K'atel* kept the title *aj bolon ha'btal* used by his predecessor, sometimes employing it in place of his own personal name. His earliest clearly dated monumental works were the construction of the radial Str. A-3 and the erection of five associated stelae—8, 9, 10, 11, and 21—commemorating the 10.1.0.0.0 *k'atun* ending of A.D. 849. Four of the five stelae, placed at the building's cardinal points, refer to visits by foreign dignitaries: holy lords of the *Mut*, *Kan*, and *Ik'* dynasties of the central Lowlands; the ruler of *Lakamtuun*, a kingdom on the Río Lacantun to the west (Stuart 2007); a lord of the as yet unidentified kingdom of *Puh*, probably somewhere to the south; and one or more lords from Ucanal to the east. The fifth, Stela 21, was erected inside the superstructural shrine of the building, and its partially eroded text appears to deal only with *Wat'ul K'atel*. The striking stylistic variability of these monuments, which disagree even as to whether *Wat'ul K'atel* wore a mustache, might be due to these visiting lords' having brought sculptors with them to contribute to the proceedings, although the lack of signatures makes it impossible to know for certain.

Only one of these monuments, the eastward-facing Stela 11, recalls events prior to A.D. 849. It records that *Wat'ul K'atel* “arrived in the center of Ceibal” (*huli tahn* “Hearth”) on 7 Ajaw 18th Sip, 9.19.18.17.15 (March 16, 829), 365 days before the tenth *bak'tun* ending. According to the next part of the inscription, his arrival was “overseen” (*u kabjiy*) by at least three other people. The passage describing them (**Figure 4.16**)

reads **U-KAB-ji-ya 4-e-(k'e)-5-PE'T-ta AJ-(K'AN)-WITZ-NAL-ye-ta-ji 4-PI'T-ta-8-PI'T-ta K'UHUL-“HEARTH”-AJAW**. The chiasitic structure of the passage makes sense of the abundance of numerals:

<i>u kabjiiy</i>	they oversaw it
<i>kan ek'</i>	Four(?)/Snake(?) Star
<i>jo' pe't</i>	Five Districts
<i>aj K'anwitznal</i>	he/those of Ucanal
<i>yetaaj</i>	in the company of
<i>chan⁹ pi't</i>	Four Palanquins
<i>waxak pi't</i>	Eight Palanquins
<i>k'uhul “Hearth” ajaw</i>	the holy Ceibal lords

In this poetic setting, *aj K'anwitznal* is another way of naming *kan ek'*, *jo' pe't*. Because *jo' pe't* is a geographic title (see below), not functionally equivalent to *kan ek'*, *aj K'anwitznal* may only refer to a single person, presumably the king of Ucanal. It is noteworthy that neither epigraphically attested Terminal Classic king at Ucanal, *Papamalil* (fl. A.D. 820) or Ruler A (fl. A.D. 859) is attributed either appellation in texts giving his personal names. *Chan pi't* and *waxak pi't*, on the other hand, denote two different people, since none of the abundant Late Classic inscriptions which contain numbered *pi't* (“palanquin”) titles assign more than one such title to the same person. Inscriptions on the other stelae around the base of Str. A-3 parallel these constructions. The holy *Kan* and *Ik'* lords mentioned on Stela 10 are called *chan pe't* (“four districts”) and *kan ek'*, respectively; the *Lakamtuun* lord on Stela 9 is called *pe't*, *kan ek'*, *waxak ek'* (“[one] district, four stars, eight stars”); and the *Puh* lord on Stela 8 is called *winik ?kaaj witzil* (“twenty towns[?] and mountains”). The multiplicity of *kan ek'* appellations and their apparent structural equivalence to a “district” title in these rhetorical contexts

⁹ *Chan* is the most likely Classic Ch'olti'an word for “four,” “sky,” and “snake” in most contexts in the ninth century A.D. *Kan* is a much older form, and its preservation in *kan ek'*—attested on Uaxactun Stela 13 (see below)—may reflect the ancient origins and phonetic fossilization of the title.

buttresses the case that they are not ordinary personal names. Only the *Mut* king, *Uuh K'awil*, is attributed a likely personal name in addition to his Emblem Glyph. The Str. A-3 monumental program is thus strongly concerned with visiting lords' *kan ek'* status, dynastic titles, and titles of geographic origin, in most cases to the exclusion of their personal identities (**Table 4.2**). Of those titles interpreted here as indicating group membership, *kan ek'* is the most prominent, pertaining to rulers of sites as distant as Ucanal, Motul de San José, and *Lakamtuun*. Although badly damaged, a stela presently in the town of Flores and dated to A.D. 869 confirms the use of *kan ek'*—or, in this context, *sak kan ek'*—by ninth-century kings at Motul de San José, whether the *Ik'* king it names was the same *kan ek'* who visited Ceibal or his successor (see Tokovinine and Zender 2012: 48; **Figure 4.15m**). Consistent with the hypothesis that *kan ek'* behaves as a title in the Str. A-3 texts and elsewhere, the Flores stela assigned that king a name other than *sak kan ek'*, although this is now illegible.

What—if any—connections can be drawn between the historic *Kanek'* lineage and persons in the Classic epigraphic record bearing the *kan ek'* name or title? Ethnohistoric sources suggest non-Yucatecan origins for some participants in the Itza ethnogenesis, supposed to have taken place in the late eighth century A.D. In part based on those sources, Linda Schele, Peter Mathews, and Erik Boot proposed that ancestors of the historic Itza had migrated north from central and northern Peten in response to strife between Tikal and Calakmul in the seventh and eighth centuries (Schele and Mathews 1998: 201 – 203, 363 – 368) or the stresses of the ninth-century Maya collapse (Boot 2005: 35 – 49). The *Book of Chilam Balam of Chumayel* records that lords of places called *Mutul* and *Mutupul*, who spoke Yucatec badly, were among the people who

founded the Itza alliance sometime between A.D. 771 and 791 (Roys 1967: 18, 73 – 74). This *Mutul* corresponds to the modern city of Motul de Carillo Puerto, and it is important to note that nothing in the Yucatec text implies that it was named after another place (Roys 1967: 18). The *Report of Motul* states instead that the town was named for the lord who settled it, one *Sak Mutul*, who led his people there from the east (Roys 1962: 51).

Nevertheless, some migration from the fragmenting *Mut* kingdom in the south to northern Yucatan near the beginning of the ninth century is suggested by inscriptions from two northern sites. These are Ichmul de Morley, located between Ek' Balam and Chichen Itza, and Dzilam Gonzales, 13 km from the Gulf Coast and a bit over 100 km northwest of Ek' Balam. The fragmentary Ichmul de Morley Panel 2 (**Figure 4.17**) shows two lords—one of them a *k'uhul Mut ajaw*, the other a *k'uhul ?Baah ajaw*—playing ball in celebration of a period ending on a day 7 Ajaw, presumably 10.0.0.0.0 (March 16, A.D. 830), of which the latter is more likely. The *Mut* title uses the same **MUT** logogram favored at Tikal (Graña-Behrens 2006: 110 – 113). Daniel Graña-Behrens (2006: 110) proposes that the *Mut* lord was from Ichmul de Morley itself, while the *?Baah* lord hailed from another site, perhaps Kayal. However, the conventions of Late Classic Maya art (Stephen Houston, personal communication) would have it that the figure on the right, facing left, is the host. This is the *?Baah ajaw*, so the *Mut* lord is probably a visitor from another site. The base of Dzilam Stela 1 (**Figure 4.18**), now in the Museo Palacio Canton in Mérida, shows two bound captives beneath the feet of a victorious lord. One of the prisoners is labeled *aj Mut* or *aj Mutul*, again using the Tikal-style **MUT** sign. Since Dzilam is only 42 km northeast of Motul de Carillo Puerto, Dzilam's *Mut* antagonists could thus have come from the latter settlement. The possibility that they comprised a

group or faction from Tikal which moved north during the breakup of that city's royal court before the *bak'tun* ending is intriguing, although further epigraphic evidence would be required to decide the question. The timing of these inscriptions, however, does coincide with dynastic troubles at Tikal in the early ninth century.

An *Itza'* Emblem Glyph is attested in older hieroglyphic inscriptions than the *kan ek'* title. The earliest example of the title appears on an unprovenanced, carved, black ware tripod dish from northern or central Peten, probably produced in the first half of the sixth century A.D. (Boot 2005: 36; Eberl 2001: 311). An incised inscription on the vessel's legs (**Figure 4.19a**) identifies its owner as "the child of the *Itza'* lord" (*yunen Itza' ajaw*). The badly eroded Motul de San José Stela 2, carved sometime in the Late Classic period, records that a lord named *Juun Tzak To'k'*, with the royal title of *k'uhul Itza' ajaw*, oversaw an event at Motul de San José itself (*uhtiiy Ik'a'*) (Boot 2005: 39; Stuart and Houston 1994: 27 – 28; Tokovinine and Zender 2012: 31; **Figure 4.19b**). In these settings, *Itza'* is neither an ethnonym nor, strictly speaking, a toponym, although it may very well derive from an ancient name for Lake Peten Itza or the surrounding area (Boot 2005: 37). Instead, it denotes a dynasty which took its name from an *Itza'* place. With such a small sample of inscriptions, it cannot be determined whether *Itza'* was an alternative dynastic title for the *Ik'* lords of Motul de San José, derived from a local toponym, or whether the *Itza'* lords hailed from another site in the region (cf. Boot 2005: 39)¹⁰.

Given these ambiguities, connections between characters in Colonial-era ethnohistoric documents and names in the hieroglyphic corpus must not be proposed

¹⁰ Relevant comparisons in the former case would include the use of *k'uhul Usij Witz ajaw* by the *Ak'e'* royal family of Bonampak.

lightly or uncritically. The testimony of the *Books of Chilam Balam*, while accessible, is suspect in part because Late Postclassic and Colonial Yucatec and Itza perceptions of time—centered on the 260-year Short Count—may have forced memories of the past to conform to a cyclical narrative structure¹¹. Combined with the Classic hieroglyphic evidence, these accounts strongly suggest that some amount of migration back and forth between central Peten and northern Yucatan occurred, but can confirm little more than that. Until now there has been no epigraphic evidence from the crucial Terminal Classic period linking pre-Conquest *kan ek'* people in the southern lowlands with the northern Yucatan Peninsula (Houston 2000: 176).

A previously unrecognized instance of the *kan ek'* title on Uaxactun Stela 13 (**Figure 4.20**), erected for the 10.0.0.0.0 *bak'tun* ending of A.D. 830, provides that link. This monument bears a single column of hieroglyphs which record the joint celebration of the *bak'tun* ending by a king of Uaxactun—his name largely eroded—and a visiting lord, *Olom*, who bears the title of *ochik'in kaloomte'*, “western overlord.” Between his personal name and royal title is a glyph block whose component signs are partially eroded and have not previously been identified. Recent examination by Carlos Pallán Gayol and the author of new photographs and reflectance transformation imaging models created by Pallán permitted the whole sequence naming *Olom* to be read: **o-lo-mo ka-KAN-(e)-k'e OCHI-K'IN-ni-KAL-TE'** (**Figure 4.21**). *Olom* thus belonged to the same

¹¹ For instance, the *Book of Chilam Balam of Tizimin* records a series of abandonment events, in which Itza settlements (Chichen Itza and Champoton) were “destroyed” and their inhabitants relocated, during *k'atuns* 8 Ajaw, ca. A.D. 889, 1204, and 1461 (Edmonson 1982: 3 – 10). Ralph Roys (1962: 68) placed the date of the historic Itza's southward migration in the *k'atun* beginning on 8 Ajaw in A.D. 1461 and ending in 1480, although, as mentioned above, Itza elites continued to live at Chichen Itza around the time of the Conquest. Archaeological evidence suggests that Chichen Itza's principal occupation was between ca. A.D. 750 and 1050 (Cobos Palma 2004: 533 – 543).

kan ek' kinship group as the contemporary lords mentioned at Ceibal. A reading of *kan ek'* instead of *chan ek'* for the title is incidentally confirmed.

Olom was clearly a figure of great significance in ninth-century Maya geopolitics. Besides Uaxactun Stela 13, he is mentioned on three other monuments from northern Peten: Uaxactun Stela 7 (9.19.0.0.0, A.D. 810; **Figure 4.22a**) and Jimbal Stelae 1 (10.2.10.0.0, A.D. 879; **Figure 4.22b**) and 2 (10.3.0.0.0, A.D. 889; **Figure 4.22c**). Uaxactun Stela 7 is badly broken, but a surviving passage records another period-ending ritual overseen by the visiting *kaloomte'*: “It is his stone-binding, [his] incense-[casting] in the presence of *Olom...*” (*u k'altuun, [u chok]ch'aaj yichnal Olom...*). The Jimbal monuments were commissioned by *Olom*'s son, who used the title of *k'uhul Mut ajaw* in the latter text. Both stelae present innovative, foreign stylistic features: the king's regnal name includes Mayan lexemes like *?Kuchtal* ((**ku**)-**chu-ta-la**) and *K'awil* (**K'AWIL-li**) but also includes a succession of three *tzolk'in* day-names rendered with square cartouches and “Mexican-style” day signs (12 Serpent, 13 Death, 1 Deer; see the discussion of innovative paleographic elements above). On Jimbal Stela 1, *?Kuchtal* wears a transverse nose bar and a short cape. His mother's name includes a square day sign (8 Alligator), while his father is called *Olom Jaatz'*¹², *ochik'in kaloomte'*.

No known text assigns *Olom* an Emblem Glyph, but his presence in Belize is suggested by certain specimens of a Terminal Classic ceramic type, Ahk'utu' molded-carved, whose distribution in the archaeological record is concentrated around sites near

¹² The spelling **JAATZ'-tz'i**, described here for the first time, confirms Marc Zender's (2004a) reading for the “stone-in-hand” logogram. Contextual clues and the spellings **ja-tz'a**, **ja-tz'a-la**, **ja-tz'a-li**, **ja-tz'a-ja**, and **ja-JATZ'** strongly suggested that reading (Zender 2004a: 5 – 8), but Jimbal Stela 1 may bear the only published example of **JAATZ'-tz'i**. Also noteworthy is the use of the dog's-head rather than the bat's-head sign for syllabic **tz'i** (from **TZ'I'**, “dog”). The **-tz'i** complement may cue *jaatz'*, “whip” or “cudgel,” as opposed to *jatz'*, “to strike,” in this context (see Zender 2004a: 8, note 9).

the Belize River, including Caracol and Ucanal (Helmke and Reents-Budet 2008). The type is characterized by red-slipped, barrel-shaped drinking vases bearing dedicatory inscriptions and figural scenes produced by pressing the clay against molds, then adding details with a sharp tool. Petrographic and energy dispersive X-ray fluorescence analysis permitted the identification of four compositional paste groups within Ahk'utu' vessels from Altun Ha and Pook's Hill, Belize, possibly corresponding to four production groups (Ting and Helmke 2013: 44 – 45; see Graham et al. 1980: 164), either using the same mold or multiple molds cast from finished vessels (Helmke and Reents-Budet 2008: 41). A result of such molding is the wide distribution of a pair of scenes and an accompanying text (see **Figure 3.8** above). In the best preserved examples, one panel shows a lord holding a spear and wearing a nose bar and serpent headdress confers with an unarmed lord as a dog crouches and a subordinate kneels at their feet. The other panel shows the same ruler dressed for a ritual performance, admiring himself in a mirror held by a servant. A god or ancestor hovers in the air above. The dedicatory inscriptions on these vessels describe them as “the young man’s thing for giving” (*yahk'utu' keleem*) and name their owner, an *ochik'in kaloomte'* named *Olom*. While Chirstophe Helmke and Dorie Reents-Budet (2008: 42) propose that the name is to be read *Ix Olom* (“Lady Olom”), that suggestion is not compatible with the identification of the vessel owner as a young man. Far more likely, this is the same *Olom* who oversaw rituals at Uaxactun and fathered the *Mut* king of Jimbal.

Olom and the king of Ucanal were not the first *kan ek'* people to serve in the role of patrons to other lords. The Mural of the 96 Glyphs at Ek' Balam (A.D. 770) opens with the arrival (*?huli ti ek' bahlam*) of a high-ranking nobleman named *U Chan*

*Tzimaah*¹³, the *baah tz'am* (“head throne”) of a ruler called *Chak Jutuuw Kan Ek'*. This king was apparently an important figure in the northern Lowlands: the text calls him the holy lord of an *Ehm* (“Raccoon”) dynasty (see Zender 2005), a “northern overlord” (*xaman kaloomte'*), and a *baahkab*. Intriguingly, this occurred on the same *tzolk'in* date, 11 Eb, as the famous arrival of the Teotihuacan-affiliated warlord *Sihiyaj K'ahk'* at Tikal in A.D. 378 (Lacadena 2004: 111). Like that earlier event, this arrival had political consequences, for it was followed by the “summoning”¹⁴ of *U Kit Kan Le'k To'k'*, the first known ruler of the site (Lacadena 2004: 98). The last passage of the mural text describes *U Kit Kan Le'k To'k'*’s accession—and likely the inception of the *Talol* dynasty—49 days later: *i patlaj Talol ajaw*, “then he was made the *Talol* lord.” A.D. 770 thus marks both the first known attestation of *kan ek'* in the northern lowlands and the first instance of a *kan ek'* person overseeing the installation of another king.

To sum up, the epigraphic evidence—while admittedly fragmentary—shows that the title of *kan ek'*, which behaves in the hieroglyphic record in ways consistent with membership in some kind of ritual or other group, took on new importance beginning late in the eighth century. It usually, but not exclusively, appears in accounts of visits or interventions by foreign lords. *Kan ek'* people oversaw the installation of kings at Ek' Balam in A.D. 770 and at Ceibal in 830. One ninth-century *kan ek'* lord, *Olom Jaatz'*, was celebrated on molded-carved vases in southern Belize, oversaw rituals carried out by the king of Uaxactun, and possessed some connection to the *Mut* dynasty such that his son ruled at Jimbal as a holy *Mut* lord. The prestige value of the *kan ek'* title may derive

¹³ Lacadena (2004: 111, 114) sees *U Chan Tzimaah* as a place, perhaps the building where the mural was painted. However, a later, poorly understood passage in the mural implies that *U Chan Tzimaah* is a person because he is said to be “in the company of” (*yitaj*) the lord of *Ehm*.

¹⁴ Depending on how the eroded initial glyph is to be read, this could be Classic Ch'olti'an *i pehkaj* (“then he is summoned”) or *u pekaj*, “he summons him” in an ancient form of Yucatec (Lacadena 2004: 119).

from participation by *kan ek'* people in long-distance travel and exchange, perhaps mediated through kinship ties. Amid the ecological and sociopolitical stresses of the Terminal Classic period, the *kan ek'* status, which in some way appears to have crossed dynastic boundaries, may have helped to structure migration by both elites and commoners between Peten and north coastal Yucatan, much as it did at the time of the Spanish conquest.

Counts of lands

While not specific to the Terminal Classic period, a set of titles referring to geographical divisions are foregrounded in *Wat'ul K'atel's* Str. A-3 monumental inscriptions, where they refer to visiting lords from other dynasties. Such titles follow a regular pattern: a numeral (usually four or five) followed by *pet* or *pe't*¹⁵ (“district,” “bounded land”) or, more rarely, other words for territories or landforms. Earlier Classic inscriptions used numbered land titles for both local and foreign people (**Figure 4.23**). Tikal Stela 31 (A.D. 439 or later) records that *Yax Nuun Ahin I* “took 28 districts” (*uch'amaw waxakwinik pe't*). A partially eroded text on the Early Classic Tikal Stela 13 describes the protagonist's father as being from *kan pe't, K'ik'nal* (“four districts, Blood Place”). One of the sculpted captives from House C at Palenque (ca. A.D. 661), a lord of a “Sprout” polity, is called *jo' pe't kab* (“five bounded lands”). Aguateca Stela 1 (A.D. 741) recounts a period-ending ritual performed by the *Mut* king *K'awiil Chan K'ihnich* in the company of an unnamed lord from the Lake Tamarindito area called *waxak pe't*. In the war narrative on Naranjo Stela 12 (A.D. 800), a person from *bolon pe't, Mutal* (“nine districts, Tikal”) was forced to flee (*t'abayi*, “he goes up”) by Naranjo's forces.

¹⁵ Both **pe-te** and **pe-ta** are attested, the latter more frequently.

Exceptions to the pattern of using “district” titles for political “others” come from the area of Río Azul, where several polychrome vessels refer to a place called *jo’ pe’t, ux ha’bte’* (Tokovinine 2013: 17 – 18), and from the Oxkintok region, where *wuk pe’t* (“seven districts”) was used of local lords (Boot 2010: 3 – 8; García Campillo 1995: 208 – 211).

These counts of districts or territories probably refer to ideal political or spatial divisions that could apply to multiple local landscapes. As used in Late and Terminal Classic contexts, they more likely refer to domains under the control of single dynasties than to larger conceptual structures (like *wuk tzuk* or *uxlajuun tzuk*) that encompassed multiple polities. Their prominence on the Str. A-3 monuments at Ceibal may reflect changing political geographies, hinted at by rhetoric on monuments elsewhere. Judging from their absence in late inscriptions, *wuk tzuk* and *uxlajuun tzuk* (“seven divisions” and “thirteen divisions”), previously salient markers of trans-dynastic identity in eastern Peten (Tokovinine 2013: 98 – 110), ceased to be relevant in the Terminal Classic period. *Waxakwinik baahkab* (“*baahkab* of the 28”) is attested at Naranjo as late as A.D. 790 (Stela 14), and remained important to the Machaquila dynasty until at least A.D. 841 (Stela 5). Not previously used by *Mut* kings (Tokovinine 2013: 113 – 115), the equivalent title *waxakwinik* (“28”) was used by a claimant to the *Mut* throne at Ixlu in A.D. 879 (Altar 1). While geographic titles were never as common as dynastic ones in previous inscriptions, they thus appear in flux in the Terminal Classic epigraphic record, probably—but not provably, given the small sample size—a correlate in royal rhetoric to significant population movement and the destabilization of older ways of conceptualizing difference.

Political relationships

Because they were always produced in the context of courtly economies centered on the persons of divine kings, Classic Maya monumental texts invariably reflect royal perspectives on people and events. They do not present a full or objective picture of relations within or between courts, but rather a limited set of messages chosen in light of religious traditions, in response to earlier such works, and with an eye to the political interests of kings. Precisely for that reason, Terminal Classic inscriptions are an invaluable source of information about how some of those relationships were represented, whether to a general audience or to elites with access to restricted spaces and goods. In addition, through the close examination of iconography and texts, it is possible to tease out some information of a sort not necessarily intentionally encoded concerning the changing political dynamics of the late eighth and ninth centuries A.D.

Ancestry, succession and power-sharing

In order to assert dynastic continuity and their right to rule, Early and Late Classic Maya kings frequently mentioned their parents in monumental inscriptions, using standard expressions like *u juun tahn*, “he is her cherished one” (perhaps literally “the one at her breast”) or *u ch’ahb*, “he is his penance.” This format persisted in elite rhetoric well into the Terminal Classic period, to varying extents in different areas of the central and southern Lowlands. Parentage statements are better represented on monuments from northern Peten and the Peten Lakes areas than those from sites to the south, east, or west. Their content suggests that rulership ideally continued to be transferred patrilineally, as it

had been earlier in the Classic period, since fathers in those contexts bear higher-ranking titles than mothers do. The *yax kaloomte'* ("new overlord") who commissioned Zacpeten Altar 1 was the son of a noblewoman from *Sak Kay* ("White Fish"), a town that has not been identified with any archaeological site and is not otherwise attested in the hieroglyphic corpus. His father, *Bajlaj Chan K'awiil*, claimed the titles of *kaloomte'* and *k'uhul Mut ajaw*. Likewise, *?Kuchtal*, the *Mut* king at Jimbal, was the son of the western *kaloomte' Olom Jaatz'*. His mother's name phrase lacks an obvious Emblem Glyph, but includes a square day sign (8 Alligator), so her contribution to the match may have been the cachet of non-Maya elite identity. Father-son relationships are visually memorialized on monuments including Ucanal Stela 4 (A.D. 849) and Polol Stela 4 (A.D. 820), which show rulers conducting period-ending rituals with their similarly dressed sons¹⁶. By contrast, elite women are almost absent from Terminal Classic monumental portraits in the study sample, being represented in the Bonampak murals and Naranjo Stela 9 (ca. A.D. 849). This situation contrasts with that in the Late Classic period, when royal women were depicted prominently on monuments throughout the central and southern Lowlands. Their near absence from the Terminal Classic corpus may correspond to a decline in the diplomatic importance of royal marriages, itself connected to the downfall of southern hegemonic powers like the *Kan*, *Mut*, and *Pa'chan* dynasties.

The Caracol corpus presents a more complicated picture of ruler-successor relationships over multiple generations. Caracol Stela 11 (A.D. 800) depicts the ruler *K'ihnich Joy K'awiil*, but its damaged text also mentions a *Tum Yohl K'ihnich*—

¹⁶ James Patton (2009: Chapter 3) makes a plausible case that the front of Polol Stela 4 was dedicated earlier than the carving on the back, which he dates on the basis of style and a Calendar Round date to either 10.1.6.5.13 or 10.3.19.0.13. Given the regional context, the former date for the back carving is the more likely of the two.

attributed the Caracol regal titles of *k'uhul uxwitz'a' ajaw* ("holy Three Mountain Water lord") and *k'uhul k'antumaak*—in a context which suggests he was *K'ihnich Joy K'awiil's* father. Stela 11's companion monument, Altar 23, likewise gives rhetorical pride of place to *K'ihnich Joy K'awiil*, who bound a stone and supervised the "seizing" or "binding" (*chuk*) of two prisoners. Yet the victims themselves are called the captives (*ubaak*) of *Tum Yohl K'ihnich*, described here as a *baahkab* and a three-*k'atun* lord. Caracol Altar 12 (A.D. 820), commissioned not by *K'ihnich Joy K'awiil* but by his successor *K'ihnich Toobil Yopaat*, recalls that a king named *Tum Yohl K'ihnich* had supervised (*ukabjiy*) a ceremony at Ucanal in A.D. 793. The *Tum Yohl K'ihnich* mentioned on Stela 11 and Altar 23 has been identified as a high-ranking member of *K'ihnich Joy K'awiil's* court (Martin and Grube 2008: 96 – 97). A different explanation may better fit the textual evidence: that all three monuments name the same *Tum Yohl K'ihnich*, a king of Caracol who was still alive and in some kind of authority when *K'ihnich Joy K'awiil* acceded to lordship. In this scenario, *K'ihnich Joy K'awiil* took office while his predecessor—perhaps his father—was still alive, ruling the Caracol polity as a junior king and heading off potential competitors to the throne. The fact that Altar 23 stresses *Tum Yohl K'ihnich's* mature age, between 40 and 60 years, is a point in favor of this possibility. There was certainly historic precedent at Caracol for joint rule by father and son: the early seventh-century Stela 5 records that in A.D. 599, around his 80th year of life, the ruler's mature age, between 40 and 60 years, is a point in favor of this possibility. There was certainly historic precedent at Caracol for joint rule by father and son: the early seventh-century Stela 5 records that in A.D. 599, around his 80th year of life, the ruler *Yajaw Te' K'ihnich* "gave the royal headband ... to his child" (*yak'aw ajaw hu'n ... ti*

yunen), who was then a young man of 23. While his son “Knot Ajaw” may have taken on the heavier burdens of kingship, *Yajaw Te’ K’ihnich* remained active until at least A.D. 603, when he “witnessed” (*ilaaj*) the 9.8.10.0.0 half-*k’atun* ending (Martin and Grube 2008: 90).

A similar emphasis on chosen successors or other power-sharing arrangements is also evident from the monuments of Caracol’s later kings. *K’ihnich Toobil Yopaat* was in power by the time Caracol Altar 22 was dedicated in A.D. 810, yet that monument’s text names some other lord bearing the royal *k’uhul k’antumaak* title. This individual’s name is largely eroded and does not appear in other known inscriptions, making it impossible to determine whether he was an anointed successor who never acceded to power or a member of the royal family not in the line of succession. After Altar 22, the next monuments from the Caracol region date to after the end of the tenth *bak’tun* and mainly deal with *K’ihnich Toobil Yopaat*’s successor, “K’an III” (?-**na OHL-K’IHNICH**). Caracol Stela 17 (**Figure 4.24**) shows “K’an III” and his heir *K’awiil Ajaw* seated together, conversing. The inscription above them focuses on ceremonies conducted by the king, connected to the 10.1.0.0.0 *k’atun* ending of A.D. 849. The badly broken and eroded Altar 10 (**Figure 4.25**), commissioned at the same time, shows “K’an III” and *K’awiil Ajaw* receiving an apparent visitor from another polity.

One anomalous monument from Caracol may imply a different kind of relationship between different generations of rulers. Commissioned by *K’ihnich Toobil Yopaat*, Stela 18 (A.D. 810; **Figure 4.26**) depicts the rearing head of a supernatural entity combining anatomical features associated with snakes and centipedes in Maya art, including a bony lower jaw (see Grube and Nahm 1994: 702; Kettunen and Davis 2004;

cf. A. Chase 1985: 113). The text inscribed on the creature's body is largely eroded, and was never long enough to contain much detail. In other Classic works, such centipede beings often serve as conduits between the underworld and the world of the living, opening their mouths to receive sacrifices or reveal deceased ancestors or supernatural beings. While no such personage is visible in the mouth of the centipede on Stela 18, its presence probably alludes to communication with some royal ancestor.

War and captive-taking

Textual records of military actions—verbs like *pul*, “to burn,” *ch’ak*, “to chop,” and *chuk*, “to capture”—peak early in the sample of Terminal Classic central and southern Lowland monuments, and do so in regions peripheral to the core zone stretching from southern Campeche southward to the Peten Lakes. Wars with their roots in historical developments of the earlier eighth century are recorded on Quirigua Altar O’ (A.D. 790) and Piedras Negras Stela 12 (A.D. 795). The former monument mentions the capture and death of notable enemies and the seizure of their plumed battle palanquins (*u ch’amaw u paach u pi’t*). The Piedras Negras stela commemorates two attacks on the site of Pomona (*pakbu*) to the west, and portrays a number of tied, nearly naked prisoners—mostly nobles with the rank of *sajal*—taken in the second engagement. Other historical accounts of successful campaigns appear at Naranjo on monuments from A.D. 800 and at Caracol in 820. These correspond to wars prosecuted by Naranjo against Yaxha and by a Caracol-Ucanal alliance against a minor polity. The Caracol monuments mark the last wars explicitly recorded in preserved inscriptions anywhere in the central and southern Lowlands, but captive-taking continued to be commemorated outside of narrative

historical settings until at least A.D. 879: Jimbal Stela 1 and Altar 1 bear the latest surviving captor-of expression and depiction of a bound prisoner, while Ixlu Altar 1 bears the latest count-of-captives title.

During the ninth century, captives were most frequently depicted in figural scenes in northern Peten, southern Campeche, and the eastern and southeastern Lowlands. Although rulers at Machaquila made much of their status as captors with titles like *u chanahn boh b to'k'* and *aj jo' baak*, the only Terminal Classic monument in the Petexbatun region to represent an actual captive is Ceibal Stela 11 (A.D. 849), erected after Machaquila's fortunes had declined. Curiously, the latest monuments in that area—the theatre of intense, endemic warfare during the eighth and early ninth centuries A.D.—do not show or refer to captives at all, even though they do depict weapons and warrior costumes. Likewise, war and captive-taking are not attested in the epigraphic record of the far south of the Classic Ch'olti'an-speaking cultural zone later than Quirigua Altar O' (A.D. 790). The sculpted friezes of Copan Str. 10L-18 (A.D. 820) show *Yax Pahsaj Chan Yopaat* in warlike attire, a rarity for that site in any time period.

The disappearance of war narratives, even as captor titles and bound prisoners persisted on later Terminal Classic monuments, raises the question of what purpose such histories had served earlier in the Classic period. One thing many Late Classic war narratives have in common is the mention, even the occasional foregrounding, of elite men other than kings who played key roles in events. Conceivably, as elite and commoner populations declined in the old Classic kingdoms, rulers felt less need to purchase their subordinates' loyalty with monumental works, or else such gestures no longer carried the weight they once had.

Alliances and patronage

The role of *Olom Jaatz'* as a patron of the Uaxactun kingdom and a facilitator of interaction between the northern lowlands and a faction of the *Mut* dynasty has been noted above. Another regional patron, a ruler of Ucanal named *Papamalil*, participated in an alliance network in the eastern lowlands that included the kings of Naranjo and Caracol. Several monuments produced at those sites around A.D. 820 indicate that relationships with *Papamalil* were important components of royal self-representation. Good relations among the three polities followed a period of hostility, since a king of Ucanal, perhaps *Papamalil*'s predecessor, is one of two captives depicted on Caracol Altar 23 (A.D. 790) and called "the work of" (*yete'*) the Caracol lord *Tum Yohl K'ihnich*. By 820, *Tum Yohl K'ihnich* and his younger co-ruler *K'ihnich Joy K'awiil* had been succeeded by *K'ihnich Toobil Yopaat*, who had himself depicted hosting *Papamalil* on Altars 12 and 13 (A.D. 820; **Figure 4.27**). The peripheral text on the latter monument looks back to a ritual *Tum Yohl K'ihnich* oversaw at Ucanal, presumably before hostilities broke out. Both altars depict *Papamalil* offering *K'ihnich Toobil Yopaat* a bundle of quetzal plumes, and Altar 13 adds a kneeling captive to his gifts.

Another account of the Ucanal king comes from Naranjo Stela 32 (A.D. 820). The monument once depicted the young ruler *Waxaklajuun U Baah K'awiil* seated on an ornate palanquin, still well preserved despite the damage that obliterated the ruler's portrait. The surviving text records that this youth participated in a ceremony overseen by an otherwise unknown *k'uhul Pi't ajaw* the day before acceding to the throne on June 29,

A.D. 814. Five years later, *Waxaklajuun U Baah K'awiil* paid a visit to Ucanal, where he “was lifted up ... in the palanquin of” (*?kuhchtaj ... tu pi't*) *Papamalil* (**Figure 4.28**).

At both Caracol and Naranjo, then, *Papamalil* appears as an ally and a bestower of riches. The Caracol altars depict *K'ihnich Toobil Yopaat* executing the courtly gesture associated in Late Classic ceramic art with lords' gracious acceptance of tribute from their subordinates. Yet both the Caracol and the Naranjo texts emphasize *Papamalil*'s exalted status as a “western overlord” (*ochik'in kaloomte'*), and his offerings to the kings of both sites should be seen as diplomatic gifts and demonstrations of his great wealth, not as tribute from a vassal. If anything, the eagerness of Caracol's and Naranjo's kings to advertise their friendship with *Papamalil* contributes to the impression that the Ucanal court enjoyed an unprecedented period of power and prosperity in the early ninth century. In such exchanges, *Papamalil* may not have risen in official rank—he was already a king and a western *kaloomte'*—but he certainly converted material wealth into social capital.

Textual evidence from Ceibal suggests that *Wat'ul K'atel*, who arrived at Ceibal in A.D. 829 with the backing of Ucanal's *K'anwitznal* dynasty, was fostered at the court of *Papamalil* (or, if that king did not live long past A.D. 820, his successor). That *Wat'ul K'atel*'s his installation as king was a joint project of “he of Ucanal” and two or more “holy ‘Hearth’ lords” who were not themselves paramount rulers has long been clear from the text on Ceibal Stela 11. The clue pointing to fostering comes from an earlier monument, Stela 12. *Wat'ul K'atel*'s earliest surviving work, Stela 12 recounts some event (the verb is eroded) involving another lord and overseen by *Wat'ul K'atel*. The inscription calls him a “one-*k'atun* [lord]” (*winikha'b [ajaw]*). This title places Stela 12 before the Str. A-3 monumental program of A.D. 849, since that took place a full *k'atun*

and a year after *Wat'ul K'atel*'s arrival. It also implies that *Wat'ul K'atel* was still in his first twenty years of life when Stela 12 was erected, since had he been between 20 and 40 years of age, he would instead have been a two-*k'atun* lord. His junior age, the fact that he traveled to Ceibal from another place, his oversight by other members of the “Hearth” family, and the prominent role of the Ucanal king all combine to suggest that *Wat'ul K'atel* came from Ceibal, but spent part of his youth at Ucanal in preparation for taking office as an ally of the *K'anwitznal* court. That *Papamalil* himself was his likely host follows from the A.D. 820 dates associated with that king in the inscriptions of Caracol and Naranjo.

Later generations of Ceibal's kings—*Wok ?Teles* and a potential son or grandson—seem, on the basis of their monumental portraiture, to have engaged with culturally northern Lowland Maya people, likely from Chichen Itza. Ceibal Stela 1 (A.D. 869; **Figure 4.30**) shows *Wok ?Teles* in ceremonial dress derived from traditional Late Classic period ending costume, but exhibiting some significant modifications. His headdress bears a heron with flint knives for wings, a hand with matwork in the palm, and two double-headed serpents knotted together. The same knife-winged bird motif appears in contemporary iconography at and near Chichen Itza: Yula Lintel 1 (A.D. 874) and Lintel 1 from the Temple of the Four Lintels at Chichen Itza (A.D. 881) (Beyer 1973: Plates 7a and 11a; Kelley 1982: 7, 12; Kowalski 1989: 174).

Ceibal Stela 18 (A.D. 889; **Figure 4.31a**) also exhibits aberrant iconography. On it, a centipede-serpent emerging from the mouth of an animate cave disgorges a seated man in Toltec- or Chichen Itza-style attire holding a travelling staff and a brush or a spearthrower and a dart. Despite the man's costume, his placement in the mouth of the

centipede being has precedent in earlier Classic southern Lowland Maya representations of underworld entities (**Figure 4.31b**). Evidently deceased, he might represent an ancestor of the figure shown on Stela 20 (**Figure 4.32**), dedicated at the same time. That lord wears a mix of Classic Maya and Chichen Itza-like costume elements and carries a staff and darts. A similarly dressed individual appears in an arrival scene on Stela 17 (A.D. 869), greeted by a local lord (presumably *Wok ?Teles*). The relationship among the three exotically dressed persons is unclear, but one possibility is that Stelae 17 and 18 depict the same person, living in the first and dead in the second scene; Stela 20 could thus depict his son. By way of further speculation, this set of monuments could allude to a marriage alliance between the “Banded Bird” line at Ceibal and an elite family from northern Yucatan. This possibility cannot be tested against present evidence, but the visual parallels to Teotihuacan-affiliated “stranger kings” and their descendants in the Early Classic central lowlands are hard to avoid.

Rituals and supernatural beings

Nearly all Terminal Classic monuments in the central and southern lowlands were erected on the occasion of *k’atun endings* or other important stations in the Long Count. Even the late eighth- and ninth-century stelae of Machaquila, where other cycles governed the erection of calendrical monuments, refer in their texts to the most recent Long Count period endings. Unsurprisingly, the vast majority of monuments thus make some reference to period ending ceremonies, even when they also contain other historical information. An emphasis on stone-binding (*k’altuun* or *u k’alaw tuun*) and the scattering of incense (*chokch’aaj* or *u chokow ch’aaj*) is evident for the Peten lakes, northern Peten,

and the eastern and southeastern Lowlands. In texts from sites in the latter regions, references to such ceremonies are sometimes outnumbered by accounts of more secular acts or the worldly dimensions of ritual acts, such as martial events, travel, and diplomacy. Stone-binding and incense-casting remain, however, the principal religious events discussed in texts from those two regions.

Much rarer expressions elsewhere in the lowlands refer to other ceremonies, like the kindling of a ritual fire (*jahtz'aj u k'ahk'*, “struck is his fire”) by an Oxpemul ruler on the *bak'tun* ending (A.D. 830). Another fire ritual may be referenced on Altar de los Reyes Stela 1, also in Southern Campeche, with the partially eroded expression **U-ti-[...]-TE'**—conceivably *u tilte'*, “it is his wood-kindling.” Two other texts commemorating *k'atun* endings (Ceibal Stela 1 and Calakmul Stela 16) employ a logogram meaning something like “it sprouts” or “it is its sprouting,” which depicts a sprouting plant breaking up through the earth. The same term is employed, in adjectival form, in reference to bejeweled, holy trees in an account of rituals on the 9.11.0.0.0 (A.D. 652) in the long text from the Temple of the Inscriptions at Palenque (probably dedicated in A.D. 690; see Stuart and Stuart 2008: 171). Another formulation at Ceibal refers to a ritual dance performed with a Serpent Bar: Stela 9 (A.D. 849) records that *Wat'ul K'atel* “took the god” (*u ch'amaw k'uh*) and that “he himself was seen with the Yellow Tree Great Snake” (*ihlaj u baah ti K'an Te' Naah Chan*), the proper name of the Serpent Bar or the entity it manifested.

The Paddler Gods

Monuments in northern Peten, the Peten Lakes area, and the southeastern lowlands emphasize the so-called “Paddler Gods,” a pair of deities with an evident role in Classic myths of the Maize God’s death and resurrection (Taube 1984: 181). Jimbal Stela 1 (A.D. 879) calls them *naah jo’ chan kaloomte’*, connecting them to a mythological location widely referenced in older texts. Earlier Classic references to the Paddler Gods, including on Tikal Stela 31 (A.D. 485) and a set of mid-seventh-century monuments erected at Copan, emphasize their importance in period-ending rites. Such texts often record the “bathing” (*yatij*) of the Paddler Gods, probably a rain-making ceremony (Stephen Houston, personal communication). Among late central and southern Lowland texts, Tikal Stela 24 (A.D. 810) employs the same verb, while other inscriptions (Ucanal Stela 4, A.D. 849, and Ixlu Altar 1, A.D. 879) describe other ritual acts—stone-binding and incense-casting—carried out “in the presence of” (*yichnal*) the two deities.

Commencing with Tikal Stela 22 (A.D. 771), the Paddler Gods began to be depicted on some stelae floating above the human actors in a ritual scene, entwined in clouds of rain or incense smoke represented by S-shaped swirls of dots (see **Figure 4.4**). On Ixlu Stelae 1 and 2, they are joined by *Quetzalcoatl*- and *Tezcatlipoca*-like warrior gods, and Ucanal Stela 4 mentions both Paddler Gods but depicts only the *Tezcatlipoca* cognate. The visual prominence of the Paddlers and the appearance of the two warrior gods are both novel traits, restricted to the Terminal Classic and the end of the Late Classic period. The presence of other flying supernatural beings, among them the rain god *Chahk* and a warrior with a transverse nose bar, on monuments at Uxmal indicates that such motifs reached visual prominence in the context of north-south interaction. Yet even in the southern and central Lowlands, the visual trope of an ancestor or god looking

down on living persons dates to the Early Classic period at the latest. Neither the emphasis on the Paddlers and rain-making in connection to period-ending ceremonies, nor the general manner in which they were portrayed, were unprecedented in southern Maya art.

Quirigua and Copan

In the Motagua valley and parts south, where earlier inscriptions had commemorated rites involving the Paddlers, terminal eighth- and early ninth-century inscriptions instead emphasize poorly understood local gods. Texts at Quirigua discuss an entity called *Jak'at Tz'i' Ajaw*, and Zoomorph P' depicts the storm god Yopaat. Copan's late inscriptions invoke a wider range of gods. Among them may be *Yax K'amlay*, discussed in terms that suggest he was a kind of co-ruler with the king *Yax Pahsaj Chan Yopaat*, but whose human or divine status is difficult to determine from the confusing texts which mention him (Rossi 2014). Texts from that king's final monumental project, his own mortuary shrine (Str. 10L-18), deal with a *wite'naah*, a shrine dedicated to ancestor veneration and Teotihuacan-related images of sacred kingship. Stela 11 (**Figure 4.33**), the inscribed pillar which supported Str. 10L-18's outer lintel, has long been interpreted as describing the end of the Copan dynasty in poetic terms: the "throwing down" of a lineage shrine (*jomoyi wite'naah*) followed by an act of "spearing" (*jul*) or the "arrival" (*hul*) of a torch (*taj*) and a Teotihuacano War Serpent (*Waxaklajuun U Baah Kan*, "Eighteen-Headed Serpent," see Wagner 1995). Somewhat suspiciously for a supposed record of invasion or civil unrest, these events are said to have occurred on the day 8 Ajaw, or 9.19.10.0.0 (A.D. 820). In light of more recent work clarifying Classic

Maya hieroglyphic spelling conventions (Grube 2004; Houston et al. 2004), these interpretations need to be reconsidered.

To begin with, the proposed “spearing” or “arrival” verb is spelled **ju-lu**. The expected spelling for “it arrives” would be **hu-li**, for *huli*, so that possibility can be dismissed¹⁷. Yet a reference to “spearing” as a verb is also unlikely because **ju-lu** cues no verbal affixes: it is simply the noun *jul*, “spear.” That leaves *jomoyi*, a mediopassive verbal construction, as the only verb in the opening sentence. That being so, the only way to make grammatical sense of that sentence is to treat the War Serpent, not the *wite’naah*, as the subject of *jomoyi*. *Jul*, “spear,” would then modify the War Serpent, or, more probably, the following word: *taaj*, “obsidian” (**ta-ji**), not *taj*, “torch” (which would be **ta-ja**). The War Serpent is thus described as a “Spear-Obsidian-Eyed, Flint-Eyed, Eighteen-Headed Serpent” (*Jultaaj U Wut, To’k’ U Wut, Waxaklajuun U Baah Kan*), suggesting a material god effigy. *Hom*, a likely cognate of *jomoyi*, is a productive root in Yucatec, with derived verbs meaning “derribar edificios” (*homah*), “tañer trompeta” (*hom*), “sonar el viento o fuego” (*hom*), and “acabarse” (*ho’mol*) (Barrera Vázquez et al. 1980: 228 – 231). Because the subject here is an effigy and not a building, only the last sense is plausible in this context. The best reading of the whole sentence is therefore something like “On 8 Ajaw the Spear-Obsidian-Eyed, Flint-Eyed, Eighteen-Headed Serpent stops at the lineage shrine.” Read in this way, it describes not the demolition of a *wite’naah*, nor the termination of a dynasty, but a more optimistic act: the installation, literally the “stopping,” of an idol in such a structure.

¹⁷ In the hieroglyphic spellings **HUL-li** and **hu-li**, the vowel-disharmonic syllabic spelling cues the single argument predicate marker *-i* instead of providing information about the root vowel (Stephen Houston, personal communication). Thus, even though the rules about indicating root vowel quality through synharmonic or disharmonic spellings were unstable at Copan, “it arrives” would never have been written **hu-lu** or **ju-lu**.

The following clause supports the interpretation with an account of the War Serpent's physical movement. Depending on the reading of a syllabic sign depicting a hand, it either states that *Yax Pahsaj Chan Yopaat* and the dynastic founder, *K'ihnich Yax K'uk' Mo'*, both “would hold” or “would carry” (**U-lo-chi-ma**, *u loochoom*¹⁸) the effigy, or else that they “would bring it out” (**U-lo-k'o-ma**, *u lok'oom*). Either possibility would have linked the living ruler to the god of his fathers and presented *Yax Pahsaj Chan Yopaat* as replicating the acts of the revered founder. Previously interpreted as a posthumous tribute to the deceased ruler because of its placement in his funerary shrine, Copan Stela 11 is better understood as a very late installment in Copan's tradition of poetic invocations of patron gods on period-ending monuments. The building itself thus appears, not as a mournful commemoration of the foreseen end of kingship or a recent attack on the site center, but rather as a *wite'naah*, intended by *Yax Pahsaj Chan Yopaat*—whose father was not a king of Copan—as a new lineage shrine for a new epoch in Copan's history.

Wind and water in the Petexbatun region

An amalgamated “GI-K'awil” deity features prominently in images and inscriptions from the Petexbatun region, with references on monuments at Aguateca, Machaquila, and Ceibal. This deity remained important to the ritual life of Ceibal's elites until the last years of that site's monumental tradition, even as innovations replaced previous conventions of format, rhetoric, and grammar. The main inscription on Ceibal Stela 3 (10.3.0.0.0, A.D. 889) consists only of the Calendar Round date of the *k'atun*

¹⁸ See Barrera Vazquez (1980: 457) for the possible Yucatec cognates *lochah*, “sostener en los brazos,” and *loch kuchtah*, “llevar o traer o tener las indias sus niños a cuestras en alguna manta.”

ending plus the logogram naming “GI-K’awiil.” Gods of wind, music, and water—these last rendered with *Tlaloc* faces and named with square day signs (see the discussion of foreign stylistic elements in Terminal Classic Maya art below)—sit in panels above and below the main scene. Ritual activity at Machaquila and Ceibal is further distinguished from that of other sites by departures from the usual pattern of erecting monuments on multiples of the 360-day Long Count year. All late stelae from Machaquila commemorate multiples of 364-day “vague years” or 365-day “solar years,” anchoring such dates to the most recent *k’atun*, half-*k’atun*, or quarter-*k’atun* ending (Just 2007: 8; Proskouriakoff 1993: 181).

Most stelae at Ceibal were commissioned for Long Count period endings, but the late Stela 19 (A.D. 889; **Figure 4.34**) presents a unique pattern of dates. The carved front face of the monument depicts a ruler wearing a mask of the duck-billed Wind God, scattering incense. His costume adheres, for the most part, to Late Classic canons, but diverges from them in that his skirt is made of multiple strips of cloth, an element attested on other late stelae at the site. An inscription below the ruler’s feet consists of eight glyph blocks, two high by four wide. The leftmost four glyphs are all dates with numeric coefficients of 1, while the four to the right are noncalendrical. The four glyph blocks in the middle of the panel have all been partially or completely effaced, damage which might have been deliberately inflicted in antiquity (J. Graham 1990: 57). This has led to confusion about the reading order of the text and even the nature of the dates. J. Graham (1990: 60) read the signs at A1 and B1 as forming a Calendar Round date of 1 Ben 1st Pop, corresponding to a Long Count date of 10.1.18.6.13. By implication, the panel would have to be read from left to right in two rows of four glyphs, since one Calendar

Round date immediately followed by another would be nonsensical. Bryan Just (2004: 27), on the other hand, placed the stela somewhere around 10.3.0.0.0 on stylistic grounds. Prudence Rice (2004: 214) proposed instead that the putative 1 Ben 1st Pop date refers in some way to a half- or quarter-*k'atun* ending, noting the close association between incense-scattering and period ending dates.

Careful inspection of a photograph of the monument (I. Graham 1996: 47) reveals that the date at B1 is not 1st Pop at all, but rather a *tzolk'in* day-name with a coefficient of 1. The date at A2 is 1 Kawak, while B2 is completely destroyed. Three *tzolk'in* dates, all with coefficients of 1, and in such close proximity to one another, suggest a calendrical pattern. As it happens, 1 Ben 16th Yaxk'in falls 13 days after the 10.3.0.0.0 *k'atun* ending. 13 days after 1 Ben 16th Yaxk'in is 1 Kimi 9th Mol, and 13 days after that is 1 Kawak 2nd Ch'en. The four glyphs at A1 through B2 can thus be reconstructed, and connected to the *k'atun* ending, as follows:

	[10.3.0.0.0]	[1 Ajaw 3rd Yaxk'in]
+ 13 days =	[10.3.0.0.13]	1 Ben [16th Yaxk'in]
+ 13 days =	[10.3.0.1.6]	1 [Kimi 9th Mol]
+ 13 days =	[10.3.0.1.19]	1 Kawak [2nd Ch'en]
+ 13 days =	[10.3.0.2.12]	[1 Eb 15th Ch'en]

If this analysis is correct, then there is an implicit reference to a period ending, as P. Rice (2004: 214) suggested—but the date in question is 10.3.0.0.0 rather than the end of a smaller interval of years, confirming Just's stylistic date. Stela 19 itself should date to 10.3.0.2.12 or a little after, conceivably the date of the deity impersonation depicted in the figural panel and perhaps described in the second half of the text. The four *tzolk'in* dates on the monument would thus represent an innovative way of celebrating *k'atun* endings, with a ritual timed using the numerologically significant numbers 4 and 13.

Aside from that significance, it is hard to explain why this arrangement of dates should have been thought important. Since each day-name is thirteen places later than the previous one, one and only one of them can have served as a Year Bearer in the Calendar Round, no matter how the *tzolk'in* and *ha'b* calendars were aligned at Terminal Classic Ceibal. Other ritual counts of thirteen units—particularly periods of thirteen *winals*, or 260 days—are certainly attested on Classic monuments dealing with calendrical celebrations, but this proposed 4×13 day count is unique in the hieroglyphic record. Its invocation here no doubt articulates with other innovative developments in Ceibal's late monumental corpus, discussed above, but precisely how must remain obscure for the present.

This analysis of Stela 19's date has implications for the archaeological chronology of Ceibal. The duck-billed Wind God is only depicted at Ceibal on monuments dating to A.D. 889, indicating a new importance for the cult of *Ik' Kuh* at that time. The round Str. C-79, a ritual dance platform, resembles other such platforms elsewhere in Mesoamerica connected with *Ik' Kuh*- or *Ehecatl*-like wind deities (Szymański 2010: 56 – 61; Taube 2001; see Chapter Three, this volume). Its construction can therefore be placed near the end of the ninth century, under *Wok ?Teles* or a hypothetical successor.

Summary and discussion

Chapter Three examined archaeological evidence for Terminal Classic elite behavior, concluding that distinctively elite interaction with the physical world involved, to a great extent, the production and manipulation of material signs. The present chapter

complemented and extended that work by considering inscribed monuments and mural paintings, a special category of material signs whose linguistic and explicitly representational content lent itself to abstraction from the tangible object as such. At the same time, their inescapable materiality compelled certain kinds of interpretive interactions on the part of readers, but also allowed the subversion or erasure of their intended messages through acts of vandalism.

In presenting the results of a spatially broad epigraphic and iconography study of late eighth- and ninth-century monuments, this chapter directly advanced the aim of the dissertation project: to explore Terminal Classic southern Lowland kingship and aristocracy in representation and practice. It illustrated the frequently profound disconnect between those two dimensions of behavior by ruling groups: if kings' power relative to their nobles weakened, or if divisions between elites and non-elites deepened, in the decades prior to courtly collapse, there are is no overt mention of such processes. Some of the most obvious changes had to do with royal self-reference, as some titles and representational strategies receded from prominence and others were newly emphasized. Notable among the latter were instances of code-switching from Classic-Maya-style visual and scribal canons to signs and formats apparently alluding to foreign lands and peoples. These findings situate the Terminal Classic Maya within a broader scholarly literature on the real or perceived otherness of ruling groups.

Broadly speaking, three contrasting approaches to the problem of how to represent royal authority in word and image in a time of demographic and political disruption can be discerned in the Terminal Classic monumental record. One approach was to insist on the time-honored trappings of royal authority and the unique status and

responsibilities of divine kings. Visual and rhetorical references to ancient sources of legitimacy—the divine or human founders of dynasties, or *wite'naah* structures and other markers of Teotihuacano rulership—were central to such representations. For the *Mut* courts of Tikal and the Ixlu/Zacpeten area, so were the more recent compositional precedents set by the ruler *Yik'in Chan K'awiil*. Late sculptures at Tonina and Calakmul, which adhered to long-standing convention but were not always skillfully produced, belong to the same category. Other kings openly acknowledged their dependence on the support of other lords, but restricted such acknowledgement to foreign patrons or, within the kingdom, to a favored co-ruler or designated heir. The late monuments of Caracol are examples of the latter approach. They do not reflect a devolution of power to sub-royal nobles, but the endorsement of a younger ruler by an elder. With precedents in the earlier Classic period, co-rulership of this kind appears as a part of southeastern Lowland political culture, not a specifically late innovation.

A third approach was to advertise royal contact with foreign lands and peoples perceived as prestigious. Unlike in the Early Classic period, representations of “foreignness” in central and southern Lowland art in the Terminal Classic period did not focus on a single urban center. Instead, they drew on the scribal and representational practices of multiple culture groups along the Gulf Coast, including the Yucatecan speakers of the northern lowlands and the potentially non-Maya peoples of coastal Veracruz—or, at least, they drew on what southern Ch'olti'an speakers imagined those practices to be. Without undermining the sacred premises of divine kingship, monuments which employed foreign symbolism asserted new physical and divine sources of political and religious legitimacy, and presented new markers for kings who had accessed those

sources. Where traditional Maya rulers acquired some measure of Teotihuacan's charisma through rituals conducted in *wite'naah* buildings, stylistically innovative Terminal Classic kings acquired power in other ways; conceivably, these could have included the taking of calendrical names recorded with square day signs, which behave in the corpus in a way unlike calendrical personal names in other Mesoamerican cultures. However exotic day signs functioned in any particular text, they represented a body of esoteric knowledge perceived to be foreign in origin, added on to the already extensive set of esoterica important to Classic Maya elite identity. The ability to switch between Maya and "non-Maya" representational codes, an ability which may have had a spoken linguistic component, served as a marker of social differentiation and group identity at a time of sociopolitical disruptions.

Some Terminal Classic rulers found it advantageous to represent themselves or their allies as belonging to groups constituted at different scales from royal dynasties. Numbered *pe't* titles tied lords to particular places on the landscape in a way that potentially portable Emblem Glyphs did not, but the motivations behind their adoption are unclear. People who incorporated *kan ek'* into their name phrases appear linked to travel and interaction among polities, including between the northern and southern Lowlands. Particularly in the case of *kan ek'* people named at Ceibal, this may not be coincidental, although nothing in the Terminal Classic hieroglyphic corpus suggests that *kan ek'* functioned as a family name in the ninth century A.D. Whether or not personal connections among elites potentiated the migration of farmers out of ecologically degraded areas in the southern lowlands (see Chapter Three, this volume), positing that such connections facilitated travel by high-ranking artisans and priests, and that they

could sometimes be marked by the adoption of certain names or titles, might go some way towards explaining a certain overlap between the distribution of *kan ek'* names and that of innovative stylistic elements like square day signs. Changes over time in the representation of Terminal Classic elite power could thus correspond partly to shifts in elite social and economic networks.

While blow-by-blow accounts of the events leading up to dynastic collapse were neither expected nor found in the late epigraphic record, the changing position of nobles in that record may be relevant. It was noted in the previous chapter that the archaeologically visible roles of the Terminal Classic Maya nobility depended to a great extent on their relationships to kings: in the absence of monarchs, they no longer produced the same kinds of symbolically freighted material goods, like inscribed monuments and ornaments, that they had previously. Clearly, Classic Maya aristocrats qua Classic Maya aristocrats needed kings in order to continue as a class. Even Ceibal's latest, anomalous monuments are probably best understood as the commissioned by sacral kings, however diminished their wealth and power. There are no post-dynastic monumental inscriptions in the study sample, and while molded-carved vessels might have continued to be produced (perhaps copied from older pieces) and exchanged among elites in the absence of kings, nothing in their iconography points to political alternatives to kingly rule. At sites like Copan where sub-royal elites had previously been honored with inscribed monuments, the latest inscriptions largely ignored courtiers in favor of older, king-centered themes.

That insight raises the question of how to interpret the absence of courtiers from the late epigraphic records of some sites prior to the collapse or dwindling away of

kingship. At Copan, that rhetorical absence is unlikely to reflect diminished numbers or a diminished role for the nobility in political practice, since sub-royal elite households were targeted for termination along with the royal residence. At other sites, like Ceibal, the lack of epigraphic or archaeological evidence for a substantial nobility could point to a largely binary opposition between royalty and everyone else, with even that distinction eventually fading into irrelevance. Conversely, it may not be coincidental that the *Mut* factions at Jimbal and Ixlu which outlasted the *Mut* court at Tikal itself devoted some space to non-royal elites on their ninth-century monuments. In other words, the Terminal Classic epigraphic record may hint that, just as the converse was true, kings themselves needed aristocrats in order to be kings.

Table 4.1. Historical characters discussed in Chapter Four.	
8 Alligator	Mother of ? <i>Kuchtal</i> and wife of <i>Olom</i> . Named on Jimbal Stelae 1 and 2 (A.D. 879 and 889).
10 ?Rain	Aristocrat at Jimbal with the title of <i>ti’hu’n</i> . Named on Jimbal Stela 1 (A.D. 879).
<i>Ajaw Bo’t</i>	First “Banded Bird” king of Ceibal, fl. ca. A.D. 800. Vassal of <i>Tahn Te’ K’ihnich</i> of Aguateca. Not the same person as <i>Lajchan K’awiil Ajaw Bo’t</i> of La Amelia.
<i>Aj Naj Chakat</i>	Young sajal, vassal of the king of <i>Hix Witz</i> , who commissioned the Josefowitz Stela in A.D. 864 to commemorate his predecessor <i>Bahlam Chil Uy K’uk’ Maax</i> .
<i>Bahlam Chil Uy K’uk’ Maax</i>	Sajal, vassal of the king of <i>Hix Witz</i> , commemorated on the Josefowitz Stela.
<i>Boloon-te’ Tuun</i>	Lord depicted on late monuments at Ixkun and Sacul, fl. ca. A.D. 790 – 800, possibly a co-ruler or successor of <i>K’iyel Janab</i> .
<i>Chan Pe’t</i>	Title of a <i>Kan</i> king mentioned on <i>Wat’ul K’atel’s</i> Stela 10 at Ceibal (A.D. 849). Court location unknown.
<i>Chan Pi’t</i> and <i>Waxak Pi’t</i>	Holy lords of the “Hearth” dynasty at Ceibal, but not paramount kings of the site. Oversaw <i>Wat’ul K’atel’s</i> arrival in A.D. 829.

“Dark Sun”	<i>Mut</i> king at Tikal, fl. ca. A.D. 810. Successor to <i>Yik’in Chan K’awiil</i> . Final king before the ninth-century interregnum.
? <i>Itzamnaaj K’awiil</i>	<i>Sa’aal</i> king at Naranjo, born A.D. 771, latest monuments in A.D. 810. Defeated and sacrificed <i>K’ihnich Lakamtuun</i> of Yaxha.
Ixlu Ruler A	<i>Mut</i> king at Ixlu and Zacpeten, fl. A.D. 830 – 879.
<i>Jasaw Chan K’awiil</i>	King of Uaxactun after Uaxactun Ruler A. Hosted an unidentified western overlord in A.D. 889. Not the same person as either king of Tikal by the same name.
<i>Jasaw Chan K’awiil II</i>	<i>Mut</i> king at Tikal, fl. ca. A.D. 869. Final king named at that site and the only one after the interregnum.
<i>Juun Tzak To’k’</i>	King of Machaquila after <i>Sihyaj Chan K’awiil II</i> , fl. A.D. 831 – 841.
<i>Kan Ek’</i>	Title of an <i>Ik’</i> king mentioned on <i>Wat’ul K’atel’s</i> Stela 10 at Ceibal (A.D. 849), possibly identical with an <i>Ik’</i> ruler with the apparent title of <i>Sak Kan Ek’</i> .
<i>Kan Ek’ Jo’ Pe’t</i>	Titles of an Ucanal king mentioned on <i>Wat’ul K’atel’s</i> Stela 11 at Ceibal. Oversaw <i>Wat’ul K’atel’s</i> arrival in A.D. 829.
<i>Kan Ek’ Waxak Ek’</i>	Titles of a <i>Lakamtuun</i> king mentioned on <i>Wat’ul K’atel’s</i> Stela 9 at Ceibal, A.D. 849.
? <i>Kuchtal [...] K’awiil 12</i>	<i>Mut</i> king at Jimbal, fl. A.D. 879 – 889. Son of <i>Olom</i>

Serpent 13 Death 1 Deer	and Lady 8 Alligator.
<i>K'ahk' Jolow Chan Yopaat</i>	King of Quirigua, successor to “Skyraiser” <i>Yopaat</i> , fl. A.D. 800 – 810.
<i>K'ihnich Joy K'awiil</i>	King of Caracol, co-ruler with and eventual successor of <i>Tum Yohl K'ihnich</i> , fl. ca. A.D. 800.
<i>K'iyel Janab</i>	<i>Juluup</i> king at Ixkun and Sacul. Possible co-ruler or predecessor of <i>Boloon-te' Tuun</i> .
<i>K'ihnich Lakamtun</i>	<i>Yaxa'</i> king at Yaxha. Defeated and sacrificed by <i>?Itzamnaaj K'awiil</i> of Naranjo, events commemorated on that king's A.D. 810 monuments.
<i>K'ihnich Tatbu ?Joloom III</i>	<i>Pa'chan</i> king at Yaxchilan. Final known king of that site. Defeated Piedras Negras Ruler 7, commemorated on Yaxchilan Lintel 10 (A.D. 808). Probably responsible for destruction at Piedras Negras.
<i>K'inich Toobil Yopaat</i>	King of Caracol after <i>K'ihnich Joy K'awiil</i> , fl. ca. A.D. 820.
<i>Lajchan K'awiil Ajaw Bo't</i>	Lord of La Amelia and vassal of <i>Tahn Te' K'ihnich</i> of Aguateca. Not the same person as <i>Ajaw Bo't</i> of Ceibal.
<i>?Nahb Chan Yopaat</i>	<i>Pa'chan</i> king at El Zotz, fl. ca. A.D. 830.
<i>Nuun Yajaw Chan Aj Jol</i>	Poorly understood figure mentioned in some of <i>Yax Pahsaj Chan Yopaat</i> 's inscription at Copan. Like <i>Yax K'amlay</i> , he takes the Copan Emblem Glyph but was never a king.

<i>Olom</i> , a.k.a. <i>Olom Jaatz</i> , <i>Olom Kan Ek'</i>	Western <i>kaloomte'</i> active in southern Belize in the early ninth century. Visited Uaxactun in A.D. 810 and 830. Fathered ? <i>Kuchtal</i> of Jimbal.
<i>Papamalil</i>	Ruler of Ucanal ca. A.D. 820. Presented gifts to rulers at Caracol and Naranjo.
Piedras Negras Ruler 7	<i>Yokib</i> king at Piedras Negras, the final king attested at that site. His defeat by Yaxchilan forces is commemorated on Yaxchilan Lintel 10, A.D. 810.
<i>Sihyaj K'in Chahk II</i>	King of Machaquila, named for an earlier ruler of that site, fl. A.D. 816 – 821.
<i>Sihyaj K'in Chahk 7 Crossed Bands [...]</i> <i>Chan [...]</i>	<i>K'anwitznal</i> prince at Ucanal, heir to Ucanal Ruler A. Depicted on Ucanal Stela 4, A.D. 859.
“Skyraiser” <i>Yopaat</i> , a.k.a. “Sky Xul”	King of Quirigua, predecessor of <i>K'ahk' Jolow Chan Yopaat</i> , acceded A.D. 785.
<i>Tahn Te' K'ihnich</i>	<i>Mut</i> king at Aguateca. Final ruler of that site. Overlord of <i>Lajchan K'awiil Ajaw Bo't</i> at La Amelia and <i>Ajaw Bo't</i> at Ceibal. Defeated by unknown attackers ca. A.D. 810.
<i>Taj Chan Ahk</i>	“Cancuen” and “Machaquila” king ruling at Cancuen at the end of the eighth century A.D.
Tonina Ruler 8	<i>Popo'</i> king at Tonina, fl. ca. A.D. 806.
Tonina Ruler 10	<i>Popo'</i> king at Tonina, fl. ca. A.D. 904.
<i>Tum Yohl K'inhich</i>	King of Caracol, co-ruler with and predecessor of

	<i>K'ihnich Joy K'awiil.</i>
Uaxactun Ruler A	King of Uaxactun. Hosted <i>Olom</i> for A.D. 810 and 830 period ending rituals.
Ucanal Ruler A ([...] <i>U Mu</i> [...] 10 Stone 13 Bird)	<i>K'anwitznal</i> king at Ucanal, father of <i>Sihyaj K'in Chahk</i> 7 Crossed Bands [...] <i>Chan</i> [...]. Depicted on Ucanal Stela 4, A.D. 859.
<i>U Kit To'k'</i>	Failed heir at Copan to <i>Yax Pahsaj Chan Yopaat</i> , probably deposed A.D. 822.
<i>Uuh Chapaht</i>	<i>Popo'</i> king at Tonina, fl. ca. A.D. 837.
<i>Uuh K'awil</i>	<i>Mut</i> king mentioned on <i>Wat'ul Katel's</i> Stela 10 at Ceibal, A.D. 849. Location of court unknown; could be identical with a ruler identified elsewhere by a different name.
<i>Wat'ul K'atel</i>	“Hearth” king at Ceibal after <i>Ajaw Bo't</i> . Probably fostered at Ucanal and installed in rulership, with Ucanal support, in A.D. 829. Latest monuments date to A.D. 849.
<i>Winik ?Kaaj Witzil</i>	Title of a <i>Puh</i> or <i>Puuw</i> king mentioned on <i>Wat'ul K'atel's</i> Stela 8 at Ceibal, A.D. 849.
<i>Waxaklajuun U Baah K'awiil</i>	<i>Sa'aal</i> king at Naranjo after <i>?Itzamnaaj K'awiil</i> , fl. ca. A.D. 820.
<i>Winik ?Kaaj Witzil</i>	<i>Lakamtuun</i> king mentioned on <i>Wat'ul K'atel's</i> Stela 9 at Ceibal, A.D. 849.

<i>Wok ?Teles</i>	King of Ceibal after <i>Wat'ul K'atel</i> , probably the “Banded Bird” king responsible some or all of the stelae erected at Ceibal between 859 and 889.
<i>Yax K'amlay</i>	Poorly understood figure mentioned in some of <i>Yax Pahsaj Chan Yopaat</i> 's inscriptions at Copan. Like <i>Nuun Yajaw Chan Aj Jol</i> , he takes the Copan Emblem Glyph but was never a king, although he was “seated” into some new status on the day <i>Yax Pahsaj Chan Yopaat</i> acceded to the throne.
<i>Yax Nuun Ahiin II</i>	<i>Mut</i> king at Tikal, fl. ca. A.D. 790.
<i>Yax Pahsaj Chan Yopaat</i>	? <i>Xukuup</i> king at Copan, fl. A.D. 763 – 810. Final effective ruler of that site, briefly succeeded by <i>U Kit To'k'</i> .

Table 4.2. Names and titles of foreign potentates from <i>Wat'ul K'atel's</i> Str. A-3 monumental program.			
Names/titles	Political title	Translation	Monument
<i>Kan ek', jo' pe't</i>	<i>Aj K'anwitznal</i>	<i>Kan ek'</i> , five districts, he of Ucanal	ST 11
<i>Chan pi't</i>	<i>K'uhul "Hearth" ajaw</i>	Four palanquins, eight palanquins, the holy "Ceibal" lords	ST 11
<i>Waxak pi't</i>			
<i>?Pe't, kan ek', waxak ek'</i>	<i>K'uhul Lakamtuun ajaw</i>	[?One] district, <i>kan ek'</i> , eight <i>ek'</i> , the holy <i>Lakamtuun</i> lord	
<i>Chan pe't</i>	<i>K'uhul Kan ajaw</i>	Four districts, the holy <i>Kan</i> lord	
<i>Kan ek'</i>	<i>K'uhul Ik' ajaw</i>	<i>Kan ek'</i> , the holy <i>Ik'</i> lord	
<i>Uuh K'awil</i>	<i>K'uhul Mut ajaw</i>	Jewel <i>K'awil</i> , the holy <i>Mut</i> lord	
<i>Winik ?kaj witzil</i>	<i>K'uhul ?Puh ajaw</i>	Twenty ?towns [?and] mountains, the holy <i>Puh</i> lord	

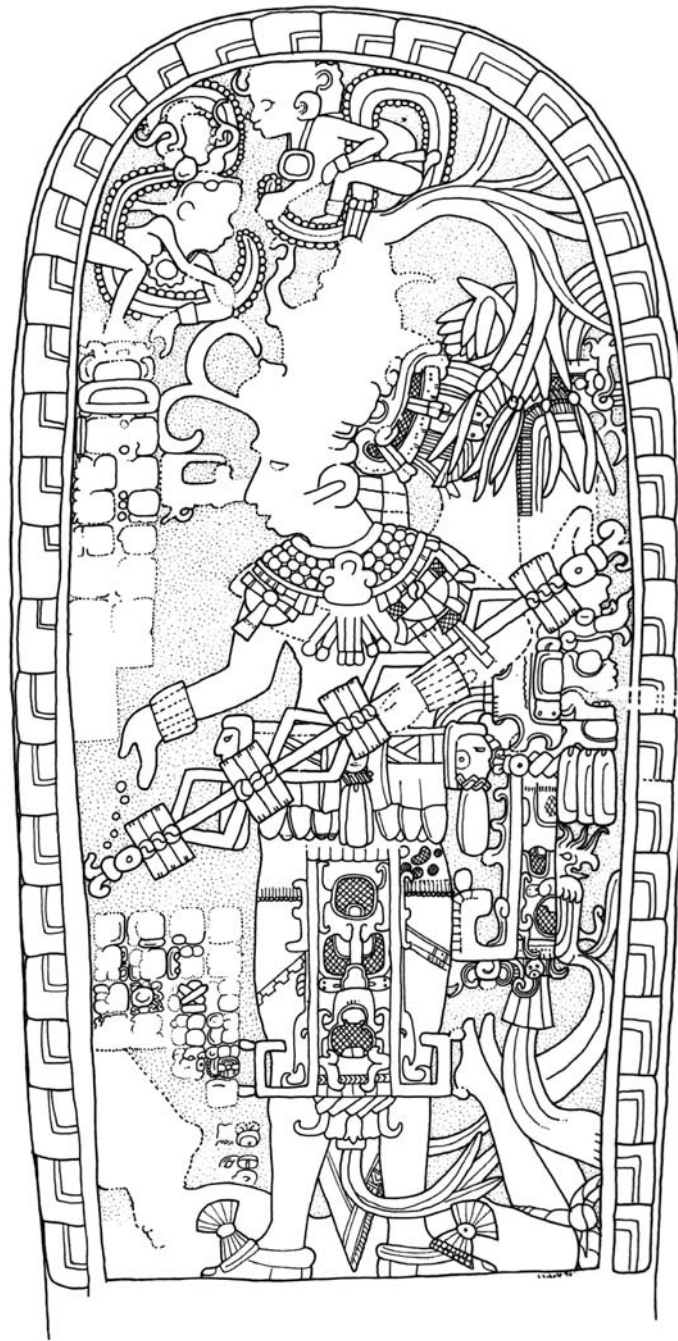


Figure 4.1. Tikal Stela 11 (A.D. 869), a late monument which adheres both to pan-southern Lowland canons of royal costume on period ending monuments and to a format established by the eighth-century ruler *Yik'in Chan K'awiil* of Tikal. Drawing by Linda Schele. Courtesy of the Foundation for the Advancement of Mesoamerican Studies, Inc.

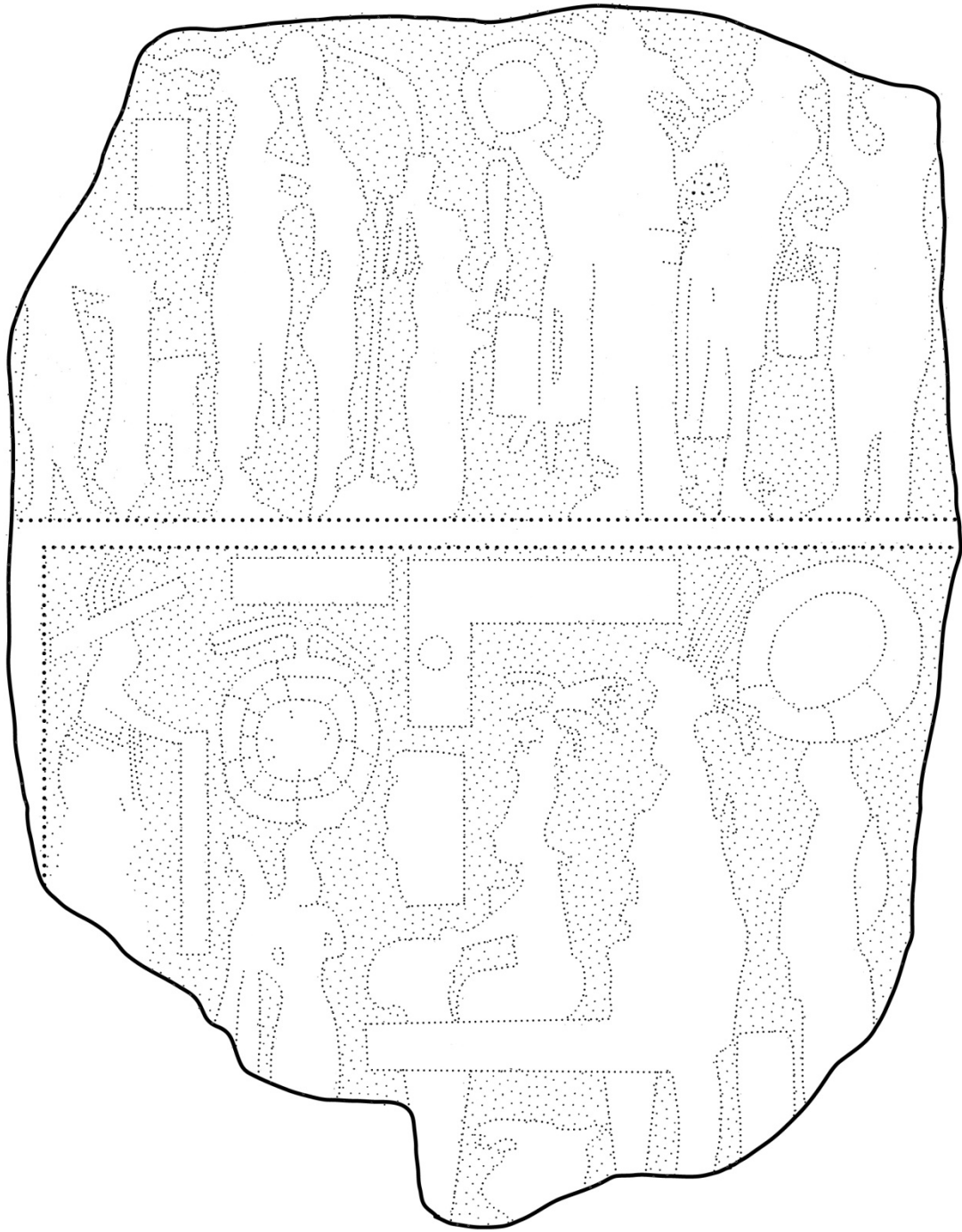


Figure 4.2. Piedra Quebrada Stela 1.

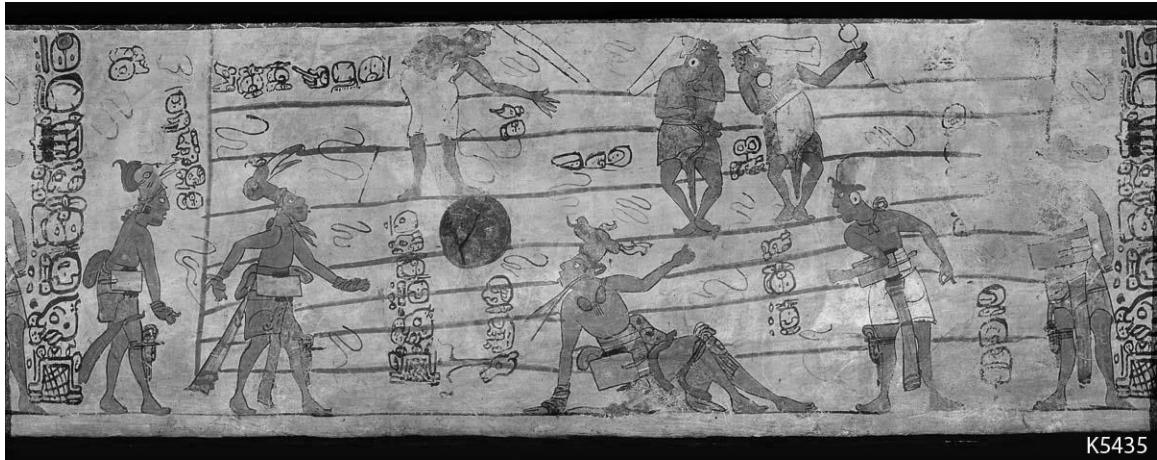


Figure 4.3. A polychrome vessel in the Señor del Peten style depicting a ballgame (Kerr 2012: 5435). Courtesy of Kerr Associates (www.mayavase.com). © Justin Kerr.

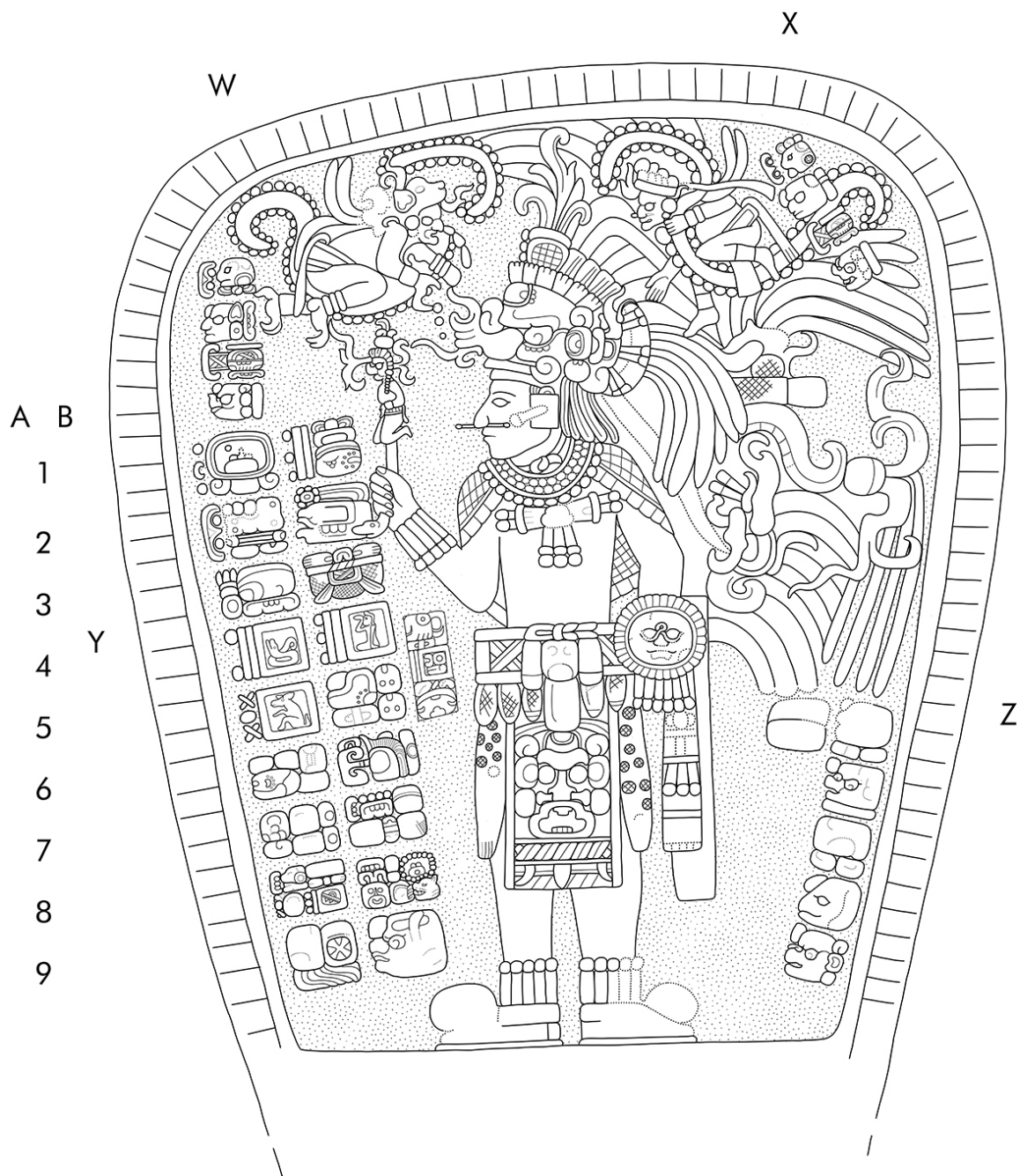


Figure 4.4. Jimbal Stela 1. Drawing by Nicholas Carter after photographs of the monument and, in damaged sections, drawings by William Coe and Linda Schele.

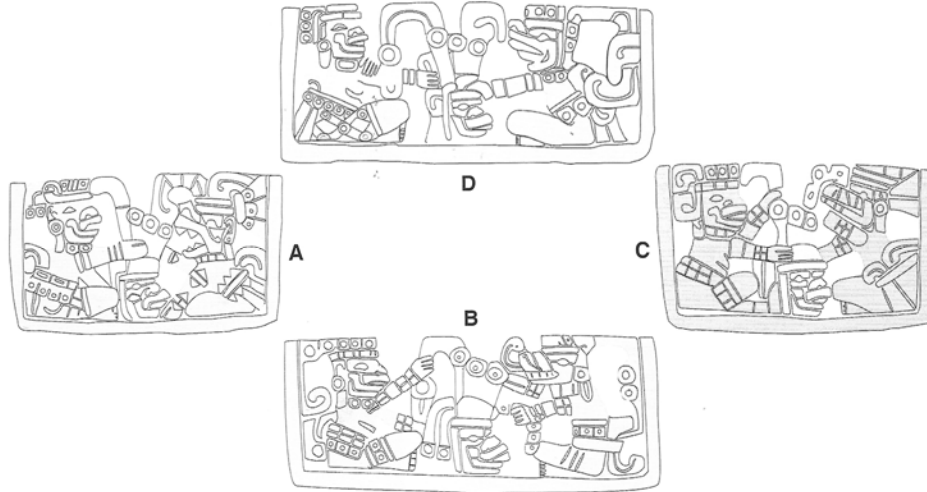


Figure 4.5. Scenes of interaction between two deities on a Classic-period carved stone box from Veracruz. Courtesy of Colin McEwan and the British Museum.

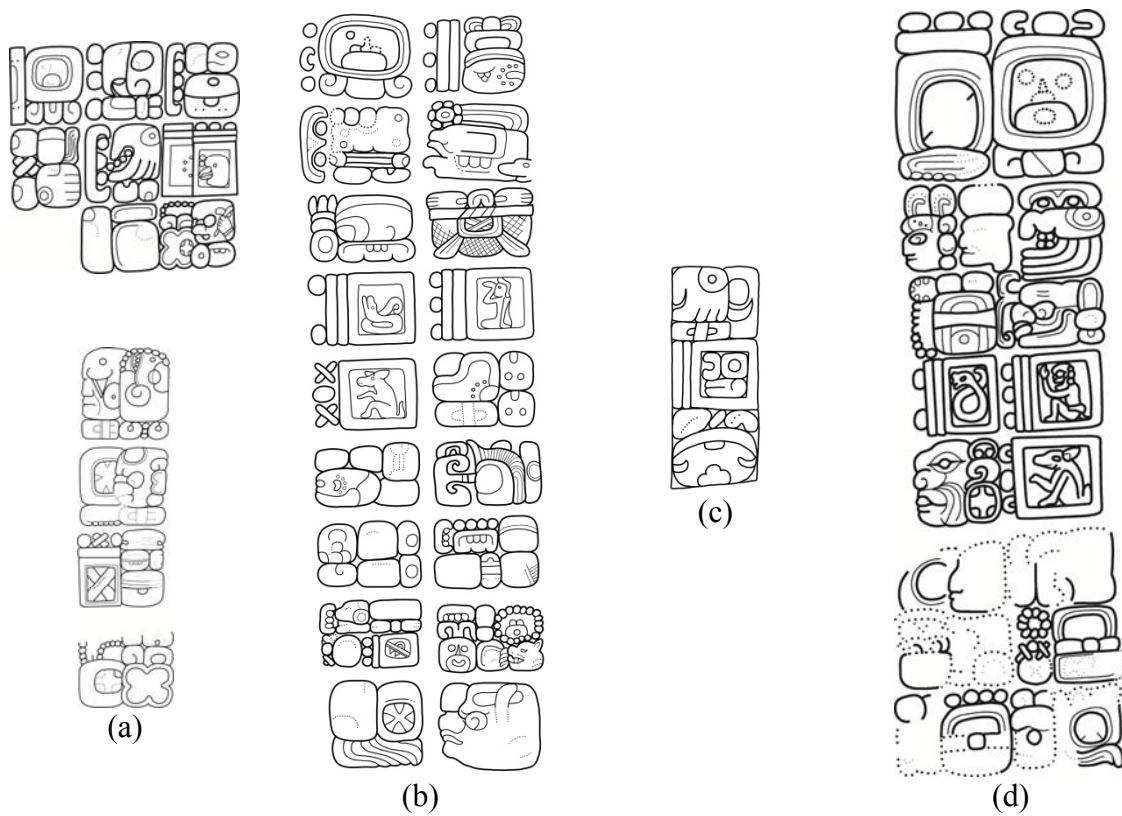


Figure 4.6. Grammatical inscriptions including square day signs: (a) Ucanal Stela 4, A1 – E1; (b) Jimbal Stela 1, A2 – B9; (c) Jimbal Stela 1, Y1 – Y3; (d) Jimbal Stela 2, C1 – B2.

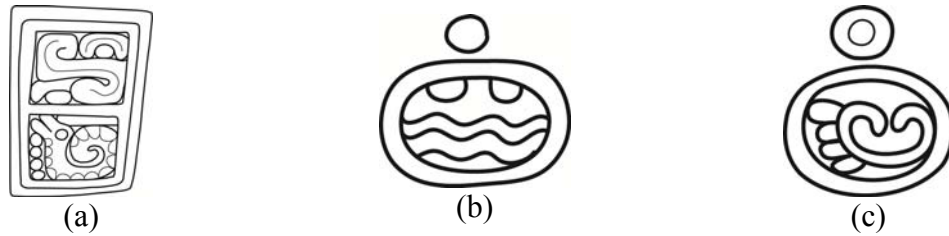
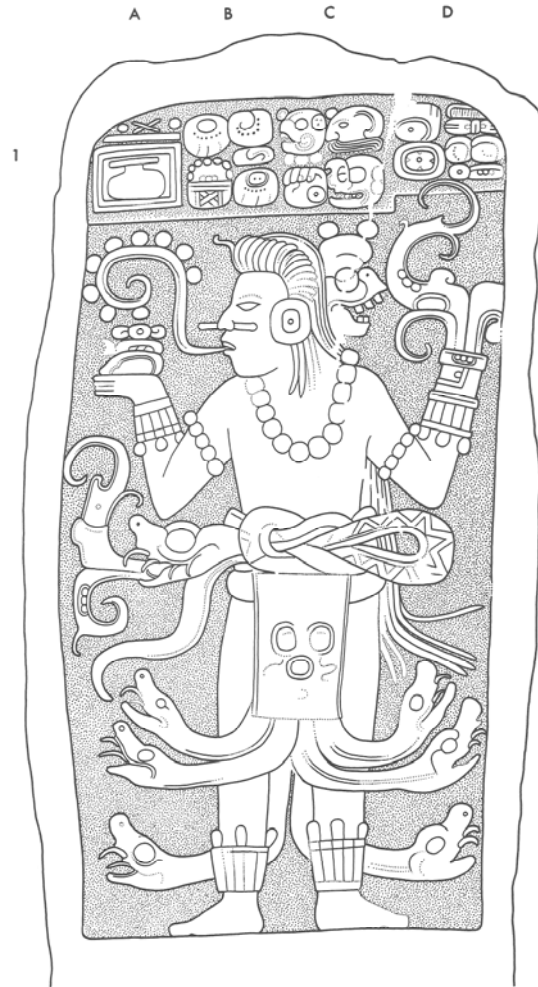


Figure 4.7. Non-Maya-style day signs from Terminal Classic vessels: (a) 1 or 6 Alligator and 4 Serpent (drawing after a photograph in the Dumbarton Oaks Precolumbian Photographic Archive, PC.M.LC.cb4.34.6); (b) 1 Water (drawing after a photograph by Justin Kerr; Kerr 2012: K319); (c) 1 ?Road (drawing after a photograph by Justin Kerr; Kerr 2012: K319).



Figure 4.8. Nominal sequence from a polychrome drinking vessel in the Señor del Peten style (Kerr 2012: K6437): *u baah Wuk Chapaht Meen K'in Ajaw 11 ? 12* “Crossed Bands” *?T’ul Tol ochik’in kaloomte’ baahkab*.



(a)



(b)

Figure 4.9. (a) Ceibal Stela 13; (b) torch-handed entity depicted on an unprovenanced molded-carved vessel (Kerr 2012: K6668). Drawing (a) by Ian Graham, courtesy of the Corpus of Maya Hieroglyphic Inscriptions; © The President and Fellows of Harvard College.

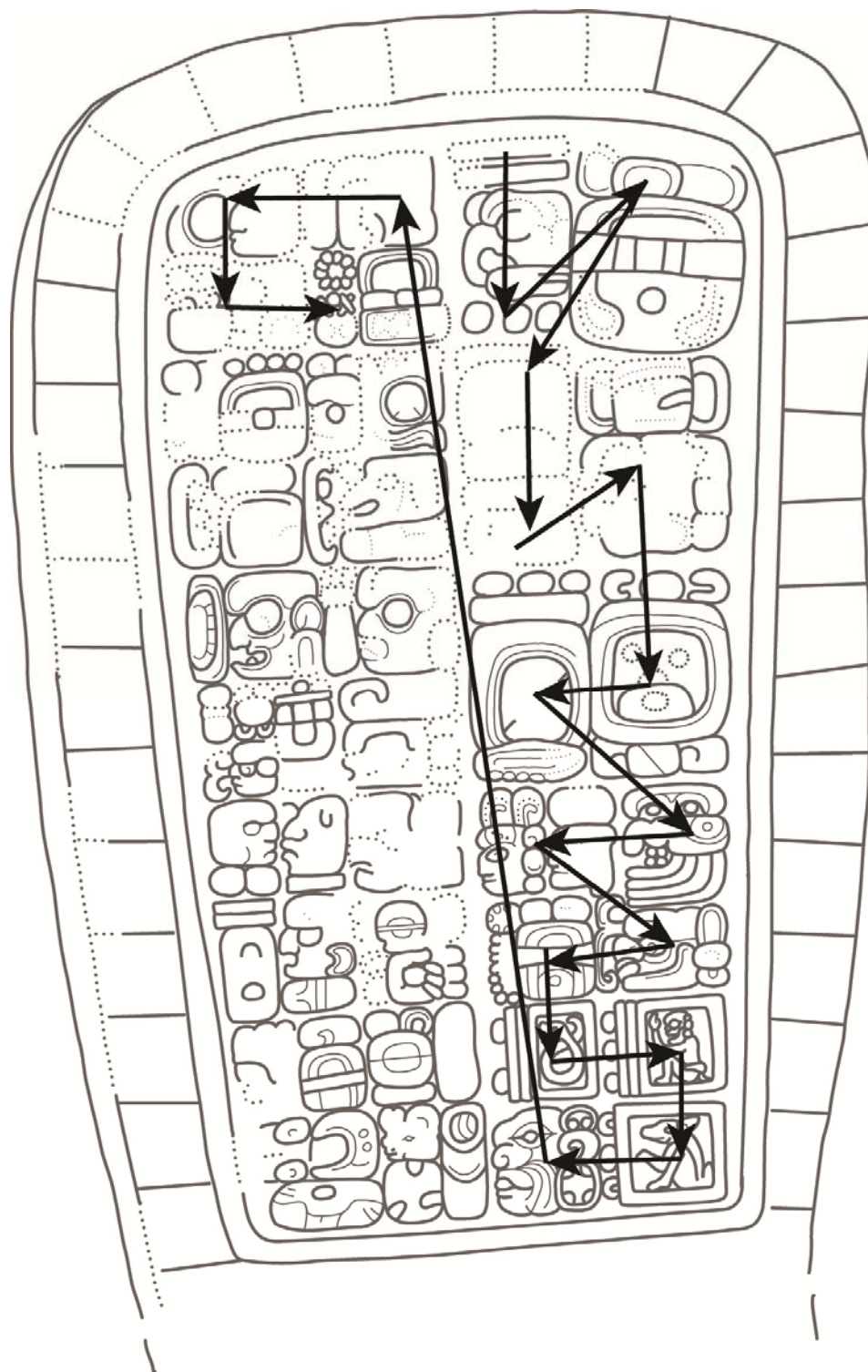


Figure 4.10. Jimbal Stela 2 with arrows showing proposed reading order. After a drawing by William Coe.



Figure 4.11. The Josefowitz Stela. Drawing by and courtesy of Simon Martin.

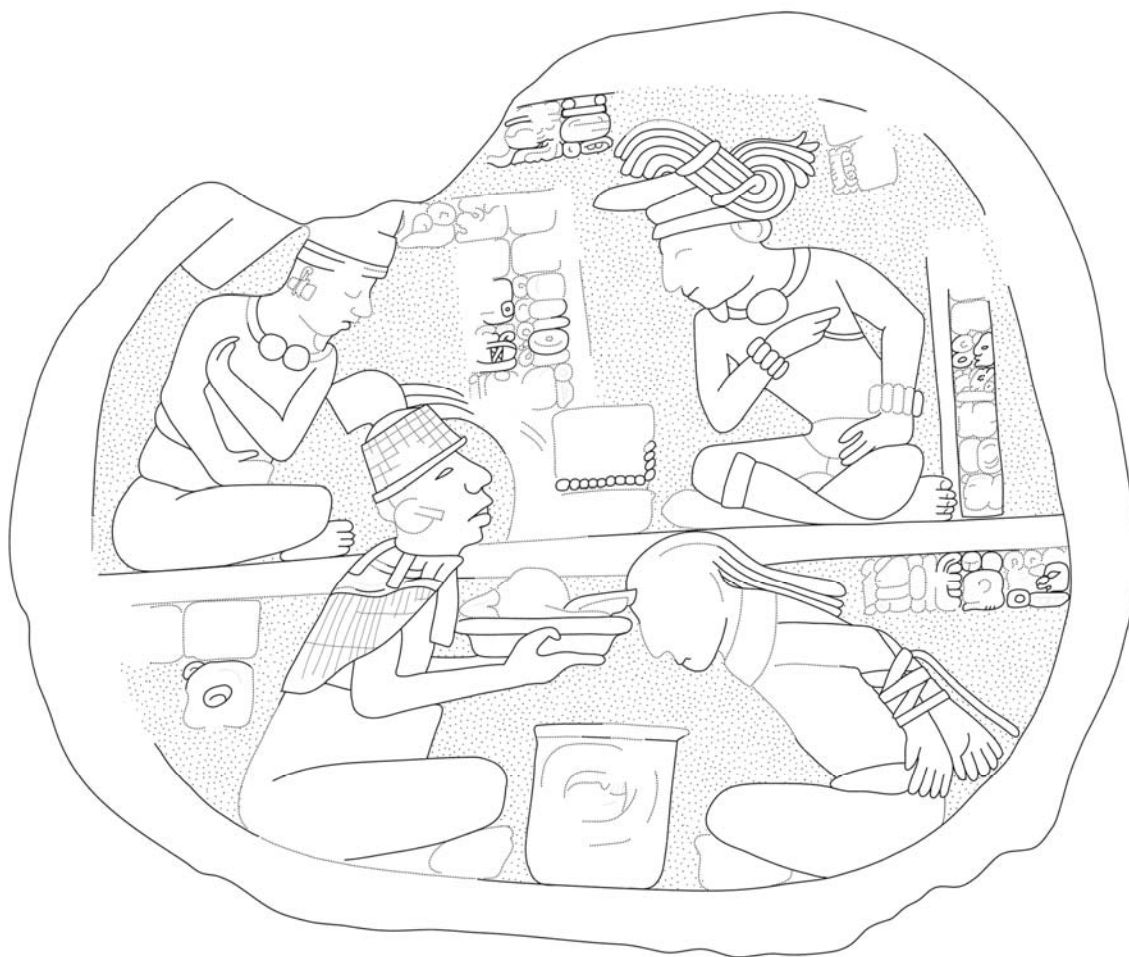


Figure 4.12. Ixlu Altar 2. Drawing by Nicholas Carter after a photograph by Teobert Maler.

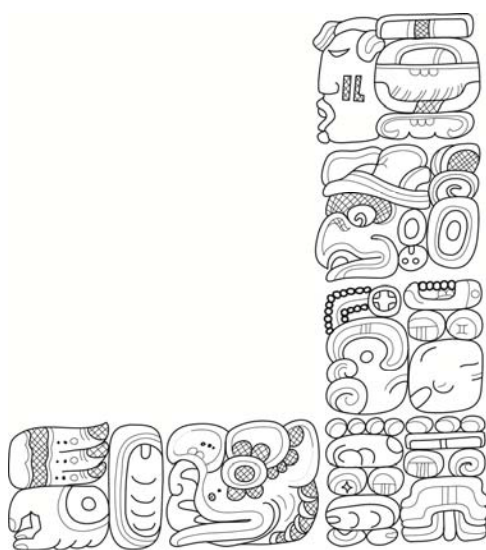


Figure 4.13. Name and titles of *K'iyel Janab* from Sacul Stela 1.

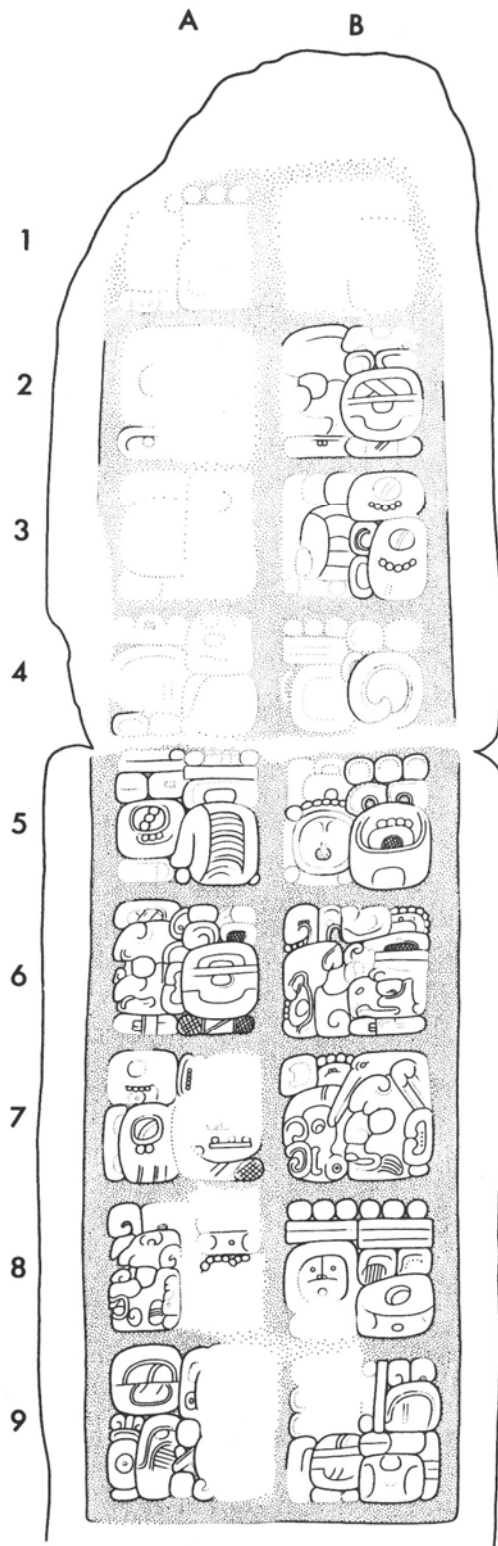
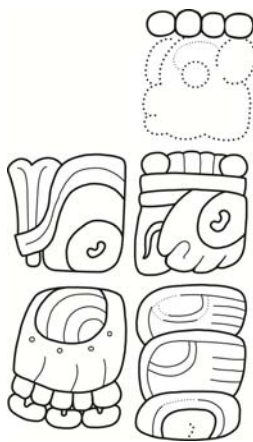


Figure 4.14. Ceibal Stela 6. Drawing by Ian Graham. Courtesy of the Corpus of Maya Hieroglyphic Inscriptions. © The President and Fellows of Harvard College.



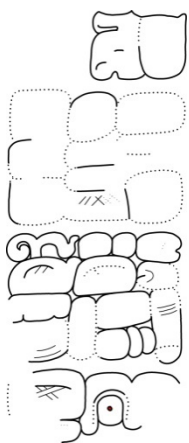
(a)



(b)



(c)



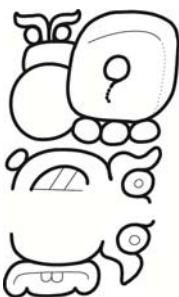
(e)



(f)



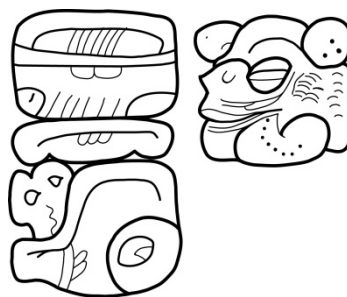
(g)



(h)



(i)



(j)

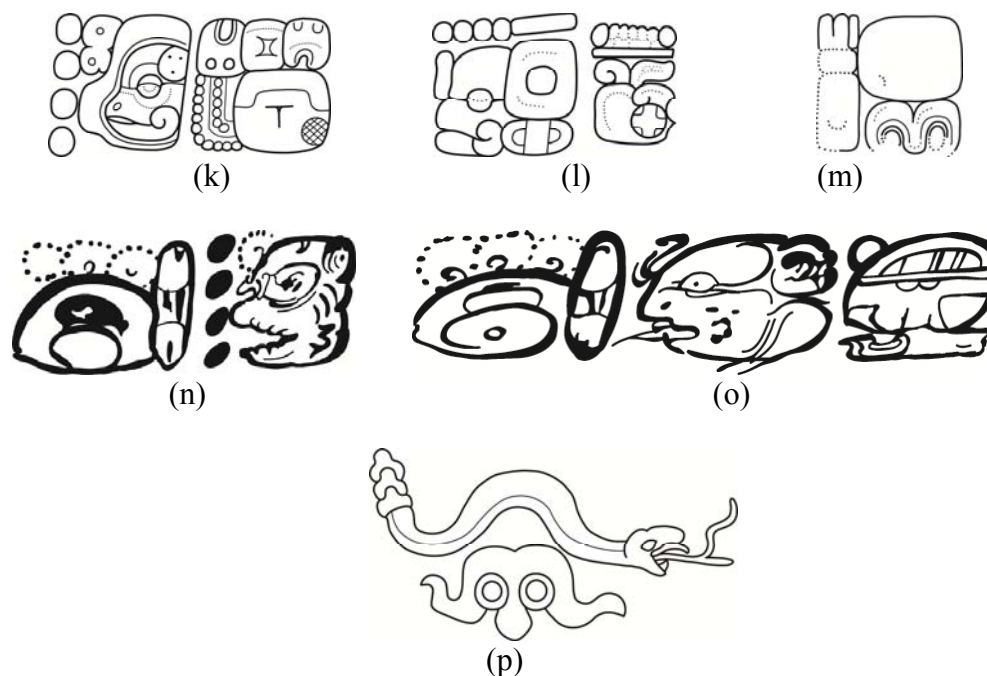


Figure 4.15. *Kan ek'* people named in Late and Terminal Classic inscriptions: (a) Edzna Stela 18; (b) Pusilja Stela D; (c) Yaxchilan Stela 10 (after a photograph by Teobert Maler); (e) Chichen Itza, Las Monjas Building, Lintel 1; (f) unprovenanced vessel from the Xultun area (after a photograph by Justin Kerr; Kerr 2012: K4387); (g) unprovenanced vessel from the Xultun area (after a photograph by Justin Kerr; Kerr 2012: K4909); (h) Yaxchilan Stela 10 (after a photograph by Teobert Maler); (i) Ceibal Stela 9 (after a photograph by Ian Graham); (j) unprovenanced carved-incised vessel (after a photograph by Justin Kerr; Kerr 2012: K8732); (k) Ceibal Stela 10 (after a photograph by Ian Graham); (l) Ceibal Stela 11 (after a cast in the Peabody Museum, Harvard University); (m) stela now in Flores, perhaps from Motul de San José; (n) and (o) unprovenanced vessel from the Motul de San José area (after photographs by Justin Kerr); (p) Chichen Itza, Great Ballcourt, South Building, Pillar 5.

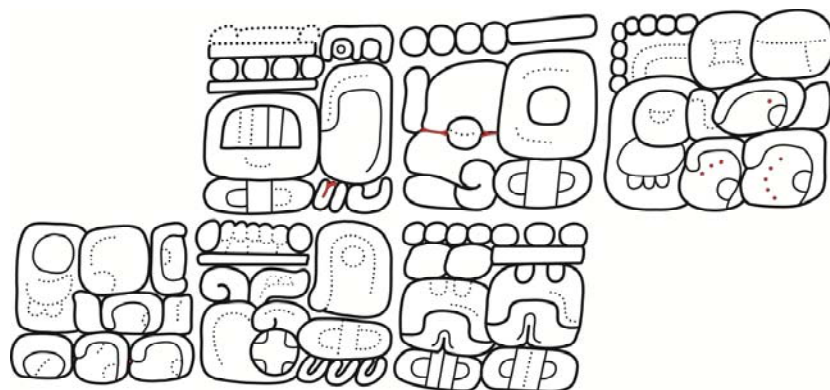


Figure 4.16. Passage from Ceibal Stela 11 recounting the arrival of *Wat'ul K'atel*. Drawing after a cast in the Peabody Museum, Harvard University.

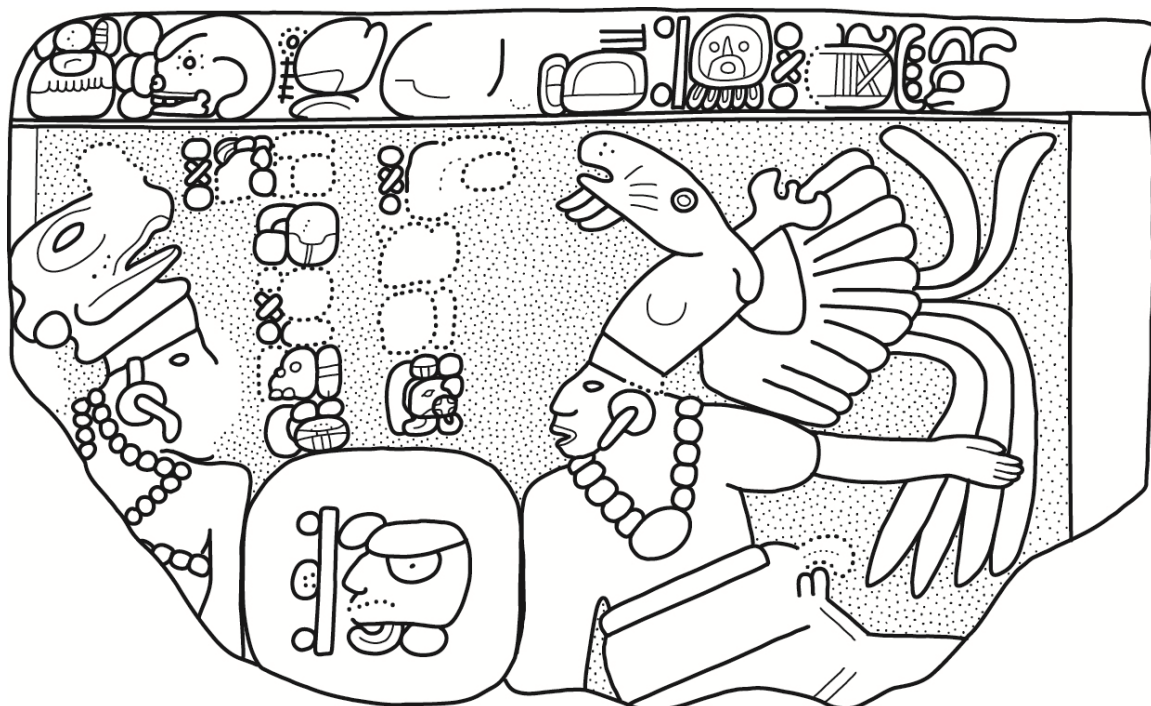


Figure 4.17. Ichmul de Morley Panel 2. Drawing after Proskouriakoff (1950: Fig. 82b) and Graña-Behrens (2006: Fig. 5a).

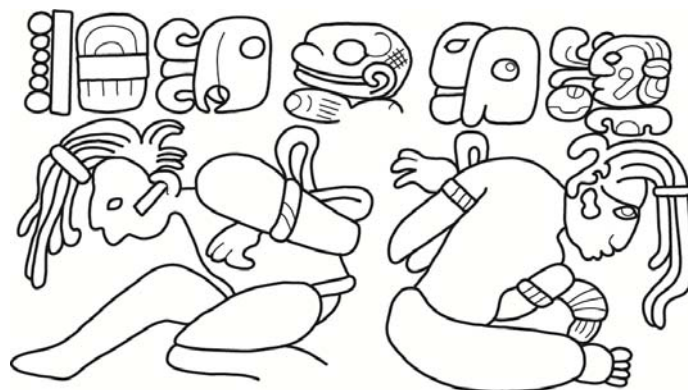
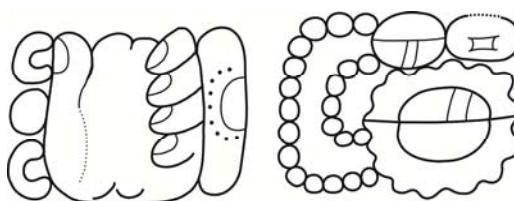


Figure 4.18. Detail of Dzilam Stela 1. Drawing after Proskouriakoff (1950: Fig. 82f) and Graña-Behrens (2006: Fig. 6a).



(a)



(b)

Figure 4.19. *Itza'* people named in Early and Late Classic Maya inscriptions: (a) unprovenanced black ware vessel from northern or central Peten (*yunen Itza' ajaw*, “the child of the *Itza'* lord,” after a photograph by Justin Kerr); (b) Motul de San José Stela 2 (*Juun Tzak To'k', k'uhul Itza' ajaw*, after Tokovinine and Zender 2012: Fig. 2.1a).

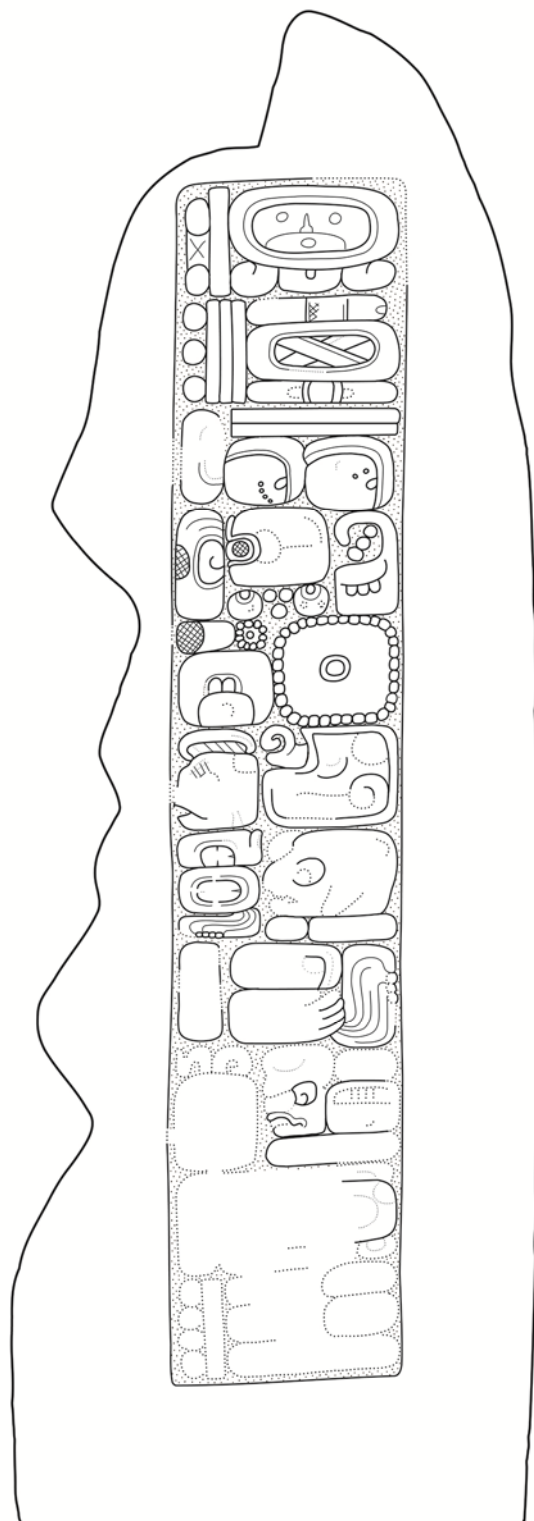


Figure 4.20. Uaxactun Stela 13. Drawing by Nicholas Carter after a reflectance transformation image by Carlos Pallan and a photograph by Ian Graham.

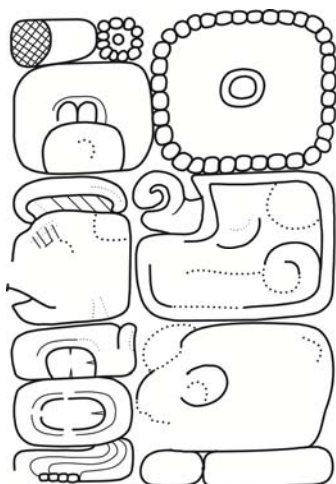


Figure 4.21. Detail of Uaxactun Stela 13. Drawing by Nicholas Carter after a reflectance transformation image by Carlos Pallan.

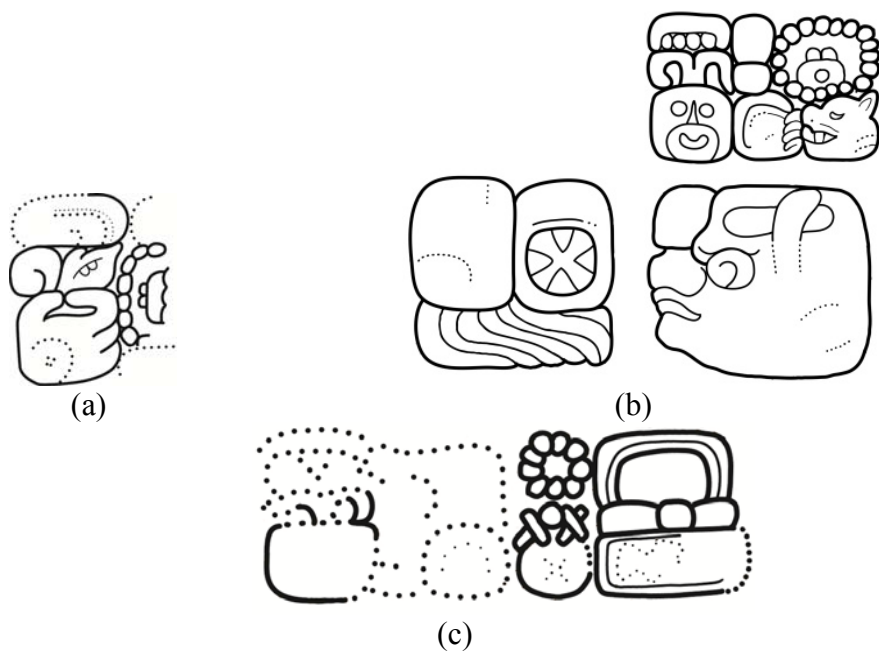


Figure 4.22. Details of Terminal Classic monuments mentioning *Olom*: (a) Uaxactun Stela 7; (b) Jimbal Stela 1; (c) Jimbal Stela 2.

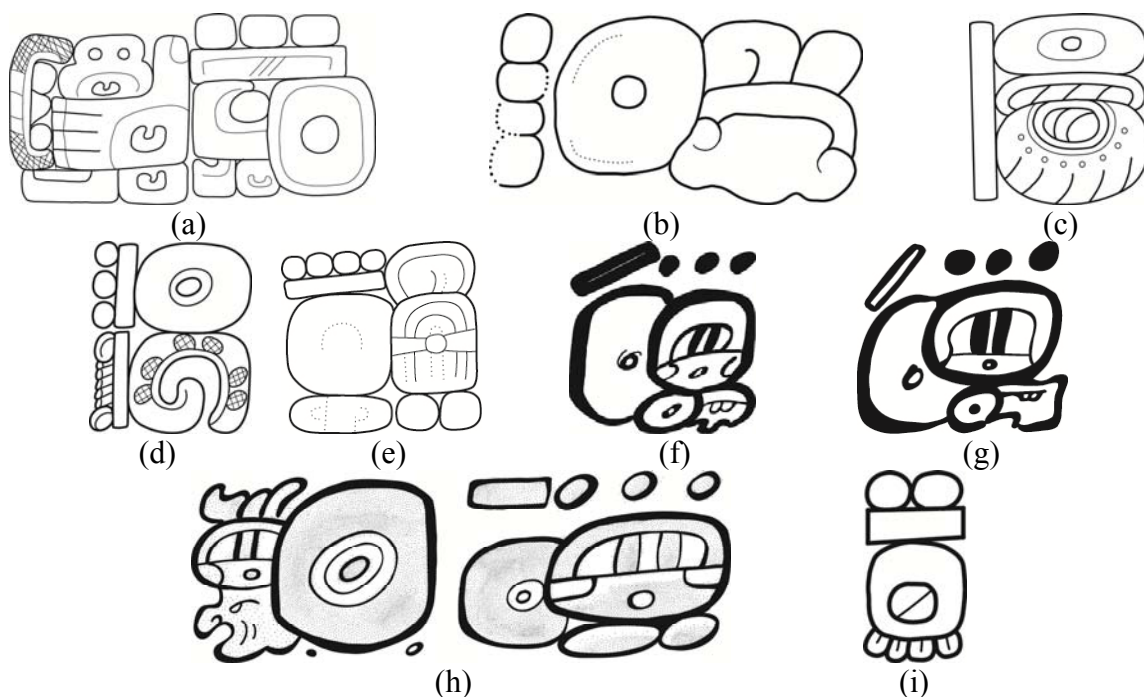


Figure 4.23. Numbered territory titles from pre-Terminal Classic inscriptions: (a) Tikal Stela 31; (b) Tikal Stela 13; (c) Palenque House C; (d) Aguateca Stela 1, after a photograph by Ian Graham (Graham 1967: Fig. 2); (e) Naranjo Stela 12; (f) unprovenanced vessel from the Rio Azul area (Kerr 2012: K1383); (g) unprovenanced vessel from the Rio Azul area (Kerr 2012: K2914); (h) unprovenanced vessel from the Los Alacranes area (Kerr 2012: K7524); (i) unprovenanced vessel from the Oxkintok area (see Boot 2010: 2).

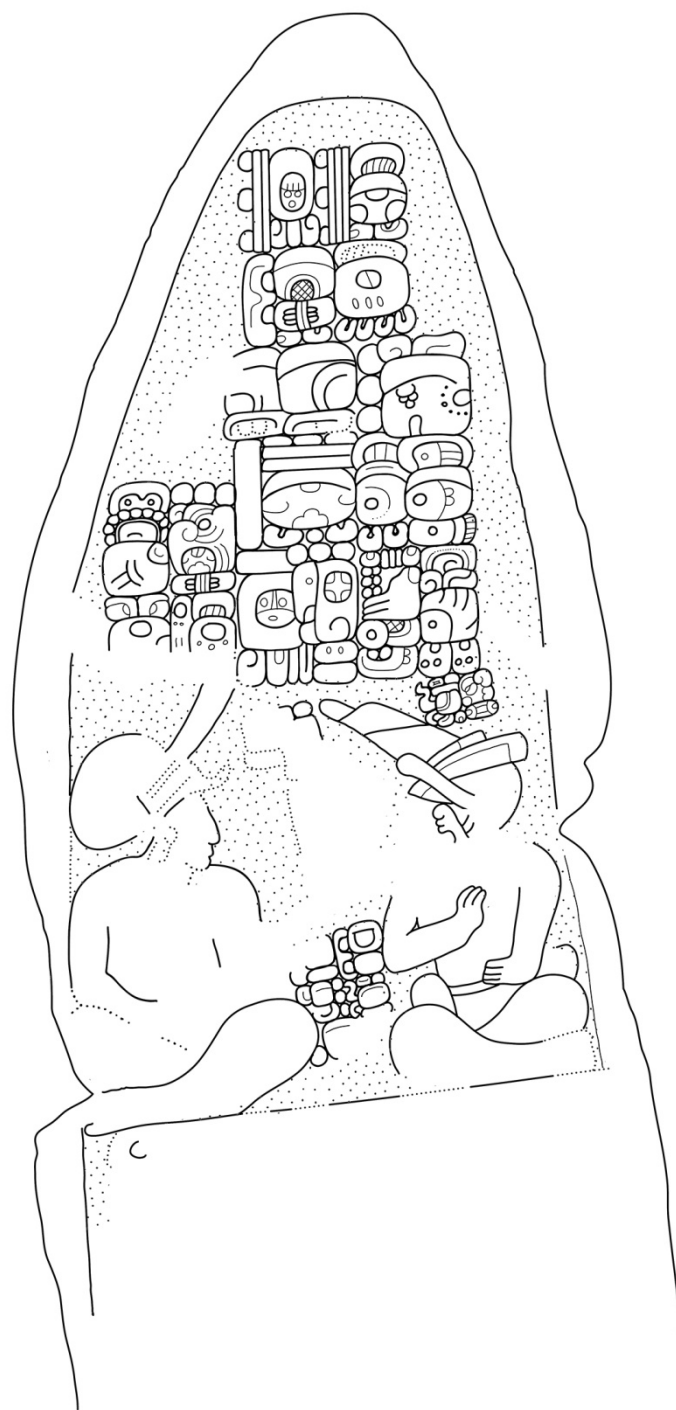


Figure 4.24. Caracol Stela 17. Drawing by Nicholas Carter after a photograph by Linton Satterthwaite (Beetz and Satterthwaite 1990: Figure 38a) and a drawing by Nikolai Grube.

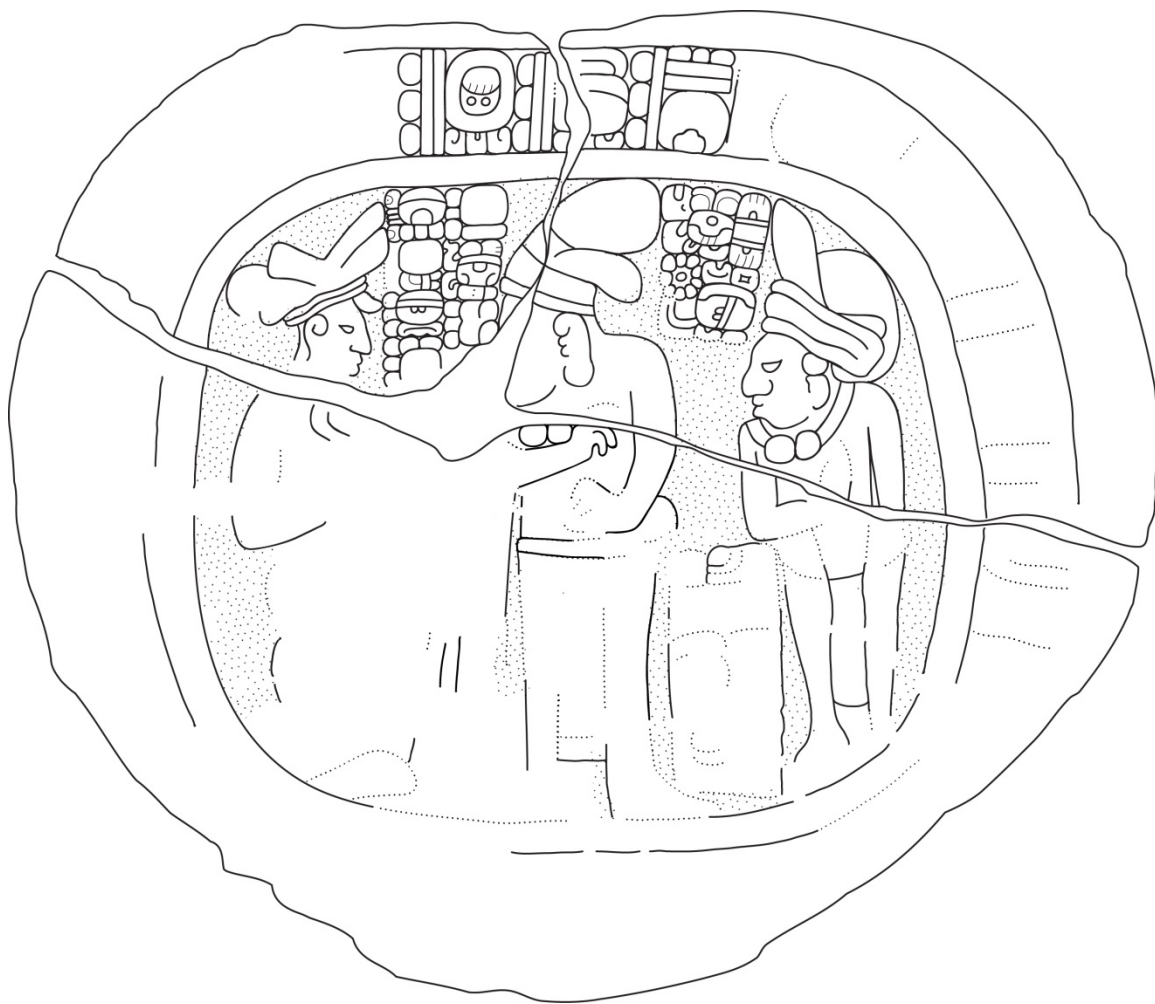


Figure 4.25. Caracol Altar 10. Drawing by Nicholas Carter after a photograph by Linton Satterthwaite (Beetz and Satterthwaite 1990: Figure 41d) and a drawing by Nikolai Grube.

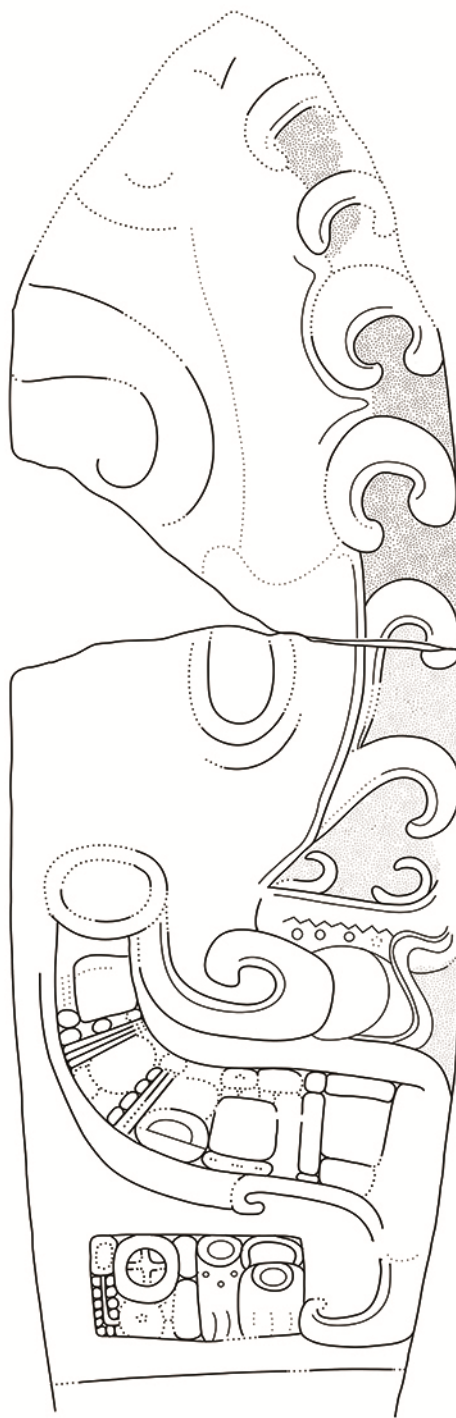


Figure 4.26. (a) Caracol Stela 18. Drawing by Nicholas Carter after Beetz and Satterthwaite 1990: Figure 16b.



Figure 4.27. Caracol Altar 13.



Figure 4.28. Excerpt from the inscription on Naranjo Stela 32, recounting *Papamalil*'s gift of a palanquin to *Waxaklajuun U Baah K'awiil*. Drawing after a photograph by Ian Graham.

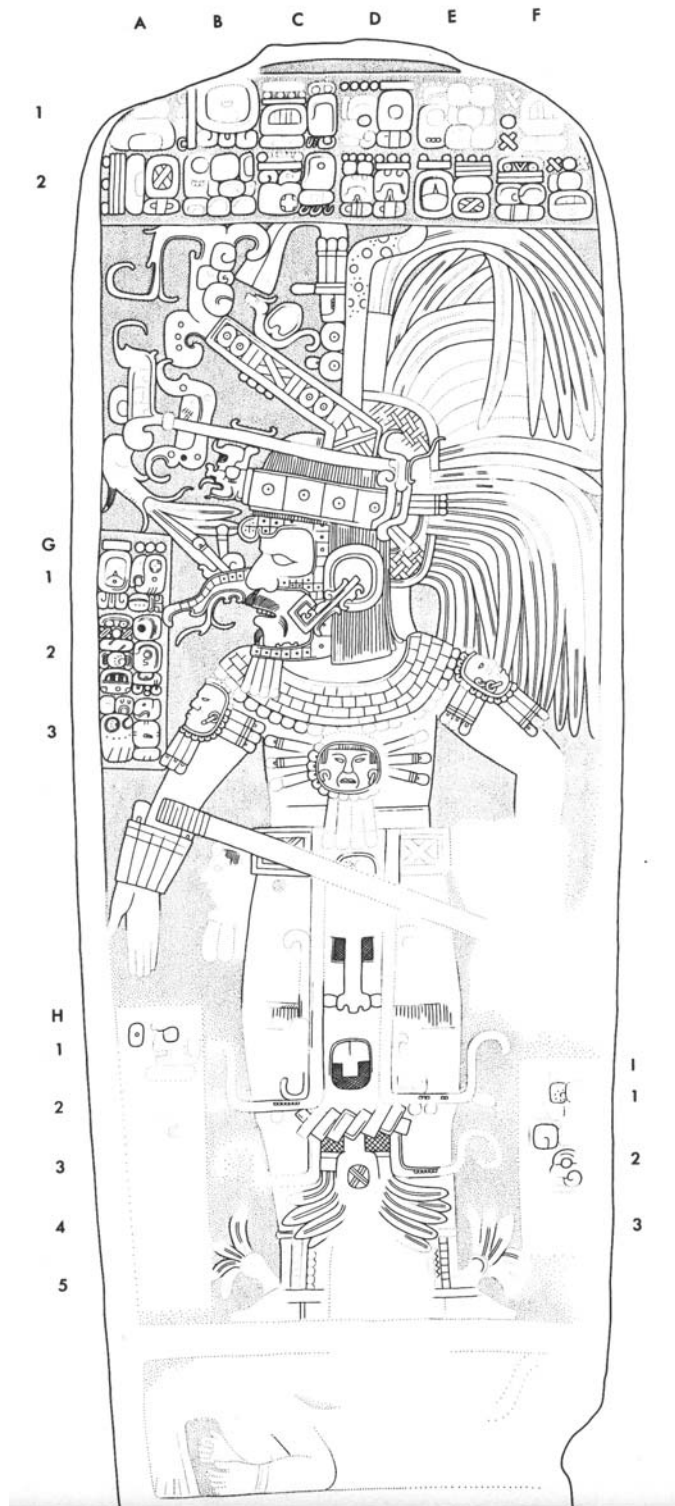


Figure 4.29. Ceibal Stela 11. Drawing by Ian Graham. Courtesy of the Corpus of Maya Hieroglyphic Inscriptions. © The President and Fellows of Harvard College.

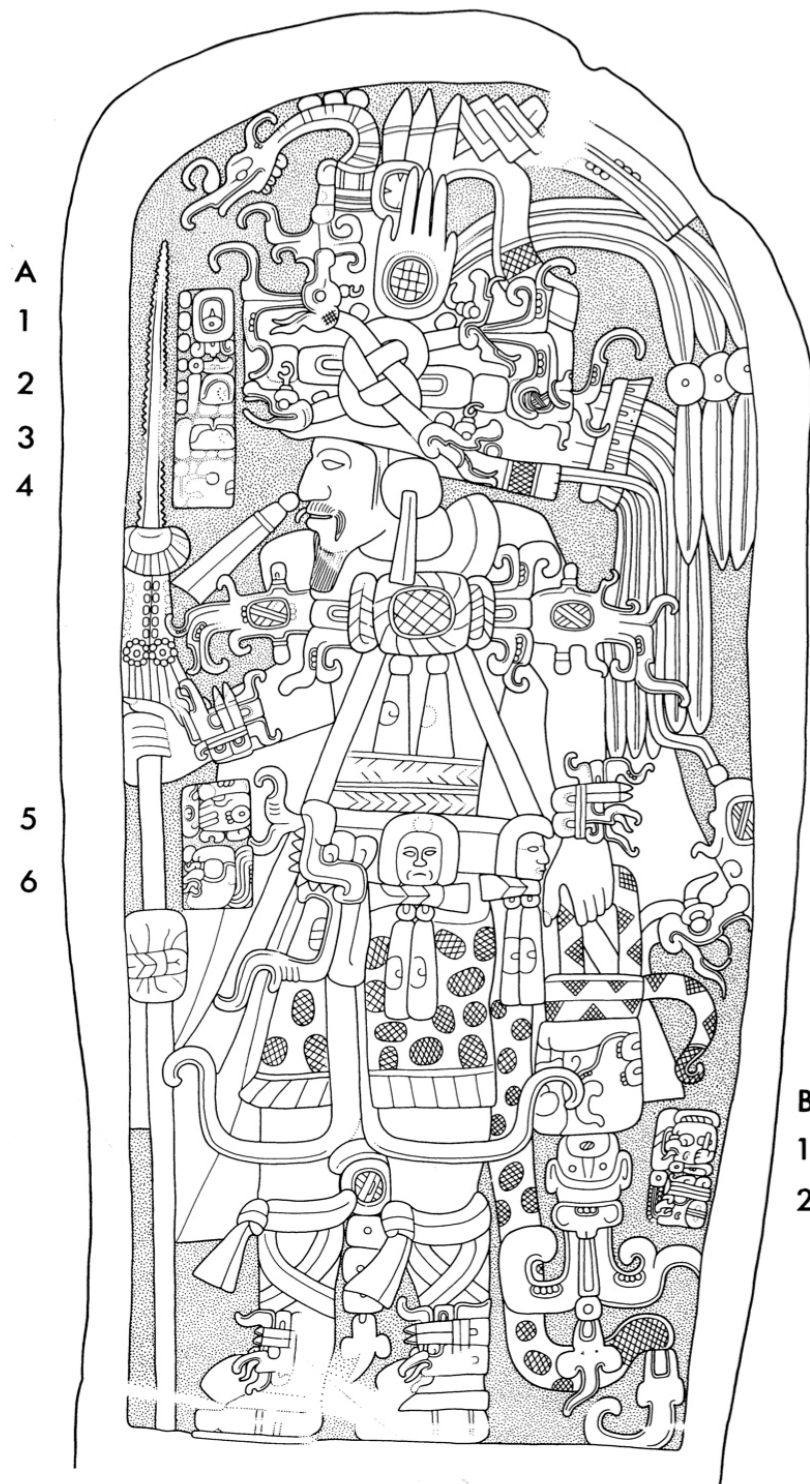
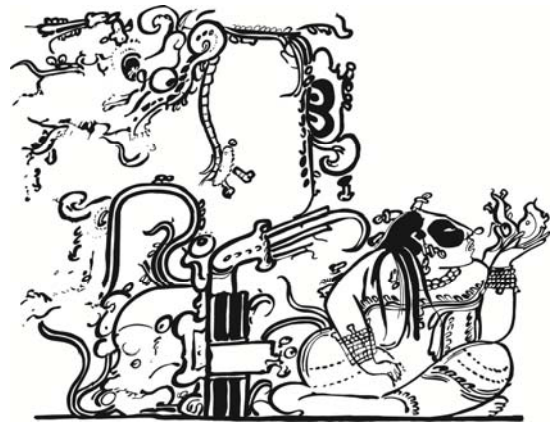


Figure 4.30. Ceibal Stela 1. Drawing by Ian Graham. Courtesy of the Corpus of Maya Hieroglyphic Inscriptions. © The President and Fellows of Harvard College.



(a)



(b)

Figure 4.31. (a) Ceibal Stela 18; (b) detail of an unprovenanced painted ceramic vessel, probably produced in the *Ik'* polity in the eighth century A.D. (K1004). Drawings by Nicholas Carter after (a) a drawing by James Porter and (b) a photograph by Justin Kerr.

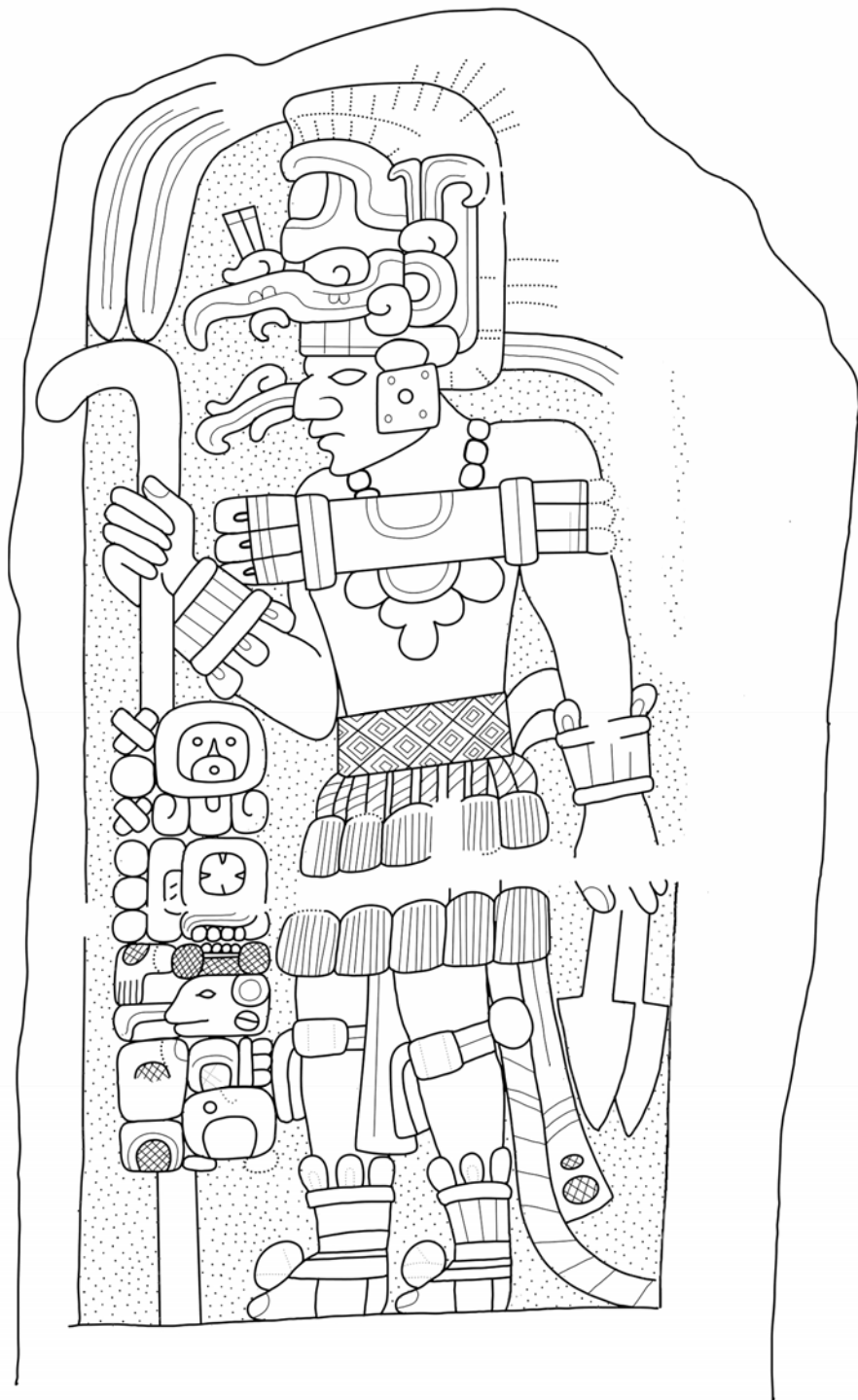


Figure 4.32. Ceibal Stela 20. Drawing by Nicholas Carter after a photograph by Ian Graham.

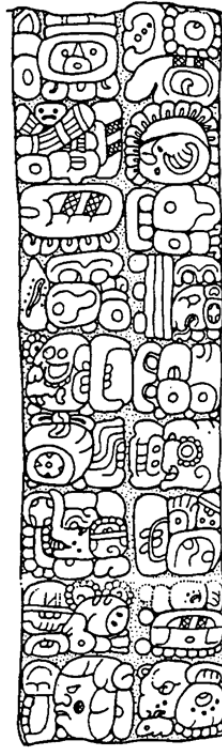


Figure 4.33. Inscription on the back of Copan Stela 11. Drawing by Linda Schele. Courtesy of the Foundation for the Advancement of Mesoamerican Studies.

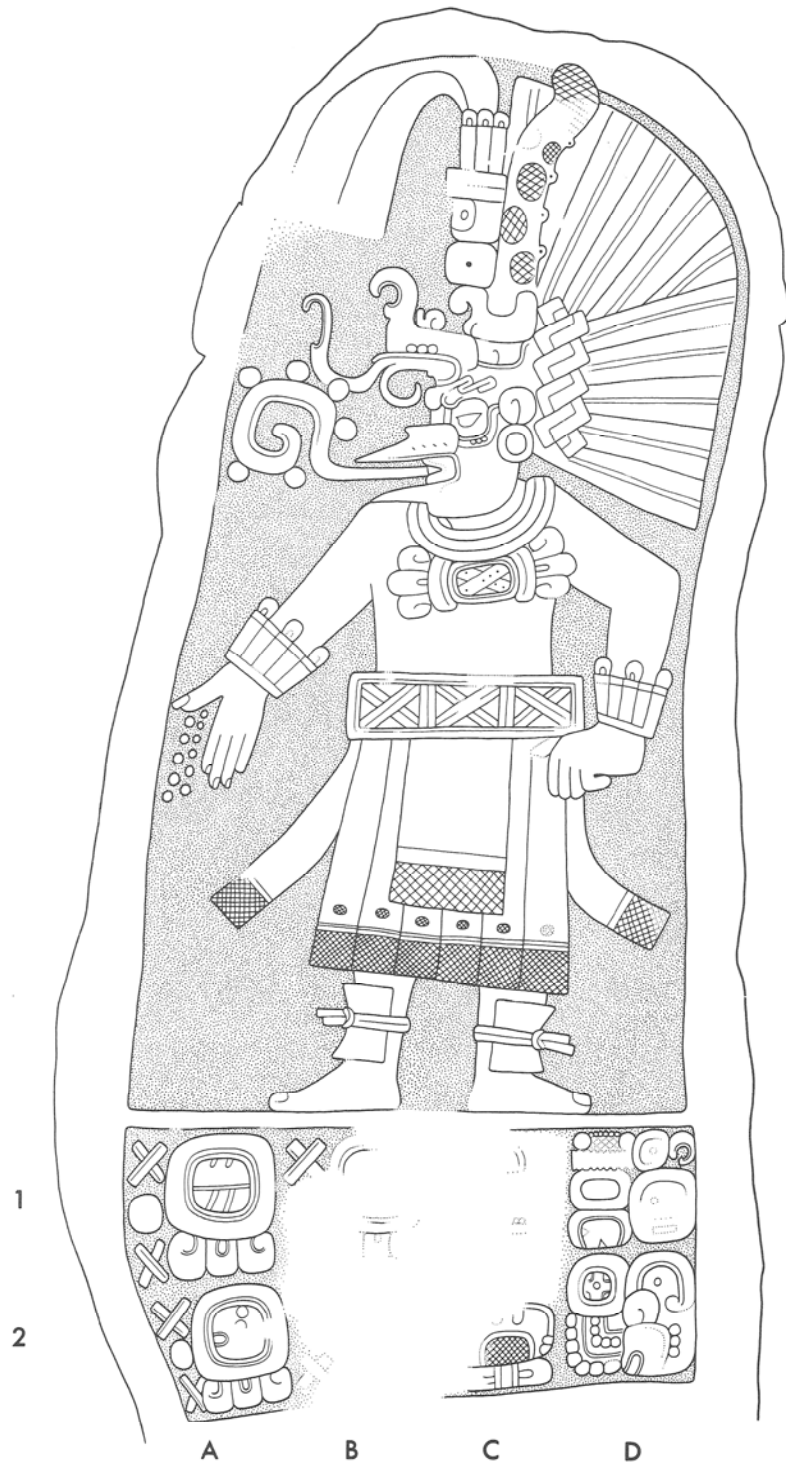


Figure 4.34. Ceibal Stela 19. Drawing by Ian Graham, courtesy of the Corpus of Maya Hieroglyphic Inscriptions. © The President and Fellows of Harvard College.

CHAPTER FIVE

EL ZOTZ: THE TRAJECTORY OF A MAYA KINGDOM IN THE TERMINAL CLASSIC PERIOD

Archaeological data from the site of El Zotz, a Classic Maya site in northern Peten, contribute to an understanding of Maya sociopolitical inequality. Parallels and contrasts to ninth-century developments at other sites emerge from a consideration of material cultural processes at the site. This chapter examines the evidence for the representation and practice of inequality at El Zotz during the Terminal Classic period.

El Zotz is located approximately midway along the Buenavista Valley, a natural corridor cutting east-west across a zone of rugged uplands, at the valley's northern edge (**Figure 5.1**). At the eastern end of the valley—25 km away, less than a day's walk—sits the ancient Maya metropolis of Tikal, with Uaxactun about the same distance to the northeast; to the west lies another major center, El Perú-*Waka'*. During the Classic period, each site was the capital of a royal dynasty: *Mut* at Tikal, *Waka'* at El Perú-*Waka'*, and *Pa'chan* ("Split Sky" or, more likely, "Fortified Sky") at El Zotz. El Zotz' geographical position had significant and not always positive impacts on the fortunes of its kings, who appear to have moved their courts to different locations within their territory in response to external pressures.

The El Zotz region (**Figure 5.2**) encompasses the site of El Zotz proper, along with the outlying minor site of Bejucal, a ritual center transformed in the Late Classic period into a royal palatial complex; the more substantial Preclassic center of El Palmar; and La Avispa, a satellite of El Palmar. El Zotz (**Figure 5.3**) includes a cluster of

monumental architecture at the base of the Buenavista Valley's northern escarpment, as well as two regal-ritual compounds—the El Diablo and Las Palmitas Groups—on hills overlooking the main site. El Diablo was abandoned by the end of the Early Classic period, while Las Palmitas was constructed in the eighth century and occupied until the abandonment of the whole site. Occupation at El Zotz stretched from the Late Preclassic to the Early Postclassic period—the latest carbon dates from the South Group place that complex's abandonment in the mid-thirteenth century (Melanie Kingsley, personal communication)—with the basic layout of the site core in place by the fourth century A.D. Inscriptions on stone monuments and ceramics from Bejucal and El Zotz make it clear that both sites were ruled by *Pa'chan* kings at least between the fourth and ninth centuries A.D., but demographic and political continuity with the inhabitants of El Palmar is less certain. Commoner settlement in the rural hinterlands of El Zotz has been documented through survey work by Garrison, Newman, Joshua Kwoka, and Alyce de Carteret, although rural residences identified thus far remain surprisingly sparse and dispersed. By the early ninth century A.D., Bejucal appears to have been abandoned (Garrison et al. n.d.), and the kinds of activities through which *Pa'chan* kings and elites performed social inequality were more or less confined to the El Zotz site center and the Las Palmitas Group.

Archaeological work at El Zotz

El Zotz has been licitly and illicitly excavated since the middle of the twentieth century (Houston et al. 2006: 1 – 2). In the 1960s, extensive illegal excavations damaged nearly every ancient building in the site area. It was probably during this time that a

fallen stela in the Main Plaza had its carved surfaces sawn off; these carvings, presumably in a private collection, have yet to appear on the art market (Stephen Houston, personal communication). The same period saw the removal of El Zotz Lintel 1 (**Figure 5.4**), a carved chicozapote lintel dating to the sixth century A.D., from Str. M7-1. In the 1990s, the lintel was repatriated from the Denver Museum of Art to Guatemala's National Museum of Anthropology and Ethnology. Ian Graham visited El Zotz in 1970 and prepared preliminary maps of the principal architectural groups and drawings of exposed monuments. In 1977, Marco Antonio Bailey carried out salvage work at the site on behalf of the Instituto de Antropología e Historia de Guatemala (IDAEH), collecting ceramic sherds discarded by looters, and El Zotz was formally registered as an archaeological site the following year. In 1978, Graham returned to the site area and discovered Bejucal, where he documented four monuments and prepared a map (Garrison et al. n.d.). George Andrews visited El Zotz that same year and published a description of it in 1986, noting architectural similarities between temples at El Zotz and Tikal and the fact that Tikal's Temple IV and other large buildings could be seen from atop Str. F8-1 at El Diablo (Andrews 1986: 123 – 125). The Proyecto Nacional Tikal carried out further rescue work at El Zotz during the 1980s, including recovering a lithic offering from a looters' tunnel and repairing the partially collapsed superstructure of Str. M3-1 (Ruiz Aguilar 2004: 81 – 97). Archaeologists with the Departamento de Monumentos Prehispánicos y Coloniales prepared a map of the site in 1995. Between 1997 and 2000, the Proyecto Triángulo excavated test units at El Zotz and produced a new site map (Quintana and Wurster 2001, cited in Houston et al. 2006: 2).

Contemporary work at El Zotz was initiated in 2006 by Dr. Stephen Houston of Brown University. The Proyecto Arqueológico El Zotz (PAEZ) was directed by Houston from 2006 to 2012, and is now directed by Dr. Thomas Garrison of the University of Southern California. Co-directors have included Garrison (2009 – 2012), Dr. Héctor Escobedo (2007), Dr. Ernesto Arredondo (2008 – 2009), and Lic. Edwin Román (2009 – present), and Dr. Timothy Beach of Georgetown University has served as the project's director of paleoenvironmental studies since 2009. With the permission of IDAEH, PAEZ excavated at El Zotz, El Palmar, and Bejucal beginning in 2007. The author was privileged to take part in that work since 2009, including excavating at Las Palmitas in 2010 and 2011 alongside Yeny M. Gutiérrez Castillo. The present chapter draws heavily on evidence from Las Palmitas, as well from excavations by Sarah Newman and other colleagues in and near the El Zotz site core.

Late Classic elites at El Zotz

During the Late Classic period, the *Pa'chan* dynasty found itself in a precarious geographical and political position which had consequences for the activities of local elites. To the east lay the powerful *Mut* kingdom of Tikal, far larger and more populous than El Zotz and foremost among the polities of northern Peten. To the west was the *Waka'* realm, at least one of whose Early Classic kings had presented an inscribed slate-and-pyrite mirror to a *Pa'chan* ruler. No later than A.D. 546, kings of the *Kan* dynasty—then based at Dzibanche, in southern Quintana Roo—began assembling power in the southern Lowlands, bringing the rulers of other sites under *Kan* suzerainty through diplomacy or war. Conflict between the *Kan* and *Mut* courts, waged with the assistance of

vassal kings, powerfully shaped the political landscape of the southern lowlands in the sixth through eighth centuries (Martin and Grube 1994: 10 – 17; Martin and Grube 2008: 104 – 111). The *Kan* court's move southwestward from Dzibanche to Calakmul in A.D. 635, under the ruler *Yuknoom* "Head," may have been partly motivated by strategic considerations connected to intensified engagement with the south (Martin 2005: 5 – 6; Stuart 2012b).

There is circumstantial but compelling evidence that Late Classic rulers at El Zotz were functionally dependent first on one, then the other of the two hegemonic powers of the Late Classic period. El Zotz Lintel 1 dates on stylistic grounds to the sixth century A.D. The ruler the lintel depicts is described in accompanying captions (**Figure 5.5**) as the son of a *Pa'chan* king and a lady bearing the title of *sak wahyas*, used by elites in the Mirador Basin and *Kan* client kingdoms like La Corona (Grube 2008: 228 – 229). A polychrome ceramic vase (**Figure 5.6**) whose dedicatory text names a "holy *Pa'chan* lord" was recovered from a looted burial in El Perú-*Waka*'s Chakah Group, dated to ca. A.D. 500 – 650 (Eppich 2011: 293). The burial was that of a sub-royal noble, not a *Waka*' king, yet the suggestion of amicable political interaction between the two dynasties is real. El Perú-*Waka*' itself was allied with the *Kan* dynasty by the middle of the seventh century, when *Yuknoom* "Head"'s successor *Yuknoom Ch'e'n* oversaw the accession of a *Waka*' king (Martin and Grube 2008: 109), yet the connection to El Zotz hints that the *Kan-Waka*' alliance could be older.

The strongest epigraphic indication of the *Pa'chan* court's vassalage to the *Kan* kings comes from a polychrome vase excavated from an elite grave in Str. A-1 at Uaxactun (Smith and Morley 1932) and pertaining to the Tepeu I ceramic phase, which

corresponds to Mo' at El Zotz (Czapiewska et al. n.d.). In the vessel's painted scene (**Figure 5.7**), a seated ruler receives tribute from two subordinate lords and an anthropomorphic jaguar holding a sealed cache vessel. Its dedicatory text names the vase's original owner, one *Bolon Chan K'in* an epithet also attributed to a *Pa'chan* ruler in the inscription on an unprovenanced vessel. Despite the lack of an Emblem Glyph, an El Zotz origin for the vase is confirmed by the substitution of **PA'CHAN-na** for **U** in *u jaay* ("his clay vessel"), a calligraphic quirk of El Zotz' polychrome vase painting tradition¹⁹. A caption in the scene below (**Figure 5.8a**) refers to the celebration of the 7.5.0.0.0 *k'atun* ending in 255 B.C. by an "eastern overlord" (*elk'in kaloomte'*) whose name includes the words for "holy" (*k'uhul*) and "snake" (*kan*). *Elk'in kaloomte'* is otherwise attested only once at Lamanai and once—in reference to a *Kan* lady—at Yaxchilan. One of the subordinate lords (**Figure 5.8b**) is called *K'uk' Chan* ("Quetzal Snake"); the other (**Figure 5.8c**), *Yax Ajaw* ("First Lord"), is "he of Calakmul" (*aj Chiik Nahb*) (see Stuart and Houston 1994: 28 – 29). The scene thus appears to present a mythological charter for the *Kan* dynasty's preeminence over other lords and a precedent for its move to Calakmul, ostensibly a vassal polity of yore. It is hard to explain why a ruler of El Zotz would have commissioned a painted vessel telling that story were he not part of the *Kan* alliance network. At the same time, its presence at Uaxactun raises the strong possibility that that site's court was part of the same coalition.

¹⁹ While it is tempting to read the expression literally as *Pa'chan jaay*, "the El Zotz clay vessel," the same unprovenanced vessel that names *Bolon Chan K'in* proves that, in these specific contexts, **PA'CHAN-na** was actually phonetically read as the third person ergative pronoun *u*. Unlike most El Zotz polychrome ceramics, this vessel's dedicatory inscription lacks *yuk'ib* ("his drinking-instrument") after *u jaay* and before the name of the owner. The inscription only makes grammatical sense if **PA'CHAN-na** is read as the pronoun, not literally as *Pa'chan*.

The Uaxactun vessel belongs to a group of more than thirty polychrome vases, most with red or orange backgrounds, produced at El Zotz in the early seventh century A.D. Most of the other vessels depict supernatural beings called *wahy*, perhaps messengers of bad tidings or personifications of disease (Houston and Inomata 2009: 208). Vessels listing such beings and connecting them to specific royal dynasties were produced at other Late Classic courts, including at Altar de Sacrificios and in the Mirador Basin, but the El Zotz vases are the earliest examples of the genre. Strong stylistic similarities among El Zotz vessels suggest that they were produced by no more than about two generations of artists (Carter et al. n.d.), yet their dedicatory texts refer to numerous “Earspool” or *Pa’chan* lords with different personal names (**Figure 5.9**; Houston 2014). Genealogical relationships among these rulers are unclear, but the proliferation of royal titles may indicate some fragmentation of royal authority or the early extension of such titles to princes, a practice attested at the end of the ninth century at Bonampak (Houston 2012c: 167). Innovation in ceramic art accompanied a burst of construction activity at El Zotz, including the renovation of royal residential structures in the Acropolis and mortuary shrines in the Plaza of the Five Temples (Carter et al. n.d.).

That art and architecture flourished at El Zotz during the seventh century A.D. suggests that the *Pa’chan* court benefited materially from its relationships with *Kan* and *Waka’* kings. It is probably no coincidence that the early eighth century, when the *Mut* court was in the ascendant under the rulership of *Jasaw Chan K’awiil I*, saw a hiatus in monumental constructions at El Zotz. Following this break, another sudden burst of construction activity (see **Figure 5.10**) transformed the Acropolis: buildings in both of the group’s two courtyards were covered over by architectural fill and new

superstructures built atop the new platforms. Probably after this remodeling event, a new residential group, the Northwest Courtyard, was constructed just west of the Acropolis. Religious constructions during this time included a new phase of the pyramidal Str. M7-2, in the East Group, and a massive new pyramid, Str. L7-11, just southeast of the Acropolis. The most ambitious architectural project of this period was the single-phase construction of the Las Palmitas Group (**Figure 5.11**) on a ridge ca. 1 km north of the East Group. This compound includes an elevated palace patio bounded by two range structures (**Figure 5.12**), as well as a mortuary pyramid (Str. M3-1) and an open patio with long viewing platforms. Most major eighth-century constructions at El Zotz were renovated once or twice, with new floors laid down at Str. L7-11, the Acropolis, and Las Palmitas (Carter et al. n.d.). This period of evident prosperity for El Zotz' elites very likely coincided with the *Mut* court's effective control of the Buenavista Valley, a possibility suggested by Lintel 3 from Temple IV at Tikal. The lintel text records an attack by the *Mut* king *Yik'in Chan K'awiil* against a town called *Yaxa'* in the eastern part of the *Waka'* realm (*elk'in Waka'*) in A.D. 743. Though an alternative route is possible (e.g., through the Peten Lakes area), the most direct path for *Yik'in Chan K'awiil*'s army to take would have been due west through *Pa'chan* territory.

The only secure Late Classic reference to El Zotz in the inscriptions of another site comes from Uaxactun Stela 2 (A.D. 751). Following an account of a period ending ritual, the text records that the Uaxactun king "went up to the *Pa'chan* place" (*t'abayi pa'chan nal*). A close relationship between the two courts might thus have survived the vicissitudes of the *Mut-Kan* conflict. Yet there are no surviving eighth-century inscriptions at El Zotz, raising questions about the status of the *Pa'chan* court. Assuming

that Tikal did dominate the Buenavista Valley by the 740s A.D., it is unclear whether that control was achieved through military or diplomatic means, whether anyone at El Zotz held the title of *k'uhul Pa'chan ajaw*, and what the role of the Uaxactun court was in the arrangement. Despite these ambiguities, it is likely that El Zotz' elites at the beginning of the ninth century A.D. faced a combination of material prosperity and political subordination to the *Mut* kingdom.

Royal activity in the early ninth century A.D.

Conflict within Tikal's ruling class led to an interruption in monumental construction and kingly rule at that site by no later than A.D. 830 (see Chapter Three, this volume). At El Zotz, by contrast, a *Pa'chan* king was able to assert his sovereignty with the erection of a stela recording his celebration of the 830 *bak'tun* ending (Houston et al. 2012: 185). Either the same ruler or other Terminal Classic kings commissioned monumental architectural constructions aimed at engaging their subjects in the veneration of the royal line. These projects were less ambitious than those of the mid-eighth century (Carter et al. n.d.), and one of them was ultimately unsuccessful. Typically for northern Peten, there is no hieroglyphic or monumental evidence prior to the fall of the *Pa'chan* dynasty that non-royal magnates at El Zotz were able to represent themselves, whether through inscriptions or architecture, as possessing the kind of political authority that could potentially have rivaled that of the king. Instead, all early ninth-century monumental constructions at El Zotz seem to have been "about" *Pa'chan* kings, living and dead.

El Zotz Stela 4

Excavation by Newman recovered unambiguous evidence for an active royal court in the early ninth century in the form of a fragment of a carved monument, El Zotz Stela 4 (**Figure 5.13**; Newman and Menéndez 2012: 152). Broken off in antiquity, the sole piece of the stela recovered thus far was incorporated into later ninth-century constructions in the Northwest Courtyard (see below). This fragment, from the top right of the stela, bears a partial hieroglyphic text; below, the very top of a figural panel depicts the plumes of a ceremonial headdress, once worn by the king who commissioned it. The fragment is 52 cm wide at its maximum, and based on the structure of the hieroglyphic inscription, the monument could only have been a little over 1 m wide originally. Despite extensive erosion, crucial parts of the text can be reconstructed: a reference to the 10.0.0.0.0 *bak'tun* ending (March 16, A.D. 830); a description of royal rituals characteristic of Peten sites (*u k'altuun, u chokch'aaj*, “it is his stone-binding, his incense-casting”); and the name and regal titles of a *Pa'chan* king, *?Nahb Chan Yopaat* (Houston et al. 2012: 185, 192).

The stela's existence and inscription testify to the persistence until at least A.D. 830 of a royal court with access to the services of skilled artisans, probably members of that court themselves. A public monument, likely erected in the Main Plaza, Stela 4 targeted multiple audiences with differing capacities to access the information it encoded. To everyone who saw it, the stela proclaimed that *Pa'chan Nal* was home to a king who carried out the appropriate calendrical rituals. Locals would have recognized the portrait of *?Nahb Chan Yopaat*, and many could have identified key elements of the inscription like the date and the king's name. But the stela text also includes passages which, though

now badly deteriorated, were clearly less formulaic constructions employing some unusual signs. Extracting the text's full intended meaning would thus have required specialized knowledge not available to everyone. In that sense, Stela 4 conveyed one message about rulership to local elites and another to the common people.

An unintended message of the stela, perceptible to modern audiences as it must have been to ancient ones, concerns the diminished resources of the *Pa'chan* royal family. The stela, a public assertion of political autonomy after a long period of presumed *Mut* dominance, was probably quite small by comparison to sixth-century monuments. Notwithstanding the skill that went into its production, the scale of the monument calls into question the quantity of specialized labor available to the king who commissioned it.

Str. M7-1

Another monumental project, dated on ceramic grounds to the end of the Late Classic/early Terminal Classic Caal ceramic phase (ca. A.D. 700 – 850; see Table 5.1), altered the way El Zotz' inhabitants interacted with Str. M7-1, the eastern pyramid of the site's East Group (**Figure 5.14**). It is clear that Str. M7-1 was an important ritual structure for the *Pa'chan* dynasty over its whole history. The building was closely connected with kingship and ancestor veneration: three monumental stucco masks on the basal platform of a buried early fifth-century phase of the building, Str. M7-1-4th, depict the avian variants of the *Ux Yop Hu'n* ("Three Leaf Paper [Headband]") entity, a marker of divine kingship typically depicted at a much smaller scale as diadems worn on royal headbands (Stuart 2012a: 123 – 124). The pyramid was renovated up to three times during the Early Classic period, with the final phase (Str. M7-1-1st) completed by the end of the sixth

century A.D. (Garrison and Rivas 2013: 72). It was from the partially preserved superstructure of this last phase that twentieth-century looters removed the wooden El Zotz Lintel 1, whose hieroglyphic and figural style are consistent with late Early Classic conventions. Str. M7-1 was thus not a focus of construction activity for most of the Late Classic period, but neither was it demolished or ritually terminated.

That changed in the Late Classic period, probably in the eighth century A.D. At that time, an auxiliary platform was built along the base of the pyramid's front (western) side (**Figure 5.15**). Later, this central platform was extended outward and smaller "wings" were built onto either end. Ceramic evidence yields dates for both phases: a Saxche-Palmar orange polychrome fragment was recovered from the first phase of the central auxiliary platform, placing it in the Caal ceramic period (Garrison and Rivas 2013: 66), while sherds from the second phase date to the Terminal Classic Cucul period (Garrison et al. 2012: 62). With no evidence of passable stairs for either phase of the auxiliary platforms, it is likely that they completely blocked access to the pyramid's central stairway, leaving the shrine at its summit out of reach. Dense concentrations of sherds recovered from the fill of the second platform and the area at its base have been interpreted as offerings, and thus as evidence that the platforms were foci of ritual activity during both phases, from the end of the Late into the Terminal Classic period (Garrison and López 2012: 73).

The Str. M7-1 auxiliary platforms can be interpreted generally as evidence for a functioning royal court in the early ninth century, and specifically as conveying royal messages about the *Pa'chan* dynasty. Despite the lack of accompanying inscriptions, there is a good circumstantial case for royal sponsorship of the project. The

representational content of successive sculptural programs at Str. M7-1 consistently referred to kingship and particularly to kings of the *Pa'chan* line, not to deities of nature or local patron gods. Even though the wooden lintel of the Str. M7-1-1st shrine was defaced in antiquity, that act most likely pre- or postdates the construction of the auxiliary platforms: hacking away at the faces on the lintel was a job for one person, while each phase of the platforms needed a work crew. If the builders' intent had been to decommission the temple, that organized effort would have been better directed at the superstructure, but no traces of termination rites have been detected there.

The accretion of historical meanings in Str. M7-1's previous architecture and sculpture raises the possibility that the platforms represent an effort by the king or kings who commissioned them to involve the commoner inhabitants of El Zotz more directly in the veneration of deceased royal ancestors than had perhaps previously been the case. Restricting access to courtly spaces set late Maya kings ever more apart from their subjects, a practice evident at El Zotz in late eighth-century remodeling projects at the Acropolis (Carter et al. n.d.). Yet courts had to admit servants, entertainers, and petitioners in order to function as courts; temple pyramids, with their restricted shrines, narrow landings, and steep stairs, could function in no other way than to exclude. The small number of ritual specialists they could accommodate might perform ceremonies in the privacy of the superstructure or in public view on the stairway or landing, but almost everyone attending such a ritual would have had to watch from the plaza below. In precluding access to the shrine, the Str. M7-1 auxiliary platforms took nothing away from the majority of El Zotz' inhabitants. They do not represent a termination even in the sense of unsanctifying or deactivating the pyramid, since the shrine was not filled or

demolished and the platforms themselves were used as religious spaces and renovated over many years. After a period of about two centuries without architectural renovation, these modest Terminal Classic constructions renewed Str. M7-1 as an active ritual site and made it more accessible to most worshippers than it had previously been. By facilitating popular devotion to long-dead kings, the new structures may have helped foster a sense of solidarity between the farmers and craftspeople of El Zotz and their *Pa'chan* rulers.

The El Zotz Acropolis deposit: an abortive renovation

A ritual deposit at the Acropolis, dated to the mid-ninth century A.D., involved the partial demolition of some buildings and the infilling or closing-off of access points to its two courtyards. This deposition event clearly marked the end of that space as a courtly facility, and with it the end of effective kingship at El Zotz. Other, similar deposits targeting royal residences elsewhere in the Maya lowlands are interpreted as deliberate terminations of royal authority, organized by external enemies or rebellious nobles or commoners. As discussed in Chapter Three, Copan's Acropolis and multiple elite residential compounds present dramatic examples of such events, which befell royal courts across the southern Lowlands. Yet not every ritual deposit that, from an archaeological perspective, marks the end of kingship at a Maya site was laid down with that intent (Iannone 2010: 270 – 276). A close consideration of the El Zotz deposits in the context of the site's architectural history suggests that these were in fact sponsored by the site's final effective ruler. Rather than a symbolic end to kingship, they represent, like the auxiliary platforms at Str. M7-1, an attempt by a *Pa'chan* king to symbolically and

physically engage El Zotz' wider population in a project enhancing the authority of the royal family. Where the platforms created a new focus for the veneration of royal ancestors, the Acropolis project was aimed at raising and further limiting access to the already-exclusive royal palace. Unlike the Str. M7-1 platforms, however, the Acropolis remodeling effort ended before it had proceeded very far.

Deposition rituals were conducted in both courtyards of the Acropolis, in front of and on top of the platforms of buildings including Strs. L7-1, L7-2, and L7-8, and in a restricted, elevated patio at the southwest corner of the group (**Figure 5.16**). As discussed by Sarah Newman et al. (n.d.), the deposits seem aimed at sealing entrances to the Acropolis. The interior end of a vaulted passageway running underneath Strs. L7-8 and L7-9 was covered over by construction fill, although the corridor itself was not filled in. Str. L7-2, a platform offering access to the western courtyard from the north, had been partially closed off by the addition of wide jambs during an earlier remodeling event in the late eighth century; with the Terminal Classic deposits, that entrance was now blocked. Yet not every building was affected: Str. L7-4, on the north side of the east courtyard, was left untouched. Where the deposits were laid down, archaeological excavations by Sarah Newman and Elsa Dámaris Menéndez revealed the same sequences of strata. First, hundreds of ceramic objects (including vessels, drums, figurine whistles, and incense burners) were smashed, scattered, and then burned. Also included in this deposit were human and animal bones; chert nodules, debitage, and whole points; ground stone manos and metates; and fragments and complete ornaments of marine shell. These artifact scatters (see **Figures 5.17** and **5.18**) were denser in some areas than others: the southwest patio, for instance, showed evidence of burning, but produced only a handful

of ceramic sherds. The burned layers were covered with dense mud, then buried under layers of rubble and earth fill, some of it evidently taken from a midden. The deposition of the rubble layers coincided with the partial demolition of the targeted buildings, which contributed masonry blocks and fragments of stucco from their façades to the fill. The rubble was covered with a thick cap of lime mortar, but with that the project ceased. Extensive excavations have uncovered no evidence of later construction at the Acropolis.

Several lines of evidence point to the conclusion that the deposition events represent an interrupted remodeling effort rather than a completed act of termination in the sense of permanently decommissioning the Acropolis. The fill covering the southwestern patio incorporated a series of low retaining walls of cut stone, indicating a concern with structural stability and perhaps with demarcating the dimensions of a planned structure (Newman et al. n.d.). The limited and discontinuous extent of the deposits bespeaks a project aimed at modifying specific structures, not targeted at the entire Acropolis or the institutions connected to it. Finally, major buildings remained open and usable, and access to the complex itself was never completely blocked, only restricted. If the intent had been to deactivate the Acropolis, and the royal court with it, the deposits could have been expected to exhibit a more uniform distribution, closing off all channels of access and all large structures, and to lack stabilizing internal features like retaining walls.

The architectural history of El Zotz contains ample precedent for such palace remodeling programs, both at the Acropolis and elsewhere. One such project, in the late eighth century A.D., elevated and expanded platforms in the Acropolis and partially or completely restricted entrances that had been open in the complex's Early Classic

iteration (Carter et al. n.d.). Another royal palace, this one in the El Diablo Group, was filled in and raised to twice its original height during the fifth century A.D., a project that was in the process of being repeated when the group was abandoned before the end of the Early Classic period (Román Ramirez and Carter 2009: 98 – 99). These kinds of remodeling events, which required significant labor investments and produced ever more imposing buildings to which most commoners would never be admitted, were not simple matters of home improvement, the consequences of royal power which already existed and remained unchanged after the project was over. Rather, they were a central means by which rulers at El Zotz and other Maya sites claimed authority. Kingship as an institution was built, in part, through just such building projects, in which kings and their subjects performed inequality and concretized hierarchical relations in monumental form.

The contents of the ritual deposit indicate involvement by a broad segment of El Zotz' Terminal Classic population. Ceramic artifacts recovered from it contained high-value polychrome and molded-carved vessels, along with specialized objects appropriate to festivals and rituals: drums, figurine whistles, and incense burners. Many or most of these items could have come from the royal household or from other elite residences. Yet these were far outnumbered by utilitarian vessels, probably numbering in the hundreds: primarily unslipped water jars and wide basins with incurving rims. Persons from lower-ranked social groups may thus have attended the proceedings, not just as laborers tasked with pulling down buildings and heaping up earth, but as participants in the rituals of breakage and burning that preceded the architectural remodeling. By investing their labor and items from their own households in the construction project and attendant rituals, these people performed their subordination to their king and their loyalty to the idea of

his *Pa'chan* lineage. It is plausible, but not confirmable on current evidence, that this program of rituals and renovations corresponded to an important station in the Long Count or to a crucial moment in El Zotz' dynastic history, like the accession of a new king.

Post-royal elite activities at El Zotz

Later Terminal Classic constructions point to significant changes in practices of domination and associated material signs of authority at El Zotz. These construction projects and subsequent occupations were documented in the Northwest Courtyard, in the Las Palmitas Group, and in an unnamed residential patio group southeast of the Plaza of the Five Temples. Each of these groups yielded evidence of habitation by domestic units with access to high-value goods, and at least the first two groups contained or were spatially connected with monumental architecture. Terminal Classic occupation at El Zotz was by no means limited to these groups, but identification of Terminal Classic rural households is hampered by the persistence of Caal utilitarian types into the Cucul phase. At El Zotz, as at Tikal, Caracol, and other sites, ceramic typological change from the Late into the Terminal Classic period happened mainly at the level of high-value types used by the socioeconomic elite. Without radiocarbon dates and pending modal analysis of ceramics from houselots in El Zotz' rural hinterland, it is not possible to say more than that all rural houselots excavated thus far were occupied during the Caal, Cucul, or both ceramic phases.

The Northwest Courtyard

Despite nearly abutting the Acropolis, no buildings in the Northwest Courtyard (**Figure 5.19**) were subject to burning or infilling during the renovation project (Newman et al. n.d.; Newman et al. 2011; Newman and Menéndez 2012: 143, 155 – 156, 168 – 169). This may indicate that the group was not thought of as part of the royal residence. There is good evidence, however, that the Northwest Courtyard housed a family group of high social status and, by Terminal Classic standards, some wealth, from the mid-ninth into perhaps the eleventh century A.D. One building in the group, Str. L7-18, seems to have been used continuously into the Early Postclassic period without significant remodeling, while two others, Strs. L7-17 and L7-20, were substantially modified after the demise of kingship at El Zotz. Str. L7-20, less intensively excavated than Str. L7-17, shows evidence of Terminal Classic modifications to a Late Classic foundation (Newman et al. n.d.). More can be said of the other structure. Over the course of successive construction phases, Str. L7-17's low substructural platform was expanded to a final footprint of $\sim 25 \times 8.5$ m, while the two rooms of its superstructure, a perishable range building, were subdivided into smaller spaces. Its thin, poor-quality stucco floors required multiple refurbishments, one of which coincided with the interment of an elderly man (Burial 12) whose skull had been subjected in infancy to tabular oblique deformation (Scherer 2012: 274). This is not in itself a sign of high social status, since cranial modification was nearly ubiquitous at many Terminal Classic Maya sites (Tiesler 1999: 2 – 4). The decedent was interred in a cavity dug into the floor of the first Terminal Classic version of the building. His flexed position at the time of burial suggests bundling, a widespread mortuary practice in the Maya Lowlands, but the westward orientation of the head is inconsistent with earlier customs at El Zotz. Nevertheless, the grave furniture (a

cylindrical vase, a tripod plate, and a small bowl placed inside the plate) is very much like that of the ninth-century Burial 7 at the Las Palmitas Group (see below), which did conform to the earlier pattern of northward-oriented burials (Newman et al. n.d.).

Multiple lines of evidence point to dates in the late ninth or early tenth centuries for these remodeling projects. When Str. L7-17's Late Classic platform was extended during the Terminal Classic period, the fragmentary El Zotz Stela 4 served as the northeastern cornerstone of the expansion. The stela's repurposing is reminiscent of the architectural reuse of monuments at El Perú-*Waka'* in the ninth century (see Chapter Three), although in this case the carved surface of the monument was turned inwards towards the platform fill. Its inscription provides a clear *terminus post quem* of A.D. 830 for the remodeling of Str. L7-17, but its weatherbeaten condition, with erosion most strongly affecting the top edges of its relief carvings, suggests that Stela 4 stood through many rainy seasons before being broken up and reused. Additional evidence comes from the low quality and modest scale of the Terminal Classic renovations in the Northwest Courtyard, which reflect their inhabitants' inability to obtain the services of skilled masons or large work crews (Newman et al. n.d.). This situation is consistent with the Terminal Classic construction seen at Las Palmitas (see below), but contrasts with the auxiliary platforms built at Str. M7-1.

Las Palmitas

The Las Palmitas Group continued to be inhabited by a household with access to high-value goods through the ninth century and perhaps into the tenth. With the Acropolis decommissioned, the palace complex at Las Palmitas may have taken on new

significance as the residence of a “king” with severely attenuated power, or of an elite lineage whose members did not claim *k’uhul ajaw* status. The lack of texts from the group make the details of that question inaccessible, but archaeological evidence points to the high social rank of Las Palmitas’ Terminal Classic inhabitants and to their engagement with Las Palmitas’ architecture in new performances of social inequality. Las Palmitas’ late residents inhabited an elevated patio group defined by a pair of masonry range structures (Strs. M3-6 and M3-7) which remained structurally sound and which, after the failure of the Acropolis remodeling effort and the apparent abandonment of Bejucal, constituted the finest domestic structures in use in the El Zotz site area. Modifications to that space suggest that it remained a center of elite residential and political activity well into the ninth century. Middens associated with that occupation phase contained high-value, imported ceramics, including molded-carved drinking vessels from northern Peten and the Usumacinta region.

The major architecture of Las Palmitas, including the palace, a plaza, and a pyramid (Str. M3-1), was constructed in a single episode in the mid- to late eighth century A.D. (Carter et al. n.d.). A low parapet or bench made of stone and covered over with stucco ran along the northern edge of the palace patio. During the Terminal Classic period, a cist grave (El Zotz Burial 7) was excavated into the Late Classic patio floor in front of the parapet, on the palace group’s north-south axis. The extended or flexed body of an adult (the decedent’s osteological remains are too decomposed to determine sex) was placed on its right side, head oriented to the north, consistent with the long-term pattern of burials at El Zotz since the Early Classic period (Stephen D. Houston, personal communication). Three ceramic vessels included in the grave (**Figure 5.20**) place the

burial in the Cucul ceramic phase. Just north of the head, a small Tinaja red bowl or cup was set in a Máquina brown tripod dish plate with oven-shaped rattle feet. At the occupant's knees was a barrel-shaped vase with an appliquéd collar band, eroded polychrome painting, and the nubs of three hollow feet that had been sawn off, perhaps for stability after one of them broke. Despite some modal differences, the vase is similar in form and surface treatment to drinking vessels excavated from the ritual deposit at the Acropolis.

Following the interment, a new building—Str. M3-8—was constructed, running about 15 m east-west along the northern edge of the patio and covering the grave and parapet both (**Figure 5.21**). Most of the structure was made of perishable materials, now vanished, but its stone foundations reveal its original shape and suggest its function. These foundations consist of unworked or roughly cut stones, packed in a matrix of grayish earth and probably capped and faced with plaster which has long since disintegrated. Open along its southern side, Str. M3-8 belonged to the architectural tradition of “C-shaped” buildings constructed throughout the northern and southern Maya lowlands during the Terminal Classic and Postclassic periods. George Bey et al. (1997: 239) and Prudence and Don Rice (2004: 132) connect such structures to post-dynastic political life. The bracket-shaped foundations of Str. M3-8 would have supported a higher wall of organic materials, perhaps wattle and daub, and the thick back wall of the structure could also have served as a bench. A lower terrace, only 0.5 m above the final Late Classic patio floor, runs along the front of the structure (Carter and Gutiérrez 2011: 319 – 328).

Str. M3-8's axial location opposite the stairway leading up into a Late Classic palace patio, along with the gradations of height and enclosure presented by its architecture, strongly suggest its use as a venue for public or semipublic events in which the centrality and elevation of participants communicated something about their roles and status. The obvious interpretation of the building's architectural format is that it allowed some participants to sit, placed spatially according to rank and other considerations, facing interlocutors who approached from below. The central location of Str. M3-8's permanent occupant, the person interred in Burial 7, consequently implies that the deceased possessed high social rank in life and continued in death to be socially present, with his or her personal identity invoked through use of the new building. While it is not knowable whether a claimant to the *Pa'chan* throne lived at Las Palmitas after the failure of the Acropolis project, Str. M3-8 appears designed to serve some of the same functions as earlier courtly facilities: displays of authority by seated officeholders, the reception of guests or tributaries, and the hosting of gatherings.

The architectural parallels between Las Palmitas and the residence of *Wat'ul K'atel* in Group A at Ceibal are striking, though not exact. In both cases, a narrow, multi-roomed range structure with a central passageway (Str. M3-7 at Las Palmitas, Str. A-14 at Ceibal) served as the main access way between a lower, open plaza and the elevated, restricted, royal precinct. Opposite those structures were wider buildings better suited for royal residence (Str. M3-6 at Las Palmitas, Str. A-16 at Ceibal), with axial suites of rooms flanked by chambers with separate entrances on either side. Following the decline or collapse of earlier and more prosperous royal courts, later Terminal Classic elites—perhaps in the tenth century A.D.—built C-shaped structures across the northern edges of

both compounds, covering over previous constructions. Elites at El Zotz and Ceibal thus held shared ideas about how royal (and possibly post-royal) spaces for habitation and reception should be laid out. Those ideas changed over generations, but changed in the same direction at both sites.

Elite households in the Terminal Classic period: evidence from middens

Midden deposits associated with Terminal Classic occupations at Las Palmitas and the Northwest Courtyard indicate that both groups were inhabited by families whose patterns of consumption reflected and helped to constitute their high status. Excavations behind buildings in the Northwest Courtyard yielded the remains of white-tailed deer, brocket deer, and peccary, indicating that those groups' inhabitants had access to socially prestigious food animals (Carter et al. n.d.; Newman and Menéndez 2012: 149, 168). They also contained abundant fragments of unslipped and monochrome slipped utilitarian vessels, along with sherds of high-value ceramic types stretching from the mid-eighth century into the ninth or tenth. Late Classic pottery from Northwest Courtyard refuse dumps included fragments of locally produced polychromes and vessels painted in the *Ik'* style associated with Motul de San José (Halperin and Foias 2012; Reents-Budet et al. 2012: 68). Among the Terminal Classic ceramics were fragments of painted, barrel-shaped drinking vessels with modeled collars, like those excavated at Las Palmitas and the Acropolis, as well as Fine Orange and Fine Gray vessels produced in the Usumacinta River area (Forné et al. 2009: 1164). During the Terminal Classic period, such fine-paste wares and their local imitations, often decorated by molding and carving, largely replaced the polychrome painted vessels characteristic of Late Classic elite material culture.

Terminal Classic middens at Las Palmitas contained a similar range of ceramic types. While ceramics from both the Las Palmitas middens and the ritual deposits at the Acropolis belong to the Cucul ceramic phase, typological differences within a single use-class suggest that much of the Las Palmitas material accumulated later than the Acropolis deposits. Among incurved-rim basins from the two contexts, impressed ceramic types in the Tinaja group (Chinja impressed and Chaquiste impressed; see **Figure 5.22**) are much better represented at Las Palmitas than at the Acropolis, where types without stamps or impressions predominated. Among those two impressed types, almost all from the Acropolis are Chaquiste impressed, while Chinja impressed dominates the sample from Las Palmitas' Terminal Classic trash piles (Czapiewska et al. n.d.). Instrumental neutron activation analysis placed two Chaquiste impressed sherds from the Acropolis in the same paste group as Tinaja red and polychrome sherds believed to have been produced at El Zotz (Ronald Bishop, personal communication). It is therefore inferred that the typological differences between the Acropolis and Las Palmitas assemblages could reflect generational differences in local potters' production techniques.

In the period after the abortive Acropolis renovation, the inhabitants of Las Palmitas and the Northwest Courtyard were not uniquely privileged in their access to luxury goods. The Terminal Classic inhabitants of a less architecturally impressive, though still centrally located patio group (Strs. L8-6, L8-22, and L8-23, just south of the Plaza of the Five Temples) were able to obtain a Sahcaba molded-carved vessel produced from the same mold as one owned by the residents of Las Palmitas (De Carteret 2014: 112). Sherds bearing identical scenes were recovered from middens in both groups (**Figure 5.23**). In fact, four other barrel-shaped Sahcaba vases made from the same mold

have been found in archaeological contexts: one each at Tikal and Yaxha, and two at Uaxactun (Culbert 1993: Figure 145; Smith 1955: Figure 86i, m, o)²⁰. An additional vessel bearing the same two scenes as the others, but lacking their characteristic rim inscription, was photographed by Nicholas Hellmuth in a private collection in Guatemala. The Uaxactun vessels, at least, probably came from a surface or humic context (Smith 1955: 13), putting their production and deposition near the end of the site's occupation. These few vessels are not statistically significant considered against the background of the whole Terminal Classic ceramic sample from northern Peten, but they and other molded-carved types did largely replace polychrome painted types during that period, and the iconography of the Sahcaba vessels is worth considering because they represent local productions rather than imports.

The scenes stamped on these vessels depict interactions among supernatural beings, one of whom wears the trilobate diadem of royalty, in underworld or mythical locations. A version of God L, with a wide-brimmed hat and large eye, may be present in one tableau. The bands of text above the scenes are not typical dedicatory inscriptions: they include apparently real Maya hieroglyphs (e.g., **SIH-ya-AJ** and **K'UH/K'UHUL**), but contain no recognizable elite titles, vessel types, or dedicatory verbs. Thus, while they refer to concepts and practices tied to Maya elite culture (kingship, writing, certain gods), they were not obviously tied to a specific king or court. This stands in contrast to polychrome painted vessels of the Early and Late Classic periods, which bore dedicatory

²⁰ Unfortunately, the archaeological contexts of these additional vessels were never published, making their precise provenience impossible to ascertain. The Tikal example came from Problematic Deposit 133, to be described in a volume of the Tikal Reports not yet printed (Culbert 1993: 28). The two Sahcaba vessels found at Uaxactun, now in Guatemala's National Museum of Anthropology and Ethnology, are said in the Museum's ledger to have come from the "floor of the east patio" near Str. B-XII, but no publication specifies their provenience, and Robert Smith (1955: 185) implies that they came from near Str. A-V.

texts naming the lords who commissioned them. When given away as gifts, as they likely often were, such vessels would have reminded their recipients of their ties and obligations to the original owners. The Terminal Classic Ahk'utu' molded-carved vessels of the Belize River region do bear traditional, if confusing, inscriptions naming the same *Olom* who was important in the ninth-century politics of northern Peten (Helmke and Reents-Budet 2008: 41; see Chapter Three). It is an unresolved question whether the Sahcaba vases of that region, with their aberrant texts, also relate in some way to *Olom*'s sphere of influence, or whether they represent a parallel, local development.

Sahcaba vessels like those recovered from Las Palmitas and the unnamed patio group required technical skill to produce. Unsited for casual use, they might have held chocolate or other beverages consumed on special occasions. Yet molding scenes and motifs on ceramic vessels rather than painting them allowed arbitrarily many copies of a desirable design to be produced more quickly and easily, with little variation in quality. The new technique must have altered the economic value and social meanings of high-status drinking vessels. Such objects no longer had to be one-of-a-kind works, and new molds could be made from existing vessels. The same technological transformation may have affected ceramic snuff bottles, which circulated widely near the end of the Late Classic period (Houston et al. 2006: 116). Like drinking vases, snuff bottles could be decorated by painting, carving and incising, or molding. Unprovenanced examples in private collections show modal changes closely resembling those observed for high-value drinking vessels, with molded bottles appearing stylistically later than painted ones.

Discussion

At El Zotz, two stages in the material construction and mediation of social inequality can be identified for the Terminal Classic period. The first period represents the continuation of Late Classic material practices and corresponds to a sociopolitical order headed by a king whose court included subordinate elites. During this period, a *Pa'chan* ruler, ?*Nahb Chan Yopaat*, commissioned Stela 4, which recorded (and, originally, depicted) his ritual celebration of the tenth *bak'tun* ending. Another royal project of this period was the construction of the second phase of the auxiliary platforms at Str. M7-1. These structures may have reinforced the unequal relationship between the royal family and the common people by drawing on commoner labor to renew a cult of ancestor veneration focused on a royal ancestor specifically. Yet the indifferent quality of their construction relative to eighth-century royal projects—the Las Palmitas group stands out here as a labor-intensive project executed according to a master plan—presaged the failure of the final major representational act of the early Terminal Classic period at El Zotz. This was the attempted renovation of multiple buildings at the Acropolis, represented by substantial ritual deposits of artifacts and fill. Like the Str. M7-1 platforms, the Acropolis project was a performance of royal power and sanctity, and of the ties of solidarity existing between king and community. A broad swath of El Zotz' population participated, but the intended outcome was a loftier and more inaccessible palace for one man, his family, and his court. In sum, all of the early Terminal Classic material culture whose political meanings can still be accessed appears aimed at perpetuating a hierarchical social system centered on the person, lineage, and sacred authority of the king.

During the latter part of the Terminal Classic period, the earlier representational emphasis on the *Pa'chan* dynasty faded away. No inscribed stone monuments postdating Stela 4 have been discovered, and no constructions from this time can be connected to the royal ancestor cults of earlier days. It may be significant that when Tikal's court suffered interregnum and spatial dispersion around A.D. 830, a *Pa'chan* king at El Zotz erected a *bak'tun*-ending stela, while the subsequent brief restoration of the *Mut* dynasty at Tikal by 869 roughly coincided with the *Pa'chan* court's decline. It is not knowable whether any residents of El Zotz claimed the status of *k'uhul Pa'chan ajaw* in the latter years of the ninth century, but if functional kingship can be measured by a putative king's capacity to motivate his subjects to carry out plans on a large scale, then there was no longer a king at the site during this second period. Yet El Zotz itself was not completely abandoned, nor did inequalities of wealth and status disappear with divine kingship. Instead, the architectural and ceramic evidence suggests that multiple, high-ranking lineages, relatively wealthy by Terminal Classic standards, occupied domestic groups within the El Zotz site area. The group inhabiting Las Palmitas may have possessed greater prestige and exercised more moral or symbolic authority than the other lineages, since they successfully claimed a palatial-ritual complex and modified it to facilitate the kinds of gatherings and displays that could no longer be conducted in the Acropolis. Indeed, this group this group might have included one or more generations of claimants to the *Pa'chan* throne, so that kingship could have persisted in theory and representation longer than it survived as the kind of effective institution it had been earlier in the Classic period. Some or all of the families which occupied the Northwest Courtyard, the South Group, and the group southeast of the Plaza of the Five Temples may have claimed

higher social status than those living farther from the site core, and some of them were able to obtain ceramics of precisely the same quality as the residents of Las Palmitas. Nevertheless, none of the other family groups built structures like Sr. M3-8, with its open front, stepped interior, and outward orientation.

Monuments commissioned by the *Pa'chan* kings met different fates in the Terminal Classic period. Stela 4 was broken—by whom, it is not possible to say—and reused as construction material by a household whose burial practices departed from earlier traditions at El Zotz. A Late Classic monument in the Main Plaza, Stela 3, was roughly reworked in antiquity into a circular altar subsequently shattered by burning (Stephen Houston, personal communication). This reshaping may have taken place around the same time as the Str. L7-18 project, although the treatment of Stela 4 looks more like desecration than the ritual reuse of Stela 2.

Given the persistence of elite lineages at El Zotz following the decline of kingship, as well as the evidence of monument production and courtly activity at the site, it seems clear that noble houses featured prominently in the social hierarchy of the community during the Late and early Terminal Classic periods. Yet the representational focus of public works at El Zotz—stelae, religious architecture, and other monumental construction—was squarely on the *Pa'chan* dynasty. It was surely never the case that non-royal elites were excluded from all representations of power and authority; after all, for the ancient Maya, political power had to be made known to be made real. But local conventions of representational decorum did largely exclude aristocrats from some kinds of material, symbolic expressions of high status, like inscribed monuments and large ancestor shrines. After the fall of the *Pa'chan* dynasty, old material cultural grammars of

elevation, centrality, exclusion, and display were not replaced outright, but did change with the emergence of new hierarchies and political arrangements.

Table 5.1. Ceramic phases at Tikal (after Culbert 1993), Uaxactun (after Smith and Gifford 1996), and El Zotz (after Czapiewska 2012).			
Dates	Tikal	Uaxactun	El Zotz
800 – 600 B.C.	Eb		Unnamed Eb-like complex
600 – 350 B.C.	Tzec	Mamom	Che
350 – 0 B.C.	Chuen		
0 B.C. – A.D. 150	Cauac		Chub
A.D. 150 – 250	Cimi	Chicanel (~200 B.C.)	Pop
A.D. 250 – 550	Manik I	Tzakol I	Saquij (early)
	Manik II	Tzakol II	
	Manik III	Tzakol III	Saquij (late)
A.D. 550 – 700	Ik	Tepeu I	Mo'
A.D. 700 – 850	Imix	Tepeu II	Caal
A.D. 850 – 980	Eznab	Tepeu III	Cucul
A.D. 980 – 1250	Caban		Choc

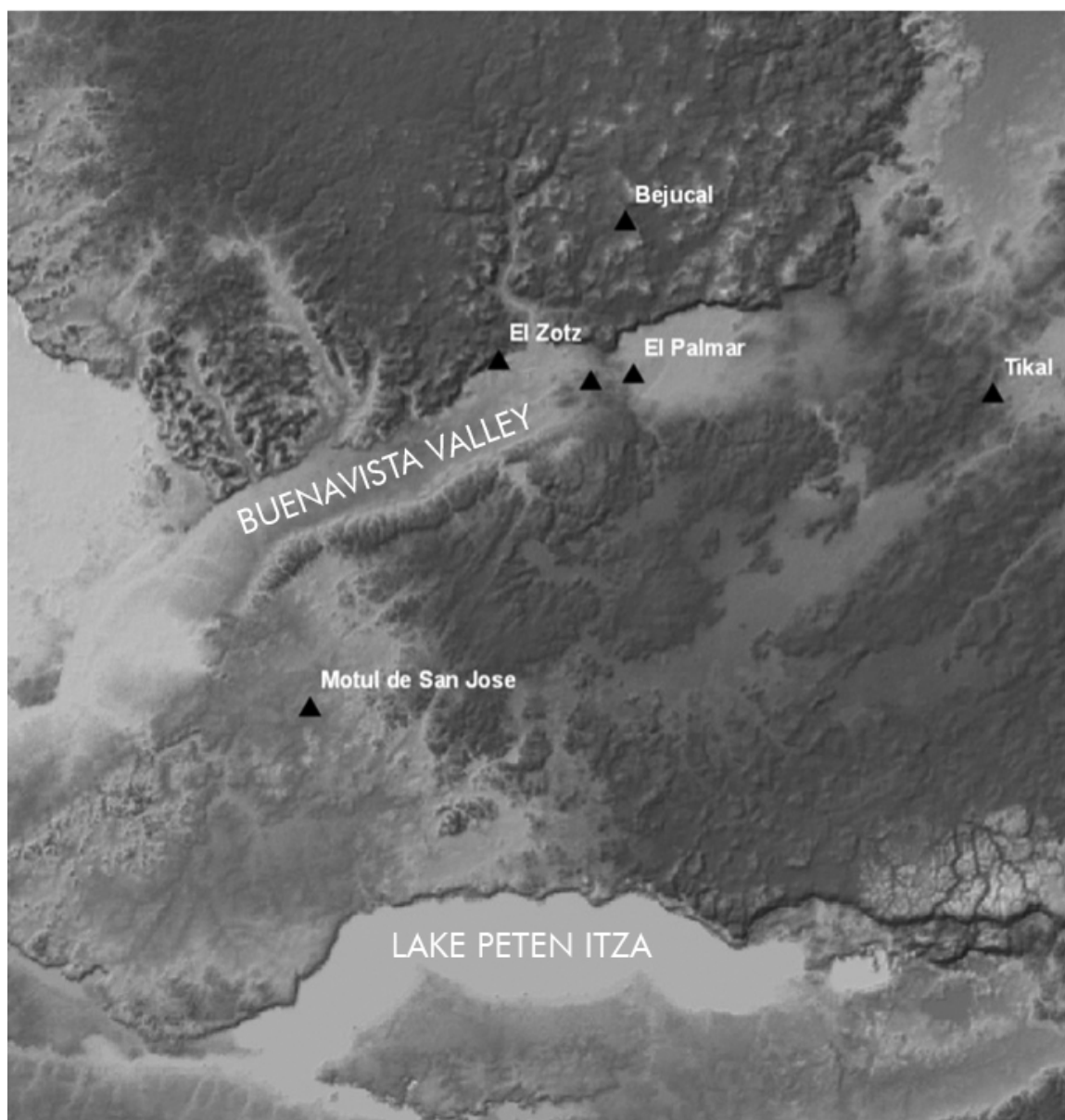


Figure 5.1. El Zotz in its regional context. Map by and courtesy of Thomas Garrison.

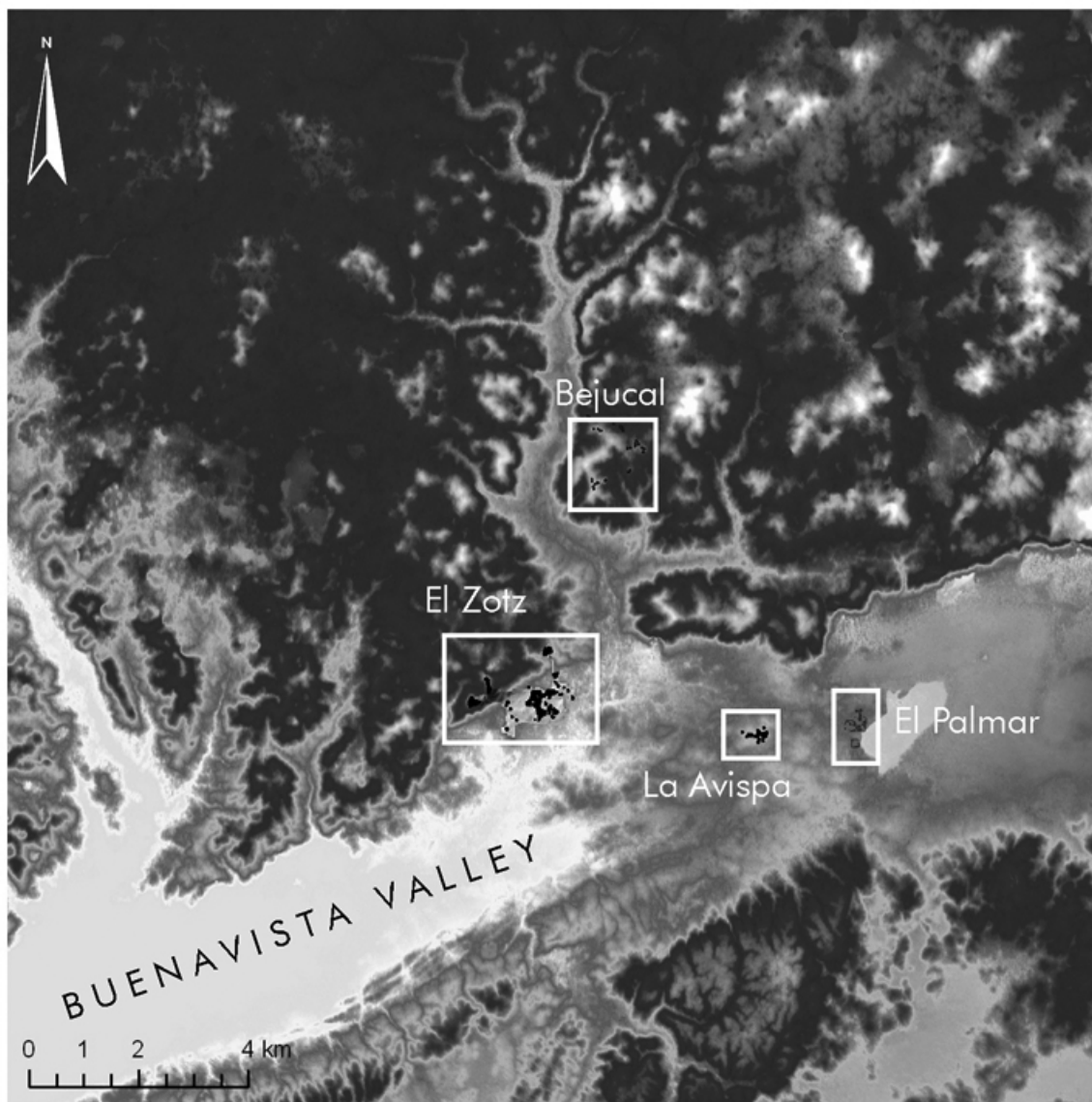


Figure 5.2. The El Zotz site region. Map by and courtesy of Thomas Garrison.

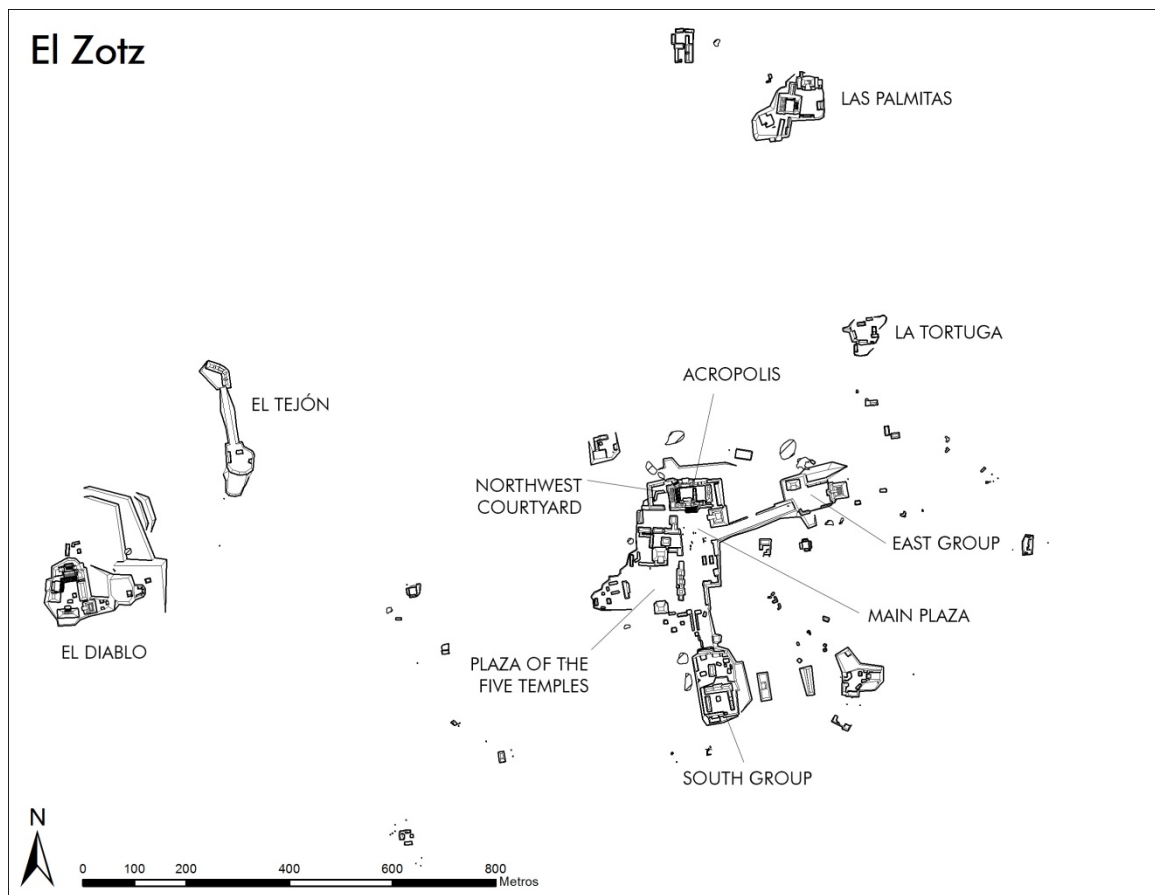


Figure 5.3. Site map of El Zotz with major architectural groups labeled. Map by and courtesy of Thomas Garrison.

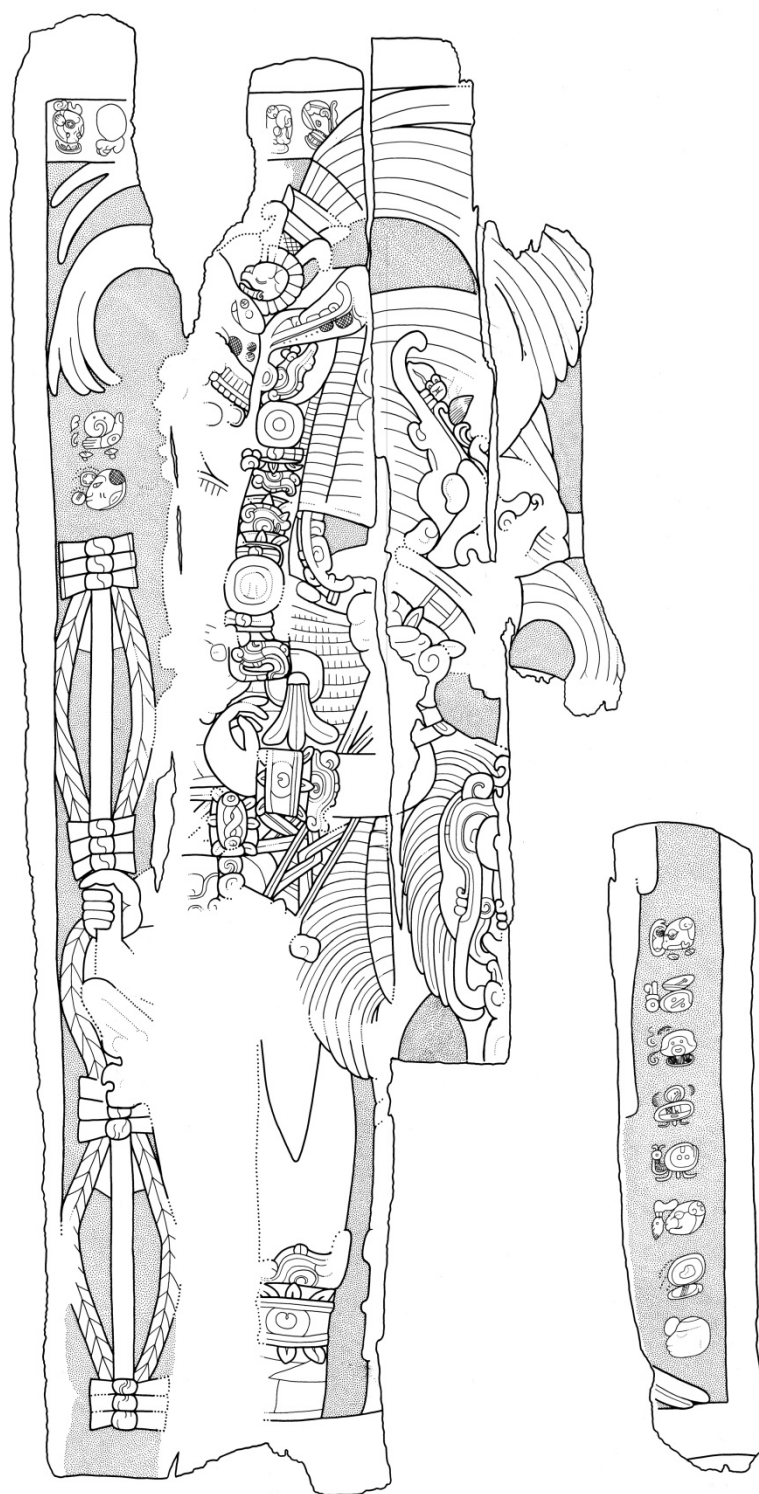


Figure 5.4. El Zotz Lintel 1. Drawing by Nicholas Carter.

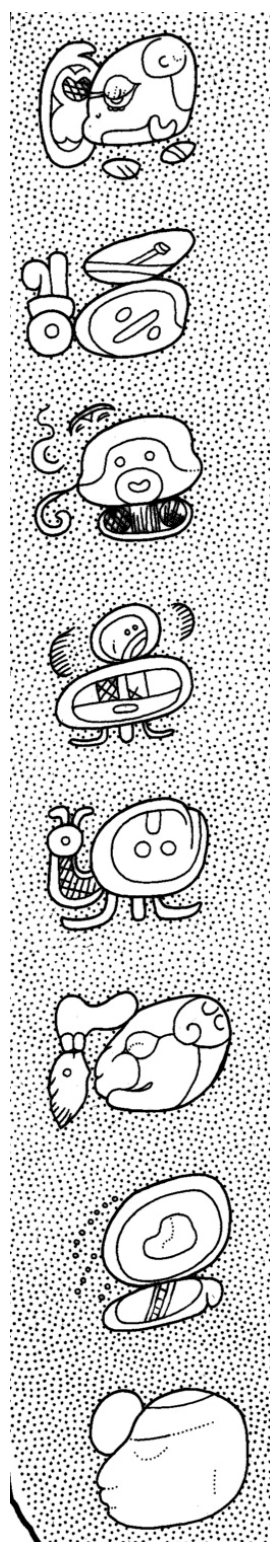
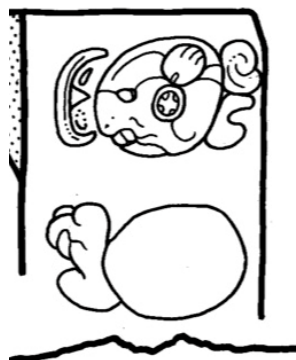


Figure 5.5. Captions from El Zotz Lintel 1. Drawings by Nicholas Carter.

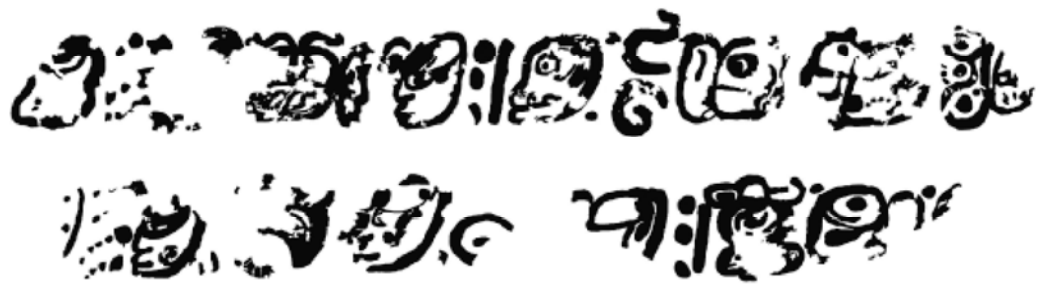
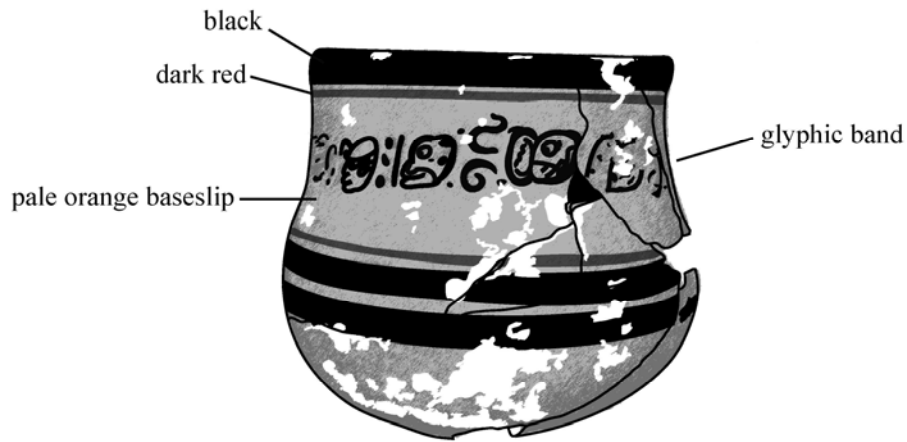


Figure 5.6. Polychrome vase naming a lord of El Zotz, recovered from a looted burial at El Perú-Waka'. Courtesy of Keith Eppich.

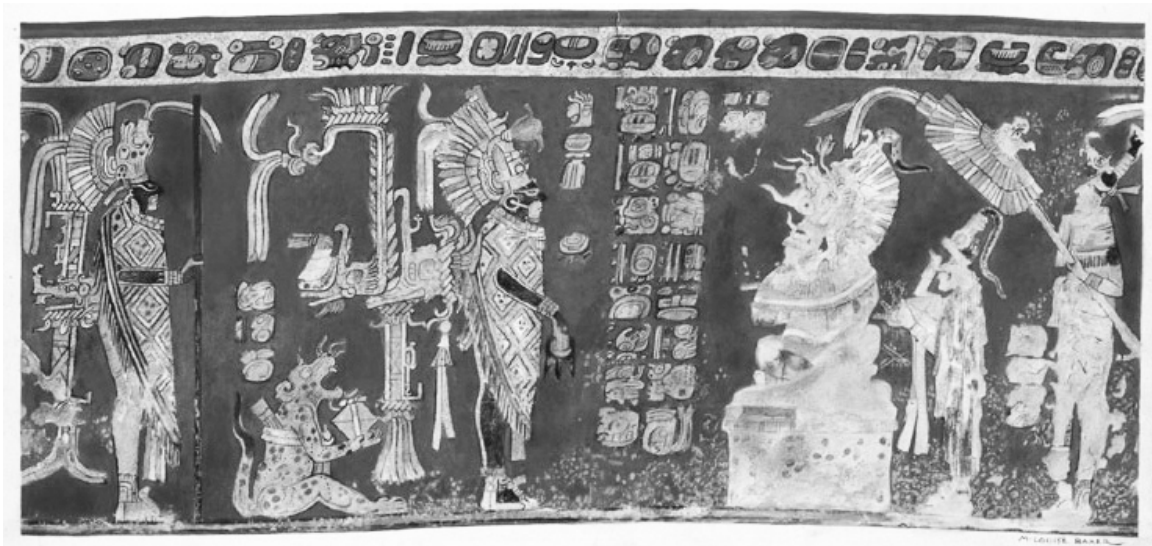


Figure 5.7. Polychrome vase recovered from an elite tomb in Uaxactun Str. A-1. Rollout painting by Mary Louise Baker, courtesy of the University of Pennsylvania Museum.

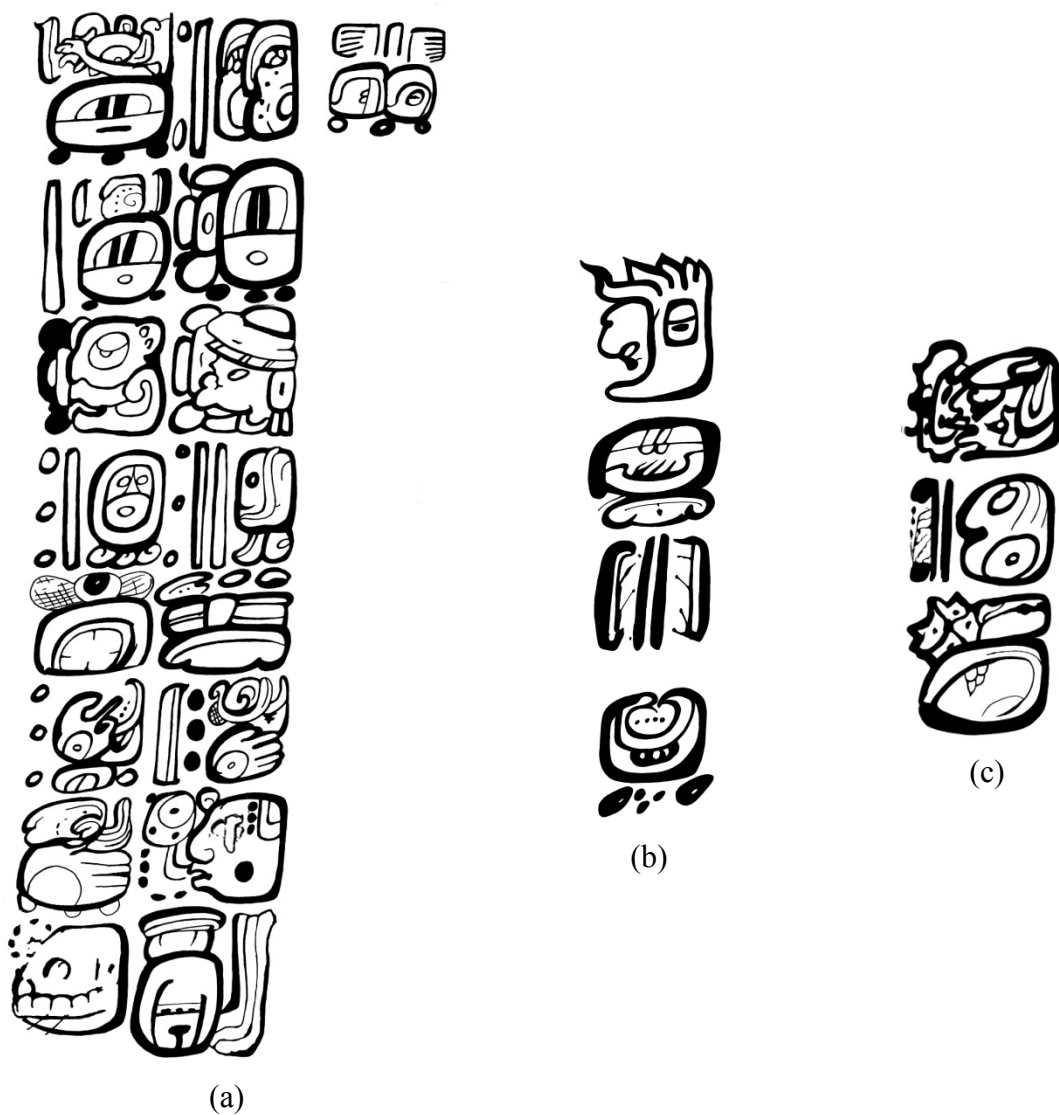


Figure 5.8. Texts on the polychrome vase from Uaxactun Str. A-1: (a) main text; (b) caption naming *K'uk' Chan*, the *sajal*; (c) caption naming *Yax Ajaw*, he of Calakmul. Drawings by Nicholas Carter.

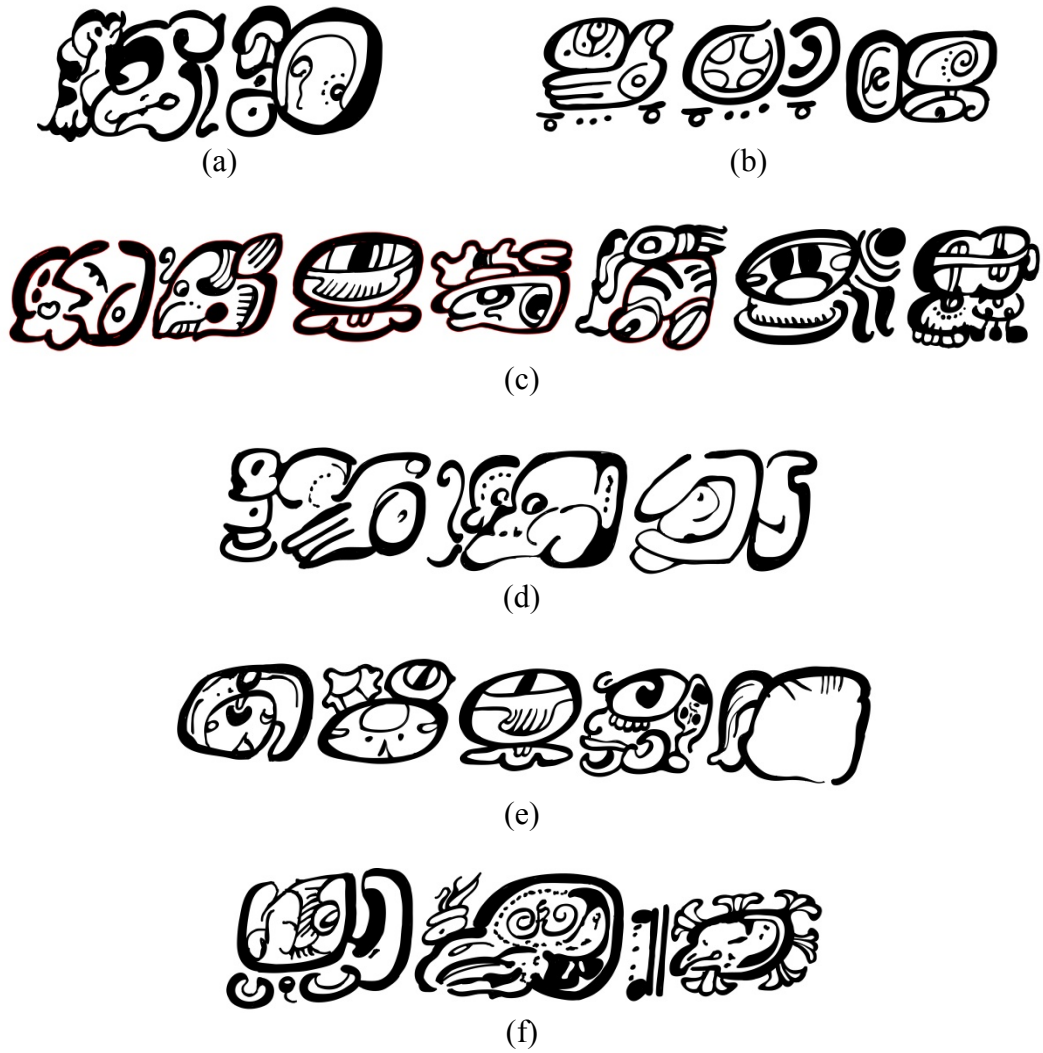


Figure 5.9. *Pa'chan* and “Earspool” lords named on unprovenanced, early seventh-century polychrome vases in the El Zotz style. Drawings (a) – (e) after photographs by Justin Kerr: (a) K679, (b) K5509, (c).K5465, (d) K6618, (e) K7147. Drawing (f) after a photograph by Nicholas Hellmuth in the collection of Dumbarton Oaks Research Library and Collection.

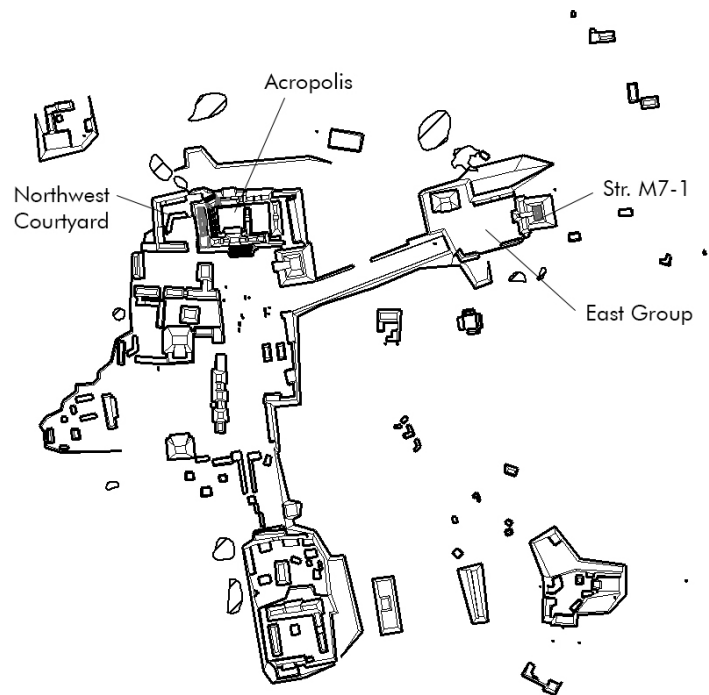
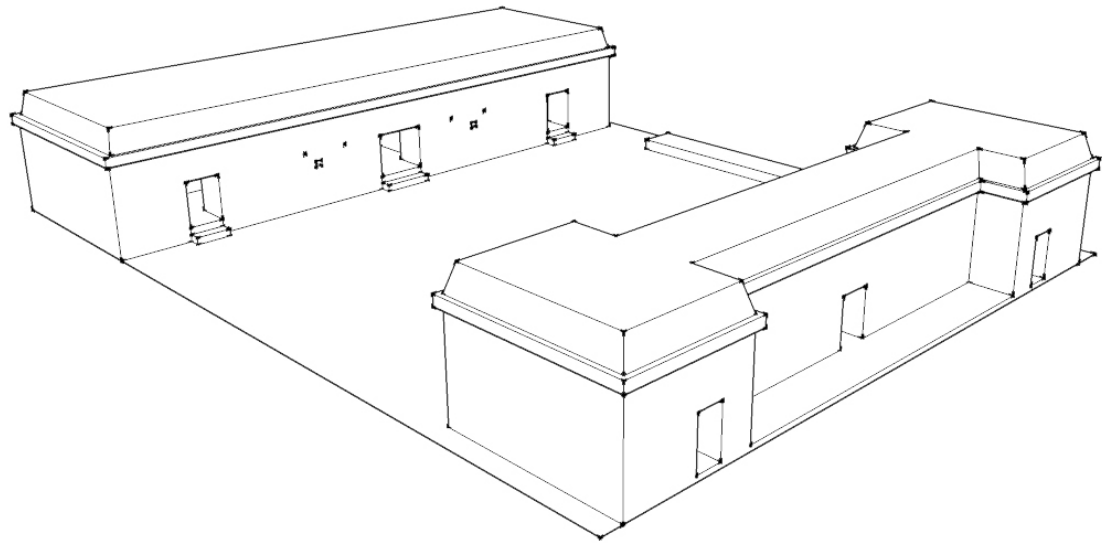


Figure 5.10. Locations of early and mid-eighth century construction activity in central El Zotz. Map by and courtesy of Thomas Garrison.

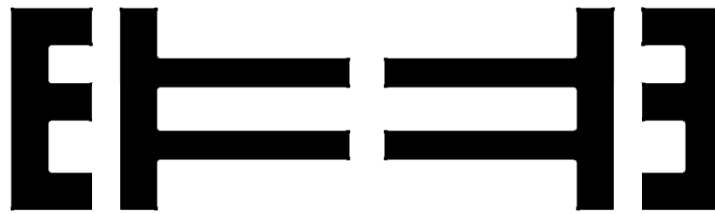




(a)



(b)



(c)

Figure 5.12. (a) Reconstructed eighth-century form of the elevated palace patio in the Las Palmitas group; (b) reconstructed plan of Str. M3-6; (c) reconstructed plan of Str. M3-7. Drawings by Nicholas Carter.

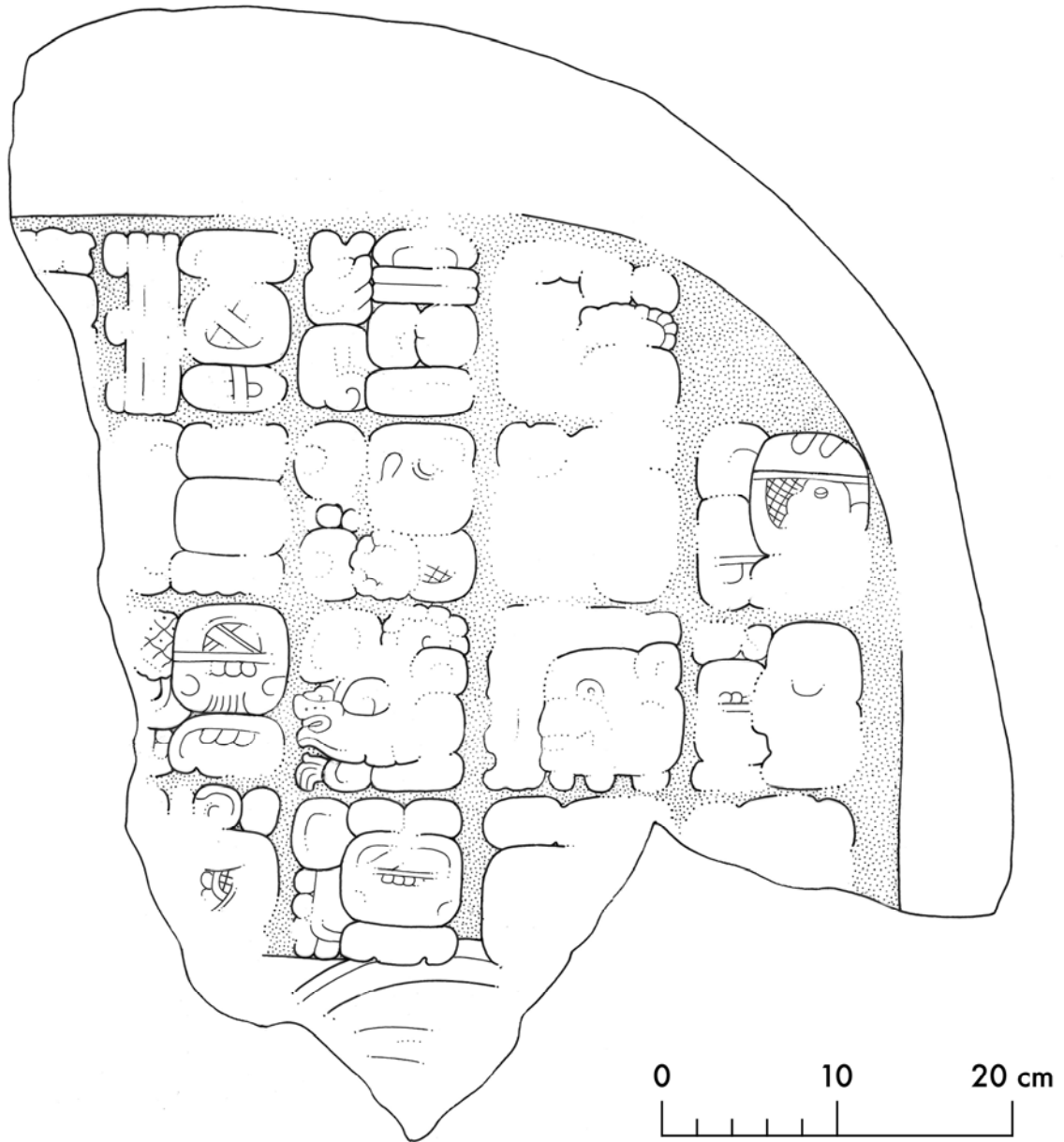


Figure 5.13. El Zotz Stela 4. Drawing by and courtesy of Stephen D. Houston.

Grupo Este

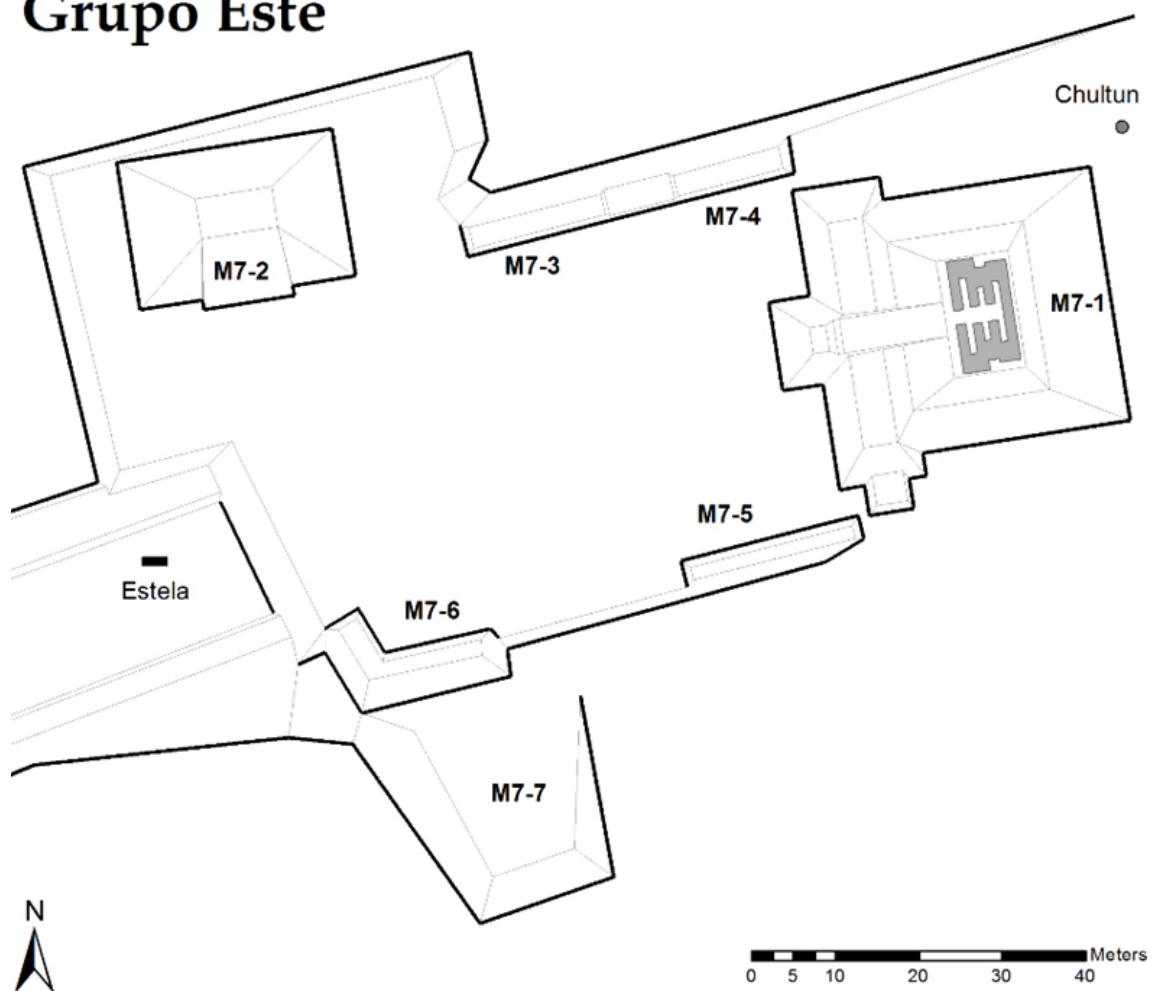


Figure 5.14. Location of Str. M7-1 in the East Group of El Zotz. Map by and courtesy of Thomas Garrison.

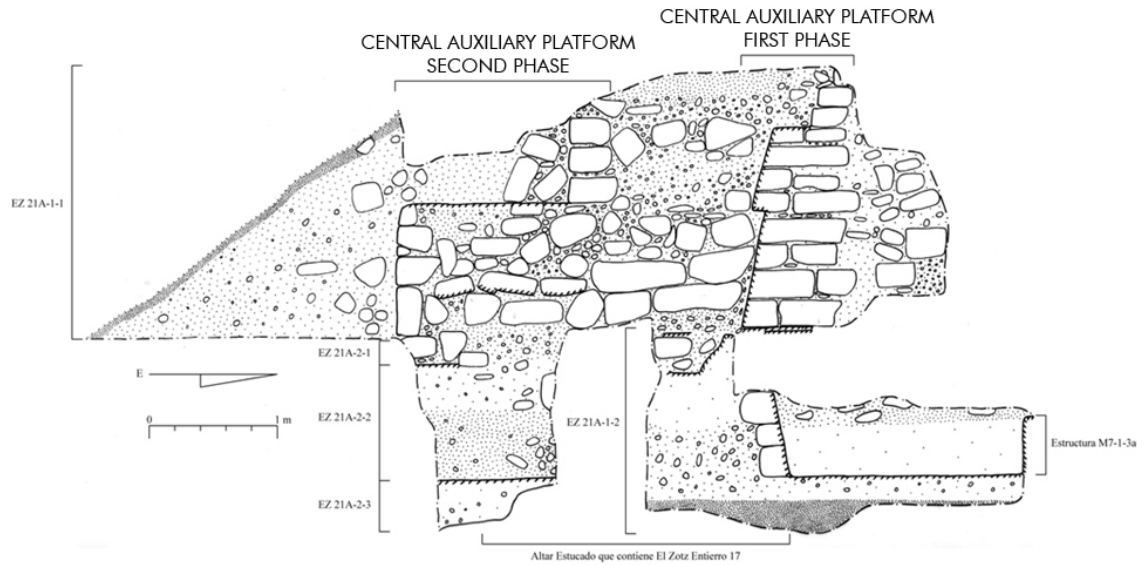


Figure 5.15. Profile of excavations in Str. M7-1 showing two-phase construction of auxiliary platforms. Courtesy of Thomas Garrison.

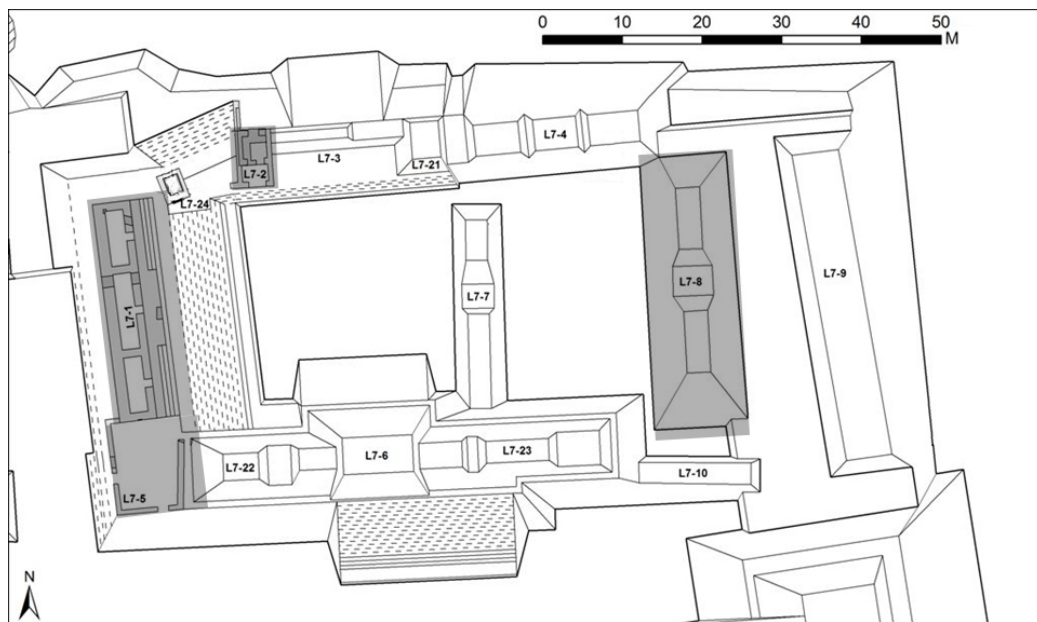


Figure 5.16. Foci of ritual depositional activity in the Acropolis. Map by and courtesy of Thomas Garrison.



Figure 5.17. Griselda Pérez Robles excavating part of the ritual deposit in the Acropolis.
Photograph by Arturo Godoy.

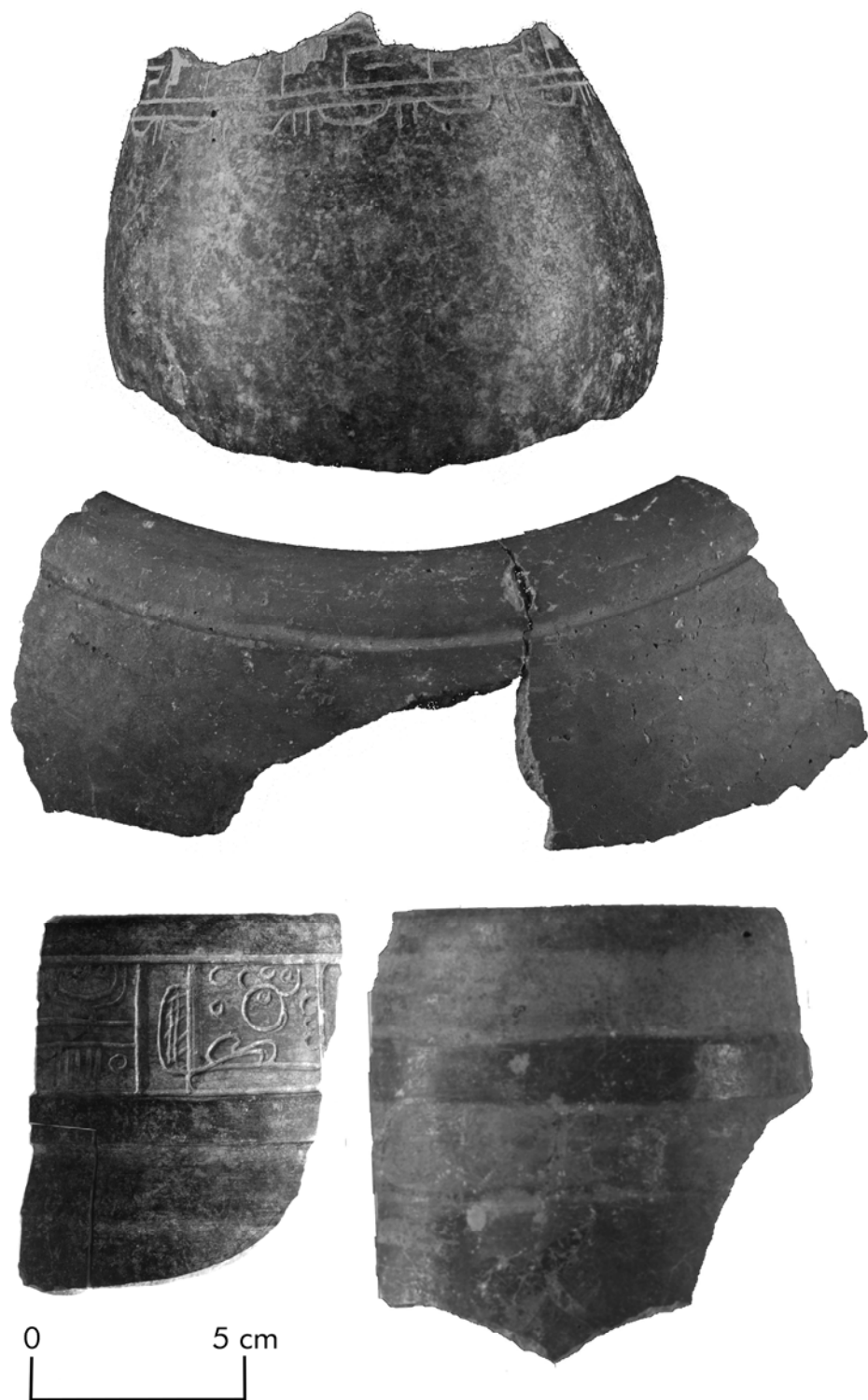


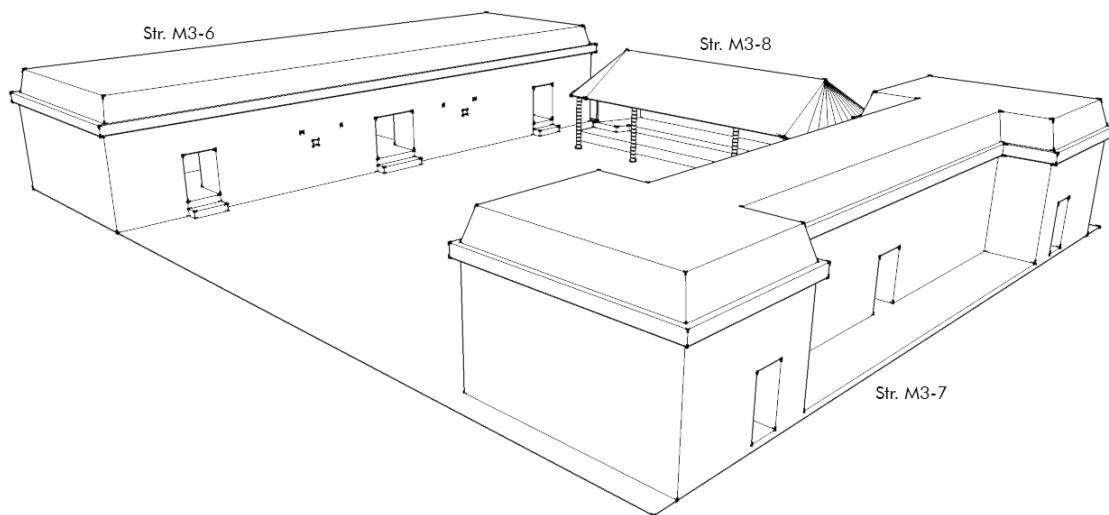
Figure 5.18. Ceramic sherds from the ritual deposit in the Acropolis. Photographs by Nicholas Carter.



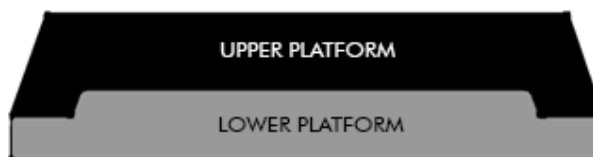
Figure 5.19. Map of the Acropolis and Northwest Courtyard. Map by and courtesy of Thomas Garrison.



Figure 5.20. Vessels included in El Zotz Burial 8. Photograph by Nicholas Carter.



(a)



(b)

Figure 5.21. (a) Reconstructed ninth-century form of the elevated palace patio in the Las Palmitas group; (b) reconstructed plan of Str. M3-8.

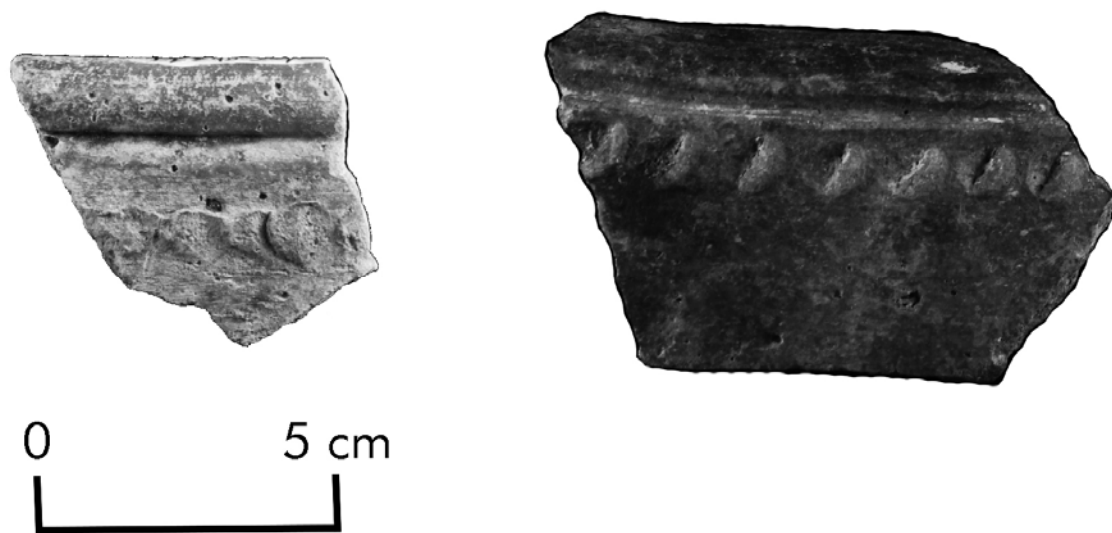


Figure 5.23. Rim and body fragments of (a) Chaquiste impressed and (b) Chinja impressed incurved-rim bowls. Photographs by Nicholas Carter.

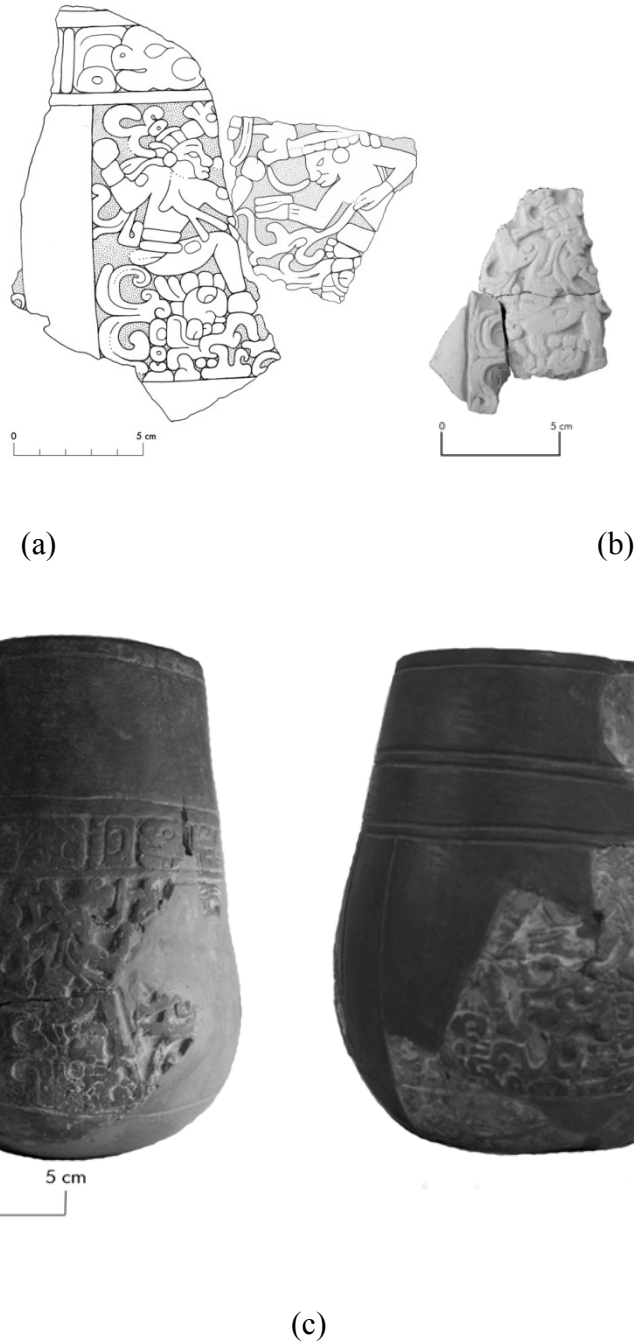


Figure 5.23. Sahcaba molded-carved sherds and vessels bearing copies of the same scenes: (a) from the midden immediately north of Str. M3-8 in the Las Palmitas Group (drawing by Nicholas Carter); (b) excavated near Str. L8-22 by Alyce de Carteret (photograph by Alyce de Carteret; (c) from Uaxactun (photographs by Nicholas Carter).

CHAPTER SIX CONCLUSIONS

The preceding chapters identified patterns in royal and elite practices of monumental self-representation and archaeologically detectable behavior in the central and southern Maya lowlands during the Terminal Classic period. Evidence for these practices included data on material culture from nine sites: Aguateca, Caracol, Ceibal, Copan, El Perú-*Waka'*, Nakum, Piedras Negras, Tikal, and El Zotz, this last discussed in detail in Chapter Five. Architectural and ceramic data were particularly important here, but other materials were considered as well, especially including apparent termination or renovation deposits associated with elite architecture. Further evidence came from stone monuments, mural paintings, and decorated ceramics that were commissioned by Terminal Classic elites and that presented them as they wished to be perceived. Analysis of the epigraphic and iconographic content of such works clarified some details of ninth-century Maya political history and—more importantly from an anthropological perspective—revealed trends in elite rhetoric during a time when elite status was itself unstable and rapidly changing.

The most salient findings of this research are synthesized in the present chapter. The primary finding, which structures consideration of the others, is that a striking difference is evident in the behavioral and representational practices of Terminal Classic elites before and after the end of divine kingship at each site considered in this dissertation. Prior to the end of kingship, Terminal Classic elite imagery and texts

displayed significant continuities with earlier practices, even though innovations in representational and rhetorical strategies at several sites point to some changes in how elite statuses were conceived and performed. The changes in elite material culture discussed in Chapters Three and Five likewise appear mainly in artifacts particularly connected to performance and signaling, especially religious architecture and decorated ceramics. After the collapse of effective kingship at each site, more significant changes in material culture, including the cessation of monument production, point to radical shifts in the meanings of elite status that went beyond the simple “decapitation” of courtly structures.

Terminal Classic kings and courtiers

Considerable material cultural and representational continuity is apparent between early Terminal Classic elites and their eighth-century forebears. Diagnostic Terminal Classic modes in various artifact classes—mold-made ceramics, new ways of portraying gods and kings on monuments—did not necessarily accompany major social changes, or at least not right away. Some courts did succumb to internal or external pressures, and some sites were largely abandoned, early in the ninth century. Yet at the courts which survived for decades more, political behavior and the nature of elite authority had much more in common with eighth-century models than they did with what was to follow the end of kingship.

Material culture and bioarchaeological evidence

Innovations in writing and representation, attested in the hieroglyphic corpus and discussed below, find material correlates in Terminal Classic religious architecture. Circular platforms at Ceibal and Nakum resemble structures associated with the worship of wind deities elsewhere in Mesoamerica, including at Chichen Itza (A. Smith 1982: 164 – 173; Szymański 2010: 56 – 61; Zrałka and Hermes 2012: 171). Attested at some Late Preclassic and Early Classic sites in the southern Lowlands, circular platforms were virtually never built during the Late Classic period, and their construction at Ceibal, at least, probably coincided with representational prominence for wind gods on royal monuments. Square, radial platforms at Ceibal belong to another architectural tradition with roots in the Preclassic period, but one which was never fully out of fashion in the intervening centuries. The radial Str. A-3 was the major architectural statement of revived divine kingship under *Wat'ul K'atel*, referred to by a later—and conceivably post-royal—generation of Ceibal's elites in the stunted form of Str. A-13 (see Chapter Three and below).

Diagnostic markers of Terminal Classic ceramic complexes at most sites with substantial and long-lasting ninth-century occupation, molded-carved drinking vessels and bowls coexisted with but partially replaced Late Classic-style polychrome ceramic types. Like those older types, such vessels appear to have been valuable relative to monochrome wares (see Chapter Three; A. Chase and D. Chase 2005: 81 – 88) and bore religious, political, and cultural messages in their texts and iconography. As discussed in Chapter Three, patterns in the social and spatial distribution of polychrome and molded-carved ceramics differ at sites across the southern Lowlands. At Caracol, their concentration in palatial contexts in the site center indicates that access to such vessels

was largely restricted in practice to royalty and high elites, yet their occasional appearance in non-epicentral residential compounds suggests that this could have been a byproduct of wealth disparities rather than sumptuary restrictions. This pattern contrasts with more the more socially even distribution of decorated ceramics and other artifacts interpreted as markers of wealth at other Terminal Classic sites, among them Xunantunich (LeCount 1999: 239), Nakum (Zaalka 2008: 92 – 102), and Ceibal (Tourtellot 1990: 96 – 100, 136 – 139), and at Caracol itself in the Late Classic period (A. Chase and D. Chase 2009b).

Isotopic data from human remains at Caracol support status-linked differences in food acquisition for Terminal Classic elites and commoners, with members of the royal court enjoying a “palace diet” high in meat and maize which remained much the same as it had been in the Late Classic period, even as the commoner population became poorer. Royalty and courtiers preserved access to such a diet despite the declining economic fortunes of the commoner population, evident in commoners’ diminished access to decorated ceramics relative to their Late Classic forebears (A. Chase and D. Chase 2005: 81 – 88). Terminal Classic Caracol thus appears as one case in which wealth and status closely corresponded, perhaps because one privilege of exalted status at that site was the right to appropriate certain material resources even during lean times. Whatever their precise nature, such prerogatives sometimes ran up against hard environmental constraints: at Copan, nutritional stress is evident for all social classes, a consequence of the Copan Valley’s limited agricultural potential (Webster et al. 1997: 58; Storey 2005: 336 – 338).

Economic inequality was less closely tied to apparent status inequality at Ceibal, where ninth-century commoner residential compounds show evidence of increased wealth compared to previous generations (Tourtellot 1990: 96 – 100, 136 – 139). Meanwhile, the royal court, though still socially and economically able to mobilize labor for dynastic projects, was materially poorer in luxury items than the ruling classes of more inegalitarian sites, perhaps a consequence of a small court (Inomata and Triadan 2013: 64). At Nakum, too, people residing outside the Acropolis (though still nearby) had access to molded-carved ceramics (Zralka 2008: 92 – 102).

Elite self-representation

In the sample of elite works considered in Chapter Four, the richest evidence for a populous court with fine gradations of royal and aristocratic rank comes from the murals of Bonampak Str. 1 (ca. A.D. 791). Clear references to persons of lower rank than *k'uhul ajaw* are otherwise rare, although not absent; the Josefowitz Stela (A.D. 864) is a late exception. Nevertheless, sufficient information was gleaned from that sample to identify definite regional patterns and temporal trends in the ways both kings and other elites were represented in Terminal Classic monumental art. Equally significant were patterns in who and what was *not* represented, since some such omissions may point to tensions among elite groups.

Kings and alliances

A wider extension of the formerly paramount title of *k'uhul ajaw* and its functional equivalents (e.g., *k'uhul k'antumaak* at Caracol) is evident from late royal

monuments. As several monuments at Caracol attest, such titles could pertain to appointed heirs, and the Bonampak murals extend the status of *k'uhul ajaw* to junior princes. The later Ceibal Stela 11 (A.D. 849) indicates that non-kings bore the title of *k'uhul ajaw* at that site as well, although their precise relationship to the ruler remains unclear. The broader application of kingly titles likely addressed rulers' increasing need to establish their heirs well in advance of their own deaths, excluding junior branches of growing royal families from lines of succession. Perhaps because this strategy meant degrading *k'uhul ajaw* as a title of rank, Terminal Classic rulers supplemented it by claiming the formerly exclusive status of *kaloomte'*. *Baahkab*, meanwhile, became somewhat more restricted, applied almost exclusively to local kings.

Just as in the Late Classic period, relationships of patronage and vassalage among people of royal status remained important to shifting Terminal Classic political orders. The importance of external support to multiple generations of Ceibal's Terminal Classic kings is evident from the monuments of *Ajaw Bot* (a vassal of the Aguateca ruler *Tahn Te' K'ihnich*), *Wat'ul K'atel* (who came to power backed by the king of Ucanal), and perhaps *Wok ?Teles* (whose monuments allude to ties with Chichen Itza). Monuments at Uaxactun and Jimbal appear to record another patron-client relationship between rulers of those two sites over two generations in the mid- to late ninth century. Taken all together, these texts hint at the political importance during the ninth century of amicable relationships among formerly hostile factions, in a context of newfound power for previously second-tier polities: rulers of Naranjo and Caracol enjoyed good relations with *Papamalil* of Ucanal, and kings from the *Mut* and *Kan* dynasties, once implacable enemies, joined in honoring the young king of Ceibal. Like the extension of *k'uhul ajaw*

status, the rhetorical prominence of such relationships could reflect a concern with securing the position of kings as opposed to non-royal elites. They suggest, too, a closely related concern with preserving the moral-political order of rule by local sovereigns, as opposed to aristocratic or imperial governance—a principle not at all opposed to ties of obligation among kings of unequal power. As earlier in the Classic period, and like modern states, ninth-century Maya royal courts belonged to a “community of mutual recognition” (Strang 1991: 162) whose behavioral norms guided the ways even hostile kings pursued their competing interests. Again in keeping with earlier practices, those norms included warfare and captive-taking, which are rarely discussed in Terminal Classic texts but whose outcomes are vividly illustrated in scenes of bound captives at the feet of victorious ninth-century kings.

As noted in Chapter Four, visual depictions of royal women—not particularly common at most sites even at their peak in the Late Classic period—are almost absent from the Terminal Classic monumental record. In such parentage statements as are preserved from monuments in the sample, royal mothers typically do not bear Emblem Glyphs connecting them to the dynastic “great powers” of the eighth century, like *Kan*, *Mut*, and *Pa’chan*. With those courts no longer dominating the political landscape to the extent they had once done, perhaps marriage to or descent from their royal ladies lacked some of its earlier rhetorical strength. It is somewhat curious that women from the *K’anwitznal* dynasty, a rising star in the early and mid-ninth century, are not represented in the sample either. Of course, later discoveries may fill this gap, but at present it is difficult to explain.

Nobles

As they had in earlier Classic times, Terminal Classic nobles outside the immediate royal family derived a broad range of titles from specialized, often ritualized roles in war or courtly life. At Bonampak, these included titles rarely seen in earlier texts, along with well-attested ranks like *sajal* and *anab*. *Sajal*, *aj k'uhu'n*, and *ti'hu'n* are all attested in ninth-century texts from (among others) Naranjo, Jimbal, and the *Sak Tz'i'* polity, while courtiers whose titles do not survive are depicted at Ixlu. Persons depicted in the stucco façade of Str. A-3 at Ceibal may also have been courtiers or non-ruling members of the “Hearth” dynasty, although the lack of titles makes this impossible to confirm. Yet these works are exceptions to a general decline in the representation of non-royal elites in the early Terminal Classic period. To a great extent, this decline can be explained by political instability and collapse in the Petexbatun and Pasión regions and along the Usumacinta River, where courtiers and subordinate lords had been especially prominent in Late Classic art. At Copan, another site notable for eighth-century representations of sub-royal lords, monumental art of any kind was attenuated during most of *Yax Pahsaj Chan Yopaat*'s reign, coincident with ecological and economic stress. Even within that diminished corpus, people outside the royal family almost seem deliberately excluded from the monumental record around the turn of the ninth century, especially by comparison to the earlier acknowledgement of nobles on sculpted benches (e.g., Riese 1989).

As discussed in Chapter Four, there is no compelling epigraphic evidence for innovative systems of conciliar government at Copan, Tikal, or anywhere else in the southern lowlands during the ninth century A.D. This is despite the proliferation of elite

titles and the occasional practice of shared rule between a junior and a senior lord, attested at Caracol. Nor does anything in the Terminal Classic monumental or ceramic corpora betray any concept among southern Lowland elites of an approaching post-dynastic era or of political alternatives to the system of courts centered on sacral kings. In particular, the idea that the ends of dynasties were ever recorded on stone monuments—at least on their home turf—can be abandoned now that the best candidate for such an inscription, Copan Stela 10, has been read as a forward-looking statement about a god effigy, not as recounting the destruction of royal buildings. On the contrary, ninth-century royal monuments present an image of confidence about the future at odds with the structural instability of royal power suggested by material evidence at many sites for declining wealth and eventual nobles' revolts. Generally monologic, most of these monuments exclude or marginalize nobles. Most (but not all) Terminal Classic monuments thus represent a rhetorical denial of the burgeoning problems and tensions that would eventually lead to the downfall of royal dynasties. Evidence for the weakening of royal power relative to sub-royal elites during the Terminal Classic period must therefore be sought in the archaeological record, not the epigraphic one.

Code-switching in Terminal Classic art and writing

As with practices of governance, Terminal Classic alterations to Classic stylistic canons in writing and visual representation were less radical than might be supposed. Jimbal Stela 2 flagrantly violates standard hieroglyphic reading order, but makes sense as a grammatical text; late Ceibal stelae, except perhaps for Stela 13, all commemorate period endings even though they present visually novel tableaux. Audiences versed in

Classic Maya representational traditions could have understood these works with little difficulty. But what, exactly, were such audiences meant to understand? Not just the linguistic contents of the texts or the fact that a king had celebrated a *k'atun* ending—otherwise there would have been no need for visual innovation. Those innovations added another kind of content: they conveyed the message that their principals, the kings who commissioned them, were connected in some way to far-off places like northern Yucatan, coastal Veracruz, or inland sites west of the Maya world. The proof of those connections lay in the kings' ability to switch from Classic to non-Classic visual and linguistic codes.

One prominent Terminal Classic innovation, non-Classic-style day-names, are argued in Chapter Four to be attested for gods, kings, queens, princes, and courtiers. These represent a kind of graphic—and perhaps linguistic—analogue to later practices in northern Yucatan, like the “language of Zuyua” (Roys 1967: 89, 192). Controversially, new conventions may have accompanied their adoption, whereby a single individual could acquire two or three such names. However they were used, they clearly asserted elite connections to distant lands and foreign peoples, and elite participation in a cosmopolitan intellectual and religious culture driven by long-distance travel and trade.

Sociopolitical inequality after the collapse of divine kingship

Given sharply diminished populations across the southern lowlands towards the end of the ninth century A.D., and especially given the close connection between functioning royal courts and inscribed monuments bearing historical information, the situation of post-royal Terminal Classic Maya elites in that area is less even clear than that of their predecessors. Nevertheless, the evidence presented in the foregoing chapters

makes it possible to speak in general terms about how such elites behaved and distinguished themselves as a social category. As earlier in the Terminal Classic period, the presence of post-dynastic elites was posited based not just on the presence of artifacts interpreted as valuable, but on whether artifacts in their context pointed to performances that were plausibly about social inequality in some way. Even in the absence of texts, some post-royal archaeological data could be interpreted as evidence for such activities.

Material culture

C-shaped buildings, widely attested at sites throughout the southern lowlands in the late Terminal Classic periods (Bey et al. 1999: 239; P. Rice and D. Rice 2004: 132), appear to postdate the practical end of kingship, in the sense that whatever community leaders commissioned and used them could no longer draw on nearly the same quantity or quality of skilled labor as Late Classic rulers. The lack of texts associated with such buildings makes it unknowable whether their owners called themselves *k'uhul ajaw*, yet certain features suggest that they were sociopolitical elites of some kind. Typically built in existing palatial spaces, aligned with existing architecture, and facing onto open patios, these structures with their graduated platforms and open fronts could have facilitated displays of unequal rank. Associated middens like the one in the Las Palmitas Group at El Zotz indicate that they belonged to households with substantial access to imported luxury goods and other presumably desirable objects.

Like architecture, the kinds of artifacts associated with post-royal elites at the sites considered in this dissertation differed in important ways from earlier assemblages. Displays of literacy, for instance, evidently diminished in importance, although the role

of bark-paper books during this period remains unknown. With respect to high-value ceramic vessels, it is notable that Ahk'utu' molded-carved vases, which bear scenes of historic kings accompanied by legible hieroglyphic texts, were first made in the Belize River Valley region before the end of dynastic rule at Caracol and Ucanal. Sahcaba molded-carved vases, with their more problematic rim texts and their supernatural motifs, were obtained by functionally post-royal elites at sites including El Zotz, Uaxactun, and Tikal, even if they began to be produced earlier. Shell, bone, and stone ornaments with inscriptions or Late Classic-style iconography were generally not reported for clearly post-dynastic archaeological contexts at the sites discussed here. The major exception, a finely worked bone plaque from Group 9J-5 at Copan, bears explicitly royal iconography and was most likely produced before the fall of *U Kit To'k'*.

This pattern suggests that kings were central to the ritual economies of Terminal Classic courts. Under divine kingship, objects bearing texts or decorations executed in accordance with the canons of Classic religious and courtly art perhaps served as the material currency of social obligation, produced by courtiers for kings who might then keep or re-gift them. In the absence of kings, there would seem to have been no institutional obstacles to post-royal elites' making as many of those same kinds of items for themselves or one another as they pleased—but, where elite lineages survived the end of Classic-style kingship, they appear not to have done so. Evidently, many of the productive practices that typified aristocratic status in the Late Classic period, the material correlates of which help to make aristocrats recognizable in the archaeological record, only made sense in the context of kingly rule.

Communication, performance, and post-royal elites

Given the dearth of securely post-royal, Terminal Classic monuments and inscriptions, the question of how remaining elites represented themselves through public acts of representation and communication has to be addressed to the archaeological data. Here, episodes of organized violence stand out as particularly effective ways of constituting and communicating elite authority. Indeed, at some sites, episodes of this kind marked the transition from royal to post-royal sociopolitical orders: archaeological evidence from Copan and El Perú-*Waka'*, for instance, suggests that members of sub-royal elite lineages coordinated, carried out, and survived the ritual termination of royal houses. Such events could target not only the living generations of royal families, but also their aristocratic allies and their ancestors.

Even after the end of kingship, links between organized violence and ritual authority are evident in the archaeological record. One clear example is the mass burial of young men in Str. A-14 at Ceibal, a radial platform probably used in ritual performances which, according to radiocarbon dates, was built either after the outright end of kingship at that site or during the low ebb of practical royal power (Tourtellot 1990: 90 – 91). The directionally aligned graves in Copan Group 9J-5 securely postdate the end of the *?Xukuup* dynasty; whether or not they are interpreted as sacrificial offerings, they do represent the ritual deposition of human remains in order to mark a special space within an elite residential compound (Maca 2002: 242 – 272).

In the aftermath of kingship, other kinds of ritual performances were carried out which seem to refer to royal rituals of old and could have afforded surviving elites an opportunity to demonstrate their piety and leadership. The re-use of royal monuments in

new religious contexts is one especially archaeologically visible example of this kind of activity. By conducting rites of stone-planting or sacrificial burning using existing monuments, already charged with numinous power because of their connection with ancestral authority, post-royal elites appropriated some of that authority for themselves. At the same time, in order for those monuments to take on new meanings connected to the leaders who oversaw their re-use, their old meanings had to be in some way obscured or erased. Hence the practice of resetting stelae or stela fragments upside down, attested for Terminal Classic occupations at Ceibal (J. Graham 1990: 16 – 17; Smith 1982: 155) and perhaps Tikal (Jones and Satterthwaite 1982: 14). Hence, too, the production of new altars from old monuments, among them the companion altar to the reset stela at Ceibal (to which an existing altar contributed a chunk of stone) and the reshaped stela at El Zotz (see Chapter Five). Though they involved damage and effacement, these were not necessarily uncomplicated acts of vandalism, since the targeted monuments continued to be used in sacred contexts.

The *ajaw* in society: Terminal Classic elites in context

Maya royal courts did not operate in a social or economic vacuum: they depended on the daily practices of far larger numbers of ordinary people who provided them with the necessities of life and the materials for luxury and authoritative performance, and who are almost totally excluded from the Classic representational record. The continuing opacity of ancient Maya practices of land tenure and inheritance, which are neither discussed in hieroglyphic texts nor readily inferred from present archaeological evidence, means that an important dimension—very likely the most important—of the social

tensions which contributed to the end of divine kingship and the near or total abandonment of major southern Lowland centers remains difficult to speak about with much confidence. Did unequal access to basic resources by growing populations, including a larger than ever noble class, and exacerbated in some areas by climatic drying, contribute in some way to the collapse of kingship in the southern Lowlands? The answer is almost certainly yes, but this work has tried to answer a different question. Getting from social tension and ecological stress to the radical reconfiguration of political communities requires some additional steps.

This work sought to understand how the leaders of those communities changed over the Terminal Classic period. It was hoped that a study of southern Lowland Maya elites in the decades surrounding the collapse of divine kingship would yield insights, potentially applicable to other times and culture areas, about the nature of inequality *per se* during the disintegration of inegalitarian political systems characterized by sacral kingship, heritable rank, and performances of authority tied to a religious cosmology. Despite highly variable local historical trajectories, several such facts are evident. First, status inequalities outlasted the breakdown of Late Classic-style divine kingship. Second, inegalitarian social relationships helped bring that breakdown about—not just in the sense that populations became fed up with their kings (their feelings are nowhere written down), but in that aristocratic factions at some sites were active participants in terminating kingship. Third, the nature of elite status changed significantly in the absence of kings, in that post-royal elites no longer signaled their status in the same ways or participated in the same kinds of ritualized exchanges that had characterized earlier courtly economies.

These findings extend existing scholarly work on ritual economies and the embeddedness of governing institutions in societies. Maya royal courts may not have been very statelike, but, like modern states, they were clearly “field[s] of power marked by the use and threat of violence” (Migdal 2001: 15). Again like modern states, a certain disconnection is apparent between confident, official representations of what courtly elites were and did and archaeological evidence for the instability of courtly institutions and the mutability of elite status. At least in the cases of Piedras Negras and Yaxchilan, official representations of divine kings as imbued with unique and sacred authority may have been undermined by those same kings’ attempts at expanding and intensifying practical territorial control by delegating power to vassals (Golden and Scherer 2013: 399 – 417). Lower-ranking elites are especially well represented in the monumental corpus from the Usumacinta River region, but similar processes are plausible for other areas. Depictions of Terminal Classic aristocrats focused exclusively on their subservient relationships to divine kings, but of course they had other social roles—as parents, children, spouses, trading partners, perhaps advocates for lower-ranking clients of their own—and not all the interests and obligations attendant on all those roles can have existed harmoniously. In some instances, those other social forces pulled ninth-century courts apart.

As long as royal courts did hold together, they functioned in large part as ritual economies based on tribute, royal largesse, and social prestige. To modern eyes, the most striking qualities of Terminal Classic monuments and other artifacts of courtly high culture may be aesthetic ones; on further reflection, they may elicit an appreciation of the skill and effort that went into making them. These factors were no doubt important to

ninth-century Maya elites as well, yet, as shown in the present dissertation, an exclusive focus on artistry misses something more important: the political and personal relationships that were the social context for elite artifacts' production and circulation, and that were themselves produced in part by those same acts of crafting and exchange. Properly leveraged, esoteric ritual knowledge—not just substances like jade and shell—was potentially convertible to substantial social capital in that system, yet the relative value of different domains of such knowledge was itself in flux, tied in some way to the movements of lords, traders, and farming populations. Applicable to other economic and social contexts is the lesson that goods which may appear self-evidently valuable in an imaginary, rational market in fact acquire their value in part from their function in constituting human relationships, perhaps especially unequal ones. Social inequality as such, then, appears as inseparable from communication through material media.

APPENDIX A
EXCAVATIONS IN THE LAS PALMITAS GROUP

This appendix presents the results of excavations in the Las Palmitas Group, ca. 1 km north of El Zotz' East Group, by the El Zotz Archaeological Project (PAEZ) between 2008 and 2011. Excavations were conducted at Las Palmitas by Alejandro Guillot Vassaux in 2008, by Fabiola Quiroa Flores in 2009, and by Nicholas Carter and Yeny Myshell Gutiérrez Castillo in 2010 and 2011. A complete list of ceramic sherds recovered during those four seasons, organized according to provenience and type, is presented in Appendix C.

The information in this appendix is organized according to the provenience system used by PAEZ, in which the lot, an archaeological locus of variable size, is normatively the smallest unit. One or more lots make up an excavation unit, which could correspond to a new, controlled excavation or to the cleaning of a looters' tunnel, of which there were many at Las Palmitas. One or more units make up a sub-operation, corresponding to a single structure, to an area without obvious architecture, or to a group of structures. One or more sub-operations, in their turn, comprise an operation, which corresponds to a major architectural group. In the case of Las Palmitas, a single operation (Operation 4) encompassed the entire complex. The highest level of the system is the site, in this case El Zotz, denoting a significant and spatially discrete cluster of architecture believed to have functioned and been conceptualized as a socially constructed unit (something like a "town" or "city") in antiquity.

Conventional practice on the El Zotz project called for looters' tunnels to be assigned to a special sub-operation, X, regardless of their spatial location. In this appendix, looters' tunnels have been placed with the sub-operations to which they would have belonged had they been legitimate excavations.

Operation 4: Las Palmitas

Sub-operation A: test units in the plaza

Description and objectives

Sub-operation A consisted of two test units excavated by Alejandro Guillot Vassaux in 2008 in Las Palmitas' eastern plaza (Guillot Vassaux 2008: 97 – 100). The first legitimate excavations at Las Palmitas, they both were intended to determine the plaza's stratigraphic sequence and obtain preliminary ceramic and other evidence for its chronology.

EZ-4A-1 (Guillot Vassaux, 2008)

Location: In the center of the plaza.

Dimensions: 1.5 × 1.5 m.

Orientation: 0° of north.

Objectives: This was a test unit meant to discover the stratigraphic sequence of the plaza and obtain preliminary evidence for its chronology.

Illustrations: Figure A.2.

Results:

EZ-4A-1-1: Very dark gray humus (10YR 3/1). Ca. 0.22 m thick. 7 sherds and 2 flakes of chert were recovered. Terminated with the exposure of the fill comprising EZ-4A-1-2.

EZ-4A-1-2: Dark grayish-brown earth (10YR 4/2) mixed with limestone pebbles and stones of regular size. Leveling fill of the plaza. Ca. 0.08 m thick. 4 badly eroded, unidentifiable sherds were recovered. Terminated with a change in the color and texture of the fill.

EZ-4A-1-3: Grayish-brown earth (10YR 5/2) with a fine to medium texture, more compact than the previous lot, containing limestone pebbles and stones of regular size. Plaza fill. Terminated with the exposure of bedrock, 0.48 m below the surface at the center of the unit.

EZ-4A-2 (Guillot Vassaux, 2008)

Location: 1.8 m north of Str. M3-5 on its axis.

Dimensions: 2 × 1 m.

Orientation: 90° of north.

Objectives: This was a test unit meant to discover the stratigraphic sequence of the plaza and obtain preliminary evidence for its chronology.

Illustrations: Figure A.3.

Results:

EZ-4A-2-1: Very dark gray humus (10YR 3/1), granular in texture. Ca. 0.16 m thick at the center of the unit. 3 eroded, unidentifiable sherds and 4 flakes of chert were recovered. Terminated with a change in the color and texture of the soil.

EZ-4A-2-2: Dark grayish-brown earth (10YR 4/2), soft and medium to coarse in texture and containing pebbles and stones. Ca. 0.19 m thick at the center of the unit. Leveling fill of the plaza. 23 eroded sherds and 6

flakes of chert were recovered. Terminated with a change in the color and texture of the fill.

EZ-4A-2-3: Limestone pebbles and larger rocks of regular size in a matrix of grayish-brown earth (10YR 5/2), fine and compact. Ca. 0.16 m thick.

Leveling fill of the plaza. 5 eroded sherds, 3 flakes of chert, and 1 fragment of an obsidian blade were recovered. Terminated with a change in the color and texture of the fill.

EZ-4A-2-4: Light gray-brown earth (10YR 6/2), fine and compact, containing stones for the most part of regular size. Plaza fill. Terminated with the exposure of bedrock, 0.74 m below the surface at the center of the unit.

Sub-operation B: test units in the palace patio

Description and objectives

Sub-operation B consisted of three test units excavated by Alejandro Guillot Vassaux (2008: 100 – 107) in the elevated patio formed by Strs. M3-6, M3-7, and M3-8. Its objectives were to determine the stratigraphic and construction sequences of the patio group and to recover ceramics and other artifacts in order to establish its preliminary chronology.

EZ-4B-1 (Guillot Vassaux, 2008)

Location: In the patio, 1.8 m west of Str. M3-7 on its central axis.

Dimensions: 2 × 1 m.

Orientation: 350° of north.

Objectives: To determine the stratigraphic and architectural sequence of the patio group and to obtain cultural material to establish its chronology.

Illustrations: Figures A.4 and A.7.

Results:

EZ-4B-1-1: Dark grayish brown (10YR 4/2) humus of thick texture and granular consistency. Ca. 0.24 m thick. 7 flakes of chert were recovered. So were 7 eroded sherds and 1 Saxche/Palmar orange polychrome sherd. Terminated with a change in the color and texture of the fill.

EZ-4B-1-2: Grayish brown (10YR 5/2) earth of medium texture and compact consistency, with limestone pebbles and some larger stones of regular size. Ca. 0.09 m thick. 1 chert flake and 8 ceramic sherds were recovered: 2 Tinaja red, 3 Cambio unslipped, and 3 eroded sherds.

EZ-4B-1-3: Light brownish gray (10YR 6/2) earth of medium texture and compact consistency, mixed with mud and containing limestone pebbles and more larger stones than the previous lot. Ca. 0.27 m thick. 53 chert flakes and 1 fragment of obsidian were recovered. 125 ceramic sherds were also recovered: 21 Cambio unslipped, 4 Encanto striated, 83 eroded, 5 Infierno black, 10 Tinaja red sherds, and 2 Cambio group jar rim and neck sherds (Cambio unslipped or Encanto striated). Terminated with a change in the color and texture of the soil.

EZ-4B-1-4: Gray (10YR 6/1) soil of fine texture and soft consistency, looser than the previous two lots and containing stones of regular size. A compact leveling surface of earth, sand, and limestone pebbles, 13 cm

thick, was encountered in the SW corner of the unit but not elsewhere. An extension 0.5×0.5 m (EZ-4B-3) was opened in the S profile of the unit to expose this feature. At 0.75 m from the surface, dense fill of heavy limestone chunks was encountered, the size and weight of which prevented much further excavation in the center of the unit and obliged its E and W sides to be excavated separately as Lots EZ-4B-1-6 and EZ-4B-1-5, respectively. Terminated with a change in the color and texture of the matrix. 8 chert flakes and 18 ceramic sherds were recovered: 7 Cambio unslipped, 7 eroded, 1 Infierno black, and 3 Tinaja red.

EZ-4B-1-5: Excavated in the NW corner of the unit, 0.5×0.5 m. Dense fill of limestone chunks in a compact matrix of mortar and sandy earth, gray (2.5YR 6/1) in color, of medium-fine texture and soft consistency. Terminated at 1.87 m below the surface due to lack of space in which to work. 43 chert flakes, 1 piece of ground stone, 2 carbon samples, and 46 sherds were recovered: 9 Cambio unslipped, 3 Encanto striated, 22 eroded, 4 Infierno black, 1 Polvero black, 6 Tinaja red sherds, and 1 Cambio group jar rim and neck sherd (Cambio unslipped or Encanto striated).

EZ-4B-1-6: Excavated in the NE corner of the unit, 0.5×0.5 m. Dense fill of limestone chunks in a compact matrix of mortar and sandy earth, gray (20.5YR 6/1) in color, of medium-fine texture and soft consistency. Terminated at 2.07 m below the surface with the exposure of bedrock. 74 chert flakes, 1 fragment of obsidian, and 100 ceramic sherds were recovered: 29 Cambio unslipped, 9 Encantio striated, 39 eroded, 3 Harina

cream, 6 Infierno black, 1 Polvero black, 9 Tinaja red sherds, and 4 Cambio group jar rim and neck sherds (Cambio unslipped or Encanto striated).

EZ-4B-2 (Guillot Vassaux, 2008)

Location: In the center of the palace patio, 5 m E of Str. M3-6 and 6.6 m NW of Unit EZ-4B-1.

Dimensions: 1.5 × 1.5 m.

Orientation: 350° of N.

Objectives: To determine the stratigraphic and architectural sequence of the patio group and to obtain cultural material to establish its chronology.

Illustrations: Figures A.5 and A.6.

Results:

EZ-4B-2-1: Dark grayish-brown (10YR 4/2) humus of thick texture and granular consistency. Ca. 0.26 m thick. 12 chert flakes and 31 ceramic sherds were recovered: 29 eroded and 1 Tinaja red sherd, along with 1 Cambio group rim sherd (Cambio unslipped or Encanto striated).

EZ-4B-2-2: Grayish-brown (10YR 5/2) earth of medium texture and soft consistency, with limestone pebbles and larger stones representing the leveling fill of the patio. Ca. 0.25 thick. Some larger stones were encountered at 0.3 m below the surface; these were exposed more fully in the subsequent lot. Terminated because of the exposure of these stones and a slight change in the matrix. 52 chert flakes, 3 fragments of obsidian, 1 fragment of ground stone, 2 fragments of daub, and 56 sherds were

recovered: 5 Cambio unslipped, 3 Encanto striated, 46 eroded, 1 Infierno black, and 1 Tinaja red.

EZ-4B-2-3: Gray (10YR 5/1) earth of medium texture and compact consistency containing large chunks of limestone, regularly sized and roughly shaped. Some of these formed a low retaining wall running roughly N-S (20° of N), which defined compartments in the patio fill. Terminated with a change in the color of the matrix. 18 obsidian flakes and 29 sherds were recovered: 5 Cambio unslipped, 4 Encanto striated, 14 eroded, 5 Tinaja red sherds, and 1 Cambio group jar rim sherd (Cambio unslipped or Encanto striated).

EZ-4B-2-4: Gray (10YR 6/1) earth of sandy texture and compact consistency, mixed with dense fill and regularly sized stones. Terminated with the exposure of bedrock, on which the stones of the retaining wall rested. 39 chert flakes and 30 sherds were recovered: 8 Cambio unslipped, 18 eroded, 3 Tinaja red sherds, and 1 Cambio group jar rim and neck sherd (Cambio unslipped or Encanto striated).

EZ-4B-3 (Guillot Vassaux, 2008)

Location: Extension to S of EZ-4B-1.

Dimensions: 0.5 × 0.5 m.

Orientation: 350° of N.

Objectives: To explore the leveling surface encountered in EZ-4B-1.

Illustrations: Figure A.7.

Results:

EZ-4B-3-1: Dark grayish-brown (10YR 4/2) humus, thick in texture and granular in consistency. Ca. 0.2 m thick. Terminated with a change in soil.

EZ-4B-3-2: Grayish-brown (10YR 5/2) earth, medium in texture and compact in consistency, with limestone pebbles and some stones of larger size. Ca. 0.11 m thick. Terminated with a change in soil.

EZ-4B-3-3: Light brownish gray (10YR 6/2) earth of medium-fine texture and compact consistency, mixed with mud, limestone pebbles, and larger stones. Ca. 0.27 m thick. 9 chert flakes, 1 fragment of obsidian, and 19 sherds were recovered: 8 Cambio unslipped, 7 eroded, 2 Infierno black, 1 Saxche/Palmar orange polychrome, and 1 Tinaja red sherd.

Sub-operation C: Structure M3-4

Description and objectives

Sub-operation C corresponded to excavations on and near Str. M3-4, on the eastern side of Las Palmitas' eastern plaza. These consisted of a single test unit excavated by Alejandro Guillot Vassaux (2008: 108 – 109) in 2008 (EZ-4C-1) behind the building and a second unit excavated by Nicholas Carter and Yeny Myshell Gutiérrez Castillo (2010: 68 – 70) on the mound itself. Guillot Vassaux' excavation aimed to discover a hypothetical midden rich in chronologically informative cultural material, but, unfortunately, relatively few artifacts were recovered. Carter and Gutiérrez Castillo sought to clarify the chronology, construction sequence, and architecture of the building, including determining whether it would have obstructed lines of sight through the open central passage of Str. M3-7 to the central doorway or windows of Str. M3-6.

EZ-4C-1 (Guillot Vassaux, 2008)

Location: Behind Str. M3-4, 2.4 m E of the mound.

Dimensions: 2 × 1 m.

Orientation: 350° of N.

Objectives: To uncover a hypothetical midden behind Str. M3-4.

Illustrations: Figure A.8.

Results:

EZ-4C-1-1: Dark grayish-brown (10YR 4/2) humus of thick texture and granular consistency. Ca. 0.08 m thick. 5 chert flakes, 1 fragment of obsidian, and 6 eroded sherds were reported to have been recovered.

EZ-4C-1-2: Grayish-brown (10YR 5/2) earth of medium texture and soft consistency. Ca. 0.13 m thick. 9 chert flakes, 1 fragment of obsidian, 1 ceramic bead, 1 carbon sample, and 60 eroded sherds were reported to have been recovered.

EZ-4C-1-3: Gray (10YR 6/1) earth of fine texture and soft consistency. Ca. 42 cm thick. Terminated with the exposure of bedrock 0.65 m below the surface at the center of the unit. 3 chert flakes, 1 fragment of stucco, 1 carbon sample, and 59 eroded sherds were reported to have been recovered.

Note: The ceramics reported in Guillot Vassaux (2008) for this unit could not be located in 2011, when the present author conducted a new typological analysis of all available sherds from Las Palmitas. Guillot Vassaux (2008: 108) tentatively dated the ceramics from all three lots of

EZ-4C-1 to the Late Classic period; a mix of Late and Terminal Classic types seems likely given the contents of other deposits below the plaza.

EZ-4C-2 (Carter and Gutiérrez Castillo, 2010)

Location: On the W side of Str. M3-4, on the mound's E-W axis.

Dimensions: 1 × 2 m.

Objectives: To elucidate the chronology and architectural sequence of Str. M3-4.

Illustrations: Figures A.9 and A.10.

Results:

EZ-4C-2-1: Grayish-brown (7.5 YR 5/2) humus, organic in texture, with some limestone pebbles. A line of worked stone blocks, considerably eroded, was visible at the surface, running N-S across the mound. The soil was the same on either side of the line, which was left intact. Terminated with a change in soil at NW 0.9, NE 1.0, SW 0.46, SE 0.44, and CE 0.4 m below a datum defined at the surface of the soil in the unit's NE corner. 3 Cambio unslipped and 1 Pozo unslipped sherd were recovered.

EZ-4C-2-2: Limestone pebbles and rubble fill in a matrix of light gray (7.5YR 7/1) earth, softer and finer in texture than the humus. This level was interpreted as the surface of the building platform, badly disrupted by bioturbation. West of the line of stones, this lot terminated at NW 0.7, NE 0.88, SW 0.82, SE 0.84, and CE 0.83 m below the datum with a change in the matrix and the discovery of a level of irregular stones larger than those above. 1 Azote orange, 1 Encanto striated, 3 eroded, and 1 Tinaja red sherd were recovered.

EZ-4C-2-3: Large, irregular pieces of limestone in a matrix of light gray (5YR 7/1), soft, sandy earth, loosely packed around the stones and including an admixture of degraded stucco. The stucco was interpreted as the remains of a decayed floor, although it could not be determined whether EZ-4C-2-2 and EZ-4C-2-3 corresponded to two or more distinct floors or whether the former lot simply represented a more disturbed portion of the latter. Terminated at NW 1.38, NE 1.36, SW 1.37, SE 1.35, and CE 1.35 m below the datum with the discovery of a well-preserved stucco floor. 2 flakes of chert and 16 sherds were recovered: 9 Cambio unslipped, 2 Infierno black, 3 Pozo unslipped, and 2 Tinaja red.

EZ-4C-2-4: Lot 4 consisted of a white (2.5Y 8/1) stucco floor, the floor of the plaza, underlying Str. M3-4, and the fill beneath it down to bedrock. This consisted of a thin layer of gray earth. Bedrock was encountered, terminating the lot, at NW 1.45, NE 1.44, SW 1.5, SE 1.48, and CE 1.41 m below the datum. The plaza floor was thus placed nearly on top of the bedrock.

Sub-operation D: Structure M3-7

Description and objectives

Sub-operation D corresponds to work conducted in and around Str. M3-7. Units in this sub-operation were excavated in 2008 by Alejandro Guillo Vassaux (2008: 109 – 113), in 2009 by Fabiola María Quiroa Flores (2009: 69 – 71), and in 2010 and 2011 by Nicholas Carter and Yeny Myshell Gutiérrez Castillo. In all four seasons, excavations

aimed to clarify the architectural sequence and chronology of Str. M3-7 and associated occupation.

EZ-4D-1 (Guillot Vassaux, 2008)

Location: In the mouth of the looters' trench near the NE corner of Str. M3-7, in front of the entrance to the tunnel.

Dimensions: 0.9 × 1 m.

Orientation: 357° of N.

Objectives: To locate the bedrock in this portion of the complex, to determine how many construction phases were represented in Str. M3-7, and to recover ceramic material to assist in dating the building.

Illustrations: Figure A.11.

Results:

EZ-4D-1-1: Sandy, light gray (10YR 7/1) earth of medium texture and soft consistency, containing fill of small chunks of limestone and larger blocks. Ca. 0.67 m thick. Terminated with a change in the matrix. 55 sherds were recovered: 18 Cambio unslipped, 12 Encanto striated, 5 eroded, 1 unidentified polychrome, 1 Saxche/Palmar orange polychrome, 17 Tinaja red, 1 Zacatal cream polychrome, and 1 Cambio group jar rim and neck (Cambio unslipped or Encanto striated).

EZ-4D-1-2: Sandy, gray (10YR 6/1) earth of fine texture and soft consistency, containing architectural fill of small and large chunks of limestone. Ca. 0.31 m thick. Terminated with the exposure of bedrock, 0.98 m below the surface at the center of the unit. 149 sherds were

recovered: 3 Cambio group jar rims and necks (Cambio unslipped or Encanto striated), along with 39 Cambio unslipped, 34 Encanto striated, 20 eroded, 4 Infierno black, 13 Máquina brown, 8 Saxche/Palmar orange polychrome, and 28 Tinaja red sherds.

EZ-4D-2 (Quiroa Flores, 2009)

Location: In the eastern plaza, abutting the north end of the eastern façade of Str. M3-7.

Dimensions: 1.5 × 1.5 m.

Orientation: 290° of N.

Objectives: To recover chronologically significant ceramic data and establish the architectural sequence of Str. M3-7.

Illustrations: Figure A.12.

Results:

EZ-4D-2-1: Looters' spoil mixed with humus, forming a matrix of grayish-brown (10YR 5/2) soil), sandy in consistency and thick in texture. The lot began at NW 0.33, NE 0.27, SW 0.05, SE 0.28, and CE 0.22 m below an arbitrary datum established in the NE corner. It terminated at NW 0.62, NE 0.73, SW 0.61, SE 0.73, and CE 0.65 m below the datum with a change in the matrix. 6 chert flakes, 1 distal fragment of a chert projectile point, 1 obsidian fragment, 7 faunal bone fragments, 2 ceramic figurine fragments, and 146 ceramic sherds were recovered. Comprising the latter were 2 Cambio group (Cambio unslipped or Encanto striated) jar rim and neck sherds and 47 Cambio unslipped, 3 Chaquiste impressed, 16

Encanto striated, 8 eroded, 1 Infierno black, 1 Máquina unslipped, 1 Paixban polychrome, 1 Sahcaba molded-carved, 18 Saxche/Palmar orange polychrome, 47 Tinaja red, and 1 Zacatal cream polychrome sherds.

EZ-4D-2-2: Architectural fill of the plaza floor, consisting of abundant limestone pebbles in a soft, medium-textured mix of mud and sand.

Terminated with a change in the matrix at NW 0.98, NE 1.03, SW 0.97, SE 1.04, and CE 1.0 m below the datum. 13 chert flakes, 1 fragment of obsidian, and 73 sherds were recovered: 1 Altar orange var. Altar, 7 Cambio unslipped, 54 eroded, 1 Máquina brown, 1 Pabellon molded-carved, 2 Sahcaba molded-carved, and 7 Tinaja red.

EZ-4D-2-3: Light gray (10YR 7/2) mix of sand and a little mud, sandy in consistency and fine in texture, with abundant limestone pebbles, probably representing a leveling surface or the plaza floor. Terminated with the exposure of bedrock at NW 1.06, NE 1.12, SW 1.08, SE 1.12, and CE 1.09 below the datum.

EZ-4D-3 (Quiroa Flores, 2009)

Location: In the eastern plaza, in front of the south end of the eastern façade of Str. M3-7.

Dimensions: 1.5 × 1.5 m.

Orientation: 290° of N.

Illustrations: Figure A.13.

Results:

EZ-4D-3-1: Layer of very dark grayish-brown (10YR 3/2) humus of thick texture and organic consistency, with abundant stones and roots. Began at NW 0.04, NE 0.11, SW 0.04, SE 0.12, and CE 0.09 m below the datum and terminated with a change in the matrix at NW 0.2, NE 0.35, SW 0.28, SE 0.33, and CE 0.3 m below the datum. 1 fragment of a mano, 4 chert flakes, and 21 sherds were recovered: 1 Cambio group (Cambio unslipped or Encanto striated) jar rim and neck sherd and 6 Cambio unslipped, 14 eroded, and 3 Tinaja red sherds.

EZ-4D-3-2: Architectural fill of the plaza floor, consisting of limestone pebbles in a matrix of grayish-brown (10YR 5/2) mud and sand, soft and sandy in texture. Terminated with the exposure of bedrock at NW 0.44, NE 0.44, SW 0.4, SE 0.47, and CE 0.45 m below the datum. 4 chert flakes and 7 sherds were recovered: 2 Cambio unslipped and 5 eroded sherds.

EZ-4D-4 (Carter and Gutiérrez Castillo, 2010)

Location: 0.5 m N of the E-W axis of Str. M3-7, against the west side of the southern end of the northern superstructure.

Dimensions: 1 × 2 m.

Objectives: To expose the architecture of Str. M3-7 and date its final phase of occupation.

Illustrations: Figures A.14 and A.15.

Results:

EZ-4D-4-1: Grayish brown (7.5YR 6/1) humus accumulated on the surface of the mound. Terminated with a change in the soil at NW 0.8, NE

0.18, SW 0.82, SE 0.21, and CE 0.5 m below a datum established at the surface of the humus at the SE corner of the unit. 21 sherds were recovered: 1 Azote orange, 10 Cambio unslipped, 1 Encanto striated, 3 eroded, 1 Máquina brown, 1 Saxche/Palmar orange polychrome, and 4 Tinaja red.

EZ-4D-4-2: Gray (5YR 6/1) subhumic earth of finer texture than the humus, with abundant pebbles, gradually transitioning to lighter (5YR 7/1) earth with larger stones and degraded stucco. The lot terminated in the eastern part of the unit with the exposure of the uppermost course of limestone blocks forming the western wall of Str. M3-7's platform, at NW 1.5, NE 1.45, SW 1.5, and SE 1.48 m below the datum. 51 sherds were recovered: 1 Cambio group (Cambio unslipped or Encanto striated) jar rim and neck, 19 Cambio unslipped, 6 Encanto striated, 9 eroded, 1 Máquina brown, 1 eroded polychrome, 13 Pozo unslipped, and 2 Saxche/Palmar orange polychrome.

EZ-4D-4-3: Lot 3 was excavated in front (i.e., west) of the platform wall, occupying a narrower space than the preceding lots. Its matrix consisted of light grayish (5YR 7/1) earth with stones and degraded stucco, the lot being defined by the adjacent wall rather than a change in soil. Terminated with the exposure of the final patio floor at 1.71 m below the datum at each corner. 4 chert flakes were recovered; three showed marks of burning, and of those, one was apparently part of an axe head (Zachary Hruby, personal communication). Also recovered were 52 sherds: 1

Cambio group (Cambio unslipped or Encanto striated) jar rim and neck and 17 Cambio unslipped, 6 Encanto striated, 10 eroded, 1 Máquina brown, 1 eroded polychrome, and 13 Pozo unslipped sherds.

EZ-4D-4-4: Lot 4 corresponds to the final patio platform floor on the west side of the superstructure of Str. M3-7. The matrix of the floor was composed of white (2.5Y 8/1) stucco containing limestone pebbles. It sat immediately atop another, older floor, without an intervening layer of fill. The lot terminated with the exposure of that floor at 1.8 m below the datum.

EZ-4D-4-5: Lot 5 corresponds to the penultimate patio floor, composed of white (2.5Y 8/1) stucco containing limestone pebbles. Unlike the final floor, this floor sat atop a thin layer of fine earth (5YR 7/1) interposed between it and the original patio floor. The lot terminated with the exposure of that floor at 1.92 m below the datum.

EZ-4D-4-6: Lot 6 corresponds to the original floor of the patio, which also served as a foundational floor to Str. M3-7. The floor was composed of white (2.5Y 8/1) stucco with limestone pebbles, and the small section of fill exposed beneath it consisted of stones in a light gray matrix (10YR 7/1). Terminated with the confirmation that another floor did not underlie this one, and for lack of space to work, at NW 1.96, NE 1.94, SW 1.96, SE 1.94, and CE 2.0 m below the datum.

EZ-4D-5 (Carter and Gutiérrez Castillo, 2010)

Location: 0.5 m S of the E-W axis of Str. M3-7, against the west side of the northern end of the southern superstructure.

Dimensions: 1 × 2 m.

Objectives: To expose the architecture of Str. M3-7 and date its final phase of occupation.

Illustrations: Figures A.14 and A.16.

Results:

EZ-4D-5-1: Lot 1 consisted of dark brown (7.5YR 6/1) humus.

Terminated with a change in soil at NW 0.63, NE 0.18, SW 0.62, and CE 0.34 m below a datum established at the surface of the soil at the southeast corner. 7 sherds were recovered: 1 Augustine red, 1 Cambio unslipped, 1 Encanto striated, and 4 eroded sherds.

EZ-4D-5-2: Lot 2 corresponded to the soil beneath the humus and above the uppermost surviving course of limestone blocks comprising the west wall of the Str. M3-7 platform. It included a level of gray (5YR 6/1) earth with abundant pebbles and a lower, thicker stratum of lighter gray (5YR 7/1) earth, rubble, and degraded stucco. As determined by the presence of the wall stones, the lot terminated at NW 1.0, NE 1.0, SW 1.0, SE 1.0, and CE 1.0 m below the datum. 1 chert fragment and 3 ceramic sherds were recovered: 1 Azote orange, 1 Cambio unslipped, and 1 eroded sherd.

EZ-4D-5-3: The matrix of Lot 3 was a continuation of the lighter gray (5YR 7/1) mix of earth and degraded stucco in Lot 2, and like it contained architectural rubble. Terminated at NW 1.32, NE 1.22, SW 1.21, Se 1.2,

and CE 1.32 m below the datum. 18 sherds were recovered: 5 Cambio unslipped, 2 Encanto striated, 3 eroded, 1 eroded polychrome, and 1 red-on-orange bichrome of an unidentified type.

EZ-4D-6 (Carter and Gutiérrez Castillo, 2010)

Location: 0.5 m S of the E-W axis of Str. M3-7, on the east side of the northern end of the southern superstructure.

Dimensions: 1.5 × 1.5 m.

Objectives: To expose the architecture of Str. M3-7 and date its final phase of occupation.

Illustrations: Figures A.17 and A.18.

Results:

EZ-4D-6-1: Dark gray (7.5YR 6/1) humus and limestone pebbles.

Terminated with a change in soil at NW 0.02, NE 0.09, SW 0.02, and SE 0.01 m below a datum established at the surface of the soil in the SW corner of the unit. 7 sherds were recovered: 4 Cambio unslipped, 2 eroded, and 1 Tinaja red.

EZ-4D-6-2: Lot 2 included earth, rubble, and pebbles accumulated on top of the floor of the central passage of Str. M3-7. The soil color changed from light greenish gray (GLEY 1 10Y 7/1) in the upper part of the lot to light gray (5Y 7/1) lower down. The matrix included a quantity of degraded stucco, but most of the stucco exposed on the inner surface of the wall of the superstructure was preserved. Terminated with the exposure of a possible floor at NW 1.62, NE 1.65, SW 1.6, SE 1.7, and CE

1.6 m below the datum. 10 sherds were recovered: 2 Cambio unslipped, 1 Encanto striated, 4 eroded, 1 Payaso orange-brown, 1 Pozo unslipped, and 1 Tinaja red.

EZ-4D-6-3: Lot 3 corresponded to a stratum of light gray (7.5YR 7/1) earth, fine and soft, which was interpreted as a possible degraded stucco floor. The lot terminated with the discovery of a much better preserved floor at NW 1.79, NE 1.85, SW 1.76, SE 1.8, and CE 1.8 m below the datum. 1 chert flake and 1 Cambio unslipped sherd were recovered.

EZ-4D-6-4: Lot 4 was opened with the discovery of a grayish-white (2.5Y 8/1) stucco floor containing limestone pebbles. Below the floor was encountered a layer of fill, with abundant pebbles in a matrix of gray (5Y 7/1) earth. The lot terminated with the exposure of a stucco floor, 1.9 m below the datum. For want of time, the floor was left intact and excavation ceased with its exposure. 1 chert flake was recovered.

EZ-4D-7 (Carter and Gutiérrez Castillo, 2010)

Location: An extension to the E of the SE corner of EZ-4D-6.

Dimensions: 0.6 × 0.8 m

Objectives: To expose the face of the eastern wall of the southern gallery of Str. M3-7.

Illustrations: Figures A.17 and A.18.

Results:

EZ-4D-7-1: Humus (7.5YR 6/1) accumulated on the surface of the mound. Terminated with a change in soil at NW 0.68, NE 1.16, SW 0.7, and SE

1.2 m below the datum in the SW corner of EZ-4D-6. 6 sherds were recovered: 2 Cambio unslipped, 1 Encanto striated, 2 eroded, and 1 Tinaja red.

EZ-4D-7-2: Rubble and earth accumulated on the ruined wall and in front of its surviving face. The soil color changed from light greenish gray (GLEY 1 10Y 7/1) in the upper part of the lot to light gray (5Y 7/1) lower down. Terminated at NW 0.9, NE 1.98, SW 0.91, SE 2.0, and CE 2.1 m below the datum. 6 sherds were recovered: 1 Cambio unslipped, 1 Harina cream, 2 Saxche/Palmar orange polychrome, and 2 Tinaja red.

EZ-4D-8 (Carter and Gutiérrez Castillo, 2010)

Location: Overlapping the southeast corner of the northern gallery of Str. M3-7.

Dimensions: 2.5 × 2.0 m.

Objectives: To expose the face of the eastern wall of the southern gallery of Str. M3-7.

Illustrations: Figure A.19.

Results:

EZ-4D-8-1: Dark (10YR 4/2) humus accumulated on the surface of the mound. Terminated with a change in soil at NW 0.47, NE 1.06, SW 0.52, SE 0.89, and CE 0.65 m below a datum established at the surface at the SW corner of the unit.

EZ-4D-8-2: Rubble and pebbles in a matrix of gray (10YR 5/3) earth mixed with degraded stucco. Terminated with a change in soil at NW 0.71, NE 1.18, SW 0.73, SE 0.89, and CE 0.89 m. Excavation in this lot

exposed the southeastern jamb of the narrow room running N from the central passage between the galleries of Str. M3-7. From the condition of this ruined jamb, it was evident that part of the wall had fallen outward, towards the east. A fallen vault stone was also exposed. 1 carbon sample was recovered.

EZ-4D-8-3: Light grayish-brown (10YR 6/2) earth, fine, with stones. Terminated at NW 1.22, NE 1.3, SW 0.76, and SE 1.38 m below the datum. 12 ceramic sherds were recovered: 5 Cambio unslipped, 1 Encanto striated, 4 eroded, and 2 Tinaja red.

EZ-4D-9 (Carter and Gutiérrez Castillo, 2010)

Location: Extension to the W of the SW corner of EZ-4D-4.

Dimensions: 0.5 x 1.0 m.

Objectives: To facilitate investigations of the west face of the superstructure of Str. M3-7.

Illustrations: Figures A.14 and A.15.

Results:

EZ-4D-9-1: Gray (7.5YR 6/1) humus, organic in texture. Terminated at NW 1.09, NE 0.87, SW 1.1, and SE 0.82 m below the EZ-4D-4 datum.

EZ-4D-9-2: Gray earth (5YR 6/1 changing to 5YR 7/1 deeper in the lot) with pebbles and degraded stucco, the latter especially abundant in the lower part of the lot. Terminated with the exposure of a floor at 1.71 m below the datum. 15 sherds were recovered: 10 Cambio unslipped, 4 Encanto striated, and 1 Infierno black.

EZ-4D-9-3: Lot 3 corresponds to the final patio platform floor on the west side of the superstructure of Str. M3-7 (designated EZ-4D-4-4 in Unit 4).

The matrix of the floor was composed of white (2.5Y 8/1) stucco containing limestone pebbles. It sat immediately atop another, older floor, without an intervening layer of fill. The lot terminated with the exposure of that floor at 1.8 m below the datum. Along with pebbles, 10 sherds were incorporated into the material of the floor: 2 Cambio unslipped, 3 Encanto striated, 1 eroded polychrome, 1 Saxche/Palmar orange polychrome, 2 Tinaja red, and 1 Zacatal cream polychrome.

EZ-4D-9-4: Lot 4 corresponds to the penultimate patio floor, composed of white (2.5Y 8/1) stucco containing limestone pebbles (designated EZ-4D-4-5 in Unit 4). Unlike the final floor, this floor sat atop a thin layer of fine earth (5YR 7/1) interposed between it and the original patio floor. The lot terminated with the exposure of that floor at 1.92 m below the datum.

Unlike in Unit 4, the original patio floor in Unit 9 was left intact and excavation here ceased with its exposure.

EZ-4X-1 and EZ-4X-2 (Guillot Vassaux, 2008, and Carter and Gutiérrez Castillo, 2010)

Location: Cleaning of the exterior looters' trench and tunnel near the NE corner of Str. M3-7.

Dimensions: 6 × 1.8 m.

Orientation: 267° of N.

Objectives: To clean the debris left by the looters and recover remaining ceramic material.

Illustrations: Figure A.11.

Results:

EZ-4X-1-1: Unit 1 was defined as the N and S profiles of the looters' trench along with the earth accumulated at the base of the trench walls. Sifting this earth produced 7 sherds: 1 Encanto striated, 4 eroded, and 1 Tinaja red sherd.

EZ-4X-2-1: Unit 2 was defined as the interior of the looters' tunnel. Cleaning inside the tunnel recovered 80 ceramic sherds: 2 Cambio group jar rims and necks (Cambio unslipped or Encanto striated) and 74 Cambio unslipped, 1 Corozal incised, 29 Encanto striated, 15 eroded, 2 Infierno black, 3 Máquina brown, 4 Payaso orange-brown, 4 eroded polychrome, 3 Saxche/Palmar orange polychrome, and 34 Tinaja red sherds.

EZ-4X-14 (Carter and Gutiérrez Castillo, 2011)

Location: Cleaning of the looters' tunnel near the SE corner of Str. M3-7.

Dimensions: Ca. 5.5 m from the tunnel mouth to its end in the fill of the patio platform.

Illustrations: Figure A.20.

Results:

EZ-4X-14-1: This unit and lot correspond to cleaning and collection activities inside the tunnel. New excavations were not undertaken. Various chert flakes, faunal remains, carbon samples, and 153 ceramic sherds were recovered: 7 Cambio group (Cambio unslipped or Encanto striated) jar rim and neck sherds and 66 Cambio unslipped, 31 Encanto striated, 10 eroded,

2 Paixban polychrome, 1 red-on-orange bichrome of unidentified type, 5 Saxche-Palmar orange polychrome, 24 Tinaja red, and 5 Zacatal cream polychrome sherds.

Sub-operation E: Structure M3-1

Description and objectives

Sub-operation E corresponds to work conducted in and around Str. M3-1, the pyramid at the north end of Las Palmitas' eastern plaza. Units in this sub-operation were excavated in 2009 by Fabiola María Quiroa Flores (2009: 71 – 73), and in 2010 and 2011 by Nicholas Carter and Yeny Myshell Gutiérrez Castillo. In all four seasons, excavations aimed to clarify the architectural sequence and chronology of Str. M3-7 and associated occupation.

EZ-4E-1 (Quiroa Flores, 2009)

Location: In the plaza at the base of the west side of Str. M3-1, slightly west of the pyramid's N-S axis.

Dimensions: 1.5 × 1.5 m.

Orientation: 8° of N.

Illustrations: Figure A.21.

Results:

EZ-4B-1-1: Very dark grayish-brown (10YR 3/2) humus, organic in consistency and thick in texture, mixed with the rubble of the collapsed building. The lot began at NW 0.05, NE 0.09, SW 0.07, SE 0.11, and CE 0.07 below an arbitrary datum in the NE corner of the unit and terminated at NW 0.28, NE 0.31, SW 0.31, SE 0.31, and CE 0.33m below the same

datum, by which point bedrock was already exposed in the eastern side of the unit. 20 sherds were recovered: 1 Augustine red, 3 Cambio unslipped, 1 Encanto striated, and 15 eroded.

EZ-4B-1-2: Plaza fill excavated in the western half of the unit: a mix of mud and sand, grayish-brown (10YR 5/2) in color, soft and of medium-thick texture, with abundant limestone pebbles. This fill represents a leveling stratum preparatory to the now-disintegrated plaza floor.

Terminated at NW 0.7, NE 0.31, SW 0.39, SE 0.31, and CE 0.41 m below the datum.

EZ-4E-2 (Quiroa Flores, 2009)

Location: At the base of the north side of Str. M3-1, in the terrace behind the structure, more or less on the N-S axis of the building.

Dimensions: 1.5 × 1.5 m.

Orientation: 180° of N.

Illustrations: Figure A.22.

Results:

EZ-4E-2-1: Very dark brown (10YR 2/2) humus, soft and organic in consistency and thick in texture. Began NW 0.12, NE 0.13, SW 0.09, SE 0.08, and CE 0.18 m below an arbitrary datum in the SE corner of the unit. Terminated with a change in the matrix at NW 0.33, NE 0.36, SW 0.35, SE 0.34, and CE 0.36 m below the datum. 2 chert flakes, 1 obsidian fragment, 1 anthropomorphic figurine, and 100 sherds were recovered: 1 Cambio group (Cambio unslipped or Encanto striated) jar rim and neck

and 25 Cambio unslipped, 3 Encanto striated, 72 eroded, and 1 Tinaja red sherds.

EZ-4E-2-2: Lot 2 corresponded to the terrace fill: abundant limestone pebbles in a matrix of very dark grayish-brown (10YR 3/2) mud and sand, medium-thick in texture. Terminated at NW 0.6, NE 0.59, SW 0.57, SE 0.4, and CE 0.54 m below the datum. 2 chert fragments, 1 obsidian fragment, and 75 ceramic sherds were recovered: 1 Cambio group (Cambio unslipped or Encanto striated) jar rim and neck and 26 Cambio unslipped, 5 Encanto striated, and 43 eroded sherds.

EZ-4E-5 (Carter and Gutiérrez Castillo, 2010)

Location: W of the central staircase of Str. M3-1, on the south side of the building, at the base of the lowest terrace of the pyramid.

Dimensions: 2 × 1 m.

Illustrations: Figure A.24.

Results:

EZ-4E-5-1: Reddish-gray (5YR 5/2) humus with abundant pebbles. 1 chert nodule with partial cortex and 6 ceramic sherds were recovered: 2 Cambio unslipped and 4 eroded.

EZ-4E-5-2: Dark reddish-gray (7.5YR 5/2) earth with abundant pebbles and some larger, eroded blocks apparently fallen from above. 12 chert fragments and 56 ceramic sherds were recovered: 37 Cambio unslipped, 7 Encanto striated, 5 eroded, 1 Saxche/Palmar orange polychrome, 5 Tinaja red, and 1 Zacatal cream polychrome. Terminated at NW 0.55, NE 0.52,

SW 1.48, SE 1.42, and CE 0.84 m below a datum established at the surface of the soil at the NE corner of the unit.

EZ-4E-6 (Carter and Gutiérrez Castillo, 2010)

Location: At the base of the central stairway of Str. M3-1, on the south side of the building, on its N-S axis.

Dimensions: 2.25 × 1.5 m.

Illustrations: Figures A.25 and A.26.

Results:

EZ-4E-6-1: Reddish-gray (5YR 5/2) humus with few pebbles. Terminated with a change in the soil at NW 0.1, NE 0.08, SW 1.23, SE 1.2, and CE 0.66 m below a datum established at the surface at the NW corner of the unit. 8 sherds were recovered: 4 Cambio unslipped, 1 Encanto striated, 1 eroded, and 2 Tinaja red.

EZ-4E-6-2: Dark reddish-gray (7.5YR 5/2) earth with abundant pebbles and stones of varying size. Terminated with the apparent surfaces of the steps, much disrupted by human activity or natural processes except at the north end of the unit, and at the plaza floor. These depths were NW 0.48, NE 0.51, SW 1.06, SE 1.56, and CE 0.9 m below the datum. 9 sherds were recovered: 6 Cambio unslipped, 1 Encanto striated, and 2 eroded sherds.

EZ-4E-6-3: Architectural fill consisting of abundant limestone pebbles in a light gray (7.5YR 7/1) mix of lime and mud. Terminated at NW 1.76, NE 1.76, SW 1.78, SE 1.78, and CE 1.76 m below the datum with the discovery of a stucco floor. 1 chert fragment and 39 sherds were

recovered: 10 Cambio unslipped, 1 Encanto striated, 3 eroded, 1 Máquina brown, 1 Pabellon molded-carved, 1 unidentified polychrome, 11 Saxche/Palmar orange polychrome, 10 Tinaja red, and 1 Zacatal cream polychrome.

EZ-4E-6-4: Lot 4 includes the plaza floor underlying the stairs of Str. M3-1, made of white (2.5Y 8/1) stucco, along with the thin stratum of grayish (7.5YR 8/1) earth beneath it. Terminated with the exposure of bedrock at NW 1.92, NE 1.94, SW 2.06, SE 2.04, and CE 2.0 m below the datum. 3 chert fragments and 12 ceramic sherds were recovered: 4 Cambio unslipped, 3 Encanto striated, 4 eroded, and 1 Infierno black.

EZ-4E-7 (Carter and Gutiérrez Castillo, 2010)

Location: Extension to S of EZ-4E-6.

Dimensions: 0.25 × 1.5 m.

Illustrations: Figures A.25 and A.26.

Results:

EZ-4E-7-1: Reddish-gray (5YR 5/2) humus with few pebbles. Terminated with a change in soil at NW 1.23, NE 1.2, SW 1.2, SE 1.4, and CE 1.3 m below the EZ-4E-6 datum. 4 chert fragments and 13 ceramic sherds were recovered: 4 Cambio unslipped, 1 Encanto striated, 6 eroded, 1 eroded polychrome, and 1 Tinaja red.

EZ-4E-7-2: Dark reddish-gray (7.5YR 5/2) earth with abundant pebbles. Terminated with exposure of the plaza floor at NW 1.62, NE 1.6, SW 1.65, SE 1.7, and CE 1.68 m below the EZ-4E-6 datum. 67 sherds were

recovered: 36 Cambio unslipped, 7 Encanto striated, 16 eroded, 1 Pozo unslipped, and 7 Tinaja red.

EZ-4E-7-3: Architectural fill consisting of abundant limestone pebbles in a light gray (7.5YR 7/1) mix of lime and mud. Terminated at NW 1.86, NE 1.97, SW 1.85, SE 2.02, and CE 1.91 m below the EZ-4D-6 datum. 33 sherds were recovered: 20 Cambio unslipped, 2 Encanto striated, 5 eroded, and 6 Tinaja red.

EZ-4E-8 (Carter and Gutiérrez Castillo, 2010)

Location: “Window” opened in the west wall of EZ-4X-4 (see below), which corresponds to the main looters’ tunnel in Str. M3-1.

Dimensions: 0.3 × 0.3 m.

Illustrations: Figure A.32.

Results:

EZ-4E-8-1: Layer of black mud (7.5YR 2.5/1), ca. 0.1 m thick, on top of a cache of feline bones. 1 burnt fragment of chert and 1 eroded sherd were recovered from this layer.

EZ-4E-8-2: Black mud (7.5YR 2.5/1) encasing 13 feline vertebrae (Sarah Newman, personal communication), 1 chert nodule with partial cortex, and several partially burnt pellets of tree resin.

EZ-4E-9 (Carter and Gutiérrez Castillo, 2011)

Location: At the summit of Str. M3-1, immediately outside the remains of the vault, on the building’s N-S axis.

Dimensions: 1.25 × 0.75 m.

Illustrations: Figure A.27.

Results:

EZ-4E-9-1: Dark grayish-brown (10YR 4/2) humus containing blocks and fill stones fallen from the walls and vault of the shrine. Terminated with a change in soil at NW 0.48, NE 0.45, SW 0.46, SE 0.43, and CE 0.4 m below a datum established at the surface of the soil in the NE corner of the unit. Various chert fragments and 3 sherds were recovered: 2 eroded and 1 Tinaja red.

EZ-4E-9-2: Grayish-brown (10YR 5/2) earth, sandy and pebbly, with blocks and architectural fill stones fallen from the walls and vault. Some of the fallen stones bore patches of dark gray stucco, fine in texture. Terminated with a change in soil at NW 0.53, NE 0.55, SW 0.4, SE 0.43, and CE 0.37 below the datum. Various chert fragments and 2 sherds were recovered: 1 eroded and 1 red-on-orange bichrome of an unidentified type.

EZ-4E-9-3: Light brown (7.5YR 6/4) soil containing large limestone blocks fallen from the walls and vault. Terminated with the exposure of the superstructure floor at 1.16 m below the datum in all parts of the unit. 2 eroded sherds were recovered.

EZ-4E-10 (Carter and Gutiérrez Castillo, 2011)

Location: Abutting the S base of Str. M3-1's superstructure, immediately E of EZ-4E-9, so that the SE corner of EZ-4E-9 was the NW corner of EZ-4E-10, and the N side of EZ-4E-10 was defined by the base of the superstructure.

Dimensions: 1.5 × 1 m.

Illustrations: Figures A.27 and A.28.

Results:

EZ-4E-10-1: Dark grayish-brown (10Y 4/2) humus. Terminated with a change in soil at NW 0.66, NE 0.69, SW 1.6, SE 1.58, and CE 0.75 m below an arbitrary datum established on the S wall of Str. M3-1.

EZ-4E-10-2: Grayish-brown (10YR 5/2) earth and rubble fallen from the superstructure. Terminated with a change in soil at NW 1.1, NE 1.12, SW 1.07, SE 1.71, and CE 1.4 m below the datum. Carbon samples, chert fragments, and 9 ceramic sherds were recovered: 2 Cambio unslipped, 4 eroded, and 3 Tinaja red.

EZ-4E-10-3: A matrix of light grayish-brown (10YR 6/2) earth and degraded stucco. Stones present in this layer included blocks fallen from the superstructure and the fill stones of the pyramid's terrace. The latter were somewhat disturbed by roots and the face of the terrace—presumably the source of the degraded stucco—was badly eroded, but the compactness of the stones compared to those in higher lots made their architectural function clear. Terminated at NW 2.65, NE 2.68, SW 2.64, SE 2.7, and CE 2.68 m below the datum.

EZ-4X-3 (Carter and Gutiérrez Castillo, 2010)

Location: EZ-4X-3 denotes the area in front of the mouth of the looters' tunnel in the base of Str. M3-1, bounded on either side by spoil piles and, near the tunnel entrance, by lowest terrace of the pyramid.

Illustrations: Figures A.29, A.30, and A.31.

Results:

EZ-4X-3-1: This lot corresponded to cleaning and documentation of the E and W trench walls. 35 sherds were recovered: 14 Cambio unslipped, 8 Encanto striated, 5 eroded, 1 Infierno black, and 7 Tinaja red.

EZ-4X-4 (Carter and Gutiérrez Castillo, 2010)

Location: EZ-4X-4 corresponded to the main part of the looters' tunnel in Str. M3-1, beginning at the tunnel mouth and ending where four shorter tunnels branched off.

Illustrations: Figures A.29, A.30, and A.31.

Results:

EZ-4X-4-1: The E and W tunnel walls were documented. Most of the visible fill consisted of gray or black bajo mud, laid down in distinct layers, both containing abundant stones and pebbles. In various parts of the fill, thin layers of lime and pebbles were visible, perhaps corresponding to individual basketfuls. 26 ceramic sherds were recovered: 9 Cambio unslipped, 2 Encanto striated, 7 eroded, 1 Infierno black, 1 Máquina brown, 5 Tinaja red, and 1 Zacatal cream polychrome.

EZ-4X-5 (Carter and Gutiérrez Castillo, 2010)

Location: EZ-4X-5 corresponds to the western branch of the looters' tunnel in Str. M3-1, extending roughly W from the N end of EZ-4X-4.

Illustrations: Figure A.29.

Results:

EZ-4X-5-1: The fill in this tunnel was similar to that exposed in EZ-4X-4-1. The looters destroyed much of the plaza floor underneath the pyramid, exposing bedrock. Various carbon samples were recovered and a plan drawing made, but the walls of the tunnel were not documented for lack of time.

EZ-4X-6 (Carter and Gutiérrez Castillo, 2010)

Location: EZ-4X-6 corresponds to the northwestern branch of the looters' tunnel in Str. M3-1, extending roughly N from the N end of EZ-4X-4 before turning sharply W.

Illustrations: Figure A.29.

Results:

EZ-4X-6-1: This section of tunnel had partially collapsed following its excavation, and it was judged too dangerous to enter. Its plan was documented, so far as possible, from the end of EZ-4X-4, but no material was recovered and the tunnel's walls were not drawn in profile.

EZ-4X-7 (Carter and Gutiérrez Castillo, 2010)

Location: EZ-4X-7 corresponds to the northeastern branch of the looters' tunnel in Str. M3-1, extending roughly NE from the N end of EZ-4X-4 before turning N.

Illustrations: Figures A.29 and A.33.

Results:

EZ-4X-7-1: This section of tunnel was drawn in plan and profile. No sherds or other artifacts were recovered.

EZ-4X-8 (Carter and Gutiérrez Castillo, 2010)

Location: EZ-4X-8 corresponds to the eastern branch of the looters' tunnel in Str. M3-1, extending roughly E from the N end of EZ-4X-4 and opening onto a large "room" excavated in the fill.

Illustrations: Figures A.29 and A.34.

Results: The tunnel and "room" were drawn in plan and one wall of the tunnel was drawn in profile. The looters may have happened upon a cist grave and expanded it in search of other burials, since a neat pile of human bones and the fragments of an almost complete Saxche/Palmar orange polychrome bowl (modally analyzed as EZ-4X-8-1-001; IDAEH complete vessel no. 17.7.88.26) were found in a corner of the chamber. It was not possible to distinguish original burial architecture from the surrounding fill, if any survived.

Sub-operation F: Structure M3-6

Description and objectives

Sub-operation F corresponds to work conducted in 2010 and 2011 by Nicholas Carter and Yeny Myshell Gutiérrez Castillo (2010: 78 – 88; 2011: 22) in Str. M3-6, the multi-roomed palace structure on the west side of Las Palmitas' western patio. These excavations aimed to clarify the architectural sequence and floor plan of the building, as well as to determine the date of its latest occupation phase.

EZ-4F-1 (Carter and Gutiérrez Castillo, 2010)

Location: In the patio in front (E) of Str. M3-6, on the E-W axis of the building, with the W edge of the unit ca. 1.4 m from the exterior wall.

Dimensions: 1.5 × 1.5 m.

Orientation: 0° of N.

Illustrations: Figures A.35 and A.36.

Results:

EZ-4F-1-1: Dark brown (10YR 4/2) humus. 11 chert fragments and 60 sherds were recovered: 19 Cambio unslipped, 8 Encanto striated, 27 eroded, 2 Infierno black, and 4 Tinaja red.

EZ-4F-1-2: Grayish (10YR 7/1) earth. 4 chert fragments and 32 sherds were recovered: 18 Cambio unslipped, 4 Encanto striated, 6 eroded, 1 Infierno black, and 3 Tinaja red.

EZ-4F-1-3: Soft, gray (10YR 6/1) earth with stones. 4 chert fragments and 26 sherds were recovered: 7 Cambio unslipped, 4 Encanto striated, 12 eroded, 1 eroded polychrome, and 2 Tinaja red.

EZ-4F-1-4: Light brownish gray (10YR 6/2) earth with some stones.

Terminated at 1.68 m below the EZ-4F-2 datum (see below) in all parts of the unit with the exposure of a stucco floor. 13 sherds were recovered: 1 Encanto striated, 4 eroded, and 8 Tinaja red.

EZ-4F-2 (Carter and Gutiérrez Castillo, 2010)

Location: Extension to the W of EZ-4F-1, nearly abutting the wall of Str. M3-6.

Dimensions: 1.5 × 1.5 m

Orientation: 0° of N.

Illustrations: Figures A.35, A.36, and A.37.

Results:

EZ-4F-2-1: Dark brown (10YR 4/2) humus with pebbles. Terminated with a change in soil at NW 0.42, NE 1.13, SW 0.49, SE 1.15, and CE 0.74 m

below an arbitrary datum established 0.1 m above the surface of the SW corner of the unit. 21 sherds were recovered: 2 Cambio unslipped, 1 Chaquiste impressed, 1 El Zotz red polychrome, 1 Encanto striated, 10 eroded, 4 Pozo unslipped, and 2 Saxche/Palmar orange polychrome.

EZ-4F-2-2: Grayish (10YR 7/1) earth, soft and granular, with small bits of limestone. Terminated at NW 0.96, NE 1.13, SW 0.99, SE 1.15, and CE 1.15 m below the datum with the discovery of a limestone block roughly in the center of the unit, fallen or removed from the nearby architecture.

EZ-4F-2-3: Lot 3 occupied approximately the eastern half of the unit only, beginning at the eastern edge of the block. Grayish (10YR 7/1) earth, soft and granular, with pieces of limestone. Terminated at NW 1.3, NE 1.41, SW 1.3, SE 1.39, and CE 1.36 m below the datum. 6 sherds were recovered: 5 Cambio unslipped and 1 Payaso orange-brown.

EZ-4F-2-4: Lot 4 began at the eastern edge of the block and extended west to the western side of the unit, but occupied the whole footprint of the unit below Lot 3. It consisted mostly of a lighter earth-limestone mix, almost white (10YR 8/1) and terminated with the exposure of the plaza floor and the step of the entrance to Str. M3-6 at NW 1.44, NE 1.68, SW 1.44, SE 1.68, and CE 1.68 m below the datum. 16 sherds were recovered: 12 Cambio unslipped, 2 Encanto striated, and 2 Harina cream.

EZ-4F-2-5: Lot 5 began with the breakage of the plaza floor, made of white (10YR 8/1) stucco and limestone pebbles. Terminated with the

exposure of an older floor at NW 1.81, NE 1.79, SW 1.82, SE 1.79, and CE 1.81 m below the datum.

EZ-4F-2-6: Lot 6 consisted of the older floor exposed by the removal of Lot 5. This was likewise made of white (10YR 8/1) stucco with limestone pebbles. Terminated at 1.9 m below the datum in all parts of the unit.

EZ-4F-2-7: Gray (10YR 6/1) earth, fine and soft, with stones. Terminated at NW 2.07, NE 1.94, SW 2.04, SE 2.03, and CE 2.14 m below the datum.

46 sherds were recovered: 18 Cambio unslipped, 5 Encanto striated, 10 eroded, 4 Infierno black, 3 eroded polychrome, 3 Saxche/Palmar polychrome, 2 Tinaja red, and 1 Zacatal cream polychrome.

EZ-4F-2-8: Gray (10YR 7/1) earth, fine and soft, with limestone pieces of various sizes. Terminated with a change in soil at NW 2.31, NE 2.32, SW 2.33, SE 2.31, and CE 2.31 m. 7 sherds were recovered: 8 Cambio unslipped, 1 eroded, 1 Saxche/Palmar orange polychrome, and 1 Tinaja red.

EZ-4F-2-9: Light gray (10YR 7/2) earth, fine and soft, with fewer stones than the previous lot. Terminated with the exposure of bedrock at NW 2.53, NE 2.65, SW 2.39, and SE 2.42 m below the datum.

EZ-4F-3 (Carter and Gutiérrez Castillo, 2010)

Location: The eastern edge of EZ-4F-3 was 4.5 m W of the western edge of EZ-4F-2. Its northern edge was aligned with the northern edges of EZ-4F-5, 10, and 11, all of which were aligned with the medial E-W axes of EZ-4F-1, 2, and 6.

Dimensions: 2 × 1 m.

Orientation: 0° of N.

Objectives: To expose the interior architecture of Str. M3-6.

Illustrations: Figures A.35 and A.38.

Results:

EZ-4F-3-1: Black (10YR 4/2) humus with roots and small stones.

Terminated at NW 1.3, NE 1.15, SW 0.44, SE 0.46, and CE 0.96 below an arbitrary datum established at 0.1 m above the surface of the soil in the SE corner of the unit. 5 chert fragments and 13 sherds were recovered: 5 Cambio unslipped, 4 Encanto striated, 3 eroded, and 1 eroded polychrome sherd of unidentified type.

EZ-4F-3-2: Dark grayish-brown (10YR 5/3) earth, fine, soft, and granular, with large and small stones. Terminated at NW 1.33, NW 1.32, SW 1.03, SE 1.38, and CE 1.26 m below the datum. A fallen limestone construction block was encountered at ca. 0.37 m below the datum 10 sherds were recovered: 3 Cambio unslipped, 2 Encanto striated, 1 eroded, and 4 Tinaja red.

EZ-4F-3-3: Gray (10YR 7/1) earth, soft and granular, with pieces of limestone of regular size. Terminated at NW 1.42, NE 1.48, SW 1.53, SE 1.44, and CE 1.45 m below the datum. 1 Tinaja red sherd was recovered.

EZ-4F-3-4: Light gray (10YR 6/2) earth, soft and granular, with fallen masonry blocks in its upper portion. Terminated with a change in the matrix at 1.8 m below the datum in all parts of the unit. 2 carbon samples and 6 ceramic sherds were recovered: 1 Azote orange, 1 Cambio

unslipped, 2 eroded, 1 Saxche/Palmar orange polychrome, and 1 Tinaja red. 54 snail opercula were also recovered from this lot; these were pierced through the center and were interpreted as beads from an ornament.

EZ-4F-3-5: Gray (10YR 7/1), soft, granular earth with stones of varying size. Terminated at NW 2.06, NE 2.04, SW 2.04, SE 2.13 and CE 2.1 m. 5 chert fragments and 2 eroded sherds were recovered.

EZ-4F-3-6: Gray (10YR 7/1) earth, medium in texture, containing pebbles and stones. Fallen construction blocks were encountered throughout the lot. Terminated with the exposure of a floor at NW 2.74, NE 2.75, SW 2.73, SE 2.75, and CE 2.77 m below the datum. This was the elevated floor of Str. M3-6's interior, central room, ca. 32 cm higher than the floor of the exterior room. 16 sherds were recovered: 2 Cambio unslipped, 1 Máquina brown, 2 Payaso orange-brown, 2 Saxche/Palmar orange polychrome, and 7 Tinaja red.

EZ-4F-4 (Carter and Gutiérrez Castillo, 2010)

Location: "Window" excavated westward from the NW corner of EZ-4F-2-4.

Dimensions: 0.3 m high × 0.5 m wide × 0.25 m deep.

Orientation: 0° of N.

Objectives: To investigate the step up to the central doorway of Str. M3-6.

Illustrations: Figures A.35 and A.37.

Results:

EZ-4F-4-1: Rubble in soft, gray (10YR 7/2) earth. Terminated with the exposure of the riser of the elevated floor of Str. M3-6's exterior central room and the determination that there was not a second step.

EZ-4F-5 (Carter and Gutiérrez Castillo, 2010)

Location: Immediately E of EZ-4F-6, with the northern edge of EZ-4F-5 aligned with the E-W axes of EZ-4F-1, 2, and 6, and with the northern edges of EZ-4F-3, 10, and 11.

Dimensions: 1.5 × 1.5 m.

Orientation: 0° of N.

Objectives: To expose the S jamb of the building's central doorway.

Illustrations: Figures A.35 and A.39.

Results:

EZ-4F-5-1: Dark gray (10YR 4/2), granular humus. Terminated with a change in the matrix at NW 0.82, NE 1.14, SW 0.32, and SE 1.02 below a datum specific to the unit and established at the surface at its SW corner. 4 chert fragments and 11 sherds were recovered: 7 Cambio unslipped, 2 eroded, and 2 Saxche/Palmar orange polychrome.

EZ-4F-5-2: Brown (10YR 5/3), granular soil with abundant pebbles and stones. Terminated at NW 1.02, NE 1.18, SW 0.99, SE 1.08, and CE 1.02 below the datum. 7 chert fragments and 9 sherds were recovered: 3 Cambio unslipped, 1 Encanto striated, 4 eroded, and 1 Inferno black.

EZ-4F-5-3: Light gray (10YR 7/1) earth with pebbles, stones, and degraded limestone. Terminated with a change in the matrix and the

exposure of the highest intact courses of stone blocks in the doorjamb at NW 1.19, NE 1.29, SW 1.12, SE 1.25, and CE 1.02 m. Further excavations in this unit occurred in the area north of the jamb, exposing its face but leaving the masonry intact. This left the far eastern section of the unit, which initially appeared not to contain any part of the jamb or exterior wall, temporarily unexcavated; that section was later excavated as Lots 6 and 7 (see below). 5 sherds were recovered from EZ-4F-5-3: 4 Cambio unslipped and 1 eroded.

EZ-4F-5-4: Light brownish gray (10YR 6/2) earth with some stones. Terminated at NW 1.42, NE 1.56, SW 1.53, SE 1.4 m (using the new SW and SE corners of the restricted excavation space), and CE 1.43 m below the datum. 4 chert fragments and 7 sherds were recovered: 1 Cambio unslipped, 4 eroded, and 2 Tinaja red.

EZ-4F-5-5: Light gray (10YR 7/1) earth, soft and fine, with large, fallen masonry blocks and few pebbles. Terminated at NW 2.28, NE 2.35, SW 2.33, SE 2.32, and CE 2.3 m with the exposure of the floor of the central outer room. Near the top of the lot, in the NE section, a zoomorphic figurine whistle was encountered. 10 chert fragments, 2 pierced snail opercula, and 37 sherds were recovered: 13 Cambio unslipped, 5 Encanto striated, 11 eroded, 1 Infierno black, 4 Saxche/Palmar orange polychrome, 1 Tinaja red, and 2 Zacatal cream polychrome.

EZ-4F-5-6: This lot corresponds to the eastern 50 cm of the unit, beginning at the same depth as EZ-4F-5-4. Like that lot, this one contained

light brownish gray (10YR 6/2) earth with some stones. It terminated at NW 1.56, NE 1.54, SW 1.4, and SE 1.5 m below the datum with a change in the matrix. 3 carbon samples, 4 chert fragments, and 8 sherds were recovered: 5 Cambio unslipped, 1 Encanto striated, and 2 Tinaja red.

EZ-4F-5-7: This lot corresponds to the eastern 50 cm of the unit, below EZ-4F-5-6. Like EZ-4F-5-5, it contained light gray (10YR 7/1) earth with pebbles and stones fallen from the architecture above. The exterior (E) courses of stone blocks belonging to the south doorjamb were exposed in this lot and were found to have slumped outwards away from the hearting of the wall. 3 sherds were recovered: 1 Cambio unslipped, 1 Encanto striated, and 1 Tinaja red.

EZ-4F-6 (Carter and Gutiérrez Castillo, 2010)

Location: Westward extension of EZ-4F-2.

Dimensions: 1 × 0.4 m.

Orientation: 0° of N.

Objectives: To expose the step up into the central doorway of Str. M3-6.

Illustrations: Figures A.35, A.36, and A.40.

Results:

EZ-4F-6-1: Dark grayish brown (10YR 4/2) humus. Terminated at NW 0.42, NE 0.58, SW 0.4, SE 0.57, and CE 0.53 m below the EZ-4F-2 datum.

EZ-4F-6-2: Brown (10YR 5/3) earth, granular and soft, with pebbles and alrger stones. Terminated at NW 0.66, NE 0.8, SW 0.66, SE 0.78, and CE

0.73 m below the datum. 1 Saxche/Palmar orange polychrome sherd was recovered.

EZ-4F-6-3: Light brownish gray (10YR 6/2) earth, granular, with pebbles and large stones. Terminated at NW 0.81, NE 1.02, SW 0.94, SE 1.05, and CE 0.92 m below the datum. 1 fragment of an obsidian lancet and 2 ceramic sherds were recovered: 1 eroded and Pozo unslipped.

EZ-4F-6-4: A mix of deteriorated lime and earth, whitish in color (10YR 8/1) and soft in texture, derived from the decay of the edge of the exterior room floor exposed in Unit 5. Terminated at NW 1.35, NE 1.62, SW 1.42, SE 1.66, and CE 1.5 m below the datum. 1 Cambio unslipped and 1 Tinaja red sherd were recovered.

EZ-4F-7 (Carter and Gutiérrez Castillo, 2010)

Location: Extended S from the SW corner of EZ-4F-5, on top of the E wall of Str. M3-6.

Dimensions: 1.5 × 1.5 m.

Orientation: 0° of N.

Objectives: To clarify the construction methods used in building Str. M3-6.

Illustrations: Figure A-35.

Results:

EZ-4F-7-1: Dark grayish brown (10YR 4/2) soil, granular, with pebbles. Terminated at NW 1.77, NE 1.82, SW 0.25, and SE 0.94 m below a datum specific to the unit and established at the SW corner. 3 sherds were recovered: 2 Cambio unslipped and 1 Tinaja red.

EZ-4F-7-2: Light brownish gray (10YR 6/2) earth with lime and pebbles.

Terminated at NW 1.8, NE 2.3, SW 0.6, and SE 1.83 m below the datum.

This lot exposed a preparatory “floor” of polished stucco, closely resembling actual floors, laid down atop the block of the exterior wall before the vault began to be constructed, presumably to create a level surface to support the vault. 8 sherds were recovered: 3 Cambio unslipped, 2 eroded, 2 eroded polychrome, and 1 Tinaja red.

EZ-4F-8 (Carter and Gutiérrez Castillo, 2010)

Location: “Window” extending to N from the NE corner of EZ-4F-5, at the level of the floor exposed in that unit.

Dimensions: 0.2 m high $\times$ 0.3 m wide $\times$ 0.2 m deep.

Orientation: 0° of N.

Objectives: To determine whether the floor extended N.

Illustrations: Figure A.35.

Results:

EZ-4F-8-1: Light gray (10YR 7/2) earth mixed with lime. The floor of the exterior room did indeed extend N towards the other jamb, although it was in poor condition. 1 Cambio group sherd was recovered.

EZ-4F-9 (Carter and Gutiérrez Castillo, 2010)

Location: Extension S from EZ-4F-3, on top of the wall dividing the interior from the exterior central room.

Dimensions: 1 $\times$ 1 m.

Orientation: 0° of N.

Objectives: To clarify the internal architecture of Str. M3-6.

Illustrations: Figures A.35 and A.41.

Results:

EZ-4F-9-1: Dark grayish brown (10YR 4/2) humus with stones.

Terminated at NW 0.98, NE 1.08, SW 0.72, and CE 0.7 m below a datum specific to the unit and established at the surface at the SW corner. 8

sherds were recovered: 2 Cambio unslipped, 1 Encanto striated, 2 eroded, 2 Pozo unslipped, and 1 Tinaja red.

EZ-4F-9-2: Light brownish gray (10YR 6/2) earth with lime and stones.

Terminated with the exposure of intact architectural fill at NW 1.53, NE 1.6, SW 1.24, SE 0.96, and CE 1.52 m below the datum. 1 chert fragment,

1 carbon sample, and 12 sherds were recovered: 1 Azote orange, 3 Cambio unslipped, 1 Encanto striated, 5 eroded, and 2 Tinaja red.

EZ-4F-10 (Carter and Gutiérrez Castillo, 2010)

Location: Extension eastward from EZ-4F-3. Unit 10's E side was 1.6 m W of the W side of EZ-4F-5.

Dimensions: 1.5 × 1.5 m.

Orientation: 0° of N.

Objectives: To clarify the internal architecture of Str. M3-6.

Illustrations: Figure A.35.

Results:

EZ-4F-10-1: Dark grayish brown (10YR 4/2), granular humus.

Terminated at NW 0.67, NE 0.81, SW 0.24, SE 0.44, and CE 0.64 m

below the EZ-4F-3 datum. 4 sherds were recovered: 2 Cambio unslipped, 1 eroded, and 1 Talla incised.

EZ-4F-10-2: Brown (10YR 5/3) earth with pebbles. Terminated at NW 0.68, NE 0.83, SW 0.64, SE 0.69, and CE 0.68 m below the datum. 19 sherds were recovered: 12 Cambio unslipped, 5 eroded, and 2 eroded polychrome.

EZ-4F-10-3: Light brownish gray (10YR 6/2) earth, fine in texture. Terminated at NW 1.98, NE 1.62, SW 1.0, and SE 1.67 m. 2 fallen vault stones were exposed in this lot at the E side of the unit, although they rested on the floor below (exposed in Lot 4). 2 carbon samples, 1 fragment of mineral calcite, and 42 sherds were recovered: 26 Cambio unslipped, 2 Encanto striated, 4 eroded, and 10 Tinaja red sherds.

EZ-4F-10-4: Light gray (10YR 7/1) earth with stones. Terminated with the exposure of the floor of the exterior room (0.32 m lower than that of the interior room) at 2.61 m below the datum in all parts of the unit. 4 sherds were recovered: 1 Cambio unslipped, 2 eroded, and 1 Tinaja red.

EZ-4F-11 (Carter and Gutiérrez Castillo, 2010)

Location: Extension to W of EZ-4F-3, terminating at ca. 0.25 m from the exterior surface of the W wall of Str. M3-6.

Dimensions: 2 × 1 m.

Orientation: 0° of N.

Objectives: To clarify the internal architecture of Str. M3-6.

Illustrations: Figure A.35.

Results:

EZ-4F-11-1: Dark grayish brown (10YR 4/2) humus, granular, with pebbles. Terminated at NW 0.41, NE 0.97, SW 0.32, SE 0.8, and CE 0.73 m below a datum specific to the unit and established at 0.1 m above the surface at the SW corner. The uppermost surviving course of stones in the W wall of Str. M3-6 was encountered at ca. 0.32 m below the datum. The wall was left intact and the NW and SW corners of subsequent lots were located against its interior surface. 1 chert fragment and 4 sherds were recovered: 1 Cambio unslipped, 2 eroded, and 1 eroded polychrome sherd.

EZ-4F-11-2: Brown (10YR 5/3), granular earth with abundant pebbles and stones. Terminated at NW 1.1, NE 1.24, SW 1.11, SE 1.2, and CE 1.14 m below the datum. Limestone blocks fallen from the wall and/or vault were encountered at ca. 0.45 m from the datum, approximately in the center of the unit. 2 chert fragments and 13 sherds were recovered: 8 Cambio unslipped, 4 eroded, and 1 Saxche/Palmar orange polychrome.

EZ-4F-11-3: Light brownish gray (10YR 6/2) earth, fine in texture, with large stones presumably fallen from the architecture, mainly located in the E part of the lot. Terminated at NW 1.53, NE 1.57, SW 1.58, SE 1.55, and CE 1.53 m below the datum. 11 sherds were recovered: 4 Cambio unslipped, 1 eroded, 1 Payaso orange-brown, 2 eroded polychrome, and 3 Tinaja red sherds.

EZ-4F-11-4: Light gray (10YR 7/1) earth, fine and soft, with large and small stones. Terminated with the exposure of the interior floor at NW

2.36, NE 2.35, SW 2.35, SE 2.33, and CE 2.36 m below the datum. A finished limestone block encountered near the bottom of the lot had some surviving stucco on one face, and the greater quantity of other artifacts found in the lot were located below that block. These were 3 chert fragments and 49 sherds: 2 Augustine red, 1 Azote orange, 6 Cambio unslipped, 5 Cambio unslipped, 2 Encanto striated, 9 eroded, 11 Harina cream, 27 Tinaja red, 1 Tolla channeled, and 1 incised sherd in the Cambio group. 1 of the Augustine sherds comprised the rim, neck, and much of the body of a jar, which could have been intact or nearly so at the time the vault collapsed.

EZ-4F-11-5: Lot 5 corresponded to the floor of the interior room, made of white (10YR 8/1) stucco with pebbles. Terminated at 2.7 m in all parts of the unit. 2 large, roughly shaped stone blocks in the W part of the unit could not safely be moved, confining subsequent lots to the E half. These blocks were aligned with one another and with the wall of the building. They sat atop another floor, not well polished, which could have been continuous with the floor of the exterior room exposed in EZ-4F-5. 1 obsidian flake, 4 chert fragments, and 21 sherds were recovered: 9 Cambio unslipped, 1 Encanto striated, 1 eroded, and 10 Tinaja red.

EZ-4F-11-6: Lot 6 corresponded to the floor exposed in the previous lot. This was made of white (10YR 8/1) stucco above a fill of soft, fine, grayish-white earth with very few stones. Terminated at NW 3.18, NE

3.18, SW 3.18, SE 3.18, and CE 3.2 m below the datum. 3 Cambio unslipped sherds were recovered.

EZ-4F-11-7: Bluish gray (GLEY 2 5PB 5/1) bajo mud, very hard and clayey. Excavation was terminated because of safety concerns connected to the looters' tunnel (EZ-4X-10) running below the unit. The lot ended at NW 3.33, NE 3.26, SW 3.33, SE 3.26, and CE 3.34 m below the datum. 3 chert fragments and 19 sherds were recovered: 1 Augustine red, 10 Cambio unslipped, 2 Encanto striated, 2 Infierno black, 1 Máquina brown, 1 eroded polychrome, 1 Saxche/Palmar orange polychrome, and 7 Tinaja red sherds.

EZ-4F-12 (Carter and Gutiérrez Castillo, 2010)

Location: Encompassing the N doorjamb separating the SE and SW rooms of Str. M3-6.

Dimensions: 2 × 2 m.

Orientation: 0° of N.

Objectives: To clarify the architecture of the southern room or rooms of Str. M3-6.

Illustrations: Figure A.42.

Results:

EZ-4F-12-1: Dark grayish brown (10YR 4/2) humus. Terminated at NW 0.34, NE 0.84, SW 0.7, and SE 0.9 m below a datum specific to the unit and established 10 cm above the surface at the NW corner. 1 Tinaja red sherd was recovered.

EZ-4F-12-2: Brown (10YR 5/3) earth. Terminated at NW 0.92, NE 0.96, SW 0.87, SE 1.03, and CE 1.0 m below the datum. Part of the surviving portion of the doorjamb was exposed in this lot at ca. 0.59 m below the datum. 2 Tinaja red sherds were recovered.

EZ-4F-13 (Carter and Gutiérrez Castillo, 2010)

Location: Extension to S of EZ-4F-12.

Dimensions: 0.5 × 2 m.

Orientation: 0° of N.

Objectives: To expose the S doorjamb between the SE and SW rooms of Str. M3-6, which was not discovered in Unit 12.

Illustrations: Figure A.43.

Results:

EZ-4F-13-1: Dark grayish brown (10YR 4/2) humus with abundant pebbles. Terminated at NW 0.7, NE 0.9, SW 0.4, and SE 0.39 m below the EZ-4F-12 datum.

EZ-4F-13-2: Brown (10YR 5/3) earth. Terminated at NW 0.87, NE 1.03, SW 0.64, SE 0.76, and CE 0.75 m.

EZ-4F-13-3: Light brownish gray (10YR 6/2) earth. Terminated at NW 0.9, NE 0.93, SW 0.65, and SE 0.83 m. The S doorjamb was exposed in this lot, in the form of two long stone blocks aligned E-W and parallel to the N jamb. Excavation ceased when it had been established that the jamb did not extend to either side beyond these stones, since there was now

sufficient evidence to reconstruct the dimensions of the building's two southern rooms and the doorway and walls dividing them.

EZ-4F-15 (Carter and Gutiérrez Castillo, 2011; no EZ-4F-14 was ever excavated)

Location: NW corner of the S windowed room of Str. M3-6.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To determine the height of the floor in this room.

Results:

EZ-4F-15-1: Grayish brown (10YR 5/2) earth with degraded lime mortar and broken stones fallen from the vault above. Terminated after ca. 30 cm with the exposure of the floor. 29 sherds were recovered: 7 Cambio unslipped, 3 Encanto striated, 9 eroded, 1 Máquina brown, and 9 Tinaja red.

EZ-4X-9 (Carter and Gutiérrez Castillo, 2010)

Location: EZ-4X-9 corresponded to the extensive looters' tunnel penetrating the western side of Str. M3-6. The looters dug east into the base of the structure at ground level, turning north when they reached a vertical wall of bedrock and ceasing their excavation near the north end of the structure. Because of safety concerns about the northern stretch of the tunnel, only the E-W portion was documented.

Objectives: To document the architecture of Str. M3-6 and date its construction.

Illustrations: Figure A.44.

Results:

EZ-4X-9-1: The south wall of the E-W section of the looters' tunnel was drawn in profile. The fill was found to consist of various colors of gray mud, forming a matrix with abundant stones of every size. Construction methods differed from those observed in the looters' tunnels in Str. M3-1 in that discrete layers of limestone pebbles were rare, while long, narrow gaps in the fill—presumably corresponding to wooden poles, long since decayed—were present here but not in the fill of Str. M3-1. No previous constructions were visible in the fill of the building, but two worked limestone blocks painted on one side with red stucco were noted in the fill. 7 ceramic sherds were recovered from the fill: 2 Saxche/Palmar orange polychrome, 1 Guitarra incised, 1 Máquina brown, 1 Tinaja red, 1 red-slipped vessel of unidentified type, and 1 Zacatal cream polychrome sherd.

EZ-4X-10 (Carter and Gutiérrez Castillo, 2010)

Location: EZ-4X-10 corresponded to the looters' tunnel penetrating the east side of Str. M3-6. The looters tore out part of the wall of the northern windowed room, widening the largest of the three windows. They dug downwards through the floor of the room and into the fill of the building.

Objectives: To document the architecture of Str. M3-6 and date its construction.

Illustrations: Figure A.45.

Results:

EZ-4X-10-1: The north wall of the looters' tunnel was cleaned and drawn in profile. 13 ceramic sherds were recovered: 2 red-on-orange bichrome sherds of unidentified type and 2 Cambio unslipped, 2 Encanto striated, 1

eroded, 1 Saxche/Palmar orange polychrome, 4 Tinaja red, and 1 Zacatal cream polychrome sherd.

Sub-operation G: Structure M3-8

Description and objectives

Sub-operation G corresponded to excavations on and around Str. M3-8. Its objectives were to establish the chronology of the building and its stratigraphic relationships to nearby structures: the palace patio, Str. M3-6 and M3-7, and Str. M3-9 to the north.

EZ-4G-1 (Carter and Gutiérrez Castillo, 2010)

Location: On the axis of Str. M3-8, located entirely on top of the mound near its southern edge.

Dimensions: 1 × 2 m.

Orientation: 0° of N.

Objectives: To establish the chronology and stratigraphy of Str. M3-6.

Illustrations: Figures A.47 and A.48.

Results:

EZ-4G-1-1: Dark grayish brown (10YR 4/2) humus. Terminated with a change in soil at NW 0.03, NE 0.04, SW 0.46, SE 0.48, and CE 0.22 m below a datum established at the surface at the NE corner of the unit. 40 sherds were recovered: 8 Cambio unslipped, 2 Encanto striated, 26 eroded, 1 eroded incised type, 2 Tinaja red.

EZ-4G-1-2: Pinkish gray (10YR 6/2) earth with some stones and pebbles. Terminated with a change in soil at NW 0.25, NE 0.3, and CE 0.42 m

below the datum, and with the exposure of a stucco floor at SW 0.69 and SE 0.69 m. This was interpreted as the original Late Classic patio floor, the renovation floor observed in EZ-4F-2 being absent. It was unclear whether the renovation floor had degraded or whether it had never been deposited at the northern edge of the palace patio. 40 sherds were recovered: 26 Cambio unslipped, 2 Encanto striated, 8 eroded, 1 Canoa incised, and 3 Tinaja red sherds.

EZ-4G-1-3: Light gray (10YR 7/1) earth with abundant stones, extending almost but not quite to the southern end of the unit, and interpreted as the southern platform of the Terminal Classic version of Str. M3-8.

Terminated at NW 0.5 and NE 0.53 m below the datum. 12 sherds were recovered: 6 Cambio unslipped, 3 Encanto striated, 1 eroded polychrome, and 2 Tinaja red sherds.

EZ-4G-1-4: Lot 4 corresponded to the grayish white (2.5Y 8/1) stucco floor of the Late Classic patio, broken through in antiquity prior to the construction of the Terminal Classic version of Str. M3-8, and to a mix of light gray (10YR 7/1) earth, pebbles, and chunks of limestone below the floor. The lot included a boulder, ca 0.65 m on a side, which probably served as part of the foundation of the patio, consistent with the use of other such stones underneath the west wall of Str. M3-6 and in the fill of Str. M3-1. 13 sherds were recovered: 6 Cambio unslipped, 3 Encanto striated, 2 eroded, 1 eroded polychrome, and 1 Tinaja red sherd.

EZ-4G-1-5: Lot 5 was opened with the discovery of human remains, designated Burial 7, in the same matrix of light gray (10YR 7/1) earth as the previous lot. The burial furniture consisted of a small Tinaja red bowl (designated EZ-4G-1-5-001 in the author's modal analysis of ceramics from Las Palmitas and submitted to IDAEH as complete vessel 17.7.88.23) placed in a Máquina brown tripod plate with hollow feet containing rattles (EZ-4G-1-5-003, 17.7.88.24), deposited just north of the decedent's head, along with a barrel-shaped polychrome drinking vase of unidentified type (EZ-4G-1-5-002, 17,7,88.25) deposited near the knees. The lot terminated at 1.3 m in all parts of the unit, a depth arbitrarily chosen after it was evident that all human remains had been recovered. 14 other sherds were recovered from the fill: 1 Cambio group sherd (Cambio unslipped or Encanto striated) and 2 Cambio unslipped, 5 eroded, 1 Payaso orange-brown, 1 eroded polychrome, 1 Saxche/Palmar orange polychrome.

EZ-4G-1-6: Light gray (10YR 7/1) earth, a continuation of the deposit in Lots 4 and 5 above. Terminated with the exposure of bedrock at NW 1.37, NE 1.38, SW 1.2, SW 1.18, and CE 1.37 m below the datum. 1 chert fragment and 4 sherds were recovered: 1 Cambio unslipped, 2 eroded, and 1 Infierno black sherds.

EZ-4G-2 (Carter and Gutiérrez Castillo, 2011)

Location: Near the west end of the Str. M3-8 mound, overlapping the rear wall and the west side wall of the Terminal Classic building, immediately N of EZ-4G-6.

Dimensions: 1.5 × 1 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the Terminal Classic phase of Str. M3-8.

Illustrations: Figures A.46 and A.49.

Results:

EZ-4G-2-1: Dark grayish brown (10YR 4/2) humus and grayish brown (10YR 5/2) subhumic earth. Terminated at NW 0.42, NE 0.4, SW 0.3, SE 0.22, and CE 0.34 m below a master datum established for all units of Sub-operation G. 17 sherds were recovered: 2 Azote orange, 4 Cambio unslipped, 4 Encanto striated, and 7 eroded sherds.

EZ-4G-2-2: Rubble fill in a matrix of light brownish gray (10YR 6/2) earth with degraded stucco. Terminated at 0.55 m in all parts of the unit. 1 eroded sherd was recovered.

EZ-4G-5 (Carter and Gutiérrez Castillo, 2011)

Location: 2 m E of EZ-4G-2, aligned with that unit's N and S sides.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the Terminal Classic phase of Str. M3-8.

Illustrations: Figures A.46, A.50, and A.51.

Results:

EZ-4G-5-1: Dark grayish brown (10YR 4/2) humus and grayish brown (10YR 5/2) subhumic earth. Terminated with the exposure of the Terminal Classic architecture of Str. M3-8 at NW 0.67, NE 0.8, SW 0.28, SE 0.28, and CE 0.28 m below the master datum.

EZ-4G-6 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately S of EZ-4G-2.

Dimensions: 1 × 1.5 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the Terminal Classic phase of Str. M3-8.

Illustrations: Figures A.46 and A.49.

Results:

EZ-4G-6-1: Dark grayish brown (10YR 4/2) humus and grayish brown (10YR 5/2) subhumic earth. Terminated with the exposure of the Terminal Classic architecture of Str. M3-8 at NW 0.3, NE 0.22, SW 0.35, SE 0.34, and CE 0.32 m below the master datum.

EZ-4G-6-2: Rubble fill in a matrix of light brownish gray (10YR 6/2) earth with degraded stucco. Terminated at 0.55 m below the datum in all parts of the unit. 1 Tinaja red sherd was recovered.

EZ-4G-10 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately S. of EZ-4G-6.

Dimensions: 1 × 1.5 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the Terminal Classic phase of Str. M3-8.

Illustrations: Figures A.46 and A.49.

Results:

EZ-4G-10-1: Dark grayish brown (10YR 4/2) humus and grayish brown (10YR 5/2) subhumic earth. Some elements of the Terminal Classic phase of the building were exposed in this lot, but they were less well preserved here than in units to the east. The southern edge of the upper Terminal Classic platform was exposed in the northern half of the unit, while stones to the south represent the lower platform. Terminated with the exposure of the Late Classic patio floor at NW 0.35, NE 0.34, SW 0.35, and SE 0.34 m below the datum. 11 sherds were recovered: 4 Cambio unslipped, 2 Encanto striated, and 5 eroded sherds.

EZ-4G-13 (Carter and Gutiérrez Castillo, 2011)

Location: 2 m E of EZ-4G-10, aligned with that unit's N and S edges.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the Terminal Classic phase of Str. M3-8.

Illustrations: Figures A.46, A.50, and A.51.

Results:

EZ-4G-13-1: Dark grayish brown (10YR 4/2) humus and grayish brown (10YR 5/2) subhumic earth. Terminated with the exposure of the Terminal Classic platform at NW 0.28, NE 0.26, SW 0.48, SE 0.45, and CE 0.42 m below the master datum. 4 sherds were recovered: 1 Cambio unslipped and 3 eroded sherds.

EZ-4G-13-2: Lot 2 was confined to the SW corner of the unit. It included rubble fill in a matrix of light brownish gray (10YR 6/2) earth. 1 eroded and 1 Tinaja red sherd were recovered.

EZ-4G-15 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately S of EZ-4G-13.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the Terminal Classic phase of Str. M3-8.

Illustrations: Figures A.46, A.50, and A.51.

Results:

EZ-4G-15-1: Dark grayish brown (10YR 4/2) humus. Terminated with a change in soil at NW 0.45, NE 0.55, SW 0.6, SE 0.52, and CE 0.51 m below the master datum.

EZ-4G-15-2: Grayish brown (10YR 5/2) subhumic earth. Terminated with the exposure of the Terminal Classic phase of Str. M3-8 at 0.6 m below the datum in all parts of the unit. 8 sherds were recovered: 1 Azote orange, 3 Cambio unslipped, 1 Encanto striated, 1 eroded, 1 Harina cream, and 1 Payaso orange-brown sherd.

EZ-4G-15-3: Rubble fill in a matrix of light brownish gray (10YR 6/2) earth with degraded stucco. Excavated in the W part of the unit only. Terminated with the exposure of the Late Classic patio floor at 0.97 m below the datum in all parts of the excavated area.

EZ-4G-16 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately N of EZ-4G-6.

Dimensions: 1 × 1.5 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the Terminal Classic phase of Str. M3-8.

Illustrations: Figures A.46, A.50, and A.51.

Results:

EZ-4G-16-1: Dark grayish brown (10YR 4/2) humus. Terminated with a change in soil at NW 1.46, NE 1.46, SW 0.54, SE 0.64, and CE 0.9 m below the datum. 1 eroded sherd was recovered.

EZ-4G-16-2: Grayish brown (10YR 5/2) subhumic earth. Terminated with the exposure of the Terminal Classic architecture of Str. M3-8 at NW 1.5, NE 1.5, SW 0.67, SE 0.8, and CE 0.97 m below the datum.

EZ-4G-16-3: Architectural fill of small stones in a matrix of light brownish gray (10YR 6/2) earth, excavated in a small section of the W part of the unit. 1 eroded sherd was recovered.

EZ-4G-17 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately S of EZ-4G-17.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the Terminal Classic phase of Str. M3-8.

Illustrations: Figures A.46, A.50, and A.51.

Results:

EZ-4G-17-1: Dark grayish-brown (10YR 4/2) humus and brownish gray (10YR 5/2) subhumic earth. In most of the unit this lot covered the Terminal Classic architecture of Str. M3-8. Near the southern border of the unit, the edge of the lower Terminal Classic platform was encountered. 4 sherds were recovered: 2 Cambio unslipped and 2 eroded sherds.

EZ-4G-17-2: Brownish gray (10YR 5/2) earth between the southern edge of the Terminal Classic platform and the southern limit of the unit. Terminated with the exposure of the Late Classic patio floor at 0.97 m below the datum in all parts of the unit.

EZ-4G-18 (Carter and Gutiérrez Castillo, 2011)

Location: The E edge of the unit was 1 m W of the W limits of EZ-4G-2 and EZ-4G-6, and its S edge was aligned with the S edge of EZ-4G-6.

Dimensions: 1 × 1.5 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the Terminal Classic phase of Str. M3-8.

Illustrations: Figures A.46 and A.52.

Results:

EZ-4G-18-1: Dark grayish brown (10YR 4/2) humus and brownish gray (10YR 5/2) subhumic earth. Removal of this earth exposed a low wall or parapet of roughly worked stones which connected the Terminal Classic phase of Str. M3-8 to Str. M3-6 to the west.

EZ-4G-18-2: Rubble in grayish brown (10YR 5/2) earth north of the Terminal Classic parapet exposed in Lot 1. 2 eroded sherds were

recovered. Terminated at NW 0.8, NE 0.81, SW 1.1, SE 1.1, and CE 1.1 m below the master datum, with the Late Classic patio floor exposed at 1.1 m.

Sub-operation H: Structure M3-9

Description and objectives

Sub-operation H corresponded to excavations on Str. M3-9, a long platform extending north from the palace patio, and behind it in the corner formed by its connection with the patio talud. Excavations here aimed to recover ceramics from midden deposits which might yield chronologically relevant ceramics, as well as to clarify the architecture of Str. M3-9 and its stratigraphic relationship with the patio group. It was determined that Str. M3-9 consisted of three successive elevated terraces, the highest to the west and the lowest to the east, accessed by two steps leading up from the plaza floor. Its rear wall had masonry foundations but, if a higher structure existed, this was made of perishable materials. The floors of the upper two terraces were determined to be stratigraphically subsequent to the palace patio; the lowest terrace floor was not excavated against the patio talud, but is presumed to have likewise postdated it. The terraces were built and floored in succession, with the higher terraces resting on the lower.

EZ-4H-1 (Carter and Gutiérrez Castillo, 2011)

Location: At the E edge of the Str. M3-9 mound, with its E and W limits aligned with those of EZ-4H-10, and its N limit 1 m S of the S limit of that unit.

Dimensions: 2×2 m.

Orientation: 0° of N.

Objectives: To expose the architecture of the final phase of Str. M3-9.

Illustrations: Figure A.53.

Results:

EZ-4H-1-1: Very dark brown (7.5YR 2.5/2) humus over limestone pebbles. Terminated with a change in soil at NW 1.22, NE 1.84, SW 1.23, SE 1.82, and CE 1.53 m below the master datum for Str. M3-9. 1 fragment of an obsidian lancet, several fragments of chert, and 35 sherds were recovered: 17 Cambio unslipped, 1 Encanto striated, 14 eroded, and 3 Tinaja red.

EZ-4H-1-2: Dark grayish brown (10YR 4/2) subhumic earth with pebbles. The eastern edge of the lowest step of Str. M3-9 was exposed in this lot near the eastern edge of the unit, better preserved in the southern than the northern part. Terminated with the exposure of the building's stairs, much degraded, at NW 1.48, SW 1.35, and CE 1.65 m below the datum, and with the exposure of the Late Classic plaza floor in the eastern part of the unit at NE 2.11 and SE 2.11 m below the datum. Several chert fragments and 1 Cambio unslipped, 2 Encanto striated, 1 Tinaja red, and 5 eroded sherds were recovered.

EZ-4H-1-3: Lot 3 corresponded to the excavation of the plaza floor exposed in the eastern part of the unit. Due to the deterioration of the stucco, it was not possible to determine whether the renovation floor exposed in EZ-4X-13 had extended to the east side of M3-9. Terminated

with the exposure of bedrock at NW 2.19, NE 2.2, SW 2.2, SE 2.18, and CE 2.2 m below the M3-9 master datum in the restricted area of the lot.

EZ-4H-2 (Carter and Gutiérrez Castillo, 2010)

Location: In the corner formed by the junction of Strs. M3-8 and M3-9, N of the former and W of the latter, abutting the talud of the palace patio.

Dimensions: 2.25 × 2 m.

Objectives: To expose a midden deposit conjectured to be located in the vicinity of the unit.

Illustrations: Figure A.54.

Results:

EZ-4H-2-1: Dark grayish brown (10YR 4/2) humus with pebbles.

Terminated with a change in soil at NW 0.06, NE 0.07, SW 1.08, SE 1.05, and CE 0.63 m below a datum specific to this unit, as opposed to the Str. M3-9 master datum established for work in 2011. 75 sherds were recovered: 3 Augustine red, 1 Cambio group (Cambio unslipped or Encanto striated), 29 Cambio unslipped, 29 Encanto striated, 7 eroded, 1 Payaso orange-brown, and 5 Tinaja red sherds.

EZ-4H-2-2: Gray (10YR 6/1) subhumic earth and light brownish gray (10YR 6/2) earth with abundant midden materials. Terminated at NW 1.85, NE 1.79, SW 1.8, SE 1.67, and CE 1.76 m below the datum. Among the midden materials were 27 fragments of obsidian blades, 1 obsidian production flake, 155 chert fragments and tools including 1 projectile point and 1 drill bit, 1 fragmentary grinding stone, substantial carbon, and

8 ceramic figurines. Faunal remains included pieces of antler, mandibles, and long bones from deer. In addition, 2067 sherds were recovered: 31 Augustine red, 1 Azote orange, 50 Cambio group (Cambio unslipped or Encanto striated), 730 Cambio unslipped, 9 Carmelita incised, 9 Chaquiste impressed, 4 Chilar channeled, 4 Chinja impressed, 3 Corozal incised, 54 Encanto striated, 1 Encanto striated (impressed variety), 385 eroded, 66 Infierno black, 6 Máquina brown, 2 Pabellon molded-carved, 1 Paixban polychrome, 45 Paxcaman red, 19 Payaso orange-brown, 23 eroded polychrome, 2 unidentified polychrome, 3 Sahcaba molded-carved, 13 Saxche/Palmar orange polychrome, 2 Talla incised, 542 Tinaja red, 1 Tolla channeled, 1 Toro gouged-incised, and 5 Zacatal cream polychrome sherds. Late and Terminal Classic types were found mixed together, some of them bearing burn marks, a pattern tentatively interpreted as suggesting occasional burning in antiquity.

EZ-4H-2-3: Compact, light gray (10YR 7/2) earth mixed with limestone pebbles. Terminated with the exposure of bedrock at NW 2.0, NE 1.95, SW 1.8, SE 1.78, and CE 1.78 m below the datum. 90 sherds were recovered: 26 Cambio unslipped, 2 Carmelita incised, 16 Encanto striated, 9 eroded, 1 Payaso orange-brown, 4 eroded polychrome, 1 Pozo unslipped, 12 Saxche/Palmar orange polychrome, 15 Tinaja red, 2 Corozal incised, and 2 Zacatal cream polychrome sherds.

EZ-4H-2-4: Lot 4 corresponded to excavations in the soft bedrock, carried out to establish that it was indeed bedrock and not a deposit of fine stucco.

The lot terminated at 2.3 m in all parts of the unit when it was decided that the question could be answered in the affirmative.

EZ-4H-3 (Carter and Gutiérrez Castillo, 2011)

Location: N of Str. M3-8 and W of Str. M3-9, near EZ-4H-2 and aligned on its E and W sides with EZ-4G-2, EZ-4G-6, and EZ-4G-10.

Dimensions: 1.5 × 1.5 m.

Orientation: 0° of N.

Objectives: To expose more of the same midden deposit excavated in EZ-4H-2.

Illustrations: Figure A.49.

Results:

EZ-4H-3-1: Dark grayish brown (10YR 4/2) humus with rubble probably fallen from the back wall of Str. M3-8. Terminated at NW 0.84, NE 0.84, SW 0.37, SE 0.28, and CE 0.6 m below a datum specific to the unit. Several fragments of chert and snail shell were recovered, as were 16 sherds: 1 Altar fine orange, 1 Cambio group (Cambio unslipped or Encanto striated), 4 Cambio unslipped, 3 Encanto striated, 4 eroded, 1 Máquina brown, and 2 Tinaja red.

EZ-4H-3-2: Light brownish gray (10YR 6/2) earth with pebbles and stones. Terminated at NW 0.89, NE 0.91, SO 0.73, SE 0.93, and CE 0.73 m. Chert fragments, snail shell, a fragment of a metate, and several carbon samples were recovered, as were 93 sherds: 6 Augustine red, 43 Cambio unslipped, 16 Encanto striated, 10 eroded, 8 Talla incised, and 10 Tinaja red sherds.

EZ-4H-3-3: Light brownish gray (10YR 6/2) earth with pebbles and stones, occupying only the southern half of the unit. To ensure better stratigraphic control than was achieved in 2010, this north-south division of the unit was maintained in subsequent lots, which were excavated in arbitrary levels of 0.2 m. *EZ-4H-3-3* was terminated at NW 1.0, NE 1.03, SW 0.93, SE 0.93, and CE 0.95 m below the datum. Fragments of chert, grinding stones, snail shell, stucco fragments, broken ceramic figurines, a broken support from a metate, and carbon samples were recovered. 267 sherds were recovered: 7 Augustine red, 7 Cambio group (Cambio unslipped or Encanto striated), 72 Cambio unslipped, 2 Carmelita incised, 1 Chinja impressed, 2 Corozal incised, 49 Encanto striated, 31 eroded, 6 Harina cream, 3 Infierno black, 26 Payaso orange-brown, 3 eroded polychrome, 4 Saxche/Palmar orange polychrome, 1 Talla incised, and 53 Tinaja red sherds.

EZ-4H-3-4: Light brownish gray (10YR 6/2) earth with pebbles and stones, occupying only the northern half of the unit. Terminated at NW 1.2, NE 1.23, SW 1.25, SE 1.25, and CE 1.25 m below the datum. Fragments of chert, snail shell, worked marine or lacustrine shell, and stucco were recovered, as were carbon samples and animal bones. 144 sherds were recovered as well: 51 Cambio unslipped, 1 Chinja impressed, 33 Encanto striated, 18 eroded, 11 Harina cream, 1 Máquina brown, 1 Pántano impressed, 4 Payaso orange-brown, 1 Sahcaba molded carved, 1 Saxche/Palmar orange polychrome, and 22 Tinaja red sherds. The Sahcaba

fragment recovered from this lot fit with the sherds excavated from EZ-4H-3-2 in 2010.

EZ-4H-3-5: Light gray (10YR 7/2) earth with lime and pebbles, occupying only the southern half of the unit. Terminated at NW 1.25, NE 1.25, SW 1.13, SE 1.13, and CE 1.25 m below the datum. 2 obsidian blade fragments and various fragments of chert, snail shell, stucco, and carbon were recovered. So were 90 sherds: 1 Altar fine orange, 24 Cambio unslipped, 1 Chinja impressed (channeled variety), 22 Encanto striated, 16 eroded, 1 Máquina brown, 2 Saxche/Palmar orange polychrome, and 23 Tinaja red sherds.

EZ-4H-3-6: Light gray (10YR 7/2) earth with lime and pebbles, occupying only the northern half of the unit. Terminated with the exposure of bedrock at NW 1.4, NE 1.43, SW 1.36, SE 1.33, and CE 1.43 m below the datum. At 1.38 m in the NW corner, a deteriorated stucco floor laid down over at least part of the bedrock was observed. 1 obsidian blade and various faunal remains, carbon samples, chert fragments, and broken grinding stones were recovered. 234 sherds were recovered as well: 1 Augustine red, 2 Cambio group (Cambio unslipped or Encanto striated), 69 Cambio unslipped, 1 Chinja impressed, 47 Encanto striated, 48 eroded, 1 Pozo unslipped, 1 Saxche/Palmar orange polychrome, and 64 Tinaja red sherds.

EZ-4H-3-7: Light gray (10YR 7/2) earth with lime and pebbles, occupying only the southern half of the unit. Terminated with the exposure of

bedrock at NW 1.36, NE 1.33, SW 1.19, SE 1.21, and CE 1.29 m below the datum; here again, a few traces of a deteriorated stucco floor adhered to the bedrock. 1 obsidian blade and various fragments of chert, snail shell, stucco, and faunal bones were recovered, as were 1 partial ceramic figurine and a shell bead. 174 ceramic sherds were recovered as well: 1 Augustine red, 1 Azucar impressed, 1 Cambio group (Cambio unslipped or Encanto striated), 45 Cambio unslipped, 39 Encanto striated, 23 eroded, 1 Máquina brown, 32 eroded polychrome, 1 Saxche/Palmar orange polychrome, 26 Tinaja red, and 2 Zacatal cream polychrome sherds.

EZ-4H-4 (Carter and Gutiérrez Castillo, 2011)

Location: On the W side of Str. M3-9, overlapping the rear wall of the building, aligned with the entrance to the looters' tunnel designated as EZ-4X-15 and immediately W of EZ-4H-5.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the final architectural phase of Str. M3-9.

Illustrations: Figure A.55.

Results:

EZ-4H-4-1: Very dark brown (7.5YR 2.5/2) humus and the matrix of the wall fill, composed of stones in a light brownish gray (10YR 6/2) mixture of earth and decayed mortar. Terminated with the exposure of the highest course of stones of the rear wall at NW 0.38, NE 0.37, SW 0.39, SE 0.38,

and CE 0.34 m below the master datum established in 2011 for excavations in Sub-operation EZ-4H.

EZ-4H-5 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately E of EZ-4H-4 and W of EZ-4H-6.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the final architectural phase of Str. M3-9.

Illustrations: Figure A.55.

Results:

EZ-4H-5-1: Very dark brown (7.5YR 2.5/2) humus. Terminated with the exposure of the subhumic level at NW 0.45, NE 0.61, SW 0.46, SE 0.6, and CE 0.48 m below the master datum.

EZ-4H-5-2: Dark grayish brown (10YR 4/2) subhumic earth. Terminated with the exposure of a partially decayed stucco floor at NW 0.6, NE 0.8, SW 0.61, SE 0.79, and CE 0.7 m below the master datum. 12 sherds were recovered: 3 Cambio unslipped, 2 Encanto striated, 6 eroded, and 1 Payaso orange-brown.

EZ-4H-6 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately E of EZ-4H-5 and W of EZ-4H-7.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the final architectural phase of Str. M3-9.

Illustrations: Figure A.55.

Results:

EZ-4H-6-1: Very dark brown (7.5YR 2.5/2) humus. Terminated with the exposure of the subhumic level at NW 0.61, NE 0.85, SW 0.6, SE 0.84, and CE 0.72 m below the master datum. 38 sherds were recovered: 1 Cambio group (Cambio unslipped or Encanto striated), 16 Cambio unslipped, 2 Encanto striated, 16 eroded, and 3 Tinaja red sherds.

EZ-4H-6-2: Dark grayish brown (10YR 4/2) subhumic earth. Terminated with the exposure of two partially degraded floors at different levels, pertaining to two terraces or wide steps. 32 sherds were recovered: 1 Augustine red, 10 Cambio unslipped, 8 Encanto striated, 9 eroded, 1 Pozo unslipped, and 3 Tinaja red sherds.

EZ-4H-7 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately E of EZ-4H-7 and W of EZ-4H-8.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the final architectural phase of Str. M3-9.

Illustrations: Figure A.55.

Results:

EZ-4H-7-1: Very dark brown (7.5YR 2.5/2) humus and dark grayish brown (10YR 4/2) subhumic earth. Terminated with the exposure of the lower terrace whose floor was encountered in EZ-4H-6-2, at NW 1.01, NE 1.1, SW 1.1, SE 1.09, and CE 1.04 m below the master datum. 2 Cambio unslipped, 1 eroded, and 1 Payaso orange-brown sherd were recovered.

EZ-4H-8 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately E of EZ-4H-9 and W of EZ-4H-8.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the final architectural phase of Str. M3-9.

Illustrations: Figure A.55.

Results:

EZ-4H-8-1: Very dark brown (7.5YR 2.5/2) humus and dark grayish brown (10YR 4/2) subhumic earth. Terminated with the exposure of the lower terrace whose floor was encountered in EZ-4H-6-2, at NW 1.1, NE 1.34, SW 1.09, SE 1.34, and CE 1.16 m below the master datum. 1 obsidian blade fragment, several chert flakes, and 22 sherds were recovered: 1 Cambio group (Cambio unslipped or Encanto striated), 8 Cambio unslipped, 10 eroded, and 3 Tinaja red sherds.

EZ-4H-9 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately E of EZ-4H-8 and W of EZ-4H-10.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the final architectural phase of Str. M3-9.

Illustrations: Figure A.55.

Results:

EZ-4H-9-1: Very dark brown (7.5YR 2.5/2) humus and dark grayish brown (10YR 4/2) subhumic earth. Terminated at NW 1.34, NE 1.74, SW

1.34, SE 1.74, and CE 1.49 m below the master datum with the exposure of a terrace lower than that visible in EZ-4H-8. Although the floor of this terrace was completely deteriorated, it conjecturally corresponds to a floor at roughly the same level which was preserved and visible in EZ-4X-15. 9 sherds were recovered: 3 Cambio unslipped and 6 eroded.

EZ-4H-10 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately E of EZ-4H-9 and W of EZ-4H-11.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the final architectural phase of Str. M3-9.

Illustrations: Figure A.55.

Results:

EZ-4H-10-1: Very dark brown (7.5YR 2.5/2) humus and dark grayish brown (10YR 4/2) subhumic earth. Terminated at NW 1.74, NE 2.09, SW 1.74, SE 2.07, and CE 1.96 m below the master datum with the exposure of stone blocks, now badly eroded, whose dimensions and placement suggest that they originally belonged to two steps leading up to the terrace exposed in EZ-4H-9-1. The west side of this unit corresponded more or less to the transition from the higher of the two steps to the EZ-4H-9-1 terrace. Various chert fragments were recovered, as were 10 sherds: 1 Cambio group (Cambio unslipped or Encanto striated), 2 Cambio unslipped, 2 Encanto striated, and 4 eroded sherds.

EZ-4H-11 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately E of EZ-4H-10.

Dimensions: 1 × 1 m.

Orientation: 0° of N.

Objectives: To expose the final architectural phase of Str. M3-9.

Illustrations: Figure A.55.

Results:

EZ-4H-11-1: Very dark brown (7.5YR 2.5/2) humus and dark grayish brown (10YR 4/2) subhumic earth. Terminated after 20 cm of excavation into bedrock, which was especially soft and powdery in this unit. 15 sherds were recovered: 2 Augustine red, 5 Cambio unslipped, 1 Encanto striated, and 7 eroded.

EZ-4H-12 (Carter and Gutiérrez Castillo, 2011)

Location: Against the northern talud of the palace patio, where Str. M3-9 abuts the patio platform. The unit encompassed the edge of the patio platform and an area atop Str. M3-9 below; for this reason, the Str. M3-9 master datum was used, and some lot depths (noted below) were above rather than below that datum.

Dimensions: 3 × 1 m.

Orientation: 0° of N.

Objectives: To expose the final and previous architectural phases of Str. M3-9 and to clarify its stratigraphic relationship with the palace patio.

Illustrations: Figure A.56.

Results:

EZ-4H-12-1: Lot 1 included the very dark brown (7.5YR 2.5/2) humus covering the entire unit and, only in the portion of the unit on top of the palace patio, the layer of dark grayish brown (10YR 4/2) subhumic earth beneath. In the rest of the unit, the subhumus was excavated as a separate lot, EZ-4H-12-2. Lot 1 terminated at NW 0.68 and NE 0.65 m below the master datum, and at SW 3.16 and SE 3.18 m above the same datum. 14 sherds were recovered: 1 Altar fine orange, 9 Cambio unslipped, 1 Encanto striated, 1 eroded, 1 eroded polychrome, and 1 Tinaja red (Subin variety). Other artifacts recovered were a possible fragment of a grinding stone and several chert fragments.

EZ-4H-12-2: Lot 2 corresponded a layer of grayish brown (10YR 5/2) subhumic earth extending from the face of the palace talud northwards to the north limit of the unit. This matrix contained abundant pebbles and some large stones interpreted as fallen from Str. M3-8 above. Lot 2 terminated at NW 0.26 and NE 0.24 m below the master datum, and at SW 0.82 and SE 0.83 m above the same datum. 1 obsidian flake, fragments of chert and stucco, carbon samples, and 40 sherds were recovered: 2 Altar fine orange, 1 Augustine red, 15 Cambio unslipped, 3 Encanto striated, 5 eroded sherds, and 14 Tinaja red sherds.

EZ-4H-12-3: Lot 3 corresponded to a layer of light brownish gray (10YR 6/2) earth with pebbles and small stones excavated below Lot 2. In most of the unit, the lot terminated with the exposure of a stucco floor interpreted as the same floor exposed in EZ-4H-5-2, which belonged to a slightly

elevated rear terrace. In EZ-4H-5-2, this floor was ca. 0.25 m higher than the middle terrace, which was itself ca. 0.58 m higher than the lowest terrace. In EZ-4H-12-3, the floor was ca 0.28 m higher than the next floor encountered (exposed in Lot 4 and excavated in Lots 5 and 9), which was correspondingly interpreted as that of the middle terrace. However, in the southern part of the unit, against the talud, Lot 3 terminated with the exposure of a deposit of ceramic sherds in a matrix of the same light brownish gray (10YR 6/2) earth as observed throughout. These were treated as a separate lot (Lot 7) because of their spatial concentration and association with a bench or step (excavated as Lot 8). Accordingly, Lot 3 terminated at NW 0.54 and NE 0.54 m below the master datum, and at SW 0.02 and SE 0.03 m above it. Fragments of chert and carbon samples were recovered, as were 11 sherds: 1 Cambio unslipped, 3 eroded, 2 Infierno black, 1 Máquina brown, and 3 Tinaja red.

EZ-4H-12-4: Lot 4 corresponded to a deteriorated white (10YR 8/1) stucco floor and its gray (10YR 6/1) supporting fill of earth and lime. As mentioned, this was interpreted as the same upper terrace floor exposed in EZ-4H-5-2. Lot 4 terminated with the exposure of the middle terrace floor at NW 0.66, NE 0.65, SW 0.63, and SE 0.63 m below the datum. Both floors were observed to form rising lips against the facing stones of the patio talud to the south, confirming their stratigraphic posteriority to the palace patio. Fragments of chert, a small piece of faunal bone, and carbon samples were recovered from this lot, as were 145 sherds: 6 Cambio group

(Cambio unslipped or Encanto striated), 40 Cambio unslipped, 1 Carmelita incised, 37 Encanto striated, 17 eroded, 2 Infierno black, 1 Máquina brown, 4 Saxche/Palmar orange polychrome, and 37 Tinaja red.

EZ-4H-12-5: Because of the presence of large tree roots in the middle of the unit, Lot 5 was excavated only in the northern 1.2 m of the unit. It corresponded to the excavation of the floor of the middle platform, a light gray (10YR 6/1) matrix of deteriorated stucco and earth. Lot 5 terminated with a change in the matrix at NW 0.85, NE 0.84, SW 0.86, and SE 0.85 m below the master datum. 1 ceramic figurine fragment, some chert flakes, 1 obsidian blade, and carbon samples were recovered. So were 57 sherds: 13 Cambio unslipped, 18 Encanto striated, 7 eroded, 1 Infierno black, 2 Máquina brown, 1 Saxche/Palmar orange polychrome, and 14 Tinaja red sherds.

EZ-4H-12-6: Lot 6 was located directly below Lot 5 and like it was confined to the northern 1.2 m of the unit. It consisted of light gray (10YR 7/1) earth, fine and sandy, with pebbles. Terminated for want of time and space in which to work at NW 1.43, NE 1.42, SW 1.18, and SE 1.17 m below the master datum. Fragments of chert and carbon were recovered, as were 6 Cambio unslipped, 4 Encanto striated, 2 eroded, 1 Máquina brown, and 3 Tinaja red sherds.

EZ-4H-12-7: Lot 7 corresponded to a cluster of sherds and other objects in light brownish gray (10YR 6/2) earth against the face of the patio talud. Lot 7 terminated with the exposure of the stuccoed upper surface of a

bench or step at 0.47 m below the master datum. 1 fragment of an obsidian blade, 1 fragment of greenstone, chert flakes, pieces of stucco, and carbon samples were recovered from this lot, as were 30 sherds: 1 Cambio group (Cambio unslipped or Encanto striated), 1 Cambio unslipped, 13 Encanto striated, 5 eroded, and 10 Tinaja red sherds.

EZ-4H-12-8: Lot 8 corresponded to the excavation of the bench or step whose upper surface was exposed in Lot 7. This consisted of deteriorated white (10YR 8/1) stucco above a fill of pebbles in a light gray (10YR 6/1) mix of earth and degraded mortar, with a vertical face formed by a single course of stones. The height of the bench was ca. 0.5 m above the upper terrace floor. Lot 8 terminated with the exposure of that floor at 0.47 m below the datum. Chert flakes and 14 sherds were recovered: 1 Cambio group (Cambio unslipped or Encanto striated), 8 Cambio unslipped, 1 Encanto striated, 1 eroded, 1 Máquina brown, and 1 Tinaja red sherd.

EZ-4H-12-9: Constrained by the same roots which confined Lot 5 to the northern end of the unit, Lot 9 was excavated in the southwestern corner, in an area 0.6 m N-S by 0.5 m E-W. It corresponded to the excavation of the middle platform floor, a light gray (10YR 6/1) matrix of deteriorated stucco and earth. Lot 9 terminated with a change in the matrix at 0.9 m below the master datum. 7 Cambio unslipped, 4 Encanto striated, 1 eroded, 1 Saxche/Palmar orange polychrome, and 1 Tinaja red sherd were recovered.

EZ-4H-12-10: Lot 10 corresponded to a layer of light gray (10YR 7/1) earth, fine and without pebbles, not observed to the north in Lot 6. It terminated with a change in the matrix at 1.02 m below the master datum. Chert flakes, carbon samples, and 4 sherds were recovered: 3 Cambio unslipped and 1 eroded sherd.

EZ-4H-12-11: Lot 11 corresponded to a layer of light brownish gray (10Y 7/1) earth, with some pebbles and stones, which terminated with the exposure of the lowest terrace floor—very badly deteriorated—at 1.238 below the master datum. 7 sherds were recovered: 1 dark brown on light brown bichrome of unidentified type, 1 Cambio unslipped, 1 Encanto striated, 1 eroded, and 3 Tinaja red sherd.

EZ-4H-13 (Carter and Gutiérrez Castillo, 2011)

Location: Atop Str. M3-9, with its W side aligned with the W side of EZ-4H-5 and its N side separated from the S side of that unit by 5 m.

Dimensions: 1.5 × 1.6 m.

Orientation: 0° of N.

Objectives: To investigate a circular depression in the surface of the mound.

Illustrations: Figure A.57.

Results:

EZ-4H-13-1: Very dark brown (7.5YR 2.5/2) humus and dark brownish gray (10 YR 4/2) subhumic earth over the collapsed fill of the uppermost terrace of Str. M3-9. The matrix of the fill was light brownish gray (10YR 6/2) earth with degraded stucco. The lot terminated at NW 1.13, NE 1.12,

SW 1.25, SE 1.08, and CE 1.15 m below the master datum. 40 sherds were recovered: 3 Augustine red, 21 Cambio unslipped, 4 Encanto striated, 9 eroded, 1 Harina cream, and 1 Tinaja red sherd.

EZ-4H-13-2: Dark gray (10YR 4/1) earth, denser than the subhumus of Lot 1, with degraded lime and stones of varying size, including a block 0.3 m on a side. The lot terminated with the exposure of a shelf of bedrock in the east part of the unit. The lot terminated at NW 1.47, NE 1.51, SW 1.58, SE 1.5, and CE 1.58 m below the master datum. Chert flakes and 29 sherds were recovered: 4 Augustine red, 2 Cambio unslipped, 17 Encanto striated, 4 eroded, and 2 Tinaja red sherds.

EZ-4H-13-3: Lot 3 began with the exposure of the shelf of bedrock in the east part of the unit. It included the same dark gray (10YR 4/1) earth seen in the previous lot and, below, gray (2.5Y 6/1) earth with pebbles and stones. The lot terminated at NW 1.68, NE 1.7, SW 1.65, SE 1.69, and CE 1.65 m below the datum. 23 sherds were recovered: 1 Azote orange, 7 Cambio unslipped, 3 Encanto striated, 6 eroded, 1 Payaso orange-brown, and 5 Tinaja red sherds.

EZ-4H-13-4: Gray (2.5Y 6/1) earth with pebbles and large stones, representing the fill of Str. M3-9. Fragments of architectural stucco from the façade of some unknown building—there is no evidence that it was located in the Las Palmitas Group—were present in the fill. Terminated at NW 2.76, NE 2.77, SW 2.62, SE 2.51, and CE 2.72 m below the datum. Chert fragments and carbon samples were recovered, as were 66 ceramic

sherds: 22 Cambio unslipped, 8 Encanto striated, 19 eroded, 1 Harina cream, 2 Infierno black, 1 Máquina brown, 1 eroded polychrome, and 11 Tinaja red sherds.

EZ-4H-13-5: Lot 5 corresponds to an area of loose fill adjoining Lot 4 to the north. During excavation of Lot 4, this area of fill began to crumble, and the earth and rubble were removed and sifted for artifacts. Safety concerns then dictated that excavations in the unit cease. 25 sherds were recovered from the fill: 1 Azote orange, 1 red on orange bichrome of unidentified type, 8 Cambio unslipped, 3 Encanto striated, 3 eroded, 1 Infierno black, and 8 Tinaja red sherds.

EZ-4X-15 (Carter and Gutiérrez Castillo, 2011)

Location: Looters' tunnel in the back (W) side of Str. M3-9, directly below EZ-4H-4.

Illustrations: Figure A.55.

Results:

EZ-4X-15-1: This lot corresponds to cleaning operations in the looters' tunnel. Examination of the exposed fill revealed it to consist mainly of rubble in gray (2.5Y 6/1) earth and permitted the identification of the middle and lower terrace floors discussed above. The looters dug downward (eastward) into the foundations of Str. M3-9, hit the same (probably anthropogenically modified) vertical shelf of bedrock exposed in EZ-4H-13 and EZ-4X-9, turned right (southward), and abandoned their

efforts after a meter or so. The south profile of the tunnel was drawn, but no sherds were recovered.

Sub-operation I: Structure M3-5

Description and objectives

Sub-operation I corresponded to excavations on and around Str. M3-5, a long, low mound stretching along the southern boundary of Las Palmitas' main plaza. Str. M3-5 presented a strange aspect, with a higher mound at each end of a long, lower structure. Sub-operation I aimed to clarify its morphology, stratigraphic sequence, chronology, and function. The goals of the sub-operation were expanded to include the search for a hypothesized midden deposit on the hill slope below (south of) the building. In the event, the midden was exposed, in units EZ-4I-7 and EZ-4I-9, and it was possible to reconstruct the building's shape. The middle part of Str. M3-5 consisted of two terraces, the northern lower than the southern, with a low parapet or the stone foundation of a largely perishable wall running along the southern edge of the higher terrace. The two higher mounds were revealed to be extensions northward of the higher, southern terrace, roughly square in shape. Unlike the flared "brackets" of Str. M3-8, these extensions were built at right angles to the back (southern) wall of the building. A difference between Str. M3-5 and another long, terraced building at Las Palmitas, Str. M3-9, lay in the fact that Str. M3-5's lower terrace floor was stratigraphically posterior to the fill of the upper terrace. This may indicate that the two buildings were constructed in different episodes, although the chronological relationship between them could not be determined.

EZ-4I-1 (Carter and Gutiérrez Castillo, 2011)

Location: Just N of Str. M3-5, with the E profile of the unit on the axis of the building, and its N profile aligned with the S limit of Unit EZ-4A-2, previously excavated by Alejandro Guillot Vassaux (see Guillot Vassaux 2008).

Dimensions: 2 × 1 m.

Orientation: 0° N-S.

Objectives: To clarify the morphology, stratigraphy, chronology, and function of Str. M3-5.

Illustrations: Figures A.58, A.59, and A.68.

Results:

EZ-4I-1-1: Very dark brown (7.5YR 2.5/1) humus and dark grayish-brown (10YR 4/2) subhumic earth, both layers containing limestone pebbles.

Terminated in the northern part of the unit with the exposure of bedrock at NW 1.9 and NE 1.89 m below the master datum for Str. M3-5. Terminated in the southern part, where the bedrock began to slope downwards, with the exposure of levelling fill at SW 1.75, SE 1.75, and CE 1.8 m below the same datum. 2 eroded sherds were recovered.

EZ-4I-1-2: Lot 2 corresponded to the levelling fill in the southern part of the unit. This consisted of small stones and pebbles in a matrix of light brownish gray (10YR 6/2) earth containing an admixture of degraded stucco. This was interpreted as the fill of the plaza floor, which ran beneath Str. M3-5, but the stucco surface was no longer preserved.

Terminated with the exposure of bedrock at NW 1.9, NE 1.9, SW 1.97, SE

1.98, and CE 1.99 m below the master datum. 2 Augustine red and 2 eroded sherds were recovered.

EZ-4I-2 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately S of EZ-4I-1.

Dimensions: 2 × 1 m.

Orientation: °

Objectives: To clarify the morphology, stratigraphy, chronology, and function of Str. M3-5.

Illustrations: Figures A.58, A.59, and A.68.

Results:

EZ-4I-2-1: Very dark brown (7.5YR 2.5/1) humus. Terminated with the exposure of the subhumus at NW 1.6, NE 1.6, SW 1.12, SE 1.11, and CE 1.28 m below the master datum. 11 sherds were recovered: 1 Cambio group (Cambio unslipped or Encanto striated), 7 eroded, 1 Pozo unslipped, and 2 Tinaja red sherds.

EZ-4I-2-2: Dark grayish brown (10YR 4/2) subhumic earth overlying the rubble fill of Str. M3-5's lowest platform, along with some of that fill itself. Terminated with the exposure of a preserved portion of the plaza floor near the northern end of the unit, just S of a regularly shaped stone block interpreted as part of the riser of Str. M3-5's terrace. Several chert fragments but no ceramic sherds were recovered.

EZ-4I-3 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately S of EZ-4I-2, but the E side of this unit was 5 m W of the W side of EZ-4I-2.

Dimensions: 2 × 2 m.

Orientation: 0° of N.

Objectives: To clarify the morphology, stratigraphy, chronology, and function of Str. M3-5.

Illustrations: Figures A.58 and A.60.

Results:

EZ-4I-3-1: Very dark brown (7.5YR 2.5/1) humus with stones from the rubble fill of Str. M3-5. Terminated with the exposure of the subhumus at NW 0.69, NE 0.7, SW 0.58, SE 0.6, and CE 0.6 m below the master datum. 1 Encanto striated, 2 eroded, and 1 Tinaja red sherd were recovered.

EZ-4I-3-2: Dark grayish brown (10YR 4/2) subhumic earth overlying the rubble fill of the upper and lower terraces of Str. M3-5. The difference between the two terraces was evident in the height of the rubble, but the division between them was much less well preserved here than in EZ-4I-4 or EZ-4I-6. Terminated with the exposure of that architecture at NW 0.78, NE 0.76, SW 0.8, SE 0.9, and CE 0.96 m below the master datum. 4 eroded and 1 Tinaja red sherds were recovered.

EZ-4I-4 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately S of EZ-4I-2, but offset by 1 m W so that the NE corner of this unit was the SW corner of EZ-4I-2.

Dimensions: 1 × 2 m.

Orientation: 0° of N.

Objectives: To clarify the morphology, stratigraphy, chronology, and function of Str. M3-5.

Illustrations: Figures A.50, A.61, and A.68.

Results:

EZ-4I-4-1: Very dark brown (7.5YR 2.5/1) humus with pebbles.

Terminated with the exposure of the subhumus at NW 1.05, NE 1.06, SW 0.7, SE 0.72, and CE 0.84 m below the master datum. 7 sherds were recovered: 2 Cambio unslipped, 2 eroded, 1 Harina cream, 1 Máquina brown, and 1 Tinaja red sherd.

EZ-4I-4-2: Dark grayish brown (10YR 4/2) humus with stones. The lot terminated in the northern part of the unit at NW 1.1 and NE 1.1 m below the master datum, with the exposure of a badly damaged stucco floor pertaining to the lower terrace of Str. M3-5, ca. 0.72 m above the plaza floor exposed in EZ-4I-2-2 and, later, in EZ-4I-4-5. This floor occupied only about the northern third of the unit, ending against an elevated area of rubble fill taking up the southern two thirds. This fill lacked a surviving stucco surface, but was interpreted as the remains of an upper terrace. The lot terminated in the southern part of the unit at SW 0.8, SE 0.79, and CE 0.9 m below the master datum. The riser of the upper terrace was well defined by a course of regularly shaped limestone blocks. 2 Cambio unslipped and 3 eroded sherds were recovered.

EZ-4I-4-3: Architectural fill of the upper terrace. This consisted of medium-sized stones in the southern part (1.4 m N-S by 1 m E-W) of the unit, in a matrix of grayish brown (10YR 5/2) earth with a quantity of degraded stucco. The southern portion of the lot overlapped some stones higher than the rest of the upper terrace, which were interpreted as the remains either of a parapet or (if Str. M3-6 had a superstructure) the foundations of a perishable rear wall. Terminated with the removal of the fill to the level of the floor exposed in EZ-4I-4-2 at NW 1.12, NE 1.14, SE 1.1, SE 1.09, and CE 1.12 m below the master datum. This floor ended at the north edge of the upper terrace. This revealed a difference between the construction techniques used in Strs. M3-5 and M3-9: whereas the lower terraces, including the floors, of Str. M3-9 stratigraphically preceded the upper ones, the stucco floor of Str. M3-5's lower terrace postdated the fill of the upper terrace. Chert fragments and 1 eroded sherd were recovered.

EZ-4I-4-4: Lot 4 began with the removal of the damaged stucco floor exposed in Lot 2 above. Immediately below it, a second, older floor was encountered. This floor and part of the adjacent rubble fill of the upper terrace were removed, confirming both floors' stratigraphic posteriority to the upper terrace. The stucco floors were grayish white (10YR 8/2) in color, and the matrix of the upper terrace fill and a layer of earth below the second floor were grayish brown (10YR 5/2). The lot was limited to the northern two thirds of the unit and terminated with the exposure of the

rubble fill beneath the second floor, at 1.24 m below the master datum in all parts of the excavated area. 1 Encanto striated sherd was recovered.

EZ-4I-4-5: Rubble fill of irregular stones between 0.1 and 0.2 m long in a matrix of dark gray (10YR 4/1) earth, excavated below EZ-4I-4-4.

Terminated with the exposure of the plaza floor at 1.84 m below the master datum. 6 Cambio unslipped, 3 Encanto striated, 4 eroded, 1 eroded polychrome, and 1 Tinaja red sherd were recovered.

EZ-4I-4-6: Lot 6 corresponded to excavations in the plaza floor exposed in EZ-4I-4-5 above. The floor consisted of grayish white (10YR 8/2) stucco above a layer of large, semiregular stones in a matrix of grayish brown (2.5Y 5/2) earth. Chert fragments, carbon samples, and 1 Encanto striated sherd were recovered.

EZ-4I-5 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately N of EZ-4I-3. The S side of EZ-4I-5 was aligned with the N side of EZ-4I-6, and the N and S sides of EZ-4I-5 were aligned with the N and S sides of EZ-4I-2.

Dimensions: 2 × 2 m.

Orientation: 0° of N.

Objectives: To clarify the morphology, stratigraphy, chronology, and function of Str. M3-5.

Illustrations: Figures A.58 and A.60.

Results:

EZ-4I-5-1: Black (7.5YR 2.5/1) humus with very few pebbles. Terminated with the exposure of subhumus at NW 1.6, NE 1.6, SW 0.84, SE 0.83, and CE 1.26 m below the datum. 2 eroded sherds were recovered.

EZ-4I-5-2: Dark grayish brown (10YR 4/2) subhumic earth overlying the rubble fill of Str. M3-5's lower platform. Terminated with the exposure of that architecture throughout the unit at NW 1.62, NE 1.62, SW 0.99, SE 1.0, and CE 1.31 m below the master datum. 1 chert projectile point and 1 eroded sherd were recovered. A large, semiregular, somewhat eroded construction block in the northwest corner of the unit (extending into EZ-4I-11) was interpreted as the northeastern cornerstone of the western "bracket" of the building.

EZ-4I-6 (Carter and Gutiérrez Castillo, 2011)

Location: The E wall of EZ-4I-6 was 1 m W of the W wall of EZ-4I-4, and the N and S walls of the two units were aligned.

Dimensions: 2 × 2 m.

Orientation: 0° of N.

Objectives: To clarify the morphology, stratigraphy, chronology, and function of Str. M3-5.

Illustrations: Figures A.58 and A. 62.

Results:

EZ-4I-6-1: Black (7.5YR 2.5/1) humus and dark grayish brown (10YR 4/2) subhumic earth with pebbles. Terminated with the exposure of the stucco floor in a northern section of the unit ca. 0.12 m N-S, at NW 1.1

and NE 1.1 m. Terminated in the rest of the unit with the exposure of the upper terrace at SW 0.7, SE 0.71, and CE 0.8 m below the master datum. One semiregular, worked stone protruded from the east wall of the unit and was interpreted as part of the same riser better preserved in EZ-4I-4. In this lot, however, most of the riser had been dislocated—probably by bioturbation, since eroded but appropriately sized stones and collapsed fill were exposed north of the riser line, and since the compact, elevated fill of the upper terrace were exposed south of it. 12 sherds were recovered: 1 Augustine red, 1 Encanto striated, 8 eroded, and 2 Infierno black.

EZ-4I-7 (Carter and Gutiérrez Castillo, 2011)

Location: Unit 7 was opened on the slope of the hill below the SE corner of Str. M3-5, where the steeply inclined bedrock began to level out.

Dimensions: 2 × 1 m.

Objectives: To locate and recover artifacts from a hypothesized midden.

Illustrations: Figure A.63.

Results:

EZ-4I-7-1: Black (7.5YR 2.5/1) humus. Terminated with the exposure of the subhumus in most of the unit, and of a deposit of rubble (Lot 3) at the unit's southern end, at NW 0.14, NE 0.15, SW 0.88, and SE 0.86 m below a datum specific to EZ-4I-7 and EZ-4I-9. Chert fragments and 118 sherds were recovered: 1 Augustine red, 4 Azote orange, 4 Cambio group (Cambio unslipped or Encanto striated), 40 Cambio unslipped, 27 eroded,

9 Payaso orange-brown, 1 eroded polychrome, 2 Pozo unslipped, and 8 Tinaja red sherds.

EZ-4I-7-2: Very dark gray (10YR 3/1) subhumic earth with a few stones.

In order to excavate the deposit of rubble partially exposed by the removal of Lot 1 above as a discrete lot, Lot 2 was confined to the area north of where that rubble had been revealed, i.e., a rectangle extending 1.2 m south from the northern wall of the unit. The lot terminated with the exposure of bedrock at the north end of the unit at NW 0.57 and NE 0.59, and with the exposure of the rubble deposit throughout that area at SW 0.66 and SE 0.7 m below the datum specific to the midden. 1 obsidian blade fragment, chert flakes, carbon samples, broken grinding stones, and 84 sherds were recovered: 2 Augustine red, 1 Azote orange, 2 Cambio group (Cambio unslipped or Encanto striated), 28 Cambio unslipped, 18 Encanto striated, 13 eroded, 1 Infierno black, 1 Máquina brown, 2 Payaso orange-brown, and 15 Tinaja red.

EZ-4I-7-3: Lot 3 began with the removal of the rubble deposit exposed in Lots 1 and 2 above. This consisted of rough stones, not obviously worked but tentatively interpreted as fallen from Str. M3-5, in a matrix of dark gray (10YR 4/1) earth. From below these stones were recovered 1 obsidian blade fragment, chert fragments, broken grinding stones, and 165 sherds: 6 Augustine red, 3 Cambio group (Cambio unslipped or Encanto striated), 55 Cambio unslipped, 45 Encanto striated, 37 eroded, 2 Infierno black, 3 Payaso orange-brown, and 1 Tinaja red. Terminated with the

exposure of bedrock at NW 0.71 m, NE 0.7 m, SW 1.2, and SE 1.0 m
below the midden datum.

EZ-4I-8 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately S of EZ-4I-4, but immediately E of EZ-4I-2, so that the NW corner of EZ-4I-8 was 1 m E of the SE corner of EZ-4I-4 and 2 m S of the SE corner of EZ-4I-2.

Dimensions: 2 × 1 m.

Orientation: 0° of N.

Objectives: To clarify the morphology, stratigraphy, chronology, and function of Str. M3-5.

Illustrations: Figures A.58, A.64, and A.68.

Results:

EZ-4I-8-1: Black (7.5YR 2.5/1) humus. Ceramics and lithic artifacts were not recovered from this lot. Terminated at NW 1.06, NE 1.06, SW 1.87, SE 1.86, and CE 1.11 m below the Str. M3-5 master datum with the exposure of the architecture. This consisted of rubble fill at approximately the level of the upper terrace revealed in EZ-4I-3, EZ-4I-4, EZ-4I-6, and EZ-4I-10. A section of the wall or parapet attested in EZ-4I-3 and EZ-4I-4 was observed in the northern part of the unit, but did not survive in the eastern or western profiles.

EZ-4I-9 (Carter and Gutiérrez Castillo, 2011)

Location: A continuation to the S of EZ-4I-7.

Dimensions: 2 × 1 m.

Objectives:

Illustrations: Figure A.63.

Results:

EZ-4I-9-1: Black (7.5YR 2.5/1) humus. Terminated with the exposure of the subhumus at NW 1.24, NE 1.23, SW 1.42, and SE 1.39 m below the midden datum. 1 obsidian blade fragment, chert flakes, and 112 ceramic sherds were recovered: 1 Altar fine orange, 3 Augustine red, 3 Azote orange, 4 Cambio group (Cambio unslipped or Encanto striated), 34 Cambio unslipped, 1 Chinja impressed, 20 Encanto striated, 18 eroded, 3 Harina cream, 2 Infierno black, 5 Payaso orange-brown, 1 Poite incised, and 17 Tinaja red.

EZ-4I-9-2: Very dark gray (10YR 3/1) subhumic earth. Terminated with the exposure of bedrock at the northern end of the unit at NW 1.2 and NE 1.0 m below the midden datum. In the rest of the unit, Lot 2 terminated with the exposure of a layer of rubble and lighter earth at SW 1.49 m and SE 1.44 m below the midden datum. Chert flakes, 1 obsidian blade fragment, pieces of ground stone, and 69 sherds were recovered: 1 Augustine red, 18 Cambio unslipped, 17 Encanto striated, 19 eroded, and 14 Tinaja red sherds.

EZ-4I-9-3: Dark gray (10YR 4/1) earth with small and larger stones possibly fallen from Str. M3-5 above. Terminated with the exposure of bedrock at NW 1.33, NE 1.3, SW 1.74, and SE 1.71 m below the midden datum. Chert flakes and 92 sherds were recovered: 6 Augustine red, 1

Cambio group (Cambio unslipped or Encanto striated), 29 Cambio unslipped, 1 Chinja impressed, 3 Encanto striated, 26 eroded, 3 Harina cream, 1 Máquina brown, 1 Pantano impressed, 4 Payaso orange-brown, 2 eroded polychrome, 2 Pozo unslipped, and 13 Tinaja red sherds.

EZ-4I-10 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately W of EZ-4I-3, with its N and S sides aligned with the N and S sides of that unit. Immediately S of EZ-4I-11 and aligned with it on the E and W sides.

Dimensions: 2 × 1 m.

Orientation: 0° of N.

Objectives: To clarify the morphology, stratigraphy, chronology, and function of Str. M3-5.

Illustrations: Figures A.58 and A.65.

Results:

EZ-4I-10-1: Black (7.5YR 2.5/1) humus and dark grayish brown (10YR 4/2) subhumic earth mixed with degraded stucco and pebbles. Terminated with the exposure of the western “bracket” platform of Str. M3-5 at NW 0.5, NE 0.76, SW 0.78, SE 0.9, and CE 0.56 m below the Str. M3-5 master datum. 6 eroded and 1 Payaso orange-brown sherd were recovered.

EZ-4I-11 (Carter and Gutiérrez Castillo, 2011)

Location: Immediately W of EZ-4I-5-1, with its N and S sides aligned with the N and S sides of that unit. Immediately N of EZ-4I-11 and aligned with it on the E and W sides.

Dimensions: 2 × 1 m.

Orientation: 0° of N.

Objectives: To clarify the morphology, stratigraphy, chronology, and function of Str. M3-5.

Illustrations: Figures A.58 and A.65.

Results:

EZ-4I-11-1: Black (7.5YR 2.5/1) humus and dark grayish brown (10YR 4/2) subhumic earth mixed with degraded stucco and pebbles. Terminated with the exposure of the western “bracket” platform of Str. M3-5 at NW 1.6, NE 1.62, SW 0.77, SE 0.99, and CE 0.75 m below the Str. M3-5 master datum. Although the stones were badly eroded and jumbled, the gradual slope and the presence of some semiregular blocks aligned roughly E-W, including the large block extending east into EZ-4I-5, were interpreted as the remains of two steps. These would have allowed a person to ascend directly to the “bracket” platform from the plaza, bypassing Str. M3-5’s central lower and upper terraces.

EZ-4X-11 (Carter and Gutiérrez Castillo, 2011)

Location: Looters’ tunnel in the S side of M3-5 and the fill of the plaza beneath it, S of Units EZ-4I-3 and EZ-4I-10.

Objectives: The tunnel was cleaned and documented to assess the stratigraphy and chronology of the exposed architecture.

Illustrations: Figure A.66.

Results:

EZ-4X-11-1, EZ-4X-11-2, and EZ-4X-11-3: The looters' tunnel took a turn to the northeast shortly after penetrating the side of the plaza platform, terminating after about 2 m. Only the E profile of the tunnel entrance was drawn, a decision motivated in part by the discovery of a sleeping fer-de-lance. This work was sufficient to document the plaza floor, the southern foundation stones of Str. M3-5, and one large, flattish stone from the talud of the plaza platform, still roughly in its original location. Lot 1 was defined as the looters' spoil, Lot 2 as the profile of Str. M3-5's foundation, and Lot 3 as the profile below the plaza floor. 1 Chaquiste impressed and 2 Tinaja red sherds were recovered from Lot 3.

EZ-4X-12 (Carter and Gutiérrez Castillo, 2011)

Location: Looters' tunnel in the S side of M3-5 and the fill of the plaza beneath it, roughly S of Unit EZ-4I-8.

Objectives: The tunnel was cleaned and documented to assess the stratigraphy and chronology of the exposed architecture.

Illustrations: Figure A.67.

Results:

EZ-4X-12-1: The looters' trench exposed two stucco floors at ca. 2.43 and 2.8 m below the M3-5 master datum. The uppermost of these was tentatively interpreted as an extension of the plaza floor documented in EZ-4I-4 at 1.84 m below the same datum, which over time could plausibly have slumped down ca. 0.4 m. The lower floor was not observed in any other unit and may represent a preparatory surface employed during Las

Palmitas' initial construction phase in extending southward the flat surface offered by the bedrock throughout most of the rest of the plaza. The plaza fill included differently colored zones of earth and mud, including a substantial deposit of black bajo mud reminiscent of those employed in the fill of Str. M3-1. 12 sherds were recovered: 1 Cambio unslipped, 1 Encanto striated, 1 Máquina brown, and 2 Saxche/Palmar orange polychrome sherds.

Sub-operation J: Structure M3-11

Description and objectives

Sub-operation J corresponded to excavations on Str. M3-11, a small mound near the NW corner of Str. M3-1. Because of its form and location, it was hypothesized to be a mortuary structure like Str. M3-3. Sub-operation J was intended to test that hypothesis—which was, as it turned out, erroneous—and to establish the building's chronology and construction sequence. In the end, it was determined that Str. M3-11 was not a tomb, but more likely a simple mound made of unworked stones and bajo mud which could have supported a perishable superstructure. The crudity of its construction made a Terminal Classic date attractive, but none of the ceramics recovered from the fill were inconsistent with an eighth-century date.

EZ-4J-1 (Carter and Gutiérrez Castillo, 2011)

Location: On Str. M3-11.

Dimensions: 1 × 2 m.

Orientation: 120° of N.

Objectives: To investigate the stratigraphy, chronology, and function of Str. M3-11.

Illustrations: Figures A.69 and A.70.

Results:

EZ-4J-1-1: Very dark grayish brown (2.5Y 3/2) humus and grayish brown (10YR 5/2) subhumic earth. Terminated at NW 0.84, NE 0.42, SW 0.86, SE 0.4, and CE 0.42 m below a datum specific to Str. M3-11. 7 sherds were recovered: 3 Cambio unslipped, 1 Encanto striated, and 3 eroded sherds.

EZ-4J-2 (Carter and Gutiérrez Castillo, 2011)

Location: Extension to the W of EZ-4J-1.

Dimensions: 2 × 1 m.

Orientation: 120° of N.

Objectives: To investigate the stratigraphy, chronology, and function of Str. M3-11.

Illustrations: Figures A.69 and A.70.

Results:

EZ-4J-2-1: Very dark grayish brown (2.5Y 3/2) humus and grayish brown (10YR 5/2) subhumic earth. Terminated at NW 0.36, NE 0.57, SW 0.35, SE 0.58, and CE 0.45 m below the Str. M3-11 datum. 14 sherds were recovered: 9 Cambio unslipped, 1 Encanto striated, and 4 eroded sherds.

EZ-4J-2-2: Grayish brown (10YR 5/2) earth with small stones. This and subsequent lots were excavated only in the northeastern half of the unit.

Terminated with a change in the matrix at NW 0.54, NE 0.67, SW 0.55, SE 0.66, and CE 0.6 m below the Str. M3-11 datum. Some chert flakes and 20 sherds were recovered: 7 Cambio unslipped, 5 Encanto striated, and 8 eroded sherds.

EZ-4J-2-3: Small stones in a layer of light brownish gray (10YR 6/2) earth overlying a layer of larger, flattish, unworked stones. The lot was terminated when those stones were removed, revealing a change in the matrix below them, at NW 0.9, NE 0.95, SW 0.86, SE 0.9, and CE 0.92 m below the Str. M3-11 datum. Chert flakes and 4 sherds were recovered: 2 Cambio unslipped, 1 Encanto striated, and 1 Tinaja red.

EZ-4J-2-4: Very dark gray (10YR 3/1) bajo mud below the large stones at the bottom of Lot 3. A second layer of similar stones was encountered near the bottom of this lot. The lot was terminated shortly after they were removed, when a change in the matrix was revealed at NW 1.35, NE 1.38, SE 1.38, SW 1.36, and CE 1.37 m below the datum. Chert flakes and 38 sherds were recovered: 1 Cambio group (Cambio unslipped or Encanto striated), 10 Cambio unslipped, 7 Encanto striated, 4 eroded, 1 Máquina brown, 2 eroded polychrome, and 7 Tinaja red.

EZ-4J-2-5: Lot 5 corresponded to a very pale brown (10YR 8/2) deposit of lime and degraded stucco, tentatively interpreted as the remains of a destroyed floor laid down over the bedrock. The lot was terminated with the exposure of bedrock in the eastern part of the unit and with a change in the soil at the western edge, at NW 1.4, NE 1.63, SW 1.4, SE 1.64, and CE

1.46 m below the datum. 2 Encanto striated and 1 Tinaja red sherd were recovered.

EZ-4J-2-6: Lot 6 corresponded to a shallow deposit of very dark gray (10YR 3/1) soil with limestone pebbles, encountered in a depression in the bedrock in the western part of the unit. The lot terminated with the exposure of the bedrock at NW 1.62, NE 1.61, SE 1.62, SW 1.6, and CE 1.61 m below the datum, within the limits of that depression. 4 Cambio unslipped and 1 eroded sherd were recovered.

Sub-operation K: excavations in the basin west of the palace

Description and objectives

Sub-operation K corresponded to activities carried out in the natural basin west of the palace patio, including the collection of surface materials (*EZ-4K-1*) and one excavation unit (*EZ-4K-2*) atop a small platform. The sub-operation aimed to clarify how the basin was used during the occupation of the palace group: whether it had been modified to serve as a reservoir, had been home to humbler residences, or had been little used at all. Investigations found some evidence for residential construction in this area in the form of Strs. M3-14 and M3-15, low platforms which could have supported a house and outbuilding made of perishable materials. Bedrock in the basin had been extensively modified, with evidence for quarrying seen in the bedrock foundation of Str. M3-15 and in regular “reefs” visible on the surface. Further data came from the fortuitous discovery of a refuse deposit exposed in the roots of a fallen tree; these materials were collected from the surface as Lot *EZ-4K-1-1*, but the spot was not excavated. The midden was

dated on ceramic grounds to the eighth or early ninth century, but all that could be said of Str. M3-15 is that its construction likely postdated that of Las Palmitas' major architecture, assuming that the basin was quarried to provide stone for those works.

EZ-4K-1 (Carter and Gutiérrez Castillo, 2011)

Location: Ca. 300 m W of M3-6. This unit corresponds to the surface collection of midden materials exposed in the roots of a fallen tree.

Illustrations: Not illustrated.

Results:

EZ-4K-1-1: This lot included fragments of grinding stones, 1 obsidian blade fragment, numerous chert flakes, and 82 sherds: 31 Cambio unslipped, 8 Encanto striated, 31 eroded, and 12 Tinaja red.

EZ-4K-2 (Carter and Gutiérrez Castillo, 2011)

Location: Atop Str. M3-15, near the NW corner of the platform.

Dimensions: 1.5 × 1 m.

Objectives: To clarify the architecture, stratigraphy, and chronology of Str. M3-15.

Illustrations: Figure A.71.

Results:

EZ-4K-2-1: Very dark grayish brown (10YR 3/2) humus and dark gray (7.5YR 4/2) humus with fragments of degraded bedrock churned up from below. No architectural fill was encountered, yet the quadrangular form of Str. M3-15 made its use as a building platform highly probable. 1 obsidian

blade fragment; 1 small, spherical ground stone; chert fragments; and 10 eroded sherds were recovered.

Sub-operation L: Structure M3-3

Description and objectives

Sub-operation L corresponded to excavations on Str. M3-3, a looted crypt near the SE corner of Str. M3-1. It was intended to clarify the external architecture of the building.

EZ-4L-1 (Carter and Gutiérrez Castillo, 2011)

Location: On the W side of Str. M3-3.

Dimensions: 1 × 2 m.

Objectives: To expose the exterior architecture of Str. M3-3.

Illustrations: Figures A.72 and A.75.

Results:

EZ-4L-1-1: Very dark brown (7.5YR 2.5/2) humus and dark grayish brown (10YR 4/2) subhumus with some small stones and pebbles.

Terminated with the exposure of the external blocks of the tomb, rectangular prisms with rounded corners, stacked in a stepped fashion to form a slope. Near the west edge of the unit, the top of a vertical stone slab was exposed, west of which there was a deposit of earth different from the subhumic layer. This deposit was excavated as Lot 2. Lot 1 ended at NW 2.25, NE 1.52, SW 2.25, SE 1.46, and CE 2.07 below a master datum established for Str. M3-3.

EZ-4L-1-2: Light brownish gray (10YR 6/2) earth west of the vertical slab and light gray (10YR 7/1) earth and lime with rubble fill east of the slab.

The height of the plaza floors on top of which Str. M3-3 was built was well established by preserved sections of those floors in EZ-4X-13 and under Strs. M3-1, M3-5, and M3-7, but neither the original plaza floor nor the renovation floor were visible in this lot even though they were expected to be found at about the middle of the stone slab. Instead, it appears that a section of the plaza was removed to accommodate the slab and associated constructions, conjecturally forming a perimeter around Str. M3-3. If the excavation was repaired with a new stucco floor, it did not survive. Ceramic sherds recovered from Lots 1 and 2 were inadvertently combined and consisted of 2 Azote orange, 2 Cambio group (Cambio unslipped or Encanto striated), 25 Cambio unslipped, 3 Encanto striated, 12 eroded, 1 Máquina brown, 2 Payaso orange-brown, 2 eroded polychrome, 1 Pozo unslipped, 17 Tinaja red, 2 Corozal incised, and 1 Zacatal cream polychrome sherds.

EZ-4L-2 (Carter and Gutiérrez Castillo, 2011)

Location: Extension W of EZ-4L-1.

Dimensions: 1 × 0.5 m.

Illustrations: Figures A.72 and A.75.

Results:

EZ-4L-2-1: Very dark brown (7.5YR 2.5/2) humus and dark grayish brown (10YR 4/2) subhumic earth overlying a large stone block extending above and below the levels of both plaza floors. No ceramics were recovered from this lot.

EZ-4X-13 (Carter and Gutiérrez Castillo, 2011)

Location: Looters' tunnel penetrating the E side of Str. M3-3. The looters broke into the crypt through the E wall, dug out through the W wall into the fill of the tomb mound, abandoned that tunnel, then dug down through the floor of the tomb and into the plaza fill. The extensive damage to the structure led to its eventual partial collapse.

Objectives: To document exposed architecture and fill and to salvage what data could be rescued.

Illustrations: Figures A.73, A.74, and A.75.

Results:

EZ-4X-13-1: Lot 1 was defined as the initial cleaning of the tunnel into Str. M3-3, which at first appeared much smaller than it was. Clearing rubble from the tomb chamber revealed the tunnel penetrating the west wall, which was included in this lot, but also revealed the tomb and plaza floors and the lower tunnel extending downwards from them. Chert flakes and 60 sherds were recovered: 23 Cambio unslipped, 9 Encanto striated, 14 eroded, 4 Infierno black, 3 Payaso orange-brown (possibly high-fired Tinaja red), 6 Tinaja red, and 1 Zacatal cream polychrome sherd.

EZ-4X-13-2: Lot 2 corresponded to the cleaning of the upper part of the lower looters' tunnel, which had partially filled with rubble collapsed from above. Chert flakes and 44 sherds were recovered: 17 Cambio unslipped, 6 Encanto striated, 7 eroded, 3 Infierno black, 1 Saxche/Palmar orange polychrome, and 10 Tinaja red sherds.

EZ-4X-13-3: Lot 3 was opened with the discovery of a human tooth in the rubble partially filling the lower looters' tunnel. When the fallen debris was removed, the lot was expanded to include cleaning operations in the cavity the looters had excavated in the plaza fill. In the end, only a few teeth and phalanges were recovered, the rest of the remains having decayed or been destroyed. 62 sherds were recovered as well: 27 Cambio unslipped, 5 Encanto striated, 11 eroded, 4 Infierno black, 7 Máquina brown, 3 Saxche/Palmar orange polychrome, and 5 Tinaja red sherds.

Sub-operation M: excavations in the southern platform

Description and objectives

Sub-operation M corresponded to excavations on the platform extending south and southwest from the base of the palace patio. These consisted of two test units near a pair of chultuns by the southwest corner of Str. M3-13, a broad platform hypothesized to have served a residential or utilitarian purpose. The goals of the excavations were to determine whether and how the bedrock had been modified to create the south platform's surface, and to recover chronologically informative artifacts associated with the chultuns. The layer of limestone chips and stones in EZ-4M-1 was so shallow that it could not by itself be positively identified as fill, as opposed to bits of bedrock detached by roots and other natural factors. An analogous stratum of pebbles and stones in EZ-4M-2, on the other hand, was a good deal thicker; its upper surface was nearly level, in contrast to the irregularity of the bedrock below. This layer, and that in EZ-4M-1 by extension, were interpreted as leveling fill which was probably once covered by a floor of stucco or rammed earth.

EZ-4M-1 (Carter and Gutiérrez Castillo, 2011)

Location: Ca. 4 m S of the western chultun.

Dimensions: 1 × 1 m.

Illustrations: Figure A.76.

Results:

EZ-4M-1-1: Very dark brown (7.5YR 2.5/1) humus above a layer of light brownish gray (10YR 6/2) earth with abundant limestone pebbles and some larger stones. Terminated with the exposure of bedrock at NW 0.64, NE 0.66, SW 0.65, SE 0.65, and CE 0.66 m below a master datum established for Sub-operation M. 2 eroded sherds were recovered.

EZ-4M-2 (Carter and Gutiérrez Castillo, 2011)

Location: Ca. 1 m NW of the western chultun.

Dimensions: 1.5 × 1 m.

Illustrations: Figure A.77.

Results:

EZ-4M-1-1: Very dark brown (7.5YR 2.5/1) humus and dark grayish brown (10YR 4/2) subhumic earth overlying a fill of limestone pebbles and stones in a matrix of light brownish gray (10YR 6/2) earth. The pebble fill was encountered at roughly the same level as the analogous stratum in EZ-4M-1-1, even though the bedrock was deeper. Terminated with the exposure of bedrock at NW 0.64, NE 0.67, SW 0.87, SE 0.85, and CE 0.7 m below the Sub-operation M datum. 2 Encanto striated and 9 eroded sherds were recovered.

Sub-operation N: Structure M3-2

Description and objectives

Sub-operation N corresponded to work on Str. M3-2, a low platform running N-S along the east side of Str. M3-1. Its sole unit, EZ-4N-1, was opened in order to determine whether the plaza floor observed in the fill of Str. M3-1 extended east of Str. M3-1 and north of Str. M3-3, given that that floor was surprisingly absent in Units EZ-4L-1 and EZ-4L-2. No surviving floors were encountered, and it was not possible to determine the stratigraphic relationship between Strs. M3-1 and M3-2. However, the limited ceramic data were compatible with a Late Classic date for Str. M3-2.

EZ-4N-1 (Carter and Gutiérrez Castillo, 2011)

Location: Atop Str. M3-2, at the foot of Str. M3-1.

Dimensions: 1 × 1 m.

Illustrations: Figure A.78.

Results:

EZ-4N-1-1: Black (5YR 2.5/1) humus and dark grayish brown (10YR 4/2) humus with limestone pebbles. Chert flakes and 1 eroded sherd were recovered. Terminated at NW 0.49, NE 0.6, SW 0.51, SE 0.6, and CE 0.54 m below a datum specific to the unit.

EZ-4N-1-2: Architectural fill comprised of large stones in a matrix of sandy, gray (7.5YR 7/1) earth. Chert flakes and 11 sherds were recovered: 3 Cambio unslipped, 6 eroded, 1 Payaso orange-brown, and 1 Tinaja red. Terminated at NW 1.04, NE 1.15, SW 1.06, SE 1.14, and CE 1.1 m below the datum.

EZ-4N-1-3: Light olive brown (2.5Y 5/6) earth with larger stones than were encountered in Lot 2. 2 figurine fragments, chert flakes, and 8 sherds were recovered: 2 Cambio unslipped, 2 Encanto striated, and 4 eroded. Terminated with the exposure of bedrock at NW 1.43, NE 1.48, SW 1.42, SE 1.47, and CE 1.45 m below the datum.

Chronology and stratigraphy

The data presented above were interpreted as the material correlates of nine phases of building and use activity at Las Palmitas. Presented in Table A.1 below, these time spans were of widely varying duration. Time Spans 7, 8, and 9, for instance, might very well have occurred during a single dry season given the evidence that Las Palmitas was rapidly constructed.

Table A.1: Time spans at the Las Palmitas Group.

Time span	Architectural developments	Ceramic phase	Date
1	Quarrying and leveling; deposition of plaza fill and extension of plaza	Caal	Ca. A.D. 750 – 800
2	Construction of most or all other buildings	Caal	Ca. A.D. 750 – 800
3	Construction of Str. M3-9	Caal	Ca. A.D. 750 – 800
4	Renovation of Str. M3-5, plaza floor, and palace patio floor (2 times); use of existing architecture	Caal	Ca. A.D. 750 – 800
5	Building of Str. M3-3; use of existing architecture	Caal	Ca. A.D. 750 – 800
6	Remodeling of Str. M3-8; use of existing architecture	Cucul	Ca. A.D. 850 – 950
7	Use following remodeling of Str. M3-8	Cucul, Choc	Ca. A.D. 850 – 1200 A.D. 1200
8	Post-abandonment processes	n/a	Ca. A.D. 1200 – 1970s
9	Collapse of Str. M3-3; forest growth on looters' spoil	n/a	A.D. 1970s – 2008

Time Span 1 corresponds to the stratigraphically earliest architecture documented at the group. Stratigraphic evidence permits the process to be outlined. Vegetation and earth were first removed from the hilltop to expose bedrock, which was probably extensively altered both in order to obtain limestone for building and to create two broad, flat surfaces: one underlying the eastern plaza and part of the patio platform, the other extending south and west in the form of the south platform. The bedrock was higher below the western part of the palace patio, and much of this was left intact. Quarrying in the basin west of Str. M3-6 likely occurred at the same time. Quarrying was used to define planned architectural spaces, including the platform of Str. M3-15 and the western limit of the elite complex: the vertical wall of bedrock encountered in looters' tunnels in Strs. M3-6 and M3-9 would have been shaped at this stage, with material to the west being removed. The fill underlying the plaza floor was then laid down. This was only a shallow layer throughout most of the group, but a complication arose from the wish to extend the plaza farther south and east than the leveled bedrock surface would permit. Rubble fill contained by a talud of worked stones was deposited over the southern and eastern slopes of the hill as part of this process. This extension fill, which included large blocks of distinctly colored bajo mud, was exposed in Units EZ-4X-11, EZ-4X-12, and EZ-4X-13. Two preparatory floors below the level of the plaza floor were noted in EZ-4X-12, but their full extent was not determined.

With the plaza fill in place, a stucco floor was laid down over it. As noted above, this extended for some meters into the future footprint of the palace patio. Near its north edge, in the area buried by Str. M3-1, the floor rose up to form a platform, being laid

down in one continuous stratum over a higher area of fill. Before the fill of Str. M3-1 was built up, an auxiliary platform was added onto the south side of this platform; it is visible only in the west profile of EZ-4X-4 (see Figure A.31), suggesting that it was built on the axis of the building's intended footprint. Damage from illegal excavations complicates interpretation, but in one small area (visible in the east profile of EZ-4X-4; see Figure A.30), this platform floor directly covered another polished stucco surface, conceivably a preparation floor. Near the north edge of Str. M3-1, the plaza/platform floor disappears from tunnel profiles, replaced by three poorly understood floors (in EZ-4X-7; see Figure A.33) divided by a massive, roughly worked block of limestone. The floors north of that block might extend into the flat area north of Str. M3-1, an interesting possibility that, unfortunately, was not tested. These northern floors and the fill below them were stratigraphically subsequent to the fill underlying the plaza floor, so cannot represent an occupation predating Time Span 1.

Time Span 2 includes the major constructions at Las Palmitas: the pyramidal Str. M3-1 and the palace patio with its buildings. The profile of EZ-4X-14, in the fill of the palace platform below Str. M3-7, makes it clear that the elevated patio was constructed soon after the plaza floor was laid down, marking the end of Time Span 1. The evidence is that the lime and pebble fill of the plaza floor continues beneath the patio for several meters, but its surface is only finished near the edge of the patio platform (see Figure A.20). Thus, the plaza floor deposit was more extensive than it needed to be, and not all of it was smoothed and polished, but the unfinished part was covered by the platform fill before it could deteriorate. The polished section of the plaza floor underneath Str. M3-7 corresponds precisely to the footprint of the stepped terraces on the western side of the

patio complex, plus a deposit of stones in black bajo mud behind the innermost terrace wall. While the builders may initially have overestimated the area of floor they would need, the decision to finish the part of the buried floor that was finished thus appears deliberate and was presumably intended to furnish a level surface for the terrace walls. Similar concerns are evident in the stratigraphy of Str. M3-6. There, the patio floor extended for some distance under the building, but terminated before reaching the western wall. The lowest floor of the structure (elevated relative to the patio floor), however, covered the whole footprint of the building and was visible underneath the lowest course of stones of the western wall (see Figure A.44). This floor served as the floor of the exterior rooms, but also as the foundation for the walls and for the higher floors of the interior central rooms and the vaulted chambers with windows on either side of the axial doorway. The walls were built before these higher floors, since the elevated floor of the rear central room did not pass underneath the western wall, even though a small hole through the wall—a drain?—was left open at floor level. The stucco floor exposed in EZ-4F-7, on top of the vertical masonry of the eastern wall, was of course not a use-floor but a preparatory surface for the vault.

Str. M3-1 is not directly stratigraphically related to the palace patio, but is included in Time Span 2 because Las Palmitas is assumed to have been conceived from the beginning as a palatial-ritual complex and built thus in one major construction phase. The pyramid was built in a single episode, and the floor of its superstructural shrine was never renovated. The stratigraphy of its fill is more complex than that of other buildings at Las Palmitas, with distinct zones of gray and black mud, plus lenses of bajo mud or crushed limestone that seem to correspond to individual basketfuls. Together with the

cached feline vertebrae and partially burned resin excavated as EZ-4E-8, these patterns suggest that Str. M3-1's construction was more ritualized than that of other structures. Its function as a mortuary shrine is attested by the human bones found in EZ-4X-8, but given their peripheral location it is doubtful that those remains belonged to the person for whom the pyramid was primarily built.

Time Span 3 corresponds to the construction of Str. M3-9, which is stratigraphically subsequent to the palace patio. Although Strs. M3-9 and M3-5 resemble one another in that both are long, terraced buildings without masonry superstructures, and both face onto the eastern plaza, their construction techniques differ. Str. M3-9 was built in distinct layers, with stucco floors laid down over each layer before the next was put in place. This technique parallels that of Str. M3-6, where the elevated floors of the rear and windowed rooms were deposited on top of a lower floor extending throughout the whole building. By contrast, the fill of Str. M3-5's terraces and "bracket" platforms was all deposited before any of its floors, so that the floor of the lower terrace did not extend under the fill of the upper. For these reasons, Str. M3-5 is tentatively placed in Time Span 2, not Time Span 3.

Except for the construction of Str. M3-3, it is impossible to stratigraphically correlate all the other late eighth- or early ninth-century architectural events at Las Palmitas, since they occurred in spatially disconnected settings. These are grouped together here as Time Span 4 and include all architectural modifications limited to specific buildings or areas of the group during a time when El Zotz' elites had access to substantial, skilled labor power. They include the deposition of one renovation floor in the plaza, one on the lower terrace of Str. M3-5, and two in the palace patio. The patio

renovation floors did not evidently cover the whole patio: the first renovation floor was encountered in excavations at Strs. M3-6 and M3-7, but not at Str. M3-8, while the second such floor was limited to some area in front of Str. M3-7.

Time Span 5 is confined, on present evidence, to the building of Str. M3-3, the crypt near the southeast corner of Str. M3-1. The evidence is that Str. M3-3 postdated a renovation floor overlying the original floor of the eastern plaza. The extent of that renovation floor, is unknown since the plaza floors were only preserved where they were covered by architectural fill. Yet stratigraphic profiles from all other buildings on the plaza—including Str. M3-4, whose relatively crude architecture and undiagnostic ceramics might otherwise have suggested a Terminal Classic date—contained only the original plaza floor. Str. M3-3 was thus the only building stratigraphically subsequent to the plaza renovation floor.

Time Span 6 corresponds to the remodeling of Str. M3-8, a process which began with the excavation and filling of Burial 7. Time Span 7 denotes the latest ancient Maya occupation of Las Palmitas visible from the PAEZ excavations. Time Span 7 represents the Terminal Classic and Early Postclassic use and occupation of the complex as it was following the remodeling of Str. M3-8. The bulk of ceramics securely attributed to Time Span 7 belonged to the Terminal Classic Cucul phase, with a small quantity of Postclassic Choc-phase ceramics recovered from the midden behind Strs. M3-8 and M3-9. Diagnostic of Postclassic contributions to those excavation lots were a few Paxcaman red plates with hourglass-shaped or scroll-footed supports. These sherds released a distinctly sulfurous odor when broken, consistent with their having been produced with lacustrine clays, but whether they represent migration from or trade with the Peten Lakes

district is unknowable. During Time Span 7, some of Las Palmitas' residents evidently held high status relative to other people at El Zotz, and may have included the last asserted *Pa'chan ajaw*. Their domestic trash, including imported ceramics, accumulated in middens behind Strs. M3-7, M3-8, and M3-9 and on the hillside below Str. M3-5. Ceramics recovered from the floor of the central, rear room of Str. M3-6 also date to Time Span 7, but these on-floor deposits leave some unanswered questions about the condition and use of that structure just before Las Palmitas was abandoned. Was Str. M3-6 in disrepair—perhaps with some of its vaults already collapsing—and some of its rooms being used as trash dumps? The absence of complete vessels could support this possibility. Yet in the case of one large Tinaja red jar, far more fragments of the vessel were recovered in close spatial association than was true for similar jars from confirmed midden deposits. Additionally, no animal bones were found in Str. M3-6, in contrast to the midden in Sub-operation H. Ceramics from Str. M3-6 may thus correspond to the building's domestic use, left behind when its last inhabitants departed; the partial collapse of the vault is a conceivable explanation for that departure.

During Time Span 8, the complex was reclaimed by the forest, with exterior stuccoed surfaces eroding, tree roots causing extensive damage to masonry architecture, and decaying organic matter accumulating atop fallen rubble. Nearly all excavation lots containing collapsed masonry date to this period. It is highly likely that visitors of all sorts, pre- and post-Columbian, passed through Las Palmitas from time to time during Time Span 8, but if so, they left no archaeologically detected traces.

Time Span 9 is defined as the period following illegal excavations, believed to have occurred primarily in the 1970s at Las Palmitas as in the rest of the El Zotz site area.

During this period, spoil piles became covered with vegetation and forest humus. The collapse of the Str. M3-3 vault probably dates to this period, as may the partial collapse of the fill in EZ-4X-6. Except for excavation-induced architectural collapse, Time Span 9 basically represents a continuation of natural processes ongoing during Time Span 8, corresponding to the period before the looters arrived but after Las Palmitas ceased to be used as a permanent residence, no later than sometime in the Early Postclassic period.

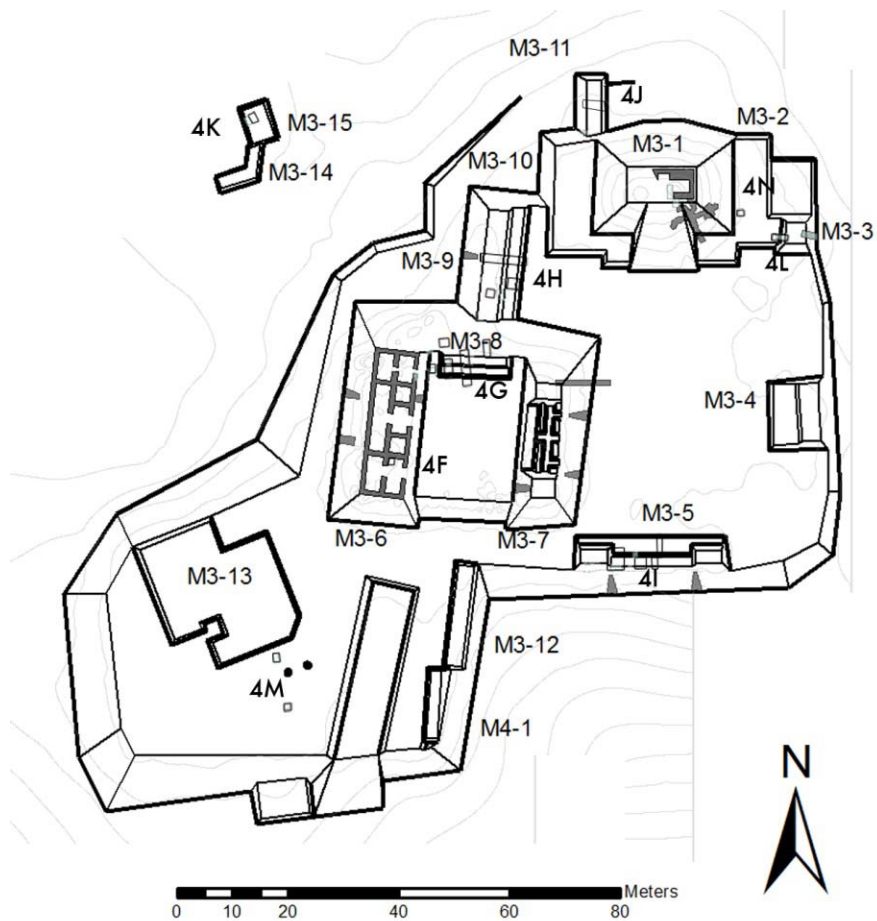


Figure A.1. Excavations in the Las Palmitas Group. Map by Thomas G. Garrison.

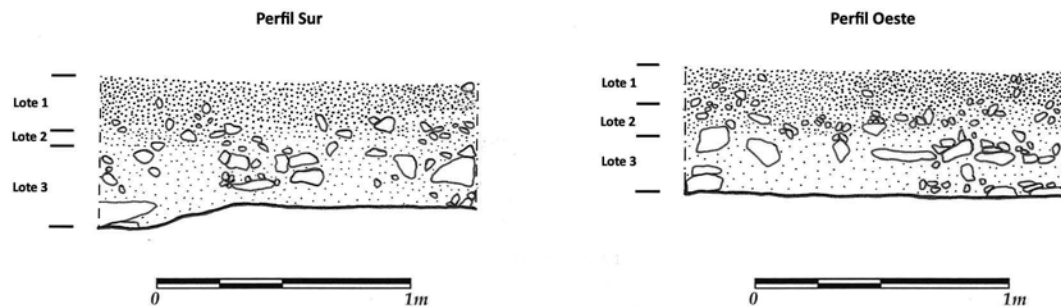


Figure A.2. EZ-4A-1, south and west profiles. Drawing by Alejandro Guillot Vassaux and Nicholas Carter.

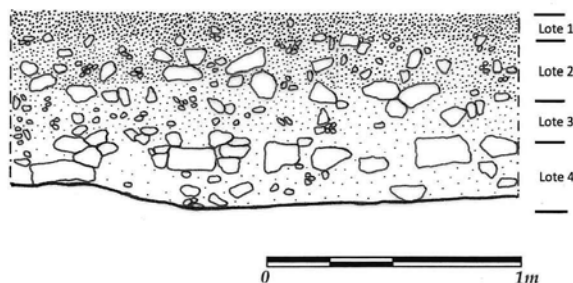


Figure A.3. EZ-4A-2, north profile. Drawing by Alejandro Guillot Vassaux and Nicholas Carter.

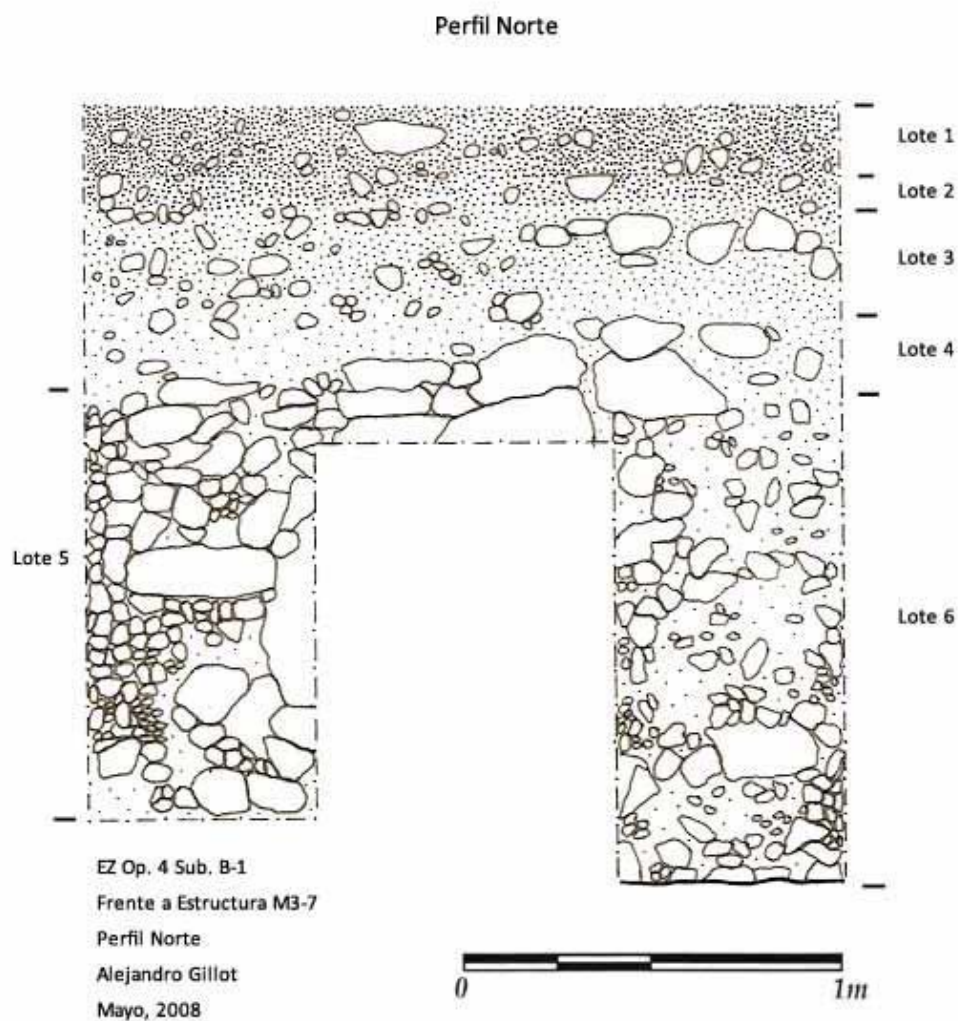


Figure A.4. EZ-4B-1, north profile. Drawing by Alejandro Guillot Vassaux and Nicholas Carter.

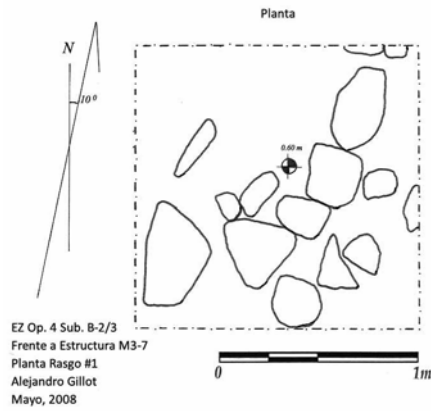


Figure A.5. EZ-4B-2, plan view. Drawing by Alejandro Guillot Vassaux and Nicholas Carter.

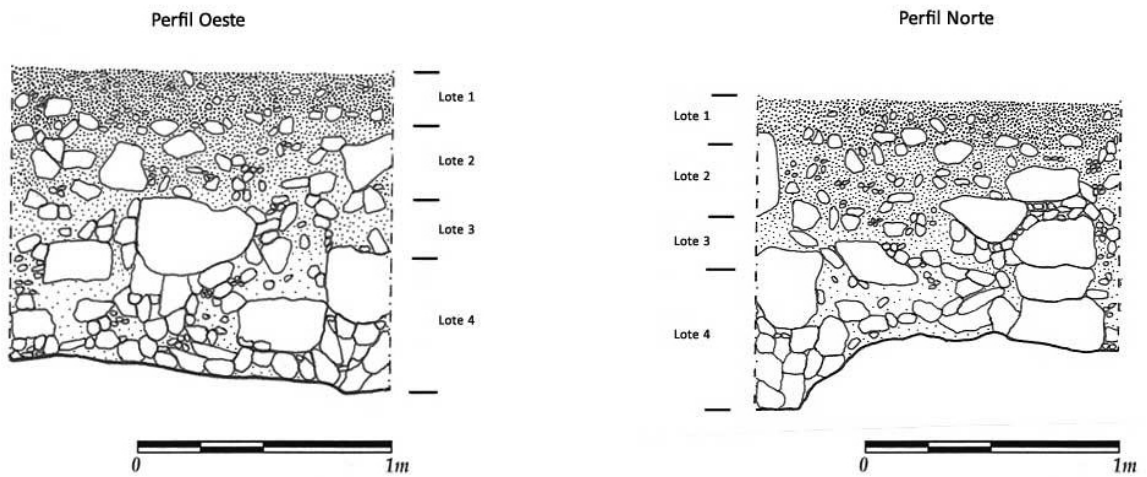


Figure A.6. EZ-4B-2, west and north profiles. Drawing by Alejandro Guillot Vassaux and Nicholas Carter.

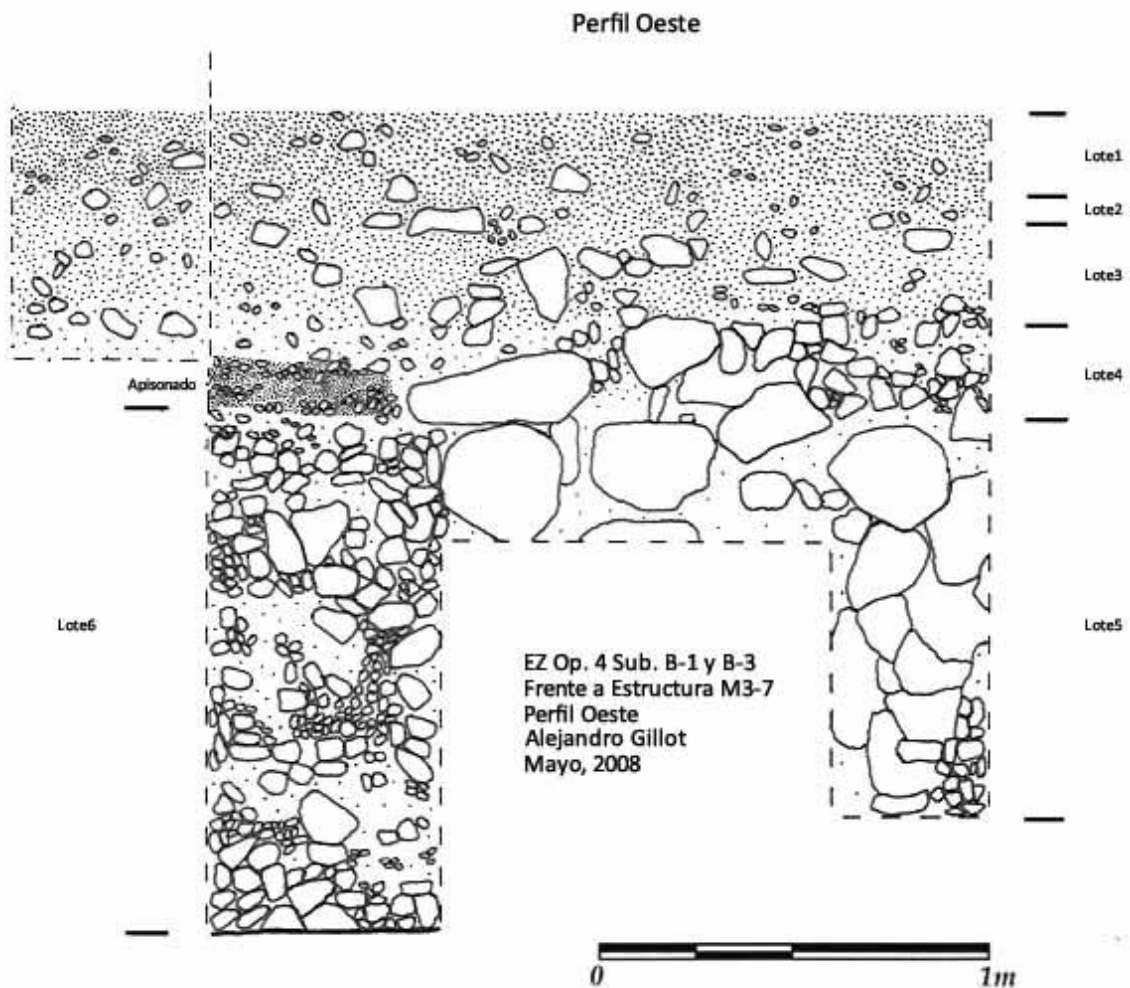


Figure A.7. EZ-4B-1 and EZ-4B-3, west profile. Drawing by Alejandro Guillot Vassaux and Nicholas Carter.

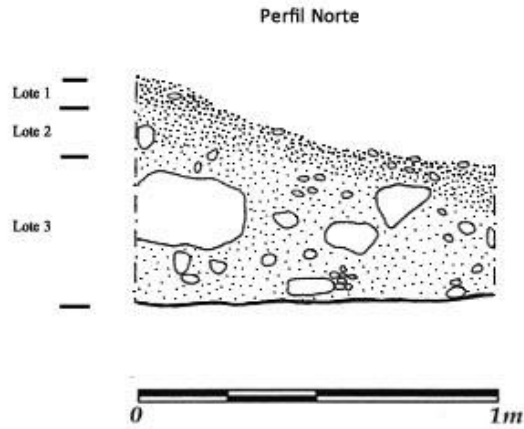


Figure A.8. EZ-4C-1, north profile. Drawing by Alejandro Guillot Vassaux and Nicholas Carter.

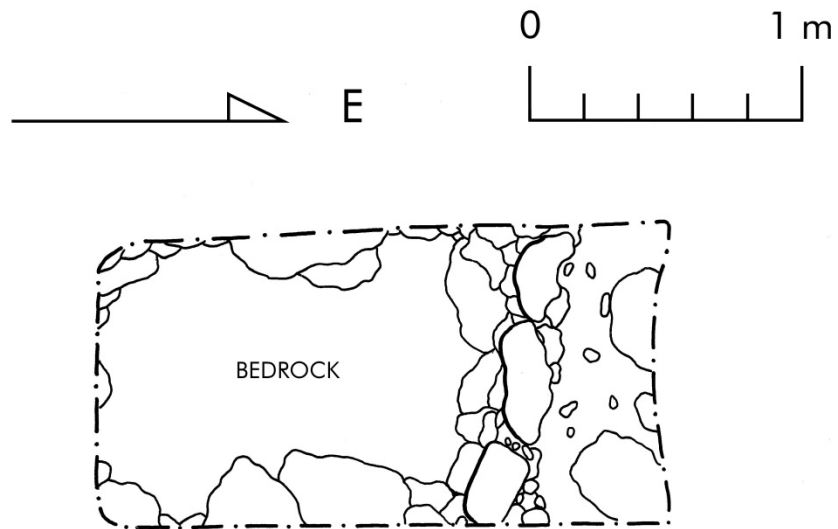


Figure A.9. EZ-4C-2, plan view. Drawing by Nicholas Carter.

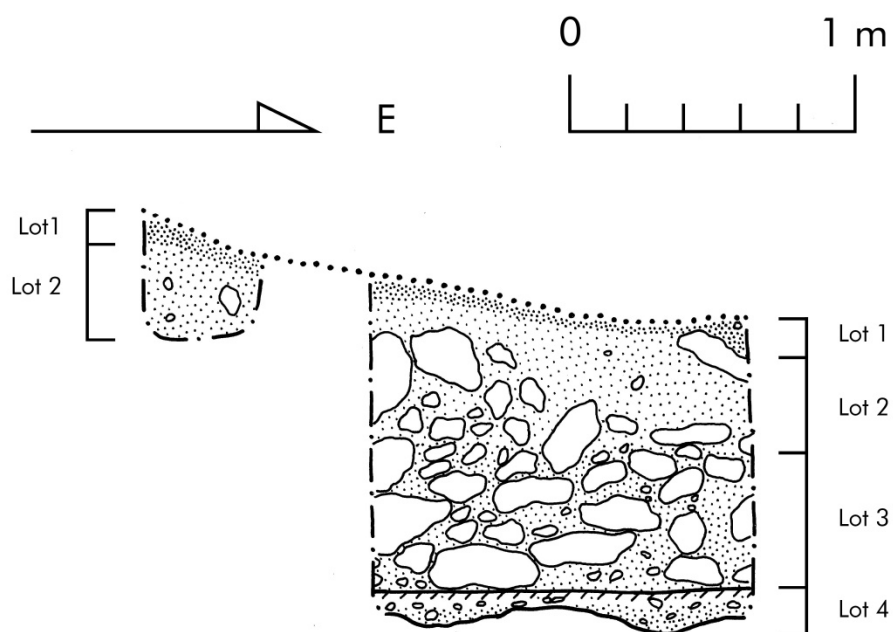


Figure A.10. EZ-4C-2, south profile. Drawing by Nicholas Carter.



Figure A.11. EZ-4D-1, EZ-4X-1, and EZ-4X-2, north profiles. Drawing by Alejandro Guillot Vassaux, Juan Carlos Meléndez, and Nicholas Carter.

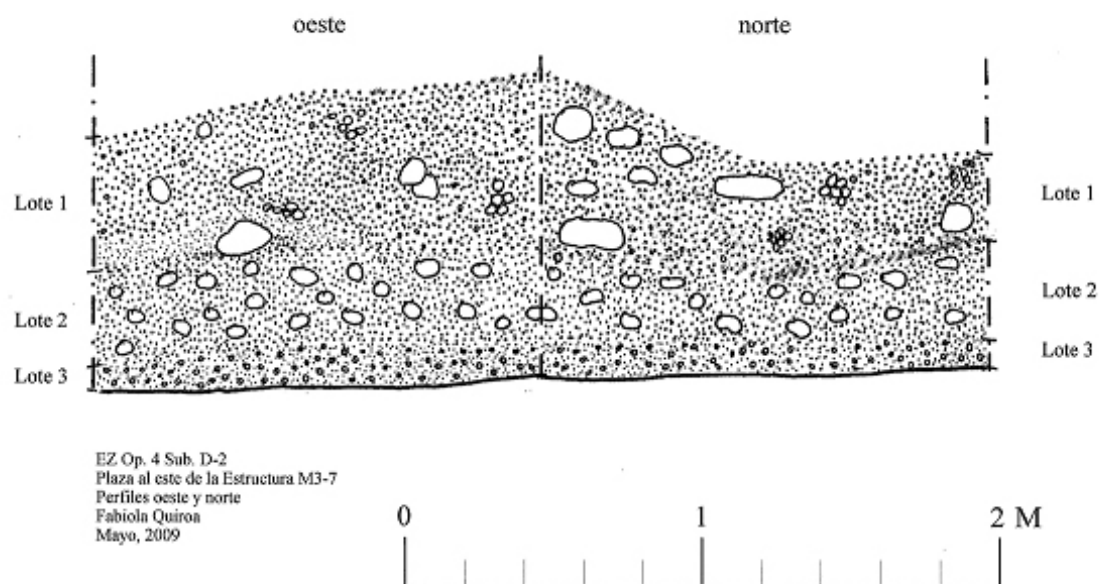


Figure A.12. EZ-4D-2, west and north profiles. Drawing by Fabiola Quiroa.

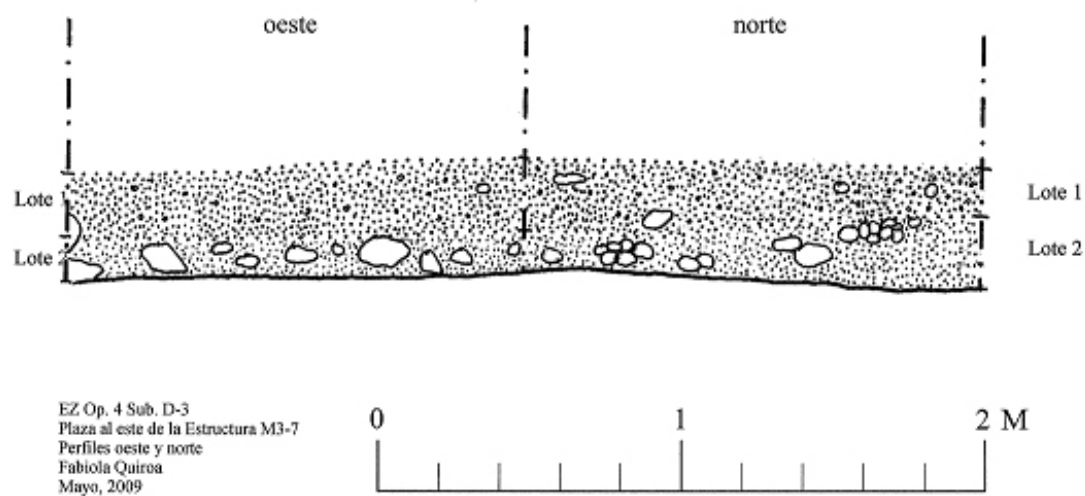


Figure A.13. EZ-4D-3, west and north profiles. Drawing by Fabiola Quiroa.

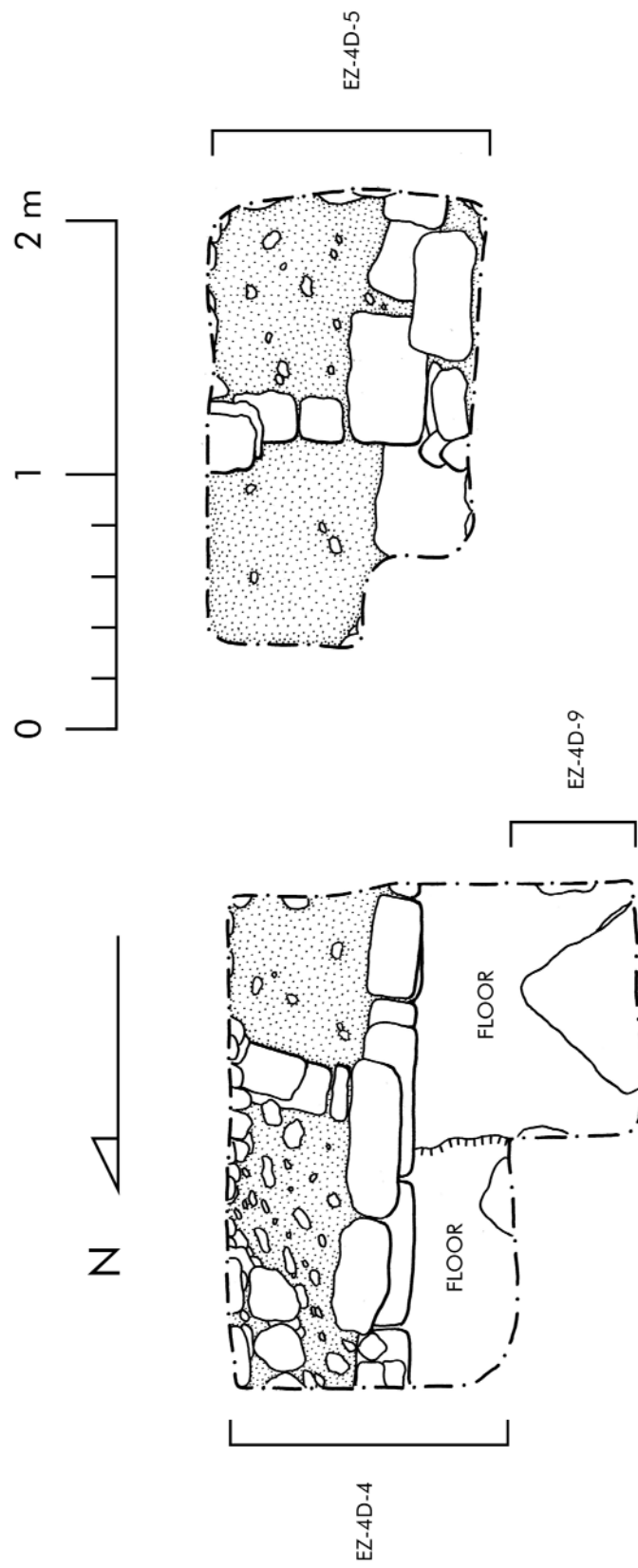


Figure A.14. EZ-4D-4, EZ-4D-5, and EZ-4D-9, plan view. Drawing by Nicholas Carter.

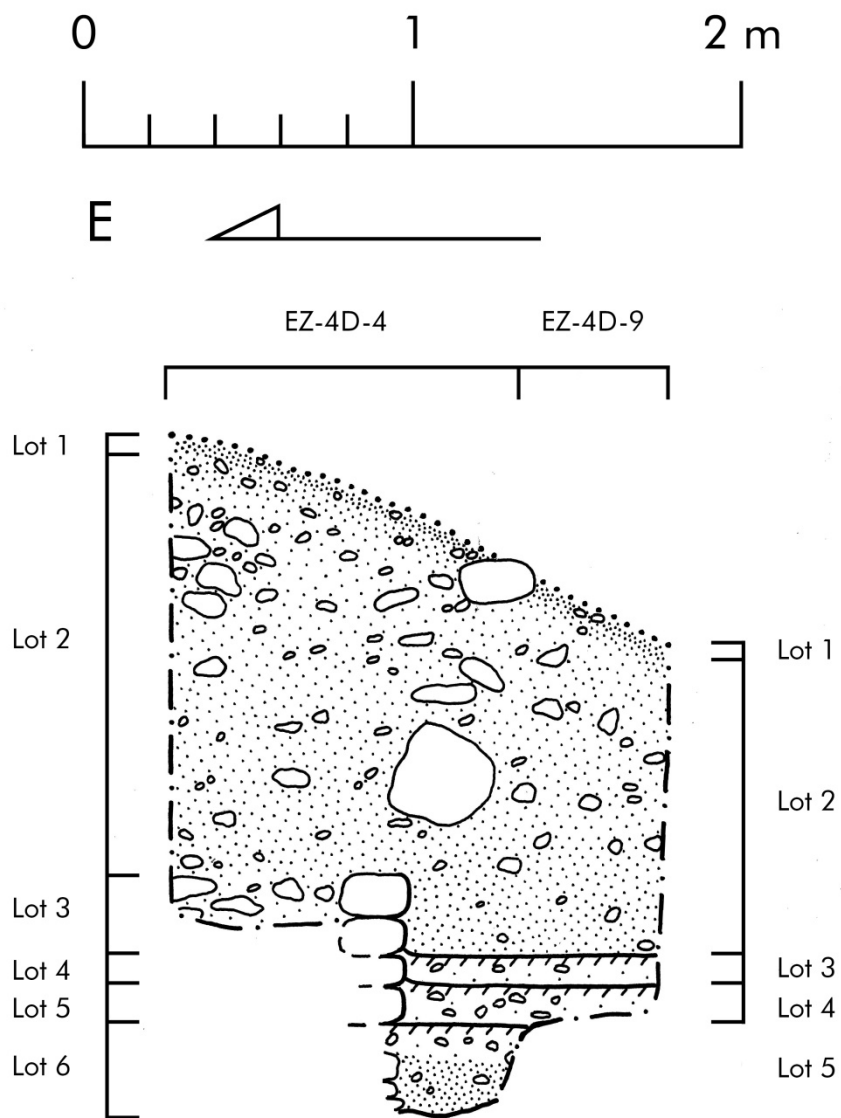


Figure A.15. EZ-4D-4 and EZ-4D-9, south profiles. Drawing by Nicholas Carter.

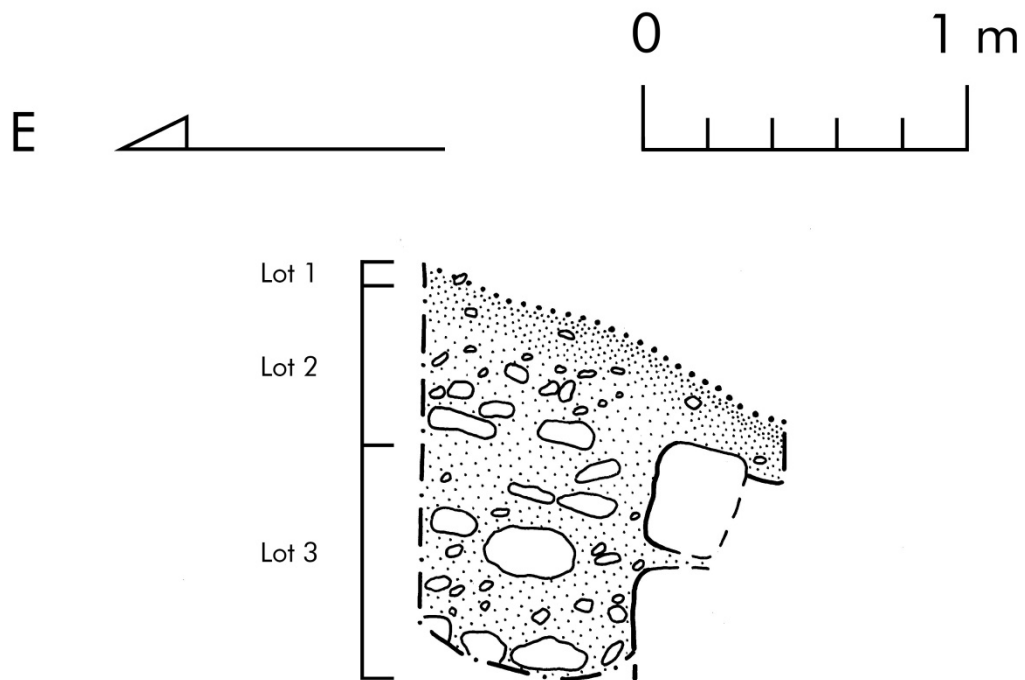


Figure A.16. EZ-4D-5, south profile. Drawing by Nicholas Carter.

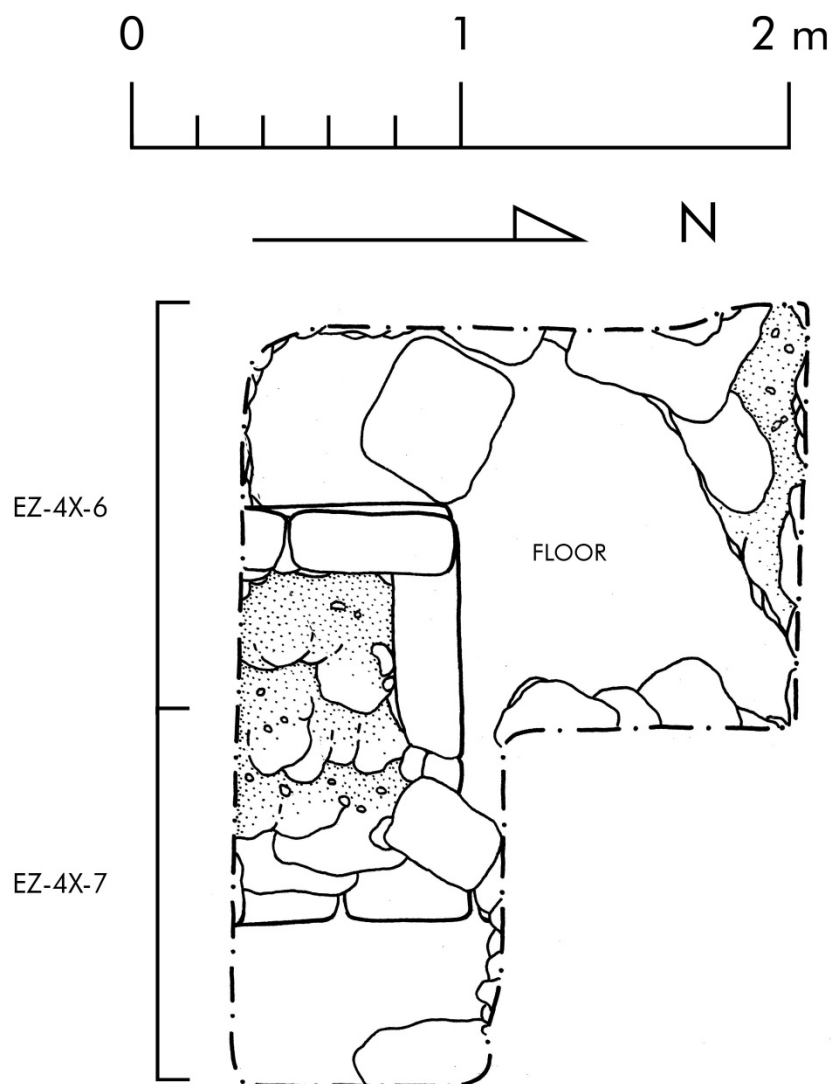


Figure A.17. EZ-4D-6 and EZ-4D-7, plan view. Drawing by Nicholas Carter.

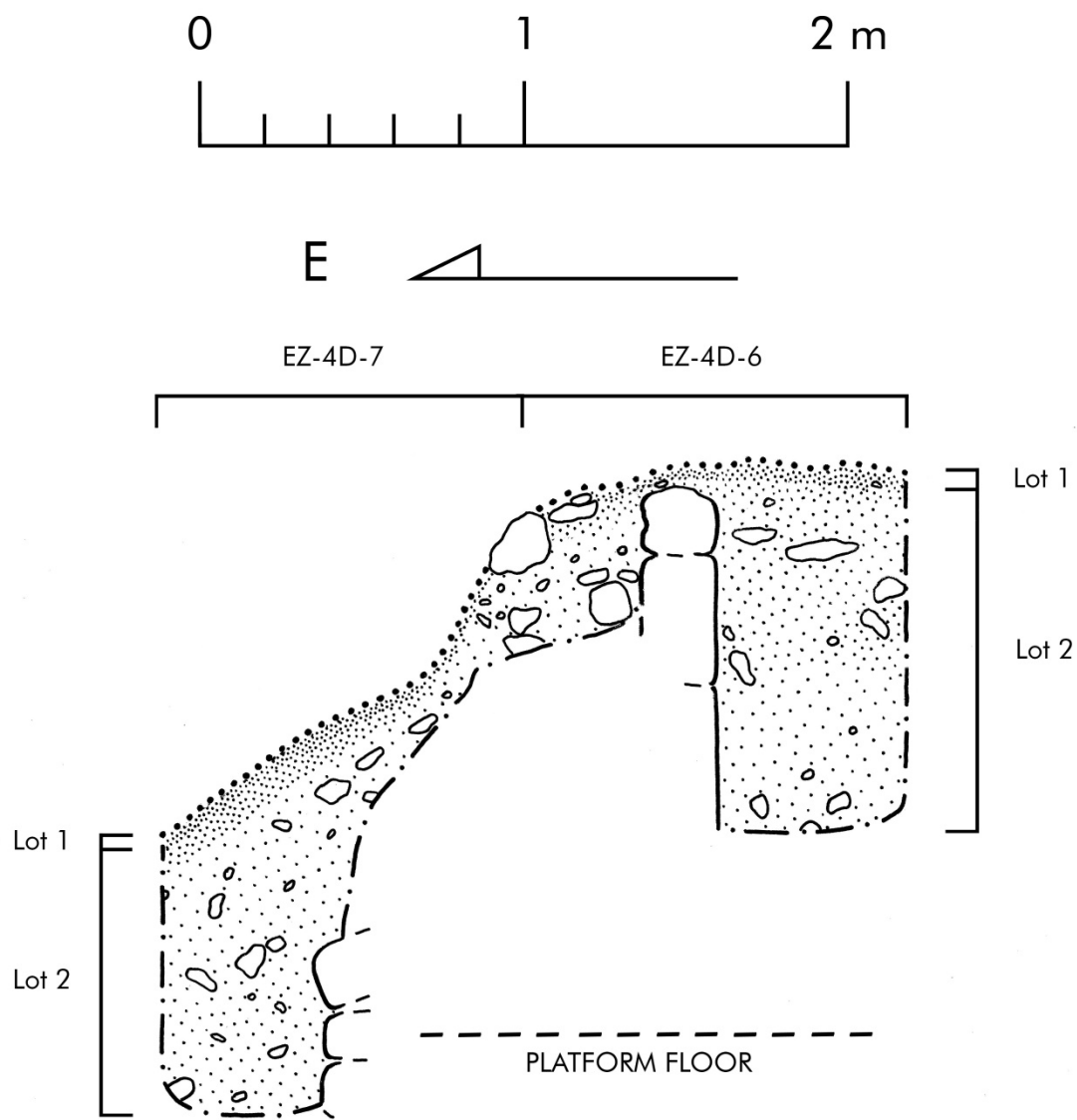


Figure A.18. EZ-4D-6 and EZ-4D-7, south profiles. Drawing by Nicholas Carter.

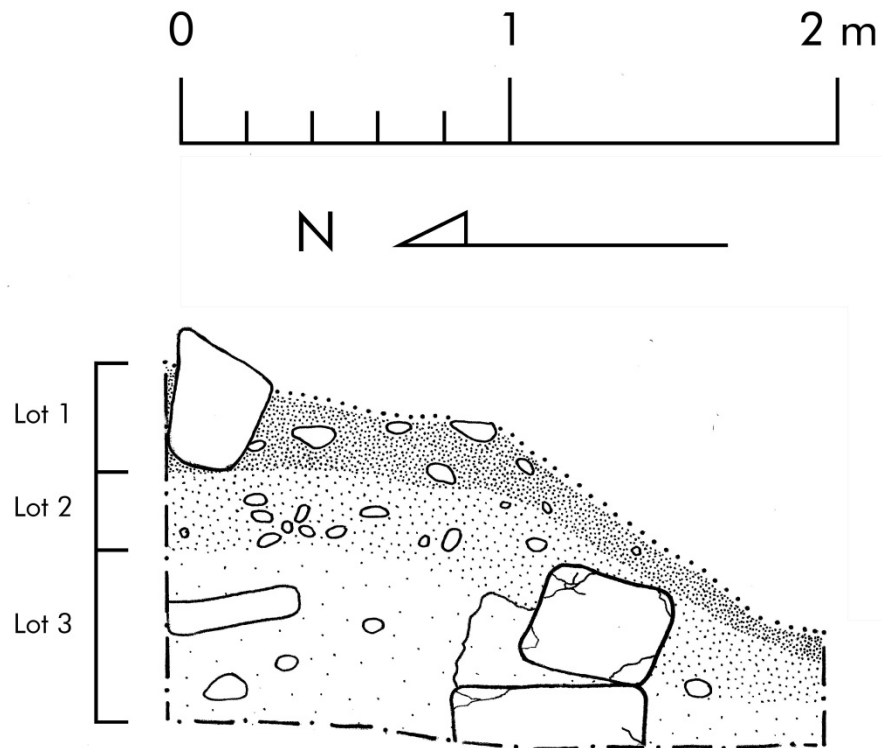


Figure A.19. EZ-4D-8, south profile. Drawing by Nicholas Carter.



Figure A.20. EZ-4X-14, south profile. Drawing by Nicholas Carter.

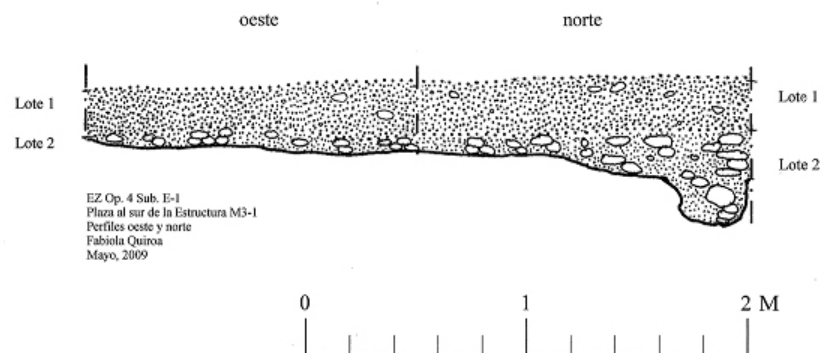


Figure A.21. EZ-4E-1, west and north profiles. Drawing by Fabiola Quiroa.

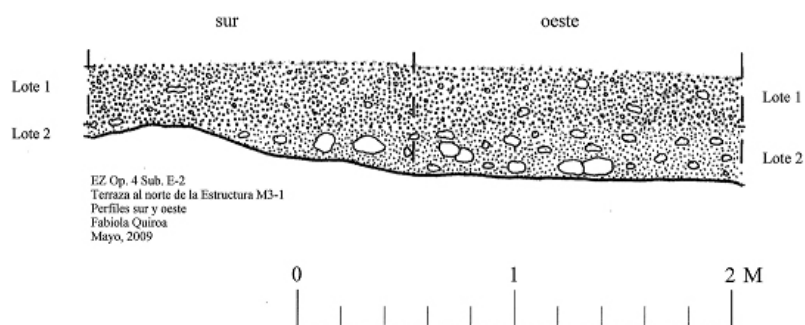


Figure A.22. EZ-4E-2, south and west profiles. Drawing by Fabiola Quiroa.

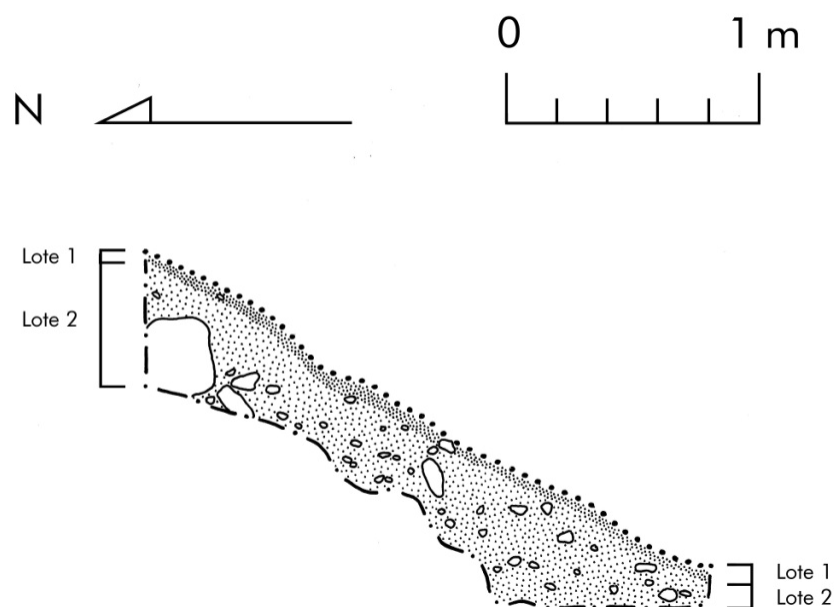


Figure A.23. EZ-4E-3, east profile. Drawing by Nicholas Carter.

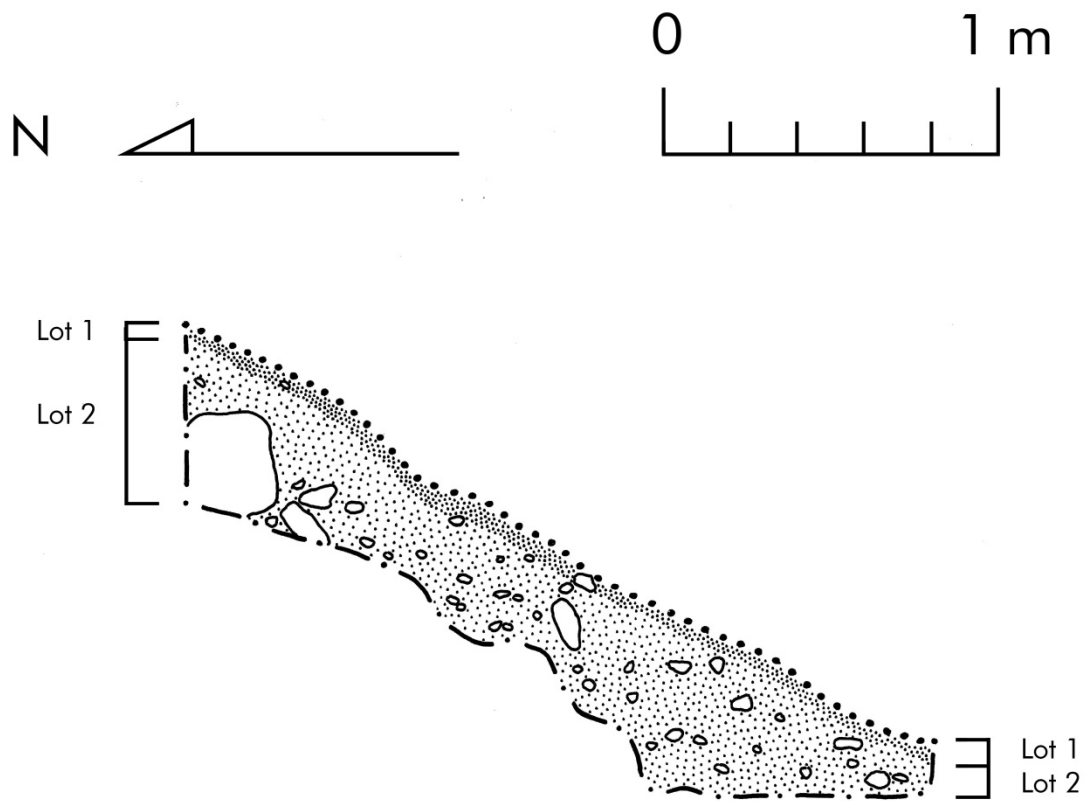


Figure A.24. EZ-4E-5, east profile. Drawing by Nicholas Carter.

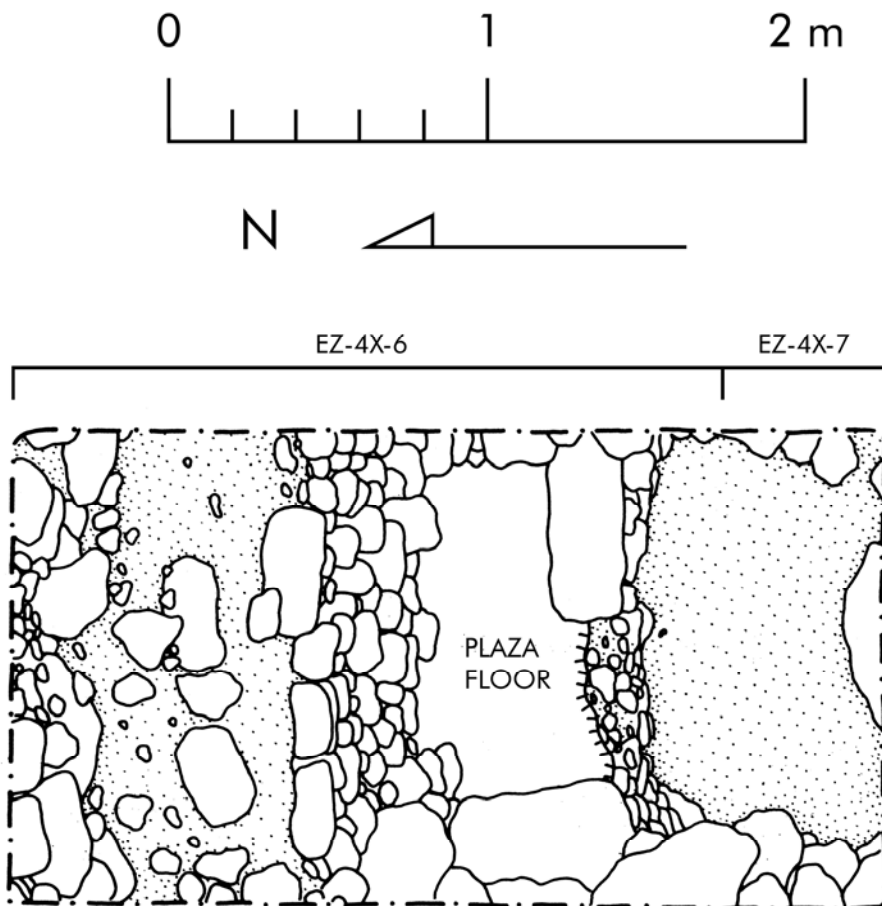


Figure A.25. EZ-4E-6 and EZ-4E-7, plan view. Drawing by Nicholas Carter.

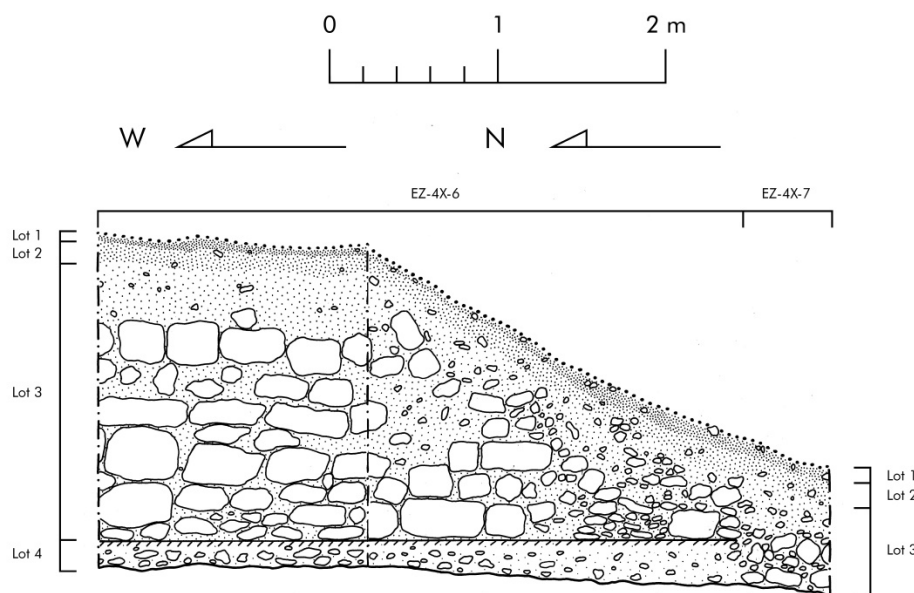


Figure A.26. EZ-4E-6, north profile, and EZ-4E-6 and EZ-4E-7, east profiles. Drawing by Nicholas Carter.

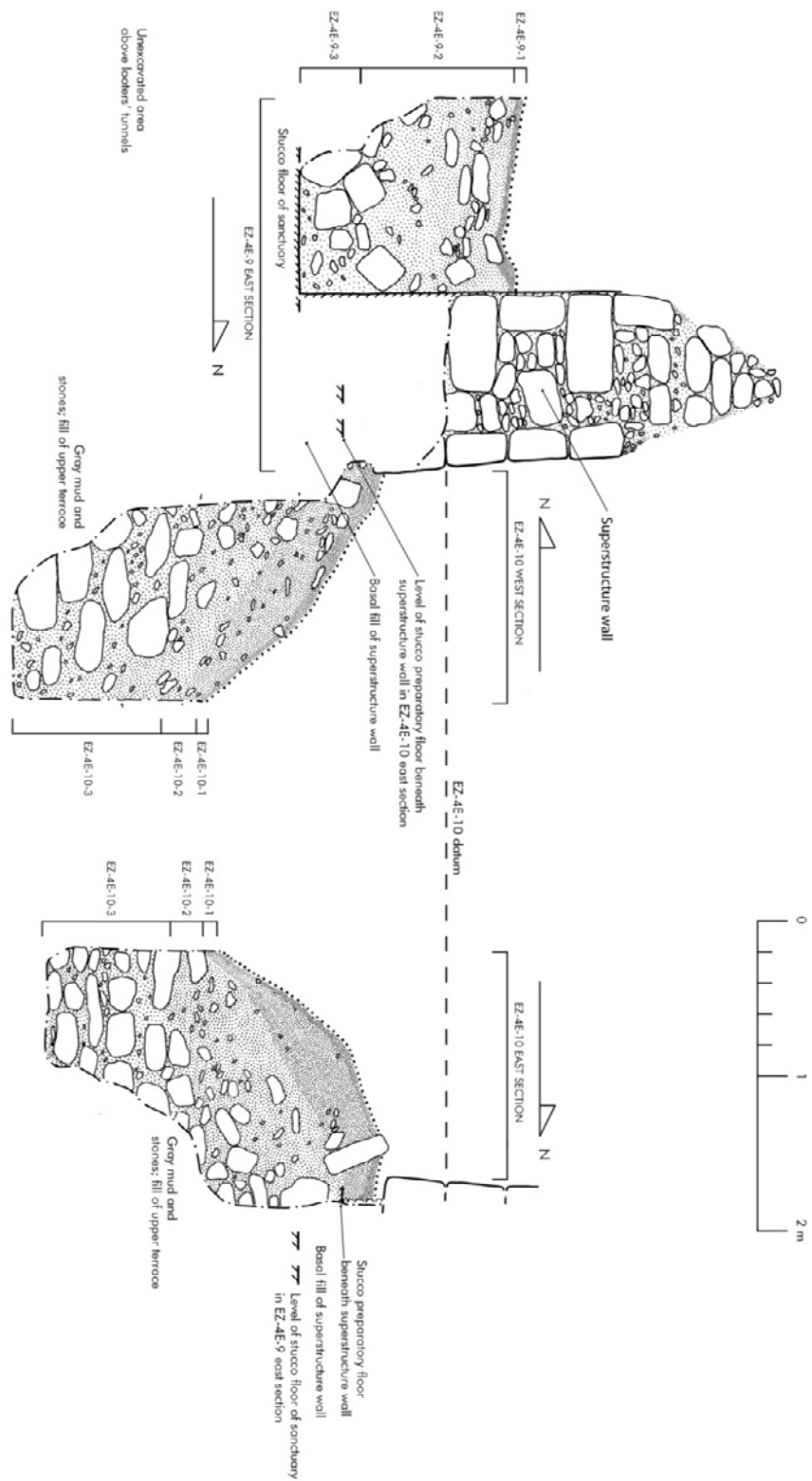


Figure A.27. EZ-4E-9, east profile, and EZ-4E-10, west profile (reversed). Drawing by Nicholas Carter.

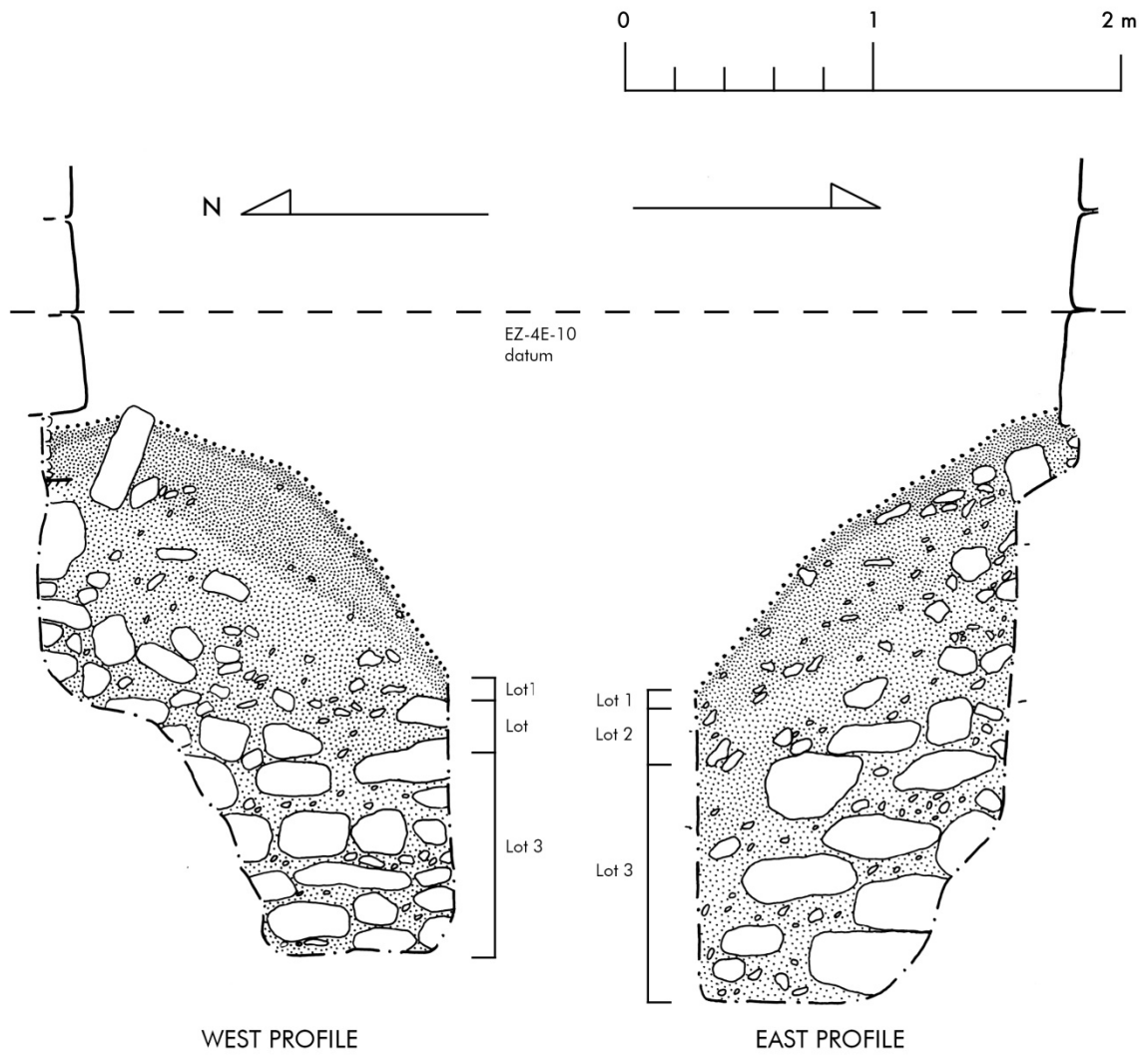


Figure A.28. EZ-4E-10, east and west profiles. Drawing by Nicholas Carter.

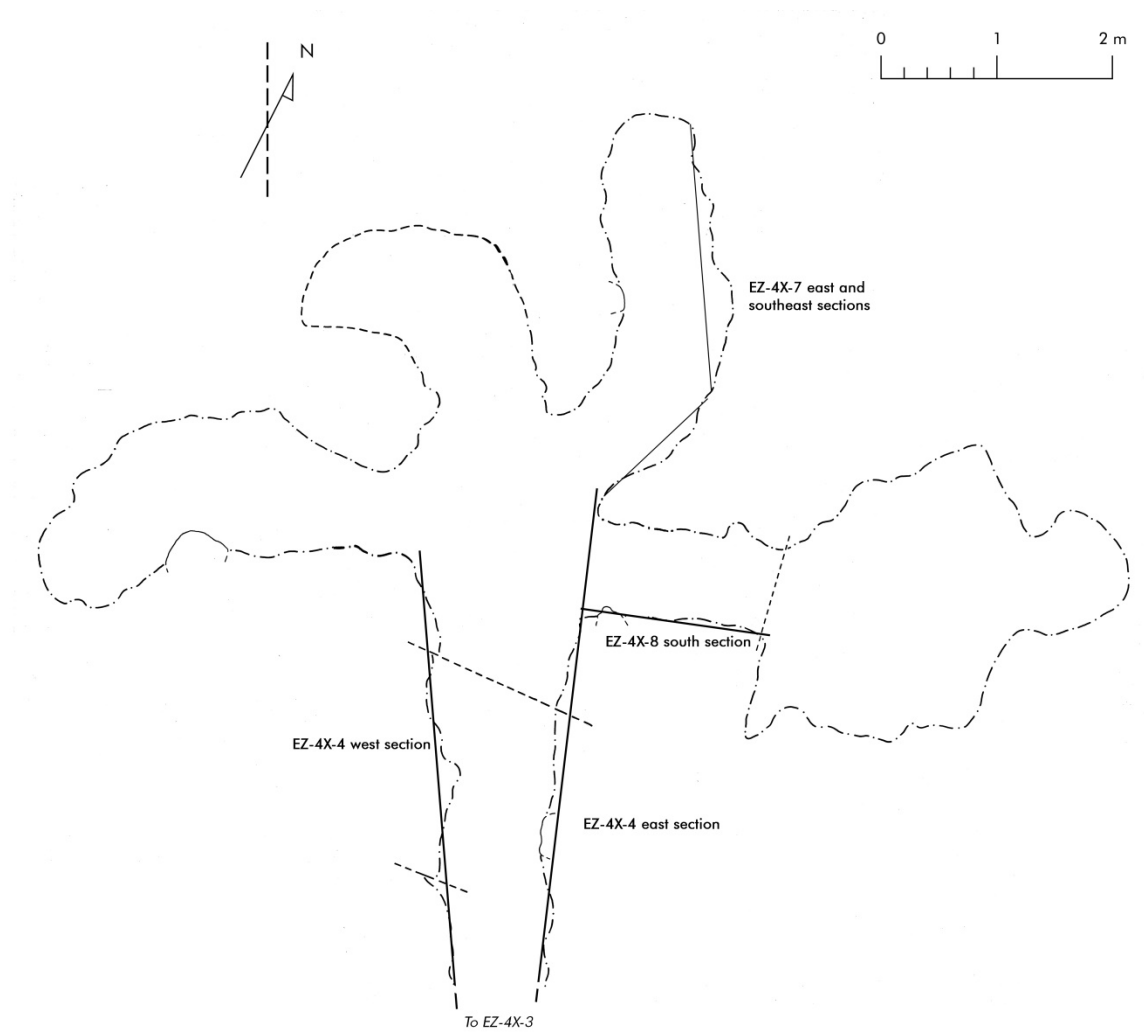


Figure A.29. EZ-4X-3, EZ-4X-4, EZ-4X-5, EZ-4X-6, EZ-4X-7, and EZ-4X-8, plan view. Drawing by Nicholas Carter.

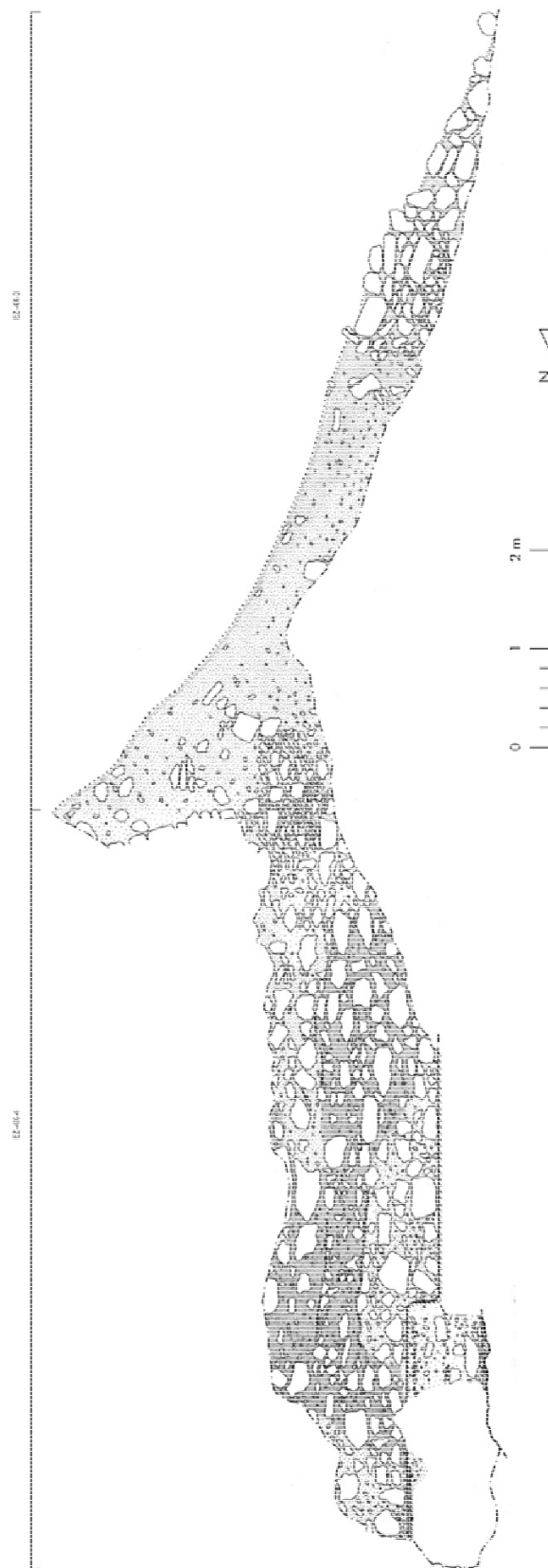


Figure A.30. EZ-4X-3 and EZ-4X-4, east profiles. Drawing by Nicholas Carter.

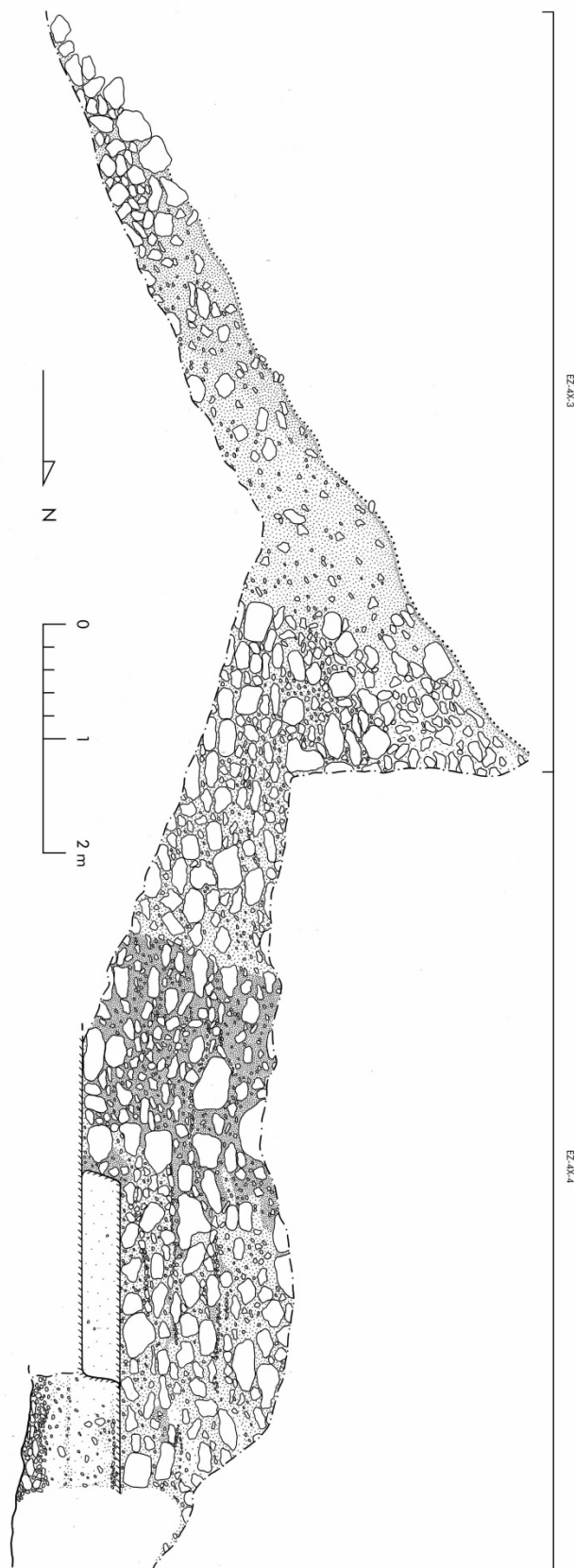


Figure A.31. EZ-4X-3 and EZ-4X-4, west profiles. Drawing by Nicholas Carter.

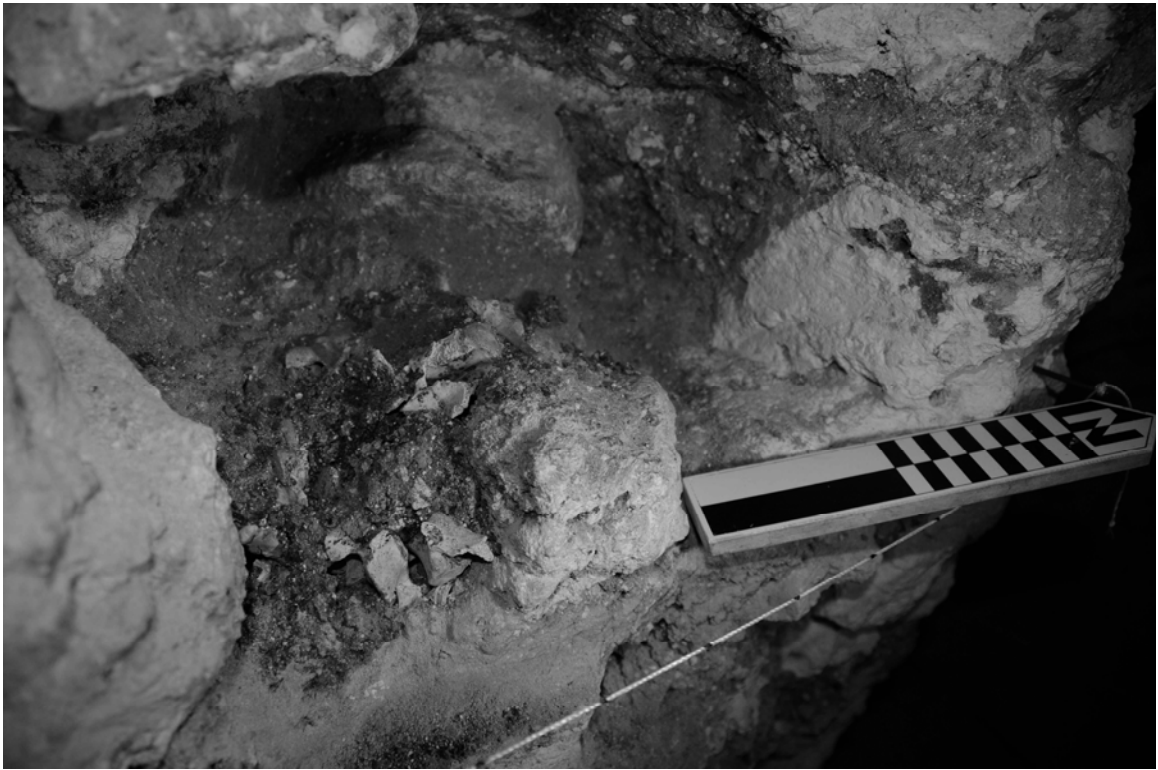


Figure A.32. EZ-4E-8. Photograph by Arturo Godoy.

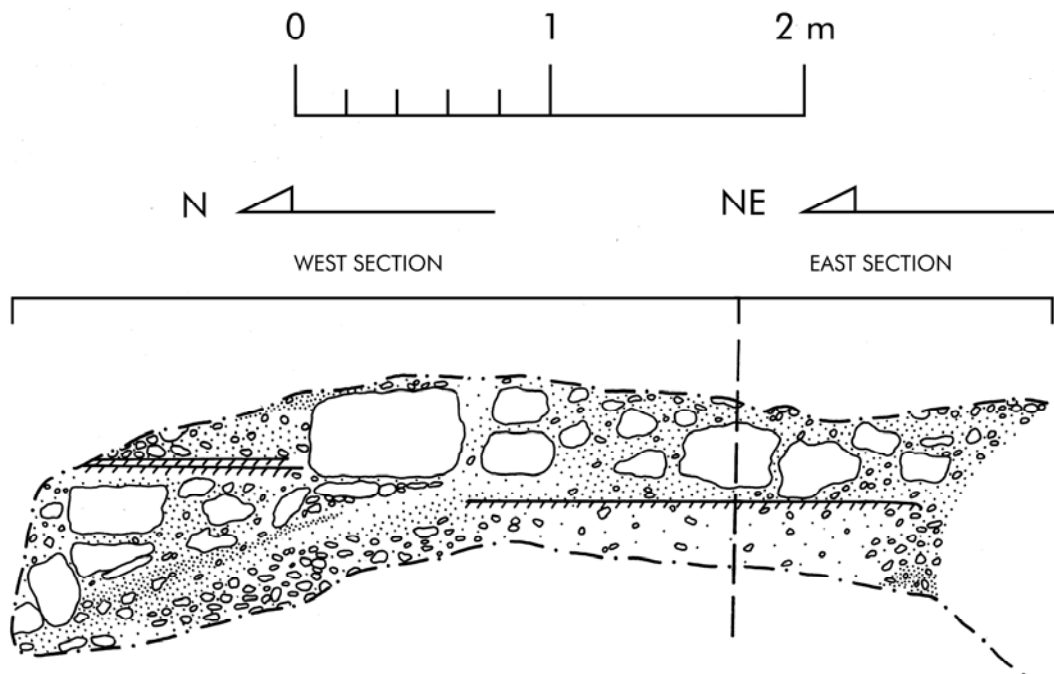


Figure A.33. EZ-4X-7, east and southeast profiles. Drawing by Nicholas Carter.

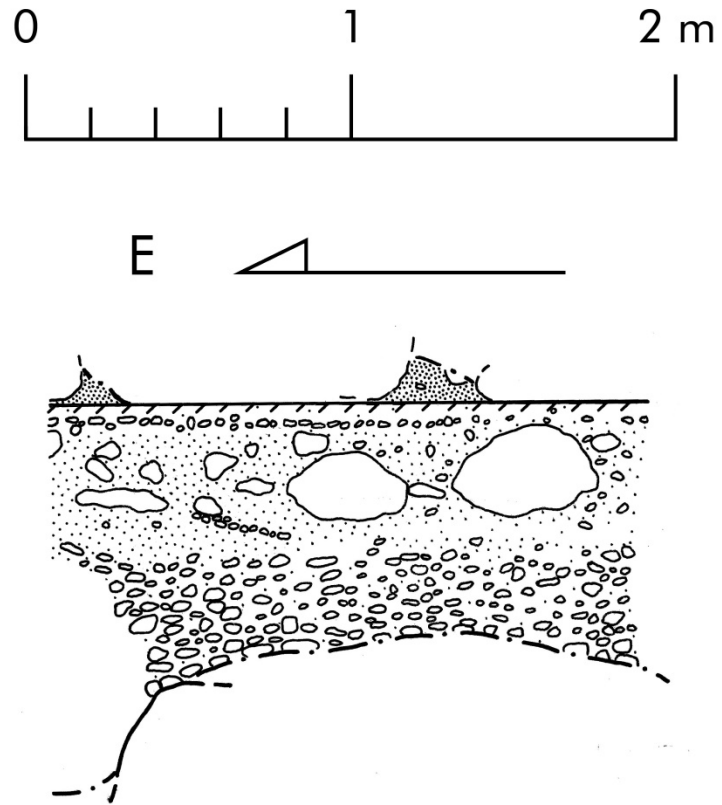


Figure A.34. EX-4X-8, south profile. Drawing by Nicholas Carter.

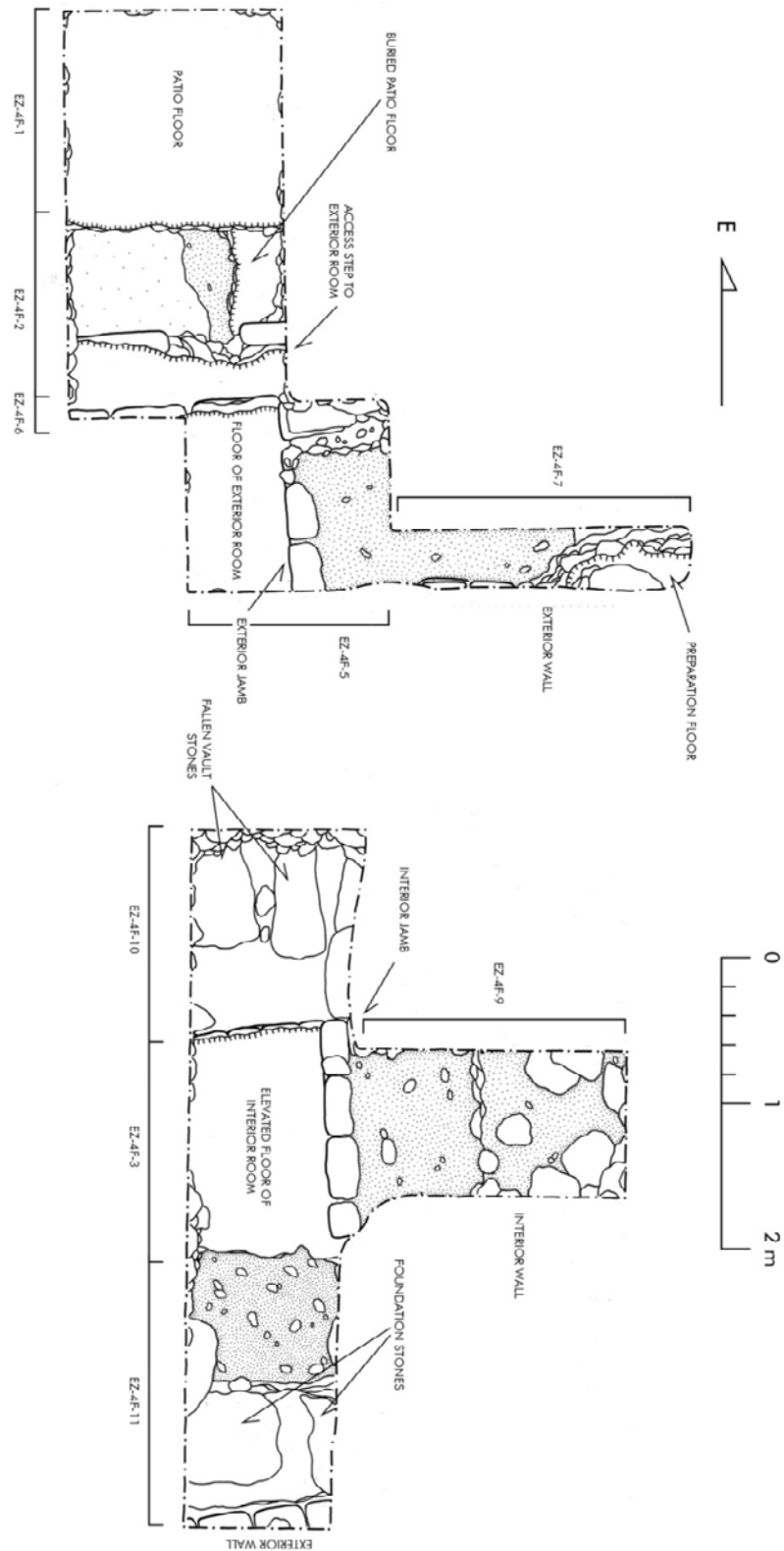


Figure A.35. EZ-4F-1, EZ-4F-2, EZ-4F-3, EZ-4F-4, EZ-4F-5, EZ-4F-6, EZ-4F-7, EZ-4F-8, EZ-4F-9, EZ-4F-10, and EZ-4F-11, plan view. Drawing by Nicholas Carter.

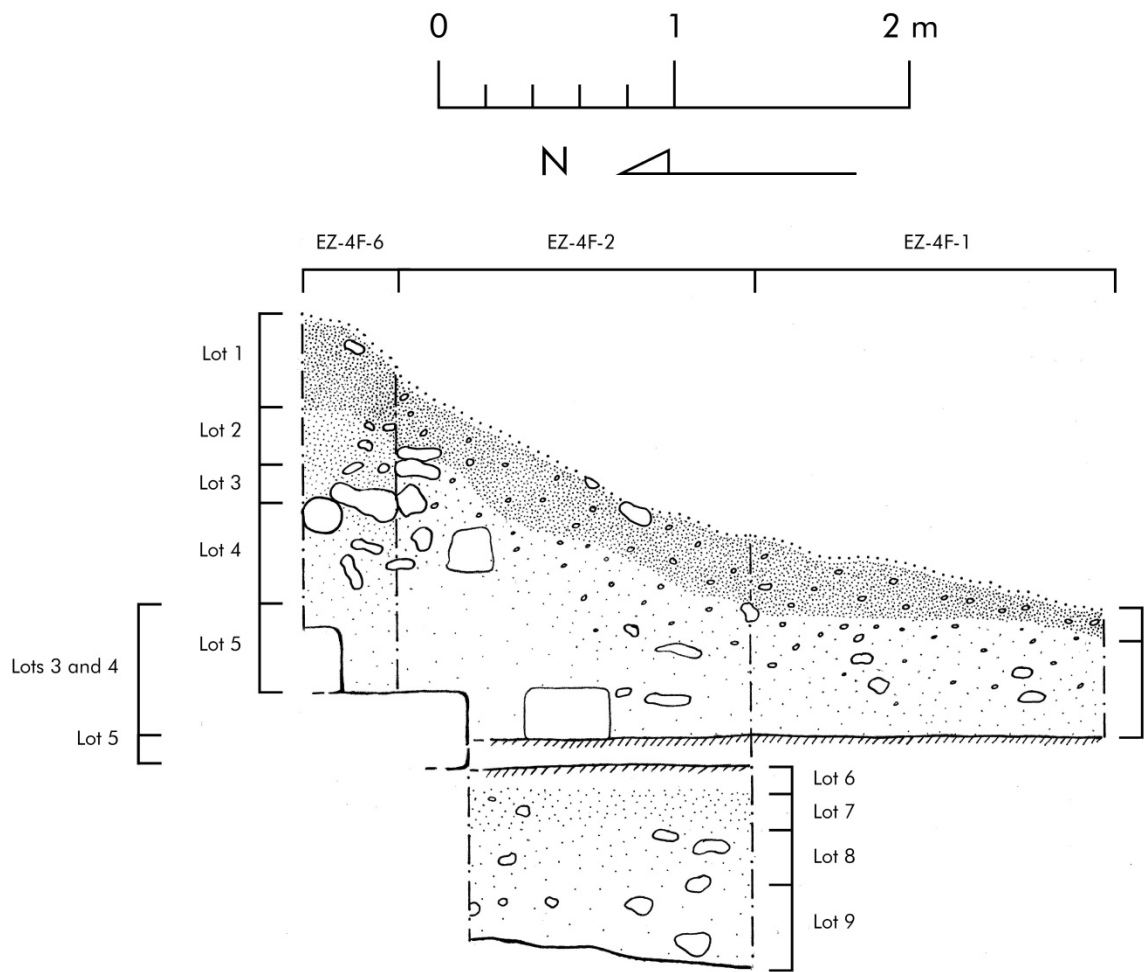


Figure A.36. EZ-4F-1, EZ-4F-2, and EZ-4F-6, north profile. Drawing by Yeny Gutiérrez.

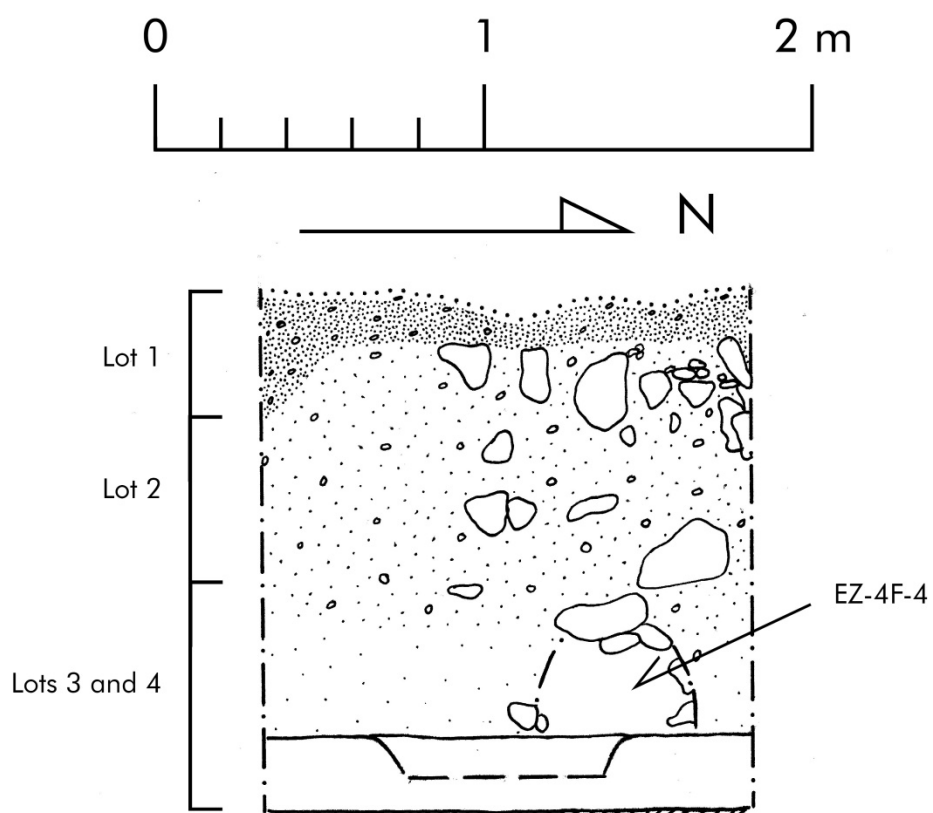


Figure A.37. EZ-4F-2 and EZ-4F-4, west profile. Drawing by Yeny Gutiérrez.

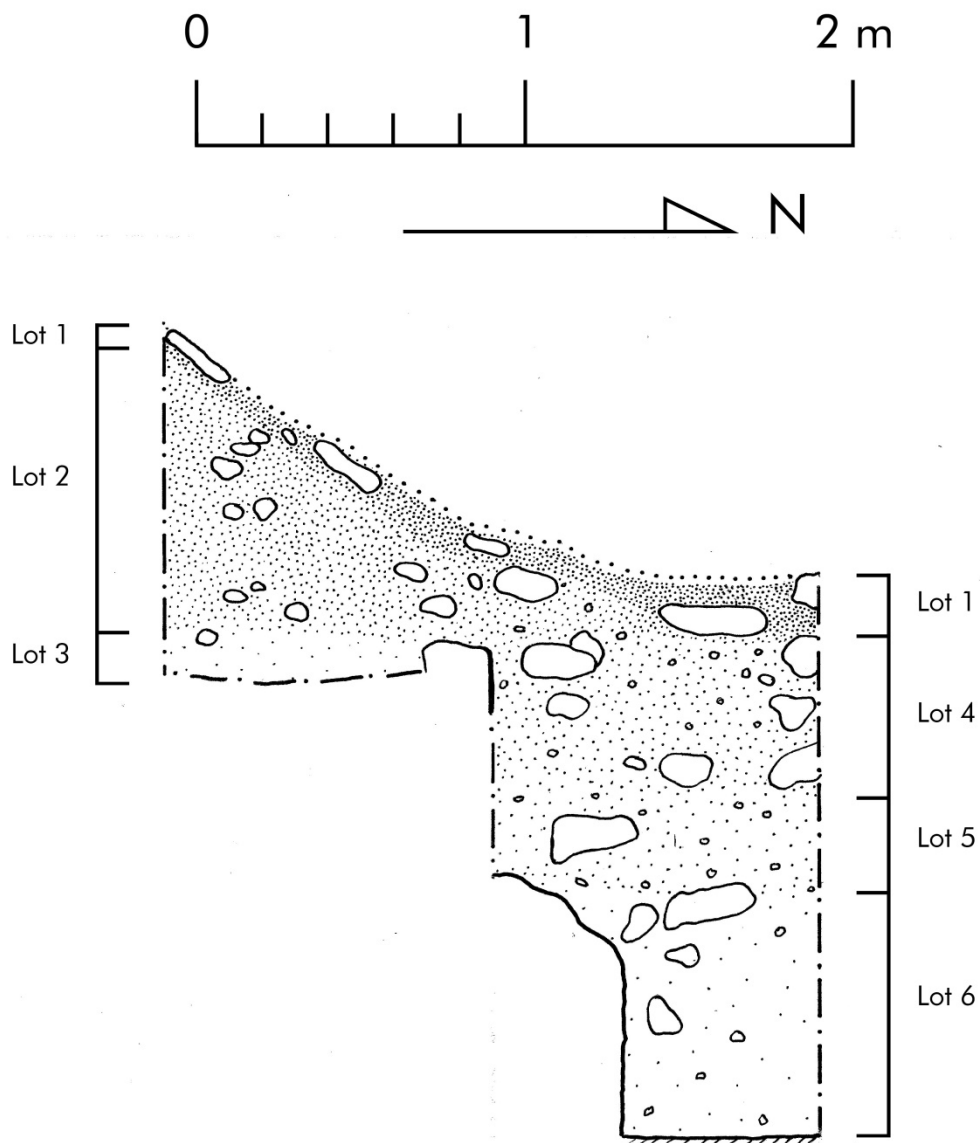


Figure A.38. EZ-4F-3, west profile. Drawing by Yeny Gutiérrez.

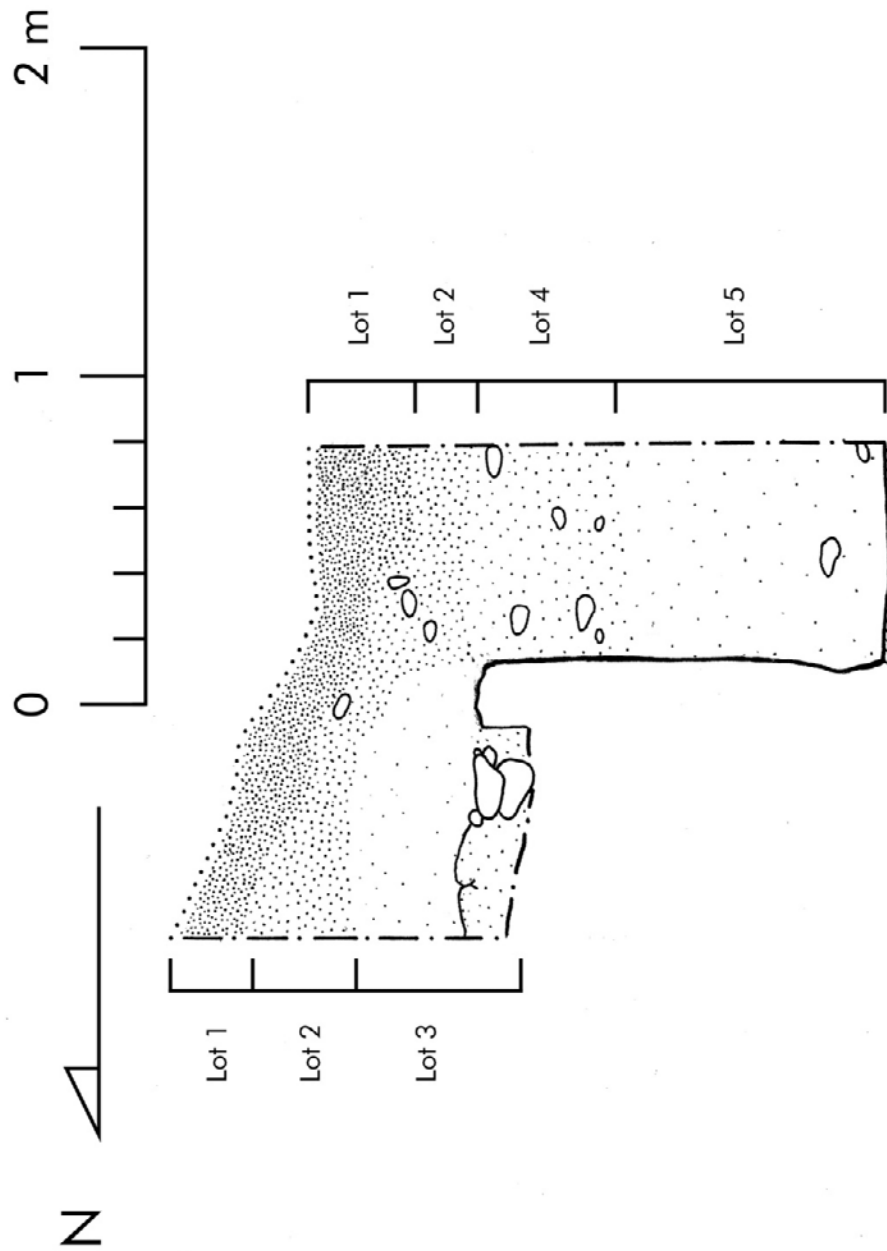


Figure A.39. EZ-4F-5, west profile. Drawing by Yeny Gutiérrez.

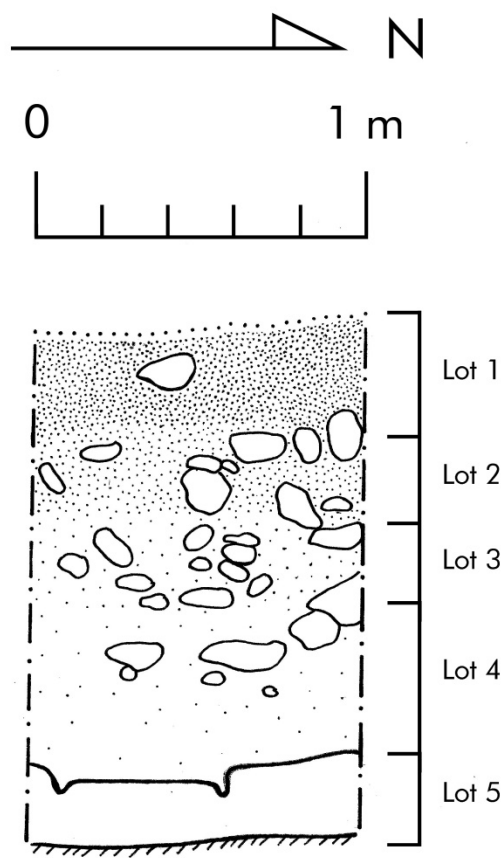


Figure A.40. EZ-4F-6, west profile. Drawing by Yeny Gutiérrez.

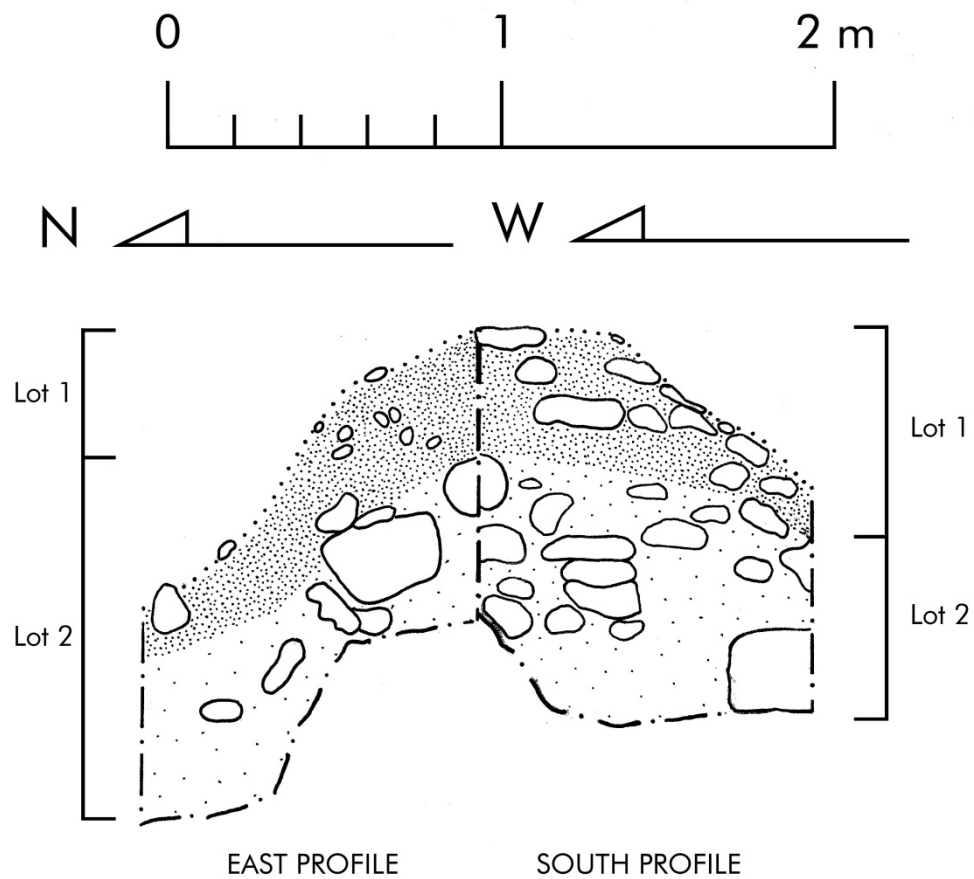


Figure A.41. EZ-4F-9, east and south profiles. Drawing by Yeny Gutiérrez.

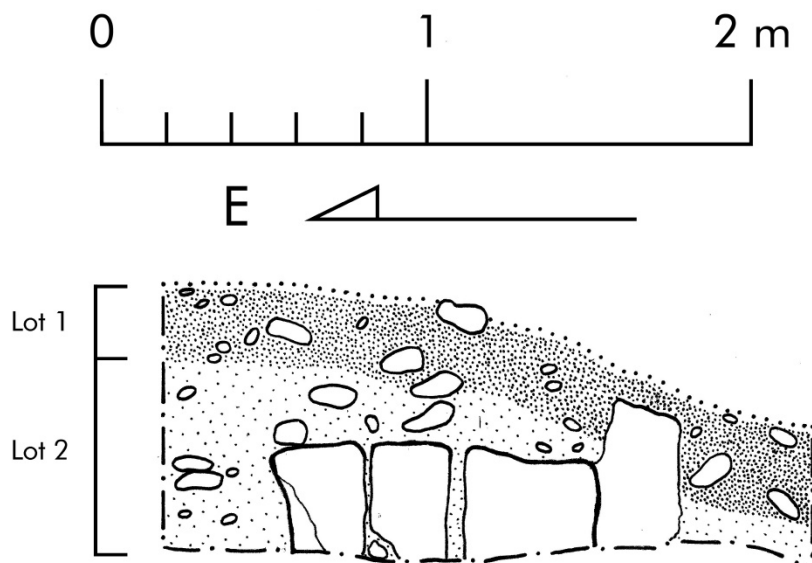


Figure A.42. EZ-4F-12, north profile. Drawing by Yeny Gutiérrez.

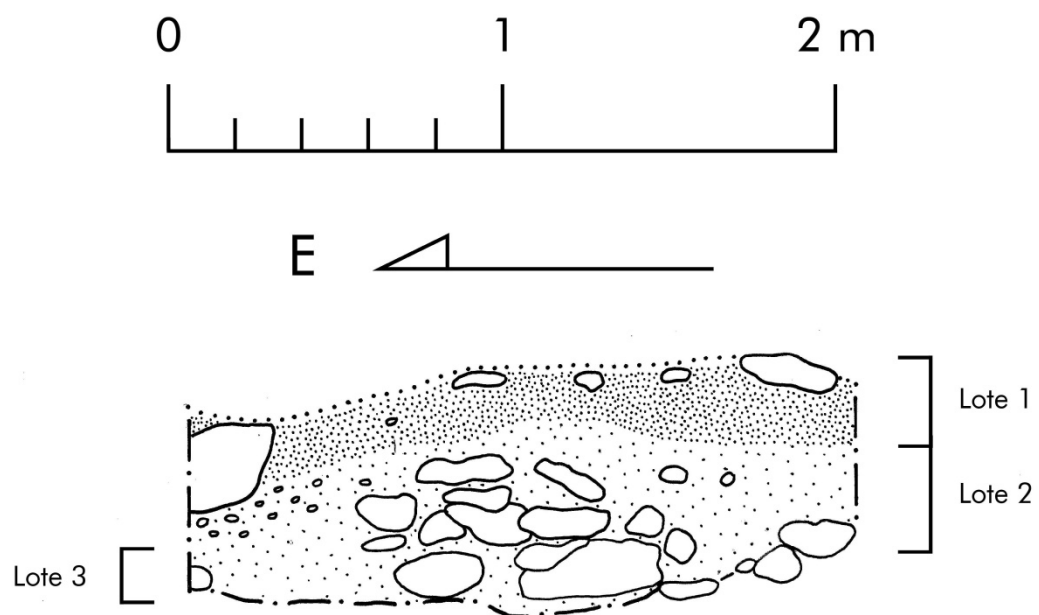


Figure A.43. EZ-4F-13, south profile. Drawing by Yeny Gutiérrez.

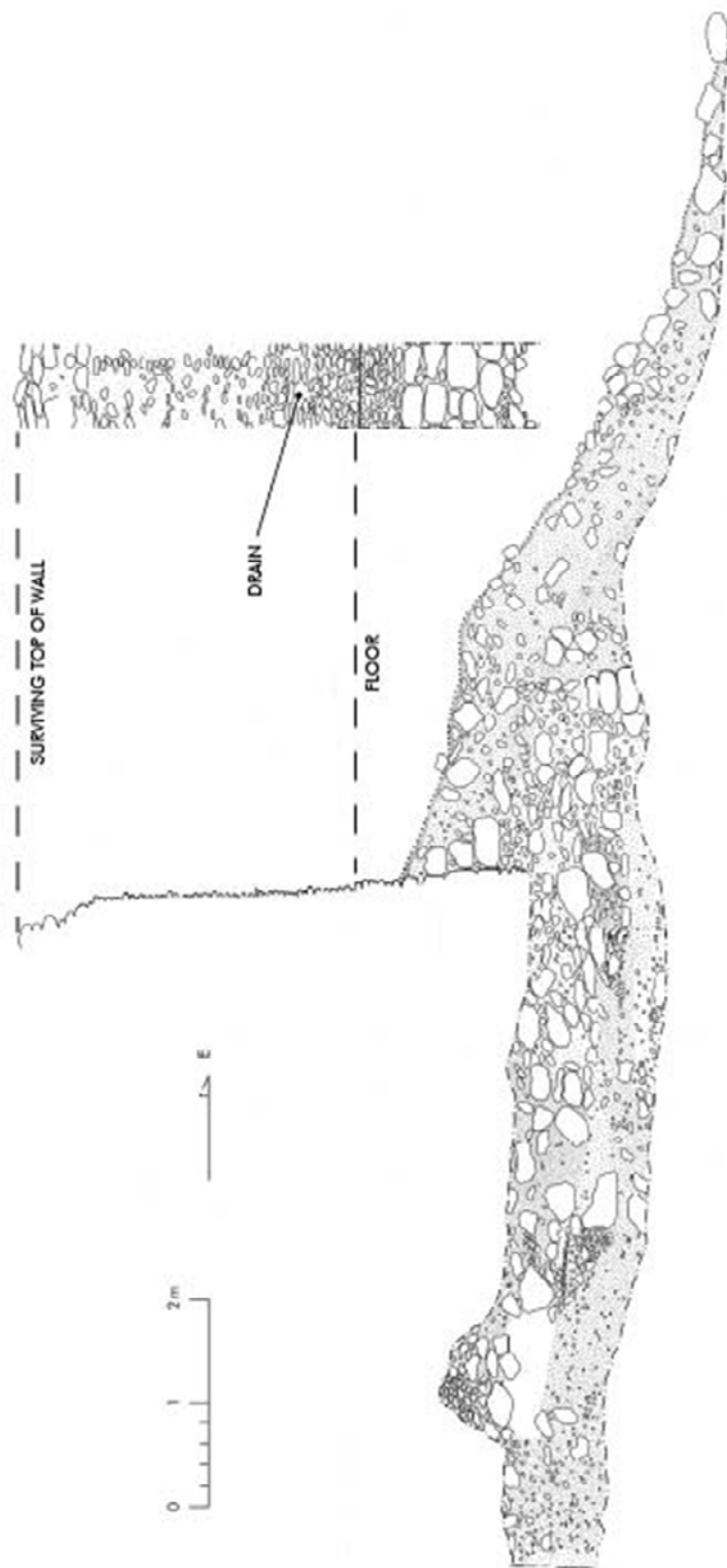


Figure A.44. EX-4X-9, east profile, with a section of the west wall of Str. M3-6.
Drawing by Nicholas Carter.

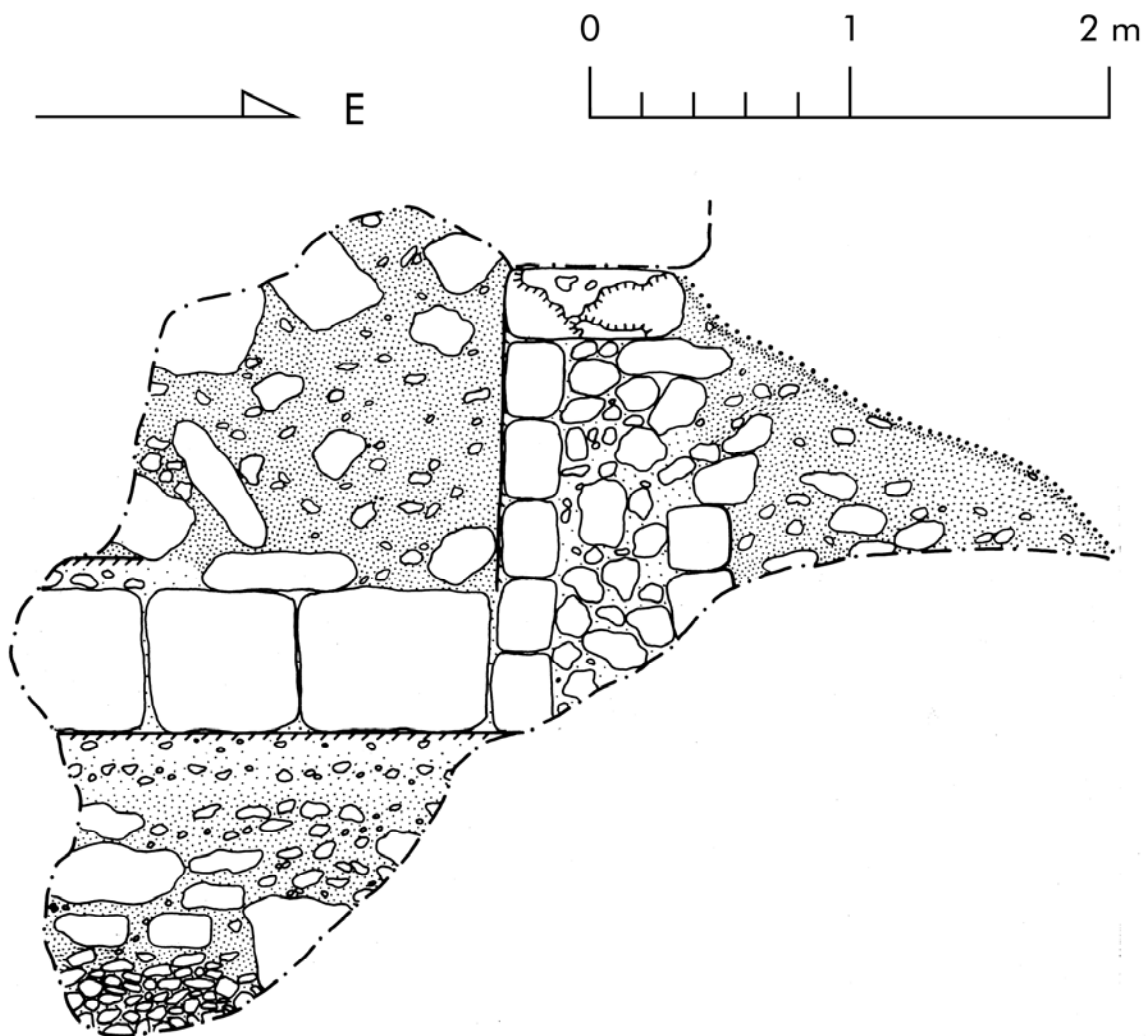


Figure A.45. EX-4X-10, north profile. Drawing by Nicholas Carter.

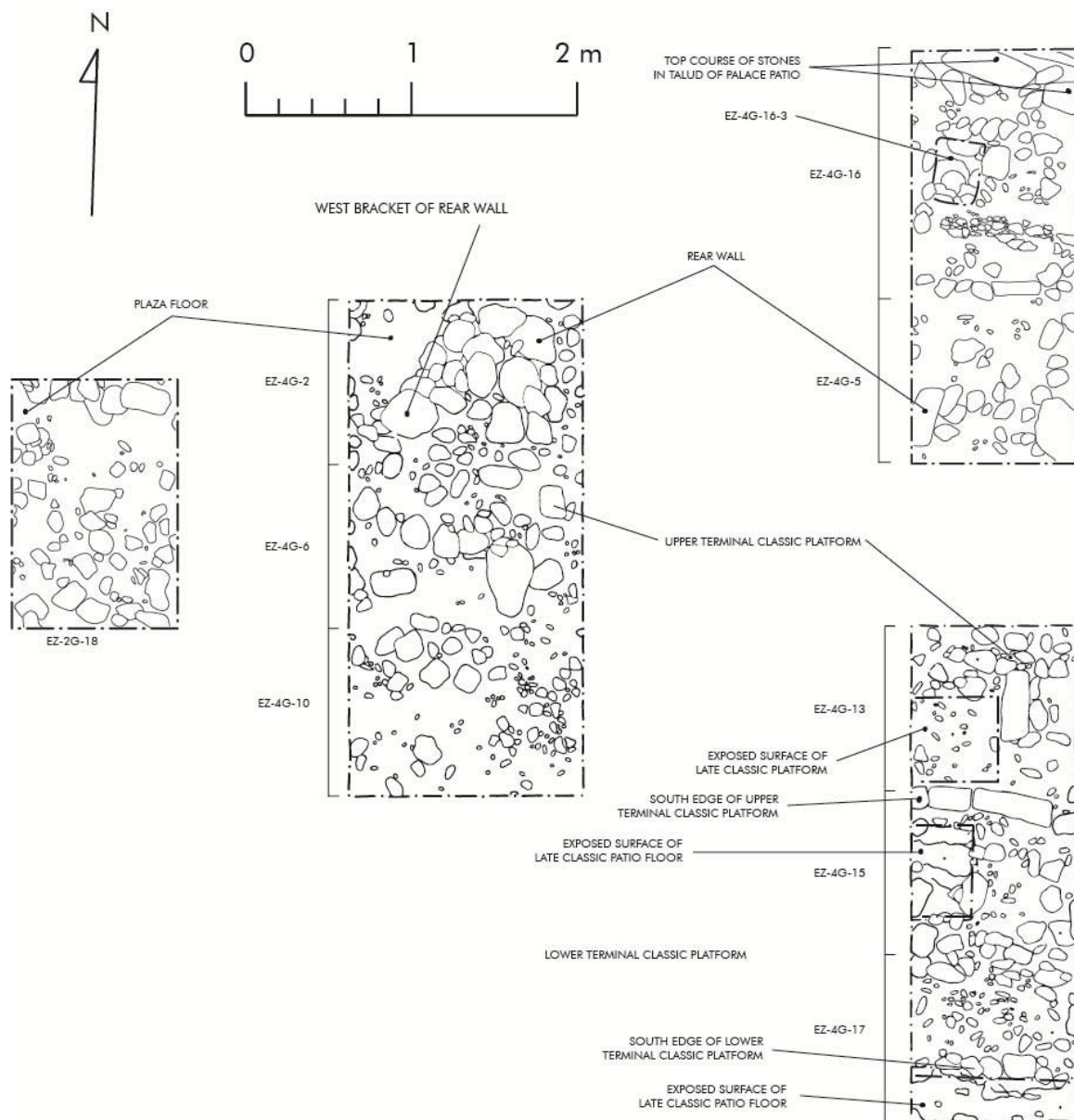


Figure A.46. EZ-4G-2, EZ-4G-5, EZ-4G-6, EZ-4G-10, EZ-4G-13, EZ-4G-15, EZ-4G-16, and EZ-4G-18, plan view. Drawing by Nicholas Carter.

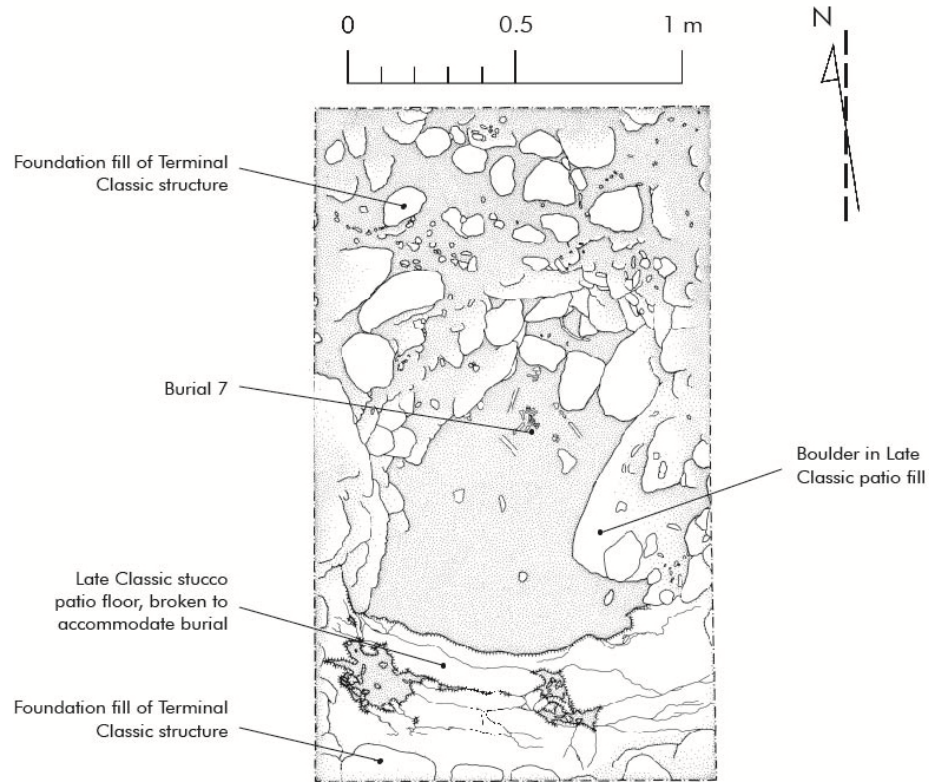


Figure A.47. EZ-4G-1, plan view. Drawing by Nicholas Carter.

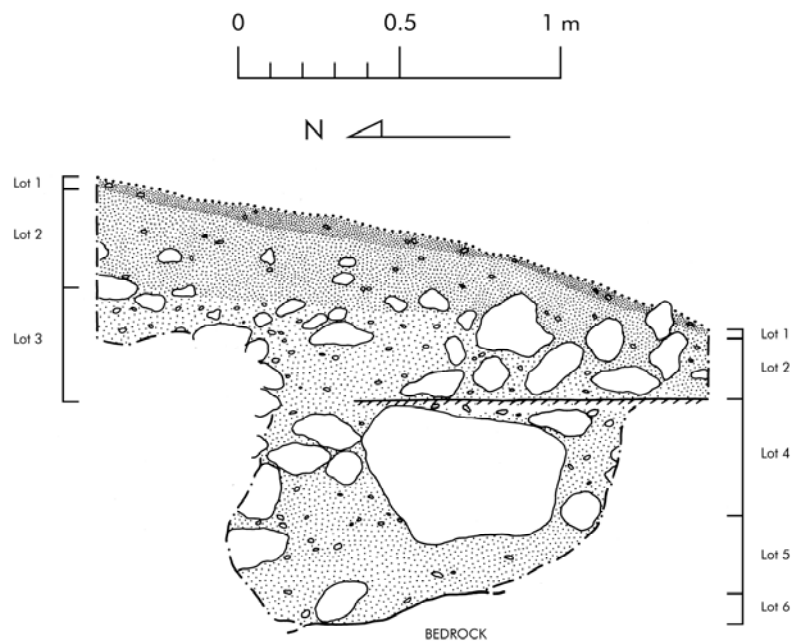


Figure A.48. EZ-4G-1, east profile. Drawing by Nicholas Carter.

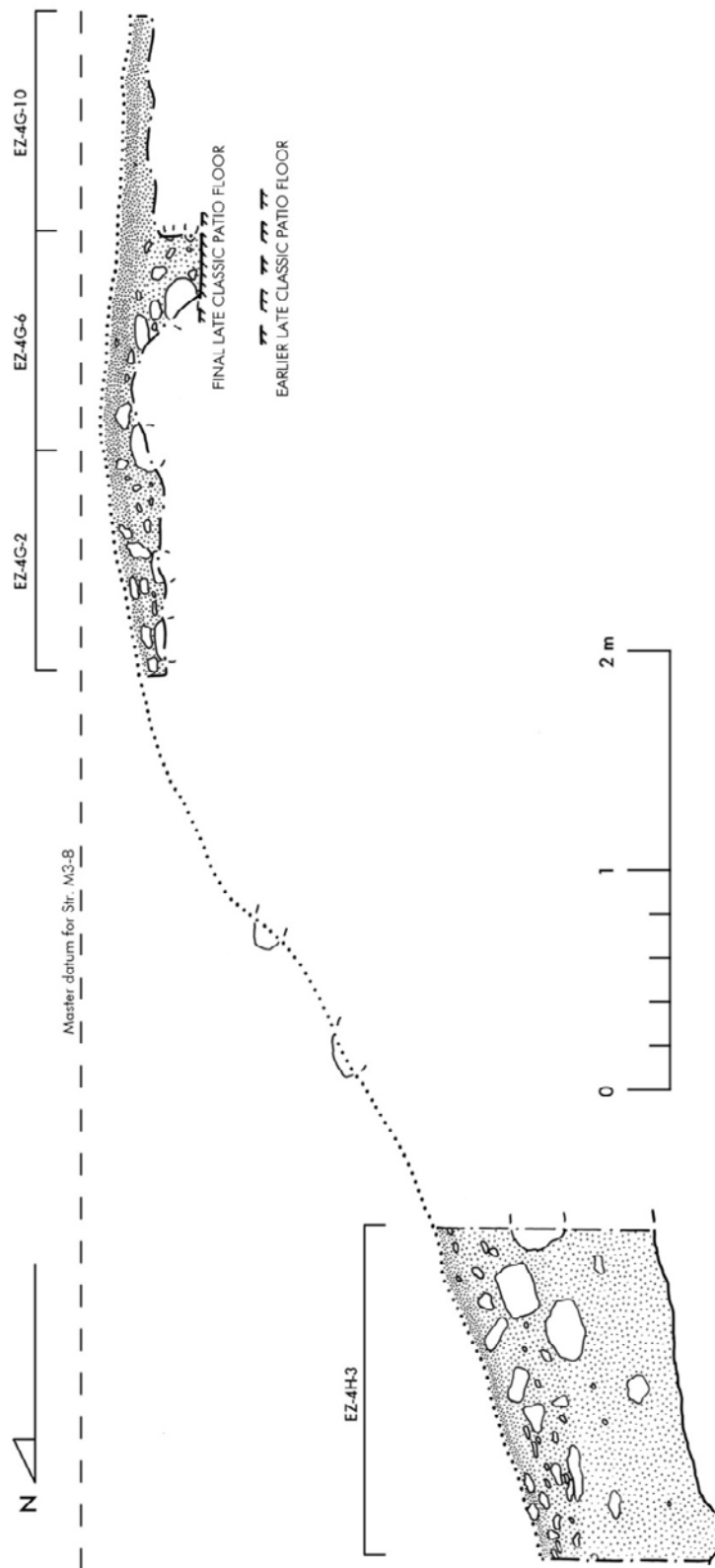


Figure A.49. EZ-4G-2, EZ-4G-6, EZ-4G-10, and EZ-4H-3, east profiles. Drawing by Nicholas Carter.

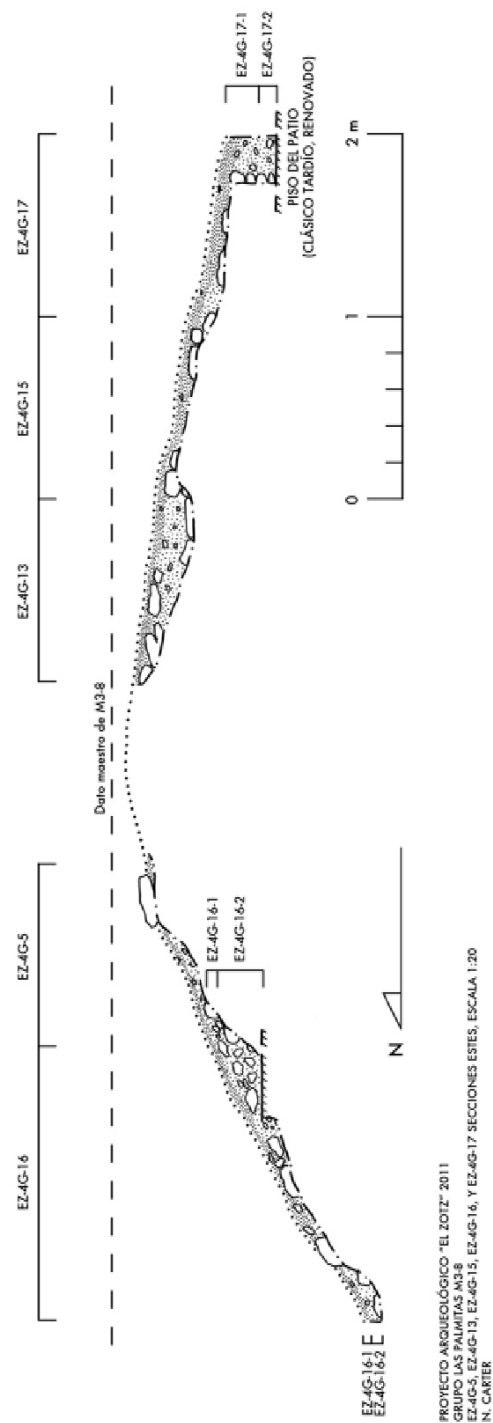


Figure A.50. EZ-4G-5, EZ-4G-13, EZ-4G-15, EZ-4G-16, and EZ-4G-17, east profiles. Drawing by Nicholas Carter.

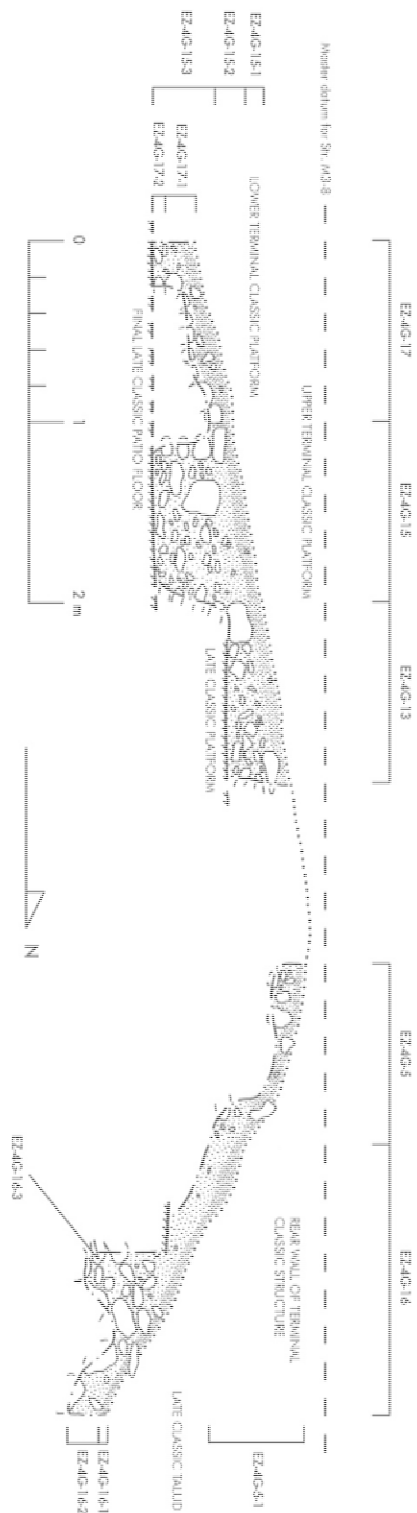


Figure A.51. EZ-4G-5, EZ-4G-13, EZ-4G-15, EZ-4G-16, and EZ-4G-17, west profiles. Drawing by Nicholas Carter.

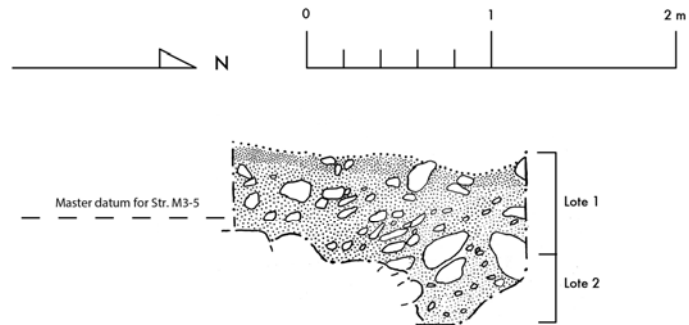


Figure A.52. EZ-4G-18, west profile. Drawing by Nicholas Carter.

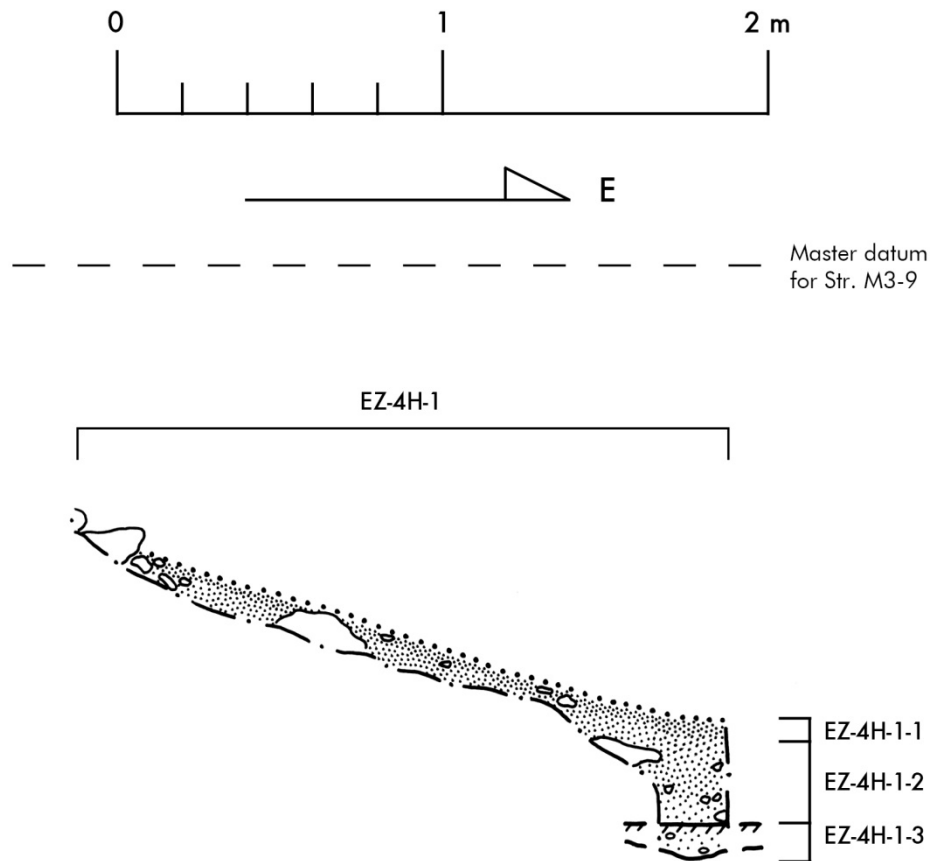


Figure A.53. EZ-4H-1, north profile. Drawing by Nicholas Carter.

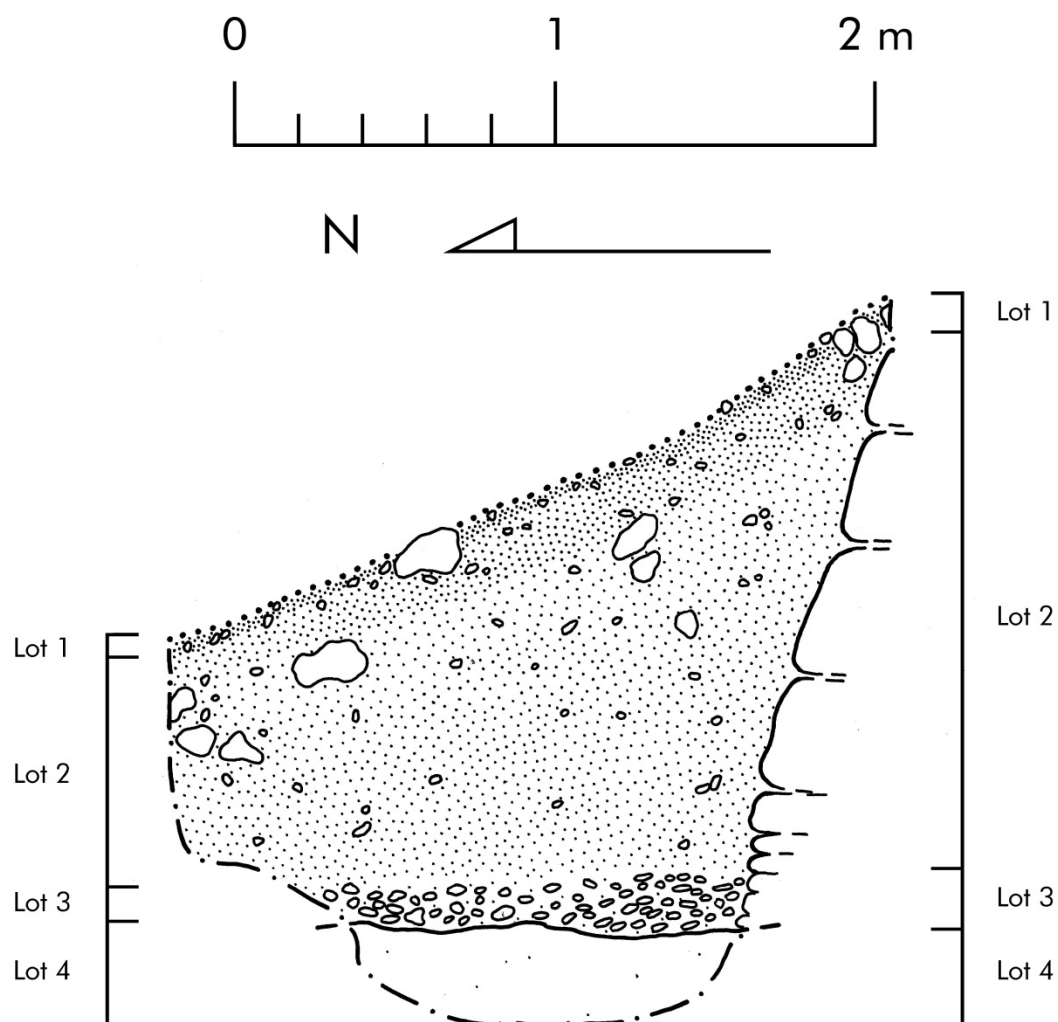


Figure A.54. EZ-4H-2, east profile. Drawing by Nicholas Carter.

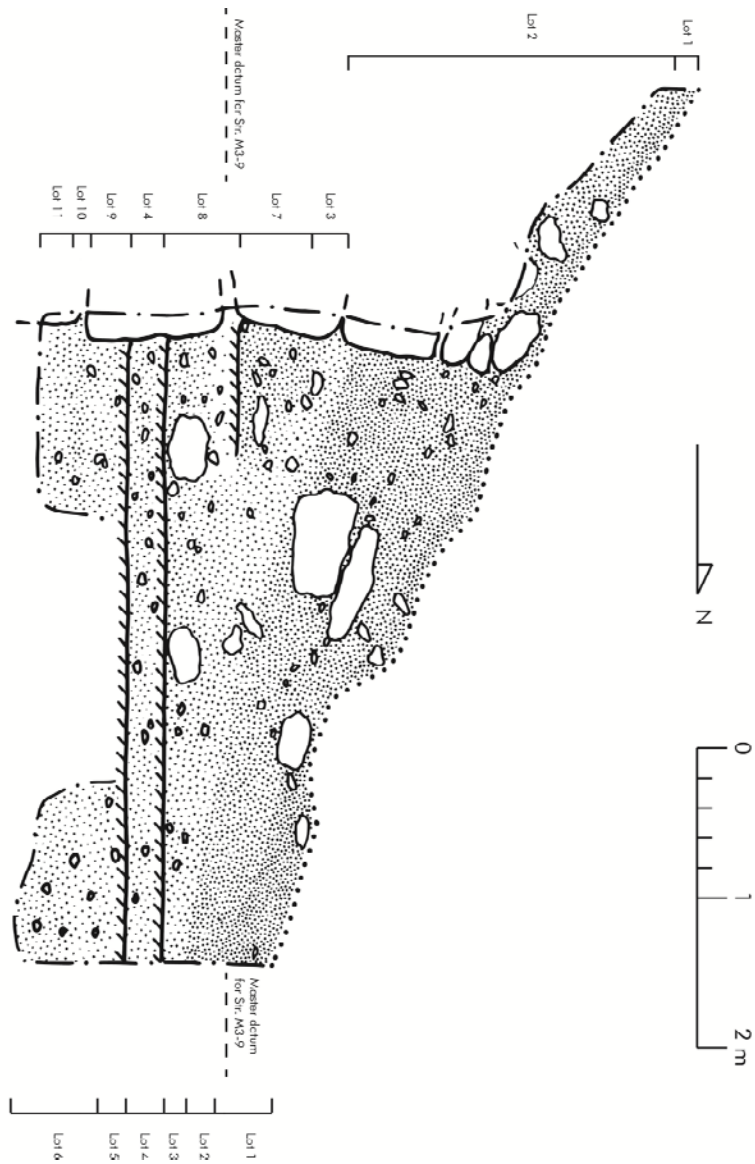


Figure A.56. EZ-4H-12, west profile. Drawing by Nicholas Carter.

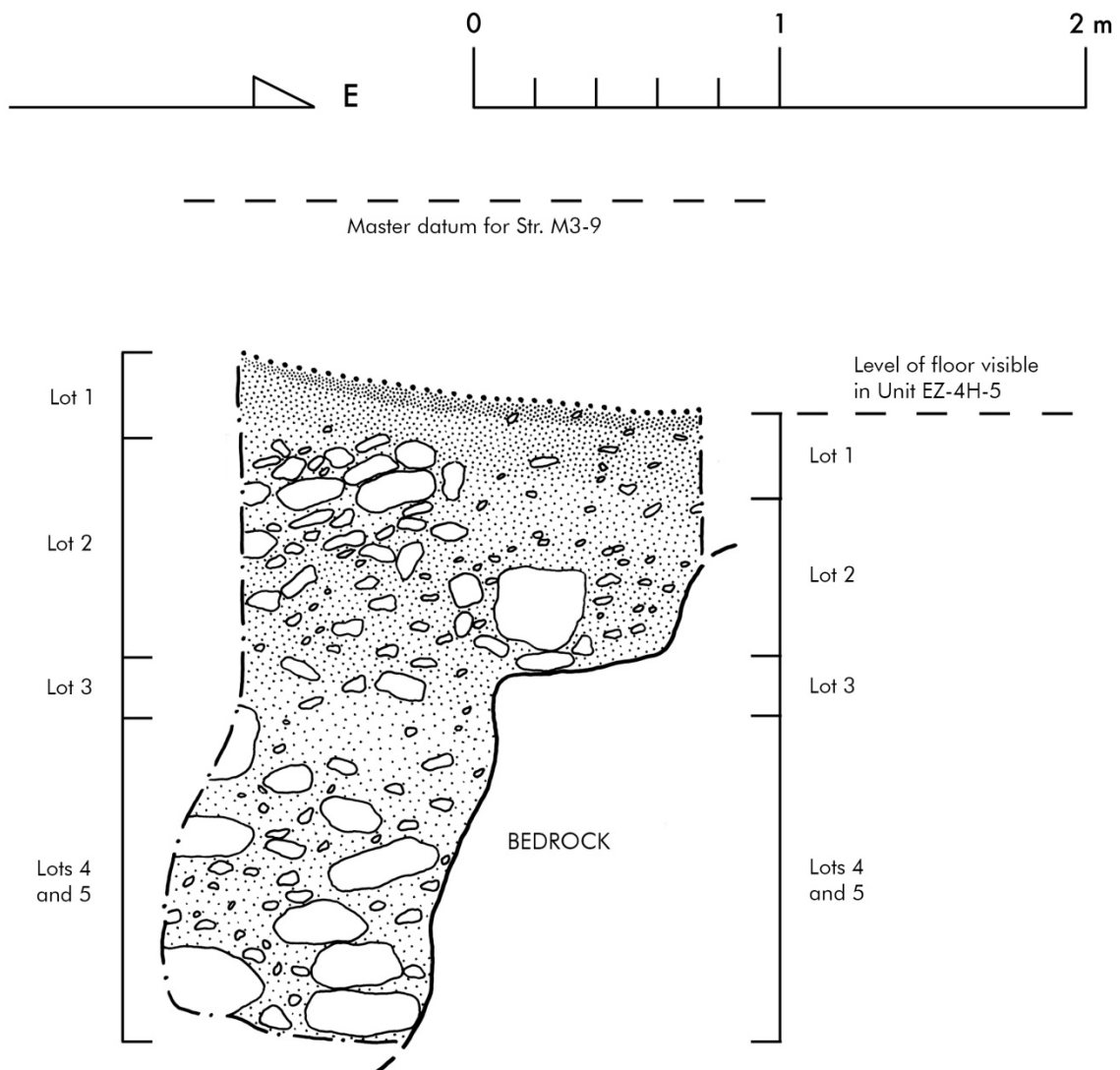


Figure A.57. EZ-4H-13, north profile. Drawing by Nicholas Carter.

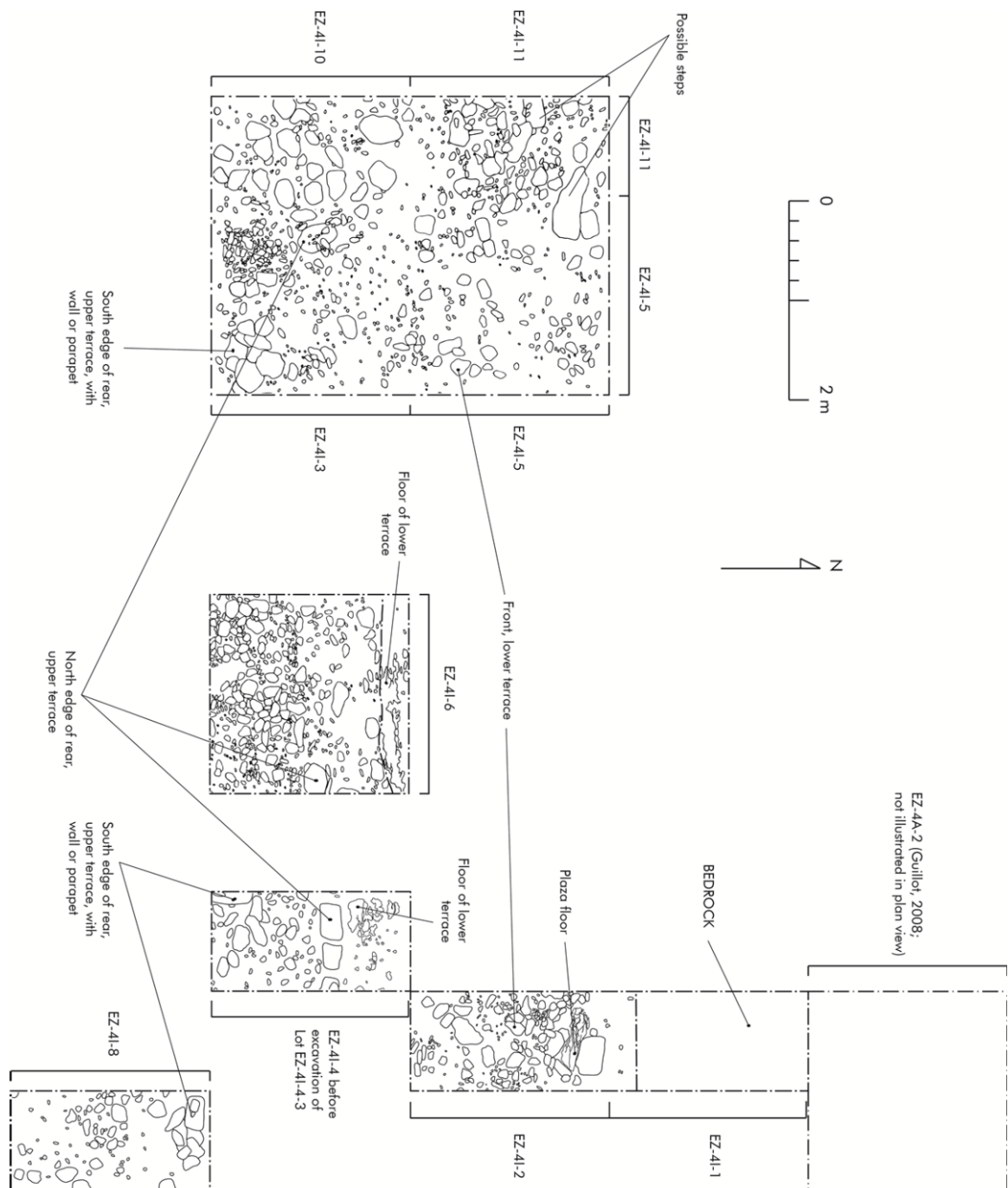


Figure A.58. EZ-4I-1, EZ-4I-2, EZ-4I-3, EZ-4I-4, EZ-4I-5, EZ-4I-6, EZ-4I-8, EZ-4I-10, and EZ-4I-11, plan view. Drawing by Nicholas Carter.

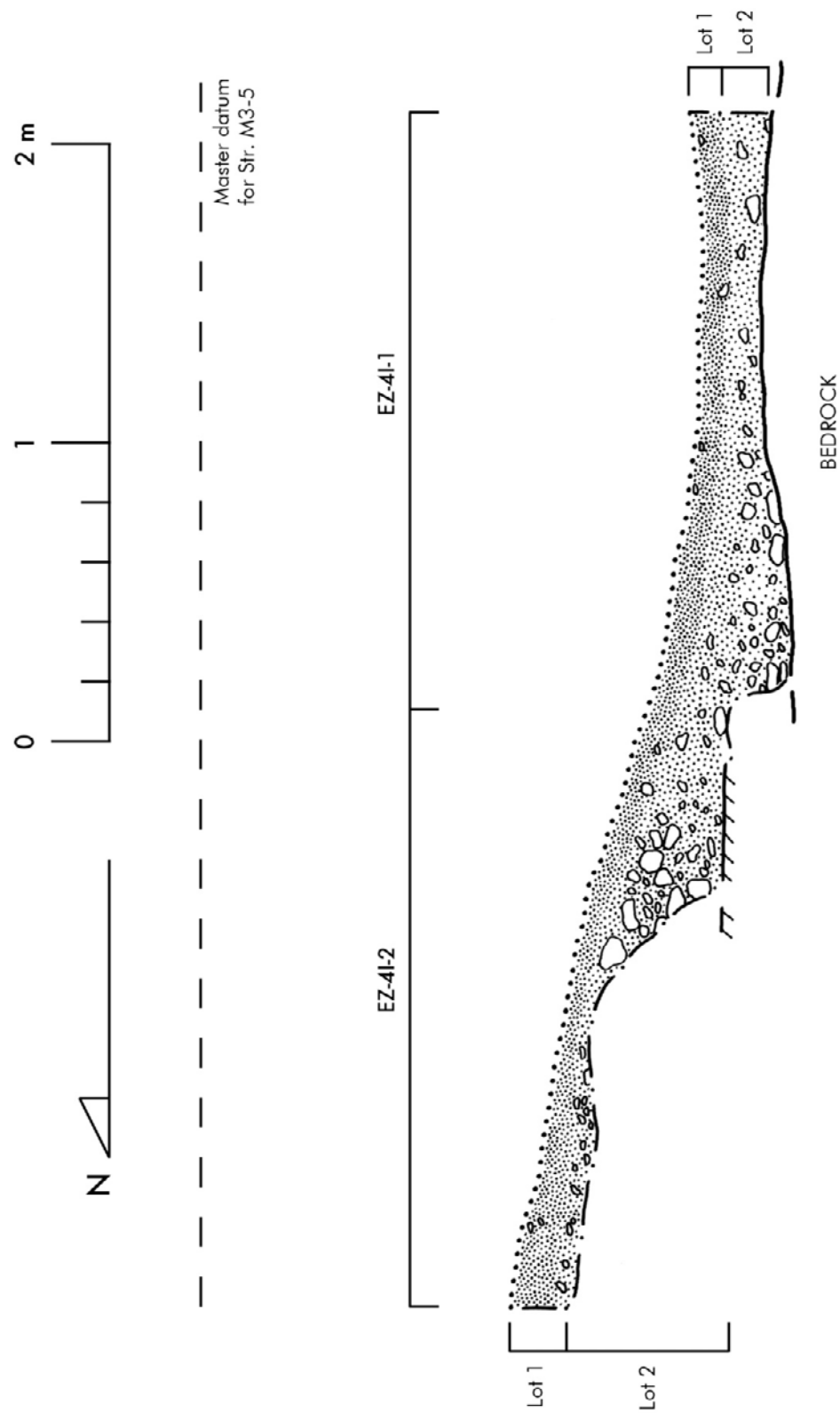


Figure A.59. EZ-4I-1 and EZ-4I-2, west profiles. Drawing by Nicholas Carter.

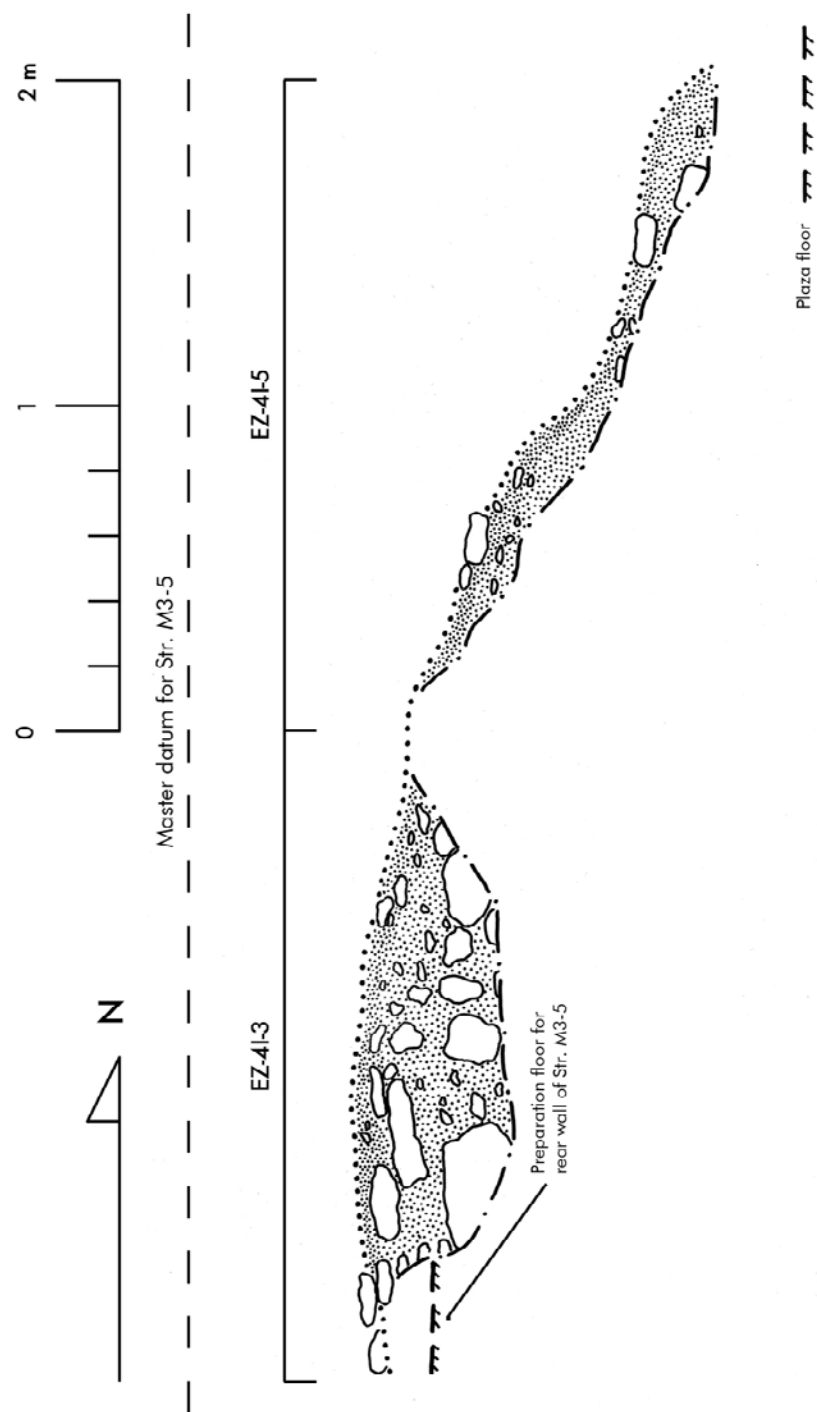


Figure A.60. EZ-4I-3 and EZ-4I-5, west profiles. Drawing by Nicholas Carter.

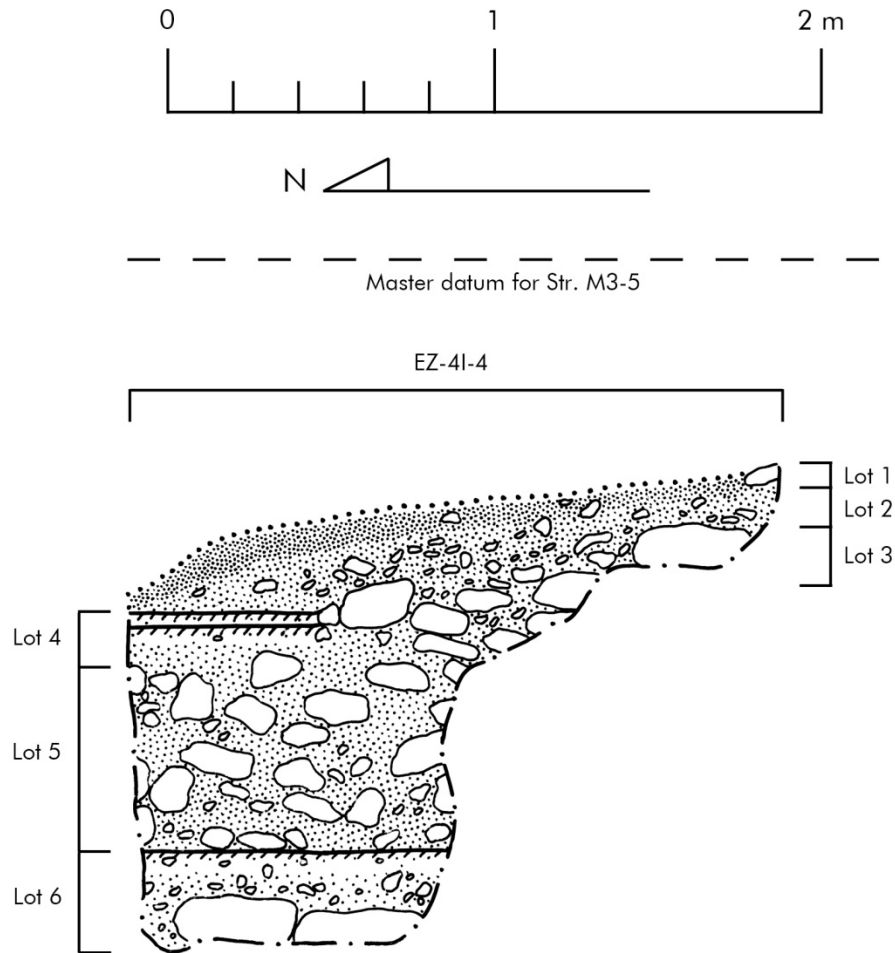


Figure A.61. EZ-4I-4, east profile. Drawing by Nicholas Carter.

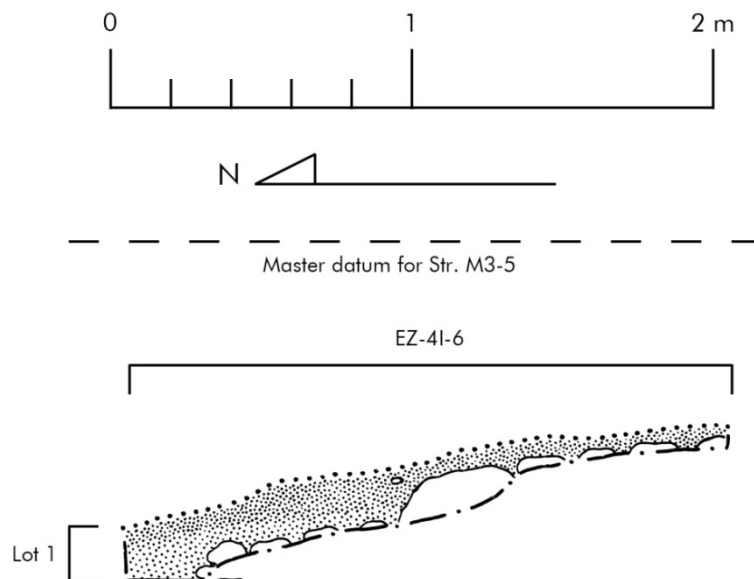


Figure A.62. EZ-4I-6, east profile. Drawing by Nicholas Carter.

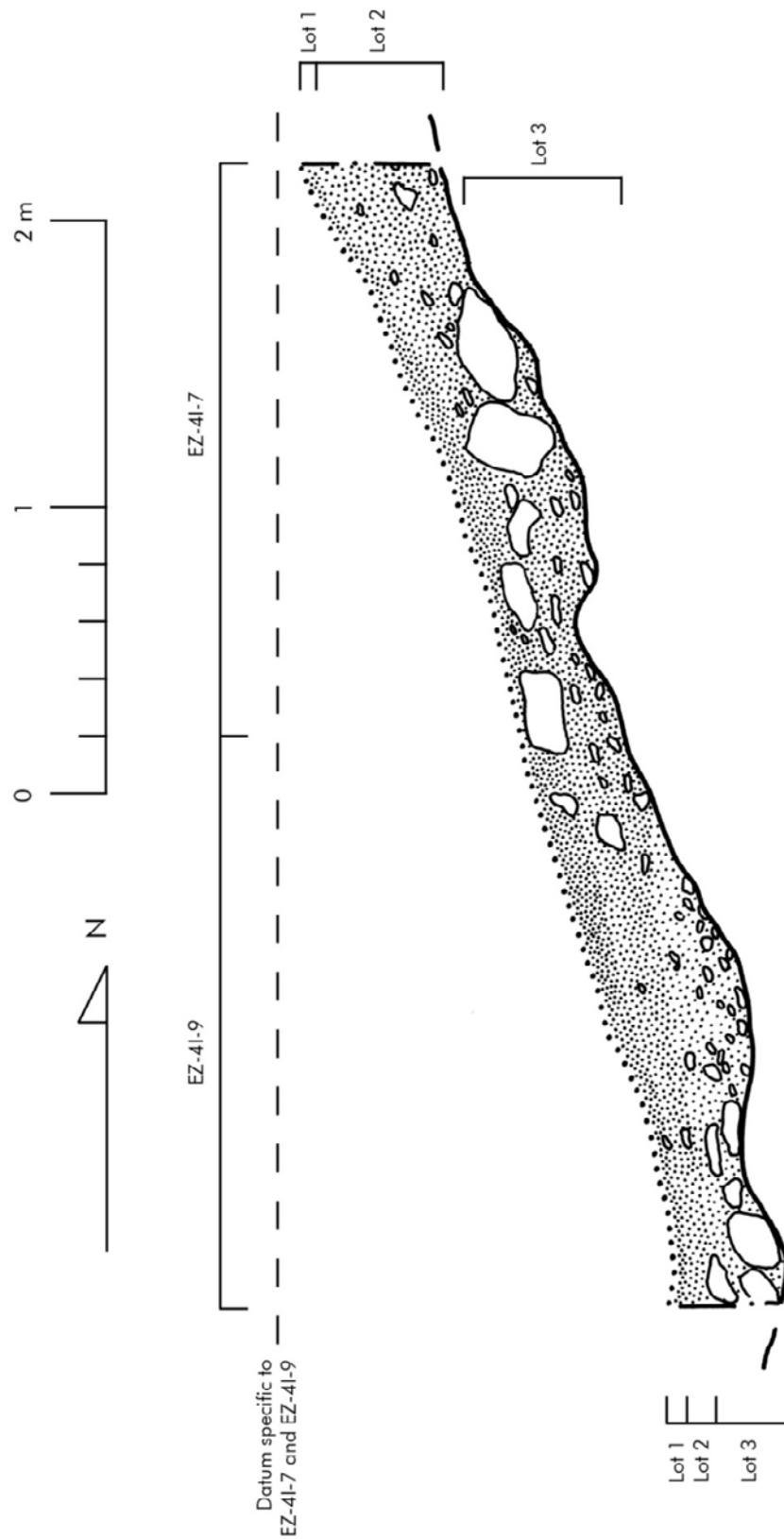


Figure A.63. EZ-4I-7 and EZ-4I-9, west profiles. Drawing by Nicholas Carter.

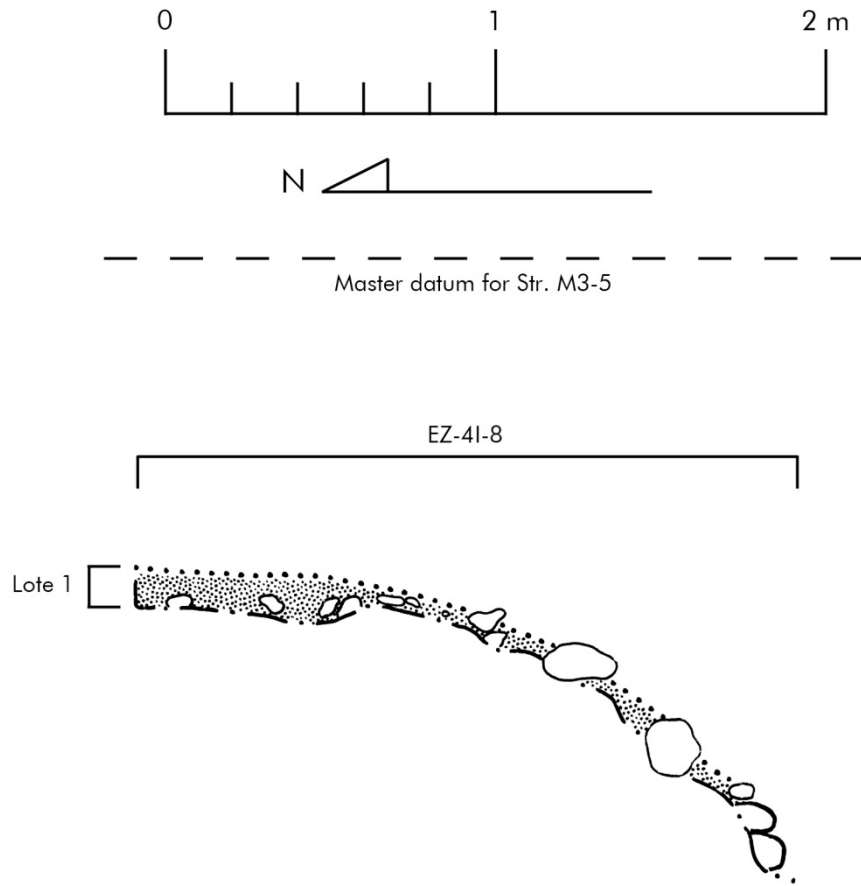


Figure A.64. EZ-4I-8, east profile. Drawing by Nicholas Carter

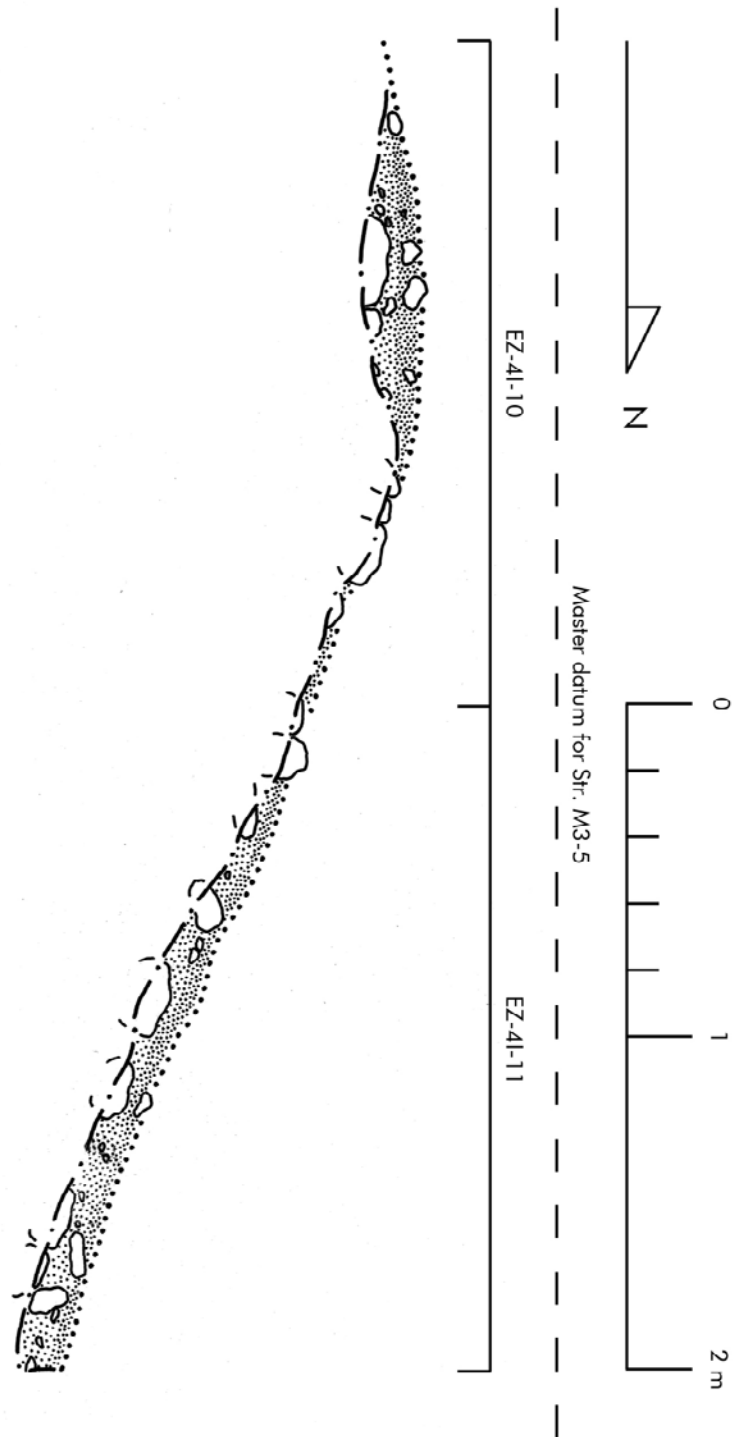


Figure A.65. EZ-4I-10 and EZ-4I-11, west profiles. Drawing by Nicholas Carter.

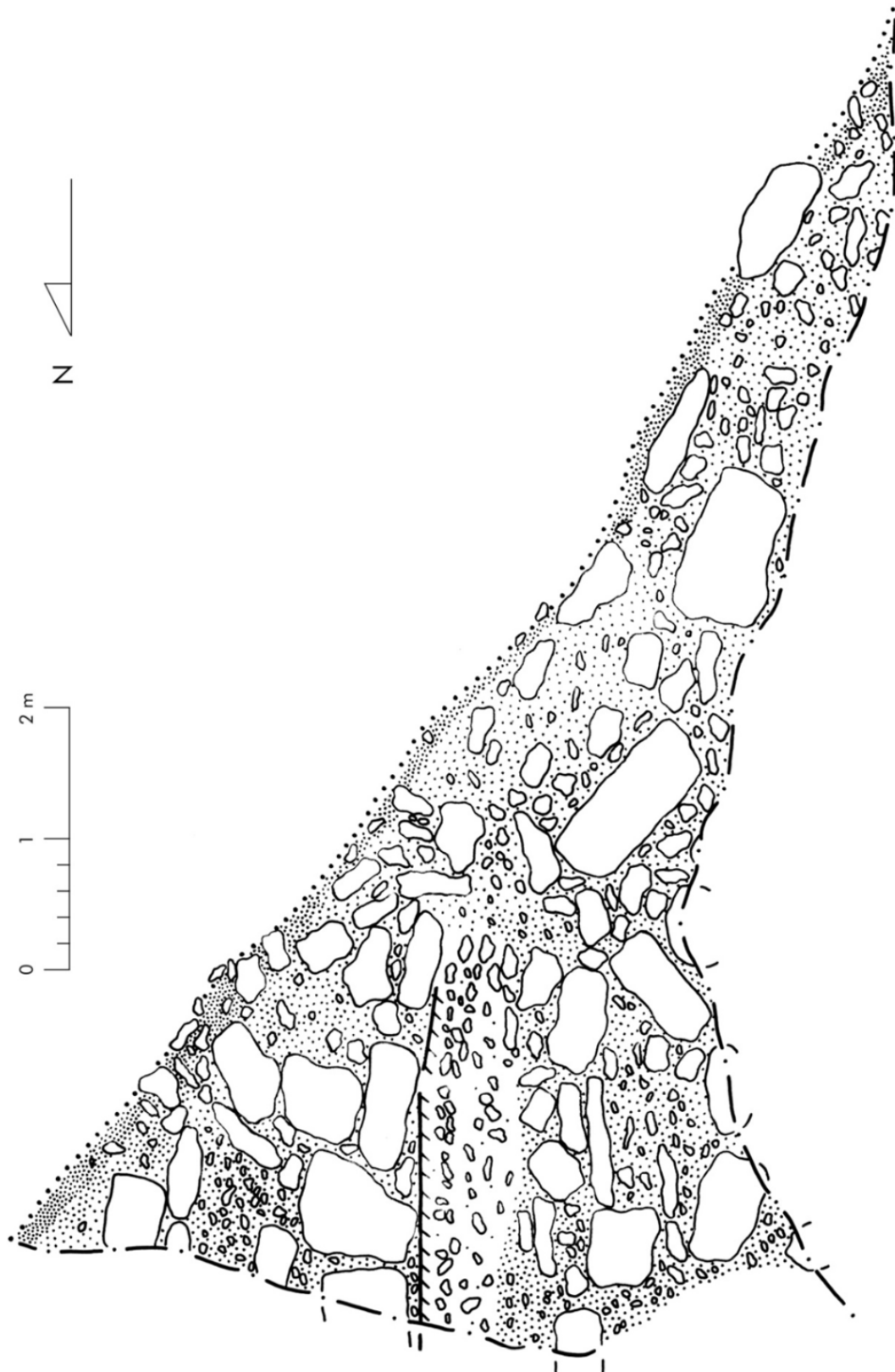


Figure A.66. EZ-4X-11, east profile. Drawing by Nicholas Carter.

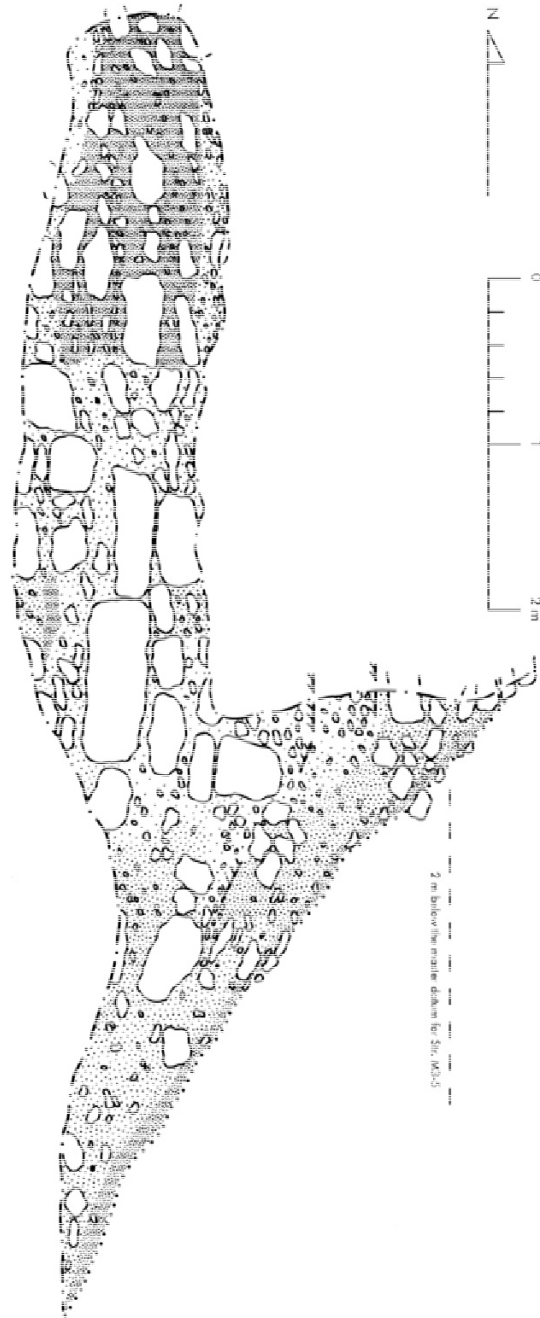


Figure A.67. EZ-4X-12, east profile. Drawing by Nicholas Carter.

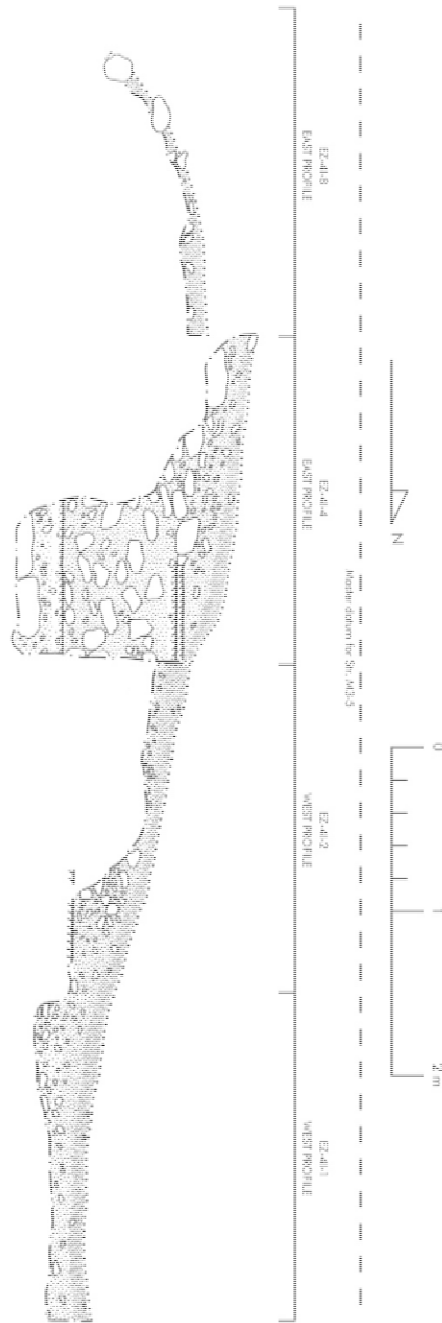


Figure A.68. Composite section of Str. M3-5: EZ-4I-1 and EZ-4I-2, west sections, and EZ-4I-4 and EZ-4I-8, east sections. Drawing by Nicholas Carter.

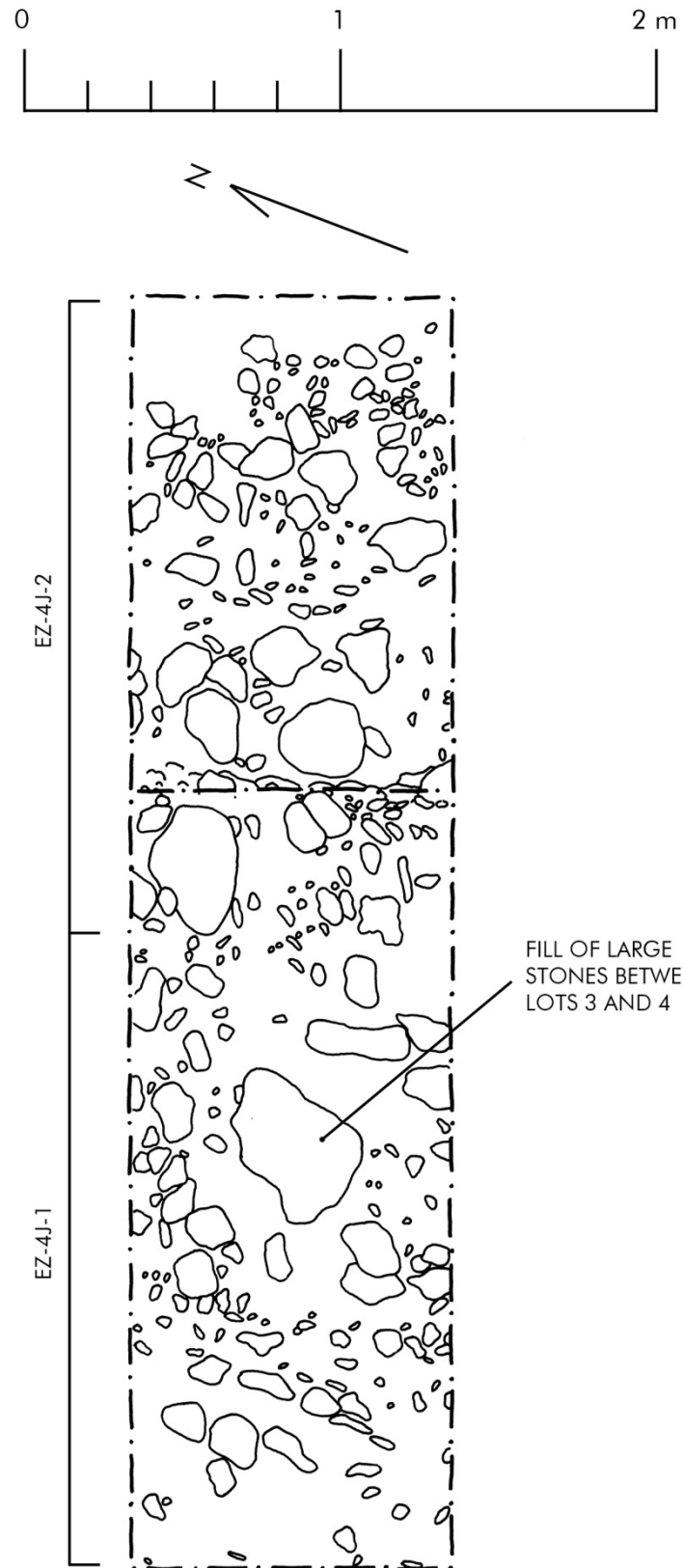


Figure A.69. EZ-4J-1 and EZ-4J-2, plan view. Drawing by Nicholas Carter.

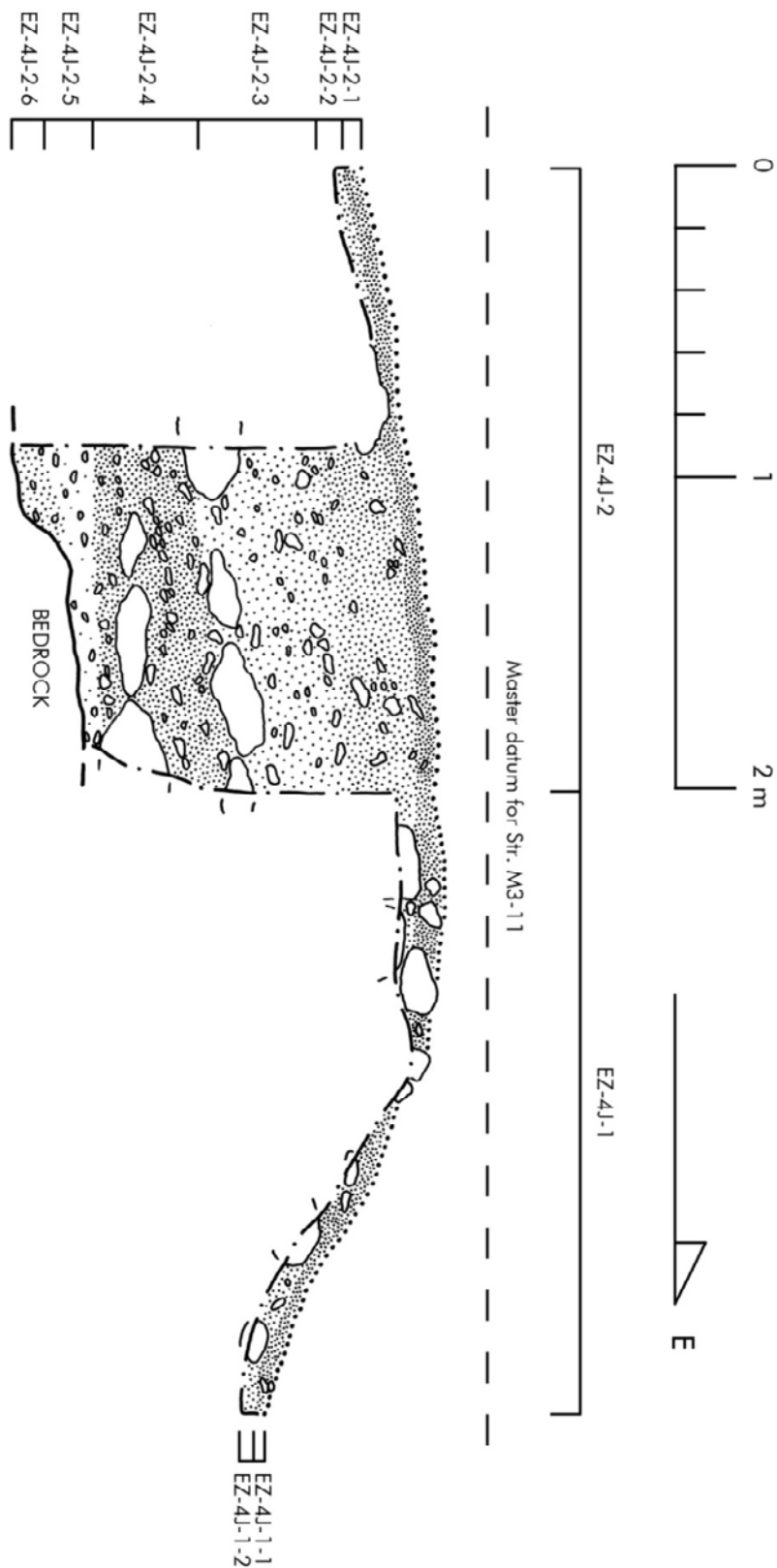


Figure A.70. EZ-4J-1 and EZ-4J-2, south profiles. Drawing by Nicholas Carter.

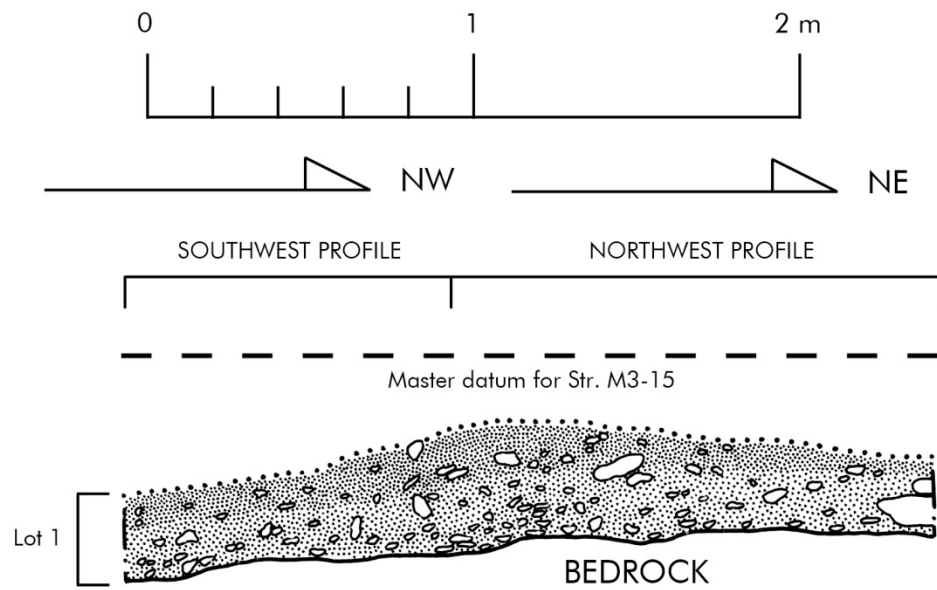


Figure A.71. EZ-4K-2, northwest and southwest profiles. Drawing by Nicholas Carter.

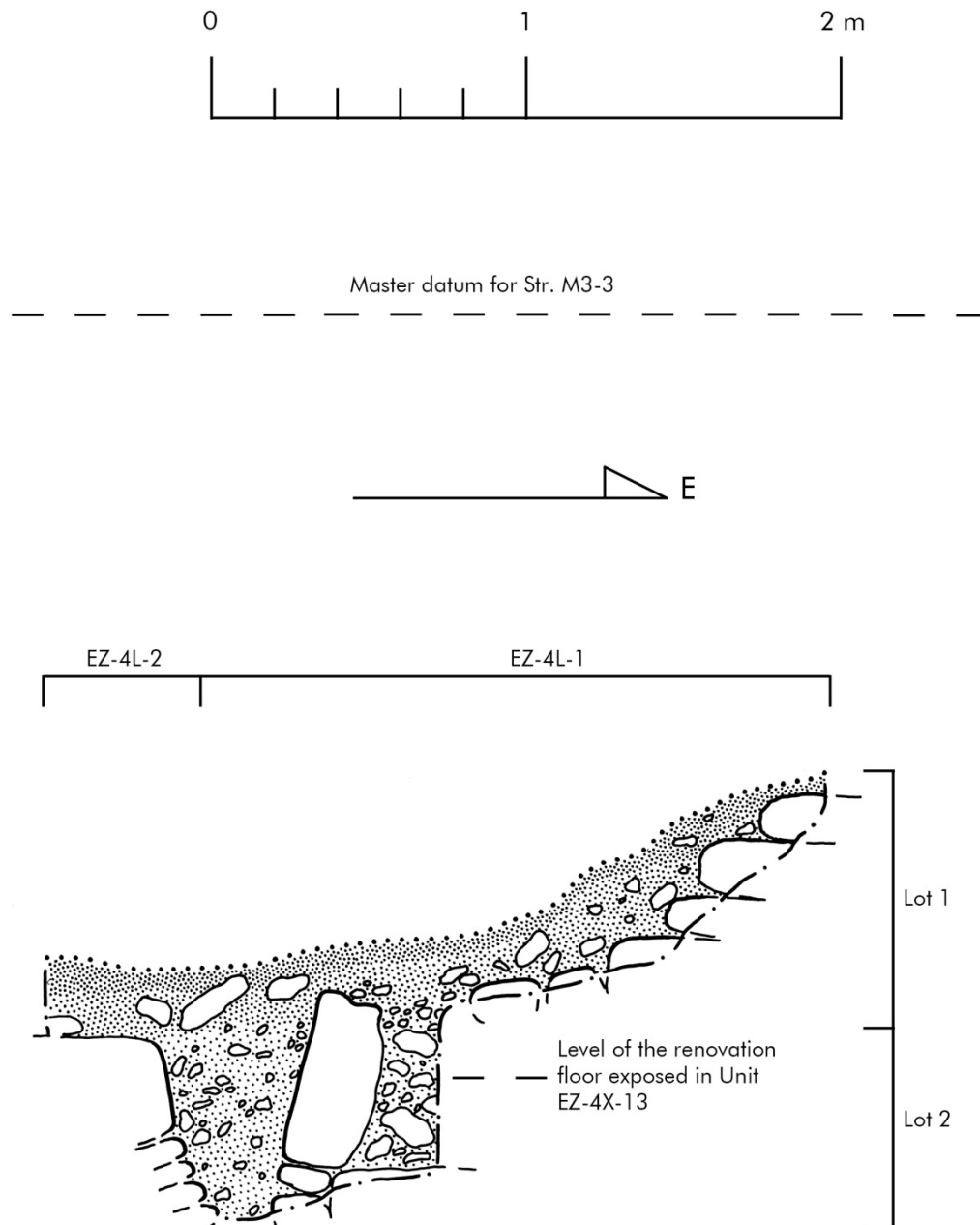


Figure A.72. EZ-4L-1 and EZ-4L-2, north profiles. Drawing by Nicholas Carter.

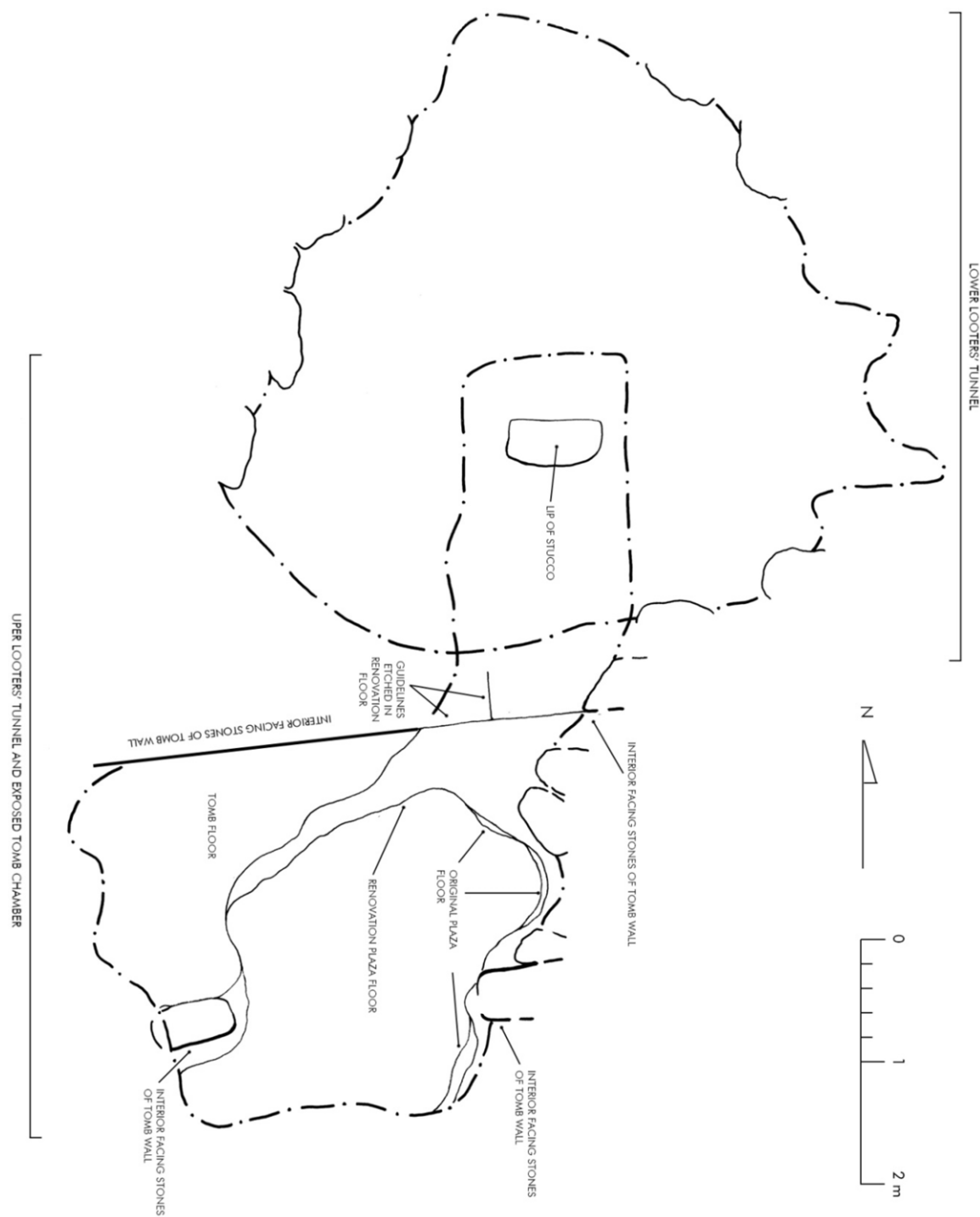


Figure A.73. EZ-4X-13, plan view. Drawing by Nicholas Carter.

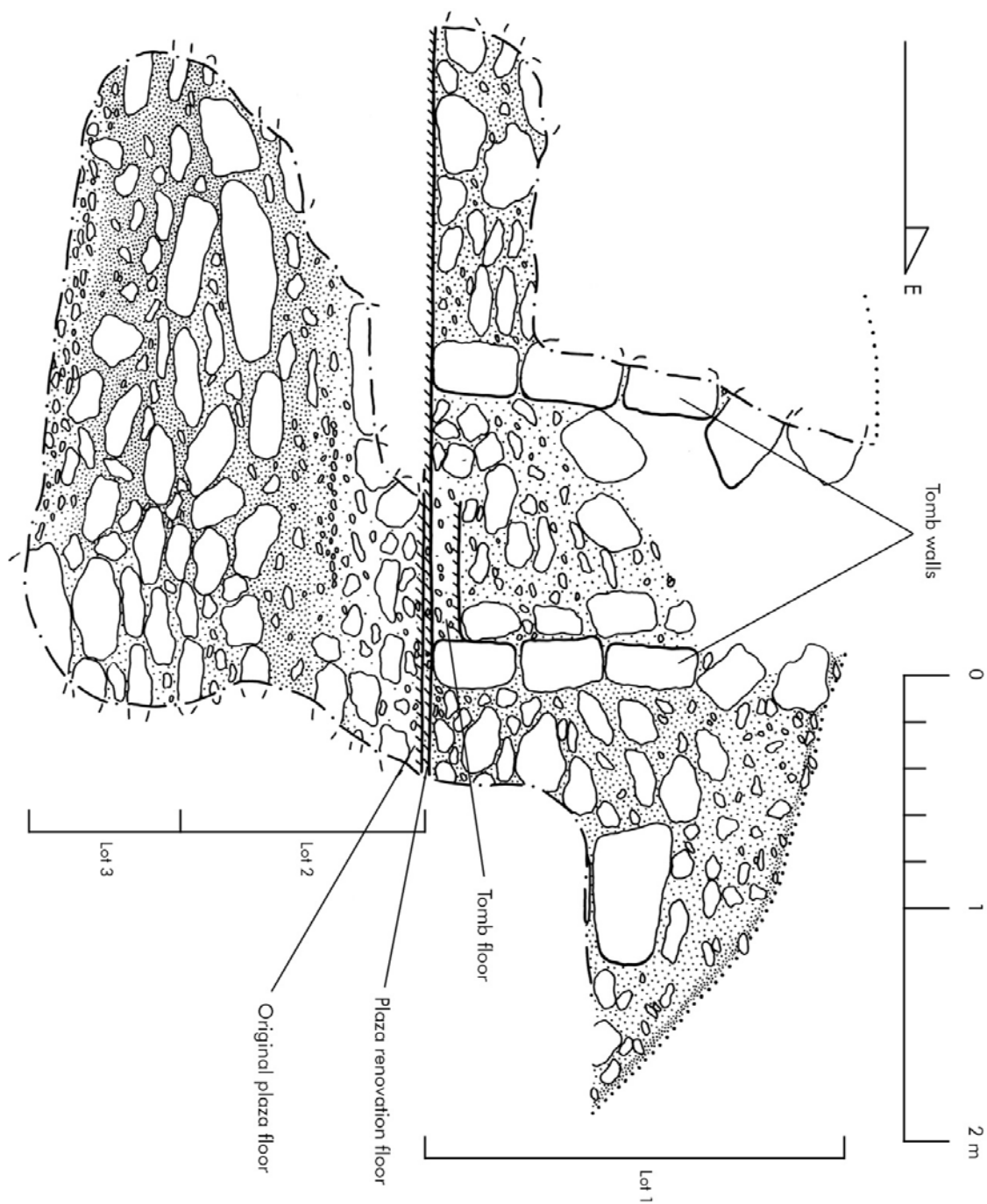


Figure A.74. EZ-4X-13, north profile. Drawing by Nicholas Carter.

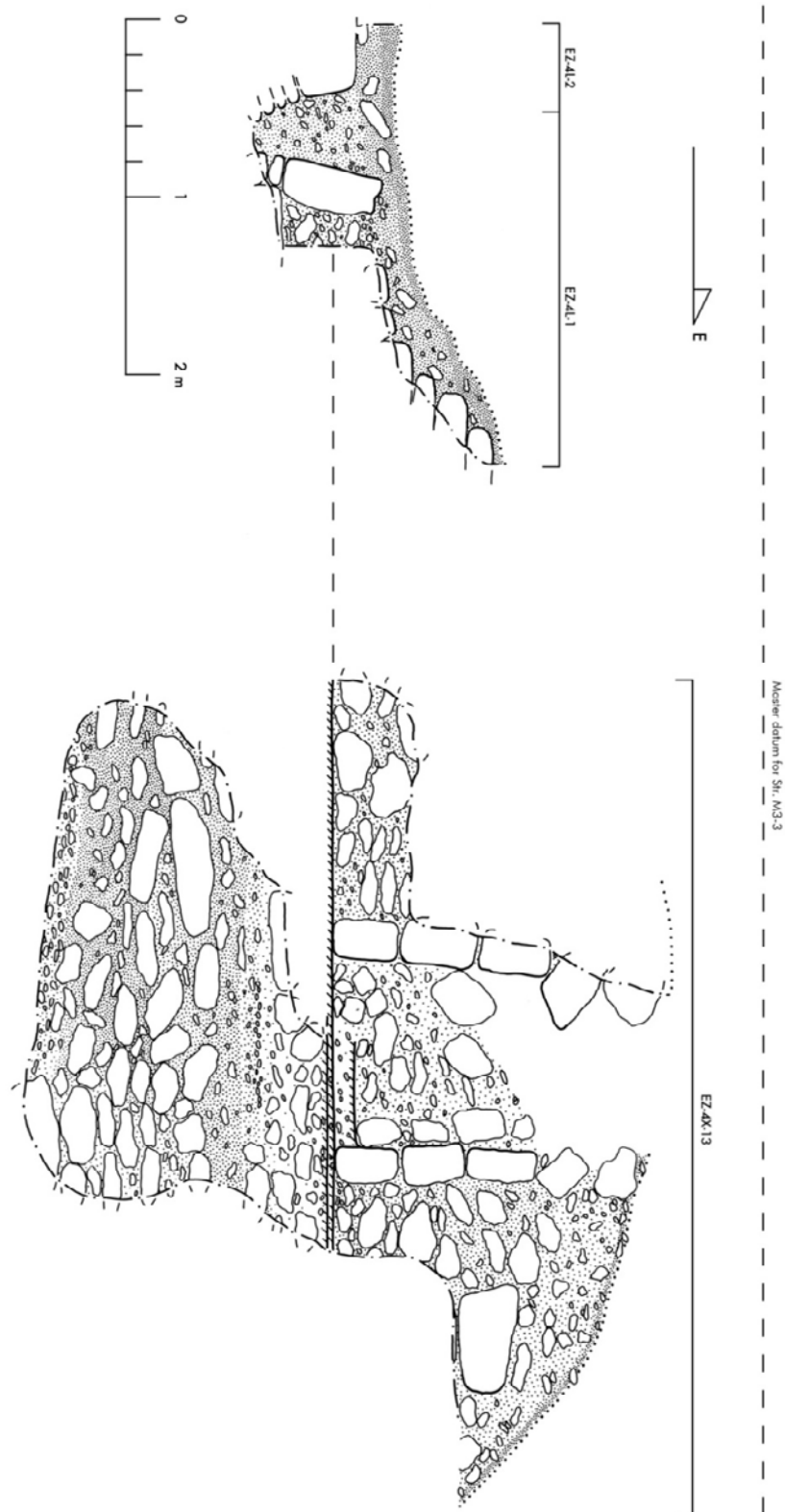


Figure A.75. Composite section of Str. M3-3: EZ-4L-1, EZ-4L-2, and EZ-4X-13, north profiles. Drawing by Nicholas Carter.

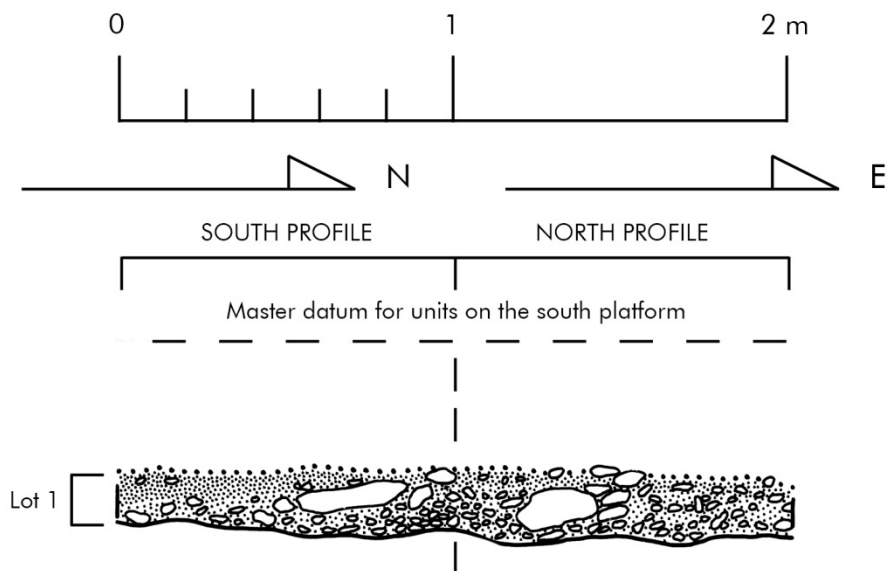


Figure A.76. EZ-4M-1, north and west profiles. Drawing by Nicholas Carter.

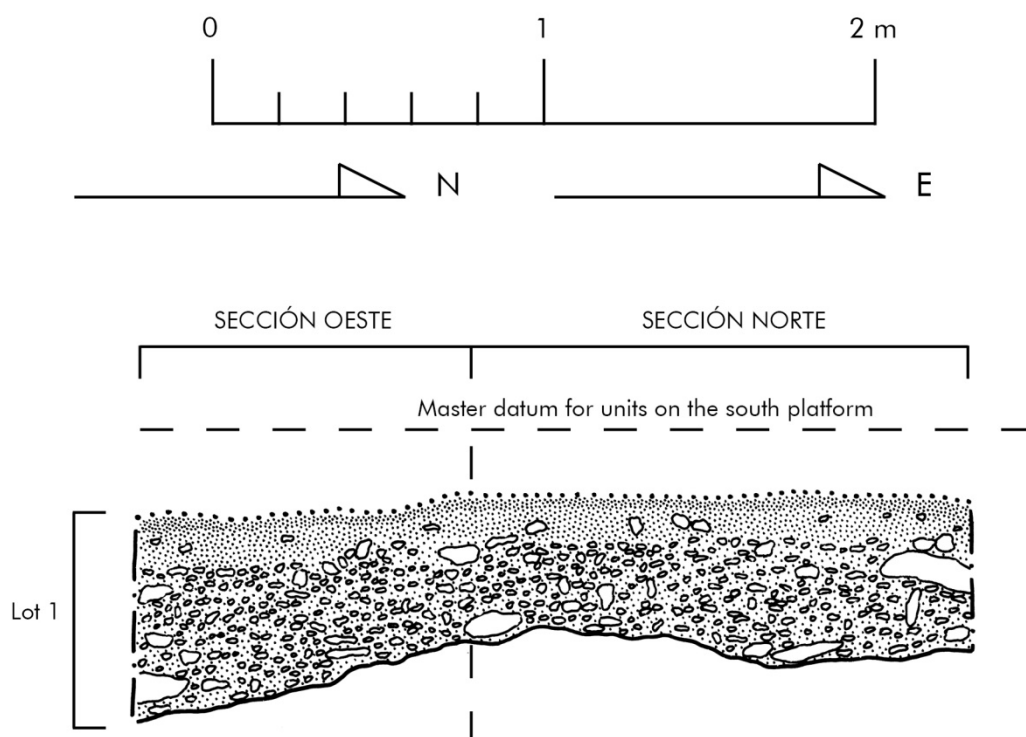


Figure A.77. EZ-4M-2, north and west profiles. Drawing by Nicholas Carter.

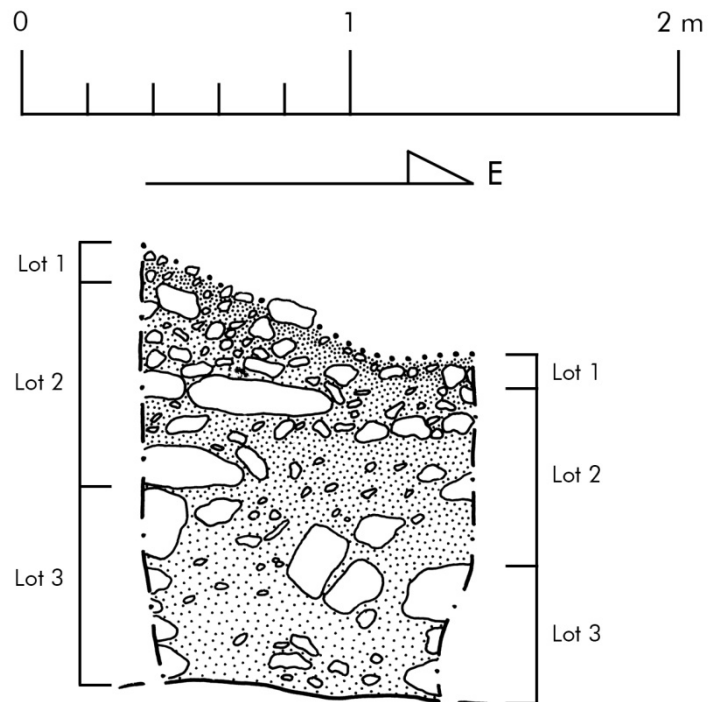


Figure A.78. EZ-4N-1, north profile. Drawing by Nicholas Carter.

APPENDIX B
CERAMICS FROM THE LAS PALMITAS GROUP

This appendix presents the results of a typological analysis of all vessels and ceramic sherds excavated in the Las Palmitas Group from 2008 to 2011. Each line of the list below describes sherds from a single lot which share a ceramic type-variety designation, vessel type, and vessel part. Thus, when multiple sherds from one lot belonged to the same ceramic type-variety, but represented different vessel types or different parts of a vessel, they are listed on separate lines. The list is organized by lot number, given in the five columns at left.

Numerous entries include identifying numbers, recorded in the “Notes” column. These designate individual sherds or vessels which received special treatment of some kind. Codes beginning with “Muestra” or “CR” denote sherds which were sampled in the El Zotz Archaeological Project laboratory for instrumental neutron activation analysis, or which were brought to Brown University in 2011 for that purpose. More numerous are codes of the format “EZ-4-*t-u-v-wxyz*,” where EZ indicates that the sherd came from El Zotz, 4 indicates that it came from Las Palmitas (Operation 4), *t* is replaced by a capital letter indicating the sub-operation, *u* is replaced by the relevant unit number, *v* is replaced by the lot number, and *wxyz* is a four-digit number unique within that lot. These codes were assigned to sherds modally analyzed by the author in 2011. The raw data from that study, and conclusions drawn therefrom, will be made public at a future date.

Lot no.	Type-variety	Form	Part	#	(g)	Notes
EZ-4A-1-1	Eroded unidentified	Jar	Rim, neck and shoulder	1	20.34	Not modally analyzed
EZ-4A-1-1	Eroded unidentified	Undetermined	Body	6	66.93	
EZ-4A-1-2	Eroded unidentified	Incensario	Body	1	5.20	Body with spikes
EZ-4A-1-2	Eroded unidentified	Undetermined	Body	1	2.05	
EZ-4A-1-2	Eroded unidentified	Undetermined	Rim	2	7.00	
EZ-4A-1-3	Eroded unidentified	Undetermined	Body	8	46.68	
EZ-4A-1-3	Eroded unidentified	Undetermined	Body and base	1	46.21	
EZ-4A-1-3	Eroded unidentified	Undetermined	Rim and body	1	6.60	
EZ-4A-2-1	Eroded unidentified	Undetermined	Body	3	24.36	
EZ-4A-2-3	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	15.70	Too small for modal analysis
EZ-4A-2-3	Cambio unslipped	Undetermined	Body	2	20.31	
EZ-4A-2-3	Eroded unidentified	Undetermined	Body	2	8.45	
EZ-4A-2-4	Cambio unslipped	Jar	Rim	1	15.03	
EZ-4A-2-4	Cambio unslipped	Jar	Shoulder	1	21.03	
EZ-4A-2-4	Cambio unslipped	Undetermined	Body	3	52.09	
EZ-4A-2-4	Encanto striated	Undetermined	Body	2	41.76	
EZ-4A-2-4	Eroded unidentified	Undetermined	Body	14	131.26	
EZ-4A-2-4	Eroded unidentified	Undetermined	Rim and body	1	18.34	
EZ-4A-2-4	Tinaja red	Bowl	Rim and body	1	25.25	Too small for modal analysis

EZ-4A-2-4	Tinaja red	Open	Body	1	3.55	
EZ-4B-1-1	Eroded unidentified	Undetermined	Body	6	99.43	
EZ-4B-1-1	Eroded unidentified var. incised	Bowl	Rim and body	1	53.01	
EZ-4B-1-1	Saxche/Palmar orange polychrome	Open	Body	1	21.6	EZ-4B-1-1-001
EZ-4B-1-2	Cambio unslipped	Undetermined	Body	3	22.39	
EZ-4B-1-2	Eroded unidentified	Undetermined	Body	3	32.40	
EZ-4B-1-2	Tinaja red	Open	Body	1	5.96	
EZ-4B-1-2	Tinaja red	Open	Body	1	2.50	
EZ-4B-1-3	Cambio group	Jar	Rim and neck	2	42.36	
EZ-4B-1-3	Cambio unslipped	Jar	Shoulder and body	3	83.86	
EZ-4B-1-3	Cambio unslipped	Undetermined	Body	18	295.64	
EZ-4B-1-3	Encanto striated	Jar	Shoulder and body	1	47.19	
EZ-4B-1-3	Encanto striated	Undetermined	Body	3	19.71	
EZ-4B-1-3	Eroded unidentified	Bowl/dish	Rim and body	2	43.05	
EZ-4B-1-3	Eroded unidentified	Jar	Shoulder	2	16.72	
EZ-4B-1-3	Eroded unidentified	Undetermined	Body	1	43.14	Flange
EZ-4B-1-3	Eroded unidentified	Undetermined	Body	69	637.80	
EZ-4B-1-3	Eroded unidentified	Undetermined	Body and base	5	126.95	
EZ-4B-1-3	Eroded unidentified	Undetermined	Rim	3	11.68	
EZ-4B-1-3	Eroded unidentified var. incised	Undetermined	Body	1	2.42	

EZ-4B-1-3	Infierno black	Jar	Rim, neck and Shoulder	1	34.16	EZ-4B-1-3- 001
EZ-4B-1-3	Infierno black	Jar	Shoulder	1	14.06	
EZ-4B-1-3	Infierno black	Open	Base	1	92.66	Complete base
EZ-4B-1-3	Infierno black	Open	Body	2	20.13	
EZ-4B-1-3	Tinaja red	Cerada	Body	7	61.50	
EZ-4B-1-3	Tinaja red	Open	Body	1	2.64	
EZ-4B-1-3	Tinaja red	Undetermined	Body	2	12.99	"Z" angle
EZ-4B-1-4	Cambio unslipped	Jar	Neck and shoulder	1	25.95	
EZ-4B-1-4	Cambio unslipped	Undetermined	Body	6	120.24	
EZ-4B-1-4	Eroded unidentified	Open	Body and base	1	9.54	
EZ-4B-1-4	Eroded unidentified	Undetermined	Body	6	42.59	
EZ-4B-1-4	Infierno black	Jar	Rim, neck and Shoulder	1	18.04	
EZ-4B-1-4	Tinaja red	Open	Body	2	8.76	
EZ-4B-1-4	Tinaja red	Open	Rim and body	1	11.2 g	EZ-4B-1-4- 001
EZ-4B-1-5	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	10.50	
EZ-4B-1-5	Cambio unslipped	Jar	Rim, neck and shoulder	1	28.44	EZ-4B-1-5- 003
EZ-4B-1-5	Cambio unslipped	Jar	Shoulder	1	11.84	
EZ-4B-1-5	Cambio unslipped	Undetermined	Body	7	55.98	
EZ-4B-1-5	Encanto striated	Undetermined	Body	3	64.35	

EZ-4B-1-5	Eroded unidentified	Undetermined	Body	22	168.39	
EZ-4B-1-5	Infierno black	Incensario	Body	1	12.66	EZ-4B-1-5-002; photographed but not analyzed
EZ-4B-1-5	Infierno black	Open	Body	1	10.44	
EZ-4B-1-5	Infierno black	Open	Body	2	9.98	
EZ-4B-1-5	Polvero black	Open	Body	1	14.6 g	EZ-4B-1-5-004, Muestra 36, EZ0037; not analyzed
EZ-4B-1-5	Tinaja red	Open	Body	2	7.62	
EZ-4B-1-5	Tinaja red	Open	Body and base	1	8.58	
EZ-4B-1-5	Tinaja red	Open	Rim	2	11.58	
EZ-4B-1-5	Tinaja red	Open	Rim and body	1	20.16	EZ-4B-1-5-001
EZ-4B-1-6	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	4	61.44	
EZ-4B-1-6	Cambio unslipped	Jar	Shoulder	2	33.79	
EZ-4B-1-6	Cambio unslipped	Undetermined	Body	27	286.15	
EZ-4B-1-6	Encanto striated	Undetermined	Body	9	108.57	
EZ-4B-1-6	Eroded unidentified	Open	Rim and body	4	50.00	
EZ-4B-1-6	Eroded unidentified	Undetermined	Body	33	172.20	
EZ-4B-1-6	Eroded unidentified	Undetermined	Rim	2	9.98	

EZ-4B-1-6	Harina cream	Open	Body	2	17.96	
EZ-4B-1-6	Harina cream	Open	Rim and body	1	11.45	EZ-4B-1-6-001
EZ-4B-1-6	Infierno black	Open	Body	6	39.82	
EZ-4B-1-6	Polvero black	Open	Body	1	8.3 g	EZ-4B-1-6-002, EZ0038, Muestra 37; not analyzed
EZ-4B-1-6	Tinaja red	Open	Base and Body	1	11.88	
EZ-4B-1-6	Tinaja red	Open	Body	1	12.9 g	EZ-4B-1-6-003, Muestra 33, EZ0034; not analyzed
EZ-4B-1-6	Tinaja red	Open	Body	5	29.38	
EZ-4B-1-6	Tinaja red	Open	Rim	2	10.51	
EZ-4B-2-1	Cambio unslipped	Undetermined	Rim	1	7.52	
EZ-4B-2-1	Eroded unidentified	Undetermined	Body	27	153.58	
EZ-4B-2-1	Eroded unidentified	Undetermined	Rim	1	3.13	
EZ-4B-2-1	Eroded unidentified	Undetermined	Rim and body	1	11.89	
EZ-4B-2-1	Tinaja red	Open	Body	1	4.10	
EZ-4B-2-2	Cambio unslipped	Undetermined	Body	5	50.31	
EZ-4B-2-2	Encanto striated	Undetermined	Body	3	27.98	
EZ-4B-2-2	Eroded unidentified	Bowl/dish	Rim and body	1	20.05	
EZ-4B-2-2	Eroded unidentified	Jar	Shoulder and body	2	35.24	

EZ-4B-2-2	Eroded unidentified	Open	Rim and body	1	24.86	basal flange
EZ-4B-2-2	Eroded unidentified	Undetermined	Base	1	10.61	ring base
EZ-4B-2-2	Eroded unidentified	Undetermined	Body	34	173.34	
EZ-4B-2-2	Eroded unidentified	Undetermined	Body and base	3	44.27	
EZ-4B-2-2	Eroded unidentified	Undetermined	Rim and body	4	32.65	
EZ-4B-2-2	Infierno black	Open	Body	1	15.81	
EZ-4B-2-2	Tinaja red	Open	Body	1	2.95	
EZ-4B-2-3	Cambio unslipped	Jar	Rim	1	40.37	
EZ-4B-2-3	Cambio unslipped	Undetermined	Body	5	63.75	
EZ-4B-2-3	Encanto striated	Undetermined	Body	4	25.97	
EZ-4B-2-3	Eroded unidentified	Jar	Rim and neck	1	5.97	
EZ-4B-2-3	Eroded unidentified	Jar	Rim, neck and Shoulder	1	19.89	
EZ-4B-2-3	Eroded unidentified	Undetermined	Body	12	77.92	
EZ-4B-2-3	Tinaja red	Open	Base	1	21.02	ring base
EZ-4B-2-3	Tinaja red	Open	Body	3	20.08	
EZ-4B-2-3	Tinaja red	Open	Body and base	1	8.57	
EZ-4B-2-4	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	13.34	
EZ-4B-2-4	Cambio unslipped	Jar	Shoulder	1	20.00	
EZ-4B-2-4	Cambio unslipped	Undetermined	Body	7	45.80	
EZ-4B-2-4	Eroded unidentified	Undetermined	Body	18	86.43	
EZ-4B-2-4	Tinaja red	Open	Base	1	12.86	

EZ-4B-2-4	Tinaja red	Open	Body	1	3.48	
EZ-4B-2-4	Tinaja red	Open	Body	1	3.58	
EZ-4B-3-3	Cambio unslipped	Undetermined	Body	8	89.09	
EZ-4B-3-3	Eroded unidentified	Jar	Rim and neck	1	22.32	
EZ-4B-3-3	Eroded unidentified	Jar	Rim, neck and Shoulder	1	25.01	
EZ-4B-3-3	Eroded unidentified	Open	Body and base	1	57.13	
EZ-4B-3-3	Eroded unidentified	Undetermined	Body	4	12.51	
EZ-4B-3-3	Infierno black	Open	Body	1	5.24	
EZ-4B-3-3	Infierno black	Open	Body	1	8.99	
EZ-4B-3-3	Saxche/Palmar orange polychrome	Open	Body	1	6.09	
EZ-4B-3-3	Tinaja red	Open	Body	1	5.58	
EZ-4C-2-1	Cambio unslipped	Undetermined	Body	3	33.84	
EZ-4C-2-1	Pozo unslipped	Undetermined	Body	1	3.13	
EZ-4C-2-2	Azote orange	Open	Body	1	6.8 g	EZ-4C-2-2- 001, EZ0180, Muestra 14; not analyzed
EZ-4C-2-2	Encanto striated	Jar	Shoulder and body	1	168.18	
EZ-4C-2-2	Eroded unidentified	Undetermined	Body	2	10.03	
EZ-4C-2-2	Eroded unidentified	Undetermined	Rim	1	3.17	
EZ-4C-2-2	Tinaja red	Jar	Rim, neck, and Shoulder	1	104.06	
EZ-4C-2-3	Cambio unslipped	Jar	Shoulder and	1	53.39	

			body			
EZ-4C-2-3	Cambio unslipped	Undetermined	Body	8	88.43	
EZ-4C-2-3	Infierno black	Open	Body	2	12.08	
EZ-4C-2-3	Pozo unslipped	Undetermined	Body	3	7.58	
EZ-4C-2-3	Tinaja red	Open	Body	1	13.43	
EZ-4C-2-3	Tinaja red	Open	Body	1	1.75	
EZ-4D-1-1	Cambio group	Jar	Rim and neck	1	79.09	
	(Cambio unslipped or					
	Encanto striated)					
EZ-4D-1-1	Cambio unslipped	Jar	Shoulder	2	131.68	
EZ-4D-1-1	Cambio unslipped	Undetermined	Body	16	452.21	
EZ-4D-1-1	Encanto striated	Undetermined	Body	12	288.50	
EZ-4D-1-1	Eroded unidentified	Undetermined	Body	5	22.99	
EZ-4D-1-1	polychrome	Open	Body	1	2.39	EZ-4D-1-1-
	unidentified					005
EZ-4D-1-1	Saxche/Palmar orange	Tambor	Body	1	12.23	EZ-4D-1-1-
	polychrome					004
EZ-4D-1-1	Tinaja red	Bowl	Rim and body	1	47.71	EZ-4D-1-1-
						001
EZ-4D-1-1	Tinaja red	Bowl/dish	Rim and body	1	25.77	EZ-4D-1-1-
						002
EZ-4D-1-1	Tinaja red	Open	Body	1	11.81	
EZ-4D-1-1	Tinaja red	Open	Body	4	59.60	
EZ-4D-1-1	Tinaja red	Open	Body	9	16.53	
EZ-4D-1-1	Tinaja red	Open	Body and	1	9.34	
			base			
EZ-4D-1-1	Zacatal cream	Open	Body	1	2.27	EZ-4D-1-1-

	polychrome					003
EZ-4D-1-2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	3	188.86	
EZ-4D-1-2	Cambio unslipped	Undetermined	Body	38	846.03	
EZ-4D-1-2	Cambio unslipped	Undetermined	Rim and body	1	22.26	
EZ-4D-1-2	Encanto striated	Undetermined	Body	34	959.72	
EZ-4D-1-2	Eroded unidentified	Open	Rim and body	1	21.03	
EZ-4D-1-2	Eroded unidentified	Plate	Support	1	7.30	
EZ-4D-1-2	Eroded unidentified	Undetermined	Base	1	30.21	
EZ-4D-1-2	Eroded unidentified	Undetermined	Body	16	171.73	
EZ-4D-1-2	Eroded unidentified	Undetermined	Body and base	1	163.14	
EZ-4D-1-2	Infierno black	Open	Body	3	22.98	
EZ-4D-1-2	Infierno black	Open	Body and base	1	14.32	
EZ-4D-1-2	Máquina brown	Open	Body	13	241.62	
EZ-4D-1-2	Saxche/Palmar orange polychrome	Open	Body	7	104.05	EZ-4D-1-2- 001
EZ-4D-1-2	Saxche/Palmar orange polychrome	Plate	Body	1	17.93	Flange with notches; EZ- 4D-1-2-002
EZ-4D-1-2	Tinaja red	Bowl	Rim and body	1	89.35	EZ-4D-1-2- 004
EZ-4D-1-2	Tinaja red	Bowl	Rim and body	1	41.73	EZ-4D-1-2- 005
EZ-4D-1-2	Tinaja red	Jar	Rim, neck	1	219.84	EZ-4D-1-2-

			and Shoulder			003
EZ-4D-1-2	Tinaja red	Jar	Rim, neck	1	219.84	
			and Shoulder			
EZ-4D-1-2	Tinaja red	Open	Base and	1	64.83	
			Body			
EZ-4D-1-2	Tinaja red	Open	Base and	1	62.59	
			partial			
			support			
EZ-4D-1-2	Tinaja red	Open	Body	8	120.85	
EZ-4D-1-2	Tinaja red	Open	Body	13	155.48	
EZ-4D-2-1	Tinaja red	Undetermined	Rim	1	5.48	
EZ-4D-2-1	Cambio group	Jar	Rim and neck	2	89.04	
	(Cambio unslipped or					
	Encanto striated)					
EZ-4D-2-1	Cambio unslipped	Jar	Rim, neck	3	214.95	EZ-4D-2-1-
			and Shoulder			001, EZ-4D-2-
						1-002, EZ-4D-
						2-1-003
EZ-4D-2-1	Cambio unslipped	Jar	Shoulder and	4	251.59	
			body			
EZ-4D-2-1	Cambio unslipped	Undetermined	Body	34	1524.7	
					0	
EZ-4D-2-1	Cambio unslipped	Undetermined	Rim	2	24.99	
EZ-4D-2-1	Cambio unslipped	Undetermined	Rim and body	4	105.77	
EZ-4D-2-1	Chaquiste impressed	Bowl	Rim and body	3	225.57	EZ-4D-2-1-
						004, EZ-4D-2-
						1-005, EZ-4D-

EZ-4D-2-1	Encanto striated	Undetermined	Body	16	503.89	
EZ-4D-2-1	Eroded unidentified	Undetermined	Body	5	94.68	
EZ-4D-2-1	Eroded unidentified	Undetermined	Rim and body	3	80.76	
EZ-4D-2-1	Infierno black	Open	Body	1	8.02	
EZ-4D-2-1	Máquina brown	Undetermined	Rim and body	1	17.54	
EZ-4D-2-1	Paixban polychrome	Bowl/dish	Rim and body	1	20.79 g	EZ-4D-2-1-017; EZ0131 (INAA)
EZ-4D-2-1	Sahcaba molded-carved	Open	Body	1	5.49 g	EZ-4D-2-1-016; EZ0136 (INAA)
EZ-4D-2-1	Saxche/Palmar orange polychrome	Bowl/dish	Rim and body	1	71.52	EZ-4D-2-1-008
EZ-4D-2-1	Saxche/Palmar orange polychrome	Open	Body	10	84.72	EZ-4D-2-1-010
EZ-4D-2-1	Saxche/Palmar orange polychrome	Open	Body	1	6.61	EZ-4D-2-1-013; pierced for reuse as spindle whorl or weight
EZ-4D-2-1	Saxche/Palmar orange polychrome	Open	Body and base	1	32.53	
EZ-4D-2-1	Saxche/Palmar orange polychrome	Open	Rim and body	1	24.83	EZ-4D-2-011
EZ-4D-2-1	Saxche/Palmar orange	Open	Rim and body	4	26.85	EZ-4D-2-1-

	polychrome					009
EZ-4D-2-1	Tinaja red	Bowl	Rim and body	1	72.23	EZ-4D-2-1-007
EZ-4D-2-1	Tinaja red	Jar	Rim and neck	1	73.75 g	EZ-4D-2-1-014; EZ0108 (INAA)
EZ-4D-2-1	Tinaja red	Jar	Shoulder	2	23.80	
EZ-4D-2-1	Tinaja red	Open	Body	6	160.81	
EZ-4D-2-1	Tinaja red	Open	Body	1	13.09	Pierced for use as spindle whorl or weight
EZ-4D-2-1	Tinaja red	Open	Body	32	552.09	
EZ-4D-2-1	Tinaja red	Open	Body and base	1	110.73	
EZ-4D-2-1	Tinaja red	Open	Body and base	2	69.97	
EZ-4D-2-1	Tinaja red	Open	Rim and body	1	7.24	EZ-4D-2-1-012
EZ-4D-2-1	Zacatal cream polychrome	Open	Body	1	15.69 g	EZ-4D-2-1-015; EZ0130 (INAA)
EZ-4D-2-2	Altar orange var. Altar	Open	Rim and body	1	3.29	EZ-4D-2-2-001; too small for modal analysis
EZ-4D-2-2	Cambio unslipped	Undetermined	Body	6	98.00	

EZ-4D-2-2	Cambio unslipped	Undetermined	Rim and body	1	12.26	
EZ-4D-2-2	Eroded unidentified	Bowl	Rim and body	1	31.06	
EZ-4D-2-2	Eroded unidentified	Bowl/dish	Rim, body, and base	1	18.29	
EZ-4D-2-2	Eroded unidentified	Jar	Shoulder	2	21.36	
EZ-4D-2-2	Eroded unidentified	Undetermined	Body	3	34.44	
EZ-4D-2-2	Eroded unidentified	Undetermined	Body	31	469.02	
EZ-4D-2-2	Eroded unidentified	Undetermined	Body and base	3	123.49	
EZ-4D-2-2	Eroded unidentified	Undetermined	Rim	1	6.56	
EZ-4D-2-2	Eroded unidentified	Undetermined	Rim	1	6.56	
EZ-4D-2-2	Eroded unidentified	Undetermined	Rim and body	8	93.69	
EZ-4D-2-2	Eroded unidentified	Undetermined	Support	3	32.57	
EZ-4D-2-2	Máquina brown	Open	Body	1	4.79	
EZ-4D-2-2	Pabellon molded- carved	Undetermined	Body	1	3.99 g	EZ-4D-2-2- 003; EZ0138 (INAA)
EZ-4D-2-2	Sahcaba molded- carved	Open	Base	1	9.86 g	EZ-4D-2-2- 002; EZ0137 (INAA); probably same vessel as EZ- 4D-2-1-016
EZ-4D-2-2	Sahcaba molded- carved	Open	Body	1	3.87 g	EZ-4D-2-2- 004; EZ-139 (INAA);

probably same
vessel as EZ-
4D-2-1-016
and EZ-4D-2-
2-002

EZ-4D-2-2	Tinaja red	Jar	Shoulder and body	1	44.24
EZ-4D-2-2	Tinaja red	Open	Body	5	60.15
EZ-4D-2-2	Tinaja red	Open	Rim and body	1	45.45
EZ-4D-3-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	18.22
EZ-4D-3-1	Cambio unslipped	Jar	Shoulder and body	1	9.99
EZ-4D-3-1	Cambio unslipped	Undetermined	Body	5	135.20
EZ-4D-3-1	Eroded unidentified	Undetermined	Body	11	120.90
EZ-4D-3-1	Eroded unidentified	Undetermined	Rim and body	3	73.96
EZ-4D-3-1	Tinaja red	Jar	Rim and neck	1	17.32
EZ-4D-3-1	Tinaja red	Open	Body	2	29.27
EZ-4D-3-2	Cambio unslipped	Undetermined	Body	2	11.51
EZ-4D-3-2	Eroded unidentified	Undetermined	Body	4	22.25
EZ-4D-3-2	Eroded unidentified	Undetermined	Rim and body	1	4.67
EZ-4D-4-1	Azote orange	Open	Body	1	1.79
EZ-4D-4-1	Cambio unslipped	Undetermined	Body	10	69.90
EZ-4D-4-1	Encanto striated	Undetermined	Body	1	7.33
EZ-4D-4-1	Eroded unidentified	Undetermined	Body	3	5.40

EZ-4D-4-1	Máquina brown	Open	Body	1	8.22	EZ-4D-4-1-001, Muestra 53; not analyzed
EZ-4D-4-1	Saxche/Palmar orange polychrome	Open	Body	1	4.0 g	
EZ-4D-4-1	Tinaja red	Open	Body	1	5.67	
EZ-4D-4-1	Tinaja red	Open	Body	3	21.60	
EZ-4D-4-2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	7.49	
EZ-4D-4-2	Cambio unslipped	Undetermined	Base	2	45.44	
EZ-4D-4-2	Cambio unslipped	Undetermined	Body	17	233.25	
EZ-4D-4-2	Encanto striated	Undetermined	Body	6	93.39	
EZ-4D-4-2	Eroded polychrome, unidentified	Open	Rim	1	1.68	
EZ-4D-4-2	Eroded unidentified	Bowl/dish	Rim and body	1	66.32	
EZ-4D-4-2	Eroded unidentified	Jar	Rim, neck and Shoulder	2	14.04	
EZ-4D-4-2	Eroded unidentified	Open	Base and Body	1	20.34	
EZ-4D-4-2	Eroded unidentified	Open	Rim and body	1	4.5	
EZ-4D-4-2	Eroded unidentified	Undetermined	Body	1	17.27	
EZ-4D-4-2	Eroded unidentified	Undetermined	Body	3	46.67	
EZ-4D-4-2	Máquina brown	Open	Body	1	0.63	
EZ-4D-4-2	Pozo unslipped	Undetermined	Body	13	59.76	
EZ-4D-4-2	Saxche/Palmar orange	Open	Body	1	3.10	

	polychrome					
EZ-4D-4-3	Augustine red	Open	Body	1	3.10	
EZ-4D-4-3	Cambio group	Jar	Rim and neck	1	7.49	
	(Cambio unslipped or					
	Encanto striated)					
EZ-4D-4-3	Cambio unslipped	Undetermined	Base	2	45.44	
EZ-4D-4-3	Cambio unslipped	Undetermined	Body	5	40.99	
EZ-4D-4-3	Cambio unslipped	Undetermined	Body	12	191.95	
EZ-4D-4-3	Encanto striated	Undetermined	Body	1	17.01	
EZ-4D-4-3	Encanto striated	Undetermined	Body	5	76.22	
EZ-4D-4-3	Eroded polychrome,	Open	Rim	1	1.68	
EZ-4D-4-3	Eroded unidentified	Bowl/dish	Rim and body	1	66.32	
EZ-4D-4-3	Eroded unidentified	Jar	Rim, neck,	2	14.04	
			and Shoulder			
EZ-4D-4-3	Eroded unidentified	Open	Body and	1	20.34	
			base			
EZ-4D-4-3	Eroded unidentified	Undetermined	Body	1	17.27	
EZ-4D-4-3	Eroded unidentified	Undetermined	Body	3	46.67	Very irregular
						forms
EZ-4D-4-3	Eroded unidentified	Undetermined	Body	1	1.36	
EZ-4D-4-3	Eroded unidentified	Open	Rim and body	1	4.50	
	var. channeled					
EZ-4D-4-3	Máquina brown	Open	Body	1	0.63	
EZ-4D-4-3	Pozo unslipped	Undetermined	Body	13	59.76	
EZ-4D-5-1	Augustine red	Open	Body	1	2.49	
EZ-4D-5-1	Cambio unslipped	Undetermined	Body	1	3.63	

EZ-4D-5-1	Encanto striated	Undetermined	Body	1	7.59	
EZ-4D-5-1	Eroded unidentified	Undetermined	Body	4	25.99	
EZ-4D-5-2	Azote orange	Open	Base	1	4.45	
EZ-4D-5-2	Cambio unslipped	Undetermined	Body	1	16.63	
EZ-4D-5-2	Eroded unidentified	Undetermined	Body	1	10.52	
EZ-4D-5-3	Cambio unslipped	Jar	Shoulder	1	6.58	
EZ-4D-5-3	Cambio unslipped	Undetermined	Body	4	34.07	
EZ-4D-5-3	Encanto striated	Undetermined	Body	2	35.78	
EZ-4D-5-3	Eroded polychrome, unidentified	Open	Body	1	8.70	
EZ-4D-5-3	Eroded unidentified	Undetermined	Body	3	16.49	
EZ-4D-5-3	Tinaja red	Open	Body	4	14.16	
EZ-4D-5-3	Tinaja red	Open	Body	2	10.62	
EZ-4D-5-3	Unidentified red on orange bichrome	Open	Body	1	7.4 g	EZ-4D-5-3- 001, Muestra 54; not analyzed; waxy
EZ-4D-6-1	Cambio unslipped	Undetermined	Body	3	15.17	
EZ-4D-6-1	Cambio unslipped	Undetermined	Rim and body	1	7.52	
EZ-4D-6-1	Eroded unidentified	Jar	Shoulder	1	10.74	
EZ-4D-6-1	Eroded unidentified	Undetermined	Body	1	3.02	
EZ-4D-6-1	Tinaja red	Open	Body	1	3.09	
EZ-4D-6-2	Cambio unslipped	Undetermined	Body	2	26.31	
EZ-4D-6-2	Encanto striated	Undetermined	Body	1	16.42	
EZ-4D-6-2	Eroded unidentified	Undetermined	Body	4	15.23	

EZ-4D-6-2	Payaso orange-brown	Open	Body	1	3.17
EZ-4D-6-2	Pozo unslipped	Undetermined	Body	1	4.41
EZ-4D-6-2	Tinaja red	Open	Body	1	2.16
EZ-4D-6-3	Cambio unslipped	Undetermined	Body	1	7.23
EZ-4D-7-1	Cambio unslipped	Jar	Shoulder and body	2	45.50
EZ-4D-7-1	Encanto striated	Undetermined	Body	1	12.51
EZ-4D-7-1	Eroded unidentified	Undetermined	Body	2	5.53
EZ-4D-7-1	Tinaja red	Open	Body	1	6.56
EZ-4D-7-2	Cambio unslipped	Undetermined	Body	1	5.77
EZ-4D-7-2	Harina cream	Open	Body	1	2.91
EZ-4D-7-2	Saxche/Palmar orange polychrome	Open	Body	2	8.56
EZ-4D-7-2	Tinaja red	Open	Body	1	13.35
EZ-4D-7-2	Tinaja red	Open	Body	1	8.03
EZ-4D-8-3	Cambio unslipped	Jar	Shoulder and body	3	32.28
EZ-4D-8-3	Cambio unslipped	Undetermined	Body	2	14.68
EZ-4D-8-3	Encanto striated	Undetermined	Body	1	15.34
EZ-4D-8-3	Eroded unidentified	Jar	Shoulder and body	1	7.59
EZ-4D-8-3	Eroded unidentified	Undetermined	Body	3	37.80
EZ-4D-8-3	Tinaja red	Open	Body	2	61.92
EZ-4D-9-2	Cambio unslipped	Undetermined	Base	1	12.25
EZ-4D-9-2	Cambio unslipped	Undetermined	Body	5	51.3
EZ-4D-9-2	Cambio unslipped	Undetermined	Body and	2	77.46

			base			
EZ-4D-9-2	Cambio unslipped	Undetermined	Rim	1	3.03	
EZ-4D-9-2	Cambio unslipped	Undetermined	Rim and body	1	4.59	
EZ-4D-9-2	Encanto striated	Undetermined	Body	4	56.76	
EZ-4D-9-2	Infierno black	Open	Body	1	2.60	
EZ-4D-9-3	Cambio unslipped	Undetermined	Body	2	12.51	
EZ-4D-9-3	Encanto striated	Undetermined	Body	3	29.51	
EZ-4D-9-3	Eroded polychrome, unidentified	Open	Body	1	4.75	
EZ-4D-9-3	Saxche/Palmar orange polychrome	Open	Body	1	1.72	
EZ-4D-9-3	Tinaja red	Bowl	Rim and body	1	49.63	EZ-4D-9-3- 001
EZ-4D-9-3	Tinaja red	Open	Body	1	24.61	
EZ-4D-9-3	Zacatal cream polychrome	Open	Rim and body	1	2.82	
EZ-4E-1-1	Augustine red	Open	Body	1	66.26	
EZ-4E-1-1	Cambio unslipped	Jar	Shoulder	2	60.86	
EZ-4E-1-1	Cambio unslipped	Undetermined	Body	1	11.85	
EZ-4E-1-1	Encanto striated	Undetermined	Body	1	36.26	
EZ-4E-1-1	Eroded unidentified	Jar	Shoulder and body	1	67.80	
EZ-4E-1-1	Eroded unidentified	Undetermined	Body	14	128.56	
EZ-4E-2-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	46.95	

EZ-4E-2-1	Cambio unslipped	Jar	Shoulder	1	11.63
EZ-4E-2-1	Cambio unslipped	Undetermined	Body	24	317.57
EZ-4E-2-1	Encanto striated	Undetermined	Body	3	36.94
EZ-4E-2-1	Eroded unidentified	Bowl	Rim and body	3	67.38
EZ-4E-2-1	Eroded unidentified	Undetermined	Body	59	723.85
EZ-4E-2-1	Eroded unidentified	Undetermined	Body and base	1	11.87
EZ-4E-2-1	Eroded unidentified	Undetermined	Rim and body	2	83.89
EZ-4E-2-1	Eroded unidentified	Undetermined	Rim and body	4	32.58
EZ-4E-2-1	Eroded unidentified	Undetermined	Support	1	22.48
EZ-4E-2-1	Tinaja red	Open	Body	1	6.07
EZ-4E-2-2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	53.54
EZ-4E-2-2	Cambio unslipped	Jar	neck and Shoulder	1	33.64
EZ-4E-2-2	Cambio unslipped	Undetermined	Body	25	441.58
EZ-4E-2-2	Encanto striated	Undetermined	Body	5	83.69
EZ-4E-2-2	Eroded unidentified	Bowl	Rim and body	3	101.85
EZ-4E-2-2	Eroded unidentified	Open	Rim and body	2	26.26
EZ-4E-2-2	Eroded unidentified	Undetermined	Body	36	517.53
EZ-4E-2-2	Eroded unidentified	Undetermined	Body and base	2	38.50
EZ-4E-5-1	Cambio unslipped	Jar	neck and Shoulder	1	44.93
EZ-4E-5-1	Cambio unslipped	Undetermined	Body	1	7.54

EZ-4E-5-1	Eroded unidentified	Jar	neck and Shoulder	1	68.08
EZ-4E-5-1	Eroded unidentified	Undetermined	Body	3	11.36
EZ-4E-5-2	Cambio unslipped	Jar	Shoulder and body	1	20.33
EZ-4E-5-2	Cambio unslipped	Undetermined	Body	36	424.91
EZ-4E-5-2	Encanto striated	Undetermined	Body	7	104.24
EZ-4E-5-2	Eroded unidentified	Jar	Rim and neck	1	33.68
EZ-4E-5-2	Eroded unidentified	Undetermined	Body	2	16.55
EZ-4E-5-2	Eroded unidentified	Undetermined	Rim and body	2	13.28
EZ-4E-5-2	Saxche/Palmar orange polychrome	Open	Body	1	7.5
EZ-4E-5-2	Tinaja red	Jar	neck and Shoulder	1	16.16
EZ-4E-5-2	Tinaja red	Open	Body	2	19.94
EZ-4E-5-2	Tinaja red	Open	Body	2	39.59
EZ-4E-5-2	Zacatal cream polychrome	Bowl/dish	Rim and body	1	16.50
EZ-4E-6-1	Cambio unslipped	Jar	Shoulder and body	1	6.83
EZ-4E-6-1	Cambio unslipped	Undetermined	Body	3	18.93
EZ-4E-6-1	Encanto striated	Undetermined	Body	1	4.23
EZ-4E-6-1	Eroded unidentified	Undetermined	Base and body	1	10.32
EZ-4E-6-1	Tinaja red	Open	Body	2	7.61
EZ-4E-6-2	Cambio unslipped	Undetermined	Body	4	30.64

EZ-4E-6-2	Cambio unslipped	Undetermined	Body and base	1	40.03	
EZ-4E-6-2	Cambio unslipped	Undetermined	Rim and body	1	74.11	
EZ-4E-6-2	Encanto striated	Undetermined	Body	1	8.36	
EZ-4E-6-2	Eroded unidentified	Undetermined	Body	2	12.63	
EZ-4E-6-3	Cambio unslipped	Jar	Shoulder and body	3	116.56	
EZ-4E-6-3	Cambio unslipped	Open	Rim and body	1	14.53	
EZ-4E-6-3	Cambio unslipped	Undetermined	Body	6	68.55	
EZ-4E-6-3	Encanto striated	Undetermined	Body	1	3.17	
EZ-4E-6-3	Eroded unidentified	Bowl/dish	Rim and body	1	34.66	
EZ-4E-6-3	Eroded unidentified	Undetermined	Body	2	2.93	
EZ-4E-6-3	Máquina brown	Undetermined	Body	1	1.41	
EZ-4E-6-3	Pabellon molded- carved	Bowl/dish	Rim and body	1	13.3 g	EZ-4E-6-3- 003, Muestra 46
EZ-4E-6-3	Saxche/Palmar orange polychrome	Open	Body	1	7.5 g	EZ-4E-6-3- 005, Muestra 45; not analyzed
EZ-4E-6-3	Saxche/Palmar orange polychrome	Open	Body	1	8.9 g	EZ-4E-6-3- 004, Muestra 49; not analyzed
EZ-4E-6-3	Saxche/Palmar orange polychrome	Open	Body	7	27.22	

EZ-4E-6-3	Saxche/Palmar orange polychrome	Open	Rim and body	1	29.6 g	EZ-4E-6-3-002, Muestra 37
EZ-4E-6-3	Saxche/Palmar orange polychrome	Vase	Body and base	1	28.17	
EZ-4E-6-3	Tinaja red	Bowl	Rim and body	2	128.60	EZ-4E-6-3-001
EZ-4E-6-3	Tinaja red	Open	Body	5	72.75	
EZ-4E-6-3	Tinaja red	Open	Body	2	7.04	
EZ-4E-6-3	Tinaja red	Open	Body	1	12.83	
EZ-4E-6-3	Unidentified polychrome	Open	Rim and body	1	37.6 g	EZ-4E-6-3-006, Muestra 48
EZ-4E-6-3	Zacatal cream polychrome	Open	Body	1	1.61	
EZ-4E-6-4	Cambio unslipped	Undetermined	Body	4	25.27	
EZ-4E-6-4	Encanto striated	Undetermined	Body	3	41.89	
EZ-4E-6-4	Eroded unidentified	Undetermined	Body	4	93.23	
EZ-4E-6-4	Infierno black	Open	Body	1	2.32	
EZ-4E-7-1	Cambio unslipped	Undetermined	Body	4	37.99	
EZ-4E-7-1	Encanto striated	Undetermined	Body	1	18.12	
EZ-4E-7-1	Eroded polychrome, unidentified	Open	Rim and body	1	17.33	
EZ-4E-7-1	Eroded unidentified	Undetermined	Body	6	21.79	
EZ-4E-7-1	Tinaja red	Open	Body	1	4.40	
EZ-4E-7-2	Cambio unslipped	Jar	Rim, neck and Shoulder	1	166.04	

EZ-4E-7-2	Cambio unslipped	Jar	Shoulder	2	28.00	
EZ-4E-7-2	Cambio unslipped	Undetermined	Base	2	30.23	
EZ-4E-7-2	Cambio unslipped	Undetermined	Body	30	197.78	
EZ-4E-7-2	Cambio unslipped	Undetermined	Rim	1	6.39	
EZ-4E-7-2	Encanto striated	Undetermined	Body	7	86.99	
EZ-4E-7-2	Eroded unidentified	Jar	Shoulder and body	2	26.56	
EZ-4E-7-2	Eroded unidentified	Undetermined	Body	10	119.85	
EZ-4E-7-2	Eroded unidentified	Undetermined	Body and base	1	5.18	
EZ-4E-7-2	Eroded unidentified	Undetermined	Rim and body	3	13.06	
EZ-4E-7-2	Pozo unslipped	Jar	Neck and shoulder	1	7.50	
EZ-4E-7-2	Tinaja red	Open	Body	2	73.28	
EZ-4E-7-2	Tinaja red	Open	Body	3	48.90	
EZ-4E-7-2	Tinaja red	Open	Rim	1	3.04	
EZ-4E-7-2	Tinaja red	Open	Rim and body	1	2.81	
EZ-4E-7-3	Cambio unslipped	Jar	Neck and shouder	1	30.31	
EZ-4E-7-3	Cambio unslipped	Jar	Shoulder and body	1	11.59	
EZ-4E-7-3	Cambio unslipped	Undetermined	Body	1	22.78	Pierced for use as spindle whorl or weight
EZ-4E-7-3	Cambio unslipped	Undetermined	Body	17	128.67	

EZ-4E-7-3	Encanto striated	Undetermined	Body	2	34.67	
EZ-4E-7-3	Eroded unidentified	Open	Rim and body	1	19.88	
EZ-4E-7-3	Eroded unidentified	Undetermined	Body	3	15.73	
EZ-4E-7-3	Eroded unidentified	Vase	Body and base	1	23.06	
EZ-4E-7-3	Tinaja red	Bowl	Rim and body	1	176.04	EZ-4E-7-3- 001
EZ-4E-7-3	Tinaja red	Open	Body	1	11.28	
EZ-4E-7-3	Tinaja red	Open	Body	3	72.09	
EZ-4E-7-3	Tinaja red	Undetermined	Rim	1	2.09	
EZ-4E-8-1	Eroded unidentified	Undetermined	Body	1	2.55	
EZ-4E-9-1	Eroded unidentified	Undetermined	Body	2	9.25	
EZ-4E-9-1	Tinaja red	Bowl	Rim and body	1	39.33	EZ-4E-9-1- 001
EZ-4E-9-2	Eroded unidentified	Undetermined	Body	1	9.06	
EZ-4E-9-2	Unidentified red on orange bichrome	Open	Body	1	9.67	EZ-4E-9-2- 001
EZ-4E-9-3	Eroded unidentified	Undetermined	Body	1	10.75	
EZ-4E-10-2	Cambio unslipped	Undetermined	Body	2	55.37	
EZ-4E-10-2	Eroded unidentified	Bowl/dish	Rim and body	1	11.84	
EZ-4E-10-2	Eroded unidentified	Undetermined	Body	3	39.28	
EZ-4E-10-2	Tinaja red	Open	Body	1	10.30	
EZ-4E-10-2	Tinaja red	Open	Body	2	10.27	
EZ-4E-10-3	Encanto striated	Undetermined	Body	1	11.86	
EZ-4E-10-3	Tinaja red	Open	Body	1	3.06	
EZ-4E-10-4	Encanto striated	Undetermined	Body	1	11.86	

EZ-4E-10-4	Tinaja red	Open	Body	1	3.06	
EZ-4F-1-1	Cambio unslipped	Undetermined	Body	18	188.28	
EZ-4F-1-1	Cambio unslipped	Undetermined	Rim	1	23.49	
EZ-4F-1-1	Encanto striated	Undetermined	Body	8	81.12	
EZ-4F-1-1	Eroded unidentified	Jar	neck and Shoulder	1	12.49	
EZ-4F-1-1	Eroded unidentified	Undetermined	Base and Body	2	58.16	
EZ-4F-1-1	Eroded unidentified	Undetermined	Body	1	5.89	
EZ-4F-1-1	Eroded unidentified	Undetermined	Body	16	96.84	
EZ-4F-1-1	Eroded unidentified	Undetermined	Rim and body	1	2.42	
EZ-4F-1-1	Eroded unidentified	Undetermined	Rim and body	5	52.25	
EZ-4F-1-1	Eroded unidentified var. incised	Vase	Body and base	1	7.02	Basal flange
EZ-4F-1-1	Infierno black	Open	Body	2	6.55	
EZ-4F-1-1	Tinaja red	Open	Body	2	5.45	
EZ-4F-1-1	Tinaja red	Open	Body	2	8.62	
EZ-4F-1-2	Cambio unslipped	Undetermined	Body	14	95.85	
EZ-4F-1-2	Cambio unslipped	Undetermined	Rim	1	3.11	
EZ-4F-1-2	Cambio unslipped	Undetermined	Rim and body	3	34.32	
EZ-4F-1-2	Encanto striated	Undetermined	Body	2	9.04	
EZ-4F-1-2	Encanto striated	Undetermined	Body	2	17.46	
EZ-4F-1-2	Eroded unidentified	Jar	Neck and shoulder	1	12.49	
EZ-4F-1-2	Eroded unidentified	Undetermined	Body and base	2	58.16	

EZ-4F-1-2	Eroded unidentified	Undetermined	Rim and body	1	2.42	
EZ-4F-1-2	Eroded unidentified	Vase	Body and base con basal flange	1	7.03	
EZ-4F-1-2	Eroded unidentified var. incised	Undetermined	Body	1	5.89	
EZ-4F-1-2	Infierno black	Open	Body	1	2.90	
EZ-4F-1-2	Tinaja red	Open	Base	1	5.42	
EZ-4F-1-2	Tinaja red	Open	Body	1	7.07	
EZ-4F-1-2	Tinaja red	Open	Body	1	1.59	
EZ-4F-1-3	Cambio unslipped	Undetermined	Body	6	113.85	
EZ-4F-1-3	Cambio unslipped	Undetermined	Rim and body	1	21.61	
EZ-4F-1-3	Encanto striated	Undetermined	Body	4	47.82	
EZ-4F-1-3	Eroded polychrome, unidentified	Open	Rim and body	1	10.6	
EZ-4F-1-3	Eroded unidentified	Body	Open	2	6.63	Ridge
EZ-4F-1-3	Eroded unidentified	Bowl/dish	Rim, body, and base	1	13.22	
EZ-4F-1-3	Eroded unidentified	Undetermined	Base	2	59.5	
EZ-4F-1-3	Eroded unidentified	Undetermined	Body	3	13.33	
EZ-4F-1-3	Eroded unidentified	Undetermined	Body and base	1	11.41	
EZ-4F-1-3	Eroded unidentified	Undetermined	Rim	2	3.89	
EZ-4F-1-3	Eroded unidentified	Undetermined	Rim and body	1	8.62	
EZ-4F-1-3	Tinaja red	Open	Body	1	4.23	
EZ-4F-1-3	Tinaja red	Open	Body	1	5.15	

EZ-4F-1-4	Encanto striated	Undetermined	Body	1	21.19	
EZ-4F-1-4	Eroded unidentified	Undetermined	Body	4	43.57	
EZ-4F-1-4	Tinaja red	Jar	neck and Shoulder	1	25.78	
EZ-4F-1-4	Tinaja red	Open	Body	4	289.88	
EZ-4F-1-4	Tinaja red	Open	Body	2	53.68	
EZ-4F-1-4	Tinaja red	Open	Body and base	1	330.07	
EZ-4F-2-1	Cambio unslipped	Undetermined	Body	2	19.69	
EZ-4F-2-1	Chinja impressed	Bowl	Rim and body	1	59.37	EZ-4F-2-1-001
EZ-4F-2-1	El Zotz red polychrome	Plate	Body, base and partial support	1	89.6 g	EZ-4F-2-1- 002, Muestra 41; not analyzed
EZ-4F-2-1	Encanto striated	Undetermined	Body	1	1.79	
EZ-4F-2-1	Eroded unidentified	Undetermined	Body	8	29.85	
EZ-4F-2-1	Eroded unidentified	Undetermined	Rim and body	2	8.72	
EZ-4F-2-1	Pozo unslipped	Jar	Shoulder and body	1	6.09	
EZ-4F-2-1	Pozo unslipped	Undetermined	Body	3	16.47	
EZ-4F-2-1	Saxche/Palmar orange polychrome	Open	Body	2	3.39	
EZ-4F-2-2	Cambio unslipped	Undetermined	Body	14	49.07	
EZ-4F-2-2	Encanto striated	Undetermined	Body	1	1.73	
EZ-4F-2-2	Eroded unidentified	Undetermined	Body	3	14.03	
EZ-4F-2-3	Cambio unslipped	Undetermined	Body	3	28.29	

EZ-4F-2-3	Cambio unslipped	Undetermined	Rim and body	2	31.9	
EZ-4F-2-3	Payaso orange-brown	Open	Body	1	123.61	
EZ-4F-2-4	Cambio unslipped	Undetermined	Base	1	22.85	
EZ-4F-2-4	Cambio unslipped	Undetermined	Body	10	90.46	
EZ-4F-2-4	Cambio unslipped	Undetermined	Rim and body	1	35.54	
EZ-4F-2-4	Encanto striated	Undetermined	Body	2	29.22	
EZ-4F-2-4	Harina cream	Open	Body	2	11.31	
EZ-4F-2-7	Cambio unslipped	Bowl/dish	Rim and body	1	25.38	
EZ-4F-2-7	Cambio unslipped	Jar	Shoulder and body	2	48.17	
EZ-4F-2-7	Cambio unslipped	Undetermined	Body	15	87.8	
EZ-4F-2-7	Encanto striated	Undetermined	Body	2	13.79	
EZ-4F-2-7	Encanto striated	Undetermined	Body	3	14.08	
EZ-4F-2-7	Eroded polychrome, unidentified	Open	Body	2	4.89	
EZ-4F-2-7	Eroded polychrome, unidentified	Open	Rim and body	1	4.53	
EZ-4F-2-7	Eroded unidentified	Undetermined	Body	10	50.94	
EZ-4F-2-7	Infierno black	Open	Body	2	4.73	
EZ-4F-2-7	Infierno black	Open	Body	2	7.25	
EZ-4F-2-7	Saxche/Palmar orange polychrome	Open	Body	3	11.81	
EZ-4F-2-7	Tinaja red	Open	Body	2	5.83	
EZ-4F-2-7	Zacatal cream polychrome	Open	Rim	1	2.4 g	EZ-4F-2-7- 001, Muestra 65; not

						analyzed
EZ-4F-2-8	Cambio unslipped	Undetermined	Body	4	24.89	
EZ-4F-2-8	Eroded unidentified	Undetermined	Body	1	4.16	
EZ-4F-2-8	Saxche/Palmar orange polychrome	Open	Rim and body	1	10.8 g	EZ-4F-2-8-002, Muestra 64
EZ-4F-2-8	Tinaja red	Open	Rim and body	1	20.4 g	EZ-4F-2-8-001, Muestra 42, EZ0181
EZ-4F-3-1	Cambio unslipped	Undetermined	Body	5	47.57	
EZ-4F-3-1	Encanto striated	Undetermined	Body	4	25.05	
EZ-4F-3-1	Eroded polychrome, unidentified	Open	Rim and body	1	7.5 g	EZ-4F-3-1-001, Muestra 62
EZ-4F-3-1	Eroded unidentified	Undetermined	Body	3	13.54	
EZ-4F-3-2	Cambio unslipped	Undetermined	Body	3	22.17	
EZ-4F-3-2	Encanto striated	Undetermined	Body	2	19.23	
EZ-4F-3-2	Eroded unidentified	Undetermined	Rim and body	1	6.27	
EZ-4F-3-2	Tinaja red	Jar	Shoulder and body	1	7.09	
EZ-4F-3-2	Tinaja red	Open	Body	2	4.69	
EZ-4F-3-2	Tinaja red	Open	Rim and body	1	5.70	
EZ-4F-3-3	Tinaja red	Open	Body	1	2.97	
EZ-4F-3-4	Azote orange	Open	Body	1	1.65	
EZ-4F-3-4	Cambio unslipped	Undetermined	Body	1	12.09	

EZ-4F-3-4	Eroded unidentified	Undetermined	Body	1	15.67
EZ-4F-3-4	Eroded unidentified	Undetermined	Body	1	4.08
EZ-4F-3-4	Saxche/Palmar orange polychrome	Open	Body	1	1.87
EZ-4F-3-4	Tinaja red	Open	Body	1	5.37
EZ-4F-3-5	Eroded unidentified	Undetermined	Body	2	7.75
EZ-4F-3-6	Cambio unslipped	Undetermined	Body	2	27.65
EZ-4F-3-6	Máquina brown	Undetermined	Body	1	15.77
EZ-4F-3-6	Payaso orange-brown	Open	Body	2	23.67
EZ-4F-3-6	Saxche/Palmar orange polychrome	Open	Body	2	3.02
EZ-4F-3-6	Tinaja red	Open	Body	1	7.59
EZ-4F-3-6	Tinaja red	Open	Body	6	54.02
EZ-4F-5-1	Cambio unslipped	Jar	Shoulder and body	1	11.91
EZ-4F-5-1	Cambio unslipped	Undetermined	Body	6	33.18
EZ-4F-5-1	Eroded unidentified	Undetermined	Body	2	5.30
EZ-4F-5-1	Saxche/Palmar orange polychrome	Open	Body	2	7.59
EZ-4F-5-2	Cambio unslipped	Undetermined	Body	3	15.12
EZ-4F-5-2	Encanto striated	Undetermined	Body	1	3.32
EZ-4F-5-2	Eroded unidentified	Undetermined	Body	4	13.55
EZ-4F-5-2	Infierno black	Open	Body	1	8.83
EZ-4F-5-3	Cambio unslipped	Jar	Shoulder and body	1	39.69
EZ-4F-5-3	Cambio unslipped	Undetermined	Body	3	13.91

EZ-4F-5-3	Eroded unidentified	Undetermined	Body	1	14.50	
EZ-4F-5-4	Cambio unslipped	Undetermined	Body	1	15.15	
EZ-4F-5-4	Eroded unidentified	Undetermined	Body	4	12.86	
EZ-4F-5-4	Tinaja red	Open	Body	1	5.48	
EZ-4F-5-4	Tinaja red	Open	Body	1	3.64	
EZ-4F-5-5	Cambio unslipped	Jar	Rim, neck and Shoulder	1	23.83	
EZ-4F-5-5	Cambio unslipped	Jar	Shoulder and body	1	4.38	
EZ-4F-5-5	Cambio unslipped	Undetermined	Body	10	74.57	
EZ-4F-5-5	Cambio unslipped	Undetermined	Body and base	1	10.70	
EZ-4F-5-5	Encanto striated	Undetermined	Body	5	47.02	
EZ-4F-5-5	Eroded unidentified	Open	Rim and body	1	2.47	
EZ-4F-5-5	Eroded unidentified	Undetermined	Body	10	26.61	
EZ-4F-5-5	Infierno black	Open	Base	1	13.26	
EZ-4F-5-5	Saxche/Palmar orange polychrome	Open	Body	3	21.45	
EZ-4F-5-5	Saxche/Palmar orange polychrome	Open	Rim and body	1	3.9 g	EZ-4F-5-5- 001, Muestra 55
EZ-4F-5-5	Tinaja red	Open	Body	1	7.35	
EZ-4F-5-5	Zacatal cream polychrome	Open	Body	2	6.5	
EZ-4F-5-6	Cambio unslipped	Undetermined	Body	5	12.62	
EZ-4F-5-6	Encanto striated	Undetermined	Body	1	2.47	

EZ-4F-5-6	Tinaja red	Open	Body	2	4.12	
EZ-4F-5-7	Cambio unslipped	Undetermined	Body	1	4.91	
EZ-4F-5-7	Encanto striated	Undetermined	Body	1	22.33	
EZ-4F-5-7	Tinaja red	Open	Body	1	2.68	
EZ-4F-6-2	Saxche/Palmar orange polychrome	Open	Body	1	2.48	
EZ-4F-6-3	Eroded unidentified	Undetermined	Body	1	1.69	
EZ-4F-6-3	Pozo unslipped	Undetermined	Body	1	2.1	
EZ-4F-6-4	Cambio unslipped	Undetermined	Body	1	17.89	
EZ-4F-6-4	Tinaja red	Open	Body	1	17.0 g	EZ-4F-6-4-001, Muestra 56; not analyzed
EZ-4F-7-1	Cambio unslipped	Undetermined	Body	2	10.92	
EZ-4F-7-1	Tinaja red	Open	Body	1	8.65	
EZ-4F-7-2	Cambio unslipped	Undetermined	Body	3	16.71	
EZ-4F-7-2	Eroded polychrome, unidentified	Open	Body	1	3.93	Basal flange
EZ-4F-7-2	Eroded polychrome, unidentified	Open	Rim and neck	1	10.5 g	EZ-4F-7-2-001, Muestra 63
EZ-4F-7-2	Eroded unidentified	Undetermined	Body	1	7.22	
EZ-4F-7-2	Eroded unidentified	Undetermined	Body and Support	1	6.82	
EZ-4F-7-2	Tinaja red	Open	Body	1	2.62	
EZ-4F-8-1	Cambio group	Jar	Rim and neck	1	21.38	

	(Cambio unslipped or Encanto striated)					
EZ-4F-9-1	Cambio unslipped	Undetermined	Body	1	3.96	Pierced for use as spindle whorl or weight
EZ-4F-9-1	Cambio unslipped	Undetermined	Body	1	15.44	
EZ-4F-9-1	Encanto striated	Undetermined	Body	1	14.05	
EZ-4F-9-1	Eroded unidentified	Undetermined	Body	2	20.36	
EZ-4F-9-1	Pozo unslipped	Jar	Rim, neck and shoulder	1	8.59	EZ-4F-9-1-001
EZ-4F-9-1	Pozo unslipped	Undetermined	Body	1	5.97	
EZ-4F-9-1	Tinaja red	Open	Body	1	19.81	
EZ-4F-9-2	Azote orange	Open	Body	1	5.15	
EZ-4F-9-2	Cambio unslipped	Undetermined	Body	3	27.13	
EZ-4F-9-2	Encanto striated	Undetermined	Body	1	15.60	
EZ-4F-9-2	Eroded unidentified	Undetermined	Body	5	30.15	
EZ-4F-9-2	Tinaja red	Open	Body	2	12.30	
EZ-4F-10-1	Cambio unslipped	Undetermined	Body	2	21.1	
EZ-4F-10-1	Eroded unidentified	Undetermined	Body	1	3.14	
EZ-4F-10-1	Talla incised	Open	Rim and body	1	12.2 g	EZ-4F-10-1- 001, Muestra 44
EZ-4F-10-2	Cambio unslipped	Undetermined	Body	12	81.98	
EZ-4F-10-2	Eroded polychrome, unidentified	Open	Body	1	5.2 g	EZ-4F-10-2- 001, Muestra

58; not
analyzed

EZ-4F-10-2	Eroded polychrome, unidentified	Open	Body	1	3.83	
EZ-4F-10-2	Eroded unidentified	Bowl	Rim and body	1	106.31	
EZ-4F-10-2	Eroded unidentified	Undetermined	Body	4	14.30	
EZ-4F-10-3	Cambio unslipped	Jar	Shoulder and body	2	39.36	
EZ-4F-10-3	Cambio unslipped	Undetermined	Body	23	196.87	
EZ-4F-10-3	Cambio unslipped	Undetermined	Body and base	1	4.54	
EZ-4F-10-3	Encanto striated	Undetermined	Body	2	15.06	
EZ-4F-10-3	Eroded unidentified	Undetermined	Body	2	8.09	
EZ-4F-10-3	Eroded unidentified	Undetermined	Body and base	1	4.86	basal flange
EZ-4F-10-3	Eroded unidentified	Undetermined	Rim and body	1	3.40	
EZ-4F-10-3	Tinaja red	Open	Body	6	31.68	
EZ-4F-10-3	Tinaja red	Open	Body	4	10.72	
EZ-4F-10-4	Cambio unslipped	Undetermined	Rim and body	1	32.69	
EZ-4F-10-4	Eroded unidentified	Undetermined	Body	2	3.57	
EZ-4F-10-4	Tinaja red	Jar	Shoulder and body	1	7.35	
EZ-4F-11-1	Cambio unslipped	Jar	Shoulder and body	1	17.53	
EZ-4F-11-1	Eroded polychrome, unidentified	Open	Rim and body	1	6.18	

EZ-4F-11-1	Eroded unidentified	Undetermined	Body	1	20.51	
EZ-4F-11-1	Eroded unidentified	Undetermined	Rim and body	1	2.33	
EZ-4F-11-2	Cambio unslipped	Undetermined	Body	8	30.06	
EZ-4F-11-2	Eroded unidentified	Jar	Rim and neck	1	27.65	
EZ-4F-11-2	Eroded unidentified	Undetermined	Body	3	44.56	
EZ-4F-11-2	Saxche/Palmar orange polychrome	Open	Body	1	2.09	
EZ-4F-11-3	Cambio unslipped	Jar	Shoulder and body	1	5.46	
EZ-4F-11-3	Cambio unslipped	Undetermined	Body	3	29.99	
EZ-4F-11-3	Eroded polychrome, unidentified	Open	Body	2	8.15	
EZ-4F-11-3	Eroded unidentified	Undetermined	Body	1	6.62	
EZ-4F-11-3	Payaso orange-brown	Open	Body	1	11.64	
EZ-4F-11-3	Tinaja red	Open	Body	2	19.75	
EZ-4F-11-3	Tinaja red	Open	Rim and body	1	8.62	
EZ-4F-11-4	Augustine red	Open	Body	1	46.5 g	EZ-4F-11-4- 003, Muestra 60; not analyzed
EZ-4F-11-4	Augustine red	Vase	Rim, neck, shoulder, and body	1	850 g	EZ-4F-11-4- 004
EZ-4F-11-4	Azote orange	Open	Body	1	6.16	
EZ-4F-11-4	Cambio unslipped	Jar	Shoulder	1	10.14	
EZ-4F-11-4	Cambio unslipped	Undetermined	Body	4	78.39	

EZ-4F-11-4	Cambio unslipped var. incised	Bowl/dish	Rim and body	1	63.16	EZ-4F-11-4- 001
EZ-4F-11-4	Encanto striated	Undetermined	Body	2	22.62	
EZ-4F-11-4	Eroded unidentified	Undetermined	Body	8	75.89	
EZ-4F-11-4	Eroded unidentified	Undetermined	Body and base	1	4.64	
EZ-4F-11-4	Harina cream	Vase	Body	1	36.36	
EZ-4F-11-4	Tinaja red	Open	Body	2	22.63	
EZ-4F-11-4	Tinaja red	Open	Body	1	5.35	
EZ-4F-11-4	Tinaja red	Open	Body	23	464.59	
EZ-4F-11-4	Tinaja red	Open	Body and base	1	207.91	
EZ-4F-11-4	Tolla channeled?	Vase	Body and base	1	35.3 g	EZ-4F-11-4- 002, Muestra 61; not analyzed
EZ-4F-11-5	Cambio unslipped	Undetermined	Body	7	52.25	
EZ-4F-11-5	Cambio unslipped	Undetermined	Rim and body	2	18.77	
EZ-4F-11-5	Encanto striated	Undetermined	Body	1	12.59	
EZ-4F-11-5	Eroded unidentified	Undetermined	Body	1	4.32	
EZ-4F-11-5	Tinaja red	Open	Body	10	52.08	
EZ-4F-11-6	Cambio unslipped	Undetermined	Body	3	22.42	
EZ-4F-11-7	Augustine red	Open	Body	1	6.72	
EZ-4F-11-7	Cambio unslipped	Undetermined	Body	9	53.11	
EZ-4F-11-7	Cambio unslipped	Undetermined	Rim	1	4.47	
EZ-4F-11-7	Encanto striated	Undetermined	Body	2	17.24	

EZ-4F-11-7	Eroded polychrome, unidentified	Open	Body	1	5.44	
EZ-4F-11-7	Infierno black	Open	Body	1	8.44	
EZ-4F-11-7	Infierno black	Open	Body	1	3.08	
EZ-4F-11-7	Máquina brown	Open	Body	1	3.47	
EZ-4F-11-7	Saxche/Palmar orange polychrome	Open	Rim and body	1	54.3 g	EZ-4F-11-7- 001, Muestra 57
EZ-4F-11-7	Tinaja red	Open	Body	1	6.27	
EZ-4F-12-1	Tinaja red	Jar	Shoulder and body	1	39.68	
EZ-4F-12-2	Tinaja red	Open	Body	1	6.44	
EZ-4F-12-2	Tinaja red	Open	Rim and body	1	25.84	
EZ-4F-15-1	Cambio unslipped	Undetermined	Body	7	95.21	
EZ-4F-15-1	Encanto striated	Undetermined	Body	3	25.19	
EZ-4F-15-1	Eroded unidentified	Jar	Shoulder	1	13.07	
EZ-4F-15-1	Eroded unidentified	Undetermined	Body	1	5.59	Basal flange
EZ-4F-15-1	Eroded unidentified	Undetermined	Body	5	49.50	
EZ-4F-15-1	Eroded unidentified	Undetermined	Rim and body	2	10.15	
EZ-4F-15-1	Máquina brown	Open	Body	1	5.68	
EZ-4F-15-1	Tinaja red	Open	Body	1	3.37	
EZ-4F-15-1	Tinaja red	Open	Body	7	15.60	
EZ-4F-15-1	Tinaja red	Open	Rim and body	1	3.14	
EZ-4G-1-1	Cambio unslipped	Undetermined	Body	7	45.67	
EZ-4G-1-1	Cambio unslipped	Undetermined	Rim and body	1	20.02	
EZ-4G-1-1	Encanto striated	Undetermined	Body	2	14.12	

EZ-4G-1-1	Eroded unidentified	Undetermined	Body	26	193.90	
EZ-4G-1-1	Eroded unidentified var. incised	Undetermined	Rim and body	1	11.0	
EZ-4G-1-1	Máquina brown	Open	Body	1	1.94	
EZ-4G-1-1	Tinaja red	Open	Body	1	7.49	
EZ-4G-1-1	Tinaja red	Open	Body	1	3.55	
EZ-4G-1-2	Cambio unslipped	Undetermined	Body	25	212.52	
EZ-4G-1-2	Cambio unslipped	Undetermined	Body and base	1	10.95	
EZ-4G-1-2	Canoa incised	Open	Rim and body	1	2.41	EZ-4G-1-2- 001; too small for modal analysis
EZ-4G-1-2	Encanto striated	Undetermined	Body	2	19.44	
EZ-4G-1-2	Eroded unidentified	Undetermined	Body	7	41.45	
EZ-4G-1-2	Eroded unidentified	Undetermined	Rim and body	1	1.94	
EZ-4G-1-2	Tinaja red	Open	Body	3	34.86	
EZ-4G-1-3	Cambio unslipped	Undetermined	Body	6	41.84	
EZ-4G-1-3	Encanto striated	Undetermined	Body	3	37.70	
EZ-4G-1-3	Eroded polychrome, unidentified	Open	Body	1	4.39	
EZ-4G-1-3	Tinaja red	Open	Body	1	1.97	
EZ-4G-1-3	Tinaja red	Open	Body	1	7.43	
EZ-4G-1-4	Cambio unslipped	Undetermined	Body	6	53.77	
EZ-4G-1-4	Encanto striated	Undetermined	Body	3	28.64	
EZ-4G-1-4	Eroded polychrome,	Open	Body	1	5.43	

	unidentified					
EZ-4G-1-4	Eroded unidentified	Jar	Shoulder and body	1	11.05	
EZ-4G-1-4	Eroded unidentified	Undetermined	Body	1	3.93	
EZ-4G-1-4	Tinaja red	Open	Body	1	2.52	
EZ-4G-1-5	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	39.43	
EZ-4G-1-5	Cambio unslipped	Jar	Rim, neck and Shoulder	1	59.69	EZ-4G-1-5- 004
EZ-4G-1-5	Cambio unslipped	Undetermined	Body	1	68.62	
EZ-4G-1-5	Eroded polychrome, unidentified	Open	Body	1	22.90	
EZ-4G-1-5	Eroded unidentified	Undetermined	Body	5	19.90	
EZ-4G-1-5	Máquina brown	Plate	Rim, Body, base and Supports	1		EZ-4G-5-1- 003; IDAEH complete vessel 17.7.88.24
EZ-4G-1-5	Payaso orange-brown	Open	Body	1	7.53	
EZ-4G-1-5	Saxche/Palmar orange polychrome	Open	Body	1	2.11	
EZ-4G-1-5	Tinaja red	Bowl/dish	Rim, body, and base	1	298.32 g	EZ-4G-1-5- 001; IDAEH complete vessel 17.7.88.23

EZ-4G-1-5	Unidentified polychrome	Vase	Rim, Body, base and Supports	1		EZ-4G-1-5-002; IDAEH complete vessel 17.7.88.25
EZ-4G-1-6	Cambio unslipped	Undetermined	Body	1	14.81	
EZ-4G-1-6	Eroded unidentified	Open	Body	1	4.24	
EZ-4G-1-6	Eroded unidentified	Undetermined	Support	1	8.6	
EZ-4G-1-6	Infierno black	Open	Body	1	6.3	
EZ-4G-2-1	Azote orange	Open	Body	2	8.67	
EZ-4G-2-1	Cambio unslipped	Undetermined	Body	4	55.97	
EZ-4G-2-1	Encanto striated	Undetermined	Body	4	41.11	
EZ-4G-2-1	Eroded unidentified	Undetermined	Body	5	17.68	
EZ-4G-2-1	Eroded unidentified	Undetermined	Body and base	1	71.26	
EZ-4G-2-1	Eroded unidentified	Undetermined	Rim	1	5.40	
EZ-4G-2-2	Eroded unidentified	Undetermined	Body	1	5.16	
EZ-4G-2-2	Tinaja red	Plate	Rim, body, and base	1	152.64 g	EZ-2G-6-2-001; to IDAEH type collection
EZ-4G-10-1	Cambio unslipped	Undetermined	Body	4	87.20	
EZ-4G-10-1	Encanto striated	Undetermined	Body	2	19.94	
EZ-4G-10-1	Eroded unidentified	Undetermined	Body	5	83.35	

EZ-4G-13- 1	Cambio unslipped	Undetermined	Body	1	11.48
EZ-4G-13- 1	Eroded unidentified	Undetermined	Body	2	8.88
EZ-4G-13- 1	Eroded unidentified	Undetermined	Rim and body	1	4.59
EZ-4G-13- 2	Eroded unidentified	Undetermined	Body	1	13.04
EZ-4G-13- 2	Tinaja red	Open	Body	1	35.15
EZ-4G-15- 2	Azote orange	Undetermined	Body	1	2.26
EZ-4G-15- 2	Cambio unslipped	Undetermined	Body	3	49.48
EZ-4G-15- 2	Encanto striated	Undetermined	Body	1	28.43
EZ-4G-15- 2	Eroded unidentified	Undetermined	Body	1	5.40
EZ-4G-15- 2	Harina cream	Open	Body	1	5.92
EZ-4G-15- 2	Payaso orange-brown	Open	Body	1	6.03
EZ-4G-15- 3	Cambio unslipped	Jar	Rim, neck and Shoulder	1	67.02
EZ-4G-15- 3	Cambio unslipped	Undetermined	Body	3	87.84
EZ-4G-15- 3	Cambio unslipped	Undetermined	Rim	1	12.06

EZ-4G-15-3	Encanto striated	Undetermined	Body	1	26.60	
EZ-4G-15-3	Eroded unidentified	Undetermined	Body and base	1	144.02	
EZ-4G-15-3	Eroded unidentified	Undetermined	Rim and body	2	12.11	
EZ-4G-15-3	Payaso orange-brown	Jar	Rim and neck	1	23.14 g	EZ-4G-15-3-001, CR-3
EZ-4G-15-3	Payaso orange-brown	Jar	Rim and neck	1	23.14	
EZ-4G-15-3	Tinaja red	Open	Body	1	32.87	
EZ-4G-15-3	Tinaja red	Open	Body	1	3.91	
EZ-4G-16-1	Eroded unidentified	Undetermined	Body	1	4.09	
EZ-4G-16-3	Eroded unidentified	Undetermined	Body	1	9.20	
EZ-4G-17-1	Cambio unslipped	Undetermined	Body	2	15.94	
EZ-4G-17-1	Eroded unidentified	Undetermined	Body	1	20.95	
EZ-4G-17-1	Eroded unidentified	Undetermined	Rim and body	1	6.17	
EZ-4G-17-2	Cambio unslipped	Undetermined	Body	1	21.16	
EZ-4G-17-2	Encanto striated	Undetermined	Body	1	15.47	

EZ-4G-17-2	Eroded unidentified	Undetermined	Body	4	41.88	
EZ-4G-17-2	Tinaja red	Undetermined	Body	1	3.72	
EZ-4G-17-2	Encanto striated	Jar	Shoulder and body	1	133.35	
EZ-4G-18-2	Eroded unidentified	Undetermined	Body	2	26.84	
EZ-4H-1-1	Cambio unslipped	Undetermined	Unknown	1		
EZ-4H-1-1	Encanto striated	Undetermined	Unknown	2		
EZ-4H-1-1	Eroded unidentified	Undetermined	Unknown	5		
EZ-4H-1-1	Tinaja red	Undetermined	Unknown	1		
EZ-4H-1-2	Cambio unslipped	Undetermined	Unknown	1		
EZ-4H-1-2	Encanto striated	Undetermined	Unknown	2		
EZ-4H-1-2	Eroded unidentified	Undetermined	Unknown	5		
EZ-4H-1-2	Tinaja red	Undetermined	Unknown	1		
EZ-4H-1-3	Eroded unidentified	Undetermined	Body	3	17.19 g	
EZ-4H-2-1	Augustine red	Open	Body	3	79.31 g	
EZ-4H-2-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	22.39 g	EZ-4H-2-1-003
EZ-4H-2-1	Cambio unslipped	Jar	Rim, neck and Shoulder	1	120.97 g	EZ-4H-2-1-002
EZ-4H-2-1	Cambio unslipped	Jar	Shoulder	1	2.65 g	
EZ-4H-2-1	Cambio unslipped	Undetermined	Base and body	1	29.27 g	

EZ-4H-2-1	Cambio unslipped	Undetermined	Body	26	397.44 g	
EZ-4H-2-1	Encanto striated	Undetermined	Body	29	378.08 g	
EZ-4H-2-1	Eroded unidentified	Plate?	Base and Support	1	15.55 g	
EZ-4H-2-1	Eroded unidentified	Undetermined	Body	6	22.26 g	
EZ-4H-2-1	Payaso orange-brown	Bowl	Rim and body	1	105.08 g	EZ-4H-2-1-001
EZ-4H-2-1	Tinaja red	Open	Body	1	6.36 g	
EZ-4H-2-1	Tinaja red	Open	Body	4	45.51 g	
EZ-4H-2-2	Augustine red	Bowl/dish	Rim and body	1	17.59 g	EZ-4H-2-2-110
EZ-4H-2-2	Augustine red	Jar	Rim, neck, shoulder and body	1	209.97 g	EZ-4H-2-2-207, Muestra 3
EZ-4H-2-2	Augustine red	Open	Body	5	31.29 g	
EZ-4H-2-2	Augustine red	Open	Body	22	249.54 g	
EZ-4H-2-2	Augustine red	Open	Body and base	1	16.86 g	
EZ-4H-2-2	Augustine red	Undetermined	Rim	1	2.29 g	
EZ-4H-2-2	Azote orange	Drum	Body and base	1	31.21 g	EZ-4H-2-2-107
EZ-4H-2-2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	147.1 g	EZ-4H-2-2-200, Muestra 2, EZ0184

EZ-4H-2-2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	62.8 g	EZ-4H-2-2- 202, Muestra 30, EZ0174
EZ-4H-2-2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	36	1305.8 1 g	EZ-4H-2-2- 047, 055, 085, 141, 142, 143, 144, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 157, 159, 160, 161 (11 sherds, not modally analyzed), 163, 169
EZ-4H-2-2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	10.21 g	EZ-4H-2-2- 177; too small for modal analysis
EZ-4H-2-2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim, neck and Shoulder	21	3249.5 1 g	EZ-4H-2-2- 045, 046, 048, 049, 050, 051, 052, 053, 054, 164
EZ-4H-2-2	Cambio unslipped	Jar	neck and Shoulder	10	226.67 g	
EZ-4H-2-2	Cambio unslipped	Jar	Rim, neck and Shoulder	4	1325.3 8 g	EZ-4H-2-2- 180, 182, 183,

EZ-4H-2-2	Cambio unslipped	Undetermined	Base	1	96.64 g	
EZ-4H-2-2	Cambio unslipped	Undetermined	Body	14	113.76 g	
EZ-4H-2-2	Cambio unslipped	Undetermined	Body	701	11442.79 g	
EZ-4H-2-2	Cambio unslipped	Undetermined	Body and base	16	782.00 g	
EZ-4H-2-2	Carmelita incised	Bowl/dish	Rim, body, and base	3	46.43 g	EZ-4H-2-2-111; two rim and body, one body and base, all from the same vessel, but no fits
EZ-4H-2-2	Carmelita incised	Open	Body	3	19.93 g	Photographed; not modally analyzed in absence of rim
EZ-4H-2-2	Carmelita incised	Open	Rim	1	4.35 g	EZ-4H-2-2-134; too small for modal analysis
EZ-4H-2-2	Carmelita incised	Open	Rim	1	4.35 g	Photographed; not modally analyzed in absence of rim

EZ-4H-2-2	Carmelita incised	Undetermined	Body	1	1.57 g	EZ-4H-2-2-129; chevron or herringbone pattern
EZ-4H-2-2	Chinja impressed	Bowl	Rim and body	8	459.95 g	EZ-4H-2-2-002, 003, 007, 009, 011, 012, 034, 078
EZ-4H-2-2	Chaquiste impressed	Jar	Rim and neck	1	33.73 g	EZ-4H-2-2-136
EZ-4H-2-2	Chilar channeled	Open	Body	3	21.44 g	
EZ-4H-2-2	Chilar channeled?	Vase	Rim and body	1	13.0 g	EZ-4H-2-2-212, Muestra 9
EZ-4H-2-2	Chinja impressed	Bowl	Rim and body	1	97.25 g	EZ-4H-2-2-190
EZ-4H-2-2	Chinja impressed	Bowl/dish	Rim and body	1	48.9 g	EZ-4H-2-2-199, Muestra 11
EZ-4H-2-2	Chinja impressed	Bowl/dish	Rim and body	1	35.9 g	EZ-4H-2-2-193, CR-80
EZ-4H-2-2	Chinja impressed	Jar	Rim and body	1	111.1 g	EZ-4H-2-2-204, Muestra 5
EZ-4H-2-2	Corozal incised	Bowl	Rim and body	2	218.23 g	EZ-4H-2-2-186, 187
EZ-4H-2-2	Corozal incised	Open	Body	1	9.52 g	Oreja; EZ-4H-2-2-139
EZ-4H-2-2	Encanto striated	Jar	Rim, neck and Shoulder	2	356.69 g	EZ-4H-2-2-179, 181

EZ-4H-2-2	Encanto striated	Jar	Shoulder and body	3	55.84 g	EZ-4H-2-2- 173; not modally analyzed for lack of rim
EZ-4H-2-2	Encanto striated	Jar	Shoulder and body	7	123.48 g	
EZ-4H-2-2	Encanto striated	Jar	Shoulder and body	42	3884.3 5 g	
EZ-4H-2-2	Encanto striated var. impressed	Jar	Shoulder and body	3	267.95 g	EZ-4H-2-2- 172; calcite and a little sand; only modally analyzed on paper for lack of a rim
EZ-4H-2-2	Eroded polychrome, unidentified	Open	Base and Support	3	24.07 g	Badly eroded and broken; not photographed
EZ-4H-2-2	Eroded polychrome, unidentified	Open	Rim	3	10.60 g	EZ-4H-2-2- 108; too small for modal analysis
EZ-4H-2-2	Eroded polychrome, unidentified	Open	Rim	3	10.67 g	EZ-4H-2-2- 133; not modally

						analyzed
EZ-4H-2-2	Eroded polychrome, unidentified	Open	Rim and body	8	118.16 g	EZ-4H-2-2- 088, 089, 090, 091, 098, 099, 105, 106
EZ-4H-2-2	Eroded polychrome, unidentified	Tambor?	Body	2	73.2 g	EZ-4H-2-2- 215, Muestra 67; not analyzed
EZ-4H-2-2	Eroded polychrome, unidentified	Vase	Rim and body	2	22.32 g	EZ-4H-2-2- 103, 104
EZ-4H-2-2	Eroded polychrome, unidentified var. channeled	Bowl/dish	Rim, body, and base	2	57.86 g	EZ-4H-2-2- 112
EZ-4H-2-2	Eroded unidentified	Bowl	Rim and body	2	134.40 g	EZ-4H-2-2- 174, 175
EZ-4H-2-2	Eroded unidentified	Bowl/dish	Rim, body, and base	1	422.92 g	EZ-4H-2-2- 135
EZ-4H-2-2	Eroded unidentified	Jar	Rim and neck	1	14.82 g	EZ-4H-2-2- 170
EZ-4H-2-2	Eroded unidentified	Jar	Rim, neck and Shoulder	1	22.8 g	EZ-4H-2-2- 201, Muestra 13, EZ0185
EZ-4H-2-2	Eroded unidentified	Miniature vessel; snuff bottle?	Rim, body, and base	1	33.07 g	Handle; EZ- 4H-2-2-138
EZ-4H-2-2	Eroded unidentified	Undetermined	Solid handle	1	6.37 g	EZ-4H-2-2- 140; not

						modally analyzed, but ash tempered
EZ-4H-2-2	Eroded unidentified	Undetermined	Base	1	8.44 g	
EZ-4H-2-2	Eroded unidentified	Undetermined	Base	1	208.64 g	EZ-4H-2-2- 189; 3 holes drilled in wall above base
EZ-4H-2-2	Eroded unidentified	Undetermined	Base	3	24.67 g	
EZ-4H-2-2	Eroded unidentified	Undetermined	Base and Support	2	14.24 g	
EZ-4H-2-2	Eroded unidentified	Undetermined	Body	5	13.90 g	
EZ-4H-2-2	Eroded unidentified	Undetermined	Body	1	18.64 g	EZ-4H-2-2- 176; pierced
EZ-4H-2-2	Eroded unidentified	Undetermined	Body	324	2873.2 8 g	
EZ-4H-2-2	Eroded unidentified	Undetermined	Body and base	17	839.83 g	
EZ-4H-2-2	Eroded unidentified	Undetermined	Rim and body	1	10.51 g	EZ-4H-2-2- 171
EZ-4H-2-2	Eroded unidentified	Undetermined	Rim and body	16	120.58 g	
EZ-4H-2-2	Eroded unidentified	Undetermined	Support	1	4.67 g	EZ-4H-2-2- 137; not modally analyzed; pierced

EZ-4H-2-2	Eroded unidentified	Undetermined	Support	6	53.38 g	
EZ-4H-2-2	Infierno black	Bowl/dish	Rim, body, and base	1	40.6 g	EZ-4H-2-2- 197, Muestra 6
EZ-4H-2-2	Infierno black	Bowl/dish	Rim, body, and base	1	147.3 g	EZ-4H-2-2- 198, Muestra 17, EZ0187
EZ-4H-2-2	Infierno black	Dish	Rim, body, and base	1	93.52 g	EZ-4H-2-2- 035
EZ-4H-2-2	Infierno black	Jar	Rim and body	1	100.6 g	EZ-4H-2-2- 203, Muestra 38
EZ-4H-2-2	Infierno black	Open	Base	7	113.07 g	
EZ-4H-2-2	Infierno black	Open	Body	18	128.88 g	
EZ-4H-2-2	Infierno black	Open	Body	1	2.25 g	EZ-4H-2-2- 132; pierced
EZ-4H-2-2	Infierno black	Open	Body	23	326.50 g	
EZ-4H-2-2	Infierno black	Open	Body and base	2	53.41 g	
EZ-4H-2-2	Infierno black	Open	Rim and body	3	86.92 g	EZ-4H-2-2- 069, 071, 086
EZ-4H-2-2	Infierno black	Plate	Body, base and Support	1	9.79 g	
EZ-4H-2-2	Infierno black	Plate (tripod)	Base	1	211.03 g	EZ-4H-2-2- 109; not modally

						analyzed in absence of rim
EZ-4H-2-2	Infierno black	Undetermined	Body	1	24.6 g	EZ-4H-2-2- 220, Muestra 26
EZ-4H-2-2	Infierno black	Undetermined	Rim	2	10.16 g	
EZ-4H-2-2	Infierno black	Vase	Body and base	2	105.22 g	Photographed; not modally analyzed in absence of rim
EZ-4H-2-2	Infierno black	Vase	Rim and body	1	43.07 g	EZ-4H-2-2- 042
EZ-4H-2-2	Máquina brown	Bowl	Rim and body	3	306.33 g	EZ-4H-004, 005
EZ-4H-2-2	Máquina brown	Bowl	Rim and body	1	140.60 g	EZ-4H-2-2- 185
EZ-4H-2-2	Máquina brown	Bowl	Rim and body	1	63.62 g	EZ-4H-2-2- 191; to IDAEH type collection
EZ-4H-2-2	Máquina brown	Plate	Rim and body	1	33.25 g	EZ-4H-2-2- 094
EZ-4H-2-2	Pabellon molded- carved	Open	Body	1	5.7 g	EZ-4H-2-2- 216, Muestra 25; not analyzed
EZ-4H-2-2	Pabellon molded- carved	Open	Body	1	3.43 g	EZ-4H-2-2- 219, CR-10;

						not analyzed
EZ-4H-2-2	Paixban polychrome	Open	Rim and body	1	2.55 g	EZ-4H-2-2-092; too small for modal analysis
EZ-4H-2-2	Paxcaman red	Dish	Rim and body	2	30.44 g	EZ-4H-2-2-061, 063
EZ-4H-2-2	Paxcaman red	Dish(?)	Rim and body	1	7.63 g	EZ-4H-2-2-067
EZ-4H-2-2	Paxcaman red	Open	Base and Support	1	56.4 g	EZ-4H-2-2-224, EZ0186, Muestra 66
EZ-4H-2-2	Paxcaman red	Open	Body	2	5.07 g	
EZ-4H-2-2	Paxcaman red	Open	Body	16	136.77 g	
EZ-4H-2-2	Paxcaman red	Open	Body	15	90.22 g	
EZ-4H-2-2	Paxcaman red	Open	Rim and body	1	6.32 g	EZ-4H-2-2-066; bolsa 2
EZ-4H-2-2	Paxcaman red	Open	Rim and body	1	20.56 g	EZ-4H-2-2-102
EZ-4H-2-2	Paxcaman red	Plate	Base and Support	1	66.29 g	EZ-4H-2-2-217, Muestra 7; not analyzed
EZ-4H-2-2	Paxcaman red	Plate	Rim, body, and base	1	29.4 g	EZ-4H-2-2-228, Muestra 8
EZ-4H-2-2	Paxcaman red	Plate	Support	1	50.04 g	EZ-4H-2-2-230, Muestra 1
EZ-4H-2-2	Paxcaman red	Plate?	Support	1	27.75 g	EZ-4H-2-2-

						079
EZ-4H-2-2	Paxcaman red	Plate?	Support	1	39.48 g	EZ-4H-2-2-080
EZ-4H-2-2	Paxcaman red	Undetermined	Body and base	1	17.02 g	
EZ-4H-2-2	Payaso orange-brown	Jar	Rim and neck	1	41.98 g	EZ-4H-2-2-118
EZ-4H-2-2	Payaso orange-brown	Jar	Shoulder and body	2	39.14 g	
EZ-4H-2-2	Payaso orange-brown	Open	Body	3	38.08 g	
EZ-4H-2-2	Payaso orange-brown	Open	Body	13	640.20 g	
EZ-4H-2-2	Pozo unslipped	Undetermined	Body	27	89.47 g	
EZ-4H-2-2	Sahcaba molded-carved	Vase	Body	1	11.1 g	EZ-4H-2-2-211, Muestra 18, CR-5; not analyzed, but belongs to the same Sahcaba molded-carved vessel as other sherds in the same lot
EZ-4H-2-2	Sahcaba molded-carved	Vase	Body	1	85.5 g	EZ-4H-2-2-229, Muestra 16; same as EZ-4H-3-3-037

EZ-4H-2-2	Sahcaba molded-carved	Vase	Body	1	37.2 g	EZ-4H-3-3-037, CR-4, same as EZ-4H-2-2-229
EZ-4H-2-2	Saxche/Palmar orange polychrome	Bowl/dish	Rim, body, and base	1	54.1 g	EZ-4H-2-2-209, Muestra 36
EZ-4H-2-2	Saxche/Palmar orange polychrome	Bowl/dish	Rim, body, and base	1	71.8 g	EZ-4H-2-2-194, Muestra 12
EZ-4H-2-2	Saxche/Palmar orange polychrome	Open	Body	1	4.9 g	EZ-4H-2-2-227, Muestra 35
EZ-4H-2-2	Saxche/Palmar orange polychrome	Open	Rim and body	1	55.7 g	EZ-4H-2-2-206, Muestra 28
EZ-4H-2-2	Saxche/Palmar orange polychrome	Open	Rim and body	1	22.2 g	EZ-4H-2-2-210, Muestra 4, EZ0175
EZ-4H-2-2	Saxche/Palmar orange polychrome	Open	Rim and body	4	111.97 g	EZ-4H-2-2-096, 097, 100, 101
EZ-4H-2-2	Saxche/Palmar orange polychrome	Plate	Rim, body, and base	1	69.1 g	EZ-4H-2-2-196, Muestra 10
EZ-4H-2-2	Saxche/Palmar orange polychrome	Plate	Rim, body, and base	1	46.0 g	EZ-4H-2-2-226, Muestra 34

EZ-4H-2-2	Saxche/Palmar orange polychrome	Vase	Body	1	18.9 g	EZ-4H-2-2-214, EZ0176, Muestra 22; not analyzed
EZ-4H-2-2	Saxche/Palmar orange polychrome var. channeled	Vase	Rim and body	1	11.61 g	EZ-4H-2-2-044
EZ-4H-2-2	Talla incised	Open	Body	2	12.63 g	
EZ-4H-2-2	Tinaja red	Bowl	Rim	2	21.24 g	
EZ-4H-2-2	Tinaja red	Bowl	Rim and body	27	1664.7 g	EZ-4H-2-2-001, 006, 008, 009, 010, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023, 024, 025, 026, 027, 028, 029, 030, 031, 032, 033, 076
EZ-4H-2-2	Tinaja red	Bowl/dish	Rim and body	1	22.9 g	EZ-4H-2-2-192, Muestra 39, EZ0171
EZ-4H-2-2	Tinaja red	Bowl/dish	Rim and body	1	20.8 g	EZ-4H-2-2-225, Muestra 40
EZ-4H-2-2	Tinaja red	Bowl/dish	Rim and body	1	46.1 g	EZ-4H-2-2-221, Muestra 24

EZ-4H-2-2	Tinaja red	Bowl/dish	Rim and body	1	71.4 g	EZ-4H-2-2- 223, Muestra 32
EZ-4H-2-2	Tinaja red	Bowl/dish	Rim and neck	1	19.3 g	EZ-4H-2-2- 208, Muestra 23
EZ-4H-2-2	Tinaja red	Jar	neck, Shoulder and body	2	2196.5 0 g	EZ-4H-2-2- 119, 120
EZ-4H-2-2	Tinaja red	Jar	Rim and neck	2	76.52 g	EZ-4H-2-2- 060, 062
EZ-4H-2-2	Tinaja red	Jar	Rim, neck and Shoulder	1	166.88 g	EZ-4H-2-2- 205, Muestra 33
EZ-4H-2-2	Tinaja red	Jar	Rim, neck and Shoulder	8	511.84 g	EZ-4H-2-2- 036, 037, 038, 039, 040, 041, 065, 070
EZ-4H-2-2	Tinaja red	Jar	Shoulder and body	7	294.12	
EZ-4H-2-2	Tinaja red	Open	Base	3	91.67 g	
EZ-4H-2-2	Tinaja red	Open	Body	3	14.98 g	
EZ-4H-2-2	Tinaja red	Open	Body	4	23.99 g	
EZ-4H-2-2	Tinaja red	Open	Body	4	11.44 g	EZ-4H-2-2- 130; pierced
EZ-4H-2-2	Tinaja red	Open	Body	164	3449.3 8 g	
EZ-4H-2-2	Tinaja red	Open	Body	3	16.63 g	EZ-4H-2-2-

						131; pierced
EZ-4H-2-2	Tinaja red	Open	Body	262	5219.1	
					3 g	
EZ-4H-2-2	Tinaja red	Open	Body and	1	8.07 g	
			base			
EZ-4H-2-2	Tinaja red	Open	Body and	17	1553.2	
			base		5 g	
EZ-4H-2-2	Tinaja red	Open	Body and	6	973.20	
			base		g	
EZ-4H-2-2	Tinaja red	Open	Rim and body	2	11.8 g	EZ-4H-2-2-
						068, 075;
						bolsa 2
EZ-4H-2-2	Tinaja red	Open	Rim and body	12	133.31	EZ-4H-2-2-
					g	072, 073, 074,
						084, 086 (too
						small for
						modal
						analysis), 093,
						113, 114, 115,
						116, 117
EZ-4H-2-2	Tinaja red	Open	Rim and body	2	5.39 g	EZ-4H-2-2-
						086; too small
						for modal
						analysis
EZ-4H-2-2	Tinaja red	Plate	Base and	1	61.38 g	
			Support			
EZ-4H-2-2	Tinaja red	Plate?	Support	2	124.74	EZ-4H-2-2-
					g	081, 082

EZ-4H-2-2	Tinaja red	Undetermined	Body	1	3.30 g	
EZ-4H-2-2	Tinaja red (high-fired)	Open	Body	1	3.22 g	
EZ-4H-2-2	Tolla channeled?	Vase	Body and base	1	134.5 g	EZ-4H-2-2- 213, Muestra 31; not analyzed
EZ-4H-2-2	Toro gouged-incised	Dish	Rim, Body, base and Support	1	72.66 g	EZ-4H-2-2- 188
EZ-4H-2-2	Unidentified polychrome	Open	Rim and body	1	16.4 g	EZ-4H-2-2- 218, CR-28
EZ-4H-2-2	Unidentified polychrome	Vase?	Rim and body	1	85.2 g	EZ-4H-2-2- 222, Muestra 43
EZ-4H-2-2	Zacatal cream polychrome	Plate	Rim, body, and base	2	270.32 g	EZ-4H-2-2- 087
EZ-4H-2-2	Zacatal cream polychrome	Vase	Rim and body	3	86.84 g	EZ-4H-2-2- 095
EZ-4H-2-3	Cambio unslipped	Jar	Shoulder	2	31.24 g	
EZ-4H-2-3	Cambio unslipped	Undetermined	Body	23	266.20 g	
EZ-4H-2-3	Cambio unslipped	Undetermined	Rim	1	5.00 g	EZ-4H-2-3- 011; not analyzed
EZ-4H-2-3	Carmelita incised	Open	Body	1	3.10 g	EZ-4H-2-3- 007; not analyzed

EZ-4H-2-3	Carmelita incised	Open	Body	1	3.10 g	
EZ-4H-2-3	Corozal incised	Undetermined	Body	1	8.25 g	EZ-4H-2-3-009; not analyzed
EZ-4H-2-3	Corozal incised	Undetermined	Body	1	8.25 g	
EZ-4H-2-3	Encanto striated	Open	Body	16	271.15 g	
EZ-4H-2-3	Eroded polychrome, unidentified	Open	Body	3	17.44 g	
EZ-4H-2-3	Eroded polychrome, unidentified	Open	Rim and body	1	4.47 g	EZ-4H-2-3-003; not analyzed
EZ-4H-2-3	Eroded unidentified	Open	Rim and body	1	6.83 g	EZ-4H-2-3-004; not analyzed
EZ-4H-2-3	Eroded unidentified	Plate	Rim and body	1	7.43 g	EZ-4H-2-3-002
EZ-4H-2-3	Eroded unidentified	Undetermined	Base	2	29.47 g	
EZ-4H-2-3	Eroded unidentified	Undetermined	Body	1	3.78 g	EZ-4H-2-3-006; reused; not analyzed
EZ-4H-2-3	Eroded unidentified	Undetermined	Body	3	29.19 g	
EZ-4H-2-3	Eroded unidentified	Undetermined	Rim	1	2.59 g	EZ-4H-2-3-010; not analyzed
EZ-4H-2-3	Payaso orange-brown	Open	Body	1	27.70 g	
EZ-4H-2-3	Pozo unslipped	Undetermined	Body	1	1.73 g	

EZ-4H-2-3	Saxche/Palmar orange polychrome	Open	Body	1	2.1 g	EZ-4H-2-3-013, Muestra 50
EZ-4H-2-3	Saxche/Palmar orange polychrome	Open	Rim and body	1	10.5 g	EZ-4H-2-3-014, Muestra 51
EZ-4H-2-3	Saxche/Palmar orange polychrome var. channeled	Open	Body	5	25.14 g	EZ-4H-2-3-008; not analyzed
EZ-4H-2-3	Saxche/Palmar orange polychrome var. channeled	Open	Body	5	25.14 g	
EZ-4H-2-3	Tinaja red	Bowl	Rim and body	1	20.55 g	EZ-4H-2-3-001
EZ-4H-2-3	Tinaja red	Open	Body	6	90.58 g	
EZ-4H-2-3	Tinaja red	Open	Body	8	41.14 g	
EZ-4H-2-3	Zacatal cream polychrome	Open	Body	1	3.1 g	EZ-4H-2-3-012, Muestra 52; not analyzed
EZ-4H-2-3	Zacatal cream polychrome	Open	Body	1	2.77 g	EZ-4H-2-3-005; not analyzed
EZ-4H-3-1	Altar orange var. Altar	Open	Body and base	1	9.65 g	EZ-4H-3-1-006, CR-8
EZ-4H-3-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	31.28 g	EZ-4H-3-1-003

EZ-4H-3-1	Cambio unslipped	Bowl/dish	Rim and body	1	8.44 g	EZ-4H-3-1-004
EZ-4H-3-1	Cambio unslipped	Undetermined	Body	3	51.74 g	
EZ-4H-3-1	Encanto striated	Undetermined	Body	3	26.10 g	
EZ-4H-3-1	Eroded unidentified	Bowl	Rim and body	1	214.14 g	EZ-4H-3-1-001
EZ-4H-3-1	Eroded unidentified	Undetermined	Body	3	36.71 g	
EZ-4H-3-1	Máquina brown	Open	Body	1	4.61 g	
EZ-4H-3-1	Tinaja red	Open	Rim and body	1	18.48 g	EZ-4H-2-3-002
EZ-4H-3-1	Tinaja red	Undetermined	Body	1	3.24 g	EZ-4H-3-1-005; not analyzed
EZ-4H-3-2	Augustine red	Bowl/dish	Rim and body	1	47.40 g	EZ-4H-3-2-003
EZ-4H-3-2	Augustine red	Undetermined	Body	5	33.96 g	
EZ-4H-3-2	Cambio unslipped	Undetermined	Body	43	686.36 g	
EZ-4H-3-2	Encanto striated	Undetermined	Body	16	312.93 g	
EZ-4H-3-2	Eroded unidentified	Open	Rim and body	3	31.75 g	EZ-4H-3-2-005, 006, 007
EZ-4H-3-2	Eroded unidentified	Undetermined	Body	4	175.41 g	
EZ-4H-3-2	Eroded unidentified	Undetermined	Body and base	3	69.23 g	
EZ-4H-3-2	Talla incised	Vase	Body	1	28.82 g	

EZ-4H-3-2	Talla incised	Vase o Bowl/dish	Body	5	36.86 g	EZ-4H-3-2-004; not analyzed
EZ-4H-3-2	Talla incised	Vase o Bowl/dish	Body	1	28.82 g	EZ-4H-3-2-005; redesignated as Corozal incised and included in IDAEH collection, but some visual differences from other "Corozal incised" sherds from that type sample
EZ-4H-3-2	Talla incised	Vase o Bowl/dish	Rim and body	1	26.23 g	EZ-4H-3-2-001
EZ-4H-3-2	Tinaja red	Bowl/dish	Rim and body	1	33.24 g	EZ-4H-3-2-002; ángulo Z
EZ-4H-3-2	Tinaja red	Open	Body	5	136.86 g	
EZ-4H-3-2	Tinaja red	Undetermined	Body	4	69.25 g	
EZ-4H-3-3	Augustine red	Bowl/dish	Rim, body, and base	1	133.03 g	EZ-4H-3-3-022; CR-56
EZ-4H-3-3	Augustine red	Open	Body	1	22.91 g	

EZ-4H-3-3	Augustine red	Open	Body	4	102.01 g	
EZ-4H-3-3	Augustine red	Plate?	Base and Support	1	9.67 g	EZ-4H-3-3-020b; ring support
EZ-4H-3-3	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	7	163.32 g	EZ-4H-3-3-012, 013, 014, 016, 017, 019
EZ-4H-3-3	Cambio unslipped	Jar	Rim, neck and Shoulder	2	161.50 g	EZ-4H-3-3-001, 015
EZ-4H-3-3	Cambio unslipped	Jar	Shoulder and body	3	62.79 g	
EZ-4H-3-3	Cambio unslipped	Undetermined	Body	67	1535.2 g	
EZ-4H-3-3	Carmelita incised	Bowl/dish	Rim and body	1	10.74 g	EZ-4H-3-3-011
EZ-4H-3-3	Carmelita incised	Vase o Bowl/dish	Body	1	12.23 g	EZ-4H-3-3-036; CR-69
EZ-4H-3-3	Chinja impressed	Bowl	Rim and body	1	62.98 g	EZ-4H-3-3-034; same vessel as EZ-4H-2-2-009 and not analyzed separately
EZ-4H-3-3	Corozal incised	Bowl	Rim and body	1	90.36 g	EZ-4H-3-3-026
EZ-4H-3-3	Corozal incised	Bowl/dish	Rim, body,	1	154.24	EZ-4H-3-3-

			and base			025, CR-57
EZ-4H-3-3	Encanto striated	Jar	Shoulder and body	4	202.30 g	
EZ-4H-3-3	Encanto striated	Undetermined	Body	45	1060.7 6 g	
EZ-4H-3-3	Eroded polychrome, unidentified	Bowl/dish	Rim, body, and base	1	11.30 g	EZ-4H-3-3- 034
EZ-4H-3-3	Eroded polychrome, unidentified	Open	Body	1	8.03 g	EZ-4H-3-3- 006; not analyzed
EZ-4H-3-3	Eroded polychrome, unidentified	Vase o Bowl/dish	Rim and body	1	11.00 g	EZ-4H-3-3- 003
EZ-4H-3-3	Eroded unidentified	Bowl/dish	Body and base	1	26.28 g	EZ-4H-3-3- 020a; basal flange
EZ-4H-3-3	Eroded unidentified	Bowl/dish	Rim and body	1	10.15 g	EZ-4H-3-3- 018
EZ-4H-3-3	Eroded unidentified	Plate	Body, base and Support	2	207.21 g	EZ-4H-3-3- 021
EZ-4H-3-3	Eroded unidentified	Plate	Support	1	12.93 g	
EZ-4H-3-3	Eroded unidentified	Undetermined	Base	8	167.58 g	
EZ-4H-3-3	Eroded unidentified	Undetermined	Base and Body	3	351.59 g	
EZ-4H-3-3	Eroded unidentified	Undetermined	Body	14	324.43 g	
EZ-4H-3-3	Eroded unidentified	Undetermined	Rim and body	1	4.22 g	EZ-4H-3-3- 009

EZ-4H-3-3	Harina cream	Open	Body	2	28.70 g	
EZ-4H-3-3	Harina cream	Open	Body	3	128.29 g	
EZ-4H-3-3	Harina cream	Open	Body and base	1	78.70 g	
EZ-4H-3-3	Infierno black	Bowl/dish	Rim and body	1	26.81 g	EZ-4H-3-3-010
EZ-4H-3-3	Infierno black	Open	Body	1	4.35 g	
EZ-4H-3-3	Infierno black	Open	Body	1	82.29 g	
EZ-4H-3-3	Payaso orange-brown	Jar	CJar, Shoulder and body	1	122.25 g	EZ-4H-3-3-035
EZ-4H-3-3	Payaso orange-brown	Jar	neck, Shoulder and body	1	81.09 g	EZ-4H-3-3-028; CR-68
EZ-4H-3-3	Payaso orange-brown	Open	Body	24	548.25 g	
EZ-4H-3-3	Saxche/Palmar orange polychrome	Bowl/dish	Body	1	45.38 g	EZ-4H-3-3-035
EZ-4H-3-3	Saxche/Palmar orange polychrome	Bowl/dish	Rim and body	2	24.48 g	EZ-4H-3-3-002, 005
EZ-4H-3-3	Saxche/Palmar orange polychrome	Open	Body and base	1	7.20 g	EZ-4H-3-3-007
EZ-4H-3-3	Talla incised	Open	Body	1	12.23 g	
EZ-4H-3-3	Tinaja red	Bowl	Rim and body	4	149.13 g	EZ-4H-3-3-023, 027, 030, 031
EZ-4H-3-3	Tinaja red	Bowl/dish	Body and	2	173.79	EZ-4H-3-3-

			base		g	024
EZ-4H-3-3	Tinaja red	Bowl/dish	Rim, body, and base	1	65.26 g	EZ-4H-3-3- 029
EZ-4H-3-3	Tinaja red	Jar	Shoulder and body	1	48.70 g	
EZ-4H-3-3	Tinaja red	Open	Base	1	74.92 g	
EZ-4H-3-3	Tinaja red	Open	Body	11	461.44 g	
EZ-4H-3-3	Tinaja red	Open	Body	26	531.27 g	
EZ-4H-3-3	Tinaja red	Open	Body and base	3	223.14 g	
EZ-4H-3-3	Tinaja red	Open	Body and base	1	5.66 g	
EZ-4H-3-3	Tinaja red	Open	Body and base	1	174.09 g	
EZ-4H-3-3	Tinaja red	Rim and body	Rim and body	2	38.05 g	EZ-4H-3-3- 008, 033
EZ-4H-3-4	Cambio unslipped	Jar	Rim, neck and Shoulder	1	118.57 g	EZ-4H-3-4- 002
EZ-4H-3-4	Cambio unslipped	Undetermined	Body	50	1067.7 1 g	
EZ-4H-3-4	Chinja impressed	Bowl	Rim and body	1	61.18 g	Same as EZ- 4H-2-2-009; not analyzed separately
EZ-4H-3-4	Encanto striated	Jar	Shoulder and body	3	200.75 g	

EZ-4H-3-4	Encanto striated	Undetermined	Body	30	797.21 g	
EZ-4H-3-4	Eroded unidentified	Bowl	Rim and body	1	52.32 g	EZ-4H-3-4-003
EZ-4H-3-4	Eroded unidentified	Bowl/dish	Rim and body	1	55.21 g	EZ-4H-3-4-001
EZ-4H-3-4	Eroded unidentified	Bowl/dish	Rim and body	1	6.24 g	EZ-4H-3-4-006
EZ-4H-3-4	Eroded unidentified	Open	Body	1	6.27 g	EZ-4H-3-4-005; basal flange; not analyzed
EZ-4H-3-4	Eroded unidentified	Undetermined	Body	12	243.53 g	
EZ-4H-3-4	Eroded unidentified	Undetermined	Body	1	17.95 g	
EZ-4H-3-4	Eroded unidentified	Undetermined	Body and base	1	61.66 g	
EZ-4H-3-4	Harina cream	Open	Body	11	126.05 g	
EZ-4H-3-4	Maquina brown	Bowl/dish	Rim and body	1	156.0 g	EZ-4H-3-4-010, CR-22
EZ-4H-3-4	Pantano impressed	Jar	neck, Shoulder and body	1	192.56 g	EZ-4H-3-4-004
EZ-4H-3-4	Payaso orange-brown	Open	Body	2	39.89 g	
EZ-4H-3-4	Payaso orange-brown	Open	Body	2	69.42 g	
EZ-4H-3-4	Sahcaba molded-carved	Open	Body	1	3.5 g	EZ-4H-3-4-007, CR-5; not

						analyzed
EZ-4H-3-4	Saxche/Palmar orange polychrome	Bowl/dish	Rim, body, and base	1	134.72 g	EZ-4H-3-4-008
EZ-4H-3-4	Tinaja red	Bowl/dish	Rim and body	1	69.2 g	EZ-4H-3-4-009, CR-26
EZ-4H-3-4	Tinaja red	Jar	Shoulder and body	1	21.04 g	
EZ-4H-3-4	Tinaja red	Open	Base and Body	2	94.43 g	
EZ-4H-3-4	Tinaja red	Open	Body	7	182.34 g	
EZ-4H-3-4	Tinaja red	Open	Body	11	177.64 g	
EZ-4H-3-5	Altar orange	Open	Body and base	1	7.92 g	EZ-4H-3-5-010; not analyzed
EZ-4H-3-5	Cambio unslipped	Jar	Rim	2	21.64 g	EZ-4H-3-5-007; too small for modal analysis
EZ-4H-3-5	Cambio unslipped	Jar	Shoulder and body	1	47.87 g	
EZ-4H-3-5	Cambio unslipped	Undetermined	Body	21	355.45 g	
EZ-4H-3-5	Chinja impressed var. channeled	Bowl	Body	1	11.09 g	EZ-4H-3-5-009; not analyzed

EZ-4H-3-5	Encanto striated	Jar	Shoulder and body	1	133.35 g	
EZ-4H-3-5	Encanto striated	Undetermined	Body	21	622.08 g	
EZ-4H-3-5	Eroded unidentified	Bowl/dish	Rim and body	1	22.77 g	EZ-4H-3-5- 004
EZ-4H-3-5	Eroded unidentified	Undetermined	Base and body	3	107.94 g	
EZ-4H-3-5	Eroded unidentified	Undetermined	Body	10	118.14 g	
EZ-4H-3-5	Eroded unidentified	Undetermined	Body	1	9.99 g	
EZ-4H-3-5	Eroded unidentified	Vase	Rim and body	1	17.97 g	EZ-4H-3-5- 006
EZ-4H-3-5	Máquina brown	Open	Body	1	5.64 g	
EZ-4H-3-5	Saxche/Palmar orange polychrome	Bowl/dish	Rim and body	1	11.40 g	EZ-4H-3-5- 002
EZ-4H-3-5	Saxche/Palmar orange polychrome	Open	Body	1	5.40 g	
EZ-4H-3-5	Tinaja red	Bowl	Rim and body	3	104.59 g	EZ-4H-3-5- 001, 003, 005
EZ-4H-3-5	Tinaja red	Bowl	Rim and body	2	51.19 g	EZ-4H-3-5- 003, 005
EZ-4H-3-5	Tinaja red	Open	Body	6	138.06 g	
EZ-4H-3-5	Tinaja red	Open	Body	9	159.79 g	
EZ-4H-3-5	Tinaja red	Plate	Base and support	2	225.27 g	EZ-4H-3-5- 008

EZ-4H-3-5	Tinaja red	Undetermined	Body	1	26.37 g	
EZ-4H-3-6	Augustine red	Jar	Shoulder and body	1	19.57 g	
EZ-4H-3-6	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	2	38.47 g	EZ-4H-3-6- 010, 011
EZ-4H-3-6	Cambio unslipped	Jar	Shoulder and body	4	62.12 g	
EZ-4H-3-6	Cambio unslipped	Plate	Rim and base	1	9.63 g	EZ-4H-3-6- 014
EZ-4H-3-6	Cambio unslipped	Undetermined	Body	63	1272.6 1 g	
EZ-4H-3-6	Cambio unslipped	Undetermined	Rim and body	1	34.90 g	EZ-4H-3-6- 013
EZ-4H-3-6	Chinja impressed	Bowl	Body	1	7.99 g	EZ-4H-3-6- 018; not analyzed
EZ-4H-3-6	Encanto striated	Jar	Shoulder and body	3	128.82 g	
EZ-4H-3-6	Encanto striated	Undetermined	Body	44	915.17 g	
EZ-4H-3-6	Eroded unidentified	Bowl/dish	Rim, body, and base	1	56.83 g	EZ-4H3-6-017
EZ-4H-3-6	Eroded unidentified	Undetermined	Body	37	679.00 g	
EZ-4H-3-6	Eroded unidentified	Undetermined	Body and base	8	232.23 g	

EZ-4H-3-6	Eroded unidentified	Undetermined	Rim and body	2	9.13 g	EZ-4H-3-6-015, 016
EZ-4H-3-6	Pozo unslipped	Jar	Rim and neck	1	6.98 g	EZ-4H-3-6-008
EZ-4H-3-6	Saxche/Palmar orange polychrome	Bowl/dish	Rim, body, and base	1	139.28 g	EZ-4H-3-6-001; CR-89
EZ-4H-3-6	Tinaja red	Bowl	Rim and body	3	75.77 g	EZ-4H-3-6-004, 006, 007
EZ-4H-3-6	Tinaja red	Bowl/dish	Rim and body	1	39.67 g	EZ-4H-3-6-009
EZ-4H-3-6	Tinaja red	Bowl/dish	Rim and body	1	11.68 g	EZ-4H-3-6-012
EZ-4H-3-6	Tinaja red	Jar	neck, Shoulder and body	1	47.97 g	EZ-4H-3-6-002; CR-55
EZ-4H-3-6	Tinaja red	Jar	Rim and neck	1	13.36 g	EZ-4H-3-6-005
EZ-4H-3-6	Tinaja red	Jar	Rim, neck and Shoulder	1	86.63 g	EZ-4H-3-6-003; CR-52
EZ-4H-3-6	Tinaja red	Open	Base and Body	1	43.76 g	
EZ-4H-3-6	Tinaja red	Open	Body	23	563.88 g	
EZ-4H-3-6	Tinaja red	Open	Body	31	817.41 g	
EZ-4H-3-6	Tinaja red	Undetermined	Base and Body	1	8.21 g	
EZ-4H-3-7	Augustine red	Jar	Rim and neck	1	16.86 g	EZ-4H-3-7-

						002
EZ-4H-3-7	Azucar impressed	Bowl	Rim and body	1	66.46 g	EZ-4H-3-7-006
EZ-4H-3-7	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	14.77g	EZ-4H-3-7-003
EZ-4H-3-7	Cambio unslipped	Undetermined	Body	45	808.44 g	
EZ-4H-3-7	Cambio unslipped	Undetermined	Body	2	29.76 g	
EZ-4H-3-7	Encanto striated	Jar	neck, Shoulder and body	1	342.58 g	
EZ-4H-3-7	Encanto striated	Jar	Shoulder and body	3	92.01 g	
EZ-4H-3-7	Encanto striated	Jar	Shoulder and body	1	47.74 g	
EZ-4H-3-7	Encanto striated	Undetermined	Body	32	611.41 g	
EZ-4H-3-7	Encanto striated	Undetermined	Body	2	75.90 g	
EZ-4H-3-7	Eroded polychrome, unidentified	Bowl/dish	Rim and body	1	14.84 g	EZ-4H-3-7-007
EZ-4H-3-7	Eroded polychrome, unidentified	Tambor?	Body	31	754.66 g	EZ-4H-3-7-004; not analyzed
EZ-4H-3-7	Eroded unidentified	Jar	Neck and shoulder	1	7.35 g	
EZ-4H-3-7	Eroded unidentified	Undetermined	Body	3	16.88 g	

EZ-4H-3-7	Eroded unidentified	Undetermined	Body	11	119.84 g	
EZ-4H-3-7	Eroded unidentified	Undetermined	Body and base	6	281.81 g	
EZ-4H-3-7	Eroded unidentified	Undetermined	Support	1	5.26 g	EZ-4H-3-7-010
EZ-4H-3-7	Eroded unidentified	Vase?	Rim and body	1	7.63 g	EZ-4H-3-7-009
EZ-4H-3-7	Máquina brown	Open	Body	1	20.24 g	
EZ-4H-3-7	Saxche/Palmar orange polychrome	Open	Rim and body	1	53.98 g	EZ-4H-3-7-011, CR-20
EZ-4H-3-7	Tinaja red	Bowl	Body	1	14.11 g	
EZ-4H-3-7	Tinaja red	Bowl	Rim and body	1	36.31 g	EZ-4H-3-7-001
EZ-4H-3-7	Tinaja red	Jar	Body	2	183.95 g	
EZ-4H-3-7	Tinaja red	Jar	Rim and neck	1	4.42 g	EZ-4H-3-7-005
EZ-4H-3-7	Tinaja red	Jar	Rim and neck	1	16.15 g	EZ-4H-3-7-008
EZ-4H-3-7	Tinaja red	Open	Body	4	78.35 g	
EZ-4H-3-7	Tinaja red	Open	Body	1	24.90 g	
EZ-4H-3-7	Tinaja red	Open	Body	10	131.24 g	
EZ-4H-3-7	Tinaja red	Open	Body	5	120.25 g	
EZ-4H-3-7	Zacatal cream polychrome	Open	Body	1	12.1 g	EZ-4H-3-7-013, CR-6

EZ-4H-3-7	Zacatal cream polychrome	Tambor?	Body	1	16.2 g	EZ-4H-3-7-012, CR-7
EZ-4H-5-2	Cambio unslipped	Undetermined	Body	3	67.19 g	
EZ-4H-5-2	Encanto striated	Undetermined	Body	2	19.10 g	
EZ-4H-5-2	Eroded unidentified	Undetermined	Body	6	33.08 g	
EZ-4H-5-2	Payaso orange-brown	Open	Body	1	9.41 g	
EZ-4H-6-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	14.42 g	EZ-4H-6-1-001
EZ-4H-6-1	Cambio unslipped	Jar	Shoulder	1	6.59 g	
EZ-4H-6-1	Cambio unslipped	Undetermined	Body	15	143.49 g	
EZ-4H-6-1	Encanto striated	Undetermined	Body	1	18.28 g	
EZ-4H-6-1	Encanto striated	Undetermined	Body	1	10.14 g	
EZ-4H-6-1	Eroded unidentified	Undetermined	Body	11	94.01 g	
EZ-4H-6-1	Eroded unidentified	Undetermined	Body	2	11.86 g	
EZ-4H-6-1	Eroded unidentified	Undetermined	Rim	1	1.90 g	EZ-4H-6-1-004; too small for modal analysis
EZ-4H-6-1	Eroded unidentified	Undetermined	Rim and body	1	28.48 g	EZ-4H-6-1-002
EZ-4H-6-1	Eroded unidentified	Undetermined	Rim and body	1	5.27 g	EZ-4H-6-1-003; too small for modal analysis
EZ-4H-6-1	Tinaja red	Open	Body	3	16.60 g	

EZ-4H-6-2	Augustine red?	Open	Body	1	4.53 g	
EZ-4H-6-2	Cambio unslipped	Undetermined	Body	6	56.97 g	
EZ-4H-6-2	Cambio unslipped	Undetermined	Body	4	37.42 g	
EZ-4H-6-2	Encanto striated	Undetermined	Body	2	14.28 g	
EZ-4H-6-2	Encanto striated	Undetermined	Body	6	100.38 g	
EZ-4H-6-2	Eroded unidentified	Bowl/dish	Rim and body	1	26.21 g	EZ-4H-6-2-002
EZ-4H-6-2	Eroded unidentified	Undetermined	Base	1	22.90 g	Basal flange
EZ-4H-6-2	Eroded unidentified	Undetermined	Body	2	47.26 g	
EZ-4H-6-2	Eroded unidentified	Undetermined	Body	3	13.68 g	
EZ-4H-6-2	Eroded unidentified	Undetermined	Body and base	1	9.32 g	
EZ-4H-6-2	Eroded unidentified	Undetermined	Rim and body	1	63.61 g	EZ-4H-6-2-001
EZ-4H-6-2	Pozo unslipped	Undetermined	Body	1	2.34 g	
EZ-4H-6-2	Tinaja red	Open	Body	1	9.08 g	
EZ-4H-6-2	Tinaja red	Open	Body	2	6.72 g	
EZ-4H-7-1	Cambio unslipped	Undetermined	Body	2	65.68 g	
EZ-4H-7-1	Eroded unidentified	Undetermined	Body and base	1	7.90 g	
EZ-4H-7-1	Payaso orange-brown	Open	Body	1	6.43 g	
EZ-4H-8-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	29.77 g	EZ-4H-8-1-001
EZ-4H-8-1	Cambio unslipped	Jar	Shoulder and	2	28.67 g	

			body			
EZ-4H-8-1	Cambio unslipped	Undetermined	Base	1	17.45 g	
EZ-4H-8-1	Cambio unslipped	Undetermined	Body	5	71.62 g	
EZ-4H-8-1	Eroded unidentified	Undetermined	Body	1	22.36 g	EZ-4H-8-1-002; basal flange
EZ-4H-8-1	Eroded unidentified	Undetermined	Body	7	77.49 g	
EZ-4H-8-1	Eroded unidentified	Undetermined	Body and base	1	13.91 g	
EZ-4H-8-1	Eroded unidentified	Undetermined	Rim	1	2.67 g	EZ-4H-8-1-003; not analyzed
EZ-4H-8-1	Tinaja red	Open	Body	1	2.82 g	
EZ-4H-8-1	Tinaja red	Open	Body	2	9.56 g	
EZ-4H-9-1	Cambio unslipped	Undetermined	Body	3	15.79 g	
EZ-4H-9-1	Eroded unidentified	Undetermined	Body	6	34.06 g	
EZ-4H-10-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	14.57 g	EZ-4H-10-1-002
EZ-4H-10-1	Cambio unslipped	Jar	Rim	1	15.17 g	EZ-4H-10-1-003; not analyzed
EZ-4H-10-1	Cambio unslipped	Undetermined	Body	2	45.25 g	
EZ-4H-10-1	Encanto striated	Undetermined	Body	2	27.00 g	
EZ-4H-10-1	Eroded unidentified	Undetermined	Body	2	9.66 g	

1							
EZ-4H-10-	Eroded unidentified	Undetermined	Body and	1	48.98 g		
1			base				
EZ-4H-10-	Eroded unidentified	Bowl	Rim and body	1	25.64 g	EZ-4H-10-1-	
1	var. impressed					001	
EZ-4H-11-	Augustine red	Undetermined	Body	2	6.53 g		
1							
EZ-4H-11-	Cambio unslipped	Undetermined	Body	5	42.77 g		
1							
EZ-4H-11-	Encanto striated	Undetermined	Body	1	20.41 g		
1							
EZ-4H-11-	Eroded unidentified	Undetermined	Base	1	40.78 g		
1							
EZ-4H-11-	Eroded unidentified	Undetermined	Body	6	62.72 g		
1							
EZ-4H-12-	Altar orange var. Altar	Open	Body	1	2.51 g	EZ-4H-12-1-	
1						003; not	
						analyzed	
EZ-4H-12-	Cambio unslipped	Undetermined	Body	9	121.18		
1					g		
EZ-4H-12-	Encanto striated	Undetermined	Body	1	9.12 g		
1							
EZ-4H-12-	Eroded polychrome,	Vase	Rim and body	1	11.01 g	EZ-4H-12-1-	
1	unidentified					001	
EZ-4H-12-	Eroded unidentified	Undetermined	Body	1	5.14 g		
1							
EZ-4H-12-	Tinaja red var. Subin	Vase	Rim and body	1	5.71 g	EZ-4H-12-1-	
1						002	

EZ-4H-12-2	Altar orange var. Altar	Open	Body	1	3.67 g	EZ-4H-12-2-009
EZ-4H-12-2	Altar orange var. Altar	Open	Rim and body	1	3.44 g	EZ-4H-12-2-006
EZ-4H-12-2	Augustine red	Undetermined (problamente Jar)	Rim and neck	1	6.75 g	EZ-4H-12-2-003
EZ-4H-12-2	Cambio unslipped	Undetermined	Body	14	221.96 g	
EZ-4H-12-2	Cambio unslipped	Undetermined	Rim	1	12.47 g	EZ-4H-12-2-008
EZ-4H-12-2	Encanto striated	Undetermined	Body	3	39.15 g	
EZ-4H-12-2	Eroded unidentified	Plate	Rim, body, and base	1	47.11 g	EZ-4H-12-2-002; CR-67
EZ-4H-12-2	Eroded unidentified	Undetermined	Base	1	28.99 g	
EZ-4H-12-2	Eroded unidentified	Undetermined	Body	1	6.86 g	EZ-4H-12-2-007; basal flange; not analyzed
EZ-4H-12-2	Eroded unidentified	Undetermined	Body	2	12.62 g	
EZ-4H-12-2	Tinaja red	Bowl/dish	Base and restos de Support	1	24.39 g	
EZ-4H-12-2	Tinaja red	Jar	Rim and neck	1	8.12 g	EZ-4H-12-2-004

EZ-4H-12-2	Tinaja red	Open	Body	3	20.31 g	
EZ-4H-12-2	Tinaja red	Open	Body	6	82.07 g	
EZ-4H-12-2	Tinaja red	Undetermined	Rim and body	1	32.79 g	EZ-4H-12-2-001; CR-51
EZ-4H-12-2	Tinaja red	Undetermined	Rim and body	2	15.61 g	EZ-4H-12-2-005
EZ-4H-12-3	Cambio unslipped	Undetermined	Body	1	7.95 g	
EZ-4H-12-3	Eroded unidentified	Undetermined	Body	2	7.11 g	
EZ-4H-12-3	Eroded unidentified	Undetermined	Body	1	6.32 g	
EZ-4H-12-3	Infierno black	Open	Body	2	19.77 g	
EZ-4H-12-3	Máquina brown	Open	Body	1	2.87 g	
EZ-4H-12-3	Tinaja red	Jar	Rim and neck	1	8.42 g	EZ-4H-12-3-002; same as EZ-4H-12-2-004; not analyzed separately
EZ-4H-12-3	Tinaja red	Jar	Rim, neck, Shoulder and body	1	243.39 g	EZ-4H-12-3-001; CR-54
EZ-4H-12-	Tinaja red	Open	Body	1	84.43 g	

3							
EZ-4H-12-	Tinaja red	Open	Body	1	4.32 g		
3							
EZ-4H-12-	Cambio group	Jar	Rim and neck	5	164.26	EZ-4H-12-4-	
4	(Cambio unslipped or				g	002, 003, 004,	
	Encanto striated)					005, 006, 007	
EZ-4H-12-	Cambio group	Jar	Rim and neck	1	32.49 g	EZ-4H-12-4-	
4	(Cambio unslipped or					008	
	Encanto striated)						
EZ-4H-12-	Cambio unslipped	Jar	Shoulder	2	70.70 g		
4							
EZ-4H-12-	Cambio unslipped	Jar	Shoulder	3	96.75 g		
4							
EZ-4H-12-	Cambio unslipped	Undetermined	Body	35	548.23		
4					g		
EZ-4H-12-	Carmelita incised	Plate	Rim, body,	1	29.4 g	EZ-4H-12-4-	
4			and base			015, CR-33	
EZ-4H-12-	Encanto striated	Undetermined	Body	37	525.35		
4					g		
EZ-4H-12-	Eroded unidentified	Undetermined	Base and	2	91.39 g		
4			body				
EZ-4H-12-	Eroded unidentified	Undetermined	Body	13	159.04		
4					g		
EZ-4H-12-	Eroded unidentified	Undetermined	Rim and body	1	14.48 g	EZ-4H-12-4-	
4						010	
EZ-4H-12-	Eroded unidentified	Vase?	Rim and body	1	13.17 g	EZ-4H-12-4-	
4						013; tagged as	

						from EZ-4H-12-3 in the photographs
EZ-4H-12-4	Infierno black	Open	Body	2	47.33 g	
EZ-4H-12-4	Máquina brown	Open	Body	1	5.66 g	
EZ-4H-12-4	Saxche/Palmar orange polychrome	Open	Body and base	2	76.11 g	EZ-4H-12-4-011, 012
EZ-4H-12-4	Saxche/Palmar orange polychrome	Open	Body, base and Support	1	166.57 g	EZ-4H-12-4-014
EZ-4H-12-4	Saxche/Palmar orange polychrome	Plate?	Base?	1	34.21 g	EZ-4H-12-4-016, CR-31
EZ-4H-12-4	Tinaja red	Bowl/dish	Rim and body	1	91.94 g	EZ-4H-12-4-017, CR-25
EZ-4H-12-4	Tinaja red	Bowl/dish	Rim and body	1	12.35 g	EZ-4H-12-4-009
EZ-4H-12-4	Tinaja red	Jar	Rim, neck, Shoulder and body	1	243.39 g	EZ-4H-12-4-001; CR-54
EZ-4H-12-4	Tinaja red	Open	Body	10	216.64 g	
EZ-4H-12-4	Tinaja red	Open	Body	23	474.36 g	
EZ-4H-12-4	Tinaja red	Open	Body and base	1	41.05 g	
EZ-4H-12-	Cambio unslipped	Jar	Rim, neck	1	33.21 g	

5			and Shoulder			
EZ-4H-12-	Cambio unslipped	Undetermined	Body	12	185.42	
5					g	
EZ-4H-12-	Encanto striated	Undetermined	Body	18	298.62	
5					g	
EZ-4H-12-	Eroded unidentified	Undetermined	Base	1	101.75	
5					g	
EZ-4H-12-	Eroded unidentified	Undetermined	Base and	2	125.41	
5			Body		g	
EZ-4H-12-	Eroded unidentified	Undetermined	Body	4	74.12 g	
5						
EZ-4H-12-	Infierno black	Open	Body	1	8.09 g	
5						
EZ-4H-12-	Maquina brown	Bowl/dish	Rim and body	1	72.6 g	EZ-4H-12-5-
5						005, CR-23
EZ-4H-12-	Máquina brown	Open	Body	1	8.11 g	
5						
EZ-4H-12-	Saxche/Palmar orange	Open	Body and	1	11.42 g	EZ-4H-12-5-
5	polychrome		base			001; not
						analyzed
EZ-4H-12-	Tinaja red	Bowl/dish	Rim and body	1	59.95 g	EZ-4H-12-5-
5						003, CR-24
EZ-4H-12-	Tinaja red	Open	Body	4	69.16 g	
5						
EZ-4H-12-	Tinaja red	Open	Body	9	254.97	
5					g	
EZ-4H-12-	Tinaja red	Open	Rim and body	1	43.37 g	EZ-4H-12-5-
5						004, CR-9

EZ-4H-12-6	Cambio unslipped	Undetermined	Body	5	99.75 g	
EZ-4H-12-6	Cambio unslipped	Undetermined	Rim	1	4.01 g	
EZ-4H-12-6	Encanto striated	Undetermined	Body	4	65.84 g	
EZ-4H-12-6	Eroded unidentified	Undetermined	Body	2	11.97 g	
EZ-4H-12-6	Máquina brown	Open	Body	1	12.21 g	
EZ-4H-12-6	Tinaja red	Open	Body	3	64.61 g	
EZ-4H-12-7	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	81.30 g	EZ-4H-12-7-001
EZ-4H-12-7	Cambio unslipped	Undetermined	Body	1	7.15 g	
EZ-4H-12-7	Encanto striated	Undetermined	Body	13	179.79 g	
EZ-4H-12-7	Eroded unidentified	Bowl/dish	Rim and body	1	36.76 g	EZ-4H-12-7-001; Z-angle
EZ-4H-12-7	Eroded unidentified	Jar?	Rim and body	1	17.10 g	EZ-4H-12-7-002
EZ-4H-12-7	Eroded unidentified	Undetermined	Body	3	29.65 g	
EZ-4H-12-7	Tinaja red	Bowl/dish	Rim, body, and base	1	37.21 g	To IDAEH type collection
EZ-4H-12-	Tinaja red	Open	Body	1	4.92 g	

7							
EZ-4H-12-	Tinaja red	Open	Body	7	63.07 g		
7							
EZ-4H-12-	Tinaja red	Open	Body and	1	42.33 g		
7			base				
EZ-4H-12-	Cambio group	Jar	Rim and neck	1	29.25 g	EZ-4H-12-8-	
8	(Cambio unslipped or					001	
	Encanto striated)						
EZ-4H-12-	Cambio unslipped	Jar	Shoulder	2	35.31 g		
8							
EZ-4H-12-	Cambio unslipped	Undetermined	Body	6	89.49 g		
8							
EZ-4H-12-	Encanto striated	Undetermined	Body	1	13.15 g		
8							
EZ-4H-12-	Eroded unidentified	Undetermined	Body and	1	84.22 g	EZ-4H-12-8-	
8			base			002; not	
						analyzed	
EZ-4H-12-	Máquina brown	Jar	Shoulder and	1	30.15 g		
8			body				
EZ-4H-12-	Máquina brown	Open	Body	1	14.46 g		
8							
EZ-4H-12-	Tinaja red	Open	Body	1	5.02 g		
8							
EZ-4H-12-	Cambio unslipped	Undetermined	Body	7	155.34		
9					g		
EZ-4H-12-	Encanto striated	Undetermined	Body	4	34.11 g		
9							
EZ-4H-12-	Eroded unidentified	Undetermined	Rim and body	1	10.94 g	EZ-4H-12-9-	

9							001
EZ-4H-12-9	Saxche/Palmar orange polychrome	Open	Body	1	8.47 g	EZ-4H-12-9-001	
EZ-4H-12-9	Tinaja red	Open	Body	1	27.92 g		
EZ-4H-12-10	Cambio unslipped	Undetermined	Body	3	48.13 g		
EZ-4H-12-10	Eroded unidentified	Undetermined	Body	1	13.75 g		
EZ-4H-12-11	Cambio unslipped	Undetermined	Body	1	12.28 g		
EZ-4H-12-11	Dark brown on light brown bichrome	Open	Rim and body	1	38.31 g	EZ-4H-12-11-001	
EZ-4H-12-11	Encanto striated	Undetermined	Body	1	34.07 g		
EZ-4H-12-11	Eroded unidentified	Undetermined	Body	1	50.56 g		
EZ-4H-12-11	Tinaja red	Open	Body	3	120.74 g		
EZ-4H-13-1	Augustine red	Bowl/dish	Body	1	14.62 g	EZ-4H-13-1-003	
EZ-4H-13-1	Augustine red	Bowl/dish	Rim and body	1	14.62 g	EZ-4H-13-1-002	
EZ-4H-13-1	Augustine red	Open	Body	1	2.97 g		
EZ-4H-13-1	Cambio unslipped	Undetermined	Body	19	395.16 g		

EZ-4H-13-1	Cambio unslipped	Undetermined	Rim and body	1	7.19 g	EZ-4H-13-1-001
EZ-4H-13-1	Cambio unslipped	Undetermined	Rim and body	1	7.19 g	
EZ-4H-13-1	Encanto striated	Undetermined	Body	4	36.57 g	
EZ-4H-13-1	Eroded unidentified	Undetermined	Body	8	62.96 g	
EZ-4H-13-1	Eroded unidentified	Undetermined	Body and base	1	8.54 g	
EZ-4H-13-1	Harina cream	Open	Body	1	6.93 g	
EZ-4H-13-1	Infierno black	Open	Body	1	15.68 g	
EZ-4H-13-1	Tinaja red	Open	Body	1	4.98 g	
EZ-4H-13-2	Augustine red	Open	Body	4	117.20 g	
EZ-4H-13-2	Cambio unslipped	Undetermined	Body	1	67.24 g	
EZ-4H-13-2	Cambio unslipped	Undetermined	Body and base	1	6.09 g	
EZ-4H-13-2	Encanto striated	Undetermined	Body	14	181.66 g	
EZ-4H-13-2	Encanto striated	Undetermined	Body	3	48.76 g	
EZ-4H-13-2	Eroded unidentified	Jar	Neck, shoulder and	1	39.65 g	

			body		
EZ-4H-13- 2	Eroded unidentified	Undetermined	Body	3	23.95 g
EZ-4H-13- 2	Tinaja red	Open	Body	1	6.03 g
EZ-4H-13- 2	Tinaja red	Open	Body	1	2.71 g
EZ-4H-13- 3	Azote orange	Open	Body	1	2.95 g
EZ-4H-13- 3	Cambio unslipped	Undetermined	Body	7	95.69 g
EZ-4H-13- 3	Encanto striated	Undetermined	Body	3	32.95 g
EZ-4H-13- 3	Eroded unidentified	Undetermined	Body	5	25.98 g
EZ-4H-13- 3	Eroded unidentified	Undetermined	Body	1	1.81 g
EZ-4H-13- 3	Payaso orange-brown	Open	Body	1	24.26 g
EZ-4H-13- 3	Tinaja red	Open	Body	3	20.25 g
EZ-4H-13- 3	Tinaja red	Open	Body	2	5.84 g
EZ-4H-13- 4	Cambio unslipped	Jar	Shoulder	1	4.03 g
EZ-4H-13- 4	Cambio unslipped	Jar	Shoulder	1	22.80 g

EZ-4H-13-4	Cambio unslipped	Jar	Shoulder and body	1	84.97 g	
EZ-4H-13-4	Cambio unslipped	Undetermined	Body	7	126.65 g	
EZ-4H-13-4	Cambio unslipped	Undetermined	Body	12	171.07 g	
EZ-4H-13-4	Encanto striated	Undetermined	Body	6	165.70 g	
EZ-4H-13-4	Encanto striated	Undetermined	Body	2	36.83 g	
EZ-4H-13-4	Eroded polychrome, unidentified	Open	Body	1	1.73 g	EZ-4H-13-4-006
EZ-4H-13-4	Eroded unidentified	Bowl/dish	Rim and body	1	34.64 g	EZ-4H-13-4-001
EZ-4H-13-4	Eroded unidentified	Undetermined	Base and support	1	30.20 g	EZ-4H-13-4-007; ring support
EZ-4H-13-4	Eroded unidentified	Undetermined	Body	12	99.10 g	
EZ-4H-13-4	Eroded unidentified	Undetermined	Body	5	36.01 g	
EZ-4H-13-4	Harina cream	Open	Body	1	51.94 g	
EZ-4H-13-4	Infierno black	Open	Body	2	11.29 g	
EZ-4H-13-4	Máquina brown	Open	Body	1	6.17 g	
EZ-4H-13-4	Tinaja red	Bowl/dish	Rim and body	1	45.57 g	EZ-4H-13-4-

4						002
EZ-4H-13-	Tinaja red	Bowl/dish	Rim and body	1	48.42 g	EZ-4H-13-4-
4						003
EZ-4H-13-	Tinaja red	Open	Body	1	5.39 g	
4						
EZ-4H-13-	Tinaja red	Open	Body	3	16.23 g	
4						
EZ-4H-13-	Tinaja red	Open	Body	3	19.81 g	
4						
EZ-4H-13-	Tinaja red	Open	Body	2	15.96 g	
4						
EZ-4H-13-	Tinaja red	Open	Rim and body	1	5.08 g	EZ-4H-13-4-
4						004
EZ-4H-13-	Azote orange	Open	Body	1	23.54 g	EZ-4H-13-4-
5						001; to
						IDA EH type
						collection
EZ-4H-13-	Cambio unslipped	Undetermined	Body	8	232.13	
5					g	
EZ-4H-13-	Encanto striated	Undetermined	Body	3	112.78	
5					g	
EZ-4H-13-	Eroded unidentified	Undetermined	Body	3	63.38 g	
5						
EZ-4H-13-	Infierno black	Open	Body	1	4.72 g	
5						
EZ-4H-13-	Tinaja red	Open	Body	4	34.32 g	
5						
EZ-4H-13-	Tinaja red	Open	Body	4	8.21 g	

5

EZ-4H-13-5	Unidentified red on orange bichrome	Open	Base	1	29.20 g	EZ-4H-13-5-001
EZ-4H-14-1	Cambio unslipped	Jar	Shoulder	2	39.52 g	
EZ-4H-14-1	Cambio unslipped	Undetermined	Body	20	243.52 g	EZ-4H-14-1-001
EZ-4H-14-1	Encanto striated	Undetermined	Body	4	55.22 g	
EZ-4H-14-1	Eroded unidentified	Undetermined	Body	8	41.84 g	
EZ-4H-14-1	Eroded unidentified	Undetermined	Body and base	1	102.66 g	
EZ-4H-14-1	Eroded unidentified	Undetermined	Rim and body	1	53.42 g	
EZ-4H-14-2	Augustine red	Open	Body	3	18.50	EZ-4H-14-2-001
EZ-4H-14-2	Cambio unslipped	Jar?	Rim and body	1	24.55 g	EZ-4H-14-2-002
EZ-4H-14-2	Encanto striated	Undetermined	Body	16	237.86 g	
EZ-4H-14-2	Encanto striated	Undetermined	Body	10	109.09 g	
EZ-4H-14-2	Eroded unidentified	Undetermined	Base and support	1	27.93 g	
EZ-4H-14-2	Eroded unidentified	Undetermined	Body	29	251.17 g	
EZ-4H-14-	Eroded unidentified	Undetermined	Body	1	11.79 g	

2							
EZ-4H-14-	Eroded unidentified	Undetermined	Body	1	16.75 g		
2							
EZ-4H-14-	Eroded unidentified	Undetermined	Body and	1	9.58 g		
2			base				
EZ-4H-14-	Eroded unidentified	Undetermined	Rim and body	1	8.92 g	EZ-4H-14-2-	
2						003	
EZ-4H-14-	Eroded unidentified	Undetermined	Rim and body	1	6.88 g	EZ-4H-14-2-	
2						004; ring base	
EZ-4H-14-	Infierno black	Open	Body	2	11.89 g		
2							
EZ-4H-14-	Payaso orange-brown	Open	Body	2	43.86 g		
2							
EZ-4H-14-	Tinaja red	Jar	Shoulder	1	8.57 g		
2							
EZ-4H-14-	Tinaja red	Open	Body	7	38.21 g		
2							
EZ-4H-14-	Tinaja red	Open	Body and	1	13.93 g		
2			base				
EZ-4I-1-1	Eroded unidentified	Undetermined	Body	2	14.95 g		
EZ-4I-1-2	Augustine red	Open	Body	2	26.50 g		
EZ-4I-1-2	Eroded unidentified	Undetermined	Body	4	53.37 g		
EZ-4I-2-1	Cambio group	Jar	Rim and neck	1	16.30 g	EZ-4I-2-1-001	
	(Cambio unslipped or						
	Encanto striated)						
EZ-4I-2-1	Eroded unidentified	Undetermined	Body	7	78.63 g		
EZ-4I-2-1	Pozo unslipped	Undetermined	Body	1	5.22 g		

EZ-4I-2-1	Tinaja red	Open	Body	1	3.85 g	
EZ-4I-2-1	Tinaja red	Undetermined	Body	1	17.01 g	
EZ-4I-3-1	Encanto striated	Undetermined	Body	1	12.66 g	
EZ-4I-3-1	Eroded unidentified	Undetermined	Body	2	4.26 g	
EZ-4I-3-1	Tinaja red	Bowl	Rim and body	1	37.48 g	EZ-4I-3-1-001
EZ-4I-3-2	Eroded unidentified	Undetermined	Body	4	37.43 g	
EZ-4I-3-2	Tinaja red	Open	Body	1	9.74 g	
EZ-4I-4-1	Cambio unslipped	Undetermined	Body	2	35.16 g	
EZ-4I-4-1	Eroded unidentified	Undetermined	Body	1	33.89 g	
EZ-4I-4-1	Eroded unidentified	Undetermined	Body	1	4.31 g	
EZ-4I-4-1	Harina cream	Open	Body	1	5.34 g	
EZ-4I-4-1	Máquina brown	Open	Body	1	4.42 g	
EZ-4I-4-1	Tinaja red	Open	Body	1	6.13 g	
EZ-4I-4-2	Cambio unslipped	Undetermined	Body	2	37.70 g	
EZ-4I-4-2	Eroded unidentified	Undetermined	Body	3	15.35 g	
EZ-4I-4-3	Eroded unidentified	Undetermined	Body	4	32.32 g	
EZ-4I-4-4	Encanto striated	Undetermined	Body	1	8.04 g	
EZ-4I-4-5	Cambio unslipped	Jar	Shoulder	3	31.48 g	
EZ-4I-4-5	Cambio unslipped	Undetermined	Body	3	23.46 g	
EZ-4I-4-5	Encanto striated	Undetermined	Body	3	49.21 g	
EZ-4I-4-5	Eroded polychrome, unidentified	Bowl/dish?	Rim and body	1	11.06 g	EZ-4I-4-5-002
EZ-4I-4-5	Eroded unidentified	Undetermined	Base and support	1	20.09 g	EZ-4I-4-5- 001; ring base
EZ-4I-4-5	Eroded unidentified	Undetermined	Body	2	18.89 g	

EZ-4I-4-5	Eroded unidentified	Undetermined	Rim and body	1	5.77 g	EZ-4I-4-5-003
EZ-4I-4-5	Tinaja red	Open	Body	1	2.46 g	
EZ-4I-4-6	Encanto striated	Undetermined	Body	1	10.57 g	
EZ-4I-5-1	Eroded unidentified	Undetermined	Body	2	42.07 g	
EZ-4I-5-2	Eroded unidentified	Undetermined	Body	1	2.67 g	
EZ-4I-6-1	Augustine red	Undetermined	Body	1	29.60 g	
EZ-4I-6-1	Encanto striated	Undetermined	Body	1	9.38 g	
EZ-4I-6-1	Eroded unidentified	Jar	Rim, neck, and shoulder	1	6.58 g	EZ-4I-6-1-001
EZ-4I-6-1	Eroded unidentified	Undetermined	Body	2	15.59 g	
EZ-4I-6-1	Eroded unidentified	Undetermined	Body	4	24.30 g	
EZ-4I-6-1	Eroded unidentified	Undetermined	Rim	1	2.65 g	EZ-4I-6-1- 002; too small for modal analysis
EZ-4I-6-1	Infierno black	Open	Body	1	1.84 g	
EZ-4I-6-1	Infierno black	Open	Body	1	3.50 g	
EZ-4I-7-1	Augustine red	Open	Body	1	15.48 g	
EZ-4I-7-1	Azote orange	Bowl/dish	Rim and body	1	44.29 g	EZ-4I-7-1- 016, CR-1
EZ-4I-7-1	Azote orange	Open	Body	3	20.27 g	
EZ-4I-7-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	4	117.94 g	EZ-4I-7-1- 002, 003, 004, 005
EZ-4I-7-1	Cambio unslipped	Jar	Rim, neck, and shoulder	1	237.53 g	EZ-4I-7-1-001

EZ-4I-7-1	Cambio unslipped	Jar	Shoulder	2	34.04 g	
EZ-4I-7-1	Cambio unslipped	Jar	Shoulder	1	33.09 g	
EZ-4I-7-1	Cambio unslipped	Undetermined	Body	36	566.71 g	
EZ-4I-7-1	Encanto striated	Undetermined	Body	18	204.15 g	
EZ-4I-7-1	Eroded polychrome, unidentified	Open	Body	1	8.54 g	EZ-4I-7-1-012; not analyzed
EZ-4I-7-1	Eroded unidentified	Plate	Base and Support	1	11.5 g	EZ-4I-7-1-013; not analyzed
EZ-4I-7-1	Eroded unidentified	Undetermined	Body	18	176.01 g	
EZ-4I-7-1	Eroded unidentified	Undetermined	Body and base	4	173.08 g	
EZ-4I-7-1	Eroded unidentified	Undetermined	Rim and body	3	42.61 g	EZ-4I-008, 009, 010
EZ-4I-7-1	Eroded unidentified var. "fluted"	Undetermined	Body	1	9.97 g	EZ-4I-7-1-015; not analyzed
EZ-4I-7-1	Eroded unidentified var. channeled	Undetermined	Body	1	9.06 g	EZ-4I-7-1-014; not analyzed
EZ-4I-7-1	Payaso orange-brown	Open	Body	9	117.85 g	
EZ-4I-7-1	Pozo unslipped	Undetermined	Body	2	9.40 g	

EZ-4I-7-1	Tinaja red	Bowl	Rim and body	3	143.28 g	EZ-4I-006, 007, 011
EZ-4I-7-1	Tinaja red	Open	Body	2	18.19 g	
EZ-4I-7-1	Tinaja red	Open	Body	6	90.88 g	
EZ-4I-7-2	Augustine red	Jar	Rim and neck	1	37.46 g	EZ-4I-7-2-003
EZ-4I-7-2	Augustine red	Open	Body	1	14.58 g	
EZ-4I-7-2	Azote orange	Open	Body	1	33.44 g	
EZ-4I-7-2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	2	57.84 g	EZ-4I-7-2-004, 005
EZ-4I-7-2	Cambio unslipped	Jar	Shoulder and body	2	70.41 g	
EZ-4I-7-2	Cambio unslipped	Undetermined	Base	1	37.45 g	
EZ-4I-7-2	Cambio unslipped	Undetermined	Body	25	338.15 g	
EZ-4I-7-2	Encanto striated	Undetermined	Body	18	460.50 g	
EZ-4I-7-2	Eroded unidentified	Bowl	Rim and body	1	240.38 g	EZ-4I-7-2-001
EZ-4I-7-2	Eroded unidentified	Plate	Rim, body, and base	1	75.56 g	EZ-4I-7-2-002
EZ-4I-7-2	Eroded unidentified	Undetermined	Base	1	123.18 g	
EZ-4I-7-2	Eroded unidentified	Undetermined	Base and body	1	42.97 g	
EZ-4I-7-2	Eroded unidentified	Undetermined	Body	6	38.99 g	
EZ-4I-7-2	Eroded unidentified	Undetermined	Rim and body	1	28.14 g	EZ-4I-7-2-008

EZ-4I-7-2	Eroded unidentified var. "fluted"	Undetermined	Body	1	5.29 g	EZ-4I-7-2-007
EZ-4I-7-2	Eroded unidentified var. incised	Undetermined	Body	1	4.99 g	EZ-4I-7-2- 006; not analyzed
EZ-4I-7-2	Infierno black	Open	Body	1	18.66 g	
EZ-4I-7-2	Máquina brown	Open	Body	1	15.22 g	
EZ-4I-7-2	Máquina brown	Open	Body	1	95.01 g	
EZ-4I-7-2	Payaso orange-brown	Open	Body	2	31.47 g	
EZ-4I-7-2	Tinaja red	Open	Body	8	113.30 g	
EZ-4I-7-2	Tinaja red	Open	Body	7	163.17 g	
EZ-4I-7-3	Augustine red	Open	Body	5	131.25 g	
EZ-4I-7-3	Augustine red	Open	Body and base	1	12.83 g	
EZ-4I-7-3	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	3	66.07 g	EZ-4I-7-3- 002, 003, 004
EZ-4I-7-3	Cambio unslipped	Jar	Shoulder and body	7	130.18 g	
EZ-4I-7-3	Cambio unslipped	Undetermined	Body	48	572.52 g	
EZ-4I-7-3	Encanto striated	Jar	Shoulder and body	1	18.42 g	
EZ-4I-7-3	Encanto striated	Undetermined	Body	44	965.77 g	

EZ-4I-7-3	Eroded unidentified	Bowl/dish	Rim and body	1	59.33 g	EZ-4I-7-3-005
EZ-4I-7-3	Eroded unidentified	Bowl/dish	Rim, body, and base	1	39.03 g	EZ-4I-7-3-006
EZ-4I-7-3	Eroded unidentified	Undetermined	Body	30	408.85 g	
EZ-4I-7-3	Eroded unidentified	Undetermined	Body and base	3	107.84 g	
EZ-4I-7-3	Eroded unidentified	Undetermined	Support	1	12.95 g	EZ-4I-7-3-007
EZ-4I-7-3	Eroded unidentified var. "fluted"	Undetermined	Body	1	6.60 g	EZ-4I-7-3-008
EZ-4I-7-3	Infierno black	Undetermined	Body	1	9.14 g	
EZ-4I-7-3	Infierno black	Undetermined	Body and base	1	24.76 g	
EZ-4I-7-3	Payaso orange-brown	Open	Body	3	41.49 g	
EZ-4I-7-3	Tinaja red	Jar	Neck and shoulder	1	19.38 g	
EZ-4I-7-3	Tinaja red	Jar	Shoulder and body	1	25.06 g	EZ-4I-7-3-001
EZ-4I-7-3	Tinaja red	Open	Body	11	199.01 g	
EZ-4I-7-3	Tinaja red	Undetermined	Undetermined	1	6.10 g	EZ-4I-7-3-009
EZ-4I-8-1	Encanto striated	Undetermined	Body	3	130.97 g	
EZ-4I-8-1	Eroded unidentified	Undetermined	Body	5	28.19 g	
EZ-4I-8-1	Eroded unidentified	Undetermined	Rim	1	3.79 g	EZ-4I-8-1- 001; too small for modal

						analysis
EZ-4I-9-1	Altar orange var. Altar	Open	Body	1	3.02 g	EZ-4I-9-1-014
EZ-4I-9-1	Augustine red	Jar	Neck, shoulder, and body	1	114.93 g	EZ-4I-9-1-015
EZ-4I-9-1	Augustine red	Open	Body	1	3.61 g	
EZ-4I-9-1	Augustine red	Undetermined	Rim and body	1	33.02 g	EZ-4I-9-1-010
EZ-4I-9-1	Azote orange	Open	Body	3	29.06 g	
EZ-4I-9-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	4	204.19 g	EZ-4I-9-1-006, 007, 008, 009 (rim of 008 too small for modal analysis)
EZ-4I-9-1	Cambio unslipped	Jar	Shoulder and body	2	47.79 g	
EZ-4I-9-1	Cambio unslipped	Undetermined	Body	32	654.19 g	
EZ-4I-9-1	Chinja impressed	Bowl	Rim and body	1	140.27 g	EZ-4I-9-1-001
EZ-4I-9-1	Encanto striated	Jar	Shoulder and body	1	80.49 g	
EZ-4I-9-1	Encanto striated	Undetermined	Body	19	251.03 g	
EZ-4I-9-1	Eroded unidentified	Bowl	Rim and body	2	196.04 g	EZ-4I-9-1-002, 003
EZ-4I-9-1	Eroded unidentified	Plate	Rim, body,	2	145.48	EZ-4I-9-1-

			and base		g	004, 005
EZ-4I-9-1	Eroded unidentified	Undetermined	Body	12	190.29	
					g	
EZ-4I-9-1	Eroded unidentified	Undetermined	Body and base	1	12.56 g	
EZ-4I-9-1	Eroded unidentified	Undetermined	Rim and body	1	3.28 g	EZ-4I-9-1-012
EZ-4I-9-1	Harina cream	Open	Body	3	16.02 g	
EZ-4I-9-1	Infierno black	Open	Body	1	5.73 g	
EZ-4I-9-1	Infierno black	Open	Body	1	13.34 g	
EZ-4I-9-1	Payaso orange-brown	Open	Body	5	152.12	
					g	
EZ-4I-9-1	Poite incised	Undetermined	Body	1	1.87 g	EZ-4I-9-1-013
EZ-4I-9-1	Tinaja red	Jar	Shoulder and body	1	7.09 g	
EZ-4I-9-1	Tinaja red	Open	Body	15	304.10	
					g	
EZ-4I-9-1	Tinaja red	Undetermined	Rim and body	1	22.19 g	EZ-4I-9-1-011
EZ-4I-9-2	Augustine red	Open	Body	1	16.02 g	
EZ-4I-9-2	Cambio unslipped	Jar	Neck and shoulder	1	82.43 g	
EZ-4I-9-2	Cambio unslipped	Undetermined	Body	16	178.27	
					g	
EZ-4I-9-2	Cambio unslipped	Undetermined	Rim	1	5.54 g	EZ-4I-9-2- 004; too small for modal analysis
EZ-4I-9-2	Encanto striated	Undetermined	Body	17	392.72	

					g	
EZ-4I-9-2	Eroded unidentified	Jar	Shoulder and body	5	65.49 g	
EZ-4I-9-2	Eroded unidentified	Undetermined	Base and Support	1	3.58 g	EZ-4I-9-2- 002; not analyzed
EZ-4I-9-2	Eroded unidentified	Undetermined	Body	11	180.46 g	
EZ-4I-9-2	Eroded unidentified	Undetermined	Body, base and Support	1	27.89 g	EZ-4I-9-2- 001; not analyzed
EZ-4I-9-2	Eroded unidentified	Undetermined	Rim and body	1	4.95 g	EZ-4I-9-2- 003; too small for modal analysis
EZ-4I-9-2	Tinaja red	Bowl/dish o Vase	Rim and body	1	161.98 g	EZ-4I-9-2-006
EZ-4I-9-2	Tinaja red	Open	Body	2	19.98 g	
EZ-4I-9-2	Tinaja red	Open	Body	10	190.65 g	
EZ-4I-9-2	Tinaja red	Undetermined	Rim	1	3.10 g	EZ-4I-9-2- 005; too small for modal analysis
EZ-4I-9-3	Augustine red	Jar	Rim and neck	1	28.41 g	EZ-4I-9-3- 013, CR-34
EZ-4I-9-3	Augustine red	Open	Body	5	69.83 g	

EZ-4I-9-3	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	16.56 g	EZ4I-9-3-005
EZ-4I-9-3	Cambio unslipped	Jar	Rim, neck and Shoulder	1	22.85 g	
EZ-4I-9-3	Cambio unslipped	Jar	Shoulder and body	3	107.54 g	
EZ-4I-9-3	Cambio unslipped	Undetermined	Body	24	424.97 g	
EZ-4I-9-3	Cambio unslipped	Vase?	Rim and body	1	17.48 g	EZ-4I-9-3-006
EZ-4I-9-3	Chinja impressed	Bowl/dish	Rim and body	1	62.40 g	EZ-4I-9-3- 012, CR-32
EZ-4I-9-3	Encanto striated	Jar	Shoulder and body	1	30.48 g	
EZ-4I-9-3	Encanto striated	Undetermined	Body	2	489.62 g	
EZ-4I-9-3	Eroded polychrome, unidentified	Open	Body	2	115.07 g	EZ-4I-9-3- 009; not analyzed
EZ-4I-9-3	Eroded unidentified	Jar	Shoulder and body	1	7.94 g	
EZ-4I-9-3	Eroded unidentified	Plate	Rim, body, and base	1	65.33 g	EZ-4I-9-3- 003; ring base
EZ-4I-9-3	Eroded unidentified	Undetermined	Base	1	26.69 g	
EZ-4I-9-3	Eroded unidentified	Undetermined	Body	21	498.22 g	
EZ-4I-9-3	Eroded unidentified	Undetermined	Rim	2	6.30 g	EZ-4I-9-3-

						007; not analyzed
EZ-4I-9-3	Harina cream	Open	Body	1	8.14 g	
EZ-4I-9-3	Harina cream	Open	Body	1	34.02 g	EZ-4I-9-3-002
EZ-4I-9-3	Harina cream	Open	Body and base	1	127.10 g	
EZ-4I-9-3	Máquina brown	Open	Body	1	29.22 g	
EZ-4I-9-3	Pantano impressed	Jar	Neck and shoulder	1	28.58 g	EZ-4I-9-3- 010, CR-30
EZ-4I-9-3	Payaso orange-brown	Open	Body	1	29.57 g	EZ-4I-9-3- 001; CR-77
EZ-4I-9-3	Payaso orange-brown	Open	Body	2	19.60 g	
EZ-4I-9-3	Payaso orange-brown	Open	Body	1	5.11 g	
EZ-4I-9-3	Pozo unslipped	Undetermined	Body	2	12.61 g	
EZ-4I-9-3	Tinaja red	Bowl/dish	Rim and body	1	15.30 g	EZ-4I-9-3-004
EZ-4I-9-3	Tinaja red	Bowl?	Rim	1	6.83 g	EZ-4I-9-3- 008; not analyzed
EZ-4I-9-3	Tinaja red	Open	Body	4	60.76 g	
EZ-4I-9-3	Tinaja red	Open	Body	6	84.27 g	
EZ-4I-9-3	Tinaja red	Undetermined	Body and base	1	132.85 g	
EZ-4I-10-1	Eroded unidentified	Undetermined	Body	6	104.30 g	
EZ-4I-10-1	Payaso orange-brown	Open	Body	1	9.26 g	
EZ-4J-1-1	Cambio unslipped	Jar	Shoulder and body	1	28.78 g	

EZ-4J-1-1	Cambio unslipped	Undetermined	Body	2	17.66 g	
EZ-4J-1-1	Encanto striated	Undetermined	Body	1	9.52 g	
EZ-4J-1-1	Eroded unidentified	Undetermined	Body	3	23.65 g	
EZ-4J-2-1	Cambio unslipped	Undetermined	Body	3	50.11 g	
EZ-4J-2-1	Cambio unslipped	Undetermined	Body	5	66.94 g	
EZ-4J-2-1	Cambio unslipped	Undetermined	Rim	1	27.49 g	EZ-4J-2-1-002
EZ-4J-2-1	Encanto striated	Undetermined	Body	1	6.23 g	
EZ-4J-2-1	Eroded unidentified	Undetermined	Body	1	3.53 g	
EZ-4J-2-1	Eroded unidentified	Undetermined	Body	2	17.34 g	
EZ-4J-2-1	Eroded unidentified (channeled and impressed)	Bowl	Rim and body	1	32.58 g	EZ-4J-2-1- 001; too small for modal analysis
EZ-4J-2-2	Cambio unslipped	Jar	Rim, neck, and shoulder	1	13.32 g	EZ-4J-2-2-001
EZ-4J-2-2	Cambio unslipped	Undetermined	Body	3	15.76 g	
EZ-4J-2-2	Cambio unslipped	Undetermined	Body	3	28.81 g	
EZ-4J-2-2	Encanto striated	Jar	Shoulder and body	1	30.98 g	
EZ-4J-2-2	Encanto striated	Undetermined	Body	4	78.80 g	
EZ-4J-2-2	Eroded unidentified	Undetermined	Body	8	106.82 g	
EZ-4J-2-3	Cambio unslipped	Undetermined	Body	2	78.27 g	
EZ-4J-2-3	Encanto striated	Undetermined	Body	1	21.74 g	
EZ-4J-2-3	Tinaja red	Open	Body	1	18.01 g	

EZ-4J-2-4	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	57.52 g	EZ-4J-2-4-002
EZ-4J-2-4	Cambio unslipped	Jar	Shoulder and body	6	78.46 g	
EZ-4J-2-4	Cambio unslipped	Undetermined	Body	9	107.31 g	
EZ-4J-2-4	Cambio unslipped	Undetermined	Body	1	15.18 g	
EZ-4J-2-4	Encanto striated	Undetermined	Body	7	149.87 g	
EZ-4J-2-4	Eroded polychrome, unidentified	Bowl/dish?	Rim and body	1	35.72 g	EZ-4J-2-4-003
EZ-4J-2-4	Eroded polychrome, unidentified	Plate?	Rim and body	1	27.58 g	EZ-4J-2-4-004
EZ-4J-2-4	Eroded unidentified	Bowl/dish	Rim and body	1	14.43 g	EZ-4J-2-4-005
EZ-4J-2-4	Eroded unidentified	Undetermined	Body	3	54.23 g	
EZ-4J-2-4	Máquina brown	Open	Body	1	48.32 g	
EZ-4J-2-4	Tinaja red	Jar	Rim, neck, shoulder and body	1	164.15 g	EZ-4J-2-4-001
EZ-4J-2-4	Tinaja red	Open	Body	3	43.90 g	
EZ-4J-2-4	Tinaja red	Open	Body	3	16.84 g	
EZ-4J-2-5	Encanto striated	Undetermined	Body	2	15.91 g	
EZ-4J-2-5	Tinaja red	Open	Body	1	3.84 g	
EZ-4J-2-6	Cambio unslipped	Jar	Shoulder	1	17.95 g	
EZ-4J-2-6	Cambio unslipped	Undetermined	Body	3	58.23 g	
EZ-4J-2-6	Eroded unidentified	Undetermined	Base	1	58.18 g	

EZ-4K-1-1	Cambio unslipped	Undetermined	Body	30	565.11 g	
EZ-4K-1-1	Cambio unslipped	Undetermined	Body and base	1	99.81 g	
EZ-4K-1-1	Encanto striated	Undetermined	Body	8	96.27 g	
EZ-4K-1-1	Eroded unidentified	Undetermined	Body	30	352.23 g	
EZ-4K-1-1	Eroded unidentified	Undetermined	Body and base	1	13.16 g	
EZ-4K-1-1	Tinaja red	Open	Body	4	54.64 g	
EZ-4K-1-1	Tinaja red	Open	Body	8	62.09 g	
EZ-4K-2-1	Eroded unidentified	Undetermined	Body	9	8.513 g	
EZ-4K-2-1	Eroded unidentified	Undetermined	Rim and body	1	10.80 g	EZ-4K-2-1-001
EZ-4L-1-1&2	Azote orange	Undetermined	Body	2	5.89 g	
EZ-4L-1-1&2	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	2	46.08 g	EZ-4L-1-1-001, 002
EZ-4L-1-1&2	Cambio unslipped	Jar	Rim	1	7.35 g	EZ-4L-1-1-003; too small for modal analysis
EZ-4L-1-1&2	Cambio unslipped	Undetermined	Body	24	408.99 g	
EZ-4L-1-1&2	Corozal incised	Bowl	Rim and body	2	59.80 g	EZ-4L-1-1-005, 006

EZ-4L-1-1&2	Encanto striated	Undetermined	Body	3	101.43 g	
EZ-4L-1-1&2	Eroded polychrome, unidentified	Open	Body	2	9.28 g	EZ-4L-1-1-007
EZ-4L-1-1&2	Eroded unidentified	Undetermined	Body	11	59.65 g	
EZ-4L-1-1&2	Eroded unidentified	Undetermined	Rim	1	5.34 g	EZ-4L-1-1-004; too small for modal analysis
EZ-4L-1-1&2	Máquina brown	Open	Body	1	4.45 g	
EZ-4L-1-1&2	Payaso orange-brown	Open	Body	2	22.57 g	
EZ-4L-1-1&2	Pozo unslipped	Undetermined	Body	1	3.12 g	
EZ-4L-1-1&2	Tinaja red	Open	Body	1	1.90 g	
EZ-4L-1-1&2	Tinaja red	Open	Body	16	54.39 g	
EZ-4L-1-1&2	Zacatal cream polychrome	Open	Body	1	20.90 g	EZ-4L-1-1-008
EZ-4M-1-1	Eroded unidentified	Undetermined	Body	2	51.42 g	
EZ-4M-2-1	Cambio unslipped	Jar	Shoulder	1	18.99 g	
EZ-4M-2-1	Encanto striated	Undetermined	Body	2	40.80 g	
EZ-4M-2-1	Eroded unidentified	Bowl/dish	Rim and body	1	25.49 g	EZ-4M-2-1-001; probably

						Chaquiste impressed before erosion
EZ-4M-2-1	Eroded unidentified	Undetermined	Body	1	3.51 g	EZ-4M-2-1- 002; basal flange; not analyzed
EZ-4M-2-1	Eroded unidentified	Undetermined	Body	8	60.42 g	
EZ-4N-1-1	Eroded unidentified	Plate	Rim, body, and base	1	17.91 g	EZ-4N-1-1- 001
EZ-4N-1-2	Cambio unslipped	Undetermined	Body	3	24.47 g	
EZ-4N-1-2	Eroded unidentified	Undetermined	Body	6	41.61 g	
EZ-4N-1-2	Payaso orange-brown	Open	Body	1	89.74 g	
EZ-4N-1-2	Tinaja red	Open	Body	1	5.26 g	
EZ-4N-1-3	Cambio unslipped	Undetermined	Body	2	9.57 g	
EZ-4N-1-3	Encanto striated	Undetermined	Body	2	11.01 g	
EZ-4N-1-3	Eroded unidentified	Undetermined	Body	4	25.63 g	
EZ-4S-1-1	Cambio unslipped	Jar	Shoulder	1	44.79 g	
EZ-4S-1-1	Encanto striated	Undetermined	Body	1	107.89 g	
EZ-4S-1-1	Eroded unidentified	Bowl	Rim and body	1	96.95 g	EZ-4S-1-1-001
EZ-4S-1-1	Eroded unidentified	Undetermined	Body	2	55.47 g	
EZ-4S-1-1	Eroded unidentified	Undetermined	Body and base	1	364.99 g	
EZ-4X-1-1	Encanto striated	Jar	Rim, neck, Shoulder and	1	154.85 g	EZ-4X-1-1- 001

			body			
EZ-4X-1-1	Encanto striated	Undetermined	Body	1	29.89 g	
EZ-4X-1-1	Eroded unidentified	Undetermined	Body	4	66.83 g	
EZ-4X-1-1	Tinaja red	Open	Body	1	159.83 g	
EZ-4X-2-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	33.54 g	EZ-4X-2-1-002
EZ-4X-2-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	1	51.63 g	EZ-4X-2-1-003
EZ-4X-2-1	Cambio unslipped	Bowl/dish	Rim and body	1	77.82 g	EZ-4X-2-1-004
EZ-4X-2-1	Cambio unslipped	Jar	Rim, neck and shoulder	1	16.21 g	EZ-4X-2-1-005
EZ-4X-2-1	Cambio unslipped	Jar	Shoulder and body	10	138.15 g	
EZ-4X-2-1	Cambio unslipped	Undetermined	Body	9	37.35 g	
EZ-4X-2-1	Cambio unslipped	Undetermined	Body	50	28.17 g	
EZ-4X-2-1	Cambio unslipped	Undetermined	Body and base	1	448.24 g	
EZ-4X-2-1	Cambio unslipped	Undetermined	Body and base	1	261.00 g	
EZ-4X-2-1	Cambio unslipped	Undetermined	Rim	1	7.06 g	EZ-4X-2-1-007
EZ-4X-2-1	Corozal incised	Bowl/dish	Rim and body	1	4.38 g	EZ-4X-2-1-

EZ-4X-2-1	Encanto striated	Jar	Shoulder and body	1	481.61 g	
EZ-4X-2-1	Encanto striated	Undetermined	Body	2	132.17 g	
EZ-4X-2-1	Encanto striated	Undetermined	Body	3	2.60 g	
EZ-4X-2-1	Encanto striated	Undetermined	Body	23	45.31 g	
EZ-4X-2-1	Eroded polychrome, unidentified	Open	Body	2	36.44 g	EZ-4X-2-1- 010; not analyzed
EZ-4X-2-1	Eroded polychrome, unidentified	Undetermined	Body and base	2	46.42 g	EZ-4X-2-1- 011; not analyzed
EZ-4X-2-1	Eroded unidentified	Undetermined	Body	2	28.83 g	
EZ-4X-2-1	Eroded unidentified	Undetermined	Body	13	4.5 g	
EZ-4X-2-1	Infierno black	Open	Body	2	28.02 g	
EZ-4X-2-1	Máquina brown	Open	Body	3	28.02 g	
EZ-4X-2-1	Payaso orange-brown o Máquina brown cocido a una temperatura muy alta	Open	Body	4	39.03 g	
EZ-4X-2-1	Saxche/Palmar orange polychrome	Open	Body	1	1345.5 6 g	EZ-4X-2-1- 001; not analyzed
EZ-4X-2-1	Saxche/Palmar orange polychrome	Open	Body	2	22.95 g	EZ-4X-2-1- 009
EZ-4X-2-1	Tinaja red	Jar	Rim and neck	1	8.01 g	EZ-4X-2-1-

						008; not analyzed
EZ-4X-2-1	Tinaja red	Jar	Rim, neck and shoulder	1	17.7 g	EZ-4X-2-1- 014, Muestra 20, EZ0178
EZ-4X-2-1	Tinaja red	Jar	Rim, neck and shoulder	1	90.45 g	EZ-4X-2-1- 012
EZ-4X-2-1	Tinaja red	Jar	Rim, neck and shoulder	1	28.17 g	EZ-4X-2-1- 013; tagged as EZ-4X-2-1- 012 in photograph
EZ-4X-2-1	Tinaja red	Jar	Shoulder and body	1	25.63 g	
EZ-4X-2-1	Tinaja red	Open	Body	1	7.3 g	EZ-4X-2-1- 016, Muestra 59; not analyzed
EZ-4X-2-1	Tinaja red	Open	Body	1	38.69 g	
EZ-4X-2-1	Tinaja red	Open	Body	2	87.60 g	
EZ-4X-2-1	Tinaja red	Open	Body	4	95.80 g	
EZ-4X-2-1	Tinaja red	Open	Body	6	54.98 g	
EZ-4X-2-1	Tinaja red	Open	Body	5	126.88 g	
EZ-4X-2-1	Tinaja red	Open	Body	8	18.27 g	
EZ-4X-2-1	Zacatal cream polychrome	Open	Rim and body	1	16.2 g	EZ-4X-2-1- 015, Muestra 21

EZ-4X-2-2	Tinaja red	Bowl/dish	Rim and body	1	92.1 g	EZ-4X-2-2- 195, Muestra 27
EZ-4X-3-1	Cambio unslipped	Jar	Shoulder	1	14.68 g	
EZ-4X-3-1	Cambio unslipped	Undetermined	Body	13	8.05 g	
EZ-4X-3-1	Encanto striated	Undetermined	Body	8	2.00 g	
EZ-4X-3-1	Eroded unidentified	Undetermined	Base	1	29.98 g	
EZ-4X-3-1	Eroded unidentified	Undetermined	Body	3	6.94 g	
EZ-4X-3-1	Eroded unidentified	Undetermined	Rim	1	55.47 g	EZ-4X-3-1- 001; not analyzed
EZ-4X-3-1	Infierno black	Open	Body	1	151.00 g	
EZ-4X-3-1	Tinaja red	Jar	Shoulder and body	1	8.40 g	
EZ-4X-3-1	Tinaja red	Open	Body	2	52.17 g	
EZ-4X-3-1	Tinaja red	Open	Body	4	1.70 g	
EZ-4X-4-1	Cambio unslipped	Undetermined	Body	7	4.03 g	
EZ-4X-4-1	Cambio unslipped	Undetermined	Rim and body	2	1.37 g	EZ-4X-4-1- 001, 002
EZ-4X-4-1	Encanto striated	Undetermined	Body	2	7.52 g	
EZ-4X-4-1	Eroded unidentified	Undetermined	Body	6	24.76 g	
EZ-4X-4-1	Eroded unidentified	Undetermined	Body and base	1	20.97 g	
EZ-4X-4-1	Infierno black	Open	Body and base	1	5.68 g	
EZ-4X-4-1	Máquina brown	Open	Body	1	34.91 g	

EZ-4X-4-1	Tinaja red	Open	Body	3	22.28 g	
EZ-4X-4-1	Tinaja red	Open	Body	2	32.45 g	
EZ-4X-4-1	Zacatal cream polychrome	Open	Body	1	79.78 g	EZ-4X-4-1-003; TUUN-ni glyphic spelling
EZ-4X-8-1	Saxche/Palmar orange polychrome	Bowl/dish	Rim, body, and base	1	702.42 g	EZ-4X-8-1-001; IDAEH complete vessel 17.7.88.26
EZ-4X-9-1	Guitarra incised	Jar	Rim and body	1	60.0 g	EZ-4X-9-2-003, Muestra 86, EZ0179
EZ-4X-9-1	Maquina brown	Bowl/dish	Rim and body	1	31.5 g	EZ-4X-9-2-001, Muestra 89
EZ-4X-9-1	Saxche/Palmar orange polychrome	Open	Rim and body	1	4.51 g	EZ-4X-9-2-004, Muestra 88
EZ-4X-9-1	Saxche/Palmar orange polychrome	Plate	Rim, body, and base	1	900 g	EZ-4X-9-1-001; the larger sherd was found by IDAEH after Las Palmitas was sacked in the 1970s, but

the smaller
was found in
4X-9-1 in
2007

EZ-4X-9-1	Tinaja red	Bowl/dish	Rim and body	1	20.9 g	EZ-4X-9-2-002, Muestra 90
EZ-4X-9-1	Unidentified red type	Open	Body	1	13.9 g	EZ-4X-9-2-006, Muestra 85; not analyzed; high fired, abundant ash
EZ-4X-9-1	Zacatal cream polychrome	Open	Body	1	13.2	EZ-4X-9-2-005, Muestra 87; not analyzed
EZ-4X-10-1	Bícromo red sobre orange unidentified	Jar	Shoulder and body	1	12.08 g	EZ-4X-10-1-002; not analyzed
EZ-4X-10-1	Bicromo red sobre orange unidentified	Open	Base	1	39.91 g	EZ-4X-10-1-001; not analyzed
EZ-4X-10-1	Cambio unslipped	Jar	Rim, neck and shoulder	1	86.72 g	EZ-4X-10-1-026
EZ-4X-10-1	Cambio unslipped	Undetermined	Body	1	9.70 g	

EZ-4X-10-1	Encanto striated	Undetermined	Body	2	147.11 g	
EZ-4X-10-1	Eroded unidentified	Undetermined	Body	1	16.60 g	
EZ-4X-10-1	Saxche/Palmar orange polychrome	Bowl/dish	Rim and body	1	30.41 g	EZ-4X-10-1-003
EZ-4X-10-1	Tinaja red	Bowl	Rim and body	1	84.90 g	EZ-4X-10-1-004
EZ-4X-10-1	Tinaja red	Open	Body	2	92.41 g	
EZ-4X-10-1	Tinaja red	Open	Body	1	9.61 g	
EZ-4X-10-1	Zacatal cream polychrome	Bowl/dish	Rim and body	1	20.68 g	EZ-4X-10-1-005
EZ-4X-11-3	Chaquiste impressed	Bowl	Rim and body	1	41.50 g	EZ-4X-11-3-001
EZ-4X-11-3	Tinaja red	Jar	Rim, neck, Shoulder and body	1	123.35 g	EZ-4X-11-3-002
EZ-4X-11-3	Tinaja red	Jar	Rim, neck, shoulder and body	1	150.85 g	EZ-4X-11-3-003
EZ-4X-12-1	Azote orange	Open	Body	1	31.75 g	
EZ-4X-12-1	Cambio unslipped	Jar	Rim, neck and shoulder	1	32.98 g	
EZ-4X-12-1	Encanto striated	Undetermined	Body	6	98.51 g	

EZ-4X-12-1	Harina cream	Open	Body	1	5.37 g	
EZ-4X-12-1	Máquina brown	Open	Body	1	5.20 g	
EZ-4X-12-1	Saxche/Palmar orange polychrome	Open	Base	1	20.89 g	EZ-4X-12-1-001; not analyzed
EZ-4X-12-1	Saxche/Palmar orange polychrome	Open	Base and support	1	14.28 g	EZ-4X-12-1-002; not analyzed; marked as EZ-4X-12-1-001 in the photograph
EZ-4X-12-1	Tinaja red	Open	Body and base	1	307.49 g	
EZ-4X-13-1	Cambio unslipped	Jar	Shoulder and body	18	27.38 g	2 bolsas
EZ-4X-13-1	Cambio unslipped	Undetermined	Rim	2	141.37 g	EZ-4X-13-1-003; rim too eroded for modal analysis
EZ-4X-13-1	Cambio unslipped	Undetermined	Rim	3	5.97 g	
EZ-4X-13-1	Encanto striated	Undetermined	Body	9	2.47 g	
EZ-4X-13-1	Eroded unidentified	Jar	Rim and body	1	15.32 g	EZ-4X-13-1-002

EZ-4X-13- 1	Eroded unidentified	Open	Body	1	82.41 g	
EZ-4X-13- 1	Eroded unidentified	Undetermined	Body	12	29.74 g	
EZ-4X-13- 1	Infierno black	Open	Body	4	96.67 g	
EZ-4X-13- 1	Payaso orange-brown (possibly high-fired Tinaja red)	Open	Body	3	19.05 g	
EZ-4X-13- 1	Tinaja red	Open	Body	4	3.02 g	
EZ-4X-13- 1	Tinaja red	Open	Rim and body	1	33.15 g	
EZ-4X-13- 1	Tinaja red	Undetermined	Rim	1	17.70 g	EZ-4X-13-1- 001
EZ-4X-13- 1	Zacatal cream polychrome	Open	Body	1	6.03 g	
EZ-4X-13- 2	Cambio unslipped	Undetermined	Body	17	58.43 g	
EZ-4X-13- 2	Encanto striated	Undetermined	Body	6	188.17 g	
EZ-4X-13- 2	Eroded unidentified	Open	Body	1	70.36 g	
EZ-4X-13- 2	Eroded unidentified	Undetermined	Body	6	23.31 g	
EZ-4X-13- 2	Infierno black	Open	Body	3	8.68 g	
EZ-4X-13-	Saxche/Palmar orange	Aberta	Body	1	598.93	EZ-4X-13-2-

2	polychrome				g	001; not analyzed
EZ-4X-13-2	Tinaja red	Open	Body	3	42.46 g	
EZ-4X-13-2	Tinaja red	Open	Body	7	6.27 g	
EZ-4X-13-3	Cambio unslipped	Jar	Rim and body	1	109.39 g	EZ-4X-13-3-003
EZ-4X-13-3	Cambio unslipped	Jar	Shoulder	2	21.47 g	
EZ-4X-13-3	Cambio unslipped	Undetermined	Body	24	81.33 g	
EZ-4X-13-3	Encanto striated	Undetermined	Body	5	14.47 g	
EZ-4X-13-3	Eroded unidentified	Bowl	Rim and body	1	26.17 g	EZ-4X-13-3-001
EZ-4X-13-3	Eroded unidentified	Plate	Rim, body, and base	1	16.70 g	EZ-4X-13-3-005
EZ-4X-13-3	Eroded unidentified	Undetermined	Body	8	73.87 g	
EZ-4X-13-3	Eroded unidentified var. channeled	Bowl	Rim and body	1	22.65 g	EZ-4X-13-3-002
EZ-4X-13-3	Infierno black	Open	Body	2	34.11 g	
EZ-4X-13-3	Infierno black	Open	Body	2	52.41 g	
EZ-4X-13-3	Máquina brown	Open	Body	6	40.45 g	

EZ-4X-13-3	Máquina brown	Open	Body and base	1	88.37 g	
EZ-4X-13-3	Saxche/Palmar orange polychrome	Open	Body	2		EZ-4X-13-3-006; not analyzed
EZ-4X-13-3	Saxche/Palmar orange polychrome	Vase?	Body and base	1	47.61 g	EZ-4X-13-3-004
EZ-4X-13-3	Tinaja red	Open	Body	2	11.32 g	
EZ-4X-13-3	Tinaja red	Open	Body	3	60.50 g	
EZ-4X-14-1	Cambio group (Cambio unslipped or Encanto striated)	Jar	Rim and neck	7	32.49 g	EZ-4X-14-1-012, 013, 014, 015, 017, 018, 020; 020 not analyzed
EZ-4X-14-1	Cambio unslipped	Jar	Rim, neck and shoulder	2	233.85 g	EZ-4X-14-1-011, 016
EZ-4X-14-1	Cambio unslipped	Jar	Rim, neck and shoulder	1	183.43 g	EZ-4X-14-1-023; to IDAEH type collection
EZ-4X-14-1	Cambio unslipped	Jar	Shoulder and body	4	60.07 g	
EZ-4X-14-1	Cambio unslipped	Undetermined	Body	59	660.77 g	
EZ-4X-14-1	Encanto striated	Jar	Shoulder and body	6	208.36 g	

EZ-4X-14-1	Encanto striated	Undetermined	Body	25	604.07 g	
EZ-4X-14-1	Eroded polychrome, unidentified	Open	Body	1	4.22 g	EZ-4X-14-1-007; not analyzed
EZ-4X-14-1	Eroded unidentified	Jar	Rim, neck and shoulder	1	77.89 g	EZ-4X-14-1-019
EZ-4X-14-1	Eroded unidentified	Undetermined	Body	5	51.40 g	
EZ-4X-14-1	Eroded unidentified	Undetermined	Body	2	140.95 g	
EZ-4X-14-1	Eroded unidentified	Undetermined	Body and base	2	15.63 g	
EZ-4X-14-1	Paixbán polychrome	Bowl/dish	Rim and body	1	19.57 g	EZ-4X-14-1-024
EZ-4X-14-1	Paixbán polychrome	Bowl/dish	Rim and body	1	34.91 g	EZ-4X-14-1-009; CR-81
EZ-4X-14-1	Saxche/Palmar orange polychrome	Bowl/dish	Body and base	1	26.93 g	EZ-4X-14-1-002; not analyzed
EZ-4X-14-1	Saxche/Palmar orange polychrome	Open	Body	1	57.95 g	EZ-4X-14-1-001; not analyzed
EZ-4X-14-1	Saxche/Palmar orange polychrome	Open	Body	1	26.94 g	EZ-4X-14-1-004; CR-86; not analyzed
EZ-4X-14-1	Saxche/Palmar orange polychrome	Open	Body	1	16.88 g	EZ-4X-14-1-006; not

						analyzed
EZ-4X-14-1	Saxche/Palmar orange polychrome	Open	Support	1	30.93 g	EZ-4X-14-1-021; CR-85
EZ-4X-14-1	Saxche/Palmar orange polychrome	Plate(?)	Rim and body	1	216.09 g	EZ-4X-14-1-010; CR-82
EZ-4X-14-1	Tinaja red	Open	Base	1	27.10 g	
EZ-4X-14-1	Tinaja red	Open	Body	7	73.91 g	
EZ-4X-14-1	Tinaja red	Open	Body	16	27.67 g	
EZ-4X-14-1	Unidentified red on orange bichrome	Open	Body	1	21.53 g	EZ-4X-14-1-008; not analyzed
EZ-4X-14-1	Zacatal cream polychrome	Open	Body	1	4.08 g	EZ-4X-14-1-025
EZ-4X-14-1	Zacatal cream polychrome	Undetermined	Support	2	219.30 g	EZ-4X-14-1-022; not analyzed
EZ-4X-14-1	Zacatal cream polychrome	Vase(?)	Body	1	18.43 g	EZ-4X-14-1-003; CR-84; not analyzed
EZ-4X-14-1	Zacatal cream polychrome	Vase(?)	Body	1	22.62 g	EZ-4X-14-1-005; CR-83; not analyzed

APPENDIX C

MONUMENTS CONSIDERED IN THE EPIGRAPHIC AND ICONOGRAPHIC SURVEY

This appendix presents a list of monuments the study of which informed the conclusions presented in Chapter Four of the present dissertation. Not all these monuments were explicitly discussed in that chapter, which presents only generally identified themes and trends and some highlights of the epigraphic and iconographic survey. Nevertheless, they are listed here in order to clarify the origins of the ideas discussed above, and to facilitate readers' own investigations.

Long Count	Gregorian date	Monument	Protagonists mentioned in Table 4.1
9.18.0.0.0	Oct. 12, 790	Aguateca Stela 7	<i>Tahn Te' K'ihnich</i> (Mut king at Aguateca)
9.18.0.0.0	Oct. 12, 790	Cancuen Stela 2	
9.18.0.0.0	Oct. 12, 790	Ixkun Stela 1	<i>K'iyel Janab</i> (Juluup king at Ixkun/Sacul) and <i>Boloon-te'</i> <i>Tuun</i> (successor or co-ruler?)
9.18.0.0.0	Oct. 12, 790	La Muñeca Stela 4	
9.18.0.0.0	Oct. 12, 790	Naranjo Stela 14	<i>?Itzamnaaj K'awiil</i> (Sa'aal king at Naranjo)
9.18.0.0.0	Oct. 12, 790	Pomona Panel 6	
9.18.0.0.0	Oct. 12, 790	Tikal Stela 19	<i>Yax Nuun Ahiin II</i> (Mut king at

			Tikal)
9.18.0.0.0	Oct. 12, 790	Quirigua	“Skyraiser” <i>Yopaat</i> (King of Quirigua)
		Zoomorph O	
9.18.0.0.0	Oct. 12, 790	Quirigua	“Skyraiser” <i>Yopaat</i> (King of Quirigua)
		Zoomorph O’	
9.18.0.0.0	Oct. 12, 790	Tayasal Lintel 1	
9.18.0.0.0	Oct. 12, 790	Tonina Monument	
		20	
9.18.0.0.0	Oct. 12, 790	Sacul Stela 2	Probably <i>K’iyel Janab (Juluup</i> king at Ixkun/Sacul) and <i>Boloon-te’ Tuun</i> (successor or co-ruler?)
9.18.0.0.0	Oct. 12, 790	Sacul Stela 9	Possibly <i>K’iyel Janab (Juluup</i> king at Ixkun/Sacul)
Ca. 9.18.1.2.0	Ca. Nov. 16, 791	Bonampak Str. 1	<i>Yajaw Chan Muwaan</i> (king of Bonampak), <i>Chooj</i> (prince), ? <i>Yaxuun Bahlam</i> (prince), courtiers
9.18.1.13.2	June 25, 792	Copan Altar U	<i>Yax Pahsaj Chan Yopaat</i> (? <i>Xukuup</i> king at Copan)
9.18.3.0.0	Sep. 26, 793	Yaxha Stela 31	
9.18.3.10.17	May 1, 794	Tonina Monument	Tonina Ruler 8 (<i>Popo’</i> king at Tonina)
		114	
9.18.5.0.0	Sep. 1, 795	Cancuen Ballcourt	

		Marker 1	
9.18.5.0.0	Sep. 1, 795	Copan Str. 10L-22 inscribed cylinder	<i>Yax Pahsaj Chan Yopaat</i> (?Xukuup king at Copan)
9.18.5.0.0	Sep. 1, 795	Piedras Negras Stela 12	“Ruler 7” (<i>Yokib</i> king at Piedras Negras), [...] <i>Ahk</i> (<i>Pe’tuun</i> king at La Mar), and another vassal lord
9.18.5.0.0	Sep. 1, 795	Quirigua Zoomorph P	“Skyraiser” <i>Yopaat</i> (King of Quirigua)
9.18.5.0.0	Sep. 1, 795	Quirigua Zoomorph P’	“Skyraiser” <i>Yopaat</i> (King of Quirigua)
9.18.5.0.0	Sep. 1, 795	Xultun Stela 14	
9.18.5.5.19	Jan. 13, 796	Cancuen Ballcourt	
		Marker 2	
9.18.5.8.1	Feb. 24, 796	Ixkun Stela 4	Possibly <i>Boloon-te’ Tuun</i> (successor or co-ruler to <i>K’iyel</i> <i>Janib</i> , <i>Juluup</i> king at Ixkun/ Sacul)
9.18.7.0.0	Sep. 5, 797	Yaxha Stela 13	<i>K’ihnich Lakamtuun</i> (<i>Yaxa’</i> king at Yaxha)
9.18.8.6.14	Jan. 12, 799	Cancuen Panel 1	<i>Taj Chan Ahk</i> (“Cancuen” and “Machaquila” king at Cancuen)
9.18.10.0.0	Aug. 20, 800	Altar de los Reyes	

		Stela 1	
9.18.10.0.0	Aug. 20, 800	Caracol Altar 23	<i>K'ihnich Joy K'awiil and Tum Yohl K'ihnich</i> (co-rulers at Caracol)
9.18.10.0.0	Aug. 20, 800	Caracol Stela 11	<i>K'ihnich Joy K'awiil</i> (king of Caracol)
9.18.10.0.0	Aug. 20, 800	Ceibal Stela 5	<i>Ajaw Bo't</i> (holy "Banded Bird" king at Ceibal)
9.18.10.0.0	Aug. 20, 800	Ceibal Stela 7	<i>Ajaw Bo't</i> (holy "Banded Bird" king at Ceibal)
9.18.10.0.0	Aug. 20, 800	Ixkun Stela 5	
9.18.10.0.0	Aug. 20, 800	Naranjo Stela 12	<i>?Itzamnaaj K'awiil</i> (<i>Sa'aal</i> king at Naranjo), possibly one or more sub-royal lords
9.18.10.0.0	Aug. 20, 800	Naranjo Stela 35	<i>?Itzamnaaj K'awiil</i> (<i>Sa'aal</i> king at Naranjo)
9.18.10.0.0	Aug. 20, 800	Naranjo Stela 8	<i>?Itzamnaaj K'awiil</i> (<i>Sa'aal</i> king at Naranjo)
9.18.10.0.0	Aug. 20, 800	Quirigua Stela I	<i>K'ahk' Jolow Chan Yopaat</i> (king of Quirigua)
9.18.10.0.0	Aug. 20, 800	Xutilha Stela 6	
Ca. 9.18.10.0.0	Ca. Aug. 20, 800	Xunantunich Panel 2	

9.18.10.7.5	Jan. 12, 801	Machaquila Stela 2	<i>Ochik'in Kaloomte'</i> (“Machaquila” king)
9.18.13.17.1	Jul. 11, 804	La Amelia Panel 2	<i>Lajchan K'awiil Ajaw Bo't</i> (local ruler at La Amelia)
9.18.15.0.0	Jul. 25, 805	Quirigua Stela K	<i>K'ahk' Jolow Chan Yopaat</i> (king of Quirigua)
9.18.15.15.0	May 21, 806	Tonina Monument 25	<i>Way [...]</i> <i>Chapaht</i> (<i>Popo'</i> king at Tonina)
9.18.17.1.13	Aug. 1, 807	La Amelia Panel 1	<i>Lajchan K'awiil Ajaw Bo't</i> (local ruler at La Amelia)
9.18.17.13.10	Apr. 10, 808	Yaxchilan Lintel 10	<i>K'ihnich Tatbu ?Joloom III</i> (<i>Pa'chan</i> king at Yaxchilan)
9.19.0.0.0	June 29, 810	Calakmul Stela 15	
9.19.0.0.0	June 29, 810	Calakmul Stela 16	
9.19.0.0.0	June 29, 810	Calakmul Stela 64	
9.19.0.0.0	June 29, 810	Caracol Altar 22	Unidentified Caracol lord with the royal title of <i>k'uhul k'antumaak</i>
9.19.0.0.0	June 29, 810	Caracol Stela 18	Unidentified Caracol lord with the royal title of <i>k'uhul k'antumaak</i>
9.19.0.0.0	June 29, 810	Naranjo Stela 7	<i>?Itzamnaaj K'awiil</i> (<i>Sa'aal</i> king at Naranjo)

9.19.0.0.0	June 29, 810	Quirigua Str. 1B-1 bench text	<i>K'ahk' Jolow Chan Yopaat</i> (king of Quirigua)
9.19.0.0.0	June 29, 810	Tikal Altar 7	“Dark Sun” (<i>Mut</i> king at Tikal)
9.19.0.0.0	June 29, 810	Uaxactun Stela C	Unidentified “Uaxactun” king and <i>Olom</i> (a.k.a. <i>Olom Jaatz'</i> and <i>Olom Kan Ek'</i> , a western overlord)
9.19.0.3.0	Aug. 28, 810	Naranjo Stela 10	? <i>Itzamnaaj K'awiil</i> (<i>Sa'aal</i> king at Naranjo)
9.19.5.0.0	June 3, 815	Nakum Stela C	
9.19.5.11.10	Jan. 19, 816	Machaquila Stela 3	<i>Sihiyaj K'in Chahk II</i> (“Machaquila” king)
9.19.10.0.0	May 7, 820	Caracol Altar 12	<i>K'ihnich Toobil Yopaat</i> (king of Caracol)
9.19.10.0.0	May 7, 820	Caracol Altar 13	<i>K'ihnich Toobil Yopaat</i> (king of Caracol)
9.19.10.0.0	May 7, 820	Caracol Stela 19	<i>K'ihnich Toobil Yopaat</i> (king of Caracol)
9.19.10.0.0	May 7, 820	Copan Str. 10L-18 interior texts	<i>Yax Pahsaj Chan Yopaat</i> (?Xukuup king at Copan)
9.19.10.0.0	May 7, 820	Copan Stela 11	<i>Yax Pahsaj Chan Yopaat</i> (?Xukuup king at Copan)
9.19.10.0.0	May 7, 820	Naranjo Stela 32	<i>Waxaklajuun U Baah K'awiil</i>

			(<i>Sa'aal</i> king at Naranjo; not the same <i>Waxaklajuun U Baah</i> <i>K'awiil</i> who ruled at Copan and was killed in a war with Quirigua in A.D. 738)
9.19.10.0.0	May 7, 820	Xunantunich Stela 8	Possibly a <i>Sa'aal</i> king
9.19.10.12.0	Jan. 2, 821	Machaquila Stela 4	<i>Sihyaj K'in Chahk II</i> ("Machaquila" king)
9.19.11.14.5	Feb. 11, 822	Copan Altar L	<i>U Kit To'k'</i> (failed heir to <i>Yax Pahsaj Chan Yopaat</i> , perhaps deposed that same year)
9.19.15.13.0	Dec. 27, 825	Machaquila Stela 8	<i>Juun Tzak To'k'</i> ("Machaquila" king)
Ca. 10.0.0.0.0	Ca. Mar. 16, 830	Calakmul Stela 17	
10.0.0.0.0	Mar. 16, 830	El Zotz Stela 4	? <i>Nahb Chan Yopaat (Pa'chan</i> king at El Zotz)
10.0.0.0.0	Mar. 16, 830	Oxpemul Stela 7	Unidentified "Bent <i>Kawak</i> " and "Bat" king at Oxpemul who claimed the title of <i>Uxte'tuun kaloomte'</i>
10.0.0.0.0	Mar. 16, 830	Panhale Stela 1	

10.0.0.0.0	Mar. 16, 830	Polol Stela 4	
10.0.0.0.0	Mar. 16, 830	Uaxactun Stela 13	Unidentified “Uaxactun” king and <i>Olom Kan Ek’</i> (a.k.a. <i>Olom Jaatz</i> , a western overlord)
10.0.0.0.0	Mar. 16, 830	Xultun Stela 8	
10.0.0.0.0	Mar. 16, 830	Xunantunich Stela 9	
10.0.0.0.0	Mar. 16, 830	Zacpeten Altar 1	<i>Aj Yax Kaloomte’</i> , he of 20 captives (probably the same <i>Mut</i> ruler at Ixlu/Zacpeten who commissioned Ixlu Altars 1 and 2 and Stelae 1 and 2)
Ca. 10.0.0.0.0	Mar. 16, 830	Zacpeten Stela 4	
10.0.0.14.15	Jan. 5, 831	Machaquila Stela 7	<i>Juun Tzak To’k’</i> (“Machaquila” king)
10.0.5.0.0	Feb. 18, 835	Mountain Cow Altar 1	“K’an III” (king of Caracol)
10.0.5.16.0	Jan. 4, 836	Machaquila Stela 6	<i>Juun Tzak To’k’</i> (“Machaquila” king)
10.0.7.9.0	Aug. 6, 837	Tonina Monument 104	<i>Uuh Chapah</i> t (<i>Popo’</i> king at Tonina)
10.0.10.17.5	Jan. 2, 841	Machaquila Stela 5	<i>Juun Tzak To’k’</i> (“Machaquila” king)

Ca. 10.0.13.0.0	Ca. Jan. 7, 843	Ceibal Stela 12	<i>Wat'ul K'atel</i> (“Hearth” king at Ceibal)
10.1.0.0.0	Dec. 1, 849	Caracol Altar 10	“K'an III” (king of Caracol) and probably <i>K'awiil Ajaw</i> (“K'an III's” intended successor)
10.1.0.0.0	Dec. 1, 849	Caracol Stela 17	“K'an III” (king of Caracol) and <i>K'awiil Ajaw</i>
10.1.0.0.0	Dec. 1, 849	Ceibal Stela 10	<i>Wat'ul K'atel</i> (“Hearth” king at Ceibal), <i>Uuh K'awil</i> (<i>Mut</i> king, court location unknown), <i>Chan Pe't</i> (<i>Kan</i> king, court location unknown), and <i>Kan Ek'</i> (<i>Ik'</i> king, probably identical with the <i>Ik'</i> ruler with the title <i>Sak Kan Ek'</i> named on Tayasal/Flores Stela 1)
10.1.0.0.0	Dec. 1, 849	Ceibal Stela 11	<i>Wat'ul K'atel</i> (“Hearth” king at Ceibal), <i>K'an Ek' Jo' Pe't</i> (<i>K'anwitznal</i> king at Ceibal), and <i>Chan Pi't</i> and <i>Waxak Pi't</i> (other holy “Hearth” lords at Ceibal, but not paramount rulers)
10.1.0.0.0	Dec. 1, 849	Ceibal Stela 21	<i>Wat'ul K'atel</i> (“Hearth” king at

			Ceibal)
10.1.0.0.0	Dec. 1, 849	Ceibal Stela 8	<i>Wat'ul K'atel</i> (“Hearth” king at Ceibal) and <i>Winik ?Kaj Witzil</i> (king of an unidentified <i>Puh</i> or <i>Puuw</i> site)
10.1.0.0.0	Dec. 1, 849	Ceibal Stela 9	<i>Wat'ul K'atel</i> (“Hearth” king at Ceibal) and <i>Kan Ek' Waxak Ek'</i> (king of <i>Lakamtuun</i> , probably El Palma on the Río Lacandon)
10.1.10.0.0	Oct. 10, 859	Ucanal Stela 4	[...] <i>U Mu</i> [...] 10 Stone 13 Bird (holy <i>K'anwitznal</i> overlord at Ucanal) and [...] <i>Sihyaj K'in Chahk</i> 7 Crossed Bands [...] (crown prince, holy <i>K'anwitznal</i> lord)
Ca. 10.1.0.0.0	Ca. Dec. 1, 849	Xunantunich Altar 1	
Ca. 10.1.0.0.0	Ca. Dec. 1, 849	Xunantunich Stela 1	
Ca. 10.1.0.0.0	Ca. Dec. 1, 849	Ixlu Altar 2	Ixlu Ruler 1 (<i>Aj Yax Kaloomte'</i> , he of 20 captives, probably the same <i>Mut</i> ruler at Ixlu/Zacpeten who commissioned Ixlu Altar 2,

			Ixlu Stelae 1 and 2, and Zacpeten Altar 1)
Ca. 10.1.0.0.0	Ca. Dec. 1, 849	Naranjo Stela 9	
10.1.10.0.0	Oct. 10, 859	Caracol Stela 10	Unidentified king using the Caracol royal title <i>k'uhul k'antumaak</i>
10.1.10.0.0	Oct. 10, 859	Ixlu Stela 1	Unidentified <i>Mut</i> king at Ixlu/ Zacpeten (probably Ixlu Ruler 1)
10.1.10.0.0	Oct. 10, 859	Ceibal Stela 4	
10.1.10.0.0	Oct. 10, 859	Xultun Stela 3	
10.1.14.9.17	Apr. 3, 864	Josefowitz Stela	<i>Aj Naj Chakat</i> (young sajal) and <i>Bahlam Chil Uy K'uk' Maax</i> (deceased sajal, <i>Aj Naj Chakat's</i> predecessor)
10.2.0.0.0	Aug. 18, 869	Ceibal Stela 1	Possibly <i>Wok ?Teles</i> (holy “Banded Bird” king at Ceibal)
10.2.0.0.0	Aug. 18, 869	Ceibal Stela 17	Possibly <i>Wok ?Teles</i> (holy “Banded Bird” king at Ceibal)
10.2.0.0.0	Aug. 18, 869	Tikal Stela 11	<i>Jasaw Chan K'awiil II</i> (<i>Mut</i> king at Tikal)
10.2.0.0.0	Aug. 18, 869	Tikal Altar 11	<i>Jasaw Chan K'awiil II</i> (<i>Mut</i> king at Tikal)

10.2.5.0.0	Jul. 23, 874	Ceibal Stela 2	Possibly <i>Wok ?Teles</i> (holy “Banded Bird” king at Ceibal)
10.2.5.0.0	Jul. 23, 874	Calakmul Stela 84	
10.2.10.0.0	June 27, 879	Ixlu Altar 1	Ixlu Ruler 1 (<i>Mut</i> king at Ixlu/Zacpeten)
10.2.10.0.0	June 27, 879	Ixlu Stela 2	Ixlu Ruler 1 (<i>Mut</i> king at Ixlu/Zacpeten)
10.2.10.0.0	June 27, 879	Jimbal Stela 1	? <i>Kuchtal</i> (<i>Mut</i> king at Jimbal)
10.2.10.0.0	June 27, 879	Jimbal Altar 1	? <i>Kuchtal</i> (<i>Mut</i> king at Jimbal)
10.2.10.0.0	June 27, 879	Ceibal Stela 14	<i>Wok ?Teles</i> (holy “Banded Bird” king at Ceibal)
10.3.0.0.0	May 5, 889	Jimbal Stela 2	? <i>Kuchtal</i> (<i>Mut</i> king at Jimbal)
10.3.0.0.0	May 5, 889	Ceibal Stela 18	
10.3.0.0.0	May 5, 889	Ceibal Stela 20	
10.3.0.0.0	May 5, 889	Ceibal Stela 3	
10.3.0.0.0	May 5, 889	Uaxactun Stela 2	<i>Jasaw Chan K’awiil</i> (“Uaxactun” king) and an unidentified western overlord
10.3.0.0.0	May 5, 889	Xultun Stela 10	
10.3.0.2.12	June 26, 889	Ceibal Stela 19	
Ca. 10.3.5.0.0	Ca. Apr. 9, 894	Ceibal Stela 13	
10.3.15.0.0	Feb. 17, 904	Tonina Monument	

158

10.4.0.0.0	Jan. 21, 909	Tonina Monument
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101

10.5.0.0.0	Oct. 8, 928	San Lorenzo Stela
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