

**SOCIAL REORGANIZATION AND HOUSEHOLD ADAPTATION IN THE
AFTERMATH OF COLLAPSE AT BAKING POT, BELIZE**

by

Julie A. Hoggarth

B.A. in Anthropology (Archaeology), University of California, San Diego, 2004

B.A. in Latin American Studies, University of California, San Diego, 2004

Submitted to the Graduate Faculty of
the Kenneth P. Dietrich School of
Arts and Sciences in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

University of Pittsburgh

2012

UNIVERSITY OF PITTSBURGH
KENNETH P. DIETRICH SCHOOL OF ARTS AND SCIENCES

This dissertation was presented

by

Julie A. Hoggarth

It was defended on
November 14, 2012
and approved by:

Dr. Olivier de Montmollin (Chair), Associate Professor, Anthropology Department
Dr. Marc P. Bermann, Associate Professor, Anthropology Department
Dr. Robert D. Drennan, Distinguished Professor, Anthropology Department
Dr. Lara Putnam, Associate Professor, History Department

Copyright © by Julie A. Hoggarth
2012

SOCIAL REORGANIZATION AND HOUSEHOLD ADAPTATION IN THE AFTERMATH OF COLLAPSE AT BAKING POT, BELIZE

Julie A. Hoggarth, PhD

University of Pittsburgh, 2012

This dissertation focuses on the adaptations of ancient Maya households to the processes of social reorganization in the aftermath of collapse of Classic Maya rulership at Baking Pot, a small kingdom in the upper Belize River Valley of western Belize. With the depopulation of the central and southern Maya lowlands at the end of the Late Classic period, residents in Settlement Cluster C at Baking Pot persisted following the abandonment of the palace complex in the Terminal Classic period (A.D. 800-900). Results from this study indicate that noble and commoner households in Settlement Cluster C continued to live at Baking Pot, developing strategies of adaptation including expanding interregional mercantile exchange and hosting community feasts in the Terminal Classic and Early Postclassic periods.

Breaking from the strict social hierarchies of the Classic period, households were increasingly participating in mercantile exchange in the Terminal Classic and Early Postclassic periods, with exotic luxury items becoming more evenly distributed throughout the community, particularly among commoner households. The even distributions of exotic items, coupled with low-level production of local resources, suggests that households were engaging in interregional networks of exchange, although this did not involve a complete reorganization of economic production. New relationships between noble and commoner households were forged, as noble

households hosted large-scale community feasts during the Terminal Classic and Early Postclassic periods. Although households were not found to have been utilizing Pan-Mesoamerican symbols as a form of status differentiation, they did display local Maya iconography on ceramics and other media, displaying a sense of shared identity and cohesion. However, this and other forms of shared identity, such as burial practices, shifted in the transition to the Postclassic period. Overall, households at Baking Pot developed innovative strategies to adapt to the changing social landscape following the sociopolitical collapse of the Classic Maya polity, playing a prominent role in the in the processes of social reorganization in the Postclassic period.

TABLE OF CONTENTS

1.0 INTRODUCTION.....	1
1.1 SOCIAL REORGANIZATION AND ADAPTATION IN THE AFTERMATH OF THE COLLAPSE OF CLASSIC MAYA DYNASTIC RULERSHIP	3
1.1.1 Collapse of Classic Maya Sociopolitical Organization.....	7
1.1.2. Household Approaches to Collapse	8
1.2 RESEARCH FRAMEWORK	11
1.2.1. Research Methodology.....	14
1.3 CHAPTER SUMMARIES AND ORGANIZATION OF THE DISSERTATION.....	17
2.0 ADAPTATION SCENARIOS AND ARCHAEOLOGICAL EXPECTATIONS.....	22
2.1 ‘MERCANTILE’ SCENARIO	24
2.1.1. Research Questions	24
2.1.2. Archaeological Correlates and Expectations.....	26
2.2 POLITICAL FEASTING SCENARIO	28
2.2.1. Research Questions	28
2.2.2. Archaeological Correlates and Expectations.....	30
2.3 PAN-MESOAMERICAN SYMBOL HORIZON SCENARIO.....	32
2.3.1. Research Questions	32
2.3.2. Archaeological Correlates and Expectations.....	34
3.0 BAKING POT RESEARCH AND METHODOLOGY	36
3.1 GEOGRAPHY	36
3.2 NETWORK OF POLITIES IN THE UPPER BELIZE VALLEY	38
3.2.1 Overview	38
3.2.2 Political Capitals in the Belize Valley.....	39
3.2.3. Baking Pot.....	40
3.2.4. Late to Terminal Classic Collapse and Partial Depopulation of the Belize Valley.....	41
3.3. BAKING POT POLITY	48
3.3.1. Previous Research	48
3.4 FIELD METHODOLOGY.....	51
3.4.1 Baking Pot Settlement Survey.....	53
3.4.2. Classification Typology for House Group Socioeconomic Status.....	56
3.4.3. Demographic Survey of Test-Pit Excavations and Surface Collections	59
3.4.4. House Group Excavations in Settlement Cluster C.....	63
3.4.4.1. Sampling Strategy	63
3.4.4.2. Excavation Methods	65
3.4.5. Laboratory Methods and Quantitative Analysis.....	66
3.3.5.1. Ceramics.....	66
3.3.5.2. Lithics.....	68
3.3.5.3. Faunal Remains	68
3.3.5.4. Human Remains	69
3.3.5.5. Other Artifacts.....	69
3.3.5.6 Quantitative Analysis	69

4.0 HOUSE GROUP CHRONOLOGY AND CONSTRUCTION IN SETTLEMENT CLUSTER C.....	71
4.1 HOUSEGROUP EXCAVATIONS IN SETTLEMENT CLUSTER C.....	71
4.2 EXCAVATIONS AT THE M-99 GROUP	74
4.3 EXCAVATIONS AT THE M-96 GROUP	77
4.4. EXCAVATIONS IN THE M-90 GROUP	81
4.5 EXCAVATIONS AT THE M-108 HOUSE GROUP	84
4.6 EXCAVATIONS AT THE M-100 GROUP	86
4.7 EXCAVATIONS AT THE M-184 GROUP	89
4.8 EXCAVATIONS AT THE M-94 GROUP	93
4.9 EXCAVATIONS AT THE M-181 GROUP	95
4.10 ARCHITECTURAL INVESTMENT IN SETTLEMENT CLUSTER C FROM THE LATE CLASSIC TO THE EARLY POSTCLASSIC PERIODS	98
5.0 EXPLORING THE ‘MERCANTILE’ SCENARIO.....	101
5.1 EVIDENCE OF ‘MERCANTILE’ EXCHANGE	103
5.1.1. Exotic Luxury Items.....	105
5.1.1.1. Marine shell items	105
5.1.1.2. Jade and Greenstone Items	107
5.1.1.3. Pyrite Items	110
5.1.1.4. Copper items	111
5.1.2. Utilitarian Items.....	113
5.1.2.1. Obsidian	114
5.1.2.2. Basalt.....	117
5.1.3 Reliance on Exotic Material for Groundstone and Chipped Tools	118
5.1.3.1. Ground Stone.....	119
5.1.3.2. Chipped Stone Tools	119
5.1.4. Local Items and Materials.....	124
5.1.4.1. Slate.....	126
5.1.4.2. Spindle Whorls.....	127
5.1.4.3. Bifaces.....	129
5.2. EXOTIC ITEMS IN RITUAL DEPOSITS.....	130
5.3. ABANDONMENT VERSUS CONTINUITY	131
5.3.1. The M-108 Group.....	131
5.3.2. The M-181 Group.....	133
5.4 CONCLUSIONS.....	136
6.0 EXPLORING THE POLITICAL FEASTING SCENARIO.....	142
6.1 EVIDENCE OF FEASTING IN SETTLEMENT CLUSTER C.....	143
6.1.1. Serving Vessels	144
6.1.1.1. Decorated Ceramics	150
6.1.2. Food Preparation Materials	153
6.1.2.1. Cooking Vessels.....	153
6.2.2.2. Food remains	156
6.2 FEASTING MATERIALS IN RITUAL AND NON-RITUAL DEPOSITS.....	163
6.3 ABANDONMENT VERSUS CONTINUITY	164
6.4 CONCLUSIONS.....	165
7.0 EXPLORING THE PAN-MESOAMERICAN SYMBOL HORIZON SCENARIO	170
7.1. EVIDENCE FOR CLASSIC AND POSTCLASSIC PAN-MESOAMERICAN SYMBOL HORIZON SCENARIO.....	173
7.1.1. Postclassic Pan-Mesoamerican Symbols.....	173
7.1.1. Distribution of Maya Symbols	176

7.1.2. Use of Symbols on Various Media.....	178
7.1.3. Disposal Patterns of Materials with Iconography	179
7.2. BURIALS	182
7.2.1. Burial Patterns through Time	184
7.2.1.2. Multi-dimensional Scaling of Burials at Baking Pot.....	186
7.3 ABANDONMENT VERSUS CONTINUITY	191
7.3.1. The M-108 and M-181 Groups	192
7.4 CONCLUSIONS.....	193
8.0 SOCIAL REORGANIZATION AND HOUSEHOLD ADAPTATION IN THE AFTERMATH OF COLLAPSE AT BAKING POT	197
8.1 DEMOGRAPHY AND CONSTRUCTION	198
8.2 HOUSEHOLD STRATEGIES OF ADAPTATION.....	200
8.2.1. ‘Mercantile’ Scenario	201
8.2.2. Political Feasting Scenario	203
8.2.3. Pan-Mesoamerican Symbol Horizon Scenario.....	204
8.3 CONCLUSIONS.....	205
APPENDIX A: ARTIFACTS.....	212
APPENDIX B: BURIALS	213
BIBLIOGRAPHY	230

LIST OF TABLES

1-1	Chronology of Periods in the Maya Lowlands and Ceramic Phases in the Belize Valley.....	6
3-1	Chronology and Population Estimates in the Belize Valley	44
3-2	Population Decline in the Belize Valley.....	45
3-3	Five stages of fieldwork	52
3-4	House group classification at Baking Pot (excluding the palace complex)	57
3-5	Population estimates for Baking Pot Settlement and Settlement Cluster C through time.....	62
3-6	House groups selected for excavation, showing the number of structures, total (terminal phase) architectural volume, and status classification	63
4-1	House Groups selected for excavation based on architectural volume status classifications and chronological occupation	73
5-1	Distributions of materials associated with the ‘Mercantile’ Scenario (relative to total sherds) in noble, high status commoner, and low status commoner households in the Late Classic, Terminal Classic, and Early Postclassic periods.....	137
6-1	Ratios of serving vessels to cooking vessels among noble, high status commoner, and low status commoner house groups in the Late Classic, Terminal Classic, and Early Postclassic periods.....	154
6-2	Vertebrate species recovered at the noble M-99 house group.....	157
6-3	Vertebrate animal remains recovered at the high status commoner M-90 house group	158
6-4	Vertebrate animal remains recovered at the high status commoner M-96 house group	158
6-5	Presence of species recovered at the high status M-108 house group	158
6-6	Presence of species recovered at the low status M-100 house group.....	159
6-7	Presence of species recovered at the low status commoner M-184 house group.....	159
6-8	Distributions of materials associated with the Political Feasting Scenario in noble, high status commoner, and low status commoner households in the Late Classic, Terminal Classic, and Early Postclassic periods.....	166
7-1	Percentage of all items with Maya symbols and motifs on different types of media and percentages of items with symbols that were used in ritual deposits.	179

7-2 Disposal patterns for materials with Maya iconography, showing the percentage of items with motifs among house groups, relative to all materials with Maya motifs in midden, fill, cache, burial, and other contexts.....**181**

7-3 Burials in Settlement Cluster C through time.....**185**

7-3 Distributions of materials (relative to total sherds) associated with the Pan-Mesoamerican Symbol Horizon scenario in noble, high status commoner, and low status commoner households in the Late Classic, Terminal Classic, and Early Postclassic periods.....**194**

LIST OF FIGURES

1.1	Map of the Maya Lowlands highlighting the location of Baking Pot.....	4
3.1	Political capitals in the Upper Belize River valley and eastern Petén	5
3.2	Topography and political capitals in the Belize Valley and surrounding areas.....	37
3.3	Settlement clusters surrounding Baking Pot’s ceremonial center.....	55
3.4	Estimated total architectural volume for excavated house groups in each period of occupation.	58
4.1	Settlement Cluster C, showing the locations of excavated house groups.....	72
4.2	Plan view of terminal phase of M-99A and M-99B	75
4.3	Plan view of terminal phase of M-99C and M-99D	76
4.4	Profile view of the south baulk of M-96.....	79
4.5	Plan view of terminal architecture at M-96	80
4.6	Profile view of north baulk of M-90.....	82
4.7	Profile view of north baulk of M-91	82
4.8	Plan view of the terminal phase of the M-90 Group.....	83
4.9	Plan view of terminal phase of architecture at M-111.....	85
4.10	Plan view of terminal architecture at the M-100 group	87
4.11	Profile view of east baulk of M-100	88
4.12	Profile view of north baulk of M-101	88
4.13	Plan view of terminal architecture at the M-184 group	90
4.14	Profile view of west baulk of M-184	91
4.15	Profile view of the east baulk of M-94	94
4.16	Plan view of terminal architecture at M-94	95
4.17	Profile view of the east baulk of M-181	97
4.18	Estimated amounts of new construction (architectural volume) during each time period .	99
5.1	Exchange routes and sources of exotic items and materials in the Maya lowlands and highlands.....	104

5.2	Marine shell ornaments from excavations at Baking Pot	106
5.3	Proportion of marine shell items.....	106
5.4	Jade ornaments recovered in excavations in Settlement Cluster C.....	108
5.5	Proportion of jade and greenstone items.....	108
5.6	Proportion of pyrite.....	110
5.7	Copper bell and ball from Early Postclassic period M-99.....	112
5.8	Proportion of copper items.....	112
5.9	Obsidian core	114
5.10	Prismatic obsidian blade	114
5.11	Proportion of obsidian.....	115
5.12	Proportion of basalt.....	117
5.13	Local chert recovered from excavations at Settlement Cluster C.....	120
5.14	Non-local chert blade.....	120
5.15	Proportions of local chert, non-local (Colha) chert, and obsidian to all chipped stone in the Late Classic period.....	121
5.16	Proportions of local chert, non-local (Colha) chert, and obsidian to all chipped stone in the Terminal Classic period.	121
5.17	Proportions of local chert, non-local (Colha) chert, and obsidian to all chipped stone in the Early Postclassic period	123
5.18	Proportion of slate.....	127
5.19	Proportion of spindle whorls.....	128
5.20	Proportion of bifaces.....	129
5.21	Proportion of exotic luxury items, exotic utilitarian items, and production items in the M-108 Group in the Late Classic.....	132
5.22	Proportion of exotic luxury items, exotic utilitarian items, and production items in the M-108 Group in the Terminal Classic	132
5.23	Proportion of exotic luxury items, exotic utilitarian items, and production items in the M-181 Group in the Late Classic.....	134
5.24	Proportion of exotic luxury items, exotic utilitarian items, and production items in the M-181 Group in the Terminal Classic	134
6.1	Decorated Late Classic bowl from M-90.....	145
6.2	Early Postclassic Augustine Red, Paxcaman Red, and Topoxte Red dish feet from M-99..	145
6.3	Proportion of serving vessels	146
6.4	Polychrome ceramics from M-99	149
6.5	Polychrome ceramics from M-90	149

6.6 Proportion of decorated sherds	150
6.7 Proportion of cooking vessels	154
7.1 Mural 1, Zone 3 at Teotihuacan, showing Tlaloc imagery	171
7.2 Examples of step-fret and feathered serpent motifs of the Postclassic “Internationalized” symbol horizons associated with the Cult of Quetzalcoatl	174
7.3 Late Classic bowl with abstract Maya design from M-90	175
7.4 Shell ornaments featuring carved flower symbols.....	175
7.5 Proportion of Maya symbols.....	177
7.6 Declining stress for dimensions 1 to 5.....	187
7.7 Multidimensional scaling for similarities between burials in Settlement Cluster C and the Baking Pot ceremonial center in dimensions 1 and 2.	188
B-1 BVAR Burial form used for recording contextual and osteological information during burial excavation.	215
B-2 Burial 96-1 in Structure	216
B-3 Burial 96-2 in Structure 96	217
B-4 Miniature ceramic vessel from Burial 96-2.	218
B-5 Burial 96-3 in Structure 96.	219
B-6 Carved shell adornos from Burial 96-3.....	220
B-7 Burial 96-4 in Structure 96.	221
B-8 Burial 99W-1 from Structure 99d.....	222
B-9 Burial 99E-1 from Structure 99b.	223
B-10 Burial 99N-1 from Structure 99a.....	224
B-11 Burial 101-1 from Structure 101.....	225
B-12 Burials 112-1-1 (primary burial) and 112-1-2 (secondary burial) from Structure 112.....	226
B-13 Greenstone and shell beads, obsidian adornos, and shell adornos from Burials 112-1-1 and 112-1-2.....	227
B-14 Burial 112-1-2 (secondary burial) in Structure 112.....	228
B-15 Burial 184b-1 from Structure 184b	229

ACKNOWLEDGEMENTS

This research was conducted under the auspices of the Belize Valley Archaeological Reconnaissance project, directed by Dr. Jaime Awe. The fieldwork was supported by the BVAR field school, as well as through several archaeology field and laboratory method courses offered by Galen University. A pre-dissertation pilot study was funded by the University of Pittsburgh Center for Latin American Studies (CLAS) and the Department of Anthropology.

This dissertation has benefited from the guidance, support, and aid of numerous individuals. As a member of the Belize Valley Archaeological Reconnaissance (BVAR) project I am forever indebted to our fearless leader, Dr. Jaime Awe, for all of the opportunities that he has provided, his guidance and mentorship, as well as his friendship. In the twelve years that I have been on the project, Jaime has never failed to inspire and awe me with his impassioned lectures and field savvy. He and his family's hospitality during the year and a half that I lived in Belize made me feel at home, and his encouragement and mentorship significantly enhanced my teaching skills. I owe Myka Schwanke abundant thanks for her support and friendship. Our numerous conversations and yoga sessions provided great stress and comical relief and I miss them greatly. Rafael Guerra was indispensable during my time in the field, greatly benefitting the research, as well as being my housemate and friend. I thank him for his ability to put up with me on those stressful, over-worked days, and for always being there, whether it was a broken-down vehicle or teaching me how to cook rice on the stove.

Several colleagues and friends on the project aided my research. The 2007 to 2010 BVAR students and staff provided the man and womanpower for this research, without which I would not have been able to finish the fieldwork. Special thanks to all of the staff who supervised excavations and survey, including Muggs Alexander, Sarah Bednar, Luisa Carrillo, Esteban Fernandez, Rafael Guerra, Carrie Hickey, Eva Jobbová, Laura Johnson, Jillian Jordan, Ashley Kiss, Céline Lamb, Shawn Morton, Phylcia Pelayo, Josue Ramos, Ben Russell, Catharina Santasilia, Chris “Boone” Sims, Jenny Smedra, Patrick Wilkinson, and Christina Zweig. Our amazing lab directors, Martin Sneddon and Christina Zweig, kept all of the materials in order and provided stability and reliability in organizing the lab. Antonio Itza was the foreman for all four field seasons of this research and excavations were conducted with the assistance of Albert Bradley, Reynaldo Cunil, Mario Espat, Mauricio Espat, Luis Itza, Rafael Luna, Cesar Magaña, Ivar Magaña, and Gilberto Puc. Additionally, the students of Galen University’s Field Archaeology and Advanced Field Archaeology courses excavated one of the house groups in this study, including Leon Castillo, Kate Debs, Ashanti Garcia, Eric Koenig, and Jenny Smedra. The students of the Archaeological Laboratory Methods class helped analyze the material, including Carina Bey, Luisa Carrillo, Carrie Hickey, Vicky Leal, Anna McDermott, Jessica Ness, Josue Ramos, Jenny Smedra, and Justin Villegas. Special thanks are owed to Jennifer Piehl and Anna Novotny for the analysis of the human remains, Norbert Stanchly for the faunal analysis, Carolyn Freiwald who conducted strontium isotope analysis on several burials, Carmen Ting for the petrographic sourcing of several ceramic vessels, as well as Valorie Aquino and Keith Prufer for the portable X-ray fluorescence analysis to source a sample of obsidian from Baking Pot. The results of some of these analyses are currently in progress. Christophe

Helmke deserves praise for his guidance and assistance in setting up this research, as well as for deciphering several hieroglyphic inscriptions from recovered ceramic vessels.

We are fortunate to work in close proximity to several other archaeological projects, and have benefited greatly from numerous discussions and collaborations with them. Meaghan Peuramaki-Brown was in San Ignacio working on her doctoral research at the same time as me and provided innumerable assistance, commiseration, and friendship during the long months of fieldwork. I was fortunate to collaborate with Meaghan comparing settlement at Baking Pot and Buenavista del Cayo, and extend my thanks to Jason Yaeger and the Mopan Valley Archaeology Project (MVAP) for this opportunity. The location of Baking Pot on Central Farm has been incredibly fortunate, and the guys who work at the Central Farm Livestock Division deserve thanks, particularly for providing storage space for our materials and patio space for our on-site lab. Finally, the Belize Institute of Archaeology provided permission and support for this research, particularly Jaime Awe, John Morris, Rafael Guerra and Sherrilynn Jones.

My dissertation committee, Olivier de Montmollin (Chair), Marc Bermann, Dick Drennan, and Lara Putnam, has provided feedback and assistance throughout all stages of this research. Special recognition is due to my advisor, Olivier de Montmollin, for his patience and guidance throughout my years in the graduate program. This research would never have been possible without his support and I thank him for expanding my horizons within and beyond the field of archaeology. Also, thanks to Dr. Bermann for his fantastic courses on household archaeology, which greatly enhanced this research. As many of my colleagues at Pitt would agree, Dick Drennan's data analysis classes changed my entire perspective on archaeology, and I have been fortunate to have his comments as a member of my committee. I also want to thank my colleagues in the department, particularly Nisha Patel, Laura Gamez, Lauren Herckis, Adam

Berrey, Alicia Ventresca Miller, Lizette Munoz, and Sebastian Fajardo Bernal. Special thanks to the “Panama crew”, including Adam Menzies, Bill Locascio, and Scott Palumbo for allowing me to take part in their research, an experience which was integral in the development of this research. Mary Elizabeth Kovacik and Sarah Taylor kept me sane in my three and a half years of coursework, and Phyllis Deasy kept me on track to finish the program as well as listened to my concerns and updates.

My family and close friends have been vital to keeping me working towards the completion of this work. Thanks are also owed to my sister, Sarah Hoggarth, for her continuing support, care packages, and visits. Abbey Batterton has consistently been there for me throughout every phase of my life. I am grateful to have her as my aunt and thank her for her generosity and love. I thank the rest of my family as well, including Jack LaShance and Kristin St. Charles. To my “other sister”, Kristen Schmitt, as well as Brett and Scott Schmitt, you are the best friends that anyone could ever ask for and I am thankful that we were able to push each other to finish up and start the next phase of our lives. Nobody has provided as much encouragement, incentive, and moral support in the writing process as Mark Robinson. In addition to providing relevant and insightful comments, I thank him for keeping me laughing and writing.

I reserve my final thanks for the two people who have had the most outstanding impact in my life, my parents, Paul and Terrie Hoggarth. The completion of this dissertation is just as much their triumph as it is mine. My dad inspired my interest in prehistory and taught me the value of hard work and to never give up. He is my role model in life and everyday I strive to live with as much integrity and honesty as him. My mom has taught me to live each day with boundless optimism, trust, and patience. Her strength and independence has provided a model

that I strive for in my own life. This work is dedicated to both of you; in pale recognition for all that you have provided and sacrificed for me.

1.0 INTRODUCTION

Survival and adaptation are essential parts of the human experience, with social responses to changing conditions providing insights into the resilient nature of humans. Adaptation is not only limited to humanity, as biological forces have shaped species for millions of years. But it is in cultural adaptations that humans set themselves apart, developing complex forms of organization and social institutions to adjust to variability in environment, climate, and social problems associated with living in large groups. While the archaeological study of the development of complex societies allows for the identification of ways that groups created social inequalities leading to centralized political hierarchies, the sociopolitical collapse of complex society provides an opportunity to examine the reformation and regeneration of social orders.

The reorganization of social hierarchies and institutions is a prominent aspect of the collapse and regeneration of societies. Comparative archaeological research reveals that sociopolitical collapse rarely means the complete disappearance of entire populations or their great traditions (Yoffee and Cowgill 1988); rather, continuing research reveals that social institutions and traditions are often re-negotiated following the disintegration of states (Schwartz 2006). Often, regenerative social systems exhibit new social innovations, particularly in the realm of social organization and wealth accumulation (Kolata 2006).

The varied nature of household adaptability is a concept that is gaining momentum within the archaeological study of sociopolitical collapse and reorganization, as major continuities in material culture show that domestic practices remained relatively stable prior to and following the demise of political regimes. Moreover, the roles of commoners in the processes of collapse are being increasingly recognized (Joyce and Weller 2007; Joyce *et al.* 2001). Beyond stressing instances of continuity following the collapse of sociopolitical institutions, archaeological investigations are beginning to investigate the role and resiliency of households in the processes of collapse and social reorganization. In this dissertation, I propose to explore the ways that households participated in the reorganization of society, considering how households of different socioeconomic ranks adopted various strategies to align themselves with the emerging social orders following sociopolitical collapse. I examine how households at Baking Pot, a small Classic Maya kingdom in western Belize, adapted to the collapse of centralized rulership in the Terminal Classic period (A.D. 800/900-1050), developing new forms of interaction and organization in response to the changing nature of society in the Postclassic period.

1.1 SOCIAL REORGANIZATION AND ADAPTATION IN THE AFTERMATH OF THE COLLAPSE OF CLASSIC MAYA DYNASTIC RULERSHIP

This dissertation focuses on the adaptations of ancient Maya households to the processes of social reorganization in the aftermath of collapse of Classic Maya rulership at Baking Pot, a small kingdom in the upper Belize River Valley of western Belize (Figures 1.1 and 1.2). While populations slowly abandoned the central and southern lowlands, residents in Settlement Cluster C at Baking Pot remained following the desertion of the palace complex in the Terminal Classic period (A.D. 800-900) (Table 1-1). The continuity of settlement into the Postclassic period at Baking Pot provides a rare opportunity to understand the changing strategies of social, political, and economic interaction that would have been necessary to adjust to new social hierarchies and institutions, due to the point that most settlements were abandoned prior to the beginning of the Postclassic period. Excavations of a sample of house groups in Settlement Cluster C at Baking Pot were conducted in order to evaluate social scenarios that have been presented for the resiliency and adaptation of households through expanding ‘mercantile’ exchange, political feasting, and the adoption of Pan-Mesoamerican symbol horizons as strategies to renegotiate emerging economic, political, and ideological orders leading into the Postclassic period.

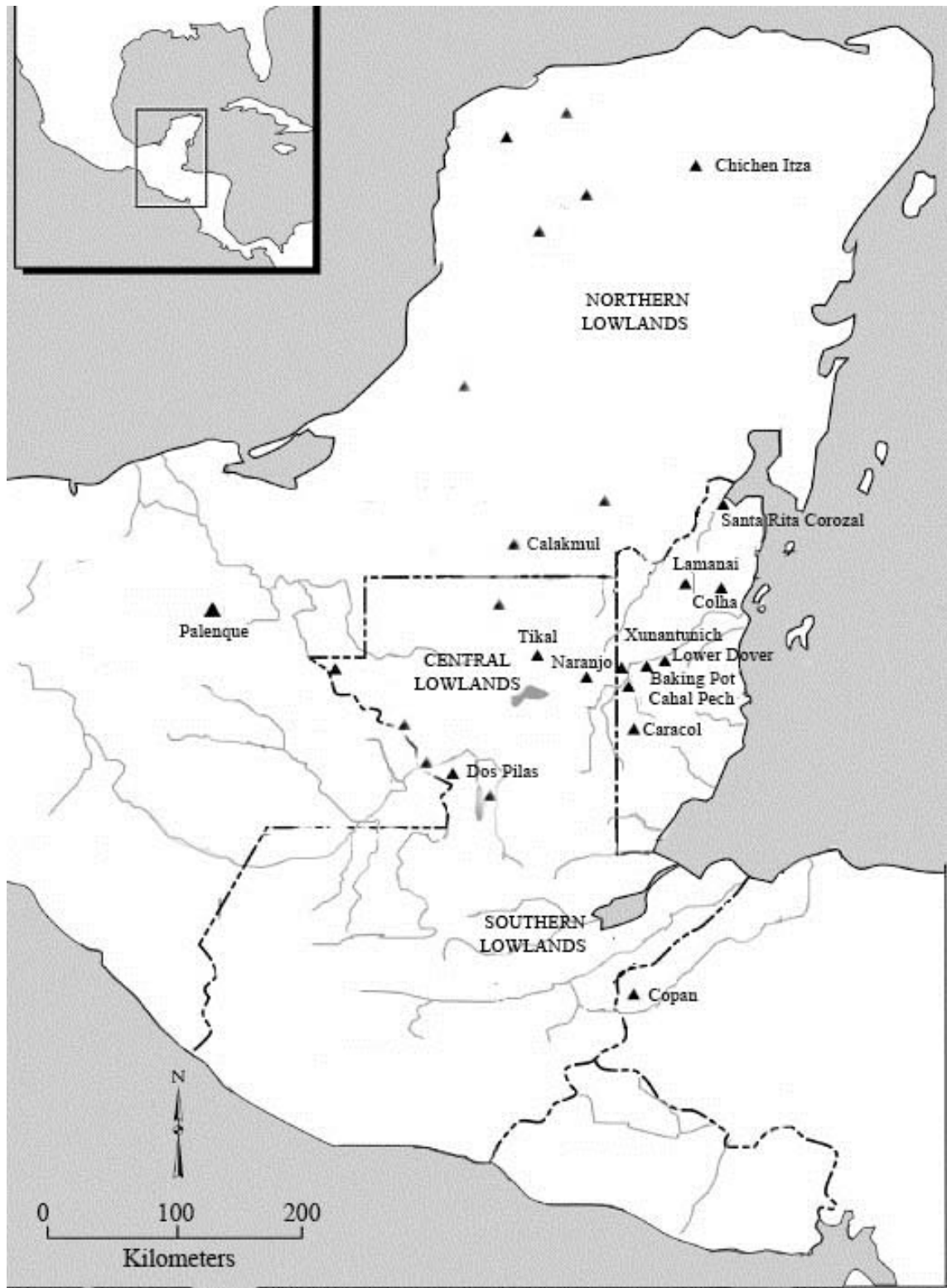


Figure 1.1: Map of the Maya lowlands, highlighting the location of Baking Pot.

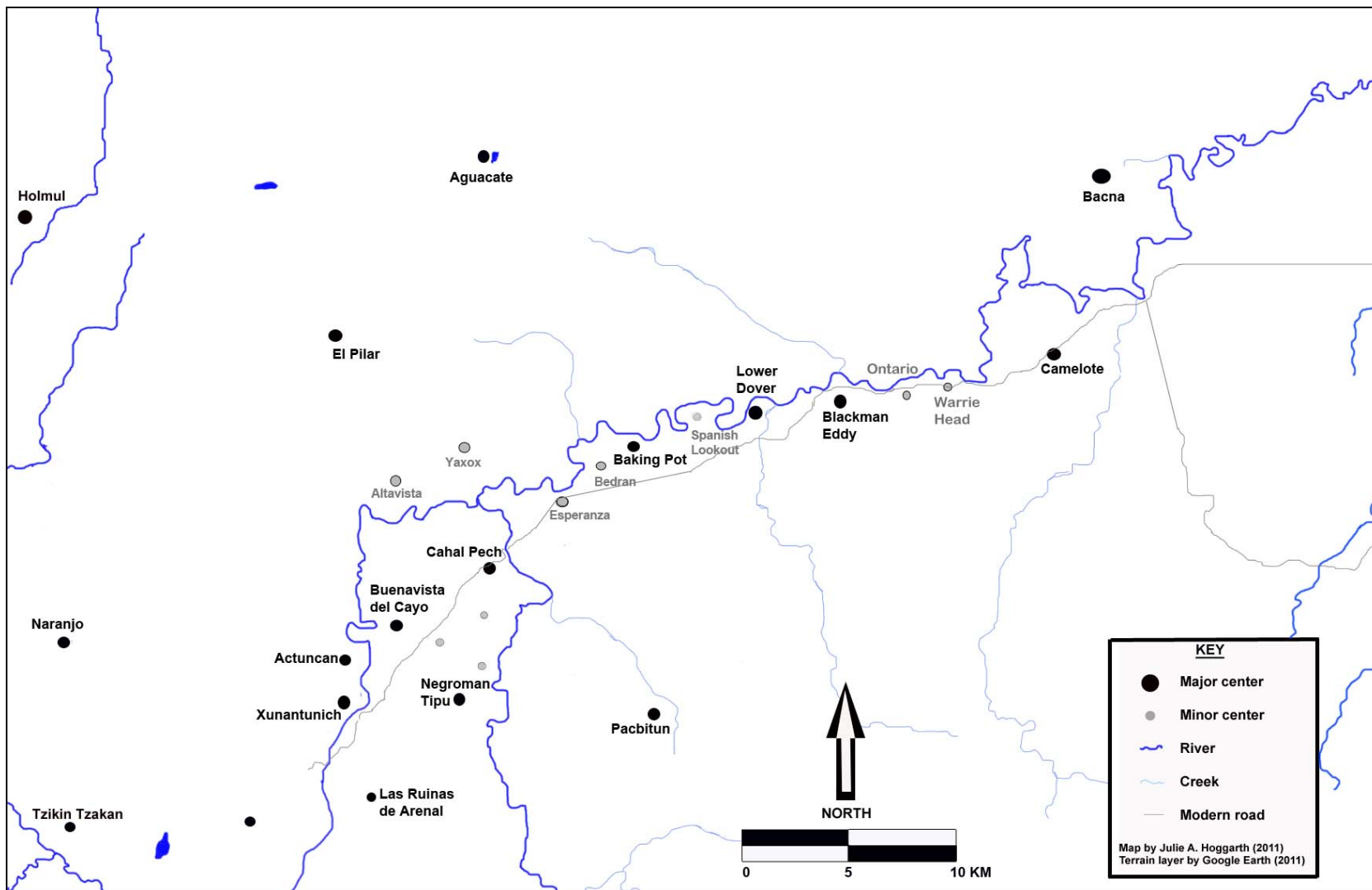


Figure 1.2. Political capitals in the Upper Belize River valley and eastern Petén.

Table 1-1: Chronology of Periods in the Maya Lowlands and Ceramic Phases in the Belize Valley.

PERIOD		BARTON RAMIE (Gifford et al. 1976)	
POSTCLASSIC	Late	1500	New Town
		1400	
		1300	
		1200	
	Early	1100	
		1000	
		900	
CLASSIC	Terminal	800	Spanish Lookout Tiger Run Hermitage
	Late	700	
		600	
	Early	500	
		400	
		300	
	PRECLASSIC	Proto-classic	
100			
-----		AD/BC	Mount Hope
Late		100	
		200	
		300	Barton Creek
Middle		400	Jenney Creek
		500	
		600	
		700	
		800	
	900		
	1000		
1100			
1200			

1.1.1 Collapse of Classic Maya Sociopolitical Organization

What is popularly known as the “Classic Maya collapse” was characterized by processes of the sociopolitical collapse of kingdoms and networks of polities, the institution of dynastic divine kingship, increasing warfare, the cessation of construction of monumental architecture and art, decline of elite paraphernalia, and changes in ideology at the end of the Late Classic period and continuing into the Terminal Classic period (Andrews V and Sabloff 1986; Culbert 1973; Demarest 2004; Demarest et al. 2004; Webster 2002, 2000). Demographic collapse of the central and southern Maya lowlands was gradual, with Classic kingdoms slowly being depopulated and eventually abandoned by the end of the Terminal Classic period.

Multivariate factors are now favored over singular models to explain the causes of sociopolitical collapse (Aimers 2007; A. Chase and D. Chase 2004, 2005). Various models have been presented to explain the variables leading to a failure in the sociopolitical organization, including environmental factors such as overpopulation and subsistence stress (Culbert 1974, 1977; Dunning and Beach 1994), deforestation and soil erosion (Beach et al. 2006; Brenner et al. 2002; Dunning et al. 1997, 1998; Emery et al. 2000; Harrison 1977; Pohl 1990; D. Rice 1978, 1996; Wright and White 1996), climate change and/or drought (Dahlin 1983, 1987, 2000, 2002; Dunning 1992; Gill 1994, 2000; Hodell et al. 1995, 2001, 2005; Kennett *et al.* 2012; Lucero 2002; Robichaux 2002; Yaeger and Hodell 2002) and other natural disasters (Sabloff 1973b; Gill and Keating 2002), as well as socio-political factors such as warfare (Demarest 1996, 2004, 2006; Demarest and Valdés 1995; Demarest et al. 1997; Foias 1996, 2004; Foias and Bishop 1997; Inomata 1995, 1997, 2006; Palka 2001; Webster 1993, 2000), intra-elite rivalry, external invasion (Adams 1973; D. Chase and A. Chase 1982; Hester 1985; Sabloff 1973a), competition for trade routes and resources (Demarest 2004, 2006), and emic concepts of cyclical fatalism

(Puleston 1979; Rice 2004). One of the main reasons why multivariate models are favored is due to the variability of the evidence in different geographic areas.

In the upper Belize River Valley in western Belize, some polities were abandoned by the end of the ninth century, although occupation continued at Baking Pot (Aimers 2004; Audet and Awe 2005; Hoggarth 2008, 2009). Continuity in Baking Pot's settlement from the Classic period into the Postclassic period offers an opportunity to expand beyond the typical discussions of the causes of collapse, as a focus on the development of new strategies of adaptation and interaction among households can provide information about the processes of social reorganization itself.

1.1.2. Household Approaches to Collapse

The effects of political collapse were not only felt at the polity level, but also among households and within communities within each kingdom. During the decline of the Classic Maya period, the social institutions that were regulating society changed, and new forms of social interaction and organizations formed. Classic period society was strongly stratified, with social groups ranging from the royals to non-royal nobles, and commoners, with a great deal of variability in each group (Hendon 1991; Lohse and Valdez 2004). With these social differences, a deep divide existed between the social, economic, and political status of elites and commoners during the Classic period. The nature of these social differences began to change in the Terminal Classic period, constituting a new pattern of social organization in the Postclassic period.

Just as in times of centralization of political institutions, periods of decentralization provide an opportunity for understanding the social changes associated with the reorganization of society (Schwartz and Nichols 2006). While political mechanisms of social control and rulership may disintegrate, regeneration of society is often based on the adaptability of commoners. Yoffee

suggests, “collapse studies are important, therefore, not only because they deal with significant but often poorly understood sociocultural phenomena, but also because they provide excellent points of entry into the social configuration of society” (2005:131-132). Additionally, he points out that periods of political decentralization and disintegration provided opportunities for peripheral settlements and secondary elites to increase social status and power (Yoffee 2006:223). These same processes identified at the polity level can also be seen among households and communities. Despite the vast literature on the collapse of Classic Maya sociopolitical structures, few studies have linked domestic and community dynamics within the context of these processes of major social change. Many of these studies assume that the collapse affected communities and households in similar ways; however, household studies suggest that we should not draw overarching assumptions about how large-scale social and political change manifested itself at the household level (Bermann 1994). Rather, household scales may indicate considerable continuities in domestic practices, as well as provide a variety of dimensions that are not apparent at larger scales.

A combined methodology of research at the community and household scale is necessary in order to understand the role of households of various statuses in the collapse of Classic Maya society and social regeneration during the Postclassic period. Yaeger and Hodell (2008) argue that research investigating the ‘collapse’ needs to take into consideration the wide range of variability, particularly the variable timing of decline in major and minor centers, as well as continuity in occupation and practices at the community and domestic scale. In particular, Yaeger (2008) emphasizes the need for micro-scale research in order to understand the demographic and domestic level effects of the collapse. As noted in Schwartz’s (2006) edited volume, he suggests that changes in household activities, as well as their integration at the

community level, may provide additional insights into the processes of reorganization associated with sociopolitical collapse. Despite the efforts for improvement, relatively few studies have substantively addressed precisely how these broader social changes relate to change at the household level especially for the lives of Maya commoners. In this research, I seek to understand the processes of social reorganization following the collapse of Classic royal political systems, centering on how households developed new strategies of interaction and differentiation to adapt and persist in this period of major social change. Focusing on a single neighborhood in Baking Pot's settlement with continuity from the Late Classic to the Early Postclassic period, I developed a sampling strategy for excavations that targeted 8 house groups of variable socioeconomic status levels, including groups continuing into the Postclassic, as well households that were abandoned in the Terminal Classic period. An overview of the research is presented below.

1.2 RESEARCH FRAMEWORK

Baking Pot is located in the upper Belize Valley of western Belize, on the eastern edge of the central Maya lowlands (Figures 1.1 and 1.2). Political organization in this area is composed of a network of small polities that were established by the Classic period, gaining power in the waning power of large kingdoms such as Naranjo and Caracol to the west and south. Although numerous other political capitals throughout the valley were abandoned in the Terminal Classic period, Baking Pot is of interest because it is one of the few that does not suffer complete depopulation during the Terminal Classic after the abandonment of the palace by the royals.

Recent research has suggested that a leveling of social differences was a prominent part of Postclassic Maya society (Aimers 2007). Renegotiation of power structures constitutes an important part of social reorganization. This may lead to expanding roles of commoner households in previously restricted or controlled social hierarchies and organization. Classic Maya social and political organization was highly ordered, with rulers and their families constituting the royal court, nobles, and commoners of varying socioeconomic status (Hendon 2007). The Late Classic period marked the height of social differentiation, with strict social roles present among various ranks. In contrast, Postclassic social differences were less marked. Changes in the Postclassic period included an expansion of polities in the northern lowlands, including Chichen Itza and Mayapan, the growing prominence of interregional trade along the coasts and interior rivers, shifts in ideology, and multepal (council) rulership. Despite these changes in the organization of society, there was still a large amount of continuity in domestic

practices of households (Aimers 2007). Although major aspects of social and political change have been identified, it is not yet clear how these changes were manifested at the domestic level or how commoner households were involved in changing social, economic, and political orders.

Recent studies have begun to focus on the social responses of households and communities to the collapse of Classic Maya sociopolitical structures. These studies have identified various strategies, including expanding interregional exchange, political feasting, and appropriating Pan-Mesoamerican symbols, that households used to adapt to changing social conditions. Marilyn Masson (2000; Masson and Peraza Lope 2004) has a scenario that suggests that commoners at Laguna de On and Caye Coco in northern Belize were increasingly involved in the expansion of 'mercantile exchange' beginning in the Terminal Classic and intensifying in the Postclassic period, gaining access to and consuming higher amounts of exotic items that were more previously restricted in Classic times. Lisa LeCount provides a second scenario, where noble households were engaging in political strategies of sponsoring large-scale community feasts in the Terminal Classic period outside of Xunantunich in western Belize. In this scenario, nobles were establishing new relationships with commoner households in order to foster community solidarity and integration. In the third scenario, Urban and Schortman (2011), as well as Aimers (2004:176), have suggested that high status households appropriated foreign symbols as a means of social differentiation during this time, associated with the spread of Pan-Mesoamerican ideology based on the Cult of *Quetzalcoatl* beginning in Postclassic period (Smith and Berdan 2003).

In order to identify the three scenarios of household adaptation in the aftermath of sociopolitical collapse in the archaeological record, an examination of the domestic artifact inventories can identify whether a household had higher amounts of exotic exchange items,

materials associated with feasting, or motifs associated with expanding Pan-Mesoamerican symbol horizons. Greater proportions of an artifact class may not always point to a specific scenario; rather, they may also be the result of preferential access of higher status households based on rank, wealth, or specialized activities. To solve this problem, comparisons of the results of the proportional distributions should be compared with expected archaeological patterns for each scenario and period, focusing on the nature of the scenario. For example, for the 'mercantile' scenario the expectation is that the consumption of some exotic items were likely socially highly restricted in the Late Classic period, becoming more widespread with due to the spread of 'mercantile' exchange in the Postclassic. This would be noted archaeologically by the presence of new exotic items, along with an increase in the consumption of exotic luxury and utilitarian objects. For the political feasting scenario, the archaeological correlates of feasting would be expected to continue to be restricted to noble households and not commoner households, as these events would have required large amounts of wealth. For the Pan-Mesoamerican symbol horizon scenario, elites and possibly high status commoners would have the resources to obtain items with exotic symbols and motifs, which would be used as a display of power. The continuity of life in the settlement at Baking after the end of centralized rulership in the Terminal Classic period provides a rare opportunity to explore the applicability of the three strategies presented above emphasizing household adaptation and participation in the reformation of social, economic, and political organization of the Postclassic period were similar at Baking Pot.

1.2.1. Research Methodology

In order to consider whether households at Baking Pot adopted similar strategies to adapt to changing social conditions in the Postclassic period, a six-stage research program was developed including: 1) settlement survey mapping domestic structures at Baking Pot; 2) creation of an architecture-based status typology of house groups; 3) test pit excavations to identify demographic trends through time; 4) excavation of a sample of house groups; 5) quantitative analysis of domestic inventories; and 6) interpreting results. A summary of these stages in the research is presented below.

1) Baking Pot Settlement Survey

The expansion of Conlon's (2000) survey was necessary to map the locations and sizes of residential platforms outside of the civic-ceremonial center of Baking Pot. This research identified settlement grouped into 8 'neighborhoods', noting a wide variability in the architectural volume of residential house groups.

2) Creation of Typology of Socioeconomic Status

Based on the architectural data from the settlement survey, the total architectural volumes of house groups were explored using basic descriptive statistics, finding that the values of total architectural volume formed three distinct peaks, likely representing separate social groups. As architecture is distinct from artifact inventories, it can serve as an independent means to distinguish status. This avoids equifinality due to using the same variable to both differentiate status as well as test the three scenarios of adaptation. The three typological classes of house groups were used as proxies to represent noble, high

status commoner, and low status commoner households and served as the basis for the later excavation sample.

3) Demographic Survey (Test-Pit Excavations)

Although previous research at Baking Pot had noted evidence of Postclassic ceramics in the settlement areas, the nature or extent of this pattern was not known. A program of test pit excavations was developed, targeting 20 percent of each of the 3 social classes of house groups in each spatial quadrat (i.e. Northwest, South-Central, Southeast, etc.). In some cases, mounds had been plowed, leading to surface collections in those areas. The results of this demographic survey revealed high concentrations of continuous settlement from the Classic to Postclassic periods in the eastern portion of the site, particularly in Settlement Cluster C, which had not been disturbed by modern plowing and agriculture.

4) House Group Excavations

Based on the information from the demographic survey, Settlement Cluster C was selected as the neighborhood from which to choose the sample of house groups for excavation. Eight house groups were identified for inclusion in the house group excavations, selected to include households of different status or rank as well as to include groups that persisted into the Postclassic along with a small sample of house groups that were abandoned in the Terminal Classic period. The single noble house group was included in the sample, along with 3 high status commoner house groups. Of these, 2 had continuous occupation from the Late Classic period to the Early

Postclassic and 1 house group was abandoned in the Terminal Classic period. The same method was used for the selection of low status house groups, which are more numerous at the site, with the selection of 4 low status commoner house groups, 3 with continuous occupation and 1 that was abandoned. A greater number of low status commoner house groups were selected due to the larger amounts of these households in the population, along with the emphasis on these households in the three scenarios of household adaptations. Excavations of the house groups used a combination of horizontal, trench, and test pit excavations to maximize the collections of ceramics and stone materials that could be used to explore the three scenarios.

5) *Quantitative Analysis of Domestic Inventories*

The proportional distribution of artifacts in the domestic inventories of each house group was analyzed, identifying higher concentrations of items associated with each of the three scenarios (i.e. exotic items for the ‘mercantile’ scenario, feasting materials for the political feasting scenario, and symbols and motifs for the Pan-Mesoamerican symbol horizon scenario). The inventories of different house groups were pooled together to identify broader patterns of adaptation between nobles and commoners of different status. These patterns were interpreted based on the archaeological expectations of each scenario.

6) *Exploring Scenarios*

The results of the quantitative analysis of materials in each of the three scenarios were interpreted based in relation to the time period and socioeconomic status of households.

In the following sections, I discuss the research at Baking Pot, organized by the different chapters in this dissertation. Finally, I discuss the results and implications of this research.

1.3 CHAPTER SUMMARIES AND ORGANIZATION OF THE DISSERTATION

In Chapter 2, I focus on the research design and theoretical scenarios of household adaptation and participation in changing social orders. In this chapter I describe the three scenarios, the ‘mercantile’ scenario, the political feasting scenario, and the Pan-Mesoamerican symbol horizon scenario. I present the various research questions for each scenario and situate each into the context of changing social, economic, and political institutions from the Late Classic period into the Terminal Classic and Early Postclassic periods. Then, I describe the archaeological correlates for each scenario and provide the hypothesized expectations for them.

In Chapter 3, I provide an overview on the research at Baking Pot, describing the geographic, political, and temporal contexts, along with a framework on how this study builds upon previous research at Baking Pot and in the upper Belize River Valley. Finally, I describe

field methodology that was used for this research, detailing the various steps in the research (i.e. survey, sampling strategies, excavation). Steps in the research included: 1) completion of the settlement survey to record the location and sizes of house groups around the civic-ceremonial center of Baking Pot; 2) developing a method for assessing rank for house groups using total house group volume of terminal architecture, used as a proxy for socioeconomic rank that is independent from artifact inventories; 3) a program of test-pit excavations stratified by space as well as socioeconomic rank (from the typology) to identify spatial neighborhoods of house groups with continuous occupation from the Late Classic to Early Postclassic period; and 4) the excavation of selection of a sample of house groups in one neighborhood (Settlement Cluster C) with continuity into the Postclassic, choosing 8 house groups featuring a range of socioeconomic rank and temporal continuity (i.e. abandoned before or continued into the Early Postclassic period) selected for excavation. Finally, I discuss how I will evaluate the material remains and artifact inventories of excavated house groups to explore the three scenarios.

In Chapter 4 I discuss the results of the excavation of the 8 house groups in Settlement Cluster C, describing the construction episodes and temporal spans of each group. In addition, I note variations in the investment in construction materials and elaboration, along with providing an overview of the special deposits and features in each house group. This chapter provides the context in which to understand the analysis of materials related to the three scenarios of household adaptation. Finally, I describe some overall trends among house groups of different socioeconomic ranks, including patterns in construction and artifacts of house groups from the Late Classic to Early Postclassic periods.

In Chapter 5, I explore Masson's 'mercantile' scenario to understand if noble and commoner households at Baking Pot were involved in broader patterns of interregional exchange

that were a major focus of the Postclassic period. In the first part of this chapter, I introduce the different types of exotic and utilitarian exchange items. Next, I discuss the archaeological patterns for the consumption of these items that would be expected if Masson's model were accurate for Baking Pot, particularly noting the distributional patterns between households of different status or rank. Finally, I discuss the evidence for the 'mercantile' scenario, examining the proportional differences (with a statistical measure of confidence) in exotic versus local luxury and utilitarian items between households of different socioeconomic status, and provide evidence for whether households adapted to shifting exchange in the Postclassic in similar ways as in Masson's example at Laguna de On and Caye Coco. Finally, I discuss the results of the analysis that demonstrated that households at Baking Pot were gaining access to previously restricted exotic items, as households were expanding low-level production of local resources to exchange for exotic items in the Terminal Classic and Early Postclassic periods.

In Chapter 6, I explore LeCount's political feasting scenario to understand if households at Baking Pot were involved in expanding large-scale community feasts to foster community integration during and after the collapse of dynastic rulership in the Terminal Classic and Early Postclassic, with noble households sponsoring feasts to facilitate community integration and solidarity. In the first part of this chapter, I introduce the different types of feasting items, including serving vessels along with items associated with food preparation. Next, I discuss the expected archaeological patterns to understand if the pattern of large-scale feasting was present among noble households at Baking Pot. Finally, I discuss the results of the distributional analysis, suggesting that nobles were involved in hosting community feasts after the Late Classic period, with the intensity of feasting at the noble house group increased during the Early Postclassic period.

In Chapter 7, I explore the Pan-Mesoamerican symbol horizon scenario to explore whether households at Baking Pot were participating in the expanding influence of Pan-Mesoamerican symbolic horizons marked by Teotihuacan-style imagery in the Late Classic period and the expansion of the symbolic motifs of the Cult of Quetzalcoatl in the Terminal Classic and Early Postclassic periods. I introduce the major symbol horizons associated with Pan-Mesoamerican motifs in the Classic and Postclassic periods, focusing on Teotihuacan based *Tlaloc* imagery during the Classic period and feathered serpent motifs associated with *Quetzalcoatl* in the Postclassic period. Second, I discuss the local (Maya) equivalents of these symbol sets and motifs to identify if any groups were differentially appropriating local or foreign symbols at amounts higher than other households. Third, I discuss changing burial patterns, which are not associated with these Pan-Mesoamerican symbol horizons but provide additional information about ideological changes leading from the Classic to Postclassic periods. Finally, I describe the results of the analysis, suggesting that households at Baking Pot were not participating in Pan-Mesoamerican symbol horizons; rather, they were utilizing local symbols in distributions relative to their socioeconomic status. The distribution of Maya symbols declined after the Classic period. In addition, a major shift was identified in burial patterns, with Postclassic burials abandoning long-held mortuary traditions of the Classic period, interring their dead in new locations and in distinct orientations and positions from their ancestors. I suggest that this shift in burial pattern illustrates a local change in ritual practice rather than the introduction of foreign ideology.

Chapter 8 describes the major conclusions from this study, finding that households at Baking Pot developed variable strategies to adapt to the changing social and political institutions and organization leading up to and following the end of Classic Maya rulership. The continuity

of households in Settlement Cluster C from the Late Classic through the Early Postclassic provided a rare opportunity to examine household adaptations in the aftermath of collapse, which has rarely been addressed in studies on the Classic Maya collapse due to the scarcity of examples of central lowland settlements with continuity from the Classic period into the Terminal Classic and Early Postclassic periods. Data from the excavations of a sample of 8 house groups in Settlement Cluster C at Baking Pot support the idea that commoner households were participating in the expansion of interregional exchange leading into the Early Postclassic period, producing items from local resources at low-levels to exchange for exotic items, with households of all socioeconomic status levels gaining access to exotic luxury items in similar amounts. I argue that noble households, which had no evidence of large-scale feasting activity during the Late Classic period, began to host community-wide feasts to create alliances with commoner households and promote community solidarity in the Terminal Classic and Early Postclassic periods. Finally, I suggest that neither noble nor commoner households at Baking Pot were using Pan-Mesoamerican symbols as a form of status differentiation. However, changes in the use of Maya iconography, along with changing burial patterns were tied to local (Maya) shifts in ritual practices rather than the introduction of foreign ideological systems.

2.0 ADAPTATION SCENARIOS AND ARCHAEOLOGICAL EXPECTATIONS

Despite the major focus in Maya archaeology on the collapse of Classic Maya sociopolitical structures at the end of the Late Classic period, an examination of the social responses to political decentralization has received minimal attention. This is primarily due to major archaeological impediments, including the depopulation and abandonment of the central and southern Maya lowlands beginning around A.D. 750. Household and community studies have been a main focus of archaeological attention in Maya studies for over 50 years (Garber 2011; Robin 2003; Willey *et al.* 1965); however, few settlements have been identified with continuity between the Classic and Postclassic periods (Masson and Boteler Mock 2000). Some settlements with temporal continuity were dispersed primarily in northern Belize, southern Quintana Roo, and in the Yucatan, often strategically located along the Caribbean Sea, inland rivers, and lagoons that would have served as major exchange routes. The location of Baking Pot on the Belize River may have been one reason why its residents remained into the Postclassic period, as its residents may have profited from the benefits of being integrated into interregional systems of interaction and exchange. This chapter aims to describe how we can understand the ways that ancient Maya households and communities adapted to the new social organization of the Postclassic period, primarily through engaging in new forms of interaction and social relationships.

A realignment of household and community interactions may have been necessary with the dissolution of kingdoms, altering the social, political, and economic roles of the Classic period and leading to new forms of social organization. Blanton and his colleagues (Blanton *et al.* 1993) suggest that expanding interregional interaction in the Postclassic period, primarily in the form of market exchange, created new strategies for the appropriation of wealth and power through specialized production and exchange. In this model, social relationships and hierarchies were drastically altered following the end of centralized rulership, with reduced distinctions between social groups. A focus on the strengthening and formation of new types of social relationships may have played an important role in generating solidarity and cohesion within unstable communities as well. Community feasts often serve to bring people together to renegotiate social relationships. Changes in ritual practice and ideology following the dissolution of Classic Maya rulership may have also occurred, with groups appropriating foreign symbols and ideologies associated with deities and interregional elites from across Mesoamerica (Smith and Berdan 2003). As the traditions and social structures of the Classic period were slowly altered, households would have needed to adjust to new social orders, taking advantage of opportunities for the development of wealth or power in the less strict social hierarchies of the Postclassic period.

To understand how households at Baking Pot were engaging in these processes of social reorganization, three scenarios of household adaptation and interaction will be explored. Section 2.1 focuses on the ‘mercantile’ scenario, based on the effects of the expansion of interregional trade in the Postclassic period, suggesting that access to and distribution of exotic luxury and utilitarian items became more widespread among a variety of households through the production of local resources. Section 2.2 focuses on a political feasting model, considering household and

community participation in large-scale community feasts aiming to construct and strengthen social relationships and solidarity. Finally, Section 2.3 focuses on the appropriation and display of foreign symbols and motifs by households to signify relationships with interregional elites and participation in new expressions of power.

2.1 'MERCANTILE' SCENARIO

2.1.1. Research Questions

Masson (2002) suggests that in the Terminal Classic and Postclassic periods in the Maya lowlands, both commoner and elite households were engaging in new strategies of 'mercantile' exchange based on small-scale household production using local resources to exchange for exotic materials and items. She explains that this new strategy allowed commoner households access to luxury items made from exotic materials at a greater amount than in the Classic period, when prestige items were far more restricted. Similarly, she also suggests that exotic utilitarian goods such as obsidian were also equally available to commoners as they were to elites, as these goods would have been part of the widespread exchange networks of the Postclassic period. As households retained more of the products of their labor as surplus due to decreased tribute demands following the collapse of Classic period political hierarchies (Masson 2000; Masson and Boteler Mock 2002; Masson and Peraza Lope 2004), this provided additional means for households of all status levels and ranks to exchange for exotic items. Continuity in the settlement of Baking Pot from the Classic to Postclassic periods provides an opportunity to explore whether these strategies may have been utilized by both noble and commoner

households to adjust to the changing forms of organization in the Postclassic period. I aim to identify if households at Baking Pot are participating in similar patterns of interregional exchange, addressing the following research questions:

Did households at Baking Pot adjust to the collapse of Classic Maya rulership through changing strategies such as increasing participation in interregional exchange of exotic luxury items such as jade, greenstone, and marine shell, as well as exotic utilitarian goods such as obsidian and basalt? Did all households, both low and high status, participate in these strategies equally?

At Laguna de On, Masson (2002) describes that commoner and elite households were engaging in household production using local materials, with evidence for lithic production and textile manufacture. At Caye Coco, shell ornament production was identified only in elite households, while commoner households were producing other commodities such as agricultural products to trade for non-local items (Masson 2002). In both examples, Masson describes that the domestic inventories for both elite and commoner households indicate that nearly all artifact classes, including exotic utilitarian and luxury items, were close to equally distributed, demonstrating that households were using the items they were producing from local materials to exchange for luxury items that were previously restricted to elites in the Classic period. To investigate this scenario at Baking Pot, I will present the material correlates and archaeological expectations for the ‘mercantile’ scenario¹, explaining how I will identify increased consumption of interregional luxury and utilitarian items in the domestic inventories from a sample of house groups at Baking Pot.

¹ Note the tentative use of the term ‘mercantile’ to discuss Masson’s scenario. Masson uses this term to refer to the unrestricted exchange of exotic items that were available in open systems of exchange, such as the expansion of interregional commercialized exchange throughout Mesoamerica in the Postclassic period.

2.1.2. Archaeological Correlates and Expectations

The expanding role of ‘mercantile’ exchange leading into the Postclassic period would be indicated by increase in the distribution, quantity, and evenness of exchange goods across a community (Hirth 1998). Alanna Ossa’s (2011) research in Veracruz has identified quantitative patterns in the distribution of both social (restricted) exchange and open (unrestricted) exchange items, with unrestricted items conforming to Hirth’s expectations, suggesting that they were obtained in a market setting and accessible by elites and commoners. Therefore, if households at Baking Pot were participating in the expansion of interregional ‘mercantile’ exchange, it is expected that both luxury and utilitarian items made from exotic materials should be distributed in relatively even amounts across households of various social classes after the Classic period. Despite the increasing availability of these items, exotic luxury and utilitarian items are expected to be distributed in relation to socioeconomic status or wealth as well (Smith 1999), as wealthier households would be able to acquire more of these objects. However, I would expect that if all households were engaging in interregional ‘mercantile’ exchange, that even low status commoner households would have low amounts of exotic items and materials.

Masson describes the nature of household adaptations in response to the expansion of interregional ‘mercantile’ exchange at Laguna de On and Caye Coco, noting that exotic luxury items, such as greenstone adzes and jade ornaments, became more evenly distributed among commoner in the Postclassic period than in the Classic period (Masson 2002:351) although distinctions based on wealth still existed. Exotic utilitarian items, such as obsidian, at both settlements were also widely distributed across social groups, indicating that all types of households had access to the material, maybe through a market system. She also suggests that residents in these communities in the Postclassic period were more dependent on obsidian for use

and production of chipped stone tools in comparison to earlier periods where households primarily used local chert.

Changes in the distribution in exotic and non-local luxury and utilitarian items will be explored by examining the proportions (with attached statistical confidence levels) of each of the archaeological correlates for exotic luxury items (jade, greenstone, marine shell, pyrite, and copper artifacts) and utilitarian objects (obsidian blades, basalt grinding stones). If households at Baking Pot were expanding their participation in interregional ‘mercantile’ exchange networks leading into the Postclassic period, we would expect to find these exotic items in the domestic inventories of both noble and commoner residences around the time of this change. If households were relying more heavily on exotic items and materials for utilitarian purposes over local materials, we would expect to see an increase in the distribution of exotic utilitarian items across both commoner and noble households and the declining use of utilitarian items made from local materials. Finally, if households were producing items from local resources to exchange for exotic items, we would expect to find an increase in local production around the same time as the expansion of interregional exchange. Due to the local resources in the area, local exchange items may include agricultural products or items made from slate. The distribution of luxury and utilitarian items will be compared between nobles, high status commoners, and low status commoners for the Late Classic, Terminal Classic, and Early Postclassic periods to explore whether the scenario that Masson describes in communities in northern Belize may have been applicable at Baking Pot. The ‘mercantile’ scenario will be explored in Chapter 5.

2.2 POLITICAL FEASTING SCENARIO

2.2.1. Research Questions

The end of dynastic kingship would have significantly altered political relationships among households, communities, and political centers in the Terminal Classic period. The political activities attached to Classic Maya rulers included the regulation of tribute, the maintenance of alliances with royal and noble families, as well as a central role in ritual and warfare (Sharer and Traxler 2006). Although the processes of sociopolitical collapse often lead to the dissolution of centralized political power, they also provides options for the appropriation of political power outside of previously controlled hierarchical structures (Brumfiel 1994:10). Several strategies have been proposed for the development of political power in Mesoamerica, including status competition through the display and exchange of prestige goods (Blanton *et al* 1996), redistribution (Earle 1977), and large-scale community events generating social debt (i.e. feasting) (Clark and Blake 1994, Dietler and Hayden 2001). Although these strategies for the establishment of political power are generally used to account for the development of political power during periods of political centralization, the same opportunities may also exist in the context of decentralization (Urban and Schortman 2004).

Using ceramic evidence from the dynastic capital of Xunantunich and the surrounding settlements, LeCount (1999; 2001) suggests that large-scale community feasting among households became more prominent during the Terminal Classic period, as non-royal nobles sought to forge new relationships and generate solidarity in the unstable political situation at the

end of the Classic period. She describes the changing pattern for household distributions of serving vessels in domestic contexts from the Late Classic to Terminal Classic periods, where these types of vessels became more frequent in the largest patio groups of noble households. Robin *et al.* (2010) suggest that these community-wide feasts also served to redistribute special types of food, such as venison, as they note that faunal remains were nearly exclusively distributed among nobles at San Lorenzo. LeCount uses this evidence to suggest that nobles at San Lorenzo, a small settlement outside of the dynastic capital of Xunantunich, formed political alliances with commoner households during the Terminal Classic period through the hosting of feasts to strengthen community integration in the unstable political environment following the collapse of dynastic rulership. In spite of expanding political strategies to garner supporters and foster community solidarity, the abandonment of Xunantunich and its settlements in the Early Postclassic period provides some indications that these strategies may not have been successful over the long-term. Since households at Baking Pot continued to live there after the abandonment of the palace complex by the royals, the exploration of LeCount's political feasting scenario provides an interesting opportunity in which to identify if households at Baking Pot were engaging in similar activities to adapt to the unstable political environment, addressing the following research questions:

Did households at Baking Pot adjust to the collapse of Classic Maya rulership through changing political strategies such as increasing the hosting of, or attendance at feasts? Did all commoner households, both low and high status, participate in these strategies equally?

2.2.2. Archaeological Correlates and Expectations

The archaeological signatures of feasting have been extensively discussed by Hayden (2001:40-41), to include higher amounts of serving vessels, particularly highly decorated or rare types, higher amounts of food remains, including rare or special types of food, and special food disposal features among many other correlates. For this analysis, feasting materials have been separated into two categories: 1) Serving vessels (including decorated ceramics), and 2) Food preparation materials (including cooking vessels and faunal remains).

If feasting was an important aspect of elite social life following the collapse of centralized rulership, then materials associated with feasts, including serving vessels, decorated ceramics, and faunal remains should be found in significantly higher concentrations among noble households in Settlement Cluster C. Serving vessels include bowls, plates, dishes and vases, often with elaborate decorations. Serving vessels were used primarily to serve food in public displays of consumption, as these more elaborate types of vessels would have been made to be seen. Feasts would have been important events where households would bring out food in serving vessels, with the elaboration of these vessels acting as a means for status competition with contending elites. If community-level feasts were being used as a means for status competition, we would expect to find decorated ceramics differentially distributed among nobles and commoners. In contrast, if the purpose of feasts was for solidarity or integrative purposes, we may expect to see a de-emphasis of status differences. Food preparation materials include the vessels used to cook the food, along with the food itself. Cooking vessels include *ollas*, which would have been used to cook food over a hearth. Since feasts emphasize the public consumption of food, cooking vessels would have been integral to the cooking of meals for large-scale consumption. If nobles were cooking larger amounts of food, we would expect to find higher amounts of cooking vessels at their residences. Feasts would have included rare or

elaborate types of food, along with higher amounts of food than typical meals in domestic settings. High-quality sources of protein, including large animals and domesticated species were likely featured in these public events. Animal protein was a part of the diet for all households, although typical meals likely utilized small game and freshwater shell. If feasts were used for community solidarity and integration, featuring a redistribution of high-quality food including meat, we would expect that faunal remains would be primarily distributed among noble households.

Changes in the distribution of materials associated with feasting will be explored by examining the proportions (with attached statistical confidence levels) of each of the archaeological correlates for feasting, including serving vessels, decorated ceramics, cooking vessels, and faunal remains. The results of this analysis should indicate if feasting materials were differentially distributed among nobles, suggesting that these households sponsored large-scale community feasts during the Terminal Classic and Early Postclassic period. The political feasting scenario will be explored for households at Baking Pot in Chapter 6.

2.3 PAN-MESOAMERICAN SYMBOL HORIZON SCENARIO

2.3.1. Research Questions

The processes of political collapse and changes in the social organization also impacted ritual and religious ideology as well. Following the collapse of Classic period political hierarchies, iconographic symbols depicting feathered serpent motifs spread throughout Mesoamerica, associated with the spread of the Cult of *Quetzalcoatl* and materialized through a standardized set of symbols and style (Ringle *et al.* 1998; Boone and Smith 2003). The appropriation of foreign symbols or iconography was a means for the legitimization of authority throughout early societies, with local rulers gaining esoteric knowledge and power from these materials (Helms 1992). Associations with “internationalized” religious iconography associated with the Cult of *Quetzalcoatl* became a new form of status differentiation in the Terminal Classic and continuing into the Postclassic period, with local elites displaying the symbols and motifs of the feathered serpent as a form of status competition (Urban and Schortman 2011:186-192; Aimers 2004).

The presence of motifs associated with symbol horizons across Mesoamerica was not restricted to the Postclassic period, as Olmec iconography was widespread across Mesoamerica as early as the Formative period (Grove 1993), and motifs from Teotihuacan and central Mexico were present throughout Mesoamerica during the Classic period (Pasztor 1993). Aimers describes the use of feathered serpent motifs among elites, although the changing social dynamics of the Postclassic period may have provided increasing opportunities for commoner

households to use and display objects featuring Pan-Mesoamerican iconography to gain power. I explore this scenario of households appropriating Pan-Mesoamerican symbol horizons as a means to link themselves to interregional elites in Mesoamerica with the following research questions:

Did households at Baking Pot adjust to the collapse of Classic Maya rulership through displaying iconography associated with the spread of Pan-Mesoamerican symbol horizons? Did all households, both low and high status, participate in these strategies equally?

In order to demonstrate their association with foreign concepts and practices and reinforce conceptions of ritual knowledge and power, individuals and groups would have used the display of Pan-Mesoamerican symbol horizons in public settings. As these symbols and motifs would have been displayed on portable objects, including elaborate ceramic vessels, they may be featured in prominent communal or ritual events, including feasts, dedication and termination rituals, caching rituals, as well as for burials and mortuary rites. This type of display would not have been limited to the Postclassic period, as examples of foreign symbols were widespread in the Classic period across the Maya lowlands. Imagery from Teotihuacan was rare but noticeable on some carved monuments of the Classic period, with texts showing Maya lords adorned in central Mexican costume and describing visits from Teotihuacan elites (Braswell 2004). Iconography associated with Teotihuacan includes goggle-eyed depictions of *Tlaloc*, the rain god, the “Great Goddess”, the pulque god, and netted jaguar (Miller and Taube 1993:163; Pasztor 1973). The identification of Classic forms of Pan-Mesoamerican symbol horizons, along with Postclassic motifs associated with Quetzalcoatl, may indicate that this was a strategy

used by individuals and households in a continuing tradition that may have shifted with the Postclassic focus on the northern Maya lowlands. In addition, the continued display of local (Maya) symbols and motifs may reflect strategies associated with affiliations with the past, including Maya beliefs and values. These types of strategies may reflect an effort to promote solidarity rather than competition, as the shared meaning of Maya symbols may provide internal cohesion between groups.

2.3.2. Archaeological Correlates and Expectations

An analysis of the distribution of iconographic symbols associated with foreign symbol horizons can provide indications of whether households were using the display of foreign iconography as a method of status competition for power or authority. Archaeological correlates for the Pan-Mesoamerican symbol horizon are classified into two groups: 1) Local (Maya) symbols and 2) Pan-Mesoamerican symbols.

The proportions of sherds decorated with Classic and Postclassic Pan-Mesoamerican motifs, along with local symbols, will be measured in relation to total ceramic sherds to identify if noble and commoner households were using this iconography. Other types of material, such as carved shell ornaments may be fashioned into symbols as well. Symbols on these types of media will be compared to those on ceramics to understand if foreign symbols were being used for different purposes. If households of both nobles and commoners were using foreign symbols to differentiate status, I would expect to find these motifs in both kinds of households. Distributions exclusively in noble households would indicate that these motifs were not widespread across society, and may have been used by elites for gaining power.

In order to understand how objects with Maya and Pan-Mesoamerican iconography were being used, a contextual analysis will identify the locations where these materials are being disposed, including in middens, fill, on-floor, and in ritual contexts (including burials and caches). In Urban and Schortman's (2011:186-192) study, they identified ceramics decorated with feathered serpent motifs in the Postclassic period were primarily disposed of in midden contexts, which reinforces the idea that they were likely displayed during public events such as feasts. This kind of pattern would indicate that foreign symbols were being utilized by prominent households to differentiate themselves from other households. In contrast, disposal of materials with foreign or local iconography may have had more ideological significance. Finally, an examination of the types of media on which iconography was displayed can also identify the function and ideological importance of these items.

In sum, archaeological correlates for the Pan-Mesoamerican symbol horizon scenario would include the iconographic depictions of foreign motifs. The distributions of exotic versus local motifs across households of different socioeconomic ranks will provide indications of whether all households were engaging in ideological strategies of differentiation. Similarly, an examination of Maya symbols may provide indications that households were using these types of materials for solidarity purposes rather than differentiation. A contextual analysis of symbols will provide indications about if these motifs became important parts of local rituals, and an analysis of burial patterns through time will identify if ritual practice drastically changed during the Postclassic period. These questions will be explored in Chapter 7.

3.0 BAKING POT RESEARCH AND METHODOLOGY

3.1 GEOGRAPHY

Baking Pot is located in the Cayo District of Belize, on the southern bank of the Belize River, approximately 10 kilometers east of the modern town of San Ignacio. The modern country of Belize is located on the eastern periphery of the central Maya lowlands, with its eastern coast on the Caribbean Sea (Figure 1.1). The Belize River, the longest river in the country, runs east to west across central Belize, flowing out into the Caribbean near present day Belize City. The upper Belize River Valley (Figure 3.1) is located in western Belize and encompasses the lower Macal and Mopan Rivers through the confluence of those rivers to form the Belize River, and ranging into the savanna region near Belmopan. Located along the eastern edge of the central Maya lowlands, the geological and natural diversity of the Belize Valley distinguished it from the Petén to the west and the Yucatan to the north.

A variety of natural resources are located in the area, with granite and slate formations in Mountain Pine Ridge to the south of the valley, along with natural outcroppings of chert and limestone in the karstic foothills. Ethnohistoric accounts of the area provide information about some of the agricultural cultigens of the region, detailing the cultivation of cacao in the highly productive soils along the Belize River (Jones 1989:102).

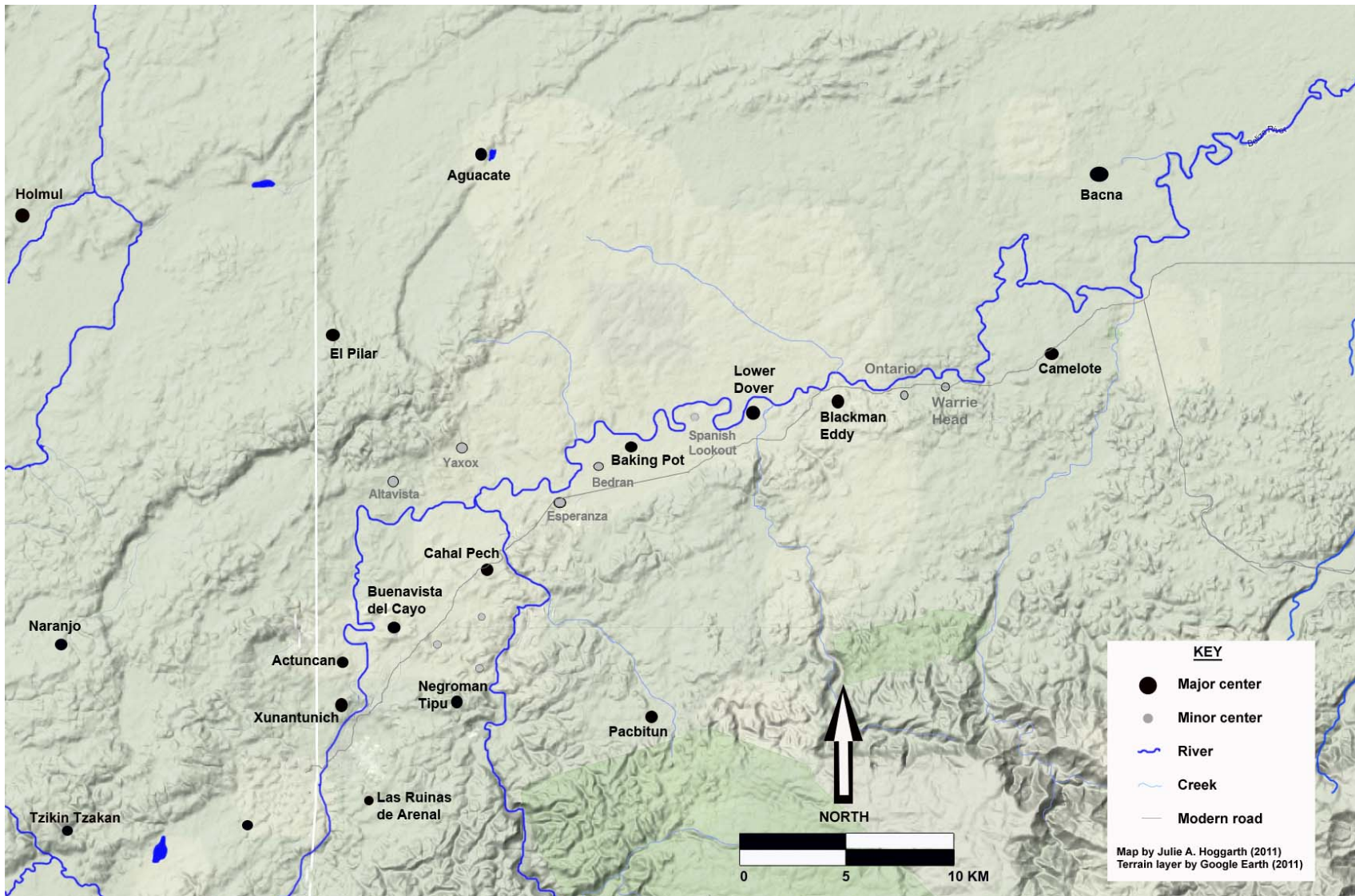


Figure 3.1. Topography and political capitals in the Belize Valley and surrounding areas.

The landscape is framed to the north and south by limestone foothills, with the Maya Mountains, Mountain Pine Ridge, and the Vaca Plateau adjacent to the southern perimeter of the region. Elevations changes are most drastic in the western portion of the valley, with river terraces and foothills rising above the Macal and Mopan Rivers (Fedick 1995:18), with less topographic variability to the west of the confluence of the rivers at Branch Mouth (Figure 3.1). At this location, the floodplain widens with a series of river terraces extending from the banks of the river to meet low foothills to the north and south. Baking Pot is located within this broad portion of the river valley.

As the Belize River continues down river, the valley floor constricts after the town of Unitedville and the archaeological site of Lower Dover, winding through steeper foothills before reaching the broad, flat expanse of central Belize. Past this point, the river continues eastward across the flat savanna before reaching the Caribbean Sea.

3.2 NETWORK OF POLITIES IN THE UPPER BELIZE VALLEY

3.2.1 Overview

The earliest studies examining the political organization of the Upper Belize River Valley originate with the pioneering research conducted by Gordon Willey and his colleagues at Barton Ramie (Willey *et al.* 1965), which is now understood as being the settlement of Lower Dover (see Hoggarth *et al.* 2010), followed by Bullard's early classification of sites in the Belize Valley and Petén (Bullard 1960). These studies served as the starting point for understanding political

organization in the valley, classifying Xunantunich, Cahal Pech, Blackman Eddy, and Baking Pot as political capitals in the Belize Valley. Since this time, new epigraphic and archaeological data has provided greater insights into the network of polities the eastern extent of the central Maya lowlands.

3.2.2 Political Capitals in the Belize Valley

The dynastic kingdoms of the eastern Petén and central Belize included Naranjo to the west and Caracol to the south, along with less powerful kingdoms in the Belize Valley (Figure 3.2). The location of the Belize Valley between these “super-powers”, as well as the highly productive agricultural land along the Mopan and Belize Rivers, would have made the area highly desirable to powerful kingdoms, subjecting polities in the Belize Valley to the changing military campaigns and alliances between dominant political powers. Despite the close proximity of powerful kingdoms, the scarcity of carved monuments in the Belize Valley makes epigraphic comparisons difficult (Helmke and Awe 2008, *In Press*). However, polities in the valley have been identified through a combination of epigraphy and archaeology.

Models of political organization in the Belize Valley have largely been based on material remains, including size, population estimates, and civic architecture (Willey *et al.* 1965; Iannone 2003, 2004; Ball and Taschek 2004; Taschek and Ball 1999; Leventhal and Ashmore 2004; Garber *et al.* 2004). Helmke and Awe (2008, *In Press*) describe nine variables that characterize political capitals in the valley: “1) nucleated monumental epicentres, 2) pyramidal temple structures, 3) eastern triadic temples (such as E-Group-like configurations), 4) royal palatial groups, 5) ballcourts, 6) monuments such as stelae and altars (some of which were carved), 7) intrasite processional *sacbeob* (causeways), or ‘vias’, 8) *sacbe* termini groups, and 9) in some

cases royal tombs” (Helmke and Awe *In Press*:3). Emblem glyphs and/or royal titles have been identified on monuments and portable objects at Xunantunich, Pacbitun, Baking Pot, and Altun Ha (Helmke and Awe *In Press*:12), suggesting that rulers in Belize Valley polities wished to be viewed as equals, at least in written form, with royals in more powerful kingdoms. This evidence suggests that polities in the Upper Belize River Valley included Lower Dover, Baking Pot, Pacbitun, Cahal Pech, Buenavista del Cayo, Actuncan, and Xunantunich.

In relation to the dynastic capitals of Naranjo and Caracol, polities in the Belize Valley were smaller and less powerful than their powerful neighbors to the west and south. While Belize Valley ceremonial centers contained the same types of civic architecture, monuments, palaces, and royal titles as their more influential counterparts, it is clear that for most of the Classic period, polities in the Belize Valley were under the influence of the Naranjo and Caracol kingdoms (Helmke and Awe *In Press*). It was not until the power of the dynastic capitals in the Petén waned that Belize Valley polities broke away from their overlords, establishing autonomous kingdoms.

3.2.3. Baking Pot

One of these political capitals is Baking Pot, which was continuously occupied from at least the Late Preclassic period into the Middle Postclassic, before reaching its apogee as a small kingdom at the end of the Late Classic period (Audet and Awe 2004; Helmke and Awe 2008). Its prominent location on the Belize River, coupled with the high soil productivity of the broad river valley at this location, may have been important for the long term occupation of Baking Pot, with construction projects continuing into the Terminal Classic period (Audet 2006; Helmke 2008). The civic-ceremonial center was abandoned in the Terminal Classic period, around A.D. 800-

900, although evidence of occupation in Baking Pot's settlement has been identified dating to as late as the Middle Postclassic period (A.D. 1250) (Audet and Awe 2005). We treat Baking Pot as a kingdom² because several royal titles of rulers at Baking Pot have been identified from portable objects, including Primary Standard Sequence (PSS) inscriptions on cacao drinking vessels describing its owner as, "*chan te' ha' ajaw*", interpreted as a royal title for one of Baking Pot's rulers (Helmke and Awe 2008). Also used as evidence for Baking Pot having been a political capital, elaborate royal tombs, along with large pyramidal structures, ballcourts, plazas, and a palace complex indicate that Baking Pot was a political capital; likely drawing its wealth from agricultural production on its rich alluvial soils.

3.2.4. Late to Terminal Classic Collapse and Partial Depopulation of the Belize Valley

The scarcity of carved monuments in the Belize Valley makes discussions of sociopolitical collapse difficult, relying heavily on the archaeological evidence for the abandonment of the ceremonial centers. The Terminal Classic period was a time of varied change in the Belize Valley, with the abandonment of the palaces and ceremonial centers of Cahal Pech (Awe 1992, 1996) and Buenavista del Cayo (Ball and Taschek 2004; Taschek and Ball 2004), while other centers, such as Xunantunich and Baking Pot, briefly thrived (Awe and Helmke 2007; Helmke 2008; LeCount *et al.* 2010). Evidence at Cahal Pech indicates that the palace was abandoned and the ceremonial center fell into disuse prior to the beginning of the Terminal Classic period, although a small population may have continued to use the ceremonial center, indicated by the construction of a crude, low structure in Plaza H constructed with recycled facing stones from

² I use the term "kingdom" with caution here, as this term is loaded with western connotations. Archaeological and epigraphic evidence at Baking Pot suggests that it was comparable to other major centers in the Belize Valley, including Xunantunich, Cahal Pech, Lower Dover, and Buenavista del Cayo.

adjoining range structures and temples and featuring with an elaborate tomb (Awe personal communication 2012). Ritual deposits on the terminal floors of Plaza B suggest that people continued using these spaces for ritual activity following its abandonment. Early abandonment of the palace and ceremonial architecture is present at Buenavista del Cayo as well, with nearly complete abandonment of the civic groups and settlement by the beginning of the Terminal Classic period (Ball and Taschek 2004). Xunantunich experienced a brief period of expansion in the Terminal Classic period, with the dedication of a monument including an emblem glyph, suggesting that the polity claimed autonomy in the waning power of Naranjo before rapidly declining after A.D. 849 (LeCount and Yaeger 2010: 77). The decline of Lower Dover is less clear, as archaeological research in the ceremonial center only began in 2009; however, preliminary evidence indicates its establishment as a political capital in the Late Classic period and a rapid decline in the Terminal Classic, the same pattern Marcus (1998) describes for the cyclical development and decline of polities in Mesoamerica and throughout the world. A limited number of New Town ceramics have been recovered on the terminal floor of Plaza F near Lower Dover's acropolis (Guerra 2012), indicating some activity in the Postclassic period; however, no Postclassic civic constructions have been identified. Civic construction in the ceremonial center of Baking Pot largely ended after the Late Classic period, with limited evidence of small Terminal Classic renovations in the palace complex suggesting that it was not occupied long thereafter (Audet 2005; Helmke 2008).

Despite the abandonment of the palaces of all Belize Valley ceremonial centers by the end of the Terminal Classic period, accumulating evidence suggests that occupation in the Belize Valley continued albeit at a smaller scale in some settlements. Evidence of Postclassic occupation has been recovered from Barton Ramie (Aimers 2004; Willey et al. 1965), Tipu

(Aimers 2004; Graham 1981), and Baking Pot (Aimers 2003; Audet and Awe 2005; Hoggarth 2008; Willey et al. 1965). The strongest evidence for Postclassic occupation is from Tipu, with continuity into the colonial period (Graham 1991). Audet (1999, 2000) found significant evidence of continuity in the Yaxtun Group at Baking Pot, including a copper bell and New Town ceramics, while the surface collections from Conlon's (Conlon and Ehret 1999, 2000) survey suggest heavy concentration in the northern and eastern settlement areas. Additional evidence suggests that other sites may have been sparsely occupied as well, with limited Postclassic remains in the settlement of Minanha (Iannone *et al.* 2003).

The decline in the population of settlement areas associated with Belize Valley political capitals provides an indication of the depopulation and abandonment of the area. As population estimates are not available for all political centers in the area, this section will focus on the changes in occupation in four areas: 1) Xunantunich, 2) the BRASS survey area, 3) Barton Ramie / Lower Dover, and 4) Baking Pot (Table 3-1).

The Xunantunich Settlement Survey mapped the locations of house mounds within a 1,000 m radius of the ceremonial center of Xunantunich, along with extending transects to the north and southeast of the ceremonial center to encompass smaller communities within the polity. The nearby settlement of San Lorenzo was also included in this area, with survey covering the extent of the community in a block area of 86 hectares. In total, the Xunantunich Settlement Survey recorded a total of 598 mounds in both the immediate and peripheral settlement areas from the combined transects. During the Tiger Run phase at the beginning of the Late Classic period, approximately 2,695 residents lived in the central and peripheral settlement around Xunantunich, expanding to 3,289 at the end of the Late Classic period in the

Table 3-1: Chronology and Population Estimates in the Belize Valley³

PERIOD		BARTON RAMIE (Gifford et al. 1976)	XSS (Ehret 1995) ⁴	BRASS (Ford 1990)	BARTON RAMIE (Willey et al. 1965)	BAKING POT (Hoggarth et al. 2010)				
	Survey area (km ²)		5.9 km ²	5 km ²	2 km ²	9 km ²				
	Mounds		598	535	262	554				
POSTCLASSIC	Late	1500	New Town	0	112	1374	2,072			
		1400								
		1300								
		1200								
	Early	1100								
		1000								
	900									
CLASSIC	Terminal	800	868	1,412	1,441	2,986				
	Late	700	Spanish Lookout	3,289	2,884	1,221	3,047			
		600	Tiger Run	2,697			2,864			
	Early	500	Hermitage	2,240	1,442	1,038	2,377			
		400								
		300								
PRECLASSIC	Proto-classic	200	Floral Park	1,554	2,678	1,110	1,798			
		100								
	-----	AD/BC	Mount Hope					533	1,645	
	Late	100	Barton Creek			1,325		331	1,097	
		200								
		300								
	Middle	400	Jenney Creek			1,371		912	403	670
		500								
600										
700										
800										
	900									

³ Population estimates were derived from total mound counts from published surveys in the Belize Valley using the standard ethnographic estimate of 5.5 individuals per nuclear family in Mesoamerica, multiplying this value by the number of structures. It should be noted that the maximum population of Xunantunich or Baking Pot at approximately 3,000 individuals likely ranges somewhere between 2,000 to 6,000 in reality (guarding against hyper precision).

Table 3-2: Population Decline in the Belize Valley, indicating maximum occupation (100%) and percentage of population decline (from the population maximum) in each survey area.

PERIOD			BARTON RAMIE (Gifford et al. 1976)	XSS (Ehret 1995)	BRASS (Ford 1990)	BARTON RAMIE (Willey et al. 1965)	BAKING POT (Hoggarth <i>et</i> <i>al.</i> 2010)
POSTCLASSIC	Late	1500	New Town (Late Facet)	-100%	-96%	-5%	-32%
		1400					
		1300					
		1200					
	Early	1100	New Town (Early Facet)				
		1000					
900							
CLASSIC	Terminal	800		-74%			
	Late	700	Spanish Lookout	100%	100%	100%	-2%

Spanish Lookout phase. Population drastically declined in the Terminal Classic period, with only 869 residents in the settlement before being completely abandoned by the beginning of the peak in at the end of the Late Classic period, with a drastic decline in the Terminal Classic and Early Postclassic periods.

The Belize River Archaeological Settlement Survey (BRASS), directed by Anabel Ford, surveyed the upland, foothill, and valley sections of an area between El Pilar to the northwest and Baking Pot on the southeast, on the northern side of the Belize River (Ford 1990). Covering over 500 hectares through three transects running north to south starting from the valley bottom into the upland areas; the BRASS project identified a total of 535 structures. Due to the location of the survey areas between political centers in the valley, these population estimates likely include residents from the peripheral areas associated with the El Pilar, Cahal Pech, and Baking Pot polities. Nonetheless, population in this area reached its peak in the Late Classic period from A.D. 600-800, with an estimated 2,884 residents, before declining the Terminal Classic period to

around 1,412 residents. Population levels continued to decline drastically, with a population of approximately 112 in the Early Postclassic period. Ford (1990:172) indicates that the majority of the population in the Postclassic period was living in the upland areas.

Gordon Willey and his colleagues' (1965) research at Barton Ramie provided a broad chronology of occupation in the settlement from the Late Preclassic to the Early Postclassic periods. Today, we know that Barton Ramie is the northern settlement area for the civic-ceremonial center of Lower Dover. Therefore, Willey's population estimates do not reflect the entire population of Lower Dover. Population at Barton Ramie increased from 1,221 residents in the Tiger Run phase, associated with the early part of the Late Classic period, to 1,441 residents in the Spanish Lookout phase at the end of the Late Classic period. Population levels were at their maximum at Barton Ramie during this time, before slightly declining to 1,374 residents in the New Town phase in the Early Postclassic period. Overall, population at Barton Ramie remained relatively steady in the Postclassic period. Although settlement remained relatively high in Barton Ramie, it is unclear whether the other settlement areas around Lower Dover persisted, as house mounds these areas have not been mapped or tested. However, it is clear that at least one community at Lower Dover continued to thrive into the Postclassic period.

Demographic shifts were also less severe at Baking Pot. The results of the 20% demographic survey (explained in further detail in Section 3.3.1 of this chapter) indicate that population peaked in the settlement immediately surrounding Baking Pot at around 3,047 residents in the early facet of the Spanish Lookout phase between A.D. 700-800. Population slightly declined at the end of the Spanish Lookout phase, dropping to 2,986 residents. An estimated 2,072 residents remained at Baking Pot in the Early Postclassic period, beginning in A.D. 900. The end date of the early facet of the New Town is still unclear, although it likely

extended until the Middle of the Postclassic period around A.D. 1200. Continuity in the settlement around Baking Pot was concentrated in Settlement Cluster C and E, east of the ceremonial groups, and in parts of Settlement Cluster A and H. Population levels in Settlement Cluster C remained relatively steady in this area, reaching 391 at the end of the Late Classic period, remaining the same in the Terminal Classic, and dropping to an estimated 345 residents in the Early Postclassic period. (Table 3-2) This indicates that like Barton Ramie, Settlement Cluster C retained a high level of its population into the Postclassic period.

Demographic shifts in the Xunantunich, Lower Dover, and Baking Pot polities in the Late Classic to Early Postclassic periods in the upper Belize Valley indicate that population declined rapidly in some settlements during the Terminal Classic period, as seen at Xunantunich which was completely depopulated by the end of the Terminal Classic period and in the BRASS survey area. Although systematic testing of house mounds has not been conducted at Cahal Pech, excavations in its settlement area reveal a similar pattern of rapid abandonment by the end of the Terminal Classic period (Brisbane 1995). Smaller populations at Baking Pot and Lower Dover persisted into the Postclassic period, concentrated into select communities. Overall, these demographic shifts indicate that polities including Xunantunich and Cahal Pech in the western section of the upper Belize Valley were depopulated and abandoned earlier, whereas populations declined in the eastern section of the valley, with smaller communities in the areas around Lower Dover and Baking Pot persisting into the Early Postclassic period.

3.3. BAKING POT POLITY

The Late Classic civic-ceremonial center of Baking Pot consists of two groups, Group A and B with one sacbe connecting the groups and two extending outward from the center (Figure 4.9). Hundreds of house mounds, organized into formal and informal plazuela groups, extend out from this center, surrounding it. Due to the presence of a royal palace in Group B, elaborate burials, and high population levels, Audet (2006) suggests that Baking Pot may have been a dependent center under the jurisdiction of the Naranjo kingdom during parts of the Classic period, becoming an independent capital at the beginning of the Late Classic period. Like many other polities in the Belize Valley, Baking Pot lacks carved stelae, although the presence of Primary Standard Sequence texts provide royal titles for Baking Pot's rulers (Helmke and Awe 2008; In Press). The location of other political capitals, including Cahal Pech, Buenavista del Cayo, and Xunantunich, at equal distances (9.9 km) may indicate similar territorial sizes of polities in the Upper Belize Valley (Driver and Garber 2004).

3.3.1. Previous Research

The initial archaeological investigations at Baking Pot were primarily aimed at obtaining materials for museum collections, with the first excavations conducted in 1924 by Oliver G. Ricketson Jr. from the Carnegie Institution of Washington at Structure A9, the primary structure

of the eastern triadic group, yielding numerous elaborate burials (Ricketson 1929). Research was not conducted at the site again until 1949, when A. Hamilton Anderson, the commissioner of archaeology in Belize at the time, stopped the quarrying of material from Group B by workers constructing the western highway, and initiated excavations in Group B shortly after, conducting small excavations in Ballcourt 3 and on Structure B1. In 1956, Gordon Willey and his colleagues (Willey *et al.* 1965) conducted the first systematic excavations in the civic center, conducted an initial settlement survey of Baking Pot (Figure 4.13), and also conducted a series of test excavations of some of the house mounds surrounding the center. William R. Bullard, who aided Willey's team in 1965, supervised the initial settlement survey of the site, returning in 1961 to conduct excavations at the primary pyramidal temple complex in Group B, Structure B1, as well as Ballcourt 3 (Bullard 1963; Bullard & Bullard 1965).

In more recent times, the Belize Valley Archaeological Reconnaissance (BVAR) project has conducted archaeological research at Baking Pot from 1992 to the present. Although the initial focus of the project focused on the settlement (Conlon 1992), subsequent research focused on excavations in the civic-ceremonial center, aiming to clarify the construction and chronology of Baking Pot. Excavations in the ceremonial center, including in Group A, the central sacbe, Group B, and the causeway termini group (M-190) revealed construction episodes beginning in the Late Preclassic period and extending to the Late to Terminal Classic period (Aimers 1996; Audet 2006; Audet 2005; Audet 2004, 2003; Audet and Awe 2003; Cheetham 1995; Conlon 1996; Ferguson 1999; Hoggarth 2005; Helmke 2008 Swain 2005). In addition to BVAR's focus on the civic architecture to understand the sociopolitical development of Baking Pot, excavations in the settlement sought to understand the relationship between the rulers their subjects.

Supplementing the research in the ceremonial groups, BVAR also focused excavations in

its settlement with James Conlon's (1992, 1993, 1994; Conlon and Ehret 1999, 2000) survey of the central and eastern settlement areas. Excavations primarily focused at formally organized patio groups, including the Bedran group (Conlon 1993, Conlon and Powis 2004), the Atalaya group (Moore 1997, 1998, 1999), and the Yaxtun group (Audet 2000, 2001, 2002). Jennifer Piehl's dissertation research (1998, 1999, 2006) focused on diet and status at Baking Pot and she conducted excavations of singular house mounds south of the Atalaya group. In 2007 BVAR extended the survey area to encompass the entirety of settlement surrounding the ceremonial center Baking Pot (Figure 3.12) (Hoggarth *et al.* 2008; Jobbova 2009). Noting that mound density tended to drop off approximately 1.5 kilometers from the site core, central Baking Pot settlement was designated to include house groups within a 9 km² block around the central point of Groups A and B (Hoggarth *et al.* 2008). Settlement outside of this area (but still within the perceived territory of the Baking Pot polity, was considered Baking Pot peripheral settlement. In all, this survey covered the extent of Baking Pot's settlement and set the stage for understanding the nature and extent of Postclassic occupation, which was primarily focused in the eastern settlement, primarily in Settlement Cluster C.

3.4 FIELD METHODOLOGY

Previous research at Baking Pot had found evidence for occupation in Baking Pot's settlement into the Postclassic period (Audet and Awe 2005; Conlon and Ehret 2000), although its spatial and temporal extent was unknown. In order to distinguish household strategies of adaptation for households after the collapse of centralized rulership, I needed to be able to identify where people were living at Baking Pot in the Postclassic period. In addition, it was necessary to be able to distinguish households of different socioeconomic status in order to understand how various types of households may have used these strategies. Therefore, initial fieldwork for this research focused on gaining a thorough perspective on the spatial and temporal demographic trends in the Postclassic, along with understanding the social variability of house groups at Baking Pot. To accomplish this, the fieldwork was conducted in a series of five steps (Table 3-3), beginning with a survey in the settlement around Baking Pot in order to understand the spatial distribution of house groups across the landscape and recording the locations and sizes of residential structures. Using the architectural data from the survey, the second step involved the creation of a classification typology of house group socioeconomic status, developed in order to understand the nature of socioeconomic variation in households across Baking Pot, finding that the architectural data (using total architectural volume for terminal phase house groups) clustered

Table 3-3: Five stages of fieldwork.

Stages in Fieldwork	Description
<p>Baking Pot Settlement Survey</p>	<p>-Survey of 9 square kilometers around the ceremonial center of Baking Pot -Recording locations and architectural attributes of house groups (number of structures, house sizes and heights, orientation)</p>
<p>Classification Typology for House Group Socioeconomic Status</p> <p>(Surface Architecture primarily Terminal Classic / Early Postclassic)</p>	<p>-Statistical analysis of total architectural volume of house groups -Results grouped into 3 clusters, indicating 3 distinct social groupings among non-royal residences. -These were designated: nobles, high status commoners, and low status commoners.</p>
<p>Chronology & Demographic Survey (Test-Pit Excavations and Surface Collection)</p>	<p>-Excavation of a sample of 20% of house groups (stratified spatially as well as using the residential status classification) -Results indicated Postclassic occupation was concentrated in eastern area, including throughout Settlement Cluster C.</p>
<p>House Group Excavations (CHAPTER 4)</p>	<p>-Selection of a sample of 8 house groups for excavation, including: 1 noble house group (with continuity into Postclassic) 3 high status house groups, including 1 abandoned in the Terminal Classic 4 low status house groups, including 1 abandoned in the Terminal Classic</p>
<p>Laboratory and Quantitative Analysis</p>	<p>-Processing and analysis of materials in the laboratory Analysis of the results, calculating the proportions of artifacts between nobles, high status commoners, and low status commoners for the Late Classic, Terminal Classic and Early Postclassic periods.</p>

into 3 distinct groups, which have been used as a proxy to distinguish noble, high status commoner, and low status commoner households. The third step in the research was to understand the demographic trends across the settlement, in order to identify sectors of Postclassic occupation at Baking Pot. Results from the test-pit excavations revealed that Postclassic settlement was concentrated to the east of the ceremonial center, particularly within Settlement Cluster C. As a result, this area was selected as the location of house group excavations. Eight house groups were selected for excavation, including those of different status (noble, high status commoner, and low status commoner) as well as distinguishing groups that were abandoned in the Terminal Classic period (2 groups) and those that continued into the Postclassic period (6 groups). This can provide an indication of how households of different status were using the strategies associated with the three scenarios, and whether there are any patterns between the households that were abandoned prior to the Early Postclassic and those that persisted. Finally, following the conclusion of excavations, artifacts were processed and analyzed in the lab and the results were compiled to analyze the proportional distribution of materials in each house group. A detailed description of these fieldwork stages is detailed below.

3.4.1 Baking Pot Settlement Survey

James Conlon's surveys from 1992 to 2000 mapped the central and eastern sectors of Baking Pot's settlement (Conlon 1992, 1993, 1994, 1996, 1999; Conlon and Ehret 1999, 2000). In 2007, the author and Eva Jobbova (Hoggarth *et al.* 2008) extended the survey area to encompass the entirety of settlement associated with the ceremonial center of Baking Pot. The survey was conducted using a handheld GPS unit, recording mound location, size, height, organization

(number of structures in group), and orientation (formal or informal organization and orientation of structures to the cardinal directions). Following the completion of the survey in 2008, the locations of house groups were included in the updated map (Figure 3.3), and spatial trends in the settlement data were identified (Hoggarth *et al.* 2008; Jobbova 2009).

The settlement pattern at Baking Pot revealed eight distinct settlement clusters in the site's central and additional clusters continuing in the periphery (Figure 3.3). Seasonal waterways, as well as distances of 100 meters, separate these 'neighborhoods'. Mound density drops off approximately 1.5 kilometers from the ceremonial center; therefore, Baking Pot settlement was designated to include house groups within a 9 km² block around the central point of the ceremonial complex (Hoggarth *et al.* 2008). Settlement outside of this area (but still within the perceived territory of the Baking Pot polity) was considered Baking Pot peripheral settlement.

Overall, the settlement area at Baking Pot is comprised of 554 mounds arranged into 416 house groups spread over 9 km². Using the total numbers of house mounds, maximum population is estimated at approximately 3,047 people at the apogee of the Baking Pot polity in the Late to Terminal Classic periods. This estimate is based on a ratio of 5.5 individuals per mound but does not include the residential areas associated with the palace complex in Group B. Since the palace complex has not been extensively excavated, I am unable to include a population estimate of the royal court.

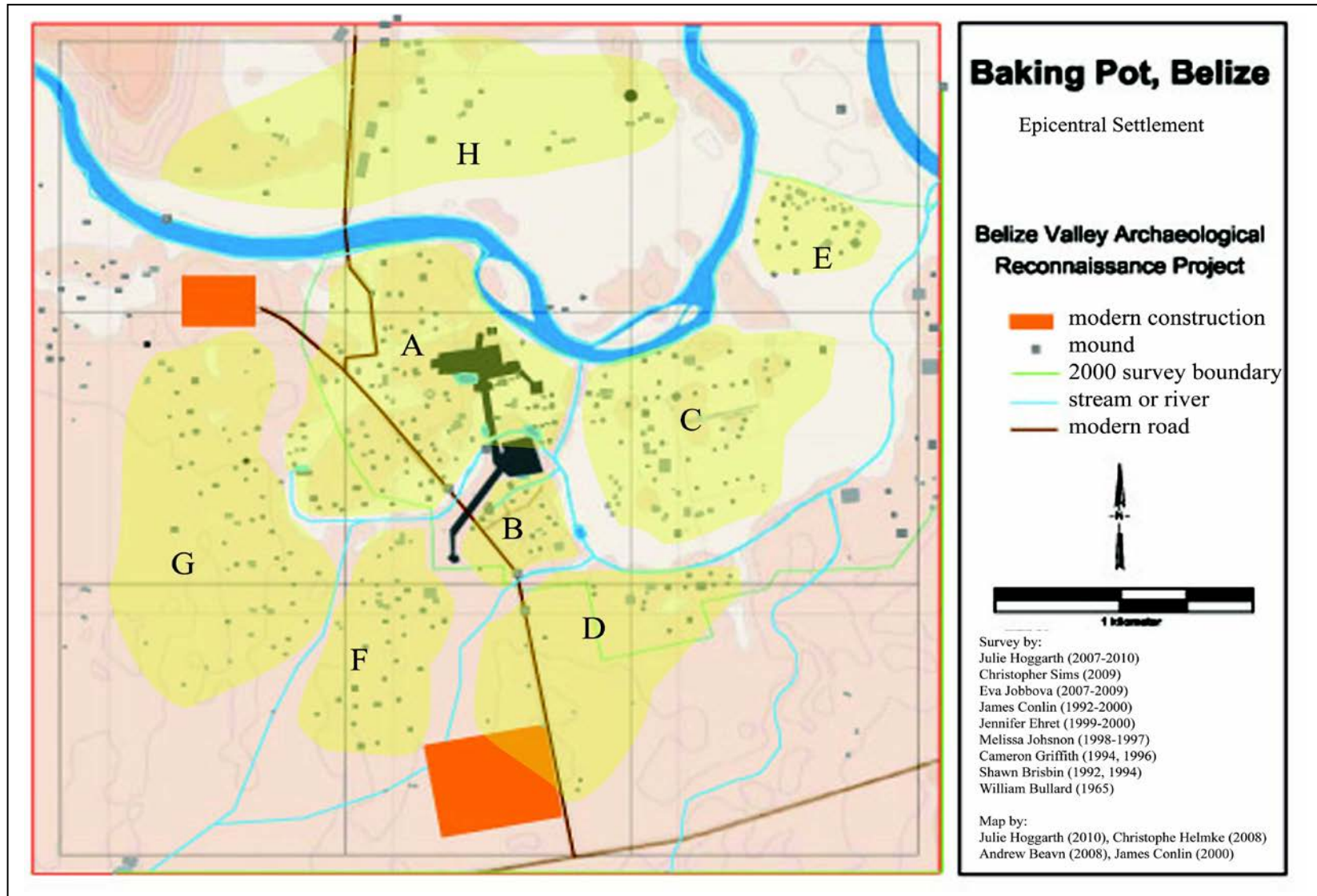


Figure 3.3. Settlement clusters surrounding Baking Pot's ceremonial center (Hoggarth 2010).

3.4.2. Classification Typology for House Group Socioeconomic Status

The results from the settlement survey provided information about the settlement pattern at Baking Pot, including both spatial patterns and population estimates. In addition, the collection of data on the architectural attributes (length, width, height, organization, number of structures, orientation) of house groups provided the opportunity to understand the variability in residential architecture and status at Baking Pot. Using architectural volume provides one proxy to evaluate relative status of households, as house groups with more architectural volume would have been more energetically expensive, requiring a greater investment in labor and materials (Abrams 1994; Smith 1987). In addition, architectural volume provides an independent measure of status that is separate from the material remains that will be used to understand the different strategies of adaptation by households. Therefore, the (terminal phase) total architectural volume for each house group was calculated. Some groups consist of singular mounds and others have several structures formally organized around a central patio. Architectural volume was used in lieu of number of structures, as that may be more indicative of the developmental cycle (Goody 1958) and longevity of occupation rather than socioeconomic status⁴. A stem-and-leaf plot of total house group architectural volume at Baking Pot found that architectural volume grouped into three distinct peaks, which indicates that each of these sets are likely distinct populations and should be analyzed separately (Drennan 1996:13-15). This information was utilized to create a classificatory status typology of non-royal house groups at Baking Pot into three groups: nobles,

⁴ Using architectural volume to understand differences in socioeconomic status does not completely resolve the problem of distinguishing status differences from processes related to the developmental cycle. However, house groups Baking Pot are primarily one or two structure house groups rather than formally organized groups. Therefore, distinguishing status based on number of structures would not reflect distinctions in status, whereas house groups display a wide range in architectural volume, suggesting that wealth differences may have been reflected in the volume of architecture rather than the number of structures.

Table 3-4. House group classification at Baking Pot (excluding the palace complex). Structures below 8m³ were excluded from this table, as they are considered too small to be residential (Ashmore 1988).

Group Type	Minimum Volume	Maximum Volume	Total
Noble	700 m ³	-----	6.0%
High Status Commoner	200 m ³	699 m ³	10.6%
Low Status Commoner	8 m ³	199 m ³	83.4%
TOTAL			100%

high status commoners, and low status commoners (Table 3-4).

Some methodological problems exist for using terminal architecture to understand socioeconomic status. Primarily, as the Maya continually rebuilt on top of earlier residences, terminal phase house groups present the accumulation of hundreds of years of constructions. Thus, it could be possible that architectural volume is reflecting the longevity of occupation rather than socioeconomic status. I can find some reassurance in the idea that households who first settle a region often continue to dominate the social hierarchy (McAnany 1995), so the earliest groups may naturally have a tendency to become the higher status households later in time. After excavations for this project were complete, I was able to evaluate whether these distinctions were actually related to status as opposed to being only related to the terminal

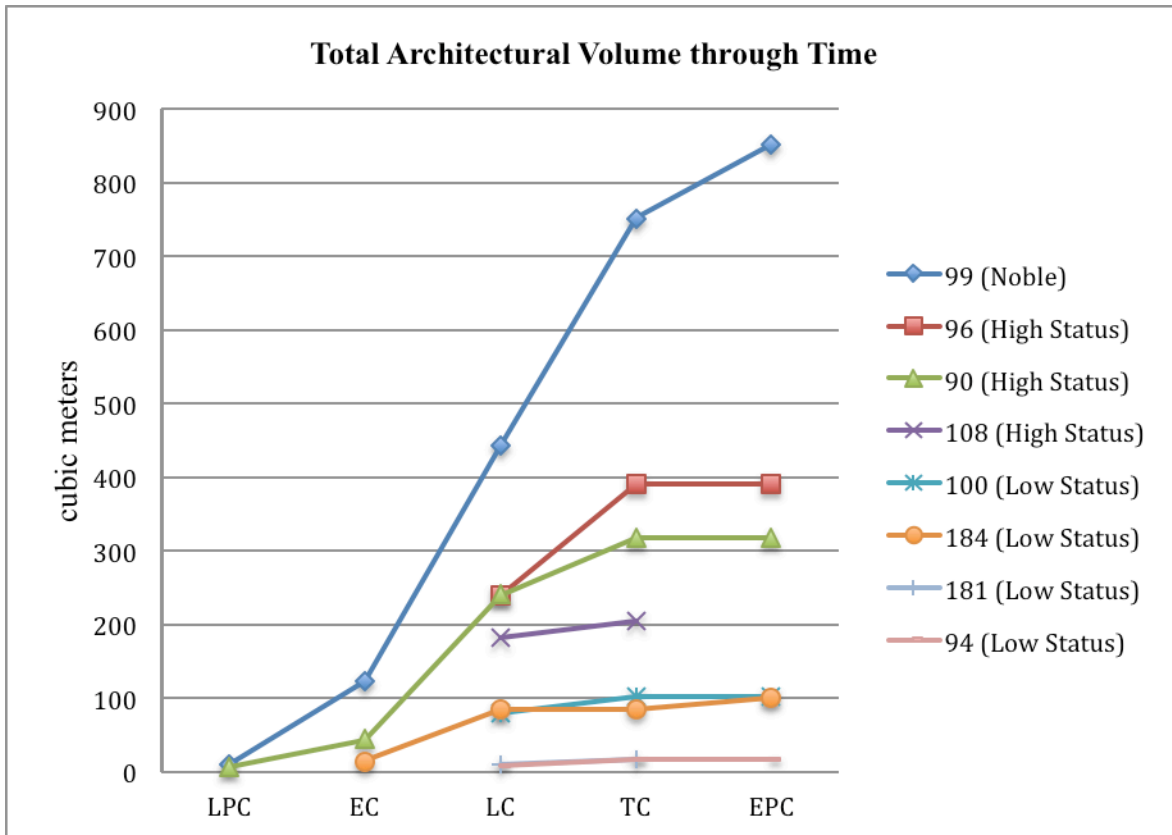


Figure 3.4: Estimated total architectural volume for excavated house groups in each period of occupation. Time period abbreviations are: LPC = Late Preclassic, EC = Early Classic, LC = Late Classic, TC = Terminal Classic, EPC = Early Postclassic. The individual house groups in this study are shown by the different color lines, listing the house group designations.

accumulations of construction. To do this, I compared the estimated total architectural volume for house groups in earlier periods. Architectural volumes for earlier house groups were estimated using the sizes and heights of early structures, although sometimes these dimensions had to be estimated based on visible earlier architecture in excavations. I would expect that if the social groups (noble, high status commoner, low status commoner) that were identified by the terminal architectural volumes were due to successive construction over a longer span of time, all of the house groups with early occupation would fall within the highest status classifications.

Figure 3.4 shows the terminal phase architectural volume on the right, showing strong distinctions between the noble residence (M-99), high status commoner residences (M-96, M-90, and M-108), and low status commoner residences (M-100, M-184, M-181, M-94) by the terminal occupation in the Early Postclassic period .

An examination of the architecture in the earlier periods shows that the status distinctions in total architectural volume on the surface were present from the Late Classic onward. Only 3 house groups pre-date the Late Classic period, M-99, M-90, and M-184. Since these house groups include one of each of the status classifications (M-99 is a noble residence, M-90 is a high status commoner residence, and M-184 is a low status commoner residence), it showed that the span of occupation was not exclusively associated with the house groups with the greatest architectural volume. In addition, the majority of the house groups in the sample, including 2 of the 3 high status commoner house groups, only had occupation beginning in the Late Classic period, so the status distinctions between these groups were not due to only to the span of occupation. Additional trends in the architectural construction sequence are discussed in Chapter 4.

3.4.3. Demographic Survey of Test-Pit Excavations and Surface Collections

The completion of the settlement survey at Baking Pot had provided information about the settlement pattern and maximum population estimates, along with providing information to create a typological classification of socioeconomic status for house groups, designating noble, high status commoner, and low status commoner house groups based on the total architectural volume of terminal architecture. The third stage in the field methodology was to understand the extent of Postclassic occupation at Baking Pot through a demographic survey featuring a

program of test-pit excavations and surface collections (in plowed contexts) to understand changes in the occupation of Baking Pot's settlement through time.

In all, the demographic survey aimed for the excavation of small test pit in a 20% sample of house groups, stratified based on spatial location along with social (status) group. A 20% sample was selected in order to obtain a representative sample that was comparable to other surveys in the valley, including the BRASS (Ford 1990) test pit program, featuring a 12.5% sample and the Barton Ramie survey (Willey *et al.* 1965) with a 25% sample. To consider demographic changes in the settlement across the distinct spatial areas of Baking Pot's settlement, the sample of tested house groups was stratified based on spatial location within the nine 1 km² quadrants (e.g. northeast, north-central, central, southeast, etc.) that was centered on Baking Pot's ceremonial architecture (Figure 3.3). In addition, the sample of house groups were selected based on socioeconomic status (evaluated through the classification of architectural volume). Therefore, 20% of house groups in each status group (noble, high status commoner, low status commoner) were tested within each spatial quadrant. House groups that were selected for the demographic survey were chosen randomly using a random number chart from all of the house groups within each of these social and spatial groupings.

The demographic survey was originally going to be conducted using small (1 x 1 meter) test pits into each structure in the selected house groups. However, disturbances by modern agricultural plowing forced the survey to be altered to collect a (unsystematic) sample of diagnostic ceramics from plowed mounds in the northern and western areas of Baking Pot's settlement. Conlon's survey encountered similar issues and he noted that ceramics on the surface at heavily disturbed mounds included those from the entire chronological time span at Baking Pot, from the Late Preclassic period onward (Conlon and Ehret 2000). An examination of

the ceramics by the author confirmed this suggestion. This indicated that basic demographic information, including the span of occupation of house groups, could be obtained from surface collections of diagnostic ceramics in the instances where test-pit excavations were counterproductive since the domestic architecture was not intact. This was primarily the case for the large sections of the western and northern settlement.

The demographic survey included a total of test excavations or surface collections in 84 house groups to understand the demographic history of Baking Pot's settlement. The results of the survey revealed initial settlement around Baking Pot in the Jenney Creek phase (1000 – 300 B.C.) reaching its population peak of 3,047 residents in the Spanish Lookout phase (A.D. 700 to 900) and declining to approximately 2,000 residents in the New Town phase associated with the Early Postclassic period (A.D. 900 to 1150) (Table 3-5). The results of the demographic survey were used to understand the extent of Postclassic occupation in the settlement, identifying high levels of Postclassic continuity in the eastern settlement, particularly in Settlement Cluster C. Therefore, this area was selected for the fourth stage of research, the excavation of house groups to identify how households adapted to the collapse of rulership at Baking Pot at the end of the Classic period (a description of the house group excavations is detailed in Chapter 4). The following section focuses on the sampling strategy that was utilized to select house groups in Settlement Cluster C for excavation and the general methodology of the research.

Table 3-5: Population estimates for Baking Pot Settlement and Settlement Cluster C through time.

PERIOD		BARTON RAME (Gifford et al. 1976)	BAKING POT Settlement	BAKING POT Settlement Cluster C	
POSTCLASSIC	Late	1500	New Town	2,072	345
		1400			
		1300			
		1200			
	Early	1100			
		1000			
		900			
CLASSIC	Terminal	800		2,986	391
	Late	700	Spanish Lookout	3,047	391
		600	Tiger Run	2,864	367
	Early	500	Hermitage	2,377	138
		400			
		300			
	PRECLASSIC	Proto- classic	200	Floral Park	1,798
100					
-----		AD/BC	Mount Hope	1,645	99
Late		100	Barton Creek		
		200			
		300			
Middle		400	Jenney Creek	670	0
		500			
		600			
		700			
	800				
900					

Table 3-6: House groups selected for excavation, showing status classification.

House Group	Status Classification
Continuous Occupation	
M-99	Noble
M-96	High Status
M-90	High Status
M-100	Low Status
M-184	Low Status
M-94	Low Status
Abandoned in Terminal Classic	
M-108	High Status
M-181	Low Status

3.4.4. House Group Excavations in Settlement Cluster C

Settlement Cluster C is located to the east of Group B, bounded by the Belize River to the north and east and seasonal streams to the west and south (Figure 3.3). The topography of this area slopes upward towards the south, with the majority of house groups located on the second ancient river terrace. Eight house groups were selected for excavation, with groups selected from the classification typology of house group architectural volume along with considering the chronology of occupation of the groups (Table 3-6).

3.4.4.1. Sampling Strategy

House groups with more than 700 m³ of architectural volume were designated as noble residences in the status classification typology. Due to the low numbers of these groups at

Baking Pot (approximately 5 percent of house groups) it is likely that the individuals and families who lived at such locations were in the upper echelon of the (non-royal) social pyramid. As there is only one house group that falls within this group, M-99 was selected for excavation in this sample.

Three house groups in the high status commoner status designation, classified with architectural volumes between 200 and 699 m³, were selected for excavation, including two groups with continuous occupation into the Postclassic period (M-96 and M-90), and one group that was abandoned in the Terminal Classic period (M-108).

High status commoner house groups account for just over 10% of all house groups at Baking Pot, whereas low status commoner house groups accounted for over 84%. These house groups represent the residences of the lowest echelon of households in society, with house groups including architectural volumes ranging between 8 and 199 m³.⁵ In order to accommodate for the large amount of the population consisting of low status commoner house groups, four low status commoner house groups were selected for excavation including three (M-100, M-90, M-94) that had continuous occupation into the Postclassic and one (M-181) that was abandoned in the Terminal Classic period.

The sample of house groups was purposely designed to encompass a broad degree of social diversity while providing a contrasting view of house groups that continued from the Classic period into the Early Postclassic period. This provides the opportunity to examine the activities and strategies of adaptation of households before, during, and after the abandonment of the palace complex and the disintegration of centralized authority at Baking Pot. Thus, the sampling strategy specifically targets all three social groups, non-royal nobles, high status

⁵ House groups with volumes below 8m³ were classified as being non-residential (see Ashmore 1988).

commoners, and low status commoners, in order to understand changes in mercantile exchange (Chapter 5), political feasting activity (Chapter 6), and the appropriation of Pan-Mesoamerican symbols (Chapter 7), further differentiating the activities and behavior of households which were navigating a reinvented socioeconomic and sociopolitical landscape in the Postclassic period from those households which abandoned their houses at Baking Pot in the Terminal Classic period.

3.4.4.2. Excavation Methods

Excavation used conventional procedures to expose a portion of internal floors and patio surfaces in the selected house groups. Horizontal, vertical, and trench excavations were used to identify the distinct construction episodes and the chronology of occupation for each group. The size and location of horizontal excavation units were chosen so as to expose terminal architecture, as well as to accommodate for the excavation of earlier construction phases in trench and test pit excavations. Excavation extended vertically into the sterile level, which ranged between 2.5 to 3.5 m below the surface (Hoggarth 2008). In addition, off-platform units were placed adjacent to excavated structures to identify midden deposits, so as to increase the sample size of artifacts, especially elaborate ceramics and exchange items, which are essential for exploring the three scenarios.

All matrix was screened through $\frac{1}{4}$ inch mesh screens to collect small artifacts from the excavation. A lot system of classification was employed in order to maintain cultural contexts of all artifacts. Artifacts from each lot (cultural feature, level, or deposit) were given a distinct identification number linked to the structure number. Artifacts were separated into artifact classes for each lot daily. Artifact cards included information including date, site name,

structure, supervisor, excavation unit, lot, level, lot description, catalog identification numbers, bag number, and number of artifacts in each bag. This information was recorded by the supervisor and later corroborated with lab records.

3.4.5. Laboratory Methods and Quantitative Analysis

Laboratory analysis was conducted using standard methodologies (Sutton and Arkush 2002; Banning 2003). Initial laboratory processing and recording took place on-site in an outdoor lab on the premises of Central Farm's livestock division. Artifact bags were recorded in the log as they came into the lab, after which the artifacts were washed and counted, and this log was updated continuously with initial artifact counts. Formal analysis was conducted later at the BVAR lab and storage building.

3.3.5.1. Ceramics

Initial ceramic counts were recorded on-site and separated between diagnostic and undiagnostic ceramic forms and ceramics were washed, counted, weighed, and recorded. Ceramic analysis was based on the regional ceramic chronology established by Gifford *et al.* (1976), as well as more recently refined ceramic analyses or reports focusing on the Terminal Classic period (Aimers 2002; Aquino 2007; Chase and Chase 2008; LeCount 1999; López and Foias 2005) and the Postclassic period (Aimers 2002; Graham 1991). The ceramic analysis focused on establishing chronologies for the excavation contexts, in order to understand the sequence of construction and occupation in the house groups. Therefore, ceramics were classified at the ceramic group level, rather than at the type-variety level, as understanding the chronology of architectural construction was the primary aim of the ceramic analysis. This analysis was not formulated to be a formal ceramic analysis, but rather, one that was developed

to address the research questions and methodology. The full results of the ceramic analysis are not included in this dissertation, but will be included in future publications.

For the purposes of the analytical portions of this dissertation, ceramics were consolidated into broader chronological time periods. As my research questions are focused on long-term social change, I consolidated chronological phases with similar sociopolitical organization, amalgamating the broader Late Classic I and Late Classic II periods. This broad period extends from A.D. 600 to 800. The Late Classic III period, differentiated at Baking Pot by the late facet of the Spanish Lookout phase, was designated within a broader “Terminal Classic” period for analysis, which extends from A.D. 800 to 900. The Early Postclassic period is distinguished within the New Town ceramic Complex by Gifford (1976:46), beginning at A.D. 900 but Gifford was unclear on the end of this period, including an early facet associated with the Early Postclassic period between A.D. 900 to 1150 and the Middle Postclassic beginning in A.D. 1150. Therefore, since the exact end in occupation at Baking Pot is still unknown, Postclassic occupation included the Early Postclassic period, although it likely encompasses the Middle Postclassic as well. These broad chronological designations will be continually referenced throughout the text. Although having such large chronological spans of time creates other sets of issues, the consolidation of these temporal periods provides easier analytical comparisons in material remains.

In addition to identifying the chronological phases of the ceramics, attributes such as form and decoration were identified as well. The form of ceramics was identified using Sabloff’s (1975: 22-27) designations, classifying vessels into plates, bowls, dishes, vases, and jars based on the diameters and open/closed nature of the vessel. The identification of ceramic form was essential to answer research questions related to the political feasting scenario, in order

to understand the distribution of serving and cooking vessels between house groups. Ceramic decoration was also recorded in order to understand the distribution of decorated vessels between households in the political feasting scenario, along with the distribution of painted symbols and motifs in the Pan-Mesoamerican symbol horizon scenario.

3.3.5.2. Lithics

Lithic materials were analyzed using a variation of James Stemp's lithic classificatory system, which has been utilized at the nearby center of Pook's Hill (Stemp *et al.* 2010). Chipped stone tools and debitage were classified according to material type (chert, quartz, and obsidian), color, size, weight, thickness, and tool (or debitage) type. The classification of lithics by material type is essential to answer questions in the 'mercantile' scenario, identifying exotic versus non-local and local material types. For obsidian artifacts, Valorie Aquino analyzed a sample of obsidian from Baking Pot using a portable x-ray fluorescence machine. The results of this research are still ongoing, although preliminary results are used for the 'mercantile' scenario.

3.3.5.3. Faunal Remains

Faunal remains were washed and processed on-site. Freshwater shell was identified by the author according to species, size, weight, and modification. Norbert Stanchly conducted the formal faunal analysis on the materials from Settlement Cluster C along with other contexts at Baking Pot, identifying animal species, NISP, as well as noting any modification to the remains. The full results of his analysis are found in Stanchly (2010). The results of the faunal analysis were used to answer questions about the distribution of faunal remains between households,

explored in the political feasting scenario. Stanchly also identified the species of marine shell, noting any modifications as well. These results were used for the ‘mercantile’ scenario.

3.3.5.4. Human Remains

Dr. Jennifer Piehl and Anna Novotny conducted osteological analysis of the human remains. Information from the burials, including age and sex, was used to understand the Pan-Mesoamerican Symbol Horizon scenario. The results of the osteological analysis will be included in Anna Novotny’s dissertation. Dr. Carolyn Freiwald conducted a strontium isotope analysis of several of the burials as well. The results of her analysis can be found in her dissertation (Freiwald 2011). A summary of the burials is located in Appendix C.

3.3.5.5. Other Artifacts

All other classes of artifacts were processed in the lab, recording counts, weights, and attributes and were photographed and included in the overall artifact inventories. Additional processing and analysis was conducted based on the specific needs of each artifact class to answer the research questions.

3.3.5.6 Quantitative Analysis

Following the laboratory analysis of materials from excavations, quantitative analysis was conducted on the artifact inventories, primarily focusing on the archaeological correlates for the ‘mercantile’, political feasting, and Pan-Mesoamerican symbol horizon scenarios (see Chapter 2 for the archaeological correlates and expectations for each scenario). Quantitative analyses focused on calculating proportions of artifacts relative to total sherds with attached

confidence levels (80%, 95%, and 99%) to identify if the proportional differences among households were due to the vagaries of sampling or actual differences between groups. The standardization of artifact totals is necessary, as the areas excavated in each house group varied. Using total sherds provides a useful measure of standardization, as we can expect to recover sherds in relation to the amount that was excavated (i.e. larger excavations will yield larger numbers of total ceramic sherds).

Using the results of these standardized measures, I created bullet graphs to compare the proportions and attached confidence levels of various house groups in the Late Classic, Terminal Classic, and Early Postclassic periods, interpreting these results to identify households that may have higher amounts of artifacts associated with each scenario.

Overall, the research methodology focused on developing sampling programs and methodologies in order to understand how various types of households were adapting to the collapse of Classic Maya political institutions at Baking Pot. The following chapter (Chapter 5) details the chronological sequence of construction and occupation in the sample of 8 house groups selected for excavation in Settlement Cluster C, providing the chronological context that is needed to understand the results in Chapters 5 ('mercantile' scenario), 6 (political feasting scenario), and 7 (Pan-Mesoamerican Symbol Horizon scenario).

4.0 HOUSE GROUP CHRONOLOGY AND CONSTRUCTION IN SETTLEMENT CLUSTER C

In chapter 1, I discussed perspectives on considering household adaptations in the aftermath of sociopolitical collapse. Furthermore, in Chapter 2 I outlined three scenarios where households were implementing new forms of interaction through ‘mercantile’ exchange, political feasting events, and using Pan-Mesoamerican symbols in efforts to participate in reorganized forms of social, political, and economic organization. For this chapter, I discuss the excavations of house groups in Settlement Cluster C at Baking Pot, focusing on outlining the occupational history and construction episodes for each group. This will provide the overall basis for understanding household life in the aftermath of collapse at Baking Pot, with a more in-depth analysis of domestic inventories and artifacts included in the subsequent chapters.

4.1 HOUSEGROUP EXCAVATIONS IN SETTLEMENT CLUSTER C

Eight house groups were selected for extensive excavation, including excavations of portions of the terminal phases of architecture, trench excavations of earlier phases, and vertical excavations into the earliest construction episodes of house groups in Settlement Cluster C. These groups



Figure 4.1. Settlement Cluster C, showing the locations of excavated house groups.

Table 4-1: House Groups selected for excavation based on architectural volume status classifications and chronological occupation.

House Group	Status Classification
CONTINUOUS OCCUPATION	
M-99	Noble
M-96	High Status Commoner
M-90	High Status Commoner
M-100	Low Status Commoner
M-184	Low Status Commoner
M-94	Low Status Commoner
ABANDONED TERMINAL CLASSIC	
M-108	High Status Commoner
M-181	Low Status Commoner

included the M-99 group, the only noble household in the excavation sample, as well as high status commoner house groups M-90, M-96, and M-108 (Table 4-1). Low status commoner house groups that were excavated included M-100, M-184, M-181, and M-94. A short summary of the construction episodes of each group, along with a quick description of special features or deposits is noted. Finally, Section 4.10 will focus on changing investment in architectural elaboration through time, identifying construction efforts in each period.

4.2 EXCAVATIONS AT THE M-99 GROUP

Mound 99 is located in the center of Settlement Cluster C, approximately 506 m southeast of Group B (Figure 4.1). As the largest house group in Settlement Cluster C, the group stands out, with the central platform alone measuring over 2 m in height, with four structures organized around a central patio (Figure 4.2 and 4.3) and likely housed a noble household.

The group was constructed over a series of 5 construction episodes spanning from the Late Preclassic period to the Early Postclassic period. The founding of M-99 featured three construction episodes during the Jenney Creek phase spanning the Late Preclassic, with the initial construction being relatively level with the natural topography, with a thin layer of plaster for the floor. The second construction and third construction episodes raised the height of the larger platform significantly. A burial was interred beneath the structure at M-99d, that of a young child (between 2 to 3 years of age) (see Appendix B for information about burials).

Significant construction occurred at M-99 during the Early Classic, with an overall increase of over 1.5 m in height for the larger platform and M-99d together. The massive construction at M-99 indicates the growing prominence of the household at this location. Construction activity continued in the Late Classic period, with additions to the larger platform, patio, and additions on the existing structures to form two L-shaped structures using high quality construction materials. Construction continued at a lower rate at M-99 in the Terminal Classic period, in its penultimate phase with M-99a being increased with the final construction at M-99a also during this time. Construction of M-99b 4th occurred during the Terminal Classic period,

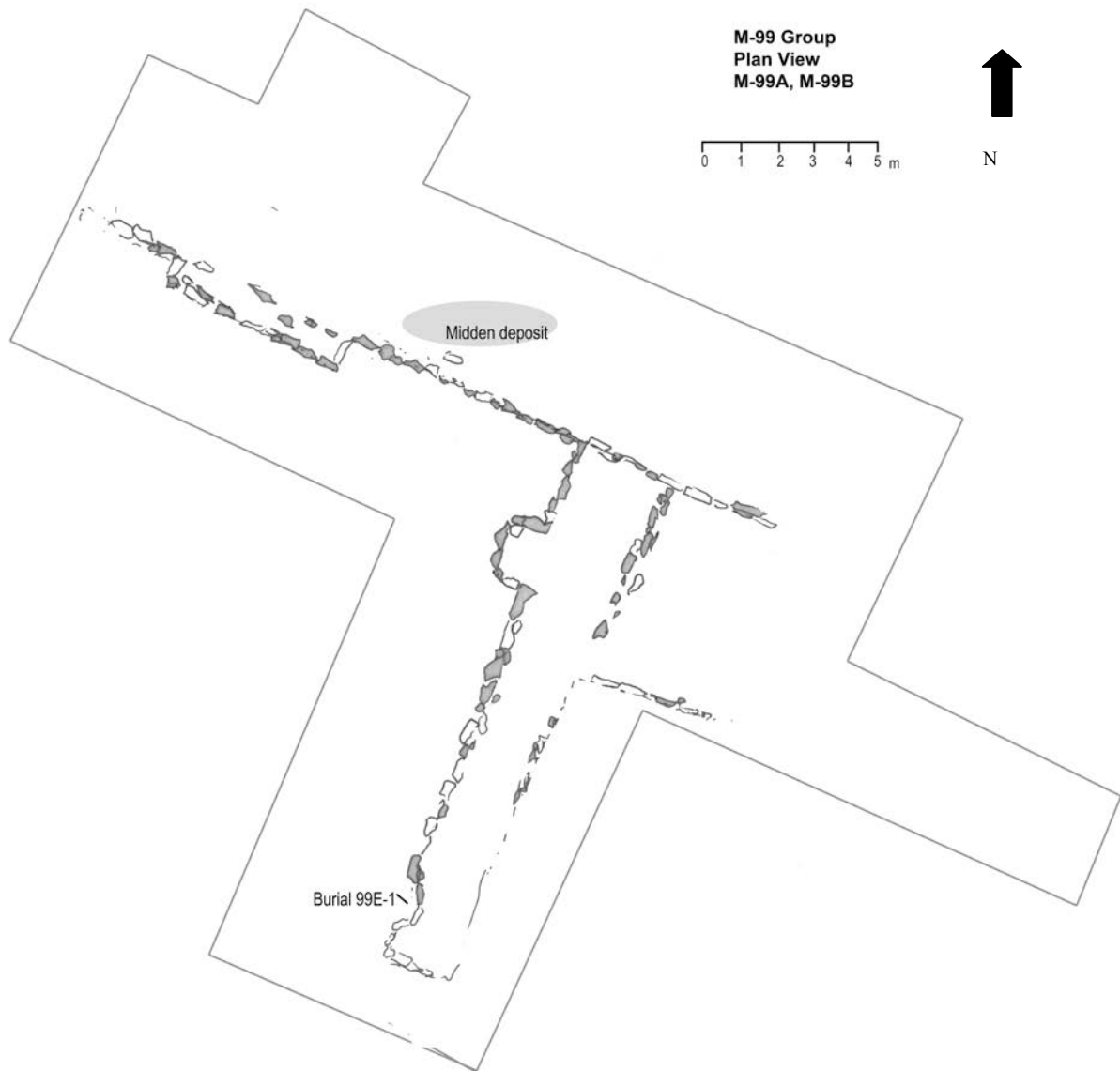


Figure 4.2: Plan view of terminal phase of M-99A and M-99B.

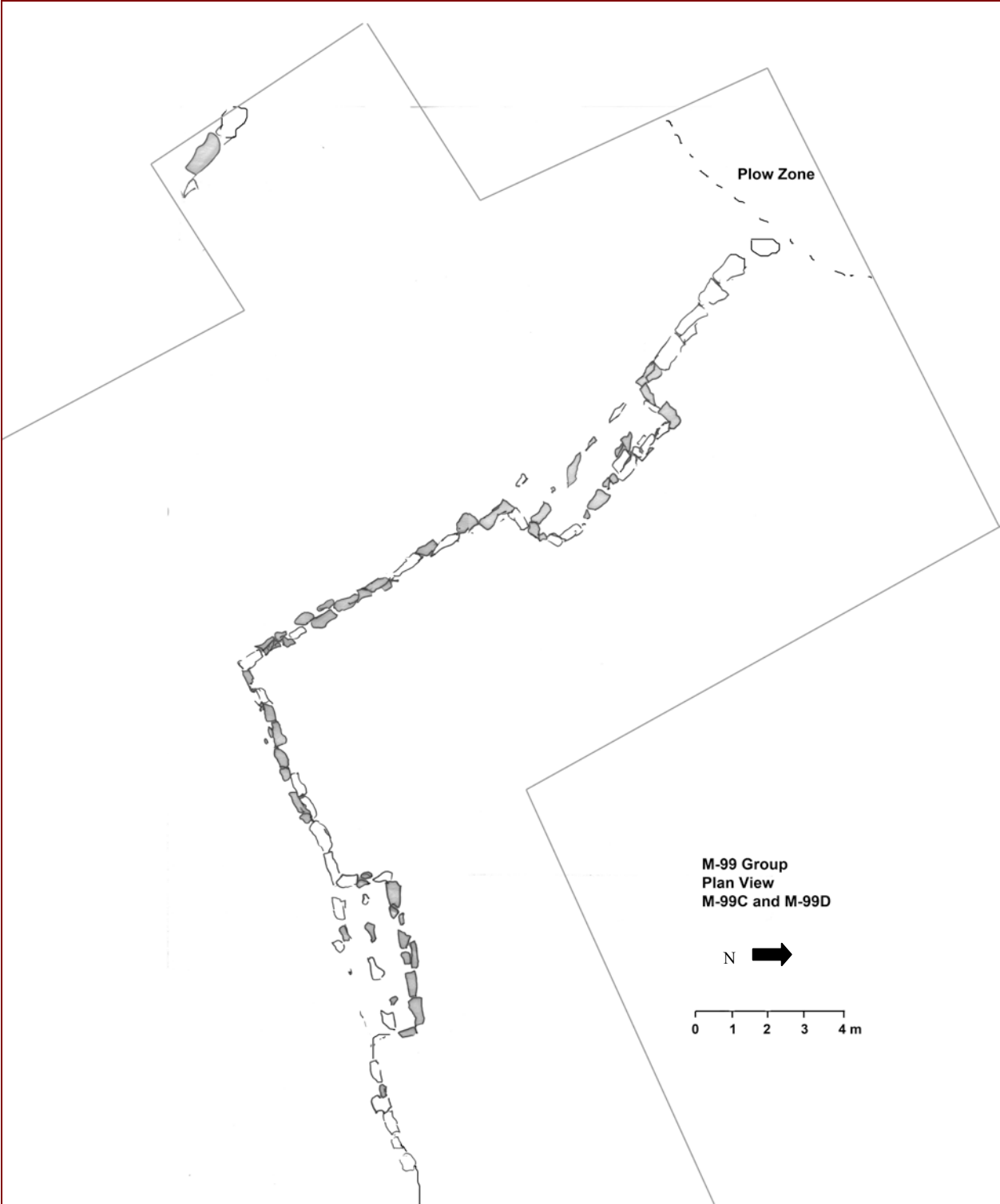


Figure 4.3: Plan view of terminal phase of M-99C and M-99D.

with the expansion of the structure and the addition of an outset on the front of the structure (Figure 4.1). In this third construction phase at M-99b, a one-course wall was constructed. M-99 4th was constructed at M-99b later in the Late Classic period, with an outset in the northern part of the structure. A second terrace was added to the M-99c side of the L-shaped structure in the fourth construction phase at M-99c (Figure 4.2). Finally, minor construction occurred at M-99d, with the platform being raised to accommodate for the addition of the terrace on the M-99c side.

Construction declined drastically in the Early Postclassic period, with only the upper terrace at M-99c being increased approximately 40 cm in height. Despite this decline in construction activity, evidence of continuing occupation is present on all structures, including New Town ceramics, notched chert points, and copper bells being present on the terminal floor of structures and the patio. A burial dating to the Early Postclassic period was interred into the side of M-99c in the Early Postclassic period, buried with a greenstone adze, a fragment of a grinding stone, and New Town ceramics.

4.3 EXCAVATIONS AT THE M-96 GROUP

Mound 96 is located in the central part of Settlement Cluster C, approximately 502 m southeast of Group B. The first construction episode occurred at the beginning of the Late Classic period (Figure 4.4). During the second construction episode in the Late Classic period, the structure was significantly enlarged in height and size. The first evidence of ritual activity within the platform was identified in this period, with three burials (Burials 96-1, 96-2, 96-3) interred in the center of

the platform (see Appendix B). At the end of the Late Classic period, the platform was enlarged again and while the dimensions only increased moderately, the quality of materials improved, with the construction of a thick plaster floor across the platform, as well as internal architecture. In addition, a cache, featuring early facet Spanish Lookout vessels deposited lip-to-lip, was found west of this wall.

The final construction of M-96 was during the Terminal Classic period (Figure 4.4), although evidence of continued occupation into the Early Postclassic on the terminal floor was present as well. In terminal construction episode, the platform had only minor renovations. This occupation level included continuing interaction with ancestors, with a seated female burial (Burial 96-4) interred in the western area of the platform. No new construction episodes occurred at the M-96 group during the Early Postclassic period. Evidence of occupation in this period included materials on the terminal floor and a pit dug into the western end of the platform, although no materials were recovered within this pit, indicating if this were a cache, it must have , it must have featured only perishable material. No other ritual activity was present at M-96 during the Early Postclassic period.

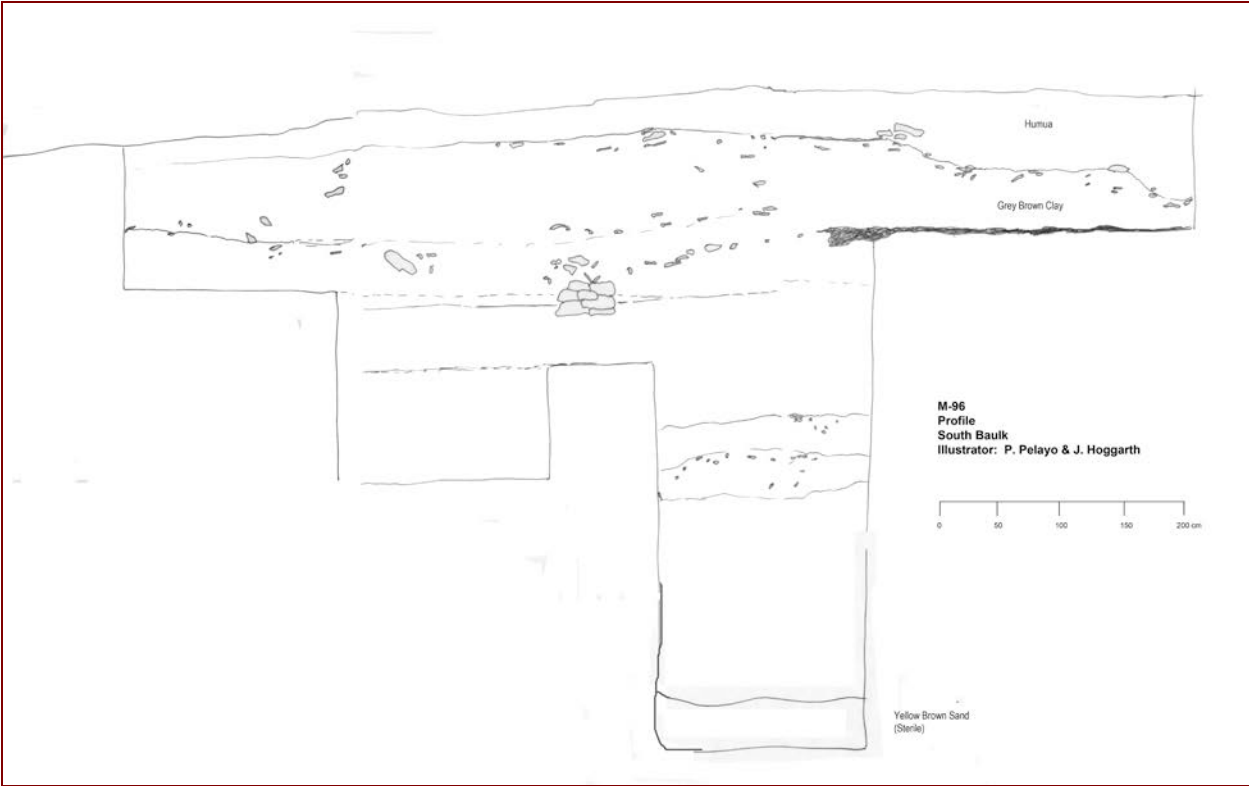


Figure 4.3: Profile view of the south baulk of M-96.

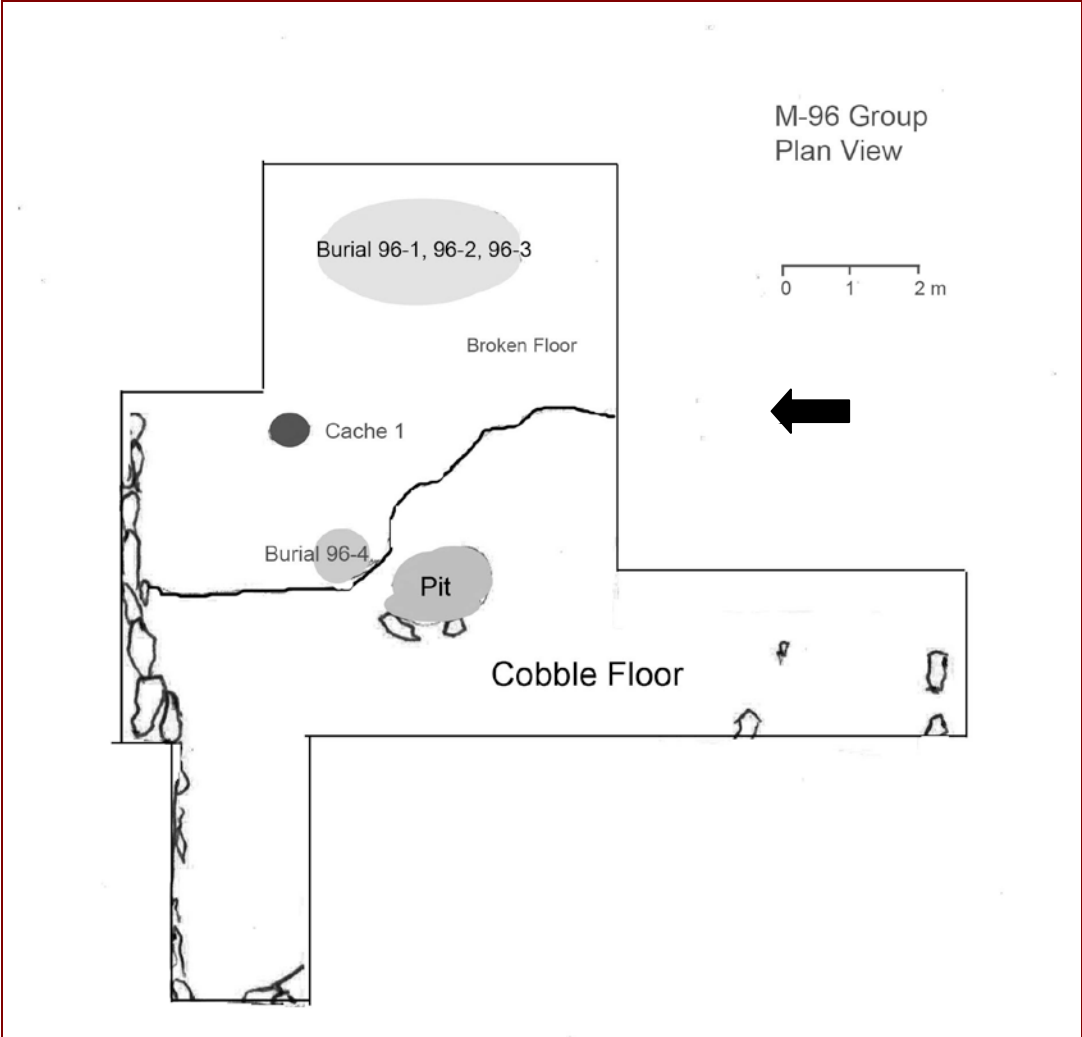


Figure 4.5: Plan view of terminal architecture at M-96.

4.4. EXCAVATIONS IN THE M-90 GROUP

Mounds 90, 91, and 95, referred to as the M-90 group, are located in the central part of Settlement Cluster C, approximately 451 m southeast of Group B. In the first construction episode at the M-90 house group, two low platforms at the locations of M-90 and M-91 were constructed featuring thick plaster floors during the Late Preclassic period (Figure 4.6 and 4.7). Construction expanded in the Early Classic period at M-90 with the addition of another thick plaster floor, and an expansion of M-91, which continued to have an earthen floor. The first evidence of occupation at M-95 was during this time, although no evidence of masonry architecture was present.

Two construction episodes took place in the Late Classic period at M-90, with the expansion of the platform as well as an increase in the height of the platform. The first masonry architecture was constructed at M-95, although this was a small structure. The final constructions occurred during the Terminal Classic period at the M-90 group, with the construction of a second terrace on M-90 (Figure 4.8). At M-91, the fifth and final construction episode the platform was expanded in height.

No additional construction activity was identified at the M-90 group during the Early Postclassic period. Despite the lack of construction in the group, evidence of occupation was present at M-91 in the form of few New Town sherds along with other material on the terminal surface.

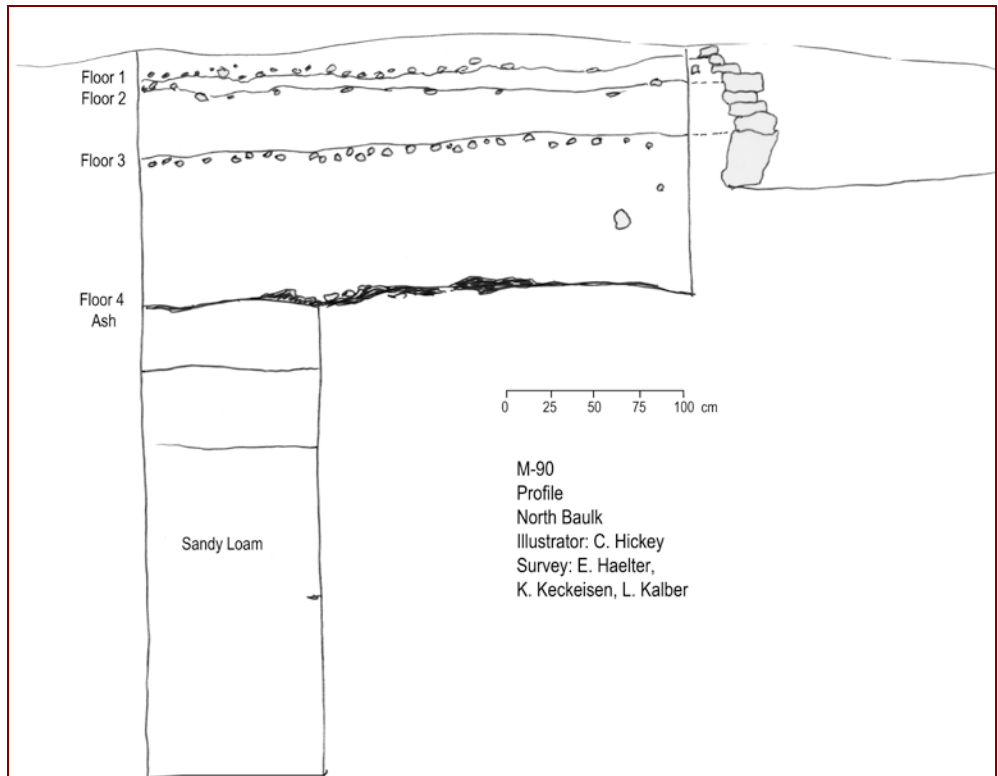


Figure 4.6: Profile view of north baulk of M-90.

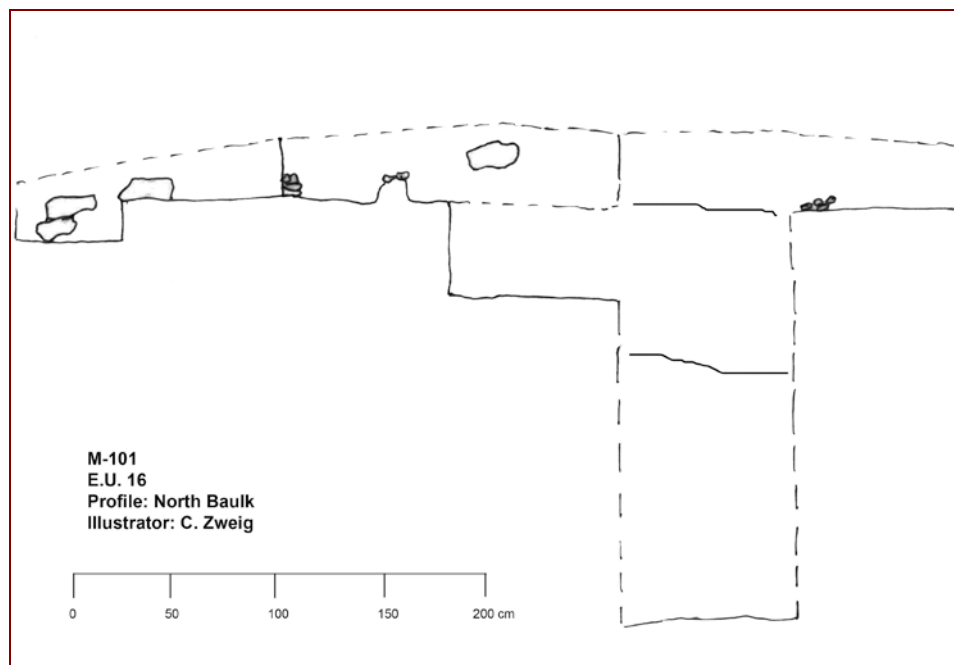


Figure 4.7: Profile view of north baulk of M-91.

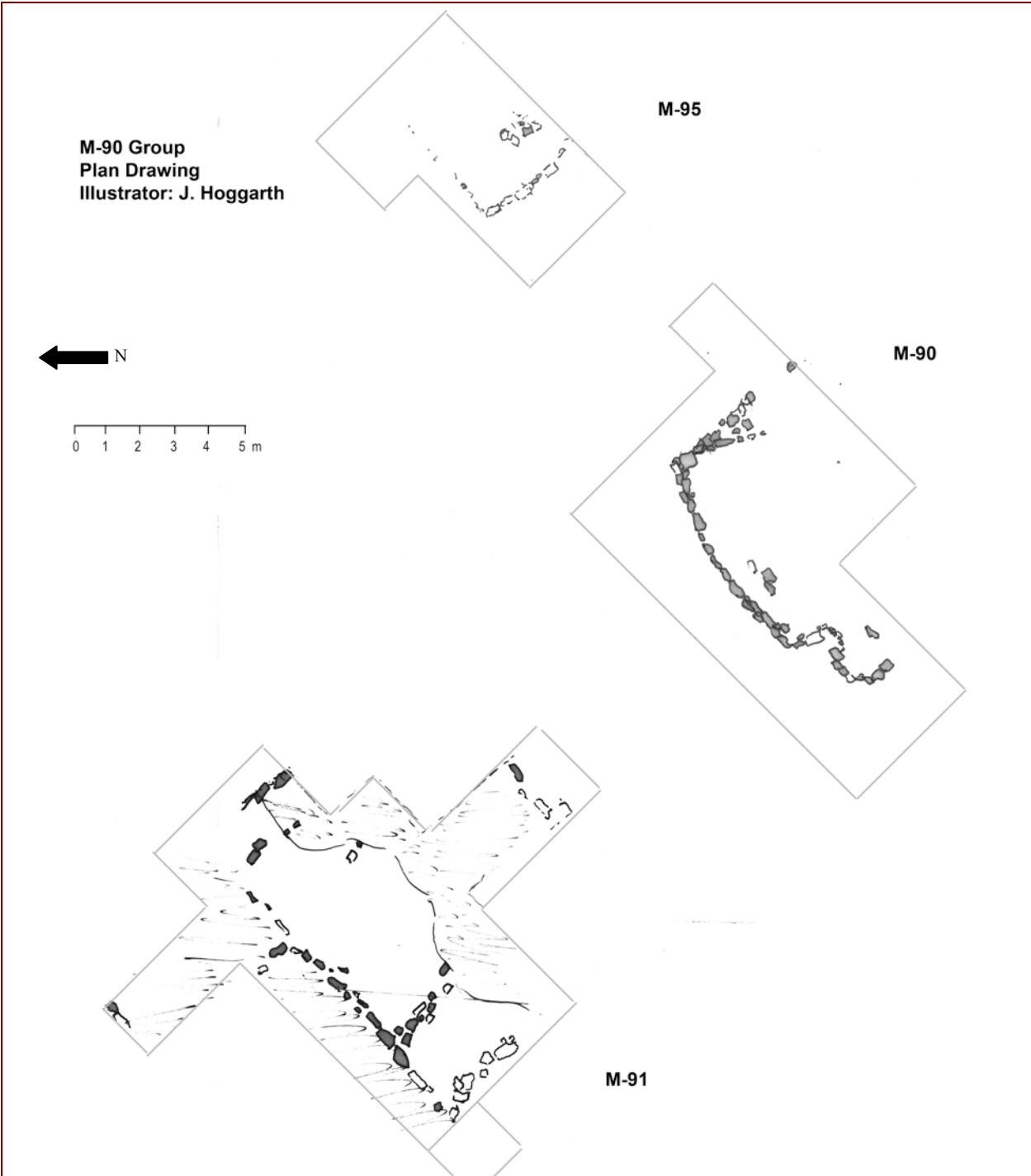


Figure 4.8: Plan view of the terminal phase of the M-90 Group.

4.5 EXCAVATIONS AT THE M-108 HOUSE GROUP

Mounds 108, 109, 110, and 111 are located in the eastern settlement of Baking Pot, in what has been designated Settlement Cluster C. The group is located approximately 378 m south of Group B, nearby the southern-most aguada and the western seasonal stream that surround the settlement cluster. Unlike the majority of house groups in Settlement Cluster C, the M-108 group was not located on the slight topographic rise running north to south in the eastern portion of the cluster, but is located slightly downhill in an area which drains to the northwest into the seasonal streams and aguada. As the occupation of the group did not extend into the Early Postclassic period, it was selected for intensive excavation as one of the high status commoner households that did not survive into the Postclassic.

Occupation at the M-108-111 group began at the end of the Late Classic period, with the construction of the northern structure, M-111 in the southern area of Settlement Cluster C, in a low-lying area that is prone to flooding. Construction expanded in the group during the early facet of the Spanish Lookout phase, with a significant expansion of M-111, along with the construction of the western structure (M-109) and the eastern structure. The M-111 second construction phase was the most energetically expensive construction in the group during this time, although the later addition, also in the Spanish Lookout phase, was less elaborate. In



Figure 4.9: Plan view of terminal phase of architecture at M-111.

contrast, M-110 hardly has any architecture to it, barely elevated off the (un-plastered) patio floor. The location of this structure, on the eastern side of the four-structure group, is typically a locus for ritual activity; however, no evidence of ritual activity was identified within the M-108 group. While the architectural investment in the construction of M-109 was higher than the other structures, the majority of the architectural labor and highest quality materials were used in the construction of M-111.

The final construction of the M-108 group occurred in the Terminal Classic period. Construction during this period was less elaborate, with thin plaster floors at M-111 (Figure 4.9), while the construction episode at M-110 featured no masonry architecture, with poorly cut limestone pieces barely elevating the platform off the (un-plastered) patio floor. Following the Late Classic period, the material record of the household decreased in quality, with declining quality of materials and investment in the Terminal Classic, along with fewer material remains. For example, no obsidian was recovered from excavations in these contexts. Overall, it appears that the M-108 group was struggling, and was eventually abandoned by the end of the Terminal Classic period.

4.6 EXCAVATIONS AT THE M-100 GROUP

The M-100 group, including two M-100 and M-101, are located in the eastern portion of Settlement Cluster C, approximately 501 m southeast of Group B (Figure 4.1). Located on a slight rise, the topography surrounding the group drains slightly downhill to the west and south into one of the seasonal streams that encompass Settlement Cluster C along with the Belize River (Figure 4.1). M-100 and M-101 are adjacent platforms, forming a two-structure house group (Figure 4.10). This group was classified as a low status commoner house group.

The initial construction at M-100 and M-101 was during the Tiger Run phase of the Late Classic period (Figure 4.11, 4.12). Although M-100 was a relatively low mound, the residents of the group constructed M-101 at the same time. During the Spanish Lookout phase, both structures were modified, each being expanded in both size and height. In addition, the

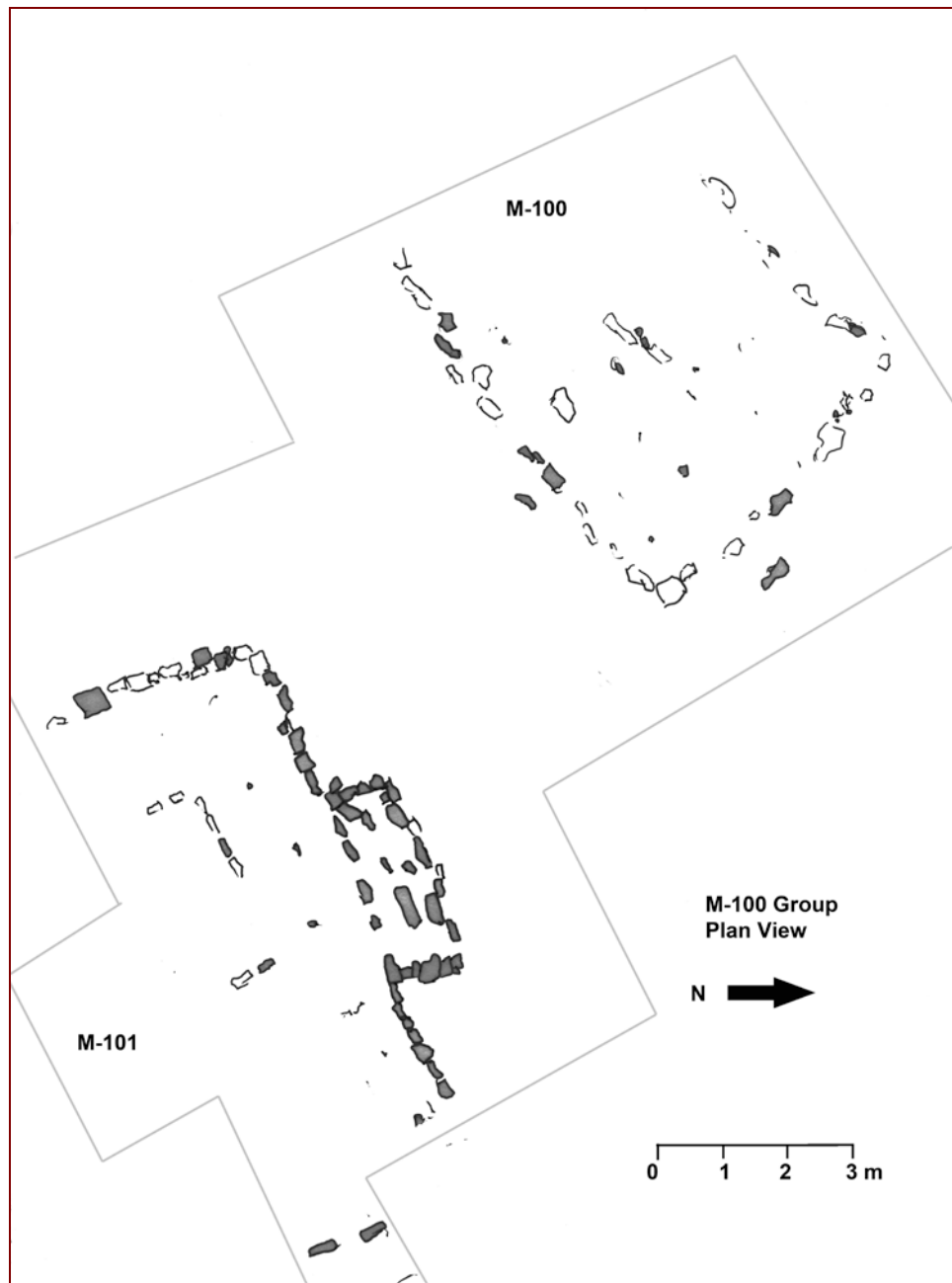


Figure 4.10: Plan view of terminal architecture at the M-100 group.

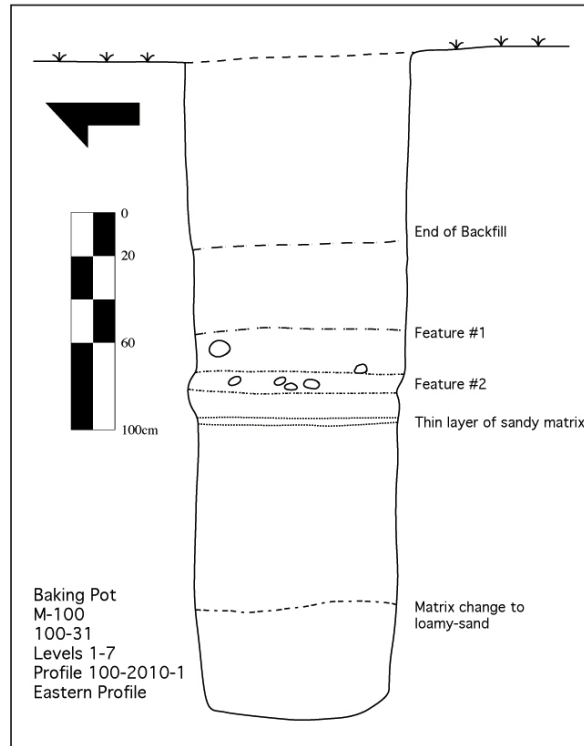


Figure 4.11: Profile view of east baulk of M-100.

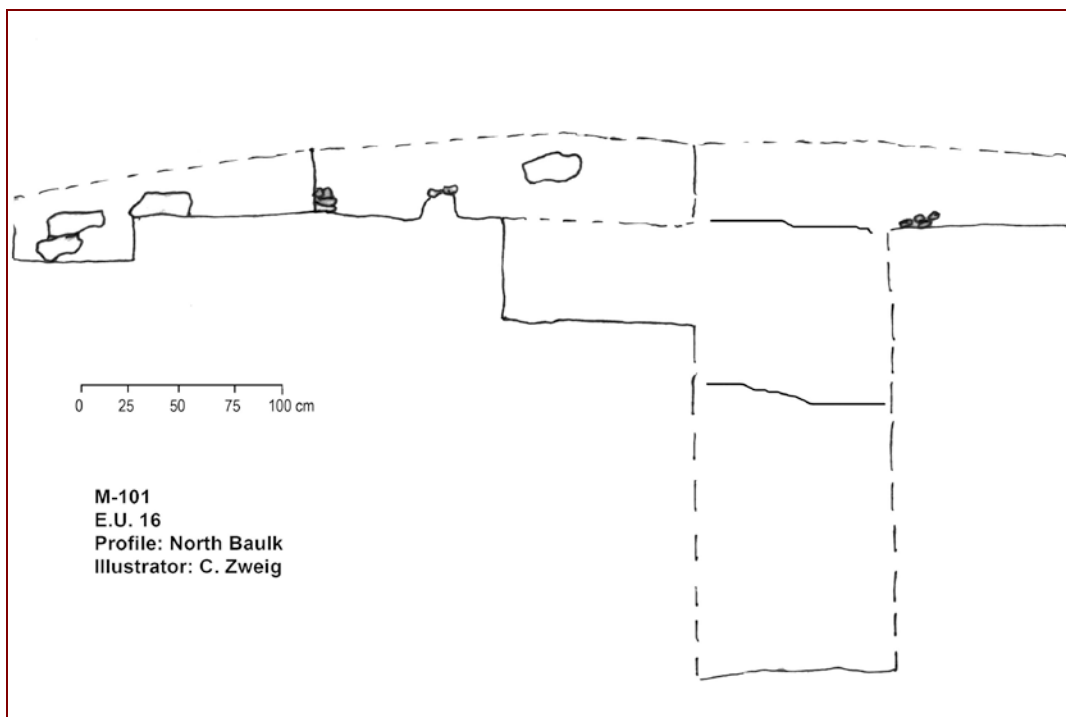


Figure 4.12: Profile view of north baulk of M-101.

construction materials and architectural elaboration of the group became more complex, requiring greater labor input as well as construction costs. This would infer that the household in the M-100 group, with a 2 cm thick plaster floor added in M-101, along with medium and large limestone blocks used in the platform walls.

No new construction was recorded at the M-100 group during the Early Postclassic period. Despite this lack of architecture, Early Postclassic material remains were identified on the terminal floors, including New Town ceramics and ceramic net sinkers, as well as in a small midden on the northern end of M-101. Burial 101-1 was included in this deposit, including a single individual dating to the Early Postclassic period.

4.7 EXCAVATIONS AT THE M-184 GROUP

Mound 184 is located in the northern part of Settlement Cluster C, approximately 50 m south of the Belize River and 374 m east of Group B's central plaza. It is located in the center of Central Farm's experimental rice fields, which are currently under cultivation. The mound is a single mound group and is L-shaped, with the longest side (M-184a) oriented east to west and the shorter north to south (M-184b) (Figure 4.13).

The M-184 house group was founded in the Early Classic period, in the northern section of Settlement Cluster C. The initial structure, located in the area of later M-184a was a simple structure, constructed with an earthen floor and low platform. The second construction, also



Figure 4.13: Plan view of terminal architecture at the M-184 group.

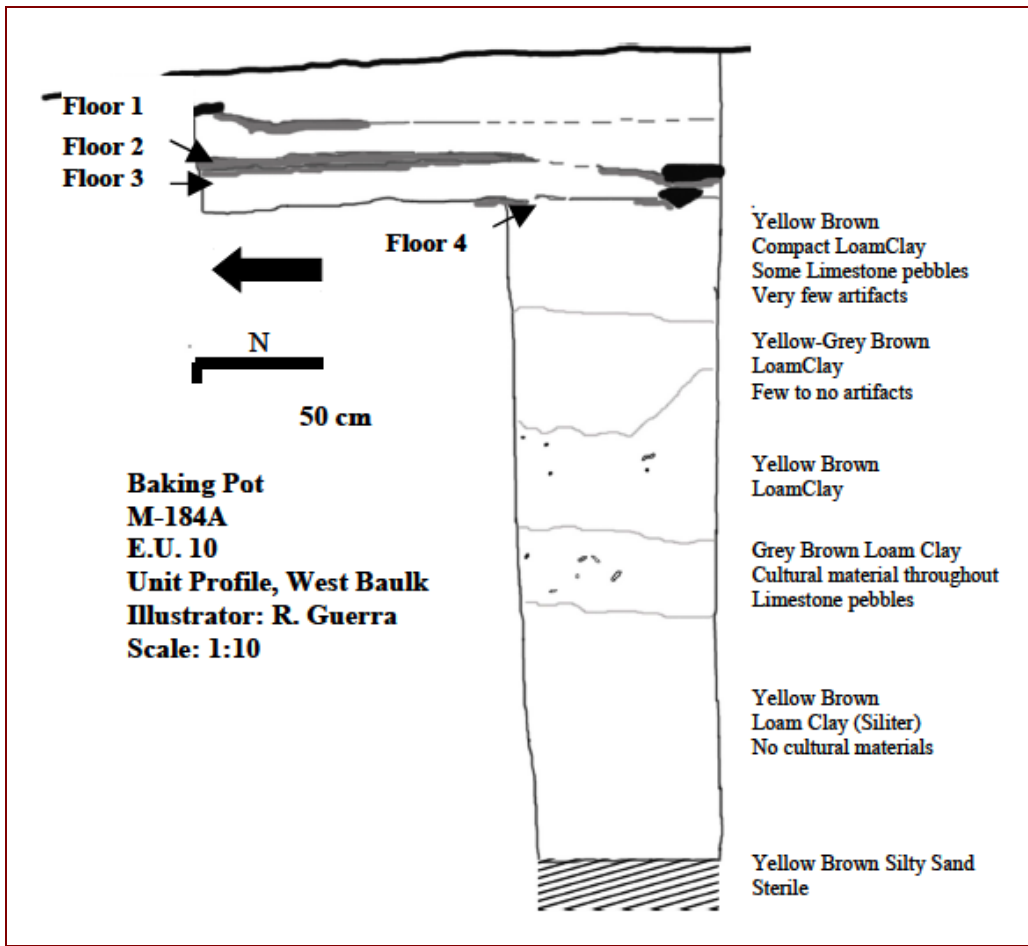


Figure 4.14: Profile view of west baulk of M-184.

during the Early Classic period saw some increasing investment in construction materials, with the addition of a very thin plaster floor and a small increase in the height of the platform (Figure 4.14). Following the construction of the second construction episode, evidence of a flooding event is present, and it appears that the structure was likely abandoned, although new construction resumed in the Late Classic period.

Multiple construction phases occurred at M-184 during the Late Classic period. Following the flooding episode, it appears that M-184 was reoccupied and the height was increased (see the yellow brown loam clay levels in Figure 4.14). The second construction phase in the Late to Terminal Classic featured construction in the southern area of the structure, with the structure being remodeled into an L-shape, with the southern structure being M-184b.

Only minor changes were made to the M-184 group during the Terminal Classic period, with a re-plastering of the previous floor. The floor was similar to the Late Classic floor, measuring approximately 2 cm. Evidence of ritual activity is present in the form of a burial, Burial 184B-1, located on the central axis and in the center of M-184b (see Appendix B). The human remains were fragmentary and were likely removed in antiquity, possibly from intrusions into the structure at a later time.

The M-184 group continued into the Early Postclassic period, with the construction at the group focused on increasing the height of the platform approximately 20 cm in height, bringing the final height of the platform to 1.5 m tall. Internal architecture was present at M-184, two one-course walls running north to south. This feature may be a low internal bench. Evidence of ritual activity is also present, with a cache of freshwater shell, faunal remains, carbon, and a few ceramic sherds present on the terminal floor of M-184a, likely representing a termination

deposit. Other evidence of Early Postclassic occupation was present on the terminal floor, including notched chert points, More Force jar sherds, and net sinkers.

4.8 EXCAVATIONS AT THE M-94 GROUP

Mound 94 is located approximately 500 m from the monumental complex in Group B, to the north of Mound 99; the largest house group in Settlement Cluster C. M-94 is a low mound, approximately 35 cm in height and is a single mound group (Figure 4.15). It falls into the low status commoner group in the status classification.

The first construction at M-94 was during the Tiger Run phase, at the beginning of the Late Classic period. This structure was small and lacked high quality construction materials, including plaster floors or large cut limestone blocks. M-94 had two construction phases during the Terminal Classic period as well (Figure 4.16). In its second construction episode, no changes

Classic period, evidence on the terminal floor at M-94 indicates that its residents continued living in this location into the Early Postclassic period. Evidence of continuing occupation into the Early Postclassic was present in the form of materials on the terminal floor, including a several More Force jar sherds and a unifacial notched point associated with the Early Postclassic period. Some evidence of ritual activity was present in the group, including a termination cache consisting of two Belize Group ceramic vessels.

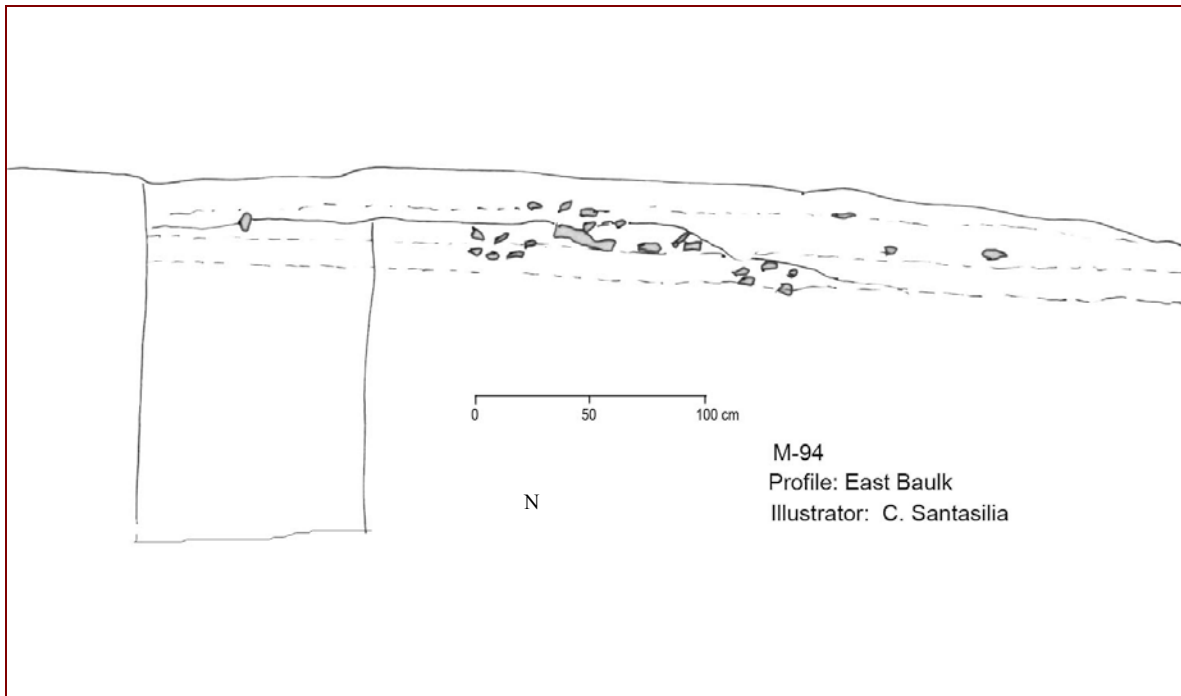


Figure 4.15: Profile view of the east baulk of M-94.

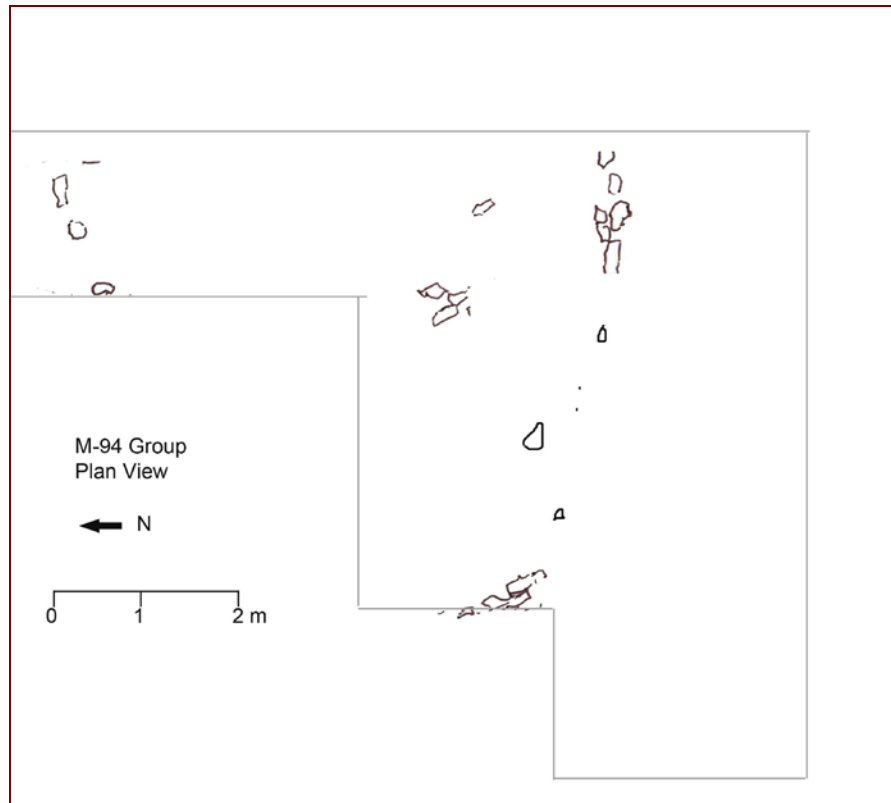


Figure 4.16: Plan view of terminal architecture at M-94.

4.9 EXCAVATIONS AT THE M-181 GROUP

Mound 181 is located in the northern part of Settlement Cluster C, approximately 55 m south of the Belize River and 68 meters east of M-184. It is a solitary mound. M-181 is classified as a low status commoner house group, representing the status class with the least amount of architectural volume. Mound 181 was constructed in two construction episodes, all during the Late Classic period (Figure 4.17). The initial construction took place during the middle part of the Late Classic period, occurred with the construction of a low mound with very little

architecture. Towards the end of the Late Classic period, during the Spanish Lookout phase, the platform was altered, building the mound up in height while including some limestone material in the architecture. While the second construction episode featured the use of higher quality materials, it is still evident that the household living at M-181 had little access to limestone or other high quality materials. The quality of the construction materials in the terminal construction greatly increased during this construction; with plaster floors being introduced to the residential platform for the first time, and the sizes of cut-limestone blocks increasing in size and quality.

The final construction episode at M-181 occurred at the end of the Spanish Lookout phase, during the Terminal Classic period. Relatively little evidence of ritual activity was recovered from each of the construction phases, with the exception of the possible termination ritual on the floor of the final platform. Unlike the majority of house groups in Settlement Cluster C in the Terminal Classic period, M-181 did not persist into the Early Postclassic period, as it was abandoned by the end of the Terminal Classic period.

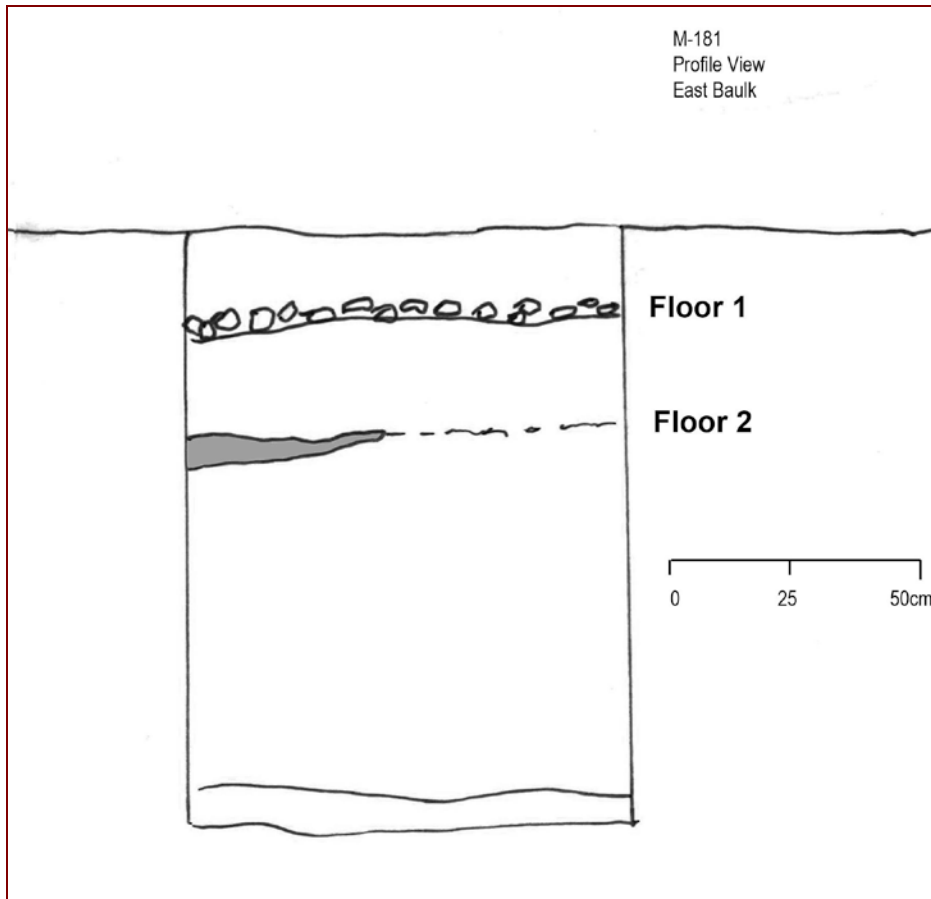


Figure 4.17: Profile view of the east bank of M-181.

4.10 ARCHITECTURAL INVESTMENT IN SETTLEMENT CLUSTER C FROM THE LATE CLASSIC TO THE EARLY POSTCLASSIC PERIODS

House groups in Settlement Cluster C at Baking Pot were established beginning in the Late Preclassic period and continued into the Early Postclassic period. Status differences in architecture became pronounced during the Late Classic period, with the noble household (M-99) having drastically more elaborate domestic architecture than any other group.

An examination of additions in architectural volume provides a different view of occupation and construction in Settlement Cluster C, identifying if households invested more resources into the construction of new architecture before and after the collapse of dynastic rulership at Baking Pot. This helps to identify if households may have been prospering, being able to build larger and taller house platforms that would reflect their wealth and status. Figure 4.18 indicates that overall, households invested the most resources to build larger house structures during the Late Classic period, with each group showing the highest levels of new additions in architectural volume during that time. Steady decreases in construction are noted in the Terminal Classic period, when the polity may have been unstable due to the waning power and eventual abandonment of the royals. Although most groups continued to live in Settlement Cluster C during the Early Postclassic period, very little construction was initiated in this time. The noble household at M-99 had decreased construction, but clearly was building more than other households. M-184 had a small addition to the Early Postclassic platform as well. This indicates that construction efforts were largely diminished following the collapse of

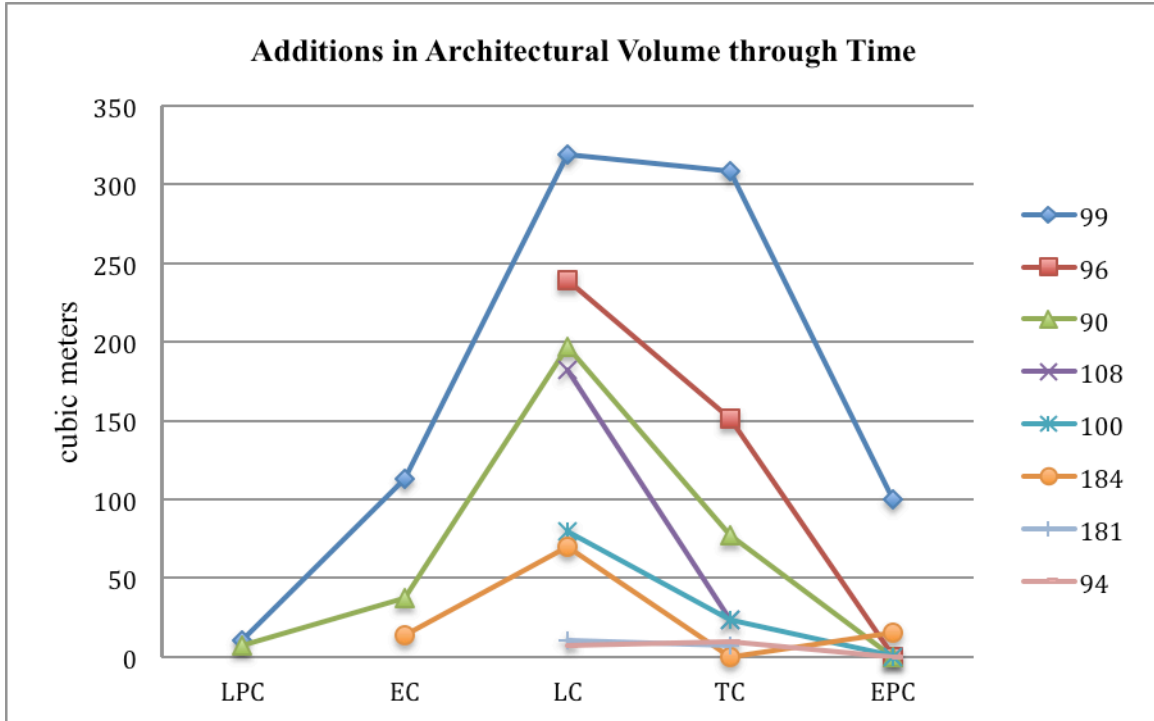


Figure 4.18: Estimated amounts of new construction (architectural volume) during each time period. House Group numbers are on the right.

rulership at Baking Pot, with only minor reconstruction of houses. Only one structure was constructed in the civic center of Baking Pot, a low structure in the center of Plaza A1.

In the uncertain political landscape, households may have been unwilling to expand their homes, as it may have been uncertain how long they would remain. Alternately, households may have had fewer resources and wealth following the sociopolitical collapse, wherefore being unable to expand their houses. Finally, households may have been utilizing wealth in new ways; rather than expanding their houses, they may have obtained exotic luxury and utilitarian items through interregional exchange, hosted community-wide feasts to foster solidarity, or used it to

obtain Pan-Mesoamerican symbols to differentiate themselves from other households. The following three chapters will explore these scenarios.

5.0 EXPLORING THE 'MERCANTILE' SCENARIO

The location of Baking Pot on the Belize River, a natural transportation route between the Caribbean Sea and the interior of the central lowlands, and a strategic location that not only enabled participation in interregional exchange networks, but also placed its residents on the eastern edge of influence of prominent polities in the central Petén during the Classic period and the southern edge of expanding city-states in the Yucatan during the Postclassic period. The expanding role of interregional maritime exchange in the Postclassic period led to major changes in economic organization throughout Mesoamerica, with an expansion and greater reliance on items exchanged in a market setting. Communities in northern Belize responded to the economic opportunities presented by this shift in long distance exchange in a variety of ways. At Laguna de On and Caye Coco, households increased production of local items and resources to exchange for exotic luxury and utilitarian items (Masson 2002). In contrast with the Classic period, commoner households increasingly had access to exotic luxury items including jade ornaments and greenstone adzes in the Terminal Classic and Early Postclassic periods. Both elite and commoner households became more reliant on exotic utilitarian items as well, using increasingly using obsidian blades in the place of chipped stone tools made from local chert. Masson suggests that commoner households in these communities took advantage of expanding interregional exchange and less strict social hierarchies following the Classic period to create

new opportunities in wealth accumulation. Evidence at Baking Pot, including copper bells and a figurine of the merchant god in Postclassic contexts at the Yaxtun house group (Audet 2000; Audet and Awe 2005), suggests that households at Baking Pot may have been adopting similar strategies of using ‘mercantile’ exchange for accumulating wealth or status in the Postclassic period.

If residents at Baking Pot were participating in the expansion of interregional exchange in the Terminal Classic and Early Postclassic periods, we would expect to see evidence of this in the archaeological record. Changing patterns of participation in interregional market exchange may be indicated by an increase in the distribution, quantity, and evenness of unrestricted (open) exchange items in the domestic inventories across a community (Hirth 1998; Ossa 2011). Therefore, evidence for households participating in interregional exchange would include an increase in exotic items among both nobles and commoners after the Late Classic period, when ‘mercantile’ exchange became more prominent. This may be particularly important for utilitarian items, such as obsidian, as households participating in expanding market exchange may rely on tools made from exotic rather than local materials at higher levels than in the past. Finally, if commoner households at Baking Pot were taking advantage of newly available economic opportunities, we would expect to find that exotic luxury items, such as jade ornaments and greenstone adzes, should be associated with households regardless of status. In addition, we would expect that households would have been producing local products and items in order to trade within the system of interregional exchange. This chapter examines these expectations by looking at the presence and proportional distributions of exotic luxury items (including marine shell, jade and greenstone items, pyrite, and copper items) and utilitarian objects (obsidian blades and basalt grinding stones).

5.1 EVIDENCE OF 'MERCANTILE' EXCHANGE

Two main categories of exchange items will be assessed to understand changing patterns of interregional exchange: luxury items and utilitarian items. These categories will be further distinguished by those made from exotic, non-local, and local materials. Objects made from exotic materials have been included based on location to the nearest source, with certain materials located in highly localized areas in Mesoamerica. For example, the nearest source for obsidian is in the volcanic highlands of Guatemala, nearly 300 km to the southwest (Figure 5.1). Other types of long distance items may have been located at closer distances, such marine shell from the Caribbean Sea approximately 100 km to the east. In contrast, items made from local items can be found in the immediate proximity of Baking Pot.



Figure 5.1: Exchange routes and sources of exotic items and materials in the Maya lowlands and highlands (From Gonzalez de la Mata and Andrews 1998).

5.1.1. Exotic Luxury Items

Luxury items in Mesoamerica were often made from materials with ideological significance and with limited (and distant) sources. In the Maya lowlands, these would include items from marine shell, jade, greenstone, and pyrite. At Baking Pot, this list can be expanded to also include copper items in the Postclassic period. An examination of the presence and distribution of exotic luxury items can provide an indication on how widespread these objects were across the community of Settlement Cluster C, along with if any groups were using them at higher levels.

5.1.1.1. Marine shell items

Marine shell was primarily recovered in the form of shell ornaments at Baking Pot (Figure 5.2) and was another material valued for its rarity, with various species of shell being transported from the Caribbean Sea and the Pacific Ocean. Overall, marine shell was found in 12 of the 22 (55% \pm 17% at the 95% confidence level) (total) house groups from the Late Classic to Early Postclassic period. This suggests that marine shell was fairly accessible in all time periods, increasing in the Early Postclassic period. However, some distinctions were present in access to marine shell, as these items were present in the domestic inventories of both noble and commoner households in all three periods, suggesting that this good was not restricted, even in the Late Classic period. Figure 5.3 shows that we can be less than 80% confident that there were any differences in the distribution among groups in the Late Classic period, suggesting that both nobles and commoners were using similar amounts of marine shell ornaments. We can be 95% confident that low status commoners had higher amounts of marine shell than nobles or high status commoners in the Terminal Classic period, although the strength of this difference is low.



Figure 5.2: Marine shell ornaments from excavations at Baking Pot.

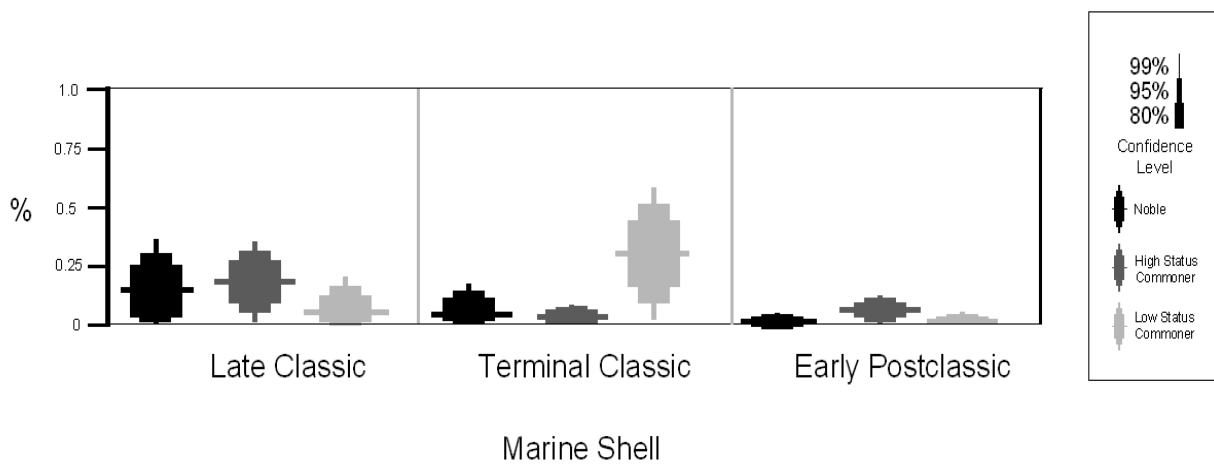


Figure 5.3: Proportion of marine shell items to total sherds (marine shell/total sherds) in noble, high status commoner, and low status commoner house groups in the Late Classic, Terminal Classic, and Early Postclassic periods.

However, the distribution of marine shell in the Early Postclassic shows no major differences between groups, as we are less than 80% confident of the difference between groups. In sum, the presence of marine shell among households suggests that the items became more widespread in the Early Postclassic period, while the distribution of the items suggest that marine shell items were present in low levels among noble and commoner households, although they were distributed in higher amounts in low status commoner households during the Terminal Classic period.

5.1.1.2. Jade and Greenstone Items

Jade was one of the most valuable materials in Maya society, due to its blue-green color, which represented life, water, maize, and concepts of rulership for the Maya (Taube 2005). The precious quality, along with its ideological significance, made jade important material aspects of rulership and authority throughout Mesoamerica. Similarly, greenstone was valued for its color and resemblance to jade, although this type of stone was not as highly valued. The closest sources for jade are in the volcanic highlands of Guatemala (Hammond *et al.* 1977) (Figure 5.1). Jade was primarily utilized to produce ornaments at Baking Pot (Figure 5.4). The material has been identified in royal, noble, and commoner contexts throughout the site, primarily in the form of jade beads. Large jade celts and mosaic masks have been identified in Late Classic royal contexts at Baking Pot (Audet 2006).

Jade and greenstone was present in 1 out of the 22 ($4.5\% \pm 5.67\%$ at the 80% confidence level) of total house group contexts (eight groups in the Late Classic, eight groups in the Terminal Classic, and six groups in the Early Postclassic) in Settlement Cluster C. This suggests



Figure 5.4: Jade ornaments recovered in excavations in Settlement Cluster C.

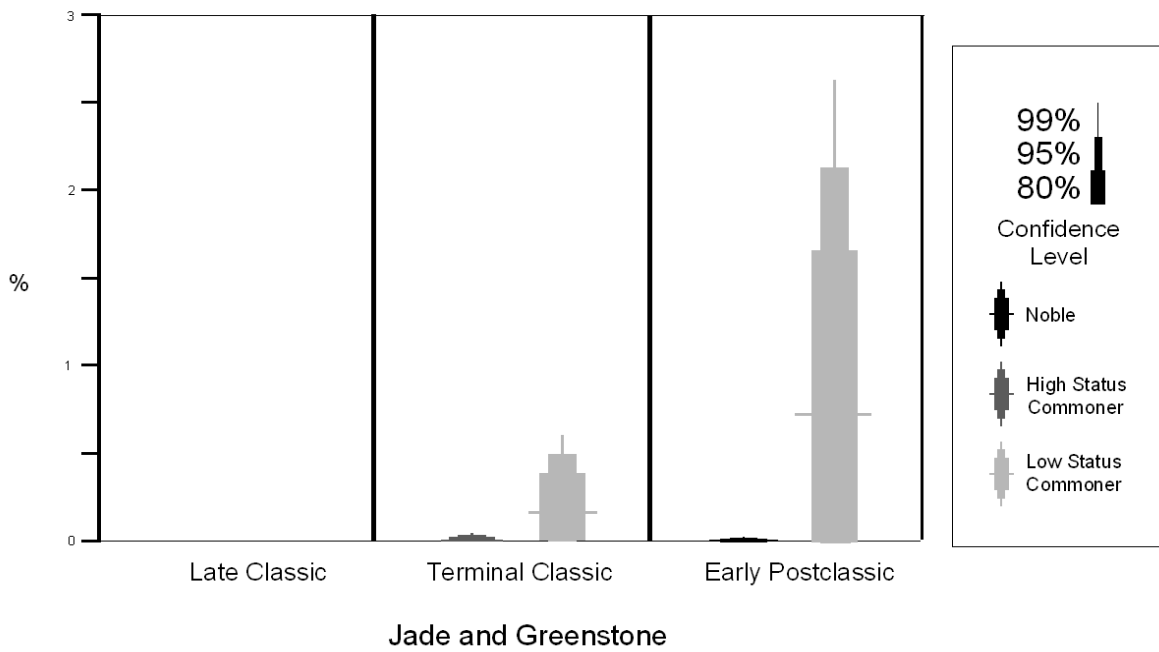


Figure 5.5: Proportion of jade and greenstone items to total sherds (jade/total sherds) in noble, high status commoner, and low status commoner house groups in the Late Classic, Terminal Classic, and Early Postclassic periods.

that access to jade and greenstone was highly restricted at Baking Pot throughout time. Jade was not present in any house group during the Late Classic period, was present in one of the eight house groups in the Terminal Classic period, and not present in any of the groups in the Early Postclassic period. Jade items were primarily ornaments, including large and small beads (Figure 5.4). In contrast, greenstone was recovered in three of the twenty two house group contexts from the Late Classic onwards, being absent in the Late Classic period, present in one of the eight house groups in the Terminal Classic period, and in two of the six of house groups in the Early Postclassic period. All greenstone items were adzes. Jade and greenstone was present in both noble and low status commoner house groups in the Terminal Classic and Early Postclassic periods. Overall, access to jade and greenstone does appear to have become more widespread among both noble and commoner households beginning in the Terminal Classic period and continuing into the Early Postclassic period.

Figure 5.5 illustrates that low status commoners more jade and greenstone items in the Terminal Classic and Early Postclassic periods than any other group, with $0.25\% \pm 0.25\%$ (at the 80% confidence level) in the Terminal Classic and 0.75% in the Early Postclassic period, although we are less than 80% confident in these differences. Despite the low distributions of jade and greenstone items, this evidence does suggest that exotic luxury items, such as jade and greenstone, were becoming increasingly accessible to commoner households in the Terminal Classic and Early Postclassic periods. The absence of jade and greenstone in noble and commoner contexts in the Late Classic period suggests that the material may have been restricted to the highest levels of society. However, the presence of these items in the Terminal Classic and Early Postclassic period among both noble and commoner households suggests that it was not restricted and available through open systems of exchange.

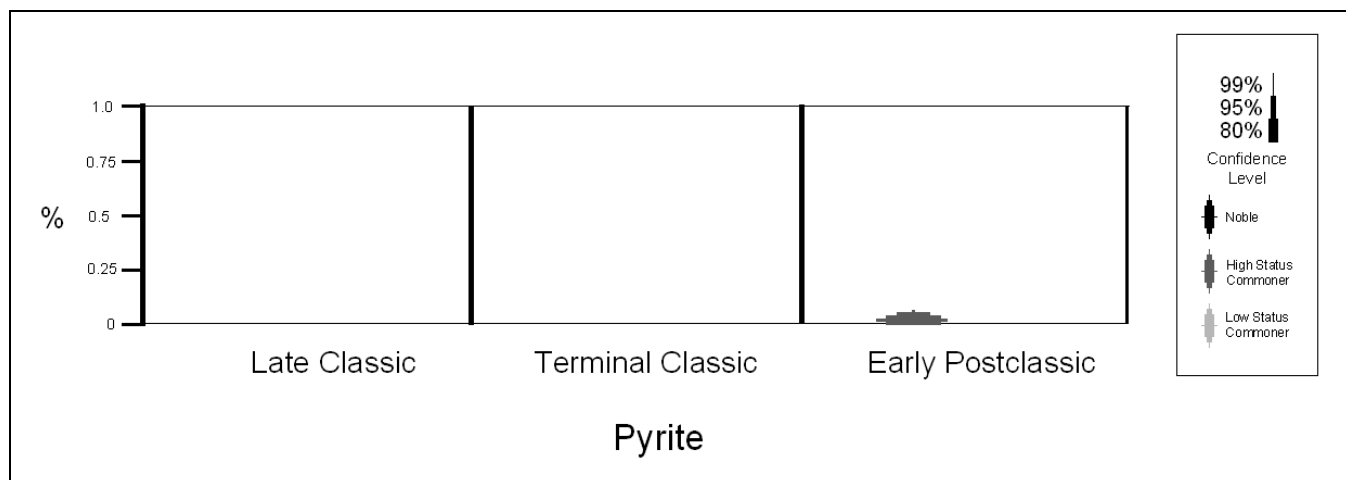


Figure 5.6: Distribution of pyrite to total sherds (pyrite/total sherds) in noble, high status commoner, and low status commoner house groups in the Late Classic, Terminal Classic, and Early Postclassic periods.

5.1.1.3. *Pyrite Items*

Pyrite was primarily used for ritual purposes in Mesoamerica, with hexagonal pieces of the material arranged together to make mosaic “mirrors” as early as the Formative Period (Carlson 1981; Heizer and Gullberg 1981). In the Maya area, epigraphic analyses have suggested that the glyphs for pyrite mirrors often emphasize the reflective properties of the material. Healy and Blainley (2011) suggest that the ritual significance of pyrite mirrors was to embody and represent concepts of light and dark. Like jade and greenstone, the nearest sources for iron-ore materials are in the volcanic highlands of southern Guatemala.

In the Early Postclassic period, two of the eight house groups had pyrite items, including both noble and commoners. This suggests that it was not widely distributed. Figure 5.6 shows the distribution of pyrite at low levels in the Early Postclassic period, with pyrite only being distributed among high status commoners, suggesting that pyrite was not restricted. No pyrite

was present among any house groups in the Late or Terminal Classic periods. The presence of pyrite among commoner households suggests that this was not a restricted item during the Early Postclassic period.

5.1.1.4. Copper items

Metal items were introduced into the Maya area beginning in the Postclassic period, with items brought from central Mexico (Paris 2008). Evidence for the production of copper items has been identified at Lamanai in northern Belize, indicating the copper items were melted down to forge new objects (Simmons *et al.* 2009). Copper items were present in two out of the six house groups in the Early Postclassic period, suggesting that metal objects were not widely distributed, although their presence among both nobles and low status commoners suggests that access to these items was not restricted. Figure 5.8 shows the low distribution of copper items among households in the Early Postclassic period, with no proportional differences in the distribution of copper between nobles ($0.02\% \pm 0.01\%$ at the 80% confidence level), and low status commoners ($0.21\% \pm 0.26\%$ at the 80% confidence level). The presence of copper items among both commoners and nobles in the Early Postclassic period suggests that these items were not restricted and available through open exchange systems.

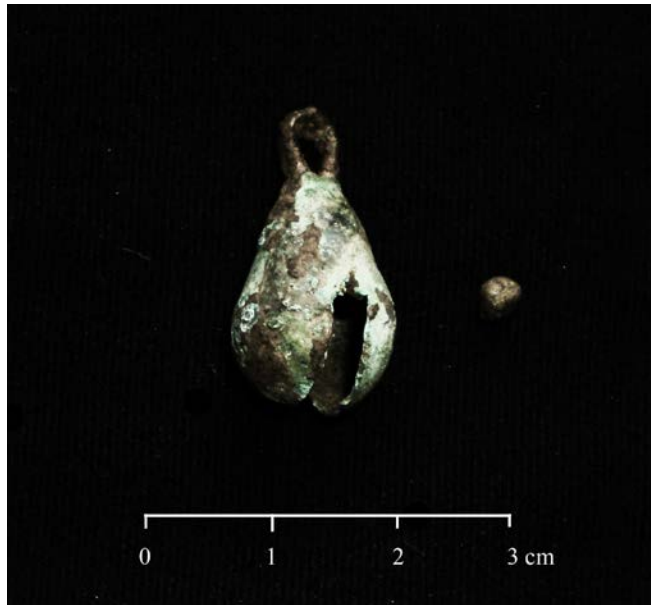


Figure 5.7: Copper bell and ball from Early Postclassic period M-99.

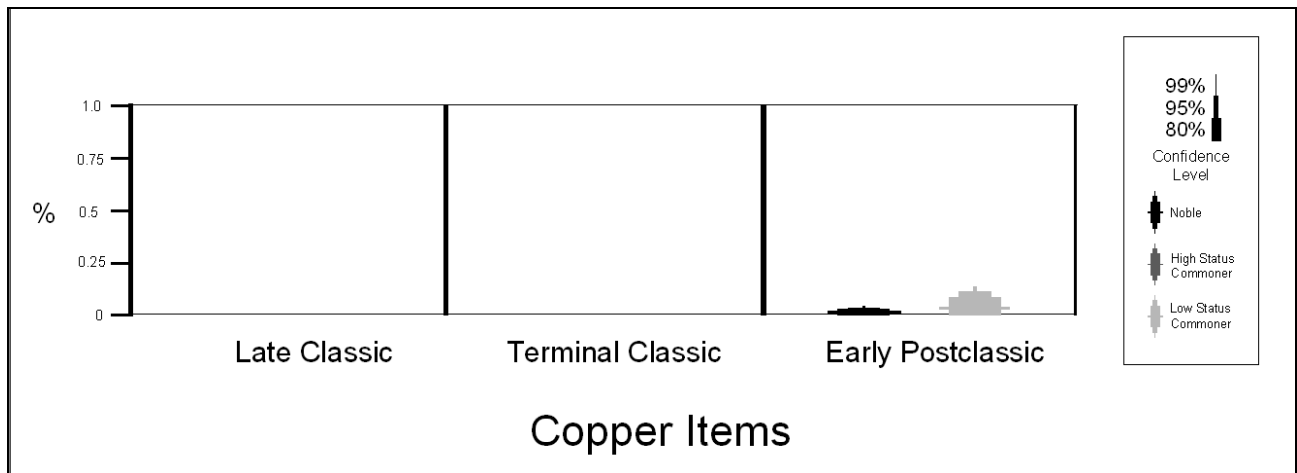


Figure 5.8: Proportion of copper items to total sherds (copper/total sherds) in noble and commoner house groups during the Early Postclassic period.

Overall, several patterns in the consumption of exotic luxury items could be identified. First, some exotic luxury items, such as marine shell, were widely distributed even during the Late Classic period and were not restricted along status lines during that time. All other luxury items were completely absent from the domestic inventories of noble and commoner households in the Late Classic period, but became increasingly available to households of all status from the Terminal Classic onwards. No luxury items made from local materials were identified, although unworked slate fragments at M-96 suggested the production of slate items rather than the consumption of those goods (this will be discussed below). This evidence supports the evidence of Masson's scenario at Laguna de On and Caye Coco, where the expansion of interregional exchange in the Postclassic period led to exotic luxury items becoming more available to commoner households.

5.1.2. Utilitarian Items

Two types of items made from exotic materials were identified from excavations in Settlement Cluster C, obsidian and basalt. While obsidian was primarily recovered in the form of blade tools, fragments of basalt were identified as broken pieces of grinding stones. In contrast, non-local and local materials were frequently used to produce utilitarian items. Local chert, along with non-local chert coming from the area around Colha, was used to produce chipped stone tools. Granite was the predominant local material used to produce grinding stones. An examination of the distribution of exotic utilitarian items can identify if households were increasingly using exotic materials for basic domestic tools due to an increase in the availability of the materials through the expansion of interregional exchange, or if they were relying primarily on materials found at closer distances.

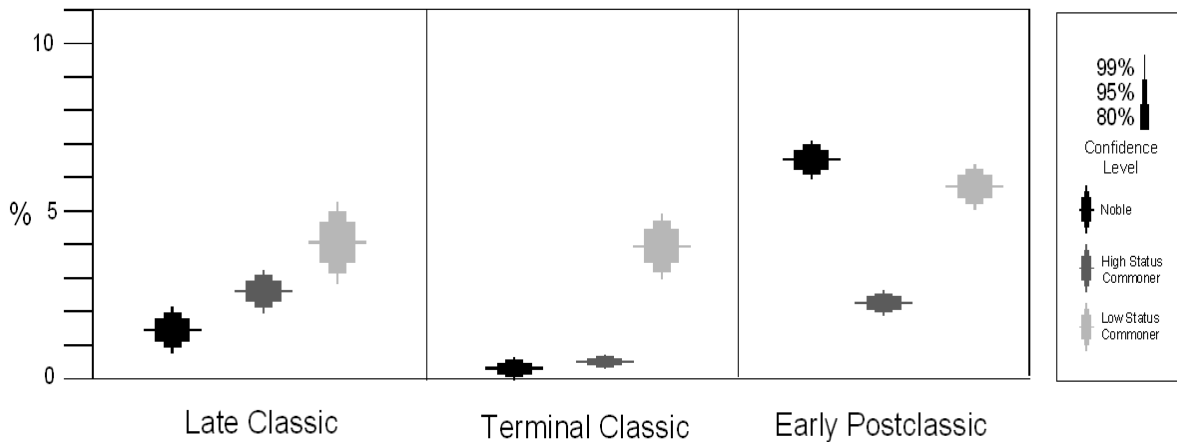


Figure 5.9 (Left): Obsidian core. Figure 5.10 (Right): Prismatic obsidian blade.

5.1.2.1. Obsidian

Obsidian is primarily found in the form of prismatic blades at Baking Pot; however, some debitage and cores have been recovered in survey and excavation (Figures 5.9 and 5.10). They were used for both utilitarian and ritual purposes, cutting materials for food preparation and house maintenance, as well as in bloodletting. This dual-function for obsidian makes the presence of obsidian different from the other long-distance goods. While other long-distance goods tend to the prestige goods, obsidian is expected to have a more even distribution than other long-distance goods.

Obsidian tools were found in 21 out of the 27 ($95.5\% \pm 7.27\%$ at the 95% confidence level) of house groups from the Late Classic to Early Postclassic periods. This indicates that obsidian was, in fact, distributed in nearly every group during this time. During the Late Classic period, all eight of the house groups had access to obsidian as well. This distributional pattern changed during the Terminal Classic period, when access to obsidian was found in seven of the



Obsidian

Figure 5.11: Proportion of obsidian to total sherds (obsidian/total sherds) in noble, high status commoner, and low status commoner households through time.

eight house groups. Despite this change, all six house groups that continued into the Early Postclassic period had access to obsidian. Obsidian was found among all status groups, with only one house group, M-108, lacking any obsidian in its domestic inventory during the Terminal Classic period. As this household was abandoned shortly thereafter, it is possible that households that did not participate in interregional systems of exchange may not have succeeded in the changing economic orders of the Postclassic period.

Figure 5.11 shows the changing distribution of obsidian across status groups through time, indicating that we can be 99% confident that low status commoners had higher amounts of obsidian during the Late Classic period, with $4.07\% \pm 1.21\%$ (at the 99% confidence level). This is surprising, as we would expect the distribution of an exotic material to be hierarchically organized based on wealth. Conlon (1992) observed high frequencies of obsidian on the surface

of several small mounds in Settlement Cluster E and suggested that lower status households may have been producing or recycling obsidian blades. The distribution of obsidian during the Late Classic period in low status commoner households may provide some support to this idea. Nonetheless, low status commoners had nearly three times as much obsidian as nobles, suggesting some kind of specialization.

The distribution of obsidian declined among nobles and high status commoners during the Terminal Classic period, although the distribution among low status commoner households remained relatively steady. We can be over 99% confident that low status commoner households had nearly seven times as much obsidian ($3.95\% \pm 0.98\%$ at the 99% confidence level) as nobles and high status commoners in the Terminal Classic period. During the same time, the proportion of obsidian declined approximately 1.15% among nobles and 2.1% among high status commoners. The presence and high distribution of obsidian among commoner households suggests that obsidian was an unrestricted item.

The distribution of obsidian in Settlement Cluster C shifted in the Early Postclassic period. We can be over 99% confident that the amount of obsidian increased nearly 6% among nobles, and over 1.75% among high status and low status commoners. This evidence provides some support that households were using more obsidian in the Postclassic period, although more information is needed to identify if there are actually becoming more reliant on obsidian for utilitarian purposes. This idea will be explored in Section 5.1.4.3, comparing the proportions of exotic, non-local, and local material for the production of stone tools.

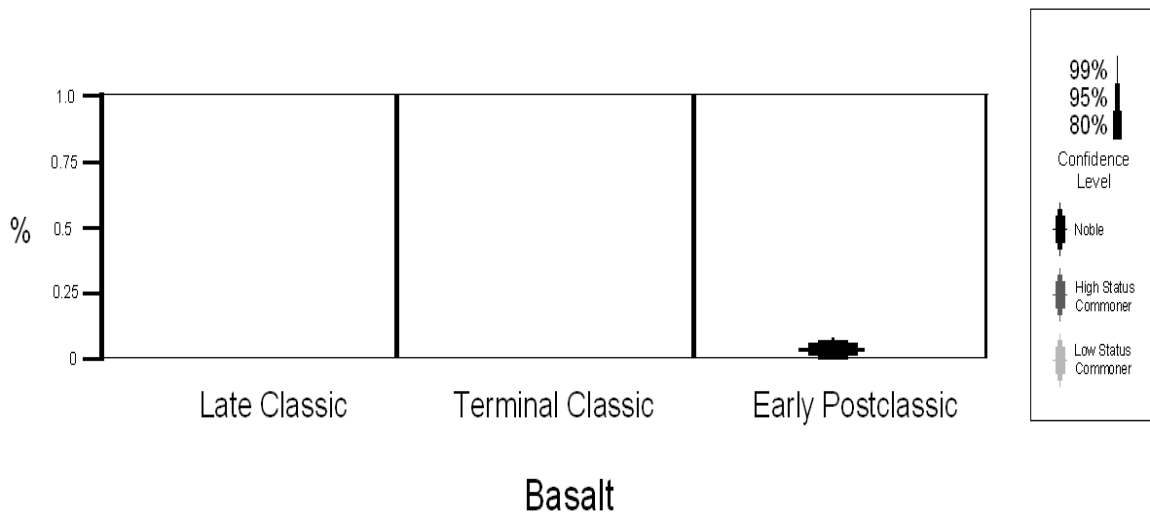


Figure 5.12: Proportion of basalt to total sherds (basalt/total sherds) in noble, high status commoner, and low status commoner house groups through time.

5.1.2.2. Basalt

Basalt is another type of exotic material used for utilitarian purposes encountered in excavations at Baking Pot, imported into the area from the volcanic highland areas in the highlands of Guatemala. Basalt ground stone tools, including manos and metates, have been recovered from excavations at sites in southern and northern Belize, including those found at Lubaantun (Hammond 1975), coastal southern Belize (McKillop 1987), and northern Belize (Sidrys 1983).

Basalt was found in 1 out of the 22 ($4.5\% \pm 5.7\%$ at the 80% confidence level) of house group contexts through time. This indicates that basalt goods were distributed in very few of the groups from the Late Classic to the Early Postclassic period, being recovered in one of the six of the house groups that continued into the Early Postclassic period. This one example was found in the noble house group at M-99. This provides some evidence that for this type of

interregional exchange item, which appears to be a highly restricted material in the Late Classic period, may have become more available to the households in Settlement Cluster C in the Terminal Classic and Early Postclassic periods. Figure 5.12 shows the low distribution of basalt in the Terminal Classic periods, with basalt only distributed among nobles. The distribution of basalt only among nobles may provide some indications that these items may have been restricted.

5.1.3 Reliance on Exotic Material for Groundstone and Chipped Tools

Exotic utilitarian items, including those made from obsidian and basalt, became increasingly available to households in Settlement Cluster C during the Early Postclassic period. These items were available regardless of status, suggesting that access to these goods increased as a result of the expansion of interregional maritime exchange in the Postclassic period. Despite the pattern for increasing availability among all social groups for these items, the question of whether households became more reliant on exotic materials and items for utilitarian purposes remains unclear. In order to answer this question, the proportions of local and non-local materials were compared to exotic materials for chipped stone and ground stone materials.

Local materials include those in the immediate vicinity of Baking Pot, while non-local materials are defined as those found at nearby sources, generally 25 km or more distant, but still within the local cultural area. At Baking Pot, non-local materials tend to come from two different locations, the Maya Mountains to the south, and Colha to the east. The Maya Mountains is the closest source for granite and slate in this area. The second location for non-local materials is to the east, around the site of Colha, approximately 80 km away. The following sections examine ground stone and chipped stone tools to identify if households

became increasingly reliant on exotic utilitarian items due to the increasing participation in interregional exchange.

5.1.3.1. Ground Stone

Ground stone tools were made from both local materials, including granite, and exotic materials, including basalt, at Baking Pot. Granite is the predominant material for ground stone artifacts at Baking Pot. Nearly mano and metate fragment recovered from excavations and survey were produced using local granite material, although slight variations in color were present. In addition to manos and mutates, some anchors and hammer stones were made from this material as well. However, a small number of basalt grinding stones were recovered (the discussion for the distribution of basalt items is in the previous section).

Due to the rarity of basalt grinding stones, with only a one piece recovered in excavations in Settlement Cluster C, we can assume that there were no major changes in the use of local materials. Therefore, households at Baking Pot did not become more reliant on exotic materials to produce these utilitarian items.

5.1.3.2. Chipped Stone Tools

Chert is the predominant local material for the production of chipped stone tools at Baking Pot. The majority of chipped stone debitage and tools were made from local types of chert (Figure 5.13), which are widely available, brought downhill from erosion of the foothills to approximately 4 km to the south, where chert outcroppings are present. Despite its widespread



Figure 5.13 (Left): Local chert recovered from excavations at Settlement Cluster C.

Figure 5.14 (Right): Non-local chert blade.

availability, the chipped stone assemblage from Baking Pot also has a small amount of non-local chert. This is high quality chert with few inclusions, honey brown in color, originating from the area to the east around Colha, which is known as a major center of chert production (Shafer and Hester 1990) (Figure 5.14). Comparing the proportions of local, non-local, and exotic materials in the chipped stone and ground stone assemblages provides one means in which to identify if households were becoming increasingly reliant on exotic materials for utilitarian purposes due to the expansion of interregional exchange.

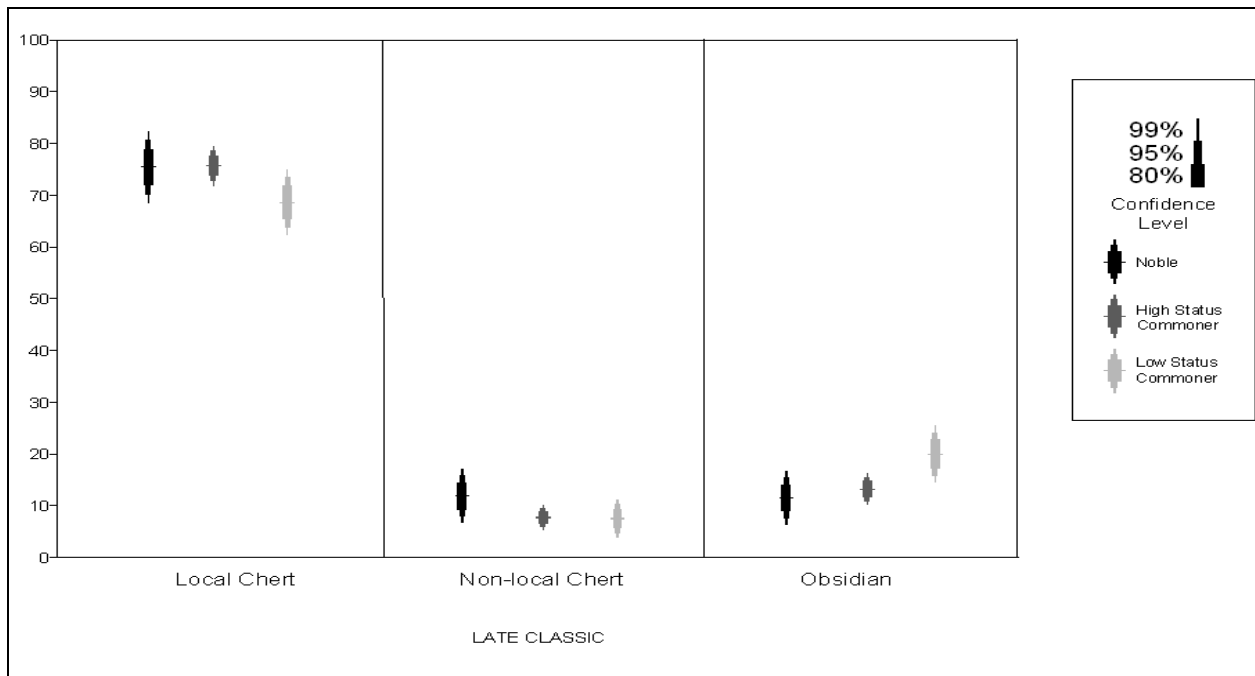


Figure 5.15: Proportions of local chert, non-local (Colha) chert, and obsidian to all chipped stone (local chert/all chipped stone, non-local chert/all chipped stone, obsidian/all chipped stone) among nobles, high status commoners, and low status commoners in the Late Classic.

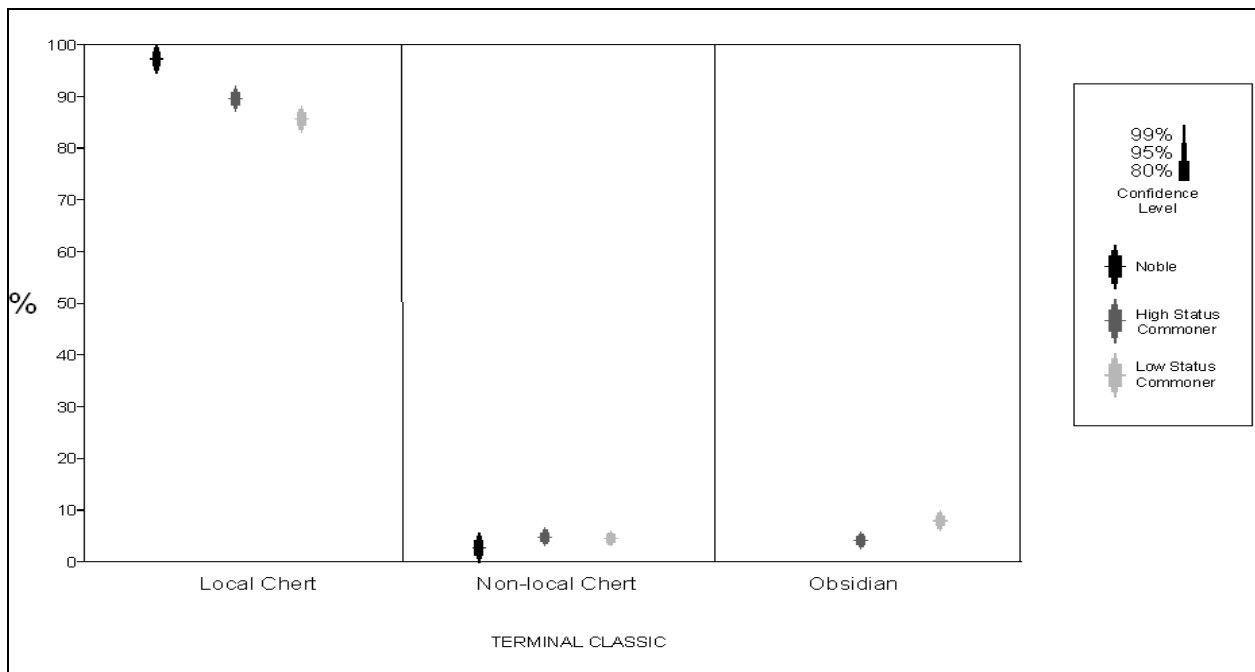


Figure 5.16: Proportions of local chert, non-local (Colha) chert, and obsidian to all chipped stone (local chert/all chipped stone, non-local chert/all chipped stone, obsidian/all chipped stone) among nobles, high status commoners, and low status commoners in the Terminal Classic period.

Figure 5.15 shows a high proportion of chipped stone material made from local chert among all status groups, with the proportions of local chert to all chipped stone ranging between 68 to 75% between groups. In contrast, non-local (Colha) chert and obsidian were used at much lower levels in the Late Classic period, accounting for approximately 7 to 20% of the chipped stone assemblage. As discussed in the previous section, low status commoners were using the highest amounts of obsidian, likely specializing in obsidian blade production or recycling. In contrast, nobles were using approximately 5% more non-local chert than commoners ($11.88\% \pm 3.93\%$ at the 95% confidence level).

Figure 5.16 shows that we can be more than 99% confident that local chert increased in the stone tool assemblages of all households in the Terminal Classic period, raising approximately 20% among nobles and 11 to 16% among commoners. In contrast, the distributions of non-local chert and obsidian declined, with no distinctions in the use of non-local chert. However, obsidian continued to be differentially distributed among low status commoners ($7.94\% \pm 1.93\%$ at the 99% confidence level). This suggests that exotic and non-local materials were used less in the Terminal Classic period, with all households becoming more reliant on local sources of stone material. This may have several implications. First, the widespread social and political disruptions due to the collapse of the institutions of Classic Maya rulership may have led to an interruption in exchange networks and trade routes. Therefore, communities may have become more self-sufficient in the midst of political and social instability.

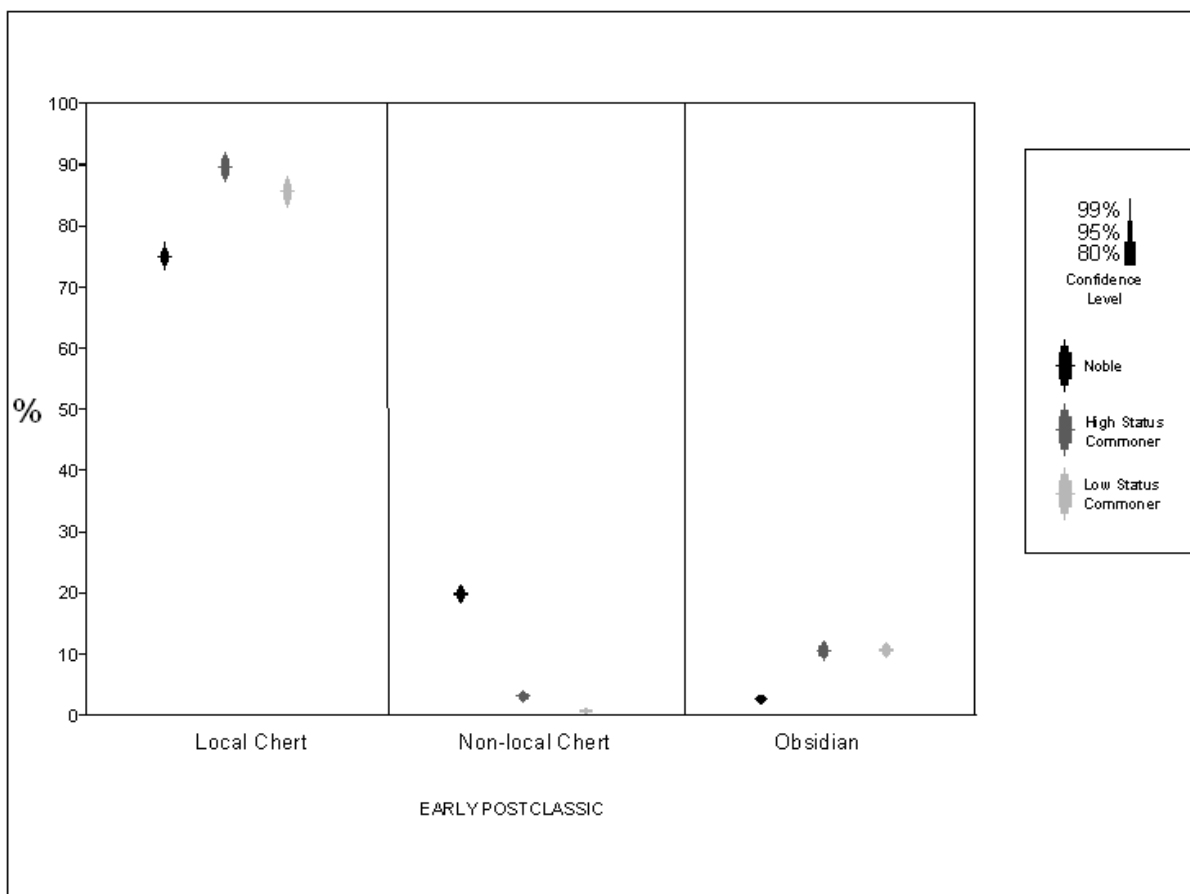


Figure 5.17: Proportions of local chert, non-local (Colha) chert, and obsidian to all chipped stone (local chert/all chipped stone, non-local chert/all chipped stone, obsidian/all chipped stone) among nobles, high status commoners, and low status commoners in the Early Postclassic period.

Figure 5.17 shows that we can be more than 99% confident that the distribution of obsidian and non-local chert increased among all groups in the Early Postclassic period, with the proportion of obsidian increasing between 2 to 6% among all groups. In contrast, the use of local chert declined approximately 25% among nobles in the Early Postclassic period ($74.5\% \pm 1.71\%$ at the 99% confidence level) and over 4% among high status commoner households ($84.9\% \pm 1.86\%$ at the 99% confidence level). Use of local chert remained steady among low

status commoners, with $85.8\% \pm 1.35\%$ (at the 99% confidence level). This suggests that we can be more than 99% confident that commoners were using more local chert than nobles in the Early Postclassic period.

Overall, this evidence suggests that all households were becoming slightly more reliant on obsidian for chipped stone tools in the Early Postclassic period. However, all households are using lower amounts of obsidian than they did during the Late Classic period. The decline in obsidian and non-local chert may suggest disruptions in long-distance exchange after the Late Classic period. As royals may have served as middlemen between distant suppliers and local consumers, particularly for exotic luxury goods, the instability in the political system may have led to the decline in obsidian in the Terminal Classic period. During this time, all households became more reliant on local materials for stone tools, although nobles were using non-local chert more than commoner households. However, expanding interregional trade in the Postclassic period may have served to make exotic utilitarian items, like obsidian, more accessible during this time.

5.1.4. Local Items and Materials

In the previous three sections, I have suggested that the increasing presence of exotic luxury items, such as jade, greenstone, pyrite, and copper, along with utilitarian items made from obsidian and basalt, suggests that both noble and commoner households were engaging in the expanding networks of interregional exchange in the transition into the Postclassic period. Commoner and noble households had similar (albeit low) amounts of exotic luxury items in the Terminal Classic and Early Postclassic periods. Exotic utilitarian items, such as obsidian blades and basalt grinding stones, had variable distributions, with obsidian being differentially

distributed in commoner households in the Late and Terminal Classic periods, shifting to nobles in the Early Postclassic. Basalt was distributed across both social groups in the Terminal Classic period. Although this evidence indicates that households in Settlement Cluster C were expanding their involvement in long-distance exchange, the question still remains as to what they were exchanging for these exotic items. This section focuses on identifying the production of local resources.

Households would have needed to produce items using local resources in order to exchange for exotic items and materials. Very little evidence for production of exchangeable items was recovered in excavations in Settlement Cluster C. No evidence of ceramic production, identified by ceramic wasters, kilns, or polishing stones, was recovered. Although evidence of stone tool production was identified across all households, it is unlikely that these bulky items would have been useful in interregional exchange. As discussed earlier, unworked slate pieces were recovered in excavations, indicating the production of slate items. In addition, some artifacts for agricultural production were identified, including spindle whorls and bifaces. While spindle whorls would have been used for spinning thread, it may imply that cotton or other cloth was being produced as an exchange item. Agricultural products would be ideal for local exchange goods, due to the high soil productivity surrounding Baking Pot. An examination of the distribution of slate, spindle whorls, and bifaces may provide some indications of the types of items that households in Settlement Cluster C used to obtain exotic materials and objects.

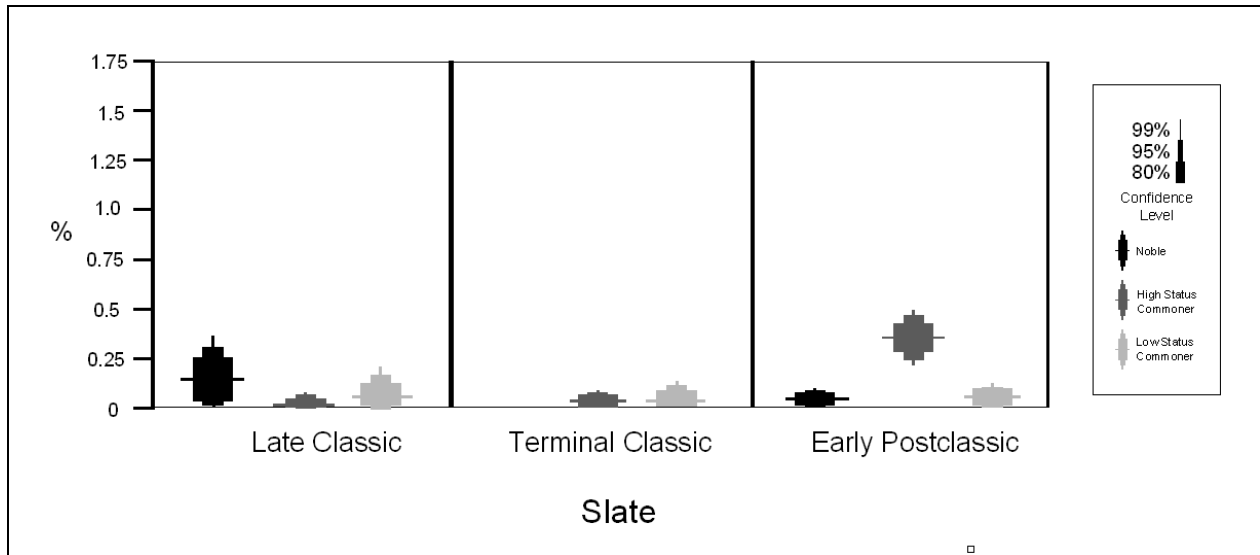


Figure 5.18: Proportional distribution of slate artifacts to total sherds (slate/total sherds) among noble, high status commoner, and low status commoner house groups in the Late Classic, Terminal Classic, and Early Postclassic periods.

5.1.4.1. Slate

Ritual items produced from non-local materials include slate objects, including maces, scepters, and plaques. Slate deposits can be found approximately 25 to 30 km to the south from Baking Pot, in the Vaca Plateau along the western edge of the Maya mountains. Slate was also used in the production of both ritual items and in the construction of carved monuments and mortuary architecture at the sites of Pacbitun, Cahal Pech, and Minanha to the west (Healy *et al.* 1995). This evidence suggests the widespread use of slate for ritual purposes in the Belize Valley. However, all slate artifacts recovered in excavations in Settlement Cluster C were unworked fragments, suggesting the production rather than the consumption of those items.

Figure 5.18 shows no significant difference in the distribution of slate items between households during the Late Classic and Terminal Classic periods. However, we can be more than 99% confident that high status commoner households had slightly more slate (0.3%) than nobles

and low status commoners during the Early Postclassic period. Although this amount is low, this may suggest that high status commoners were producing slate ritual items to exchange for exotic items and materials.

5.1.4.2. Spindle Whorls

Spindle whorls provide evidence of textile production, as they were used to spin thread prior to weaving (Brumfiel 1996; Hendon 1997). These materials would have been used to produce cloth, likely from local agricultural products such as cotton. Limestone and ceramic spindle whorls were recovered from excavations in Settlement Cluster C; however, the elaboration of spindle whorls varied. Some spindle whorls were simply modified ceramic sherds, while others were molded from ceramics or carved from limestone. Although most spindle whorls were plain, some items featured geometric designs.

Spindle whorls were found in 11 of the 22 ($50\% \pm 17.5\%$ at the 95% confidence level) house groups from the Late Classic to Early Postclassic periods, indicating that cloth spinning was a fairly widespread activity. During the Late Classic period, two of the eight households had spindle whorls while in the Terminal Classic period five of the eight households have these items. This suggests that cloth production may have increased during this time. In the Early Postclassic period four of the eight households have spindle whorls. Figure 5.19 shows few differences in the distribution of spindle whorls, as they were distributed in very low amounts among commoner households.

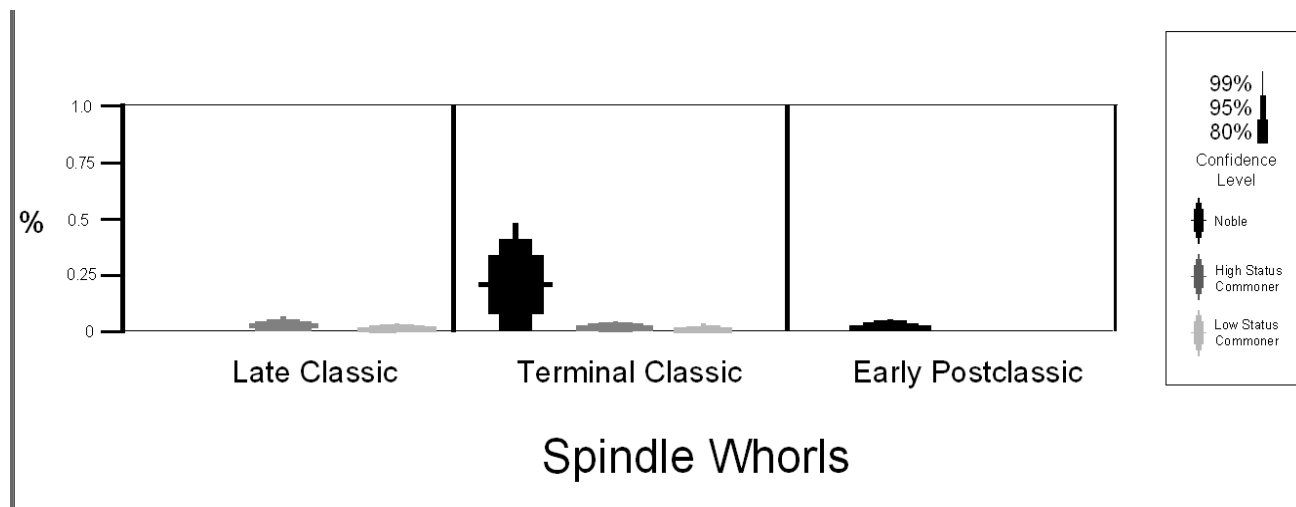


Figure 5.19: Distribution of spindle whorls to total sherds (spindle whorls/total sherds) among nobles, high status commoners, and low status commoners in the Late Classic, Terminal Classic, and Early Postclassic periods.

We can be more than 80% confident that nobles had more spindle whorls than commoners in the Terminal Classic period. In addition, only nobles had evidence of spindle whorls during the Early Postclassic period. Together, this evidence suggests that during the Terminal Classic period, both noble and commoner households were increasingly engaging in activities associated with the spinning of thread, a part of cloth production. During the Early Postclassic, evidence for cloth production is only identified in noble households. The presence of spindle whorls across Settlement Cluster C in the Late Classic, Terminal Classic and Early Postclassic periods suggests that low-level cloth production may have been integral primarily to both nobles and commoners and may have become exclusively a noble activity in the Early Postclassic period.

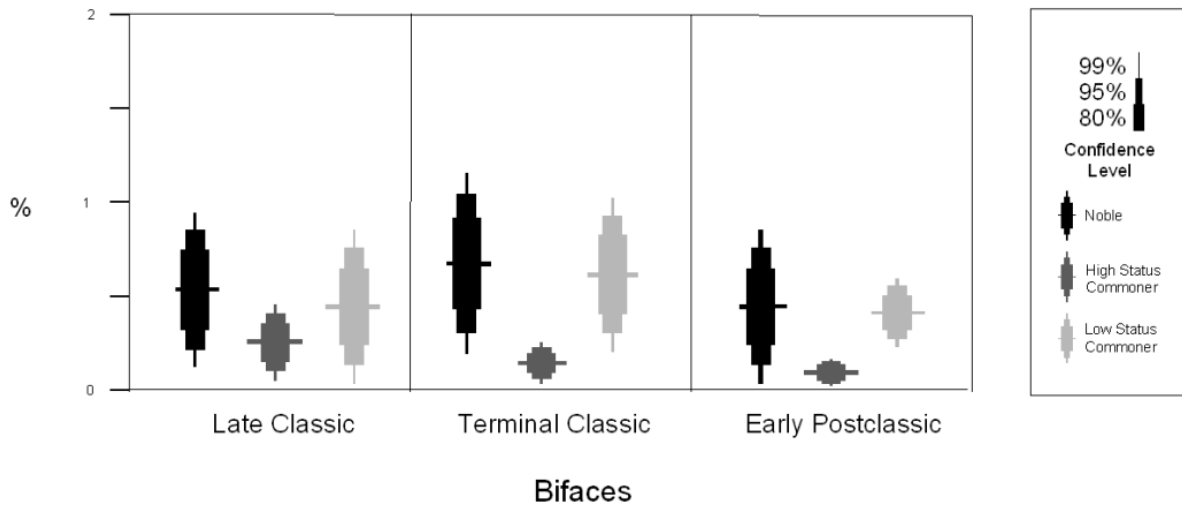


Figure 5.20: Proportion of bifaces to total sherds among nobles, high status commoners, and low status commoners in the Late Classic, Terminal Classic, and Early Postclassic periods.

5.1.4.3. *Bifaces*

Oval and general utility bifaces provide evidence of agricultural production, as they were likely used to clear brush and perform a variety of agricultural tasks (Stemp 2001). These bifaces would have been large enough to harvest crops as well. Excavations revealed that bifaces were exclusively made out of local chert in Settlement Cluster C. Bifaces were found in 21 of the 22 (95.5% \pm 7.2% at the 95% confidence level) house groups from the Late Classic to Early Postclassic periods, indicating that agricultural production was a widespread activity. In the Late Classic period, all eight of households had bifaces; while in the Terminal Classic period seven of the eight households have evidence of bifaces. During the Early Postclassic period, all six households have bifaces present. Figure 5.20 illustrates that bifaces were found in higher amounts nobles during the Late Classic period (0.54% \pm 0.32% at the 95% confidence level) and Terminal Classic period (0.68% \pm 0.48% at the 99% confidence level) although the strength of these differences is low. During the Early Postclassic period, bifaces were distributed in high

amounts among commoner households ($0.42\% \pm 0.18\%$ at the 99% confidence level low status commoners), while the distribution among nobles declined. In sum, evidence for agricultural production was present at low levels throughout the Late Classic, Terminal Classic, and Early Postclassic periods. The distribution of these items suggests that agricultural production remained at relatively steady levels during the Early Postclassic period.

5.2. EXOTIC ITEMS IN RITUAL DEPOSITS

Exotic luxury and utilitarian items were relatively rare (in relation to total sherds), suggesting that they were valuable. Therefore, an examination of the inclusion of these items in ritual deposits may provide indications about whether these items were especially valued or assigned ideological significance. The disposal of these materials was identified in various ritual contexts including caches and burials.

Overall, the majority of exotic items were not included in ritual deposits. However, evidence of exotic luxury and utilitarian items was identified from burials in the Late Classic period at the high status commoner household at M-96. Burial 96-3 featured five obsidian blades, whereas Burial 96-2 included two carved marine shell ornaments. This suggests that this one house group may have been assigning special value to exotic items. No exotic items were used in cache deposits.

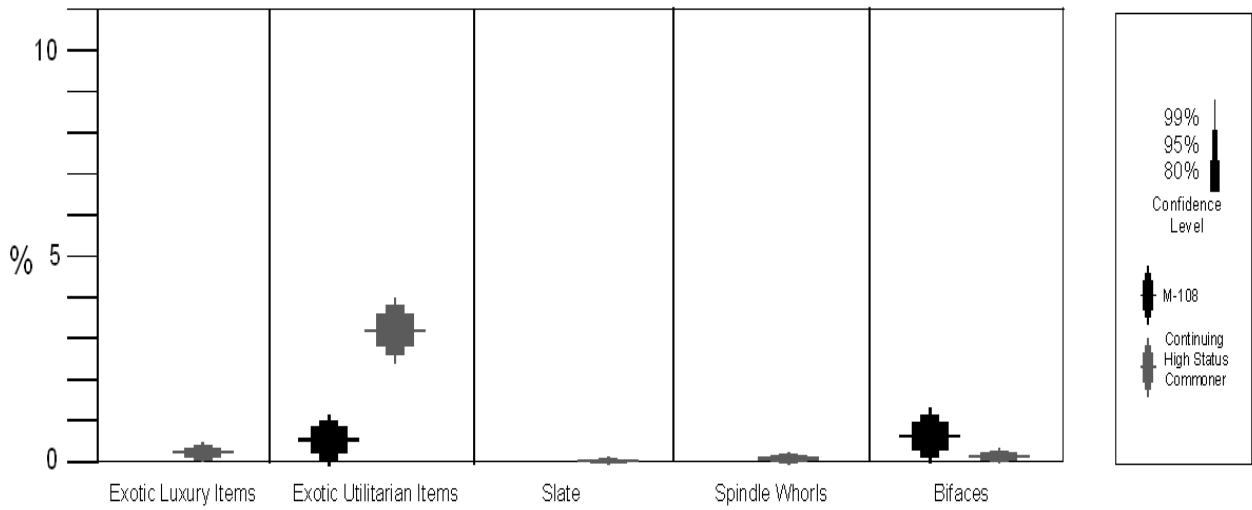
5.3. ABANDONMENT VERSUS CONTINUITY

In the previous sections I have suggested that both elite and commoner households adapted to changes in the Postclassic period, specifically the amplification of interregional exchange, by producing local items and products. Overall, the distribution of bifaces suggests that nearly all households were engaging in agricultural production, although the intensity increased among commoners during the Postclassic period. Other households may have produced cloth or slate items to exchange for exotic luxury and utilitarian items.

5.3.1. The M-108 Group

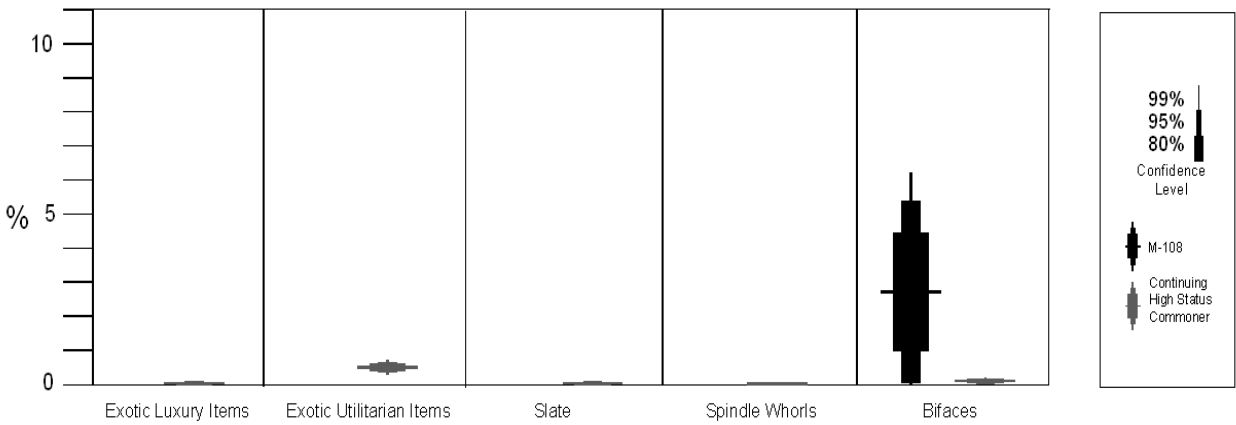
The M-108 house group is classified as the residence of a high status commoner household. This group, along with the low status commoner house group at M-181, was abandoned prior to the Early Postclassic period. It is unclear why these households left Baking Pot, when the remaining groups continued into the Postclassic period. Let us here focus on differences between the production of local items and the consumption of exotic items between groups that were abandoned and those that persisted.

Figure 5.21 illustrates the differences between Late Classic M-108, which was abandoned, compared to other high status commoner households that continued into the Postclassic period. We can be 80% confident that the M-108 group had more bifaces than continuing groups, suggesting that they were engaging in agricultural production at higher levels than other high status commoner households. However, other high status commoner households



Late Classic

Figure 5.21: Proportions of exotic luxury items, exotic utilitarian items, slate, spindle whorls, and bifaces to total sherds between the M-108 group and other high status commoner house groups.



Terminal Classic

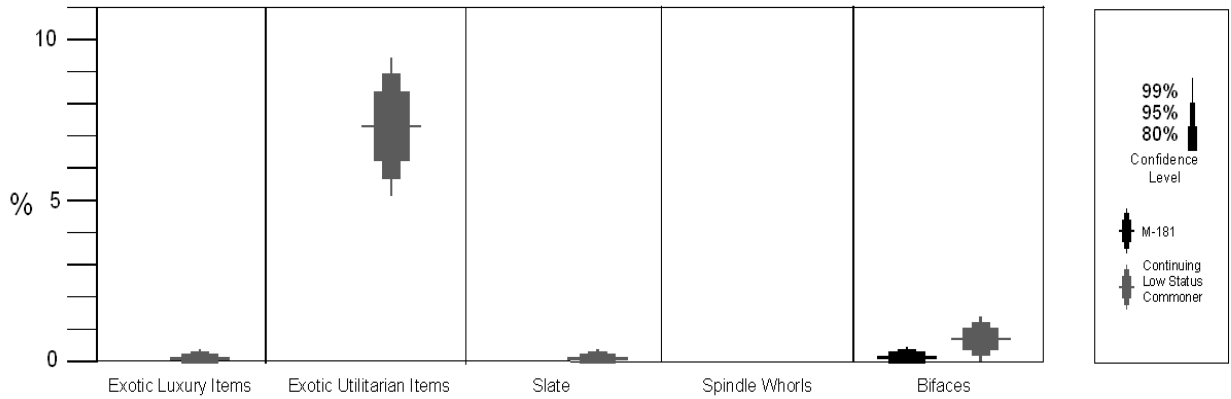
Figure 5.22: Proportions of exotic luxury items, exotic utilitarian items, slate, spindle whorls, and bifaces to total sherds between the M-108 group and other high status commoner house groups.

have evidence for low-level production of slate items and cloth, whereas the M-108 group is lacking any evidence for the production of these items. Similarly, households that persisted into the Postclassic period had higher amounts of exotic luxury and utilitarian goods in comparison to M-108, suggesting that these groups were more involved in interregional exchange than M-108.

Figure 5.22 shows a similar pattern, with bifaces distributed in higher amounts ($2.72\% \pm 1.73\%$ at the 80% confidence level) at M-108 in the Terminal Classic period than in continuing high status commoner households. However, no exotic items were recovered from M-108 during that period. Overall, this suggests that the household living at M-108 was not participating in interregional exchange in the same intensity as other households, which may have been one reason why the group was abandoned by the end of the Terminal Classic period.

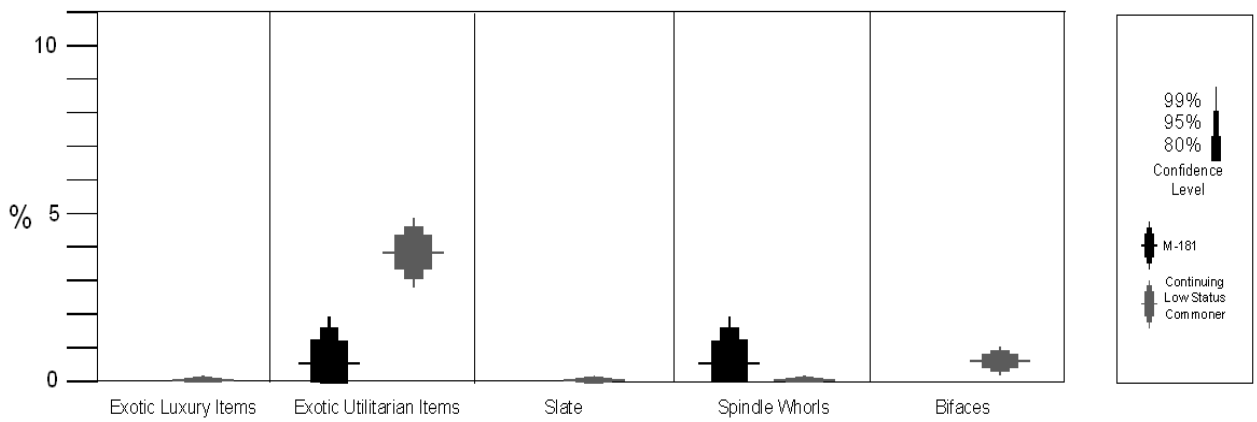
5.3.2. The M-181 Group

The M-181 is a single mound house group that is classified as the residence of a low status commoner household. Like the M-108 group, this group was abandoned by the end of the Terminal Classic period. Figure 5.23 illustrates the differences between the M-181 group and other low status commoner households that persisted into the Postclassic period. During the Late Classic period, the M-181 group had no evidence of exotic luxury or utilitarian items, slate items, or spindle whorls. In addition, we can be over 95% confident that continuing groups had more bifaces than M-181 in the Late Classic period. Figure 5.24 shows that M-181 has no evidence for exotic items, slate items, or bifaces in the Terminal Classic period, whereas other households have low amounts of all of these materials. However, although M-181 has a higher distribution of spindle whorls than other low status commoner households, we are less than 80% confident of this difference.



Late Classic

Figure 5.23: Proportions of exotic luxury items, exotic utilitarian items, slate, spindle whorls, and bifaces to total sherds between the M-181 group and other low status commoner house groups.



Terminal Classic

Figure 5.24: Proportions of exotic luxury items, exotic utilitarian items, slate, spindle whorls, and bifaces to total sherds in the Terminal Classic period between the M-181 group and other low status commoner house groups.

Overall, the distribution of exotic and local items at the M-108 and M-181 groups provides for some interesting contrasts between those the two groups and other households continued into the Postclassic period. First, both groups have evidence for agricultural production in the Late Classic period, although M-181 lacks evidence in the Terminal Classic. Generally, both groups were not engaged in the production of other local items, such as slate or cloth. Finally, both groups had little evidence of participation in interregional exchange, identified by exotic luxury and utilitarian items. Overall, as the economic conditions at Baking Pot changed in the political instability of the Terminal Classic period, households not adapting to the expansion of interregional exchange may have suffered and ultimately abandoned Settlement Cluster C.

5.4 CONCLUSIONS

In Masson's 'mercantile' scenario, she suggests that households increasingly participated in the expansion of interregional exchange in the Postclassic period, with both commoner and elite households gaining access to exotic luxury items, such as jade ornaments and greenstone adzes. At the settlements of Laguna de On and Caye Coco, she suggested that households were producing local items and resources, such as cloth, agricultural products and shell ornaments to exchange for exotic items. Overall, she provided evidence that Postclassic households not only had access to new types of luxury items, but that they became more reliant on exotic utilitarian items, such as obsidian. This chapter focused on exploring the 'mercantile' scenario at Settlement Cluster C, seeking to understand if noble and commoner households at Baking Pot employed similar strategies of increasing participation in interregional exchange. An analysis of the proportional distribution of materials associated with interregional exchange (Table 5-1), including luxury items such as marine shell, jade and greenstone, pyrite, and copper items, along with exotic utilitarian items including obsidian and basalt, suggests that both commoner and noble households in Settlement Cluster C had evidence of participation in the expansion of 'mercantile' exchange in the Postclassic period, marked by the presence of exotic items in relatively even distributions across social classes during the Terminal Classic and Early Postclassic periods.

Table 5-1: Distributions of materials associated with the ‘Mercantile’ Scenario (relative to total sherds) in noble, high status commoner, and low status commoner households in the Late Classic, Terminal Classic, and Early Postclassic periods.

MERCANTILE SCENARIO										
		Exotic Luxury Items				Exotic Utilitarian Items		Local Production Items		
PERIOD	STATUS GROUP	Marine Shell	Jade & Greenstone	Pyrite	Copper	Obsidian	Basalt	Slate	Spindle Whorls	Bifaces
LATE CLASSIC	Noble	0.15%	0.00%	0.00%	0.00%	1.46%	0.00%	0.15%	0.00%	0.54%
	High status Commoner	0.19%	0.00%	0.00%	0.00%	2.61%	0.00%	0.02%	0.07%	0.26%
	Low status Commoner	0.06%	0.00%	0.00%	0.00%	4.07%	0.00%	0.06%	0.06%	0.45%
TERMINAL CLASSIC	Noble	0.05%	0.00%	0.00%	0.00%	0.31%	0.00%	0.00%	0.21%	0.68%
	High status Commoner	0.04%	0.01%	0.00%	0.00%	0.51%	0.00%	0.04%	0.05%	0.15%
	Low status Commoner	0.31%	0.17%	0.00%	0.00%	3.95%	0.00%	0.04%	0.04%	0.62%
EARLY POSTCLASSIC	Noble	0.02%	0.01%	0.00%	0.02%	6.54%	0.00%	0.05%	0.02%	0.26%
	High status Commoner	0.07%	0.00%	0.02%	0.00%	2.26%	0.00%	0.36%	0.00%	0.10%
	Low status Commoner	0.02%	0.00%	0.00%	0.04%	5.73%	0.04%	0.06%	0.00%	0.42%

Exotic luxury items, including those made of jade and greenstone, marine shell, pyrite and copper, were not differentially distributed among nobles. Instead, they were found in low amounts across households of different status. This suggests that these were openly exchanged materials, being available through the expansion of market exchange in the Postclassic period. Marine shell was the most abundant type of exotic luxury item, and the even distributions even during the Late Classic period suggest that they were easily obtained. The complete absence of jade and greenstone from domestic contexts during the Late Classic period suggests that these items were restricted. However, the distribution of jade shifts during the Terminal Classic period, with low amounts of jade and greenstone found among both nobles and commoners, suggesting that these items were obtained through more open systems of exchange, such as the expansion of interregional ‘mercantile’ activities. Although pyrite and copper items did not appear in Settlement Cluster C until the Early Postclassic period, their distribution across social groups also provides evidence for unrestricted access of exotic luxury items in the Postclassic period.

Utilitarian items made from exotic materials, including obsidian and basalt, had a different pattern. Although both were recovered among commoner households, suggesting open exchange of these items, obsidian was differentially distributed among commoner households during the Late Classic and Terminal Classic period. I have suggested that this may be due to select commoner households producing or recycling obsidian blades. However, this pattern shifts during the Postclassic period, when nobles have the highest distribution of obsidian. Basalt was very rare, and only found at a commoner household during the Early Postclassic period. Like exotic luxury items, the distribution of utilitarian items made from exotic materials also suggests open forms of exchange, as well as suggesting an increase in participation in

interregional exchange, as the distribution of obsidian increased in all groups during the Early Postclassic period.

Unlike at Laguna de On and Caye Coco, where households became more reliant on exotic utilitarian items such as obsidian blades in the Postclassic period, households at Baking Pot relied more on local and non-local (Colha) chert during the Terminal Classic period, when obsidian distributions declined. In spite of an increase in the distribution of obsidian in the Early Postclassic period, nobles actually became more reliant on non-local (Colha) chert, while commoners continued using local chert at high levels. I suggested that the discrepancy between the reliance on exotic utilitarian items at Laguna de On and Caye Coco in comparison with Baking Pot is the distance to the coast, as merchants likely made fewer trips past Baking Pot.

In order to obtain exotic materials and items, households would have needed to produce items from local resources to exchange for exotics. An examination of the artifact inventories of households in Settlement Cluster C suggested three types of low-level production, including the production of slate items, cloth, and agricultural products. The distribution of slate items suggested that slate ritual objects were produced at low levels from the Late Classic through the Early Postclassic period, increasing among commoner households in the Postclassic. In contrast, cloth production, evident through the presence and distribution of spindle whorls was primarily distributed among commoners during the Late Classic period, becoming more associated with nobles in the Terminal Classic and Early Postclassic periods. The distribution of bifaces suggests agricultural production, although we have to infer the types of products that may have been grown. Of course, most agricultural products would have been too bulky for merchants to carry, so more specific types such as cacao may have been preferred. Bifaces were found across all social classes through time, suggesting that agricultural production was a widespread activity.

However, the high distribution of bifaces among low status commoners in the Early Postclassic period suggests that some households may have increased agricultural production during this time. Overall, the presence of local production items suggests that households may have expanded the production of local resources in order to exchange for exotic items. However, the low proportions of some production items suggests that these items were likely produced at low levels, primarily for household use with surplus being used for exchange.

Exotic luxury and utilitarian items may have taken on a special importance to some households, which included these items as grave goods. One group, the high status commoner household at the M-96 group, appeared to have placed special importance on exotic materials, including both marine shell ornaments and obsidian blades in burials. The inclusion of these items was likely due to their value, as they would have been more rare than goods produced locally.

Finally, some patterns were identified between households that were abandoned by the end of the Terminal Classic and participation in interregional exchange. Both groups that were abandoned, the M-108 and M-181 groups showed little participation in interregional exchange. Neither group had any exotic luxury items in the Late Classic or Terminal Classic period. Furthermore, the groups had few, if any, exotic utilitarian items, which were present in low frequencies in the domestic inventories of nearly every household. In both cases, the households that persisted into the Early Postclassic period had evidence of low-level production of multiple types of local resources, while those groups that were abandoned only had singular types of production in the Terminal Classic period (with only bifaces present at M-108 and only spindle whorls present at M-181). A similar pattern was identified for the M-90 group, with low proportions of local production items; however, the difference between this group (which

persisted into the Early Postclassic period) and those that were abandoned is that the M-90 group had higher proportions of exotic and utilitarian items. This may suggest that households that were able to participate in the expansion of interregional exchange by producing multiple types of local resources and items to exchange for exotic materials may have prospered, while those households failing to adapt to the new economic order of the Postclassic period may have faltered. For agricultural products, I do not suggest that merchants were transporting maize or other agricultural staples; however, it could be possible that households traded cacao for exotic goods. In conclusion, similar patterns of increasing access to exotic luxury items was identified in Settlement Cluster C, although the pattern of increasing reliance on exotic utilitarian items that Masson notes for the northern Belize sites was absent. This evidence, along with the low levels of local production items, suggests that the economic organization of households in Settlement Cluster C was not drastically altered, as households continued producing the same types of items. However, increasing access to exotic luxury items among commoner households may have provided additional opportunities for these households in the reorganization of society in the Postclassic period.

6.0 EXPLORING THE POLITICAL FEASTING SCENARIO

The large amount of literature on feasting in Mesoamerica provides evidence that hosting and attending feasts was common practice in both ancient and modern times. Studies in the Maya area have supported this view, with evidence for feasts based on solidarity and differentiation throughout the Maya lowlands (Hendon 2003). Large-scale community feasting provides mechanisms to foster social and political relationships, with hosts seeking to attract followers, create alliances, display wealth or status, generate social debt, and differentiate themselves from competing elites (Hayden 2001). During times of social or political instability, feasting activity may provide steadiness and create new forms of interaction and relationships that were previously restricted. The collapse of centralized rulership in the central and southern Maya lowlands would have led to new forms of interaction, especially in settlements that continued from the Classic to Postclassic period.

LeCount (1996) suggests the large-scale community feasts were important for the changing social relationships during the Terminal Classic period between households outside of the Xunantunich polity. Although the polity experienced a brief florescence during this time, it was short-lived and populations rapidly declined outside of Xunantunich after A.D. 849. LeCount argues that feasts were important among the highest status households at San Lorenzo, bringing the community together to share special meals and promote community integration.

Evidence of feasting (Yaeger 2000; LeCount 2004) was present in the high distribution of elaborate serving vessels, along with faunal remains among the higher status households living at the large patio groups in San Lorenzo settlement.

This chapter explores whether the strategies used by noble households at Xunantunich, focusing on large-scale community feasts for community solidarity, may have taken place at Baking Pot during the changing social and political conditions leading up to and following the collapse. To consider this scenario, the material remains of feasting, including serving vessels, decorated vessels, and faunal remains, will be explored to consider whether noble households at Baking Pot were hosting solidarity feasts following the collapse of centralized rulership.

6.1 EVIDENCE OF FEASTING IN SETTLEMENT CLUSTER C

Hayden (2001:37-40) discusses several different types of feasts, including solidarity feasts, where prominent families sponsor feasts in a community for alliance building and fostering political support. These events cultivated relationships between households, redistributed resources, and often became a form of economic interdependence (Potter 2000). Various lines of evidence will be utilized to consider this scenario.

Hayden lists several archaeological signatures of feasting, predominantly being marked proportionally by higher amounts of serving vessels, especially those that are highly decorated or rare. Other evidence includes food remains in high amounts, the presence of rare types of food,

higher amounts of items associated with food preparation, and special food disposal features among many other features (Hayden 2001:40-41). If feasting was an important aspect of social life following the collapse of centralized rulership then materials associated with feasts should be differentially found in noble households in Settlement Cluster C. For this analysis, feasting materials have been separated into two categories: 1) Serving vessels (including decorated ceramics) that would have been used to hold and present food; and 2) Food preparation materials, including cooking vessels and faunal remains, that would have been used to prepare and consume meals.

6.1.1. Serving Vessels

Feasts involved the consumption of food and drink in high amounts among multiple households within a community. Ceramic vessels would have been an integral part of a feast, for both the presentation and preparation of food. Serving vessels (Figure 6.1 and 6.2) played both practical and social roles in feasts, holding various types of food that would be consumed, as well as in the visual display of status. Both plain and decorated serving vessels would have been used for communal consumption promoting solidarity. Types of serving vessels include bowls, plates, and dishes to hold the various meals, along with vases to hold beverages such as cacao. The consumption of special or restricted foods would have been an indication of high status of the sponsors of the feast. As cacao was highly valued in Maya society, the presence of vases would likely signify the high status or wealth of the hosts. The archaeological expectations for LeCount's political feasting model would include expect high amounts of serving vessels



Figure 6.1 (Above): Decorated bowl from M-90. **Figure 6.2 (Below):** Early Postclassic Augustine Red, Paxcaman Red, and Topoxte Red dish feet from M-99.

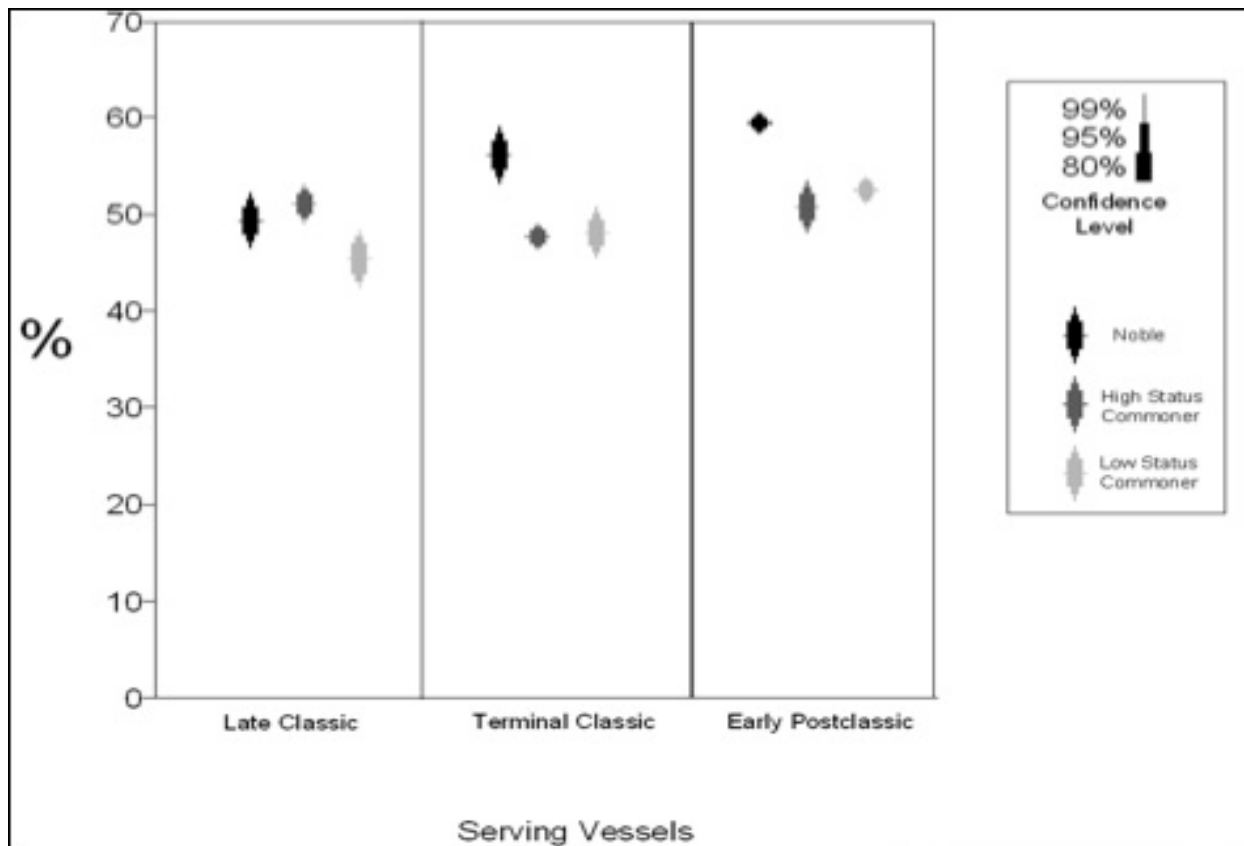


Figure 6.3: Proportions of all serving vessels, including bowls, plates, dishes, and vases, relative to total sherds (serving vessels/total sherds) among noble, high status commoner, and low status commoner households in the Late Classic, Terminal Classic, and Early Postclassic periods.

differentially distributed among noble households in the Late Classic, Terminal Classic, and Early Postclassic periods. Since feasts required surplus wealth to sponsor such large-scale community events, we would expect that only noble households would be able to host these events.

Figure 6.3 shows that serving vessels were not differentially distributed between noble and commoner households during the Late Classic period. In fact, we are less than 95% confident that noble households and those of high status commoners used serving vessels any

differently during the Late Classic period. However, we can be more than 99% percent confident that noble and high status commoner households have approximately 5% more serving vessels than low status commoner households do in the Late Classic period. This suggests that noble households were not differentially associated with serving vessels, providing no indications that they were hosting large-scale community feasts in the Late Classic period and that the distribution of serving vessels in this period was more related to status and wealth than feasting. During the Terminal Classic period this pattern shifts, with noble households with $56.1\% \pm 2.9\%$ (at the 99% confidence level) of serving vessels in relation to total sherds. Therefore, we can be more than 99% confident that nobles have nearly 8% more serving vessels than commoner households during this time. This provides some indication that M-99 may have been hosting feasts beginning in the Terminal Classic period. These results also indicate few differences in the use of serving vessels between commoner households, with both high and low status commoners using similar amounts of serving vessels. The same pattern can be identified for the Early Postclassic period, where we can be over 99% confident that nobles were using about 10% more serving vessels than commoners, with $59.4\% \pm 1.11\%$ (at the 99% confidence level) among nobles in comparison to $50.76\% \pm 2.62\%$ (at the 99% confidence level) among high status commoners and $52.5\% \pm 1.37\%$ (at the 99% confidence level) among low status commoners in the Early Postclassic period. Despite the differential distribution of serving vessels among nobles in the Early Postclassic period, we are less than 80% confident that there is any difference in serving vessels between high and low status commoners, suggesting that they were using serving vessels for general domestic purposes.

In sum, the distribution of serving vessels in the Late Classic period did not provide evidence of large-scale community feasting, as noble and commoner households were using serving vessels at similar levels, although they do appear to be distributed in relation to wealth and/or status differences. Noble and high status commoner households were using more serving vessels than commoner households, which would be expected for normal domestic activities associated with food preparation and consumption among wealthier households. This pattern changed during the Terminal Classic and Early Postclassic periods, when serving vessels were differentially distributed among nobles. The two changes in the distribution of serving vessels provide support for the hosting of community feasts in the noble household at Settlement Cluster C: 1) the 8 to 10% increase in serving vessels among nobles in the Terminal Classic Period and Early Postclassic period; and 2) the shift in differential use, with no major distinctions in the use of serving vessels between nobles and high status commoner households in the Late Classic period to being distributed primarily among nobles the Terminal Classic and Early Postclassic period. Since large numbers of serving vessels provide one of the best indications of feasting due to the need for more vessels to feed larger numbers of people, this indicates that nobles were more involved in serving and consumption activities in the Terminal Classic and Early Postclassic periods. In addition, we can be over 99% confident that serving vessels among nobles increased from the Terminal Classic period ($56.1\% \pm 2.92\%$ at the 99% confidence level) to the Early Postclassic period ($59.42\% \pm 1.11\%$ at the 99% confidence level), indicating that the intensity of activities associated with serving and food consumption among nobles increased slightly, although the strength of this difference is low.



Figure 6.4 (Above): Polychrome ceramics from M-99. **6.5 (Below):** Polychrome ceramics from M-90.

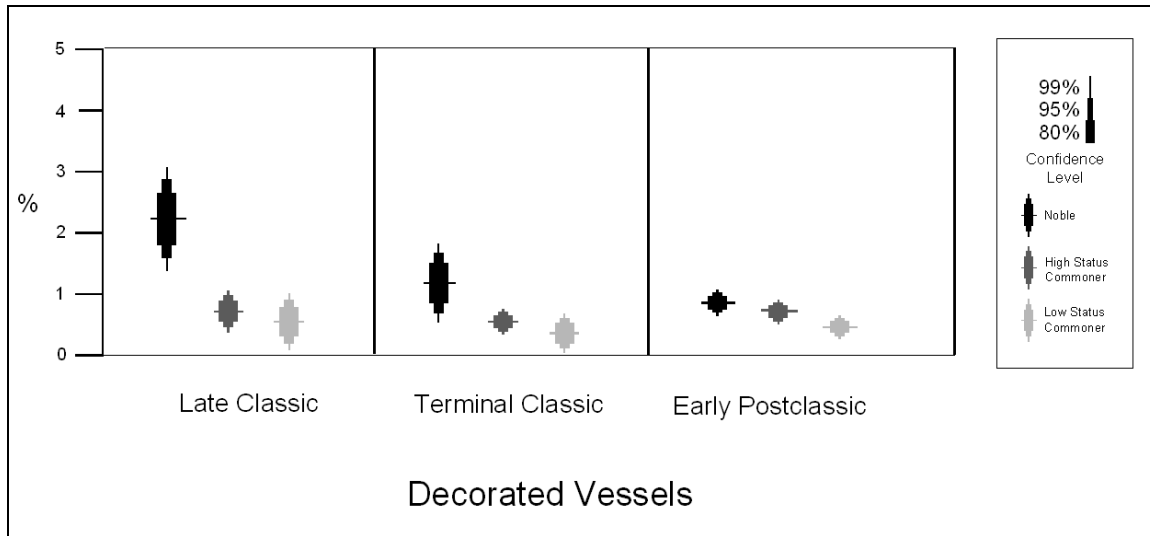


Figure 6.6: Proportion of decorated sherds to total sherds (decorated sherds/total sherds) between noble, high status commoner, and low status commoner house groups in the Late Classic, Terminal Classic, and Early Postclassic periods.

6.1.1.1. Decorated Ceramics

Decorated ceramics (Figure 6.4 and 6.5) can provide information about public displays of status and consumption that are often associated with status differentiation, along with public consumption of these materials in feasts. Feasts would have been prominent occasions where hosting families brought out food in fancy serving vessels, so we would expect that decorated ceramics would be used for public events such as feasts, as these items would have been more labor intensive and would have required more specialized skill to produce than plain ceramic vessels. The display of decorated vessels would also serve as a form of status competition, as noble households would display more elaborate types of vessels. This divisive competition would have been a form of horizontal differentiation, with noble households competing with

other nobles to display their wealth by having fancier ceramics. In contrast, vertical competition between households may have been manifested in the types of rare ceramics or food present among noble and commoner households. Decorations on ceramics vary in the Belize Valley, including painting (bi-chrome or polychrome), incising, molding, and applique decorations on slipped vessels. For this analysis, all of these types of decoration techniques are included to distinguish decorated vessels from plain vessels. Although polychrome painted vessels were the most labor-intensive and would be considered the most elaborate form of decoration, the decline in the production of polychrome ceramics following the end of centralized rulership suggests that all forms of decoration should be included to account for changes in decoration techniques through time. Decorated vessels were found in seven of the eight (88%) of house groups in the Late Classic, in six of the eight house groups (75%) during the Terminal Classic, and in five of the six house groups (83%) in the Early Postclassic period. This indicates that the decorated ceramics were widely distributed in all three periods, although they were became less available in the Terminal Classic period, although this reversed during the following period, becoming nearly as widely distributed as in the Late Classic period.

Despite the widespread nature of decorated vessels between house groups, the distribution of decorated vessels indicates that these ceramics were distributed in relation to status through time (Figure 6.6). During the Late Classic period we can be over 99% confident that nobles had more decorated ceramics than commoners, with $2.24\% \pm 0.84\%$ (at the 99% confidence level), compared to high status commoner households with $0.73\% \pm 0.34\%$ decorated ceramics (at the 99% confidence level) and low status commoners with $0.56\% \pm 0.46\%$ (at the 99% confidence level). This suggests that decorated ceramics were differentially distributed among nobles, with lower levels among commoners. We are less than 80% confident that there

were any differences between decorated ceramics among low and high status commoners in the Late Classic period.

In the Terminal Classic period the distinction between nobles and commoners declined, with the distribution of decorated sherds declining to $1.2\% \pm 0.64\%$ (at the 99% confidence level) among nobles in this period. We can be over 99% confident that nobles had more decorated ceramics than commoners in the Terminal Classic, although the extent of this difference declined from the Late Classic period, with nobles having only 0.64% more decorated sherds than commoners in the Terminal Classic period, whereas in the Late Classic period this difference was 1.49%. This declining distinction among the distribution of decorated ceramics continued during the Early Postclassic period, with a difference of only 0.15% between nobles and commoners in this period, so we are only 80% confident that there is any difference in the consumption of decorated ceramics between nobles and commoners, and the strength of the difference is low. This pattern is similar to that described by LeCount, where she describes fewer distinctions in rare ceramics between households of different status, including molded-carved ceramics.

Overall, the distribution of decorated ceramics provides some interesting patterns, with a decline in the distribution of decorated sherds between nobles and commoners from the Late Classic to the Early Postclassic periods. As we have evidence that serving vessels were increasingly associated with nobles in the Terminal Classic and Early Postclassic periods (Figure 6.3), shrinking differentiation of decorated ceramics between nobles and commoner households indicates that displays of status, through the public display of elaborate serving vessels, was less important in the Terminal Classic and Early Postclassic period. This pattern may have also have

been linked to the decline of the production of polychrome ceramics, although other forms of decoration, including incision, molding, and impression continued.

Large-scale community feasts could serve two different purposes: 1) fostering solidarity and integration through the sharing of food and resources; and 2) status competition through the public display of items associated with wealth and status, including elaborate ceramic vessels. The decline in the proportional distribution of decorated ceramics between nobles and commoners during the Terminal Classic and Early Postclassic periods suggests that large-scale community feasts were more based on solidarity than status competition.

6.1.2. Food Preparation Materials

6.1.2.1. Cooking Vessels

In contrast with serving vessels, which are associated with the presentation and consumption of food, cooking and storage vessels would have been integral for everyday food preparation activities and for feasting. *Ollas* would have been used to cook food over a hearth, while jars would have been used to store food and water. Figure 6.7 illustrates that the proportions of cooking vessels varied little between different types of households and across time. In the Late Classic period, high status households had slightly more cooking vessels than noble and low status households, although we are less than 80% confident in this difference. The same pattern is identified in the Terminal Classic period and Early Postclassic periods, with few distinctions in the use of cooking vessels between noble and commoner households.

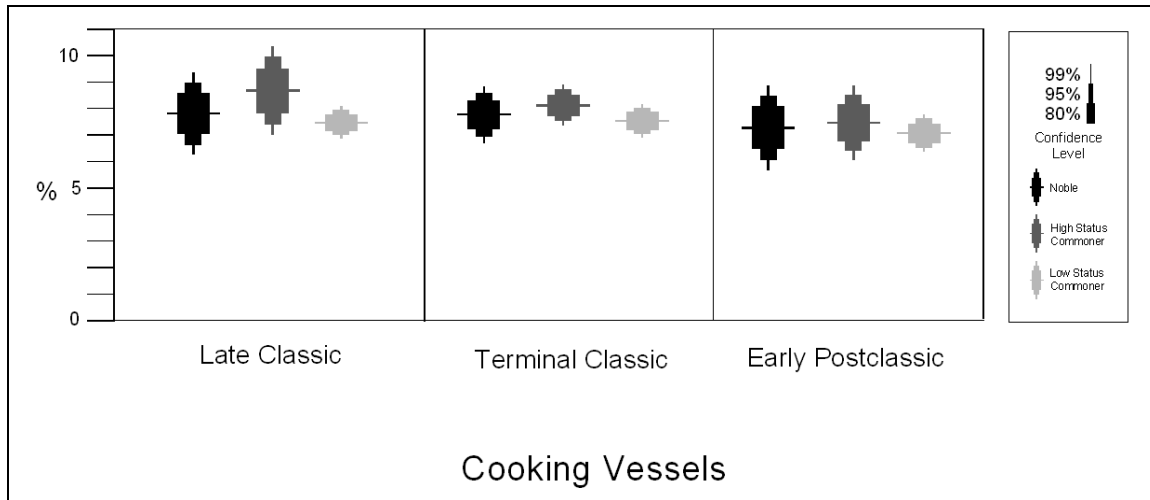


Figure 6.7: Proportion of cooking vessels relative to total sherds (cooking vessels/total sherds) among noble, high status commoner, and low status commoner households in the Late Classic, Terminal Classic, and Early Postclassic periods.

Table 6-1: Ratios of serving vessels to cooking vessels among noble, high status commoner, and low status commoner house groups in the Late Classic, Terminal Classic, and Early Postclassic periods.

	Late Classic	Terminal Classic	Early Postclassic
Noble	1.49	1.58	1.60
High Status Commoner	0.88	0.67	0.77
Low Status Commoner	0.74	0.78	0.70

Although the distribution of serving vessels provided some indications that noble households were associated with higher amounts of serving vessels than commoner households in the Terminal Classic and Early Postclassic periods, fewer distinctions in the distribution of cooking vessels suggests that cooking activities may not have been any different between groups. In fact, commoner households had slightly more cooking vessels than nobles although we cannot be incredibly confident of any difference. However, if noble households were sponsoring large-scale community feasts, we would also expect to see a higher ratio of serving vessels in relation to cooking vessels, due to the need to serve food to larger numbers of people. Table 6.1 shows the ratio of serving vessels among nobles and commoners, indicating that nobles had approximately 1.5 serving vessels or more for every cooking vessel across time periods, whereas commoner households had less than one serving vessel per cooking vessel through time. An increase in serving vessels among nobles in the Terminal Classic and Early Postclassic periods indicates that activities associated with the serving of food, rather than the cooking of food, increased among this group through time. While the ratio of serving vessels to cooking vessels increased from 1.49% in noble households in the Late Classic to 1.58% during the Terminal Classic and 1.60% during the Early Postclassic periods, the ratio of serving vessels to cooking vessels declined or remained steady among commoners. The ratio of serving vessels declined among high status commoners from 0.88% in the Late Classic period to 0.67% in the Terminal Classic, and increasing to 0.77% in the Early Postclassic period. The ratio of serving vessels slightly increased from 0.74% in the Late Classic period to 0.78% in the Terminal Classic period, declining in the Early Postclassic period to 0.70%. This indicates that activities associated with serving food remained relatively steady or slightly declined among commoner households in the Terminal Classic periods when these activities increased for nobles. This

provides additional support that noble households were associated with more serving and consumption than were commoner households in Settlement Cluster C in the Terminal Classic and Early Postclassic periods.

6.2.2.2. Food remains

Feasts would have featured elaborate meals including rare, higher quality, and more labor-intensive food along with proportionally higher quantities of food remains than in typical domestic settings (Hayden 2001: 40). This would include the remains of domesticated species, including dog and turkey, along with preferred wild species such as large mammals (including deer) that provided more meat than smaller game. Faunal remains were the primary types of food remains recovered from excavated contexts and included animal remains, excluding freshwater shell, which would have been an abundant protein resource given the location of Baking Pot along the Belize River. Since all house groups had freshwater shell present, including *Pachichilius indorium*, *Pachichilus glaphyrus*, and *Nephronias* species, these remains are excluded from this analysis since these would likely be more associated with typical meals. Vertebrate animal species recovered in excavations included mud and musk turtle, armadillo, white-tailed deer, agouti and paca, parrotfish, dog, opossum, peccary, as well as broader categories of bird, mammal, and reptile. Norbert Stanchly's (2010) faunal analysis indicates that deer, armadillo, and peccaries were the predominant source of protein, supplemented by freshwater shell, turtle, bird, and dog. Faunal remains are expected to be present among noble, high, low status commoner households, as these remains were also part of the everyday diet.

Table 6-2. Vertebrate species recovered at the noble M-99 house group from Late Classic (LC), Terminal Classic (TC), and Early Postclassic (EPC) contexts. Large mammals and domesticated species, including dog and turkey, are highlighted, as these species would provide more meat and higher amounts of protein than small game.

Species	LC	TC	EPC
<i>Cervidae</i> sp. - deer			X
<i>Mazama</i> sp. – brocket deer			X
<i>Odocoileus virginianus</i> – white-tailed deer	X	X	X
Order <i>Artiodactyla</i> - ungulate			X
<i>Canis familiaris</i> - dog			X
<i>Meleagris</i> sp. - turkey			X
<i>Mammalia</i> - mammal	X	X	X
<i>Agouti paca</i> - paca			X
<i>Tayassu</i> sp. - peccary		X	X
<i>Dasyprocta punctate</i> - agouti			X
<i>Dasyopus novemcinctus</i> – Nine-banded armadillo			X
<i>Dermatemys mawii</i> – Central American river turtle			X
<i>Kinosternidae</i> – mud/musk turtle			X
Order <i>Testudines</i> - turtle		X	
<i>Staurotypus triporcatus</i> – Mexican musk turtle			X
<i>Aves</i> - bird			X
Order <i>Serpentes</i> - snake			X
Class unknown			X

Table 6-3. Vertebrate animal remains recovered at the high status commoner M-90 house group from Late Classic (LC), Terminal Classic (TC), and Early Postclassic (EPC) contexts. Large mammals and domesticated species, including dog and turkey, are highlighted, as these species would provide more meat and higher amounts of protein than small game.

Species	LC	TC	EPC
Class Mammalia – unidentified mammal		X	
<i>Dasyurus novemcinctus</i> – Nine-banded armadillo			X
<i>Staurotypus triporcatus</i> – Mexican musk turtle		X	
Unidentified bone			X

Table 6-4. Vertebrate animal remains recovered at the high status commoner M-96 house group from Late Classic (LC), Terminal Classic (TC), and Early Postclassic (EPC) contexts. Large mammals and domesticated species, including dog and turkey, are highlighted, as these species would provide more meat and higher amounts of protein than small game.

Species	LC	TC	EPC
<i>Odocoileus virginianus</i> – White-tailed deer	X	X	
Class Mammalia – unidentified mammal	X	X	X
<i>Meleagris</i> sp. – turkey			X
<i>Didelphis</i> sp. – opossum			X
Family Agoutidae – agoutis and pacas		X	
<i>Tayassu</i> sp. – peccary	X		
Class Aves – unidentified bird	X		X
Family Kinosternidae – mud and musk turtles	X		
Order Anura – frogs and toads	X		
Unidentified bone	X		X

Table 6-5. Presence of species recovered at the high status M-108 house group from Late Classic (LC) and Terminal Classic (TC) contexts. Large mammals and domesticated species, including dog and turkey, are highlighted, as these species would provide more meat and higher amounts of protein than small game.

Species	LC	TC
<i>Canis familiaris</i> – Dog	X	
Class Mammalia – unidentified mammal	X	
Unidentified bone	X	

Table 6-6. Presence of species recovered at the low status M-100 house group from Late Classic (LC), Terminal Classic (TC), and Early Postclassic (EPC) contexts. Large mammals and domesticated species, including dog and turkey, are highlighted, as these species would provide more meat and higher amounts of protein than small game.

Species	LC	TC	EPC
<i>Odocoileus virginianus</i> – White-tailed deer			X
Class Mammalia – unidentified mammal			X
<i>Dasyopus novemcinctus</i> – Nine-banded armadillo			X
Class Aves – unidentified bird			X
Family Kinosternidae – mud and musk turtles			X
Order Testudines – turtles			X
Unidentified bone			X

Table 6-7. Presence of species recovered at the low status commoner M-184 house group from Late Classic (LC), Terminal Classic (TC), and Early Postclassic (EPC) contexts. Large mammals and domesticated species, including dog and turkey, are highlighted, as these species would provide more meat and higher amounts of protein than small game.

Species	LC	TC	EPC
Class Mammalia – unidentified mammal	X	X	X
<i>Agouti paca</i> – Paca			
<i>Tayassu</i> sp. – peccary		X	
Unidentified bone	X		X

Higher amounts of faunal remains in high status households may also reflect status and wealth differences. The presence of rare or exotic fauna may indicate that a household may have prepared meals for special occasions, such as in community-level feasts.

An examination of the types of vertebrate animal remains (Tables 6-2 to 6-7) provides information about typical diet among households. Vertebrate animal remains were recovered from Late Classic through Early Postclassic contexts, with 3 species of mammals identified in the Late Classic period, and four types of mammals recovered in Terminal Classic contexts, including white-tailed deer (*Odocoileus virginianus*), *Tayasu* species, and *Order Testudines*. Early Postclassic contexts had the broadest variation, including 16 different types of animals in addition to the unknown groups. Overall, vertebrate faunal remains reveal several interesting patterns. Vertebrate remains were found in both commoner and noble house groups from the Late Classic to Early Postclassic periods. In general, this evidence suggests a large amount of the population had access to high-quality protein sources during this time, suggesting that these sources of protein were not restricted to the highest status households. However, the absence of vertebrate animal remains among the lowest status households, including M-94 and M-181, indicates that there was differential distribution of high quality protein based on status. As these groups had evidence of freshwater shell, it is likely that the lowest status households relied on lower quality protein sources.

Despite the widespread presence of high quality protein among house groups of different status, indicating that these types of food were a part of the typical diet of households through time, the proportional distribution of faunal remains suggests differential consumption of these remains. Figure 6.7 shows that faunal remains are not differentially distributed by status in the

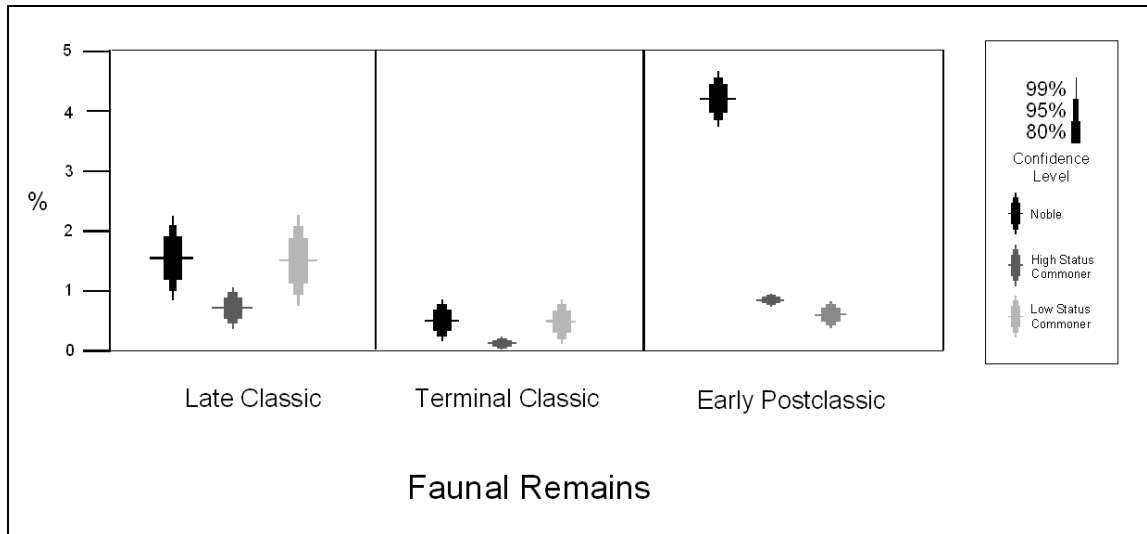


Figure 6.7: Proportion of faunal remains (based on NISP) to total sherds among noble, high status, and low status commoner house groups in the Late Classic, Terminal Classic, and Early Postclassic periods.

Late Classic period. Faunal remains were distributed at similar levels between nobles and low status commoners in the Late Classic period, although we can be over 99% confident that these groups had nearly twice the amount of faunal remains than high status commoners. This pattern is unexpected, as we would expect for faunal remains to be distributed along status lines in the Late Classic period. High status commoner households may have been focusing on lower quality protein sources during this time. Overall, the distribution of faunal remains does not appear to be associated with status in the Late Classic period. In the Terminal Classic this pattern continues, although the distribution of faunal remains declines among all types of households. We can be confident that noble and low status commoner households consumed higher amounts of vertebrate faunal remains, with $0.52\% \pm 0.34\%$ (at the 99% confidence level) among nobles and $0.50\% \pm 0.28\%$ (at the 95% confidence level) among low status commoners in the Terminal Classic, compared to $0.14\% \pm 0.10\%$ (at the 99% confidence level). Despite this

difference, the strength is low, suggesting that nobles, high status commoners, and low status commoners consumed similar amounts of faunal remains in the Terminal Classic period. Consumption of faunal remains shifts during the Early Postclassic period, with over four times as many faunal remains in noble households as in commoner households ($4.22\% \pm 0.46\%$ at the 99% confidence level). We can be more than 99% confident that high status commoners ate more faunal remains ($0.86\% \pm 0.10\%$ at the 99% confidence level) than low status commoners ($0.62\% \pm 0.22\%$ at the 99% confidence level), although the strength of this difference is low. Overall, the high distribution of faunal remains among nobles during the Early Postclassic period marks the first time that faunal remains are associated with status in the three time periods.

This pattern has several implications for the political feasting model. First, as serving vessels were differentially distributed among nobles in the Terminal Classic and Early Postclassic periods, suggesting the hosting of large-scale community feasts at M-99 in these periods. Second, the distribution of decorated ceramics in high levels in noble contexts, diminishes in scale in the later periods suggests that community-wide feasts at M-99 were likely based on solidarity and integration rather than status competition. Finally, high quality protein sources from vertebrate animals were widely available across status distinctions for typical meals; however, the distribution of faunal remains among households in the Early Postclassic is differentially associated with nobles. This indicates that large-scale community feasts in the Early Postclassic may have emphasized the sharing of food and resources more than in the Terminal Classic period.

6.2 FEASTING MATERIALS IN RITUAL AND NON-RITUAL DEPOSITS

The inclusion of items associated with feasts in ritual contexts, such as burials and caches, can provide an indication of if feasts centered on mortuary, dedication, termination, and caching rituals. Serving vessels, including dishes and bowls, were included as grave goods in 56% of primary burials and all caches in Settlement Cluster C. All of the vessels in burials were plain, suggesting that their importance was not to be seen, or they likely held food that was included as grave goods. As community-wide feasts were likely held at the M-99 group, an examination of the burials is necessary to identify whether the feasts may have centered on mortuary ritual. Three burials were recovered at M-99, a child burial from Late Preclassic contexts, an adult burial from Early Postclassic contexts, and a secondary (multiple individual) burial also from Early Postclassic contexts. Neither Postclassic burial featured any intact serving vessels. In fact, Burial 99N-1, a secondary multiple burial, was found in a small midden on the edge of M-99a interspersed with broken ceramics and faunal remains. The inclusion of this burial in the midden may suggest some involvement of mortuary rituals or ancestor veneration with feasts, although this idea is tentative at best as Postclassic burials are often found in middens or off-platform. The second Postclassic burial, Burial 99E-1, was a primary burial into the side of M-99b. This burial did not have any complete ceramic vessels, only the feet of two Augustine Red dishes. No termination deposits were identified at M-99, however, a cache in M-99d in the Late Classic period included several plain bowls arranged lip-to-lip, suggesting that food remains were originally contained inside the vessels. These deposits provide some indications that serving vessels were included in ritual deposits; however, since no evidence for large-scale feasting at

M-99 was identified for the Late Classic period, it is unlikely that feasts may have centered around ritual associated with caches.

6.3 ABANDONMENT VERSUS CONTINUITY

An analysis of feasting materials among abandoned house groups, including M-108 and M-181, was not necessary, as the political feasting scenario primarily focused on evidence for large-scale community feasts being hosted among nobles. This is due to the expensive nature of these events, which commoner households likely would not have been able to afford. Therefore, there is no reason to believe that hosting community-wide feasts may have played a role in the difference between households that continued and those that were abandoned.

6.4 CONCLUSIONS

In LeCount's political feasting scenario, she suggests that noble households in the community of San Lorenzo, within the Xunantunich polity, hosted large-scale community feasts in the Terminal Classic period in order to foster solidarity and community integration within a politically tumultuous time. While nobles were using these feasts to compete with other nobles, they also served to promote solidarity between nobles and commoners in the community. These activities were restricted to the largest patio groups in the community and were marked by high amounts of serving vessels and nearly exclusive presence of faunal remains (LeCount 2001; Robin *et al.* 2010; Yaeger 2000a, 2000b). Yaeger and LeCount suggest that the residents of San Lorenzo "came together to consume highly valued foods like venison in ceremonial meals, which recognized the residents' shared bonds and celebrated a shared community identity" (Robin *et al.* 2010:328). This chapter focused on exploring the political feasting scenario for Settlement Cluster C, seeking to understand if noble households at Baking Pot employed similar political strategies to forge alliances with other households and foster community solidarity during and after the abandonment of the palace at Baking Pot. An analysis of the proportional distribution of materials associated with large-scale feasting activities (Table 6-8), including serving vessels, decorated ceramics, cooking vessels, and faunal remains suggests that noble households in Settlement Cluster C did not host large-

Table 6-8: Distributions of materials associated with the Political Feasting Scenario in noble, high status commoner, and low status commoner households in the Late Classic, Terminal Classic, and Early Postclassic periods.

POLITICAL FEASTING SCENARIO						
PERIOD	STATUS GROUP	Serving vessels: Total sherds	Decorated ceramics: Total sherds	Cooking vessels: Total sherds	Serving: Cooking Vessels	Faunal Remains : total sherds
LATE CLASSIC	Noble	49.32%	2.24%	7.82%	1.49	1.56%
	High Status Commoner	51.08%	0.73%	8.68%	0.88	0.73%
	Low Status Commoner	45.37%	0.56%	7.48%	0.74	1.52%
TERMINAL CLASSIC	Noble	56.10%	1.20%	7.78%	1.57	0.52%
	High Status Commoner	47.68%	0.56%	8.13%	0.67	0.14%
	Low Status Commoner	48.08%	0.37%	7.54%	0.78	0.50%
EARLY POSTCLASSIC	Noble	59.42%	0.87%	7.28%	1.6	4.22%
	High Status Commoner	50.76%	0.72%	7.47%	0.77	0.86%
	Low Status Commoner	52.50%	0.47%	7.08%	0.7	0.62%

scale feasts during the Late Classic period, when political relationships between the established noble households were stable. However, political instability during the Terminal Classic period, when the rulers of Baking Pot abandoned the palace complex and the ceremonial center largely fell into disuse, led to major changes in the social interaction between households in Settlement Cluster C, with the noble household at M-99 beginning to host large-scale community feasts. The scale of feasting at M-99 may have expanded from the Terminal Classic to the Early Postclassic period as well, identified by an increase in the proportion of serving vessels at M-99 from the Terminal Classic to Early Postclassic periods. This is further supported by the presence of middens containing large numbers of serving vessels and faunal remains along M-99a. The large patio at M-99, coupled with the size of the house group and its prominent location on the landscape would have made the group ideal for community activities. Since M-99 is the only house group classified as the residence of a noble household in Settlement Cluster C, it is unclear whether community-wide feasts were hosted exclusively by the noble household at M-99 or along with other noble households around Baking Pot. Evidence at the *Yaxtun* Group (M-198) in Settlement Cluster A revealed extensive Postclassic evidence (Audet and Awe 1999, 2000, 2005), including middens with large amounts of serving vessels. This suggests that these large-scale community activities were likely hosted by multiple noble households throughout Baking Pot.

The nature of social differentiation in these activities may have shifted as well, with a decline in the public display of decorated serving vessels among noble, high status commoner, and low status commoner households through time. Distinctions in the indicators of status differentiation declined across social groups, seen predominantly with the overall decline in decorated ceramics across groups through time, suggesting an increased need for households to

emphasize bonds of solidarity rather than differentiation. Activities associated with food preparation, including cooking vessels, showed no distinctions between social groups or through time. As there are no distinctions between cooking vessels among noble and commoner households, it suggests that these groups were engaging in cooking activities at similar levels. The ratio of serving vessels to cooking vessels suggests that nobles were differentially associated with serving in comparison with cooking activities, providing additional evidence for the hosting of large-scale feasts at M-99.

Unlike at San Lorenzo where faunal remains were exclusively associated with noble households and community feasts were focused on communal sharing of highly valued food, a variety of vertebrate animal remains were identified in noble, high status commoner, and low status commoner households in Settlement Cluster C, although half of the low status households had no vertebrate remains present in any time period. Faunal remains were not differentially distributed according to status among Late Classic households, with both nobles and commoners consuming high-quality protein sources. The level of consumption of faunal remains declined among all groups during the Terminal Classic period, with no distinctions in status, suggesting that community feasts likely focused on the consumption of non-protein based foods, such as maize. During the Early Postclassic period this shifted, with a drastic increase in the consumption of high quality protein exclusively at M-99. This suggests that community feasts emphasized the communal sharing of high quality protein sources during this time.

The inclusion of items associated with feasts in ritual contexts, such as burials and caches, provides some indications that feasting may have centered on mortuary rituals. Two burials dating to the Early Postclassic period were identified; neither of these burials included

any complete serving vessels as grave goods. However, one Postclassic burial was found in a small midden.

Overall, evidence from excavations in Settlement Cluster C supports the large-scale hosting of community feasts in the Terminal Classic and Early Postclassic periods at M-99, the only noble house group in the community. As status distinctions were increasingly minimized during these periods, community feasts were likely based on fostering community solidarity, creating alliances between households, and the redistribution of food and resources in the context of political decentralization. Thus, nobles at Baking Pot developed political strategies of alliance building among the households of Settlement Cluster C following the end of Classic forms of rulership at Baking Pot at the end of the Classic period. Although the nature and extent of participation by commoner households in community-wide feasts is unknown, strategic relationships between noble and commoner households would have been essential for the continued survival of the community in the absence of centralized political rulership in the transition into the Postclassic period.

7.0 EXPLORING THE PAN-MESOAMERICAN SYMBOL HORIZON SCENARIO

Pan-Mesoamerican Symbols spread across Mesoamerica as early as the Formative period, with evidence that developing elites throughout Mesoamerica used symbols such as abstract versions of were-jaguar, *kan*-cross signs, and harpy eagle motifs among others in the Olmec area, Oaxaca, and Maya lowlands during this time (Taube 1995). Evidence for these motifs have been identified from Middle Preclassic caches in the Belize Valley at the ceremonial center of Cahal Pech, suggesting that emerging Maya rulers at the center used these motifs to legitimize power and claim esoteric knowledge or associations (Cheetham 1990).

Evidence for Pan-Mesoamerican symbols were also frequent throughout the Classic period, most notably Teotihuacan-style motifs such as *Tlaloc* imagery (Figure 7.1), the Great Goddess, Netted Jaguar, and the Pulque God (Pasztory 1993) along with evidence of Teotihuacan influence in architectural styles (*talud-tablero*) and artifacts (tripod vessels) (Braswell 2004). The spread of Teotihuacan symbol horizons and materials culture has been widely contested among scholars, with disagreements between those who suggest Teotihuacan direct interaction with Classic Maya polities and those who emphasize strong cultural influences.

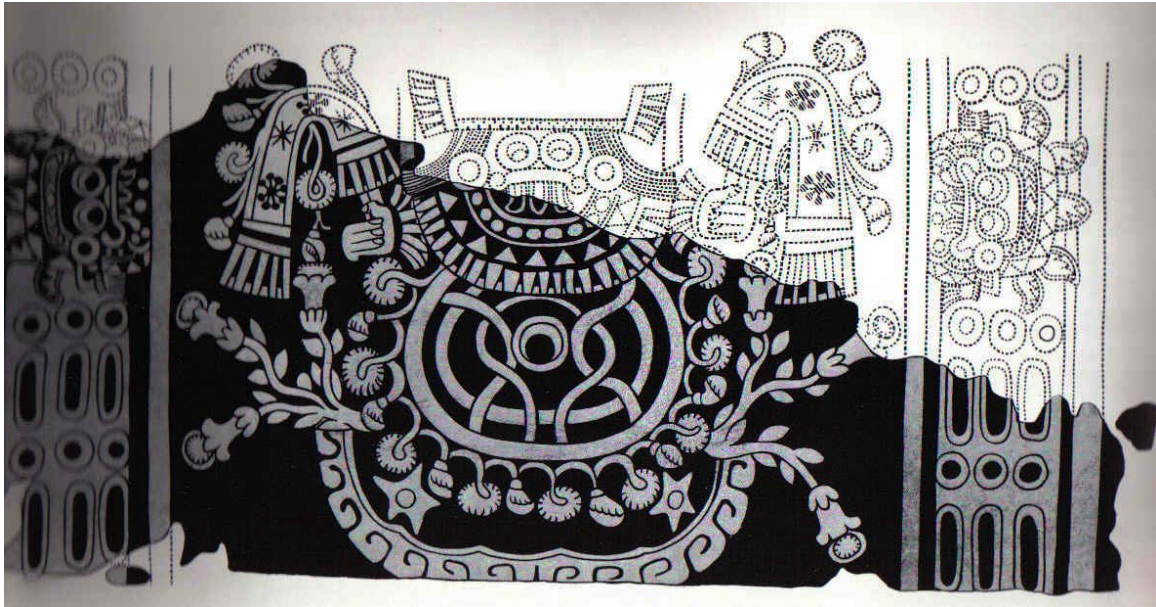


Figure 7.1: Mural 1, Zone 3 at Teotihuacan, showing Tlaloc imagery (from Miller 1973: 68).

New forms of Pan-Mesoamerican symbol horizons spread across Mesoamerica beginning in the Terminal Classic period and extending into the Postclassic, in the form of motifs related to the Cult of Quetzalcoatl (Ringle *et al.* 1998; Boone and Smith 2003). Although feathered serpent imagery is widely present in the architectural styles in the Yucatan during the Postclassic period, evidence of these symbols on portable objects have been found across Postclassic settlements, including in the Naco Valley of Honduras (Urban and Schortman 2010:186-192).

The use of Pan-Mesoamerican symbol horizons by individuals or groups seeking to legitimize or consolidate power would have been dependent on associations of foreignness and contacts with interregional elites. Aimers (2004) suggests that Postclassic elites in the Maya lowlands utilized Pan-Mesoamerican symbols associated with the Cult of *Quetzalcoatl* as a form

of status differentiation and legitimation, claiming access to foreign knowledge and elites through the display of these motifs.

Although the scenario for the appropriation of Pan-Mesoamerican symbols related to the Cult of Quetzalcoatl was originally focused on the use of these motifs by elites, the reorganization of social hierarchies may have led to the use of foreign motifs by commoner households in the Terminal Classic and Early Postclassic periods. Therefore, this chapter seeks to explore which households at Baking Pot used Pan-Mesoamerican symbols to differentiate themselves from other households, and whether forms of Maya ideology changed in the transition from the Classic period to the Postclassic period. To understand if households at Baking Pot were engaging in these processes of social reorganization, I will examine: 1) the proportional distributions of Pan-Mesoamerican symbols, along with local Maya symbols; 2) the forms of media that these symbols were displayed on, to identify if different types of media were used for different purposes; 3) disposal patterns for items with symbols to evaluate whether these materials were given special ideological importance, being used in ritual deposits such as burials and caches; and 4) shifts in burial patterns to other types of changes in ideological systems at Baking Pot.

7.1. EVIDENCE FOR CLASSIC AND POSTCLASSIC PAN-MESOAMERICAN SYMBOL HORIZON SCENARIO

7.1.1. Postclassic Pan-Mesoamerican Symbols

Boone and Smith (2003:187) define the “Postclassic International Style” as being characterized by stockier proportions, stiff lines and naturalistic depictions, with more geometric patterning. Within this style, they identify the “Early Postclassic International Symbol Set” at sites along coastal trade routes, indicating that ceramic vessels decorated with this iconography were part of broadening patterns of maritime trade in the Postclassic period. The symbols were also a part of the Cult of *Quetzalcoatl*, which spread across Mesoamerica beginning in the Terminal Classic period and extending into the Postclassic and included feathered serpents along with step-fret motifs (Figure 7.2), as the major markers of this style system.

Excavations in Settlement Cluster C recovered no Pan-Mesoamerican iconography, neither Classic Teotihuacan-style *Tlaloc* imagery nor Postclassic *Quetzalcoatl* feathered-serpent motifs. Therefore, it does not seem that households at Baking Pot were using these symbols to claim affiliations of interregional elites, or for status differentiation and legitimization. As these symbols were found in excavations in ceremonial centers in the Belize Valley, Aimers’ suggestion that it was the elites who were actively engaging in Pan-Mesoamerican symbol horizons may be accurate, but not applicable at the domestic level. Despite the lack of *Tlaloc*

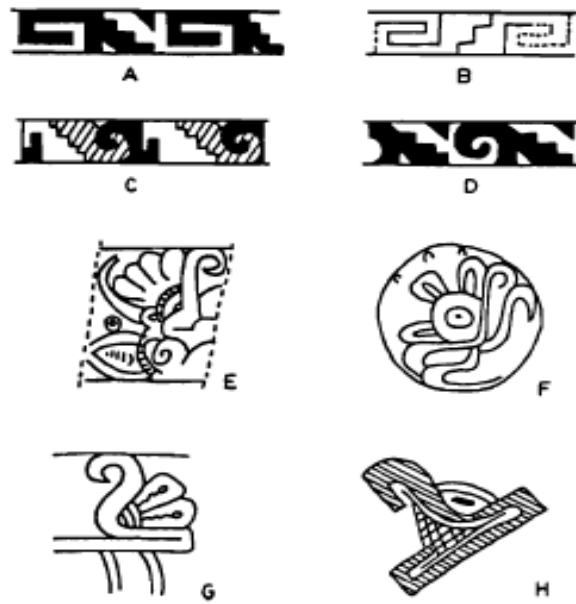


Figure 7.2: Examples of step-fret and feathered serpent motifs associated with Postclassic “Internationalized” symbol horizons associated with the Cult of Quetzalcoatl (Figure 24.5 from Boone and Smith 2003)

imagery, Awe and Helmke (2009) note the presence of *Tlaloc* imagery in caves in western Belize at the end of the Classic period, suggesting continuing influence. However, no evidence that supports the idea that households at Baking Pot were using these motifs. Despite the lack of Pan-Mesoamerican symbols and motifs in any period in Settlement Cluster C, households were using local (Maya) symbols.



Figure 7.3: Late Classic bowl with abstract Maya design from M-90.



Figure 7.4: Shell ornaments featuring carved flower symbols.

7.1.1. *Distribution of Maya Symbols*

Maya symbols and motifs are sometimes found on ceramic vessels and other media (Figure 7.3 and 7.4). Painted motifs often take the form of geometric or abstract designs; however, symbols and writing are sometimes part of decoration. One of the most common signs in Maya iconography is the *k'in* sign, which represents the sun, as well as standing for the sign for “day”. For this research, I have included painted symbols (including geometric, abstract, and formal symbols) on ceramics, as well as symbols carved from various media from excavations in Settlement Cluster C.

Maya symbols were not widespread across Settlement Cluster C, as only seven of the 22 (32% ± 13% at the 80% confidence level) house groups from the Late Classic to Early Postclassic period had any Maya symbols present. This suggests that a minority of households used materials with painted ceramics with this iconography. An examination of the different types of households reveals that use of Maya symbols was not restricted along status lines, as two of the three households in the Late Classic period with these motifs were commoners. In the Terminal Classic period one of the three households were commoners, while in the Early Postclassic period only the noble household had any evidence of Maya symbols.

Figure 7.5 illustrates the proportional distribution of Maya symbols between groups, suggesting that we can be over 99% confident that nobles used more materials with Maya symbols in the Late Classic period, but the strength of the difference with commoners is low. In fact, the proportion of materials with Maya symbols is very low in every period, suggesting that all groups used very low amounts of these materials. During the Terminal Classic the difference in the distribution of Maya symbols declined between all groups, although we can still be over

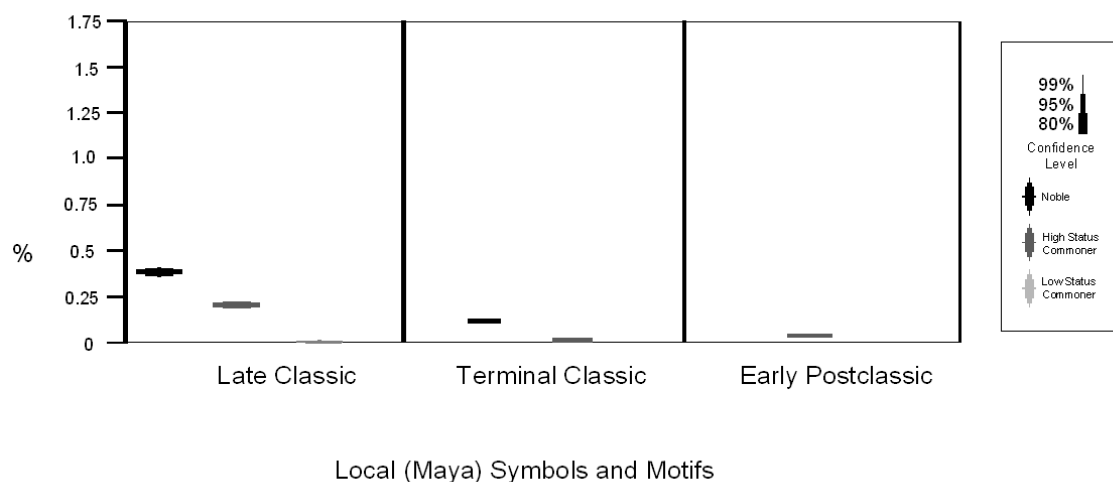


Figure 7.5: Proportional distribution of Maya symbols relative to total sherds (ceramics with Maya symbols/total sherds) among nobles, high status commoners, and low status commoners in Settlement Cluster C.

99% confident that nobles had about 0.2% more than commoner households. Only the noble household had evidence of Maya symbols during the Early Postclassic period, suggesting that the use of Maya symbols declined after the Classic period. These motifs became less widespread in Settlement Cluster C and were used in very low amounts by nobles. In sum, Maya symbols were not widespread across Settlement Cluster C from the Late Classic to Early Postclassic, becoming more rare in the Postclassic period. The proportional distribution suggests that they were used in very low levels, between both nobles and commoners, although nobles had slightly higher amounts of Maya symbols.

7.1.2. Use of Symbols on Various Media

Symbols are visual by nature and objects carrying these motifs may be differentiated based on the type of media on which symbols are displayed. Some types of media, such as ceramics, may have been highly visual in public displays of consumption, such as community feasts, or in small family based gatherings. In contrast, other types of media may have been ideologically important, containing other significance. Table 7-1 shows the percentage of Maya symbols on different types of media, including shell, stone, and bone items, along with the percent of the artifacts with Maya symbols across media types that were included in ritual deposits. Overall, symbols were primarily included on ceramic vessels, with over 90% of objects with Maya symbols on this form of media. Among the ceramics with Maya symbols, only 4.76% were used in ritual deposits, suggesting that the use of ceramic vessels with Maya symbols was likely used for in rather than for use in ritual practices. In contrast, while symbols on shell only comprised fewer than 10% of total items with Maya symbols, all of the shell items with Maya symbols were included in ritual deposits, such as burials. This suggests that shell, as a media, was important in ritual contexts.

Two carved shell ornaments were carved into star/flower shapes and included in Burial 96-2 at Late Classic M-96 (Figure 7.3). The inclusion of shell in the burial may have had ideological importance, as Reilly (1989) suggests that shell, along with fish, sharks, and amphibians, symbolized the return to the watery underworld realm in Mesoamerica. The four-petal flower symbol may have represented sacrificial offerings in Mesoamerica (Miller and Taube 1997:88-89), providing additional associations with death.

Table 7-1: Percentage of all items with Maya symbols and motifs on different types of media and percentages of items with symbols that were used in ritual deposits.

MEDIA	% Material	% Ritual
Ceramic	90.48%	4.76%
Shell	9.52%	100.00%
Stone	0.00%	0.00%
Bone	0.00%	0.00%

In sum, Maya symbols were primarily found on ceramic vessels, with only a small percentage of items with these motifs were made of other media types. However, those items on shell were included primarily in ritual deposits, suggesting that the type of media may have been just as symbolically important as the symbol itself. To explore how households were using Maya symbols, and examination of the disposal patterns of these materials is explored in the next section.

7.1.3. Disposal Patterns of Materials with Iconography

Although Pan-Mesoamerican motifs were entirely absent among noble and commoner households, the distribution of Maya iconography indicated that noble and commoner households used it in low levels. As items with iconography were rare across status groups and time periods, these materials would have been valued for their symbolic attributes and may have played an important role in communal activities and ritual practice. Therefore, an examination

of the disposal patterns of these items may provide additional information about the way that people were using these motifs. In particular, highly valued items may become an important part of ritual practice, as part of caching rituals or mortuary rites. In contrast, these materials may have been used to display status differences during large gatherings such as feasts. The disposal of these materials was identified in various contexts: middens, fill, caches, burials, and other deposits.

Table 7-2 shows the distribution of materials with Maya symbols and motifs in the various contexts that they were recovered. Although there are few of these items, some patterns can be identified in disposal patterns. Middens provide evidence of high levels of consumption, often associated with large-scale feasts. Material for construction fill of buildings was often taken from existing middens at the time of construction (Morley *et al.* 1983:363), suggesting that they may provide indications of earlier consumption. During the Late Classic period, over 75% of artifacts with Maya symbols were disposed in midden or fill contexts, suggesting that these materials may have been used primarily for use in public displays of status. However, the remaining 25% of items were used in ritual practices, including caches and burials. Both of these cases suggests relatively high status households, with the noble household at M-99 using a ceramic vessel with a local Maya geometric motif for a cache and the high status commoner household at M-96 including two carved shell symbols in a Late Classic burial.

During the Terminal Classic and Early Postclassic periods, items with Maya symbols and motifs were recovered exclusively from middens and construction fill, suggesting that these materials continued to be used in domestic and public contexts, although their role in ritual may have declined. Maya symbols may have been used as a form of shared identity as well.

Table 7-2: Disposal patterns for materials with Maya iconography, showing the percentage of items with motifs among house groups, relative to all materials with Maya motifs in midden, fill, cache, burial, and other contexts.

PERIOD	STATUS	Midden		Fill		Cache		Burial		Other	
		#	%	#	%	#	%	#	%	#	%
Late Classic	Noble	5	62.5%	2	25.0%	1	12.5%	0	0.00%	0	0.00%
	High Status Commoner	0	0.0%	3	60.0%	0	0.0%	2	33.33%	0	0.00%
	Low Status Commoner	0	0.0%	0	0.0%	0	0.0%	0	0.00%	0	0.00%
		5		5		1		2		0	
		38.5%		38.5%		7.7%		15.38%		0.00%	
Terminal Classic	Noble	4	100.0%	0	0.0%	0	0.0%	0	0.00%	0	0.00%
	High Status Commoner	0	0.0%	2	100.0%	0	0.0%	0	0.00%	0	0.00%
	Low Status Commoner	0	0.0%	1	100.0%	0	0.0%	0	0.00%	0	0.00%
		4		3		0		0		0	
		57.1%		42.9%		0.0%		0.00%		0.00%	
Early Postclassic	Noble	1	100.0%	0	0.0%	0	0.0%	0	0.00%	0	0.00%
	High Status Commoner	0	0.0%	0	0.0%	0	0.0%	0	0.00%	0	0.00%
	Low Status Commoner	0	0.0%	0	0.0%	0	0.0%	0	0.00%	0	0.00%
		1		0		0		0		0	
		100.0%		0.0%		0.0%		0.00%		0.00%	

Overall, 57% of the items with Maya symbols in the Terminal and Early Postclassic periods were in the noble house group. If this household were hosting large-scale community feasts, as suggested in Chapter 5, this would suggest a continuing strong role of these materials for creating community identity and solidarity.

7.2. BURIALS

Although burial patterns are not directly linked to the use of local or Pan-Mesoamerican symbols for status differentiation, changes in burial patterns can be related to broader shifts in ideological practice through time. In the previous section I suggested that households in Settlement Cluster C were primarily using local Maya symbols to for public display, possibly fostering a shared sense of identity through the display of items with these motifs in public gatherings, along with making grave goods carved into Maya symbols for mortuary rituals. Therefore, the use of Pan-Mesoamerican symbols and motifs can be linked to broader patterns of ritual practice. Although households did not shift to using foreign symbols following the collapse of rulership at Baking Pot, the distribution of Maya symbols did decline in the Terminal Classic and Early Postclassic periods. This may suggest that a shared sense of local identity was less important after the Late and Terminal Classic periods, or that households rejected ideological systems associated with the institution of Classic Maya rulership. This raises several questions, including whether other types of ideological systems persisted among the community of Settlement Cluster C. An examination of changes in burial patterns may provide some indications of whether local

ideological systems shifted following the abandonment of the palace at Baking Pot in the Terminal Classic period.

Burial patterns in the Maya lowlands were fairly regular, with burials interred beneath house floors in domestic contexts (Welsh 1988). This burial pattern is often linked to societies with social systems based on lineage for descent (Plunket 2002:9) and tied to practices of ancestor veneration (Gillespie 2000; McAnany 1995). Burial patterns, including mortuary architecture, skeletal remains, position and orientations, as well as grave goods, are representative of one major life-cycle event, death. Examining burial patterns also provides another means to understand changes in ideological practice through time.

Burials were recovered from the house group excavations in Settlement Cluster C, with 11 burials identified. One additional multiple burial, Burial 112-1-1 and 112-1-2, was recovered from vertical excavations in the test-pit excavation stage of research. This burial was included with the burials from the horizontal excavations in Settlement Cluster C for comparative purposes, despite M-112 not being affiliated with any of the eight house groups included in the excavation sample. In addition, the burials recovered in Settlement Cluster C are compared to other burials from Baking Pot to better understand broad changes in burial patterns through time. Osteological analysis of the burials from Settlement Cluster C was conducted by Dr. Jennifer Piehl (Tulane University) and Anna Novotny (Arizona State University). The examination of changes in burial patterns focuses on several attributes of burials, mortuary architecture, and grave goods, including burial type (primary, secondary, multiple), burial position (extended, flexed, semi-flexed, seated), body orientation (prone, supine), directional orientation (north, south, east, west), burial construction (simple burial, pit, cist, crypt, tomb), burial location (in platform, off-platform, no architecture), architectural orientation (central axis, center of mound,

northwest end of platform, etc.), and associated grave goods. A summary of each of the burials is included in Appendix B.

7.2.1. Burial Patterns through Time

Overall, some changes in burial patterns from the Classic to Postclassic periods are present. The general burial pattern in the Classic period is that of adult burials in the extended position, prone, and with the body oriented with the head to the south (Table 7-3). Most of these burials were interred in simple or lined pits rather than having formal mortuary architecture, and all were located beneath house floors within the domestic structures. In the Postclassic period, this appears to shift, with adult burials being interred along the sides of domestic platforms, sometimes in midden deposits, and in flexed and semi-flexed positions. Diane Chase (1982) found a similar pattern of flexed burials in “pits dug into constructions” in the Postclassic period at Santa Rita in northern Belize. Masson (1999) similarly describes Postclassic burials as being located in midden deposits and with no grave goods. Overall, a major shift in burial patterns can be seen, with new burial practices present in the Early Postclassic period in Settlement Cluster C. Despite this pattern, the sample of burials from Settlement Cluster C is low

Table 7-3. Burials in Settlement Cluster C through time. Column abbreviations are as follows: M = Male, F = Female, I = Indeterminate Sex, Ch = Child, Ad = Adult, Pr = Primary, Sc = Secondary, Mult = Multiple burial, Ext = Extended position, Flx = Flexed position, Sd = Seated position, HS = Head to the South, HN = Head to the North, Simp = Simple burial, Pit = Outlined pit burial, cst = Cist burial, Cpt = Crypt burial, Tmb = Tomb burial, CeV = Ceramic vessels, Ce = Other ceramics, ChE = Chert eccentrics, Ch = other chert, ObB = Obsidian blade, Ob = other obsidian, JdO = Jade ornament, Jd = Other jade, Gs Clt = Greenstone celt, Ms = Marine shell, Ls = Limestone, Gr = granite grinding stone, Cb = Carved bone, Fa = Faunal remains. Row abbreviations are: LPC = Late Preclassic, EC = Early Classic, LC = Late Classic, TC = Terminal Classic, EPC = Early Postclassic. All time periods are followed by the status group designation of the house groups.

	M	F	I	Ch	Ad	Pr	Sc	Mult	Ext	Flx	Sd	HS	HN	simp	Pit	Cst	Cpt	Tmb	CeV	Ce	ChE	Ch	ObB	Ob	JdO	Jd	Gs Clt	Ms	Ls	Gr	cb	fa	
LPC			X	X		X			X			X			X																		
EC	X	X			X	X	X	X	X			X				X				X					X	X		X					
LC	X	X	X		X	X			X		X	X		X					X			X	X	X				X	X			X	X
TC		X	X		X	X			X		X	X		X																	X		
EPC	X		X		X	X	X	X		X			X	X													X						

and only includes domestic contexts, making identifying major shifts in burial patterns at Baking Pot over time difficult. In addition, it is unclear whether there were any other patterns in the burials at Baking Pot that may have changed leading into the Postclassic period. The following section uses a multi-dimensional scaling of burials from public contexts in the ceremonial center along with the burials in domestic contexts in Settlement Cluster C to identify overarching changes in burial practice among all segments of society at Baking Pot.

7.2.1.2. Multi-dimensional Scaling of Burials at Baking Pot

A multi-dimensional scaling analysis of burials from all contexts at Baking Pot was conducted in order to identify similarities between burials, as well as identify shifts in the burial patterns through time. Similarities between burials in Settlement Cluster C and those from the ceremonial center were calculated using the SIMS program, written by Robert D. Drennan, to calculate Gower's similarity coefficient (Gower 1971) for mixed variable sets of data. The multi-dimensional scaling analysis used a similar system of categorization for the variables as the previous section, including age (child, adult), sex (male, female, indeterminate), burial type (primary, secondary), orientation of head (north, south, east, west, N/A), mortuary architecture (pit, cist, crypt, tomb), location of burial (in structure, off-structure), position (supine, prone, other), and number of grave goods (ceramic vessels, other ceramics, chert eccentrics, other chert artifacts, jade ornaments, other jade artifacts, perishable materials, shell ornaments, other shell artifacts, ground stone tools, obsidian blades, other obsidian artifacts, greenstone adzes, and other greenstone artifacts). Similarities between burials were plotted in 1 to 5 dimensions, and

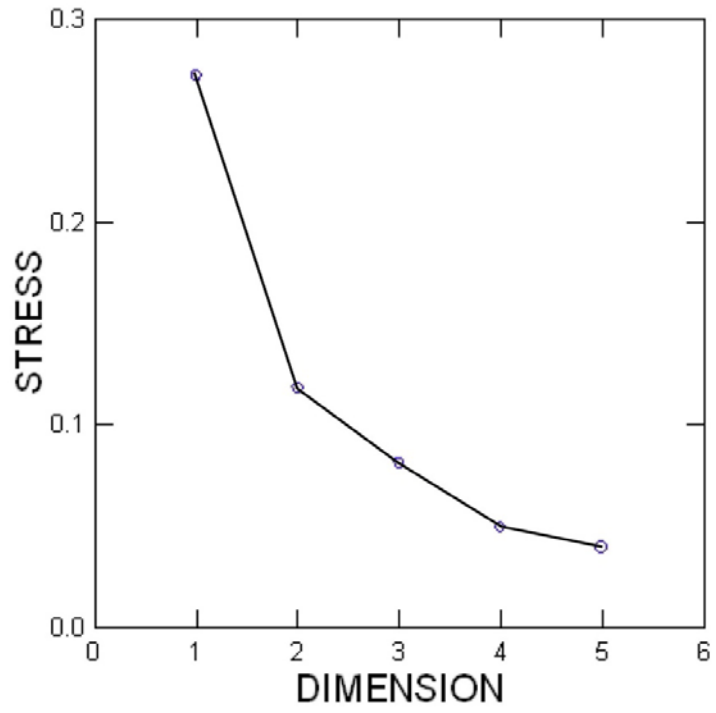


Figure 7.6: Declining stress for dimensions 1 to 5.

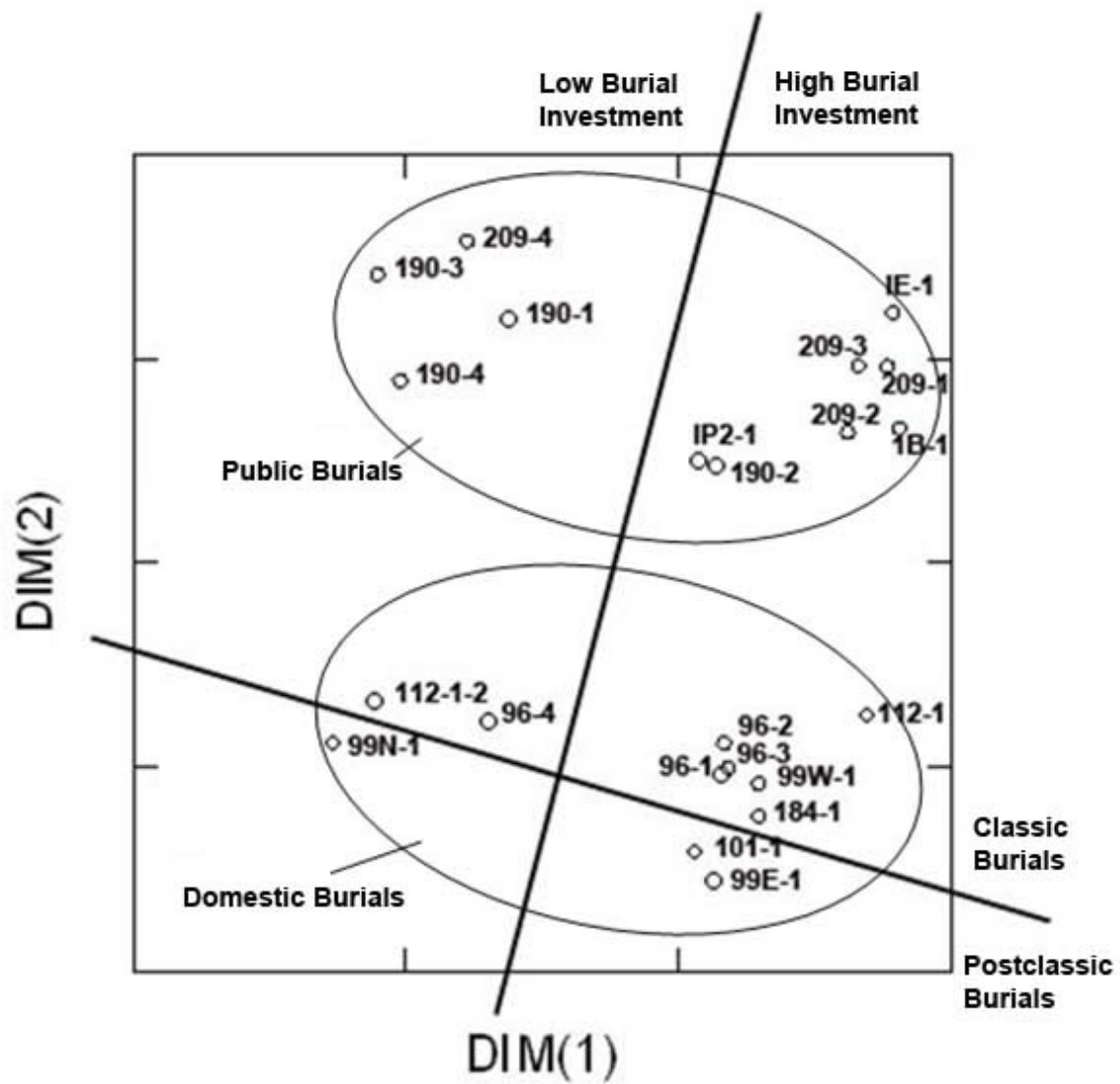


Figure 7.7: Multidimensional scaling for similarities between burials in Settlement Cluster C and the Baking Pot ceremonial center in dimensions 1 and 2.

the declining stress for each dimension (Figure 7.6) indicates that the 2-dimensional analysis provides a good measure of similarity.

Figure 7.7 shows the results of the multi-dimensional scaling, with a distinction between public and domestic locations for burials in the upper and lower clusters. Both of these groups can be further divided based on burial investment, with those with few grave goods (generally less than 2) and low investment in mortuary architecture on the left and those greater amounts of grave goods and higher investment in mortuary architecture on the right. One further distinction can be identified in the figure, with Postclassic burials skewed downward, slightly differentiated from Classic period burials above.

This analysis shows wealth and status differences between commoners and elites. The most elaborate burials, on the right of the graph, are not incredibly different between royals and nobles, with the commonality of being buried in prominent locations. In addition to the vast differentiation in similarity between commoner and elite burials, additional distinctions can be identified in terms of burial investment, including the number and types of grave goods as well as masonry mortuary architecture. For example, Burial IE-1 (Group I, Structure E, Burial 1) was one of the most elaborate burials ever excavated at the site, with a male individual interred in a tomb in the eastern triadic structure of Group A, with jade ornaments and chert eccentrics among other grave goods. Burial IB-1 (Group I, Structure B, Burial 1) was similarly elaborate, with polychrome ceramic vessels. Within the commoner group, Burial 112-1 skews upward and right due to the rich grave goods, as well as the high investment in mortuary architecture in the form of a cist burial. The variability in burials, particularly in the form of burial investment, provides some indication that the residents of Baking Pot distinguished status and wealth. Burials on the left side of the graph included less than 2 grave goods, while those on the right had more than

two goods present. It must be noted that nearly all of the burials on the left are secondary burials, with disarticulated human remains and largely lacking grave goods or any mortuary architecture. All of these burials were likely interred as offerings, with burials in M-190 including a decapitated cranium, and an infant, likely representing sacrificial victims. In contrast, Burial 209-4 and 99N-1 were secondary burials that did not appear to be sacrifices, but were likely interred as offerings. The exception to this is Burial 96-4, which is a primary burial within the domestic platform of M-96. This burial was female and was interred in a seated position, with only a mano for a grave good and no mortuary architecture.

The temporal distinction can also be identified within the commoner group. Postclassic burials, such as Burials 99E-1 and 101-1, were buried with more than 3 grave goods, but in an atypical burial pattern, being flexed and oriented with head to the north rather than to the south. They both had some investment in mortuary architecture, being in lined pits. In contrast, Burial 99N-1 is also found in this group, and was located on the left side of the graph as it was a secondary burial lacking any grave goods or mortuary architecture.

Overall, the indications of the multidimensional scaling analysis revealed distinctions in status, wealth, and temporal burial patterns. This shows major differences in terms of status, with two distinct groups present. It also indicates a great deal of variation within each of these groups, with differing amounts of grave goods and architecture between burials. Finally, temporal distinction, mainly in the form of burial orientation, including changes from Classic period patterns of extended burials with the head oriented to the south, while Postclassic burial patterns were primarily flexed burials with the head oriented to the north and located off-platform.

7.3 ABANDONMENT VERSUS CONTINUITY

In the previous sections I have suggested that neither elite nor commoner households used Pan-Mesoamerican symbols and motifs as a form of status differentiation. However, both groups included small amounts of materials decorated with Maya iconography. Although the majority of these items were on ceramic vessels, a small amount was carved into shell. All of these items were included as grave goods in Burial 96-3 in the Late Classic period at group M-96. However, the majority of items featuring Maya iconography were disposed of in middens, construction fill, or left on-floor, suggesting roles associated with display rather than more ideologically significant importance. Finally, the distribution of materials with Maya iconography declined, suggesting that these symbols may have been less important to a shared sense of identity and ideology.

An examination of other forms of ideology, such as mortuary patterns, revealed that there were major changes in ritual practice. However, burials with similar changes at other Postclassic settlements suggest that like the decline of Maya iconography, changes in burial patterns were linked to local rather than foreign influences. An examination of the different activities related to the use of iconography and changing burial patterns provides the opportunity to understand why some households were abandoned by the end of the Terminal Classic period, and why some persisted.

7.3.1. The M-108 and M-181 Groups

The M-108 house group is classified as the residence of a high status commoner household. This group, along with the low status commoner house group at M-181, was abandoned prior to the Early Postclassic period. As none of the house groups in Settlement Cluster C had any evidence of Pan-Mesoamerican symbols and motifs, I don't expect that this may have played a role in the early abandonment of M-108 and M-181. However, unlike other groups, which have low amounts of Maya iconography, neither group has any iconography as well. Given that these groups represent both high and low status commoners, as well as that other commoner households had evidence of Maya iconography, this may have played at least a small role in the early abandonment of these groups.

An examination of burial patterns between groups also suggests that the M-108 and M-181 groups did not participate in the widespread practice of burial within house floors and ancestor veneration. In addition, both of these groups were settled in the Late Classic period, rather than in the Late Preclassic or Early Classic periods. Overall, this suggests that neither group placed a strong emphasis on ancestors, ties to land, or a shared sense of identity. Although other commoner households were established only during the Late Classic period, these groups included low amounts of iconography, while nearly all of the other commoner households included at least one burial (with the exception of the M-90 group which was founded in the Late Preclassic period). All of these factors may have contributed to lead to the early abandonment of the M-108 and M-181 groups.

7.4 CONCLUSIONS

Evidence for the use of Pan-Mesoamerican symbols for status differentiation and legitimization through associations of interregional elites was not identified in Settlement Cluster C. Although the Classic period symbol horizon associated with Teotihuacan was widespread throughout the Maya lowlands during the Classic period, including Teotihuacan style (and produced) artifacts in royal tombs, *talud-tablero* styles in public architecture, imagery of figures in Teotihuacan costume, and written texts describing visitors from the expansive polity (Braswell 2004), evidence of the appropriation of Teotihuacan symbol horizons by noble and commoner households at Baking Pot was not identified. Similarly, no evidence was identified for the appropriation of symbols and motifs associated with the Cult of *Quetzalcoatl*, which spread throughout Mesoamerica in the Terminal Classic period and into the Postclassic period.

Instead, both noble and commoner households displayed local forms of iconography, featuring Maya style geometric and abstract motifs, hieroglyphic writing, and symbols. The distribution of Maya symbols and motifs comprised low amounts of the domestic inventories of both commoner and noble households, although nobles had slightly higher amounts of items with Maya motifs. The distribution of these items also declined through time, being distributed only among nobles in the Early Postclassic. Although this is likely due to the decline in the production of elite paraphernalia that was associated with rulership in the Classic period, including polychrome ceramics, motifs on other media declined as well. This may indicate a shift in Maya identity and ideology, moving away from the symbols and practices

Table 7-4: Distributions of materials (relative to total sherds) associated with the Pan-Mesoamerican Symbol Horizon scenario in noble, high status commoner, and low status commoner households in the Late Classic, Terminal Classic, and Early Postclassic periods.

PAN-MESOAMERICAN SYMBOL HORIZON SCENARIO			
PERIOD	STATUS GROUP	Local (Maya) Symbols	Pan-Mesoamerican Symbols
LATE CLASSIC	Noble	0.39%	0.00%
	High status Commoner	0.12%	0.00%
	Low status Commoner	0.00%	0.00%
TERMINAL CLASSIC	Noble	0.21%	0.00%
	High status Commoner	0.02%	0.00%
	Low status Commoner	0.04%	0.04%
EARLY POSTCLASSIC	Noble	0.01%	0.00%
	High status Commoner	0.00%	0.00%
	Low status Commoner	0.00%	0.00%

associated with Classic Maya society.

The majority of Maya symbols were on ceramic vessels, which would have facilitated the display of these elaborate items to other households during public events such as feasting. However, Maya symbols on shell appear to be primarily used in burial contexts, adding an additional dimension of ideological meaning due to the significance of marine shell (along with the carved symbols). Although disposal patterns were highly shaped by the processes of reconstruction and abandonment of house groups, some patterns could be identified. In particular, materials with Maya symbols and motifs were only used in ritual deposits during the Late Classic period. Again, this declining use of local motifs may suggest a shift in local ideology, although not necessary the adoption of foreign ideological systems.

In order to understand other aspects of ideological change, burial patterns were examined within Settlement Cluster C, along with between this area and burials in the ceremonial center of Baking Pot. An initial examination of burial patterns between the Classic period and Postclassic period suggests that some aspects of mortuary practice remained, with adults (both males and females) buried in primary burials. However, some changes in orientation, location, and position were noted. These included a shift towards off-platform burials and those oriented to the north. Although no Postclassic burials have been identified in the ceremonial center, a multi-dimensional scaling of domestic and public burials sought to identify similarities between burials, aiming to see if the distinctions in the Postclassic burials were any different than other distinctions in burial patterns at Baking Pot. The results of the multi-dimensional scaling showed that burials in both public and domestic contexts related to the elaboration of burials, including mortuary architecture and grave goods. Additionally, the Postclassic domestic burials

were slightly differentiated from Classic domestic burials, suggesting that the burial patterns in the Postclassic period were similar to other domestic burials, but had major differences.

Overall, this suggests that like the use of items and materials with Maya symbols and motifs, suggesting a shift in ideologies associated with Classic Maya society, long-held mortuary traditions were altered. However, no evidence suggests that this change was due to foreign influence, as burial patterns among nearby settlements, including Santa Rita Corozal and Tayasal, show similar patterns with the Baking Pot Postclassic burials.

8.0 SOCIAL REORGANIZATION AND HOUSEHOLD ADAPTATION IN THE AFTERMATH OF COLLAPSE AT BAKING POT

This dissertation explores the political, economic, and ideological strategies of household adaptation in the processes of political decentralization and social reorganization in a community at Baking Pot, Belize. Baking Pot is a medium-sized center located along the Belize River in western Belize. The continued occupation of Settlement Cluster C, directly east of the ceremonial center, into the Early Postclassic period is notable, as most settlements in the Belize Valley were abandoned by the end of the Terminal Classic period, demonstrating the resilience of households at Baking Pot. This provided the opportunity to understand the adaptations to political decentralization at the household and community level, focusing on changing strategies associated with mercantile exchange, large-scale community feasting, and displays of local versus Pan-Mesoamerican iconography in the Late Classic, Terminal Classic, and Early Postclassic periods. The results of this study provide important information for understanding the varied responses between social groups for maintaining and integrating communities, as well as how new mechanisms of social differentiation and reorganization of economic, political, and ideological institutions were crafted by the community following the collapse of centralized rulership.

8.1 DEMOGRAPHY AND CONSTRUCTION

A rapid expansion in the population and construction in both the civic and domestic sectors at Baking Pot occurred at the end of the Late Classic period. Population reached its peak at 3,047 people living within 9 km² of the ceremonial center. Population peaked in Settlement Cluster C as well, with an estimated 390 people living within the community (within 1 km²). Several groups, such as the M-99, M-90, and M-184 groups had already been established during the Late Preclassic and Early Classic periods. However, the demographic expansion in the Late Classic included the establishment of the M-94, M-96, M-100, M-108, and M-181 groups within Settlement Cluster C. All of these groups featured a broad diversity of architecture and material remains, showing broad variability in households during the Late Classic period. The establishment of some house groups, including the M-108 group, in less ideal locations on the landscape suggests that newly established households may have been forced to build their homes in areas that were less suitable (due to flooding) and still available. Ties to land and ancestors were emphasized in this period, particularly at M-96, shown through the internment of multiple burials.

Construction and occupation in Settlement Cluster C continued to expand during the Terminal Classic period, with all groups continuing into this period. Although the exact timing of the abandonment of the palace complex is still unclear, minor revisions in the Terminal Classic period suggest that royals were not present at Baking Pot for very long into this period. Population remained relatively steady throughout Baking Pot during the Terminal Classic period,

declining slightly to an estimated 2,986 residents. Settlement Cluster C also remained relatively steady, with 391 people. Many of the house groups expanded during this period, featuring larger and taller platforms, high quality material, and more complex forms of architecture. In other cases, such as at M-108, the quality of construction efforts along with a decline in material culture suggests that some households struggled during this period. Burials at M-96 and M-184 indicate a continuing focus on ancestors at these groups. Access to previously restricted items, such as exotic luxury items, appeared to expand to all status groups, with even low status commoners with access to luxury items in small amounts.

The ceremonial center of Baking Pot fell into disuse by the beginning of the Early Postclassic period, although a low structure was built in the center of Group A, which Aimers (1996) suggests may have been associated with *voladores* rituals. The population at Baking Pot declined to 2,072, with the western area of the settlement nearly completely depopulated. Small communities remained at Baking Pot, concentrated primarily in the eastern area of the settlement, including Settlement Cluster C and E. The population in Settlement Cluster C declined only slightly, with an estimated 345 people living in the community in the Early Postclassic period. Investment in domestic construction in Settlement Cluster C declined in the Early Postclassic period, with only a few instances of new construction in those groups. These constructions were mostly small renovations rather than the large additions seen in the Late to Terminal Classic periods. The M-108 and M-181 groups were abandoned before the beginning of the Early Postclassic period, indicating that both high and low status commoner households left the site following the abandonment of the palace complex. Major changes in ritual practice occurred in this time, with a shift in burial patterns. While most material culture remained the same, some changes were introduced in the form of new technology. This included the

introduction of the bow and arrow, indicated by the appearance of small side-notched chert points in the Early Postclassic period. In addition, residents began making ceramic net sinkers for fishing. Overall, life in Settlement Cluster C among households retained many of the same activities and practices as in the Classic period. However, the reorganization of economic orders, such as the expansion of interregional exchange in the transition into the Postclassic period, led to an expansion of low-level production of local items and resources along with increasing availability of exotic items among households of all status levels. The absence of the royals led to changes in the social relationships between households, as the noble household at M-99 expanded its earlier role in the hosting of large-scale community feasts in the Terminal Classic and Early Postclassic periods. As in previous periods, households in Settlement Cluster C did not adopt foreign symbols and motifs that were part of the cult of *Quetzalcoatl*, which was spreading throughout Mesoamerica in the Terminal Classic and Early Postclassic periods. The display of Maya iconography declined, linked to a reduction in the production of polychrome ceramics. In all, households in Settlement Cluster C adapted to the new forms of organization that were developing in the Postclassic period, developing innovative responses in their economic, social, and ideological interactions to survive in the aftermath of collapse.

8.2 HOUSEHOLD STRATEGIES OF ADAPTATION

Chapters 5, 6, and 7 explored the ‘mercantile’, feasting, and ideological scenarios, examining the varied strategies of adaptation and reorganization of households in Settlement Cluster C from the

Late Classic to Early Postclassic periods. The result of these analyses provides a view of the resilience of households and the dynamic and innovative responses of social groups in changing social conditions.

8.2.1. 'Mercantile' Scenario

Both noble and commoner households had increasing access to exotic luxury items during the Terminal Classic and Early Postclassic periods, as the expansion of interregional exchange in the transition into the Postclassic period led to changes in the accessibility of these items. Although these items were increasingly available to both noble and commoner households, the low distribution of these items between both groups suggests that nobles and commoners used exotic non-utilitarian items at similar levels after the Late Classic period. This situation is very similar to Masson's example at Laguna de On and Caye Coco, where jade ornaments and greenstone adzes were distributed relatively evenly among elites and commoners. The same pattern was identified at Baking Pot for the same items, along with pyrite and copper items.

Exotic utilitarian items, such as obsidian blades, were widely available among both noble and commoner households from the Late Classic through the Early Postclassic periods. However, some changes in the reliance on exotic utilitarian items were identified among social groups. There were few differences in the use of local and non-local chert between nobles and commoners in the Late Classic period, although obsidian was distributed in higher amounts among commoners. Evidence from excavations and surface collections suggest that this may have been due to the production or recycling of obsidian blades by commoner households. Obsidian utilitarian items declined by nearly 5% among both commoner and noble households

from the Late Classic to the Terminal Classic periods, suggesting that households became less reliant on exotic utilitarian items during this time. The use of local chert increased by nearly 20% from the Late Classic to the Terminal Classic period, with noble households relying less on local chert for the production of chipped stone tools than commoners. In contrast, reliance on non-local chert remained relatively unchanged among commoners during this time, although it increased nearly 15% for nobles. Overall, the distribution of exotic, local, and non-local materials for chipped stone tool production suggests that, unlike the scenario at Laguna de On and Caye Coco, households at Baking Pot became less reliant on exotic materials for production in the Terminal Classic period. This is likely due to the distance of Baking Pot from the coast, as the coastal communities likely had frequent contact with merchants, whereas the interior location of Baking Pot probably meant more sporadic contact with interregional merchants.

Households that were able to adapt to the changing opportunities in interregional exchange and local production during the Terminal Classic period continued into the Early Postclassic period, while households with little expansion of local production or interaction with exchange networks were abandoned by the beginning of the Early Postclassic period. The distribution of obsidian, along with evenly distributed exotic luxury items, increased among all groups in the Early Postclassic period, suggesting that the participation in interregional exchange increased a lot during this time. Changes in local production occurred during this time as well, with low-level production of multiple types of local items, including slate, cloth, and agricultural products. Overall, households in Settlement Cluster C developed new forms of organization for the exchange of local and exotic items, adapting to the expansion of interregional exchange in the Postclassic period.

8.2.2. Political Feasting Scenario

There was no evidence for the hosting of large-scale community feasts by nobles in the Late Classic period, as serving vessels were not differentially distributed among this group. This suggests that the social and political relationships between royals and nobles may have been more important than relationships between nobles and commoners at this time. Status differentiation between nobles and commoners may have been emphasized as well, as nobles had higher amounts of decorated ceramics, which would have visually displayed the wealth, and the status of the group. Despite the strong social differentiation in the Late Classic period, few differences were present in the consumption of high quality protein sources, such as vertebrate animals. Overall, social relationships in the Late Classic period appeared to strongly emphasize the wealth of nobles.

Major shifts occurred in the social and political relationships between households in Settlement Cluster C in the Terminal Classic period, when the palace was abandoned. Evidence for large-scale community feasts was present at M-99, with serving vessels distributed primarily at this location. Activities associated with serving and consuming food, in relation to cooking, also increased among nobles during this time. Although the noble household continued to have higher amounts of decorated ceramics, the differences in the distribution of these items drastically reduced. This indicates that the display of status differences was less important at this time, likely due to an increased need for integration within the community due to the social and political instability at Baking Pot and neighboring areas.

The level of large-scale community feasts hosted by nobles may have expanded in the Early Postclassic period, with continuing evidence that high levels of activities associated with the serving and consumption of food continued to be differentially distributed among nobles.

There was practically no difference in the distribution of decorated ceramics between nobles and commoners, suggesting the use of a continuing strategy of de-emphasizing status differences to foster solidarity among the community in the Postclassic period. Community-wide feasts in the Early Postclassic may have also stressed the sharing and redistribution of resources, as faunal remains were distributed primarily among nobles at this time, primarily concentrated in middens along the northern and southern structures at M-99. Overall, households in Settlement Cluster C developed new forms of social and political relationships beginning in the Terminal Classic period but expanding in the Early Postclassic period.

8.2.3. Pan-Mesoamerican Symbol Horizon Scenario

No evidence for the use of Pan-Mesoamerican symbol horizons, including motifs from Teotihuacan in the Classic period or Feathered Serpent motifs in the Postclassic period, was present among households in Settlement Cluster C at any time. This suggests that households did not use foreign iconography to claim associations with foreign elites or ideological systems to gain power or status. However, both noble and commoner households had evidence of Maya iconography on ceramics and other items during the Late Classic period, suggesting a shared sense of Maya identity and open access to these items. The distribution of these materials declined in the Terminal Classic and Early Postclassic periods, likely due to the decrease in the production of polychrome ceramics, along with other paraphernalia associated with rulership. Households that were abandoned prior to the Early Postclassic period had no evidence of Maya symbols as well.

However, shifts in ritual practice suggest that Maya concepts of ideology did change in the Postclassic period. The burial patterns, which had been established by the Preclassic period

and was highly standard among burials at Baking Pot, drastically changed in the Postclassic period. Unlike the standard practices of interring the dead within domestic platforms in the Classic period, Postclassic burials were all off-structure, being adjacent but not within the domestic structures. The orientation of burials shifted as well, with Postclassic burials being buried in positions and orientations that were not typical during the Classic period. The overall changes in ritual and ideology at Settlement Cluster C appear to be local rather than based on the adoption of foreign iconography or ideologies.

8.3 CONCLUSIONS

At the end of the Late Classic period and continuing into the Terminal Classic period, the changing geopolitical landscape of the central and southern Maya lowlands brought about many changes to the lives of royal, noble, and commoner Maya households, as well as in the institutions of Maya society. Drought, warfare, environmental degradation, and the expansion of competition between elite factions for increasingly scarce resources led to the downfall of the Classic Maya kingdoms in the central and southern lowlands. The processes of sociopolitical collapse were not generally rapid; rather, political centers were slowly depopulated and eventually abandoned with variability in timing and processes leading to sociopolitical collapse.

Despite the trajectory of decentralization within kingdoms and capitals in the southern lowlands, polities expanded in the Yucatan peninsula, with the growing prominence of Chichen Itza, along with Coba and polities in the Puuc region, in the Terminal Classic and Early Postclassic period and the growth of Mayapan in the Middle Postclassic period (Sharer and

Traxler 2004). Few settlements remained in the central and southern Maya lowlands by the end of the Terminal Classic period, although those that did remain were decentralized, smaller settlements rather than the big capitals of the Classic period. These settlements adapted to social reorganization, integrating themselves into spheres of influence and institutions of the Postclassic period. In the processes of these transformations, interactions between households that persisted took place, in efforts to keep the small communities together while forging new forms of organization. At Baking Pot, people continued living in the settlement areas to the east of the ceremonial center. The plazas, temples, and courtyards of the center largely fell into disuse, with Postclassic residents constructing a low platform in the main plaza of Group A, but largely leaving Group B, the section of the center associated with the royal residential area largely untouched. Despite being increasingly isolated due to the depopulation and abandonment of most other ceremonial centers in the upper Belize River Valley, with a 96 to 100 percent drop in population in the western polities of the valley, the location of Baking Pot on the rich alluvial basin and along the Belize River likely allowed some continuity in the settlement. The river served as a transportation route from the Caribbean to the interior areas of the Petén Lakes and the Postclassic site of Tipu, which would have enabled continued access to materials and items that were not produced in the region; whereas the potential for the production of agricultural products could have provided adequate means in order to engage and embrace the changing emphasis on interregional exchange in the Postclassic period. Overall, the residents in Settlement Cluster C at Baking Pot forged new forms of social, political, and economic interactions in order to adapt to the changing configuration of society in the Terminal Classic and Early Postclassic period.

Households increasingly participated in local production and ‘mercantile’ exchange to obtain exotic items. New types of luxury items, including those made from copper, were introduced in the Early Postclassic period. Evidence of metal goods has been noted at Postclassic Lamanai, and scholars have suggested that these goods may have actually been produced (or re-smelted) there as production materials such as blanks, ingots, and other materials have been identified (Simmons *et al.* 2009). This indicates that residents at Lamanai were importing the metal from central Mexico but producing copper ornaments and utilitarian goods at the site. Copper bells have been recovered from noble and commoner households at Baking Pot in the Postclassic period, at noble households at the M-99 group in Settlement Cluster C and the M-198 group in Settlement Cluster A. Additionally, a small copper fragment was identified at M-184, a low status commoner household, suggesting that these goods were widely available to all households. Interregional exchange increased in Settlement Cluster C in the Early Postclassic, identified by increasing distributions of exotic luxury and utilitarian items. Some shifts in long distance exchange networks may have occurred, as obsidian was predominantly coming from the El Chayal source during the Classic period, while there are some indications that obsidian from the Ixtepeque source may have been more predominant in the Postclassic period (Valorie Aquino, personal communication 2012). The results of the obsidian sourcing are still in progress, although the increasing utilization of Ixtepeque obsidian has been observed elsewhere increasing in the Terminal Classic and Postclassic period (Braswell *et al.* 2003, Golitko *et al.* 2012) as well as along maritime trade routes. Overall, it appears that Settlement Cluster C was integrated into the broader network of interregional exchange and expanding commercialization that has been well documented in Postclassic Mesoamerica.

Major shifts in social and political relationships in Settlement Cluster C altered as well, with increasing feasting activity forging social relationships between households in the context of political decentralization. The household at M-99, long established as the predominant household in Settlement Cluster C from the Late Preclassic period and likely housing a noble family with ties to the political establishment of the administrators of the Baking Pot polity in the Classic period became increasingly involved in the hosting of feasts. Commoner households were increasingly integrated into feasting activity in the Terminal Classic period, through the formation of social relationships and political with the M-99 group. The strategic alliances of noble and commoner households may have been an attempt to integrate the community, lessening the impacts of depopulation in the western settlement at Baking Pot. Unlike at Dos Pilas, where the lowest status households were the initial groups to abandon the settlement around the ceremonial center in its slow decline, leaving high and middle status households with established investment in the community vying for the increasing opportunities for power and wealth in the absence of the royals (Palka 1995), the involvement of both high and low status households was integral in the maintenance of the community at Baking Pot. Despite status differences, noble households focused on forging relationships with commoner households in Settlement Cluster C beginning in the Terminal Classic period.

There was no evidence for display of foreign symbols associated with the spread of Pan-Mesoamerican ideology, primarily the Cult of the *Quetzalcoatl*. Evidence for the spread of this ideology was present throughout Mesoamerica beginning in the Epiclassic (AD 700-900) around Chichen Itza and extending into other cultural areas (Ringle *et al.* 1998). The appropriation of new ideology and the use of the symbolic motifs were noted in other Postclassic settlements, including in the Naco Valley where elites manipulated and utilized the Quetzalcoatl cult to

integrate themselves within the broader network of elites in Postclassic Mesoamerica (Schortman and Urban 2011). Although both noble and commoner households had evidence of local (Maya) symbols in the Late Classic period, the distribution of these materials declined in the Terminal Classic and Early Postclassic periods.

Major shifts in local ritual practices occurred in the Early Postclassic period as well. Breaking from long-held traditions of interring the dead beneath house floors in the standard extended position and orientation to the south that was typical at Baking Pot and in the Belize Valley during the Classic period, Early Postclassic burials in Settlement Cluster C were drastically altered. Postclassic burials were interred along side house platforms, sometimes in middens, and featured burials in flexed positions and oriented to the north. This shift in burial pattern has been identified for other Postclassic settlements, such as Santa Rita Corozal (Chase 1985) Caye Coco (Masson 2000), and Tayasal (Chase 2006). This indicates that households in Settlement Cluster C were engaging in broader regional shifts in burial patterns in the Early Postclassic period. Caching practices elsewhere in the Postclassic period included effigy censers, which were not identified for Settlement Cluster C. Households in Settlement Cluster C forged new forms of ritual practices, although these changes appear to be related to local transformations in the Maya area rather than the adoption of foreign ideologies.

Overall, the transition from the Classic period to the Postclassic period was a time of social reorganization and regeneration, with commoner households actively involved in the reorganization of society. Although Baking Pot was no longer the royal polity that it was in the Classic period, life in the context of decentralization at Baking Pot presented new opportunities for the households in Settlement Cluster C. Commoner households, both high and low status, had increasing opportunities to gain power or wealth through local production and ‘mercantile’

exchange. Nobles sought to forge new relationships with commoners to promote community integration. Postclassic life at Baking Pot featured fewer displays of social disparities, with a general leveling of social differentiation. This case at Baking Pot provides new evidence for the resiliency of commoners in the context of political decentralization.

McAnany and Yoffee recently emphasized the need to understand the resiliency of societies rather than framing decentralization in terms of complete collapse, suggesting, “resilience is a more accurate term to describe the human response to extreme problems” (2010:11). This is particularly the case when societies continue, albeit with new forms of organization. An increasing number of recent studies focusing on the collapse of societies and subsequent reorganization have adopted bottom-up perspectives to understand the reorganization of society following sociopolitical collapse (McAnany and Yoffee 2010; Schwartz 2006). Within this trend, continuity is stressed, with domestic and local practices and materials remaining constant with new forms of organization developing in the context of social flux. This pattern can be observed in periods of social reorganization throughout time and space. In the Euphrates Valley, Cooper (2006) notes continuity in architectural and ceramic remains in the wake of political collapse, and stresses the region’s peripheral location, as well as a resumption of interregional exchange, as the main causes of social regeneration in the region. Beyond stressing instances of continuity following the collapse of sociopolitical institutions, archaeological investigations are beginning to investigate the role and resiliency of households in the processes of collapse and social reorganization. Just as in other civilizations, the collapse of complex sociopolitical organization in the Maya area led to new opportunities for regeneration, with the development of polities in the Yucatan peninsula during the Postclassic period. Communities on the edge of the expanding city-states in the Yucatan developed new forms of

interaction through interregional exchange, creating new types of social and political relationships, as well as through changing expressions of ideology and ritual.

APPENDIX A: ARTIFACTS

The complete dataset for this dissertation will be available online at the University of Pittsburgh's Center for Comparative Archaeology, found at: www.comparch.pitt.edu/

APPENDIX B: BURIALS

Burials were recorded using the standard BVAR Burial Recovery Form (Figure 1), recording information including contextual information (site, structure, excavation unit, level, lot number, lot designation (cultural designation)), as well as recording specific information about the burial position and associated architecture. Depth measurements were recorded, as well as the measurements for long bones and degree of flexure.

If identifiable in-situ, age and sex were included on the form, although most of the time this information was provided by subsequent osteological analysis. Dr. Jennifer Piehl conducted the osteological analysis for the burials from 2008, while Anna Novotny analyzed the human remains from 2009 and 2010, as well as re-inventorying the remains for 2008 (to be included as part of her dissertation research). Carolyn Freiwald conducted strontium analysis on a sample of the human remains, and those results are available in her dissertations (Freiwald 2011).

For the purpose of this dissertation, I have focused largely on burial patterns, including burial type (primary, secondary, multiple), burial position (extended, flexed, semi-flexed, seated), body orientation (prone, supine), directional orientation (north, south, east, west), burial construction (simple burial, pit, cist, crypt, tomb), burial location (in platform, off-platform, no architecture), architectural orientation (central axis, center of mound, northwest end of platform, etc), and associated grave goods. Burial construction designations were defined as follows: Simple: internment in surrounding deposit, with no visible grave structure; Pit: internment in a

hole with a visible outline; Cist: internment in a stone-lined pit; Crypt: internment in a stone-lined pit covered with capstones; and Tomb: internment in architecture with masonry walls, covered with capstones or a vault. This was supplemented by additional information on the age and sex of the individual, provided by the osteological analysis. Full detail of the results of the osteological analysis will be included in Anna Novotny's dissertation.

Observer _____ BVAR 20 _____ Burial # _____
 Date _____ Burial Recovery Form Site: BKP / CHP / LWD Site _____ Str # _____
 Supervisor: _____ Oper # _____ Ex Unit # _____
 Level # _____ Lot # _____

Articulated:
 YES If YES, // at disarticulated joints Depth to: Head _____ Feet _____ From _____
 NO If NO, // at articulated joints Heading: _____ ° of N Facing _____ ° of N

Soil sample taken?
 Pelvis _____ Most bones present?
 Other _____ YES If YES, circle bones absent
 C-14 _____ NO If NO, circle bones present

Degree of Flexure Long Bone Length

	Left	Right		Left	Right
Shoulder			Humerus		
Elbow			Radius		
Hip			Ulna		
Knee			Femur		
			Tibia		
			Fibula		

Burial pit observable? Y / N
 If yes, describe pit shape and / or burial type:

Burial lies in (Pit fill / Matrix) _____
 Soil Color / Texture: _____
 Burial lines on (Matrix): _____

Preservation	Body Position	Age / Sex	M	F	?
Excellent	Extended	Infant			
Good	Flexed	Child			
Fair	On Face	Subadult			
Poor	On Back	Young Adult			
Bone Meal	On Side	Middle Adult			
	Seated	Old Adult			

Associated Elements / Burials:

Should include the artifact abbreviation for grave goods and associated elements above (i.e. Co for ceramics, Ob for obsidian, Id for jadeite) and quantity below.

Interpretation: _____

Continue on back if necessary

Burial Form /

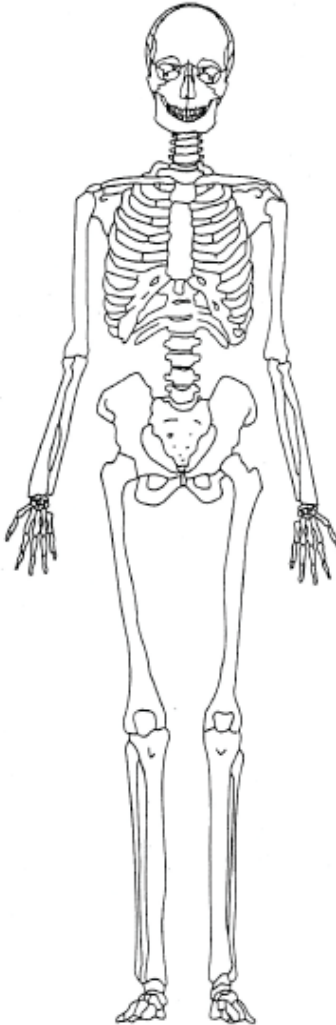


Figure B-1: BVAR Burial form used for recording contextual and osteological information during burial excavation.

Burial Summaries:

Burial 96-1

Structure: M-96

Excavation Unit: 12

Lot: 1477

Level: 5

Phase: Spanish Lookout

Location: Central axis, center of mound

Burial Type: Primary

Burial Construction: Simple

Position: Extended

Orientation: South

Head Facing: Down

Prone/Supine: Prone

Grave Goods: 5 obsidian blades near pelvis.

Age: Young to Mature adult

Sex: Male

Other notes:

Osteologist: J. Piehl, A. Novotny

Reference: Pelayo 2010



Figure B-2: Burial 96-1 in Structure 96.

Burial 96-2

Structure: M-96

Excavation Unit: 12

Lot: 1497

Level: 7

Phase: Spanish Lookout

Location: Central axis, center of mound

Burial Type: Primary

Position: Extended

Burial Construction: Simple

Orientation: South

Head Facing: Down

Prone/Supine: Prone

Grave Goods: 2 limestone spindle whorls, miniature ceramic vessel next to right scapula, several broken ceramic vessels above head (to the south).

Age: Older adult

Sex: Indeterminate

Other notes:

Osteologist: J. Piehl, A. Novotny

Reference: Pelayo 2010



Figure B-3: Burial 96-2 in Structure 96.



Figure B-4: Miniature ceramic vessel from Burial 96-2.

Burial 96-3

Structure: M-96

Excavation Unit: 12

Lot: 1501

Level: 7

Phase: Spanish Lookout

Location: Central axis, center of mound

Burial Type: Primary

Position: Extended

Burial Construction: Simple

Orientation: South

Head Facing: West

Prone/Supine: Prone

Grave Goods: 2 shell adornos (carved into shell/flower shapes), 1 ceramic vessel (fragments) at feet.

Age: Female

Sex: Older adult

Other notes: Burial 96-3 was immediately above Burial 96-2, with only 4cm of matrix separating the skeletal remains.

Osteologist: J. Piehl, A. Novotny

Reference: Pelayo 2010



Figure B-5: Burial 96-3 in Structure 96.



Figure B-6: Carved shell adornos from Burial 96-3.

Burial 96-4

Structure: M-96

Excavation Unit: 12

Lot: 1532

Level: 7

Phase: Spanish Lookout (late facet)

Location: Central axis, western side of M-96 (west of Burials 96-1, 96-2, 96-3).

Burial Type: Primary

Position: Seated

Burial Construction: Simple

Orientation: West

Head Facing: West

Prone/Supine: N/A

Grave Goods: 1 granite mano in front of legs, ceramic vessel fragments (nearly complete) above head.

Age: adult

Sex: female

Other notes:

Osteologist: J. Piehl, A. Novotny

Reference: Pelayo 2010



Figure B-7: Burial 96-4 in Structure 96.

Burial 99W-1

Structure: M-99d

Phase: Barton Creek

Location: Central axis, center of structure.

Burial Type: Primary

Position: Extended

Burial Construction: Pit

Orientation: South

Head Facing: Down

Prone/Supine: Prone

Grave Goods: None

Age: Child (between 2-3)

Sex: Indeterminate

Other notes: Burial 99W-1 was interred below Floor X, which was burned and broken in the shape of a cross, with the individual interred along the long axis, with head to the south.

Osteologist: J. Piehl, A. Novotny

Reference: Hoggarth 2010



Figure B-8: Burial 99W-1 from Structure 99d.

Burial 99E-1

Structure: M-99b

Level: 1

Phase: New Town

Location: Southern end of M-99b, off-mound, with platform blocks disassembled and bowed outward to inter individual within structure.

Burial Type: Primary

Position: Flexed

Burial Construction: Simple

Orientation: head to north

Head Facing: west

Prone/Supine: prone

Grave Goods: Greenstone celt, Paxcaman Red foot.

Age: Young to Middle adult

Sex: Male

Other notes: Burial 99E-1 was interred beside the platform wall of M-99b, moving several of the facing stones inward to accommodate for the burial, forming an arc in the platform wall. Several stones were placed outside of the wall near the head.

Osteologist: A. Novotny

Reference: Hoggarth 2011



Figure B-9: Burial 99E-1 from Structure 99b.

Burial 99N-1

Structure: M-99a

Level: 1

Phase: New Town

Location: On-floor

Burial Type: Secondary, Multiple

Position: N/A

Burial Construction: None (on surface of terminal floor)

Orientation: N/A

Head Facing: N/A

Prone/Supine: N/A

Grave Goods: N/A

Age: Adult

Sex: Indetermined

Other notes: Multiple individuals, secondary burial.

Osteologist: A. Novotny

Reference: Hoggarth 2010



Figure B-10: Burial 99N-1 from Structure 99a.

Burial 101-1

Structure: M-101

Level: 1

Phase: New Town

Location: Interred outside of the northern platform wall of M-101, with a line of stones to the west forming a cist.

Burial Type: Primary

Position: Flexed

Burial Construction: Cist

Orientation: North

Head Facing: East

Prone/Supine: Supine

Grave Goods: Augustine red foot, obsidian blade

Age: adult

Sex: male

Other notes:

Osteologist: A. Novotny

Reference: Lamb 2010b



Figure B-11: Burial 101-1 from Structure 101.

Burial 112-1-1

Structure: M112

Level: 13

Phase: Floral Park

Location: Central axis, center of mound

Burial Type: Primary

Position: Extended

Burial Construction: Cist

Orientation: South

Head Facing: Down

Prone/Supine: Prone

Grave Goods: 3 complete vessels (Vessel 1: Unidentified bowl; Vessel 2: Polvero Black jar (Barton Creek phase, AD), Vessel 3:), 2 limestone spindle whorls, greenstone and shell bead necklace at feet, 2 obsidian adornos, 2 shell adornos.

Age: Mature adult

Sex: Female

Other notes:

Osteologist: J. Piehl, A. Novotny

Reference: Lamb 2010a

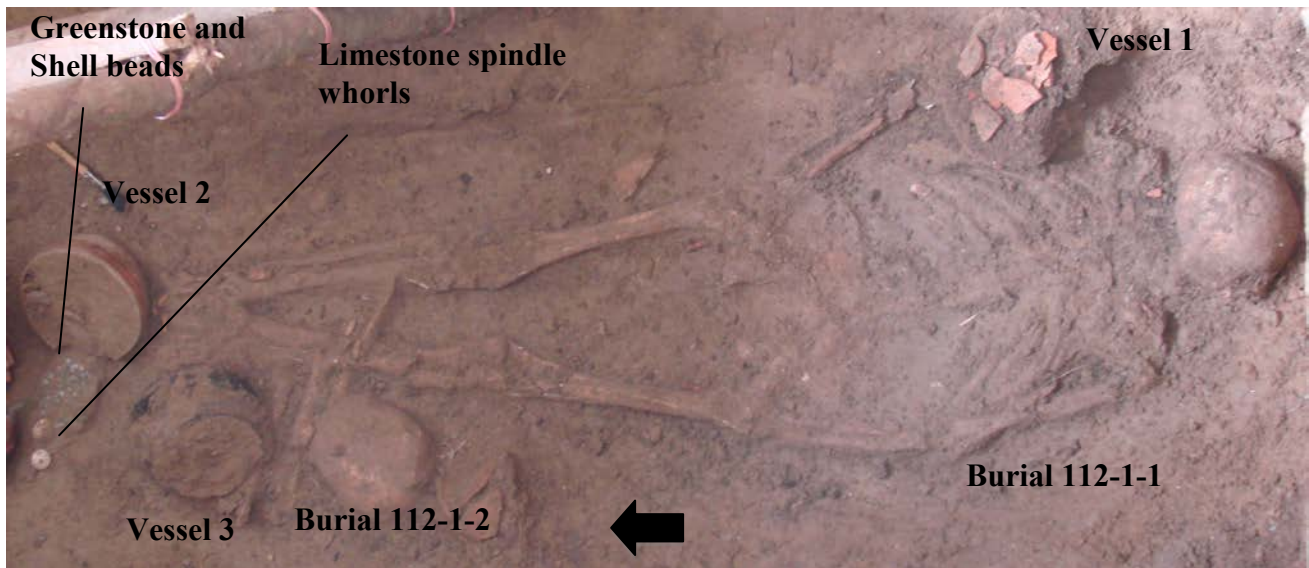


Figure B-12: Burials 112-1-1 (primary burial) and 112-1-2 (secondary burial) from Structure 112.



Figure B-13: Greenstone and shell beads, obsidian adorns, and shell adorns from Burials 112-1-1 and 112-1-2.

Burial 112-1-2

Structure: M-112

Level: 13

Phase: Floral Park (AD)

Location: Central axis, center of mound

Burial Type: Secondary

Position: N/A

Burial Construction: Cist

Orientation: N/A

Head Facing: North

Prone/Supine: N/A

Grave Goods: Goods associated with Burial 112-1-1.

Age: Adult

Sex: Male

Other notes:

Osteologist: J. Piehl

Reference: Lamb 2010a



Figure B-14: Burial 112-1-2 (secondary burial) in Structure 112.

Burial 184B-1

Structure: M-184b

Level: 2

Phase: Spanish Lookout (late facet)

Location: Central axis, center of structure.

Burial Type: Primary

Position: Extended

Burial Construction: Simple

Orientation: Head to the south

Head Facing: Down

Prone/Supine: Prone

Grave Goods: None

Age: Adult

Sex: Indeterminate

Other notes: Burial entered in antiquity and most skeletal remains were removed.

Osteologist: A. Novotny

Reference: Hoggarth 2011



Figure B-15: Burial 184b-1 from Structure 184b.

BIBLIOGRAPHY

Abrams, Elliott

1994 *How the Maya Built Their World: Energetics and Ancient Architecture*. University of Texas Press: Austin.

Adams, R. E. W.

1973 The collapse of Maya civilization: A review of previous theories. In Culbert, T. P. (ed.), *The Classic Maya Collapse*, pp. 21–34. University of New Mexico Press, Albuquerque.

Andrews V, E. Wyllys, and Jeremy A. Sabloff

1986 Classic to Postclassic: A Summary Discussion. In J. A., Sabloff and E. W. Andrews V, (eds.), *Late Lowland Maya Civilization: Classic to Postclassic*, pp. 433–456. School of American Research, University of New Mexico Press, Albuquerque.

Aimers, James J.

2002 Abandonment and Non-Abandonment at Baking Pot. In *Abandonment of Centers and Villages in Prehispanic Middle America*, edited by T. Inomata and R. Webb. Westview Press, Boulder.

2007 What Maya Collapse? Terminal Classic Variation in the Maya Lowlands. *Journal of Archaeological Research* 15:339-377.

Aquino, Daniel Eduardo

2007 La ocupación Clásico Terminal del epicentro urbano de Naranjo, Petén. En *XX Simposio de Investigaciones Arqueológicas en Guatemala, 2006* (editado por J.P. Laporte, B. Arroyo y H. Mejía), pp. 590-604. Museo Nacional de Arqueología y Etnología, Guatemala. (Versión digital).

Ashmore, Wendy, Samuel V. Connell, Jennifer J. Ehret, Chad H. Gifford, L. Theodore Neff, and Jon C. VandenBosch

1994 The Xunantunich Settlement Survey. In *Xunantunich Archaeological Project: 1994 Field Season*, edited by Richard M. Leventhal and Wendy Ashmore, pp. 248-289. Institute of Archaeology, Belmopan.

Ashmore, Wendy, Jason Yaeger, and Cynthia Robin

2004 Commoner Sense: Late and Terminal Classic Social Strategies in the Xunantunich Area. In A. A. Demarest, P. M. Rice, and D. S. Rice (eds.) *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, pp. 302-323. University Press of Colorado: Boulder.

Audet, Carolyn M.

2002 Excavations of Structure 198, Baking Pot, Belize. *The Belize Valley Archaeological Reconnaissance Project: A Report of the 2001 Field Season – Volume 1*, edited by Jaime J. Awe

& Cameron S. Griffith, pp. 91-109. Belize Department of Archaeology, Ministry of Tourism, Belmopan.

2006 *Political Organization in the Belize Valley: Excavations at Baking Pot, Cahal Pech and Xunantunich*. Ph.D dissertation, Department of Anthropology, Vanderbilt University: Nashville.

Audet, Carolyn M and Jaime J. Awe

2004 What's Cooking at Baking Pot: A Report of the 2001 to 2003 Seasons. *Research Reports in Belizean Archaeology*, Vol. 1: 49-59.

Awe, Jaime J.

1992 *Dawn in the Land Between the Rivers: Formative Occupation at Cahal Pech, Belize and its Implication for Preclassic Developments in the Maya Lowlands*. Unpublished PhD dissertation, Institute of Archaeology, University College London.

Awe, Jaime J. and Christophe Helmke

2007 Fighting the Inevitable: The Terminal Classic Maya of the Upper Roaring Creek Valley. In *Research Reports in Belizean Archaeology*, Vol. 4, 2007, pp.28-42. Print Belize Limited, Belmopan.

Ball, Joseph W. and Jennifer T. Taschek

2004 "Buenavista del Cayo: A Short Outline of Occupational and Culture History at an Upper Belize Valley Regal-Ritual Center." *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*, edited by James F. Garber, pp. 149-167. University of Florida Press, Gainesville.

Banning, E. B.

2000 *The Archaeologist's Laboratory: The Analysis of Archaeological Data*. Kluwer Academic/Plenum Publishers, New York.

Beach, T., Dunning, N., Luzzadder-Beach, S., Cook, D., and Lohse, J.

2006 Impacts of the ancient Maya on soils and soil erosion in the central Maya lowlands. *Catena* 65: 166–178.

Bermann, Marc P.

1994 *Lukurmata: Household Archaeology In Prehispanic Bolivia*. Princeton University Press, Princeton, New Jersey.

Blanton, Richard, Gary Feinman, Steven Kowalewski, and Peter Peregrine

1996 A Dual Processual Theory for the Evolution of Mesoamerican Civilization. *Current Anthropology* 37(1):1-14.

Blanton, Richard E., Steven A. Kowalewski, Gary M. Feinman and Laura M. Finsten

1993 *Ancient Mesoamerica: A Comparison of Change in Three Regions*. Cambridge University Press, Cambridge.

- Brenner, M., Michael, R., Hoddell, D., and Curtis, J. H.
 2002 Paleolimnology of the Maya Lowlands: Long Term Perspectives on Interactions Among Climate, Environment, And Humans. *Ancient Mesoamerica* 13: 141–157.
- Braswell, Geoffrey
 2004 *The Maya and Teotihuacan: Reinterpreting Early Classic Interaction*. University of Texas Press, Austin.
- 2003 Obsidian exchange spheres, in M.E. Smith & F.F. Berdan (ed.) *The Postclassic Mesoamerican world*: 131–58. Salt Lake City (UT): The University of Utah Press.
- Brumfiel, Elizabeth
 1994 Introduction. In E. Brumfiel and J. W. Fox (eds.) *Factional Competition and Political Development in the New World*. Cambridge University Press: Cambridge.
- 1996 The Quality of Tribute Cloth: The Place of Evidence in Archaeological Argument. *American Antiquity* 61(3): 453-462.
- Bullard, William R., Jr.
 1960 Maya Settlement Patterns in Northeastern Peten, Guatemala. *American Antiquity*, 25:355-72.
- 1963 The British Honduras Expedition, 1961: A Progress Report. *Royal Ontario Museum, Art & Archaeology Division Annual*, (1962): 10-16.
- Bullard, William R., Jr. & Mary Ricketson-Bullard
 1965 *Late Classic Finds at Baking Pot, British Honduras*. Art and Archaeology Occasional Paper, No. 8. Royal Ontario Museum, Toronto.
- Carlson, John B.
 1981 Olmec Concave Iron-Ore Mirrors: The Aesthetics of a Lithic Technology and Lord of Mirror. In *The Olmec and their Neighbors: Essays in Memory of Matthew W. Sterling*. Dumbarton Oaks, Washington D.C.
- Chase, Arlen F. & James F. Garber
 2004 The Archaeology of the Belize Valley in Historical Perspective. *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*, edited by James F. Garber, pp. 1-14. University Press of Florida, Gainesville.
- Chase, Arlen F. and Diane Z. Chase
 2003 *Mesoamerican Elites: An Archaeological Assessment*, University of Oklahoma Press, Norman.
- 2008 Methodological Issues in the Archaeological Identification of the Terminal Classic and Postclassic Transition in the Maya Area, *Research Reports in Belizean Archaeology* 5:23-36.

Chase, Diane Z., and Chase, Arlen F.

2006 Framing the Maya collapse: Continuity, discontinuity, method and practice in the Classic to Postclassic southern Maya lowlands. In Schwartz, G., and Nichols, J. (eds.), *After Collapse: The Regeneration of Complex Societies*, University of Arizona Press, Tucson, pp. 168–187.

2004 Hermeneutics, Transitions, And Transformations in Classic to Postclassic Maya Society. In Demarest, A., Rice, P. M., and Rice, D. S. (eds.), *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, University Press of Colorado, Boulder, pp. 12–27.

Chase, Diane Z.

1982 *Spatial and Temporal Variability in Postclassic Northern Belize*, Unpublished Ph.D. Dissertation, Department of Anthropology, University of Pennsylvania, Philadelphia.

Cheetham, David

1990 *Interregional Interaction, Symbol Emulation, and the Emergence of Socio-Political Inequality in the Central Maya Lowlands*. Unpublished Master's Thesis. University of British Columbia.

Clark, John E., and Michael Blake

1994 The Power of Prestige: Competitive Generosity and the Emergence of Rank Societies in Lowland Mesoamerica. In E. Brumfiel, and J.W. Fox (eds.) *Factional Competition and Political Development in the New World*, pp. 17-30. Cambridge University Press: Cambridge.

Conlon, James M.

1993. The 1992 Season of Investigations at Baking Pot: On the Outside Looking In. in J. J. Awe (ed.) *Belize Valley Archaeological Reconnaissance Project: Progress Report of the 1992 Field Season*, Peterborough: Department of Anthropology, Trent University, pp. 173-177

1995. The Final Frontier: Settlement Survey at the Ancient Maya Site of Baking Pot. In J. M. Conlon and J. J. Awe (eds.), *Belize Valley Archaeological Reconnaissance Project: Progress Report of the 1994 Field Season, Volume 2*. London: Institute of Archaeology, University College London, pp. 81-102

1997. An Analysis of Ancient Maya Consumption Requirements and Agricultural Production Potential at Baking Pot, Belize. In J. M. Conlon and J. J. Awe (eds.), *Belize Valley Archaeological Reconnaissance Project: Progress Report of the 1996 Field Season*. Peterborough: Department of Anthropology, Trent University, pp. 7-20.

Conlon, James M. and Jaime J. Awe

1995 Estimates of Population and Agrarian Potential for the Ditched Field Irrigation System at Baking Pot, Belize. In J. M. Conlon and J. J. Awe (eds.), *Belize Valley Archaeological Reconnaissance Project: Progress Report of the 1994 Field Season, Volume 2*. London: Institute of Archaeology, University College London, pp. 63-80.

Conlon, James M. and Jennifer J. Ehret

2000. Ancient Maya Settlement at Baking Pot, Belize: Results of the Continually Expanding Survey Program in the Search for the End of the Final Frontier. In J. M. Conlon and J. J. Awe (eds.), *The Western Belize Regional Cave Project: A Report of the 1999 Field Season*. Durham: Department of Anthropology, Occasional Paper No. 3, University of New Hampshire, pp. 43-54.

2001. Ancient Maya Settlement at Baking Pot, Belize: Final Results of the North Caracol Farm Survey Program. In J. M. Conlon and J. J. Awe (eds.), *The Western Belize Regional Cave Project: A Report of the 2000 Field Season*. Durham: Department of Anthropology, Occasional Paper No. 4, University of New Hampshire, pp. 301- 308.

Conlon, James M., Terry Powis, and Bobby Hohmann

1994. Ruler or Ruled? Status, Land Tenure, and Nucleated Settlement in the Western Periphery of Baking Pot, Belize. In J. M. Conlon and J. J. Awe (eds.), *Belize Valley Archaeological Reconnaissance Project: Progress Report of the 1993 Field Season*. London: Institute of Archaeology, University College London, pp. 224-262

Conlon, James M and Alan F. Moore

2002 Identifying Urban and Rural Settlement Components: An Examination of Classic Period Plazuela Group Function at the Ancient Maya Site of Baking Pot, Belize. *Perspectives on Ancient Maya Rural Complexity*, edited by Gyles Ianonne & Samuel. V. Connell, pp. 59-70. Regents of the University of California.

Culbert, T. Patrick

1973 *The Classic Maya Collapse*, University of New Mexico Press, Albuquerque.

1974 *The Lost Civilization: The Story of the Classic Maya*, Harper and Row, New York.

1977 Maya Development And Collapse: An Economic Perspective. In Hammond, N. (ed.), *Social Process in Maya Prehistory*, Academic Press, New York, pp. 510–531.

Dahlin, Bruce H.

1983 Climate and prehistory of the Yucatan peninsula. *Climatic Change* **5**: 245–263.

1987 Linguistic divergence and the collapse of Preclassic civilization in southern Mesoamerica. *American Antiquity* **52**: 367–382.

2000 The barricade and abandonment of Chunchucmil: Implications for northern Maya warfare. *Latin American Antiquity* **11**: 283–298.

2002. Climate change and the end of the Classic period in Yucata´n: Resolving a paradox. *Ancient Mesoamerica* **13**: 327–340.

de Montmollin, Olivier

1988 Settlement Scale and Theory in Maya Archaeology. In *Recent Studies in Pre-Columbian Archaeology*, edited by Nicholas J. Saunders and Oliver de Montmollin, pp. 63-104. BAR International Series 431. British Archaeological Reports, Oxford.

Deitler, Michael and Brian Hayden (eds.)

2001 *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*. Smithsonian: Washington, DC.

Demarest, Arthur A.

2004a After The Maelstrom: Collapse of the Classic Maya Kingdoms and the Terminal Classic in Western Peten. In Demarest, A., Rice, P. M., and Rice, D. S. (eds.), *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, University Press of Colorado, Boulder, pp. 102–124.

2004b *Ancient Maya: The Rise and Fall of a Rainforest Civilization*, Cambridge University Press, Cambridge.

Demarest, Arthur A., Rice, Prudence M., and Rice, Don S.

2004 The Terminal Classic in the Maya Lowlands: Assessing Collapses, Terminations, and Aftermaths. In Demarest, A., Rice, P. M., and Rice, D. S. (eds.), *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, University Press of Colorado, Boulder, pp. 545–572.

Demarest, Arthur A., and Valdez, J. A.

1995 Guerra, Regresion Politica, y el Colapso de la Civilizacion Maya Classica en la Region de Petexbatun. In Laporte, P., and Escobedo, H. (eds.), *VIII Simposio de Investigaciones Arqueologicas de Guatemala*, 1994, Museo Nacional de Arqueologia y Etnologia, Guatemala City, pp. 777–781.

Demarest, A. A., O'Mansky, M., Woolley, C., Van Tuerenhout, D., Inomata, T., Palka, J., and Escobedo, H.

1997 Classic Maya Defensive Systems and Warfare in The Petexbatun Region: Archaeological Evidence and Interpretation. *Ancient Mesoamerica* 8: 229–254.

Douglass, John G.

2002 *Hinterland Households: Rural Agrarian Household Diversity in Northwest Honduras*. University Press of Colorado, Boulder.

Dunning, Nicholas P., and Beach, Tim

1994 Soil Erosion, Slope Management, and Ancient Terracing in the Maya Lowlands. *Latin American Antiquity* 5: 51–69.

Dunning, Nicholas P.

1992 *Lords of the Hills: Ancient Maya Settlement in the Puuc Region, Yucatan, Mexico*,

Prehistory Press, Madison, WI.

Drennan, Robert D.

1996 *Statistics for Archaeologists: A Commonsense Approach*. Plenum Press: New York.

Driver, W. David & James F. Garber

2004 The Emergence of Minor Centers in the Zones between Seats of Power. *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*, edited by James F. Garber, pp. 287-304. University Press of Florida, Gainesville.

Dunning, Nicholas P., Beach, Tim, and Rue, D.

1997 The Paleoecology and Ancient Settlement of the Petexbatun Region, Guatemala. *Ancient Mesoamerica* 8: 255–266.

Dunning, N. P., Rue, D. J., Beach, T., Covich, A., and Traverse, A.

1998 Human-environment interactions in a tropical watershed: The paleoecology of Laguna Tamarindito, El Peten, Guatemala. *Journal of Field Archaeology* 25: 139–151.

Earle, Timothy

1977 A Reappraisal of Redistribution: Complex Hawaiian Chiefdoms. In T. Earle, and J.E. Ericson (eds.) *Exchange Systems in Prehistory*, pp. 213-229. Academic Press: New York.

Emery, Kitty F., Wright, Lori E., and Schwarz, H.

2000 Isotopic analysis of ancient deer bone: Biotic stability in collapse period Maya land-use. *Journal of Archaeological Science* 27: 536–550.

Fields, Virginia

2004 The Royal Charter at Xunantunich. In J.F. Garber (ed.) *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*, pp. 180-190. University Press of Florida: Gainesville.

Foias, Anotnia E.

1996 *Changing Ceramic Production and Exchange Systems and the Classic Maya Collapse in the Petexbatun Region, Guatemala*, Unpublished Ph.D. dissertation, Department of Anthropology, Vanderbilt University, Nashville, TN

2004 *Ceramics, Trade, and Exchange System of the Petexbatun: The Economic Parameters of the Classic Maya Collapse*. Vanderbilt University Press, Nashville, TN.

Foias, Antonia E., and Ron L. Bishop

1997 Changing ceramic production and exchange in the Petexbatun region, Guatemala: Reconsidering the Classic Maya collapse. *Ancient Mesoamerica* 8: 275–291.

Ford, Anabel

1987 *Summary Report on the Belize River Archaeological Settlement Survey, Field and Laboratory Research 1983-1987*. Department of Anthropology, University of California Santa Barbara. Copy on file at the Institute of Archaeology, Belmopan.

1990 Settlement and Environment in the Upper Belize River Area and Variability in Household Organization in the Central Maya Lowlands. In *Prehistoric Population History in the Maya Lowlands*, edited by T.P. Culbert and D. S. Rice.

1992 *Organization and Integration among Communities, Centers, and Regions: Hierarchical Organization of the Maya of the Belize River Area Summary Report on Intensive Excavations of the BRASS Project 1990-1992*. Department of Anthropology, University of California Santa Barbara. Copy on file at the Institute of Archaeology, Belmopan.

Ford, Anabel & Scott Fedick

1992 Prehistoric Maya Settlement Patterns in the Upper Belize River Area: Initial Results of the Belize River Archaeological Settlement Survey. *Journal of Field Archaeology*, Vol. 19 (1): 35-49.

Fedick, Scott

1995 Land Evaluation and Ancient Maya Land Use in the Upper Belize River Area, Belize, Central America, *Latin American Antiquity* 6: 16-34.

Fortes, Meyer

1958 Introduction. In *The Developmental Cycle of Domestic Groups*. Cambridge University: Cambridge.

Freiwald, Carolyn.

2011. *Maya Migration Networks: Reconstructing Population Movement in the Belize River Valley during the Late and Terminal Classic*. Unpublished Ph.D. Dissertation, Department of Anthropology, University of Wisconsin – Madison.

Garber, James

2011 *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*. University Press of Florida, Gainesville.

Gifford, James C., Carol A. Gifford, Muriel Kirkpatrick, Michael Nicholazzo, Robert J. Sharer.

1976 *Prehistoric Pottery Analysis and the Ceramics of Barton Ramie in the Belize Valley*. *Memoirs of the Peabody Museum of Archaeology and Ethnology*, Volume 18. Harvard University, Cambridge, MA.

Gill, Richardson

1994 *The Great Maya Droughts*, Unpublished Ph.D. dissertation, Department of Anthropology, University of Texas, Austin.

2000 *The Great Maya Droughts: Water, Life, and Death*. University of New Mexico Press,

Albuquerque.

Gill, Richardson and J. P. Keating

2002 Volcanism and Mesoamerican archaeology. *Ancient Mesoamerica* 13: 125–140.

Gillespie, Susan

2000 Beyond Kinship: An Introduction. In R. Joyce and S. Gillespie (eds.) *Beyond Kinship: Social and Material Reproduction in House Societies*, pp. 1-21. Philadelphia: University of Pennsylvania Press.

Golitko, Mark, James Meierhoff, Gary M. Feinman and Patrick Ryan Williams

2012 Complexities of collapse: the evidence of Maya obsidian as revealed by social network graphical analysis. *American Antiquity* 86:507-523.

Goody, Jack (ed)

1958 *The Developmental Cycle of Domestic Groups*. Cambridge University: Cambridge.

Graham, Elizabeth

1991 Archaeological insights into colonial period Maya life at Tipu, Belize. In D. H. Thomas, (ed.), *Columbian Consequences*, Smithsonian Institution Press, Washington, DC, pp. 319–336.

Grove, David C.

1993 “Olmec” Horizons in Formative Period Mesoamerica: Diffusion of Social Evolution. *Journal of World Prehistory* 11(1): 51-101.

Hammond, Norman

1975 *Lubaantun: A Classic Maya Realm*. Peabody Museum Monographs, Number 2. Harvard University, Cambridge, MA.

Hammond, Norman, Arnold Aspinall, Stuart Feather, John Hazelden, Trevor Gazard, and Stuart Agrell

1977 Maya jade: source location and analysis. In *Exchange systems in prehistory*, edited by Timothy Earle and Jonathon Ericson, pp. 35-67. Academic Press, New York.

Harrison, P. D.

1977 The rise of the bajos and the fall of the Maya. In Hammond, N. (ed.), *Social Process in Maya Prehistory: Studies in Honour of Sir Eric Thompson*, Academic Press, London, pp. 470–508.

Haviland, William A.

1988 “Musical Hammocks at Tikal.” *Household and Community in the Mesoamerican Past*, edited by Richard R. Wilk & Wendy Ashmore, pp.121-134. University of New Mexico Press, Albuquerque.

Hirth, Kenneth

1998 The Distributional Approach. *Current Anthropology* 40:520-527.

Heizer, Robert F. and Jonas E. Gullberg

1981 Concave Mirrors from the Site of La Venta, Tabasco: Their Occurrence, Mineralogy, Optical Description, and Function. . In *The Olmec and their Neighbors: Essays in Memory of Matthew W. Sterling*. Dumbarton Oaks, Washington D.C.

Helmke, Christophe

2008 Excavations of Structures B1 and B7 at Baking Pot, Belize. In *The Belize Valley Archaeological Reconnaissance Project: A Report of the 2007 Field Season*, edited by Christophe Helmke and Jaime J. Awe, pp. 109-143. Belize Institute of Archaeology, National Institute of Culture and History, Belmopan.

Helmke, Christophe and Jaime Awe

2008 New Site Description and Structure Designations of Baking Pot, Belize. *The Belize Valley Archaeological Reconnaissance Project: A Report of the 2007 Field Season*, edited by Christophe Helmke and Jaime J. Awe, pp. 81-102. Belize Institute of Archaeology, National Institute of Culture and History, Belmopan.

2008 Organización territorial de los antiguos mayas de Belice Central: confluencia de datos arqueológicos y epigráficos. *Mayab* 20: 65-91.

In Press Ancient Maya Territorial Organisation of Central Belize: Confluence of Archaeological and Epigraphic Data. *Acta Mesoamericana*.

Hester, T. R.

1985 Studying the Late Classic–Early Postclassic Maya transition at the Maya site of Colha: Research goals. Final Report to the National Endowment for the Humanities, University of Texas, San Antonio.

Hendon, Julia

1991 Status and Power in Classic Maya Society: An Archaeological Study. *American Anthropologist* 93(4):894-918.

1997 Women’s Work, Women’s Space, and Women’s Status among the Classic Period Maya Elite of the Copan Valley. In C. Claassen and R. Joyce (eds.) *Women in Prehistory: North America and Mesoamerica*. University of Pennsylvania Press, Philadelphia.

2003 Feasting at Home. In T. Bray (ed.) *The Archaeology and Politics of Food and Feasting in Early States and Empires* pp 203-233. Kluwer Academic, New York.

Hodell, D. A., Brenner, M., and Curtis, J. H.

2005 Terminal Classic Drought in the Northern Maya Lowlands Inferred From Multiple Sediment Cores in Lake Chichancanab (Mexico). *Quaternary Science Reviews* 24: 1413–1427.

Hodell, D. A., Brenner, M., Curtis, J., and Guilderson, T.

2001 Solar forcing of drought frequency in the Maya lowlands. *Science* 292: 1367–1370.

Hodell, D. A., Curtis, J. H., and Brenner, M.

1995 Possible role of climate in the collapse of Classic Maya civilization. *Nature* 375: 391–394.

Hoggarth, Julie A.

2008 Settlement Excavations at Baking Pot, Belize: Results of the 2007 Season.” *The Belize Valley Archaeological Reconnaissance Project: A Report of the 2007 Field Season*, edited by Christophe G.B. Helmke & Jaime J. Awe. Belmopan: Institute of Archaeology, National Institute of Culture and History.

Hoggarth, Julie A., Eva Jobbová, Christophe Helmke and Andrew Bevan

2008 Settlement Survey At Baking Pot, Belize: Results Of The 2007 Season. *The Belize Valley Archaeological Reconnaissance Project: A Report of the 2007 Field Season*, edited by Christophe Helmke and Jaime J. Awe, pp. 157-187. Belize Institute of Archaeology, National Institute of Culture and History, Belmopan.

Iannone, Gyles & Samuel V. Connell (eds.)

2003 *Perspectives on Ancient Maya Rural Complexity*. The Cotsen Institute of Archaeology. Monograph 49. University of California, Los Angeles.

Iannone, Gyles

2004 “Minor Centres” in the Upper Belize River Region: Problems in Definition and Interpretation. In *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*, edited by James F. Garber pp. 273-286. The University Press of Florida, Gainesville.

Inomata, Takeshi

1995 *Archaeological Investigations at the Fortified Center of Aguateca, El Peten, Guatemala: Implications for the Study of the Classic Maya Collapse*, Unpublished Ph.D. dissertation, Department of Anthropology, Vanderbilt University, Nashville, TN.

1997 The last day of a fortified Classic Maya center: Archaeological investigations at Aguateca, Guatemala. *Ancient Mesoamerica* 8: 337–351.

2003 War, Destruction and Abandonment: The Fall of the Classic Maya Center of Aguateca, Guatemala. In Inomata, T., and Webb, R. W. (eds.), *The Archaeology of Settlement Abandonment in Middle America*, University of Utah Press, Salt Lake City, pp. 43–60.

2006 *Warfare and the Fall of a Fortified Center: Archaeological Investigations at Aguateca*, Vanderbilt University Press, Nashville, TN.

Jobbová, Eva

2009 Comparative Settlement in the Central Belize Valley: GIS Analysis of Baking Pot, Spanish Lookout and Barton Ramie. *The Belize Valley Archaeological Reconnaissance Project: A Report of the 2007 Field Season*, edited by Julie A. Hoggarth and Jaime J. Awe. Belize Institute of Archaeology, National Institute of Culture and History, Belmopan.

Jones, Grant D.

1989 *Maya Resistance to Spanish Rule: Time and History on a Colonial Frontier*. University of New Mexico Press, Santa Fe.

Kolata, Alan

2006 *Before and After Collapse: Reflections on the Regeneration of Society*. In *After Collapse: The Regeneration of Complex Society*, edited by Glen Schwartz and John J. Nichols. University of Arizona Press, Tucson.

Joyce, Arthur A., Laura Arnaul Bustamonte, and Marc N. Levine

2001 *Commoner Power: A Case Study from the Classic Period Collapse on the Oaxaca Coast*. *Journal of Archaeological Method and Theory* 8(4): 343-385.

Joyce, Arthur A. and Errin T. Weller

2007 *Commoner Rituals, Resistance, and the Classic-to-Postclassic Transition*. In *Commoner Ritual and Ideology in Ancient Mesoamerica*, edited by Nancy Gonlin and Jon Lohse. University Press of Colorado, Boulder.

Kennett, Douglas J., Sebastian F. M. Breitenbach, Valorie V. Aquino, Yemane Asmerom, Jaime Awe, James U.L. Baldini, Patrick Bartlein, Brendan J. Culleton, Claire Ebert, Christopher Jazwa, Martha J. Macri, Norbert Marwan, Victor Polyak, Keith M. Prufer, Harriet E. Ridley, Harald Sodemann, Bruce Winterhalder, and Gerald H. Haug

2012 *Development and Disintegration of Classic Maya Political Systems in Response to Climate Change*. *Science* 388: 788-791

Lecount, Lisa

1999 *Polychrome Pottery and Political Strategies in Late and Terminal Classic Lowland Maya Society*. *Latin American Antiquity* 10(3):239-258.

2001 *Like Water for Chocolate: Feasting and Political Ritual among the Late Classic Maya at Xunantunich, Belize*. *American Anthropologist* 103(4): 935-953.

LeCount, Lisa J. and Jason Yaeger

2010 *Classic Maya Provincial Politics: Xunantunich and its Hinterlands*. University of Arizona Press, Tucson.

Leventhal, Richard M. and Wendy Ashmore

2004 *Xunantunich in a Belize Valley Context*. In *The Ancient Maya of the Belize Valley*, edited by James Garber, pp. 168-179. University Press of Florida, Gainesville.

López, V. S. L., & Foias, A. E. (2005). *Geographies Of Power: Understanding The Nature Of Terminal Classic Pottery In The Maya Lowlands*. Oxford: Archaeopress

Lucero, Lisa J.

2002 *The collapse of the ancient Maya: A case for water control*. *American Anthropologist* 104: 814-826.

Marcus, Joyce

1998 An Extension of the Dynamic Model. In G.M. Feinman and J. Marcus (eds) *Archaic States*. School of American Research Press, Santa Fe.

2004 Maya Commoners: The Stereotype and the Reality. In *Ancient Maya Commoners*, edited by Jon C. Lohse and Fred Valdez, Jr., pp. 255-283. University of Texas Press, Austin.

Masson, Marilyn

2000. *In the Realm of Nachan Kan: Postclassic Maya Archaeology at Laguna de On, Belize*. University Press of Colorado: Boulder.

2002 Community Economy and the Mercantile Transformation in Postclassic Northeastern Belize. In M. A. Masson and D. Freidel (eds.) *Ancient Maya Political Economies*, pp. 335-364. Altamira Press: Berkeley.

Masson, Marilyn and Shirley Boteler Mock

2004 Ceramics and Settlement Patterns at Terminal Classic-Period Lagoon Sites in Northeastern Belize. In A. A. Demarest, P. M. Rice, and D. S. Rice (eds.) *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, pp. 367-401. University Press of Colorado: Boulder.

Masson, Marilyn And Carlos Peraza Lope

2004 Commoners in Postclassic Maya Society: Social Versus Economic Class Constructs. In J. C. Lohse, and F. Valdez, Jr (eds.) *Ancient Maya Commoners*, pp. 197-223. University of Texas Press: Austin.

McAnany, Patricia A.

1995 *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society*. University of Texas Press: Austin.

McAnany, Patricia and Norman Yoffee (eds)

2010 *Questioning Collapse: Human Resilience, Ecological Vulnerability, and the Aftermath of Empire*. Cambridge University Press, Cambridge.

McKillop, Heather

1987 Wild Cane Caye: An Insular Classic Period to Postclassic Period Maya Trading Station. Unpublished PhD Dissertation. University of California, Santa Barbara.

Miller, Mary and Karl Taube

1993 *Gods and Symbols of Ancient Mexico and the Maya: An Illustrated Dictionary of Mesoamerican Religion*. Thames and Hudson: New York.

Morley, Sylvanus G., George Brainerd, and Robert J. Sharer

1983 *The Ancient Maya*, 4th ed. Stanford University Press, Stanford, CA.

- Palka, Joel W.
2001 Ancient Maya Defensive Barricades, Warfare, And Site Abandonment. *Latin American Antiquity* 12: 427–430.
- Ossa, Alanna
2011 *Given, Borrowed, Bought, Stolen: Exchange and Economic Organization in Postclassic Sauce and its Hinterland in Veracruz, Mexico*. Unpublished PhD Dissertation, Arizona State University, Tucson.
- Pasztory, Esther
1973 *The Iconography of the Teotihuacan Tlaloc*. Dumbarton Oaks, Washington D.C.
- 1993 An Image is Worth a Thousand Words: Teotihuacan and Meanings of Style in Classic Mesoamerica. In *Latin American Horizons*, edited by Don S. Rice, pp. 113-146. Dumbarton Oaks, Washington D.C.
- Piehl, Jennifer
2004 *Performing Identity in an Ancient Maya city: The Archaeology of Houses, Health and Social Differentiation at the Site of Baking Pot, Belize*. Ph.D. Dissertation. Department of Anthropology, Tulane University, New Orleans.
- Pohl, M. D. (ed.)
1990 *Ancient Maya Wetland Agriculture: Excavations on Albion Island, Northern Belize*, Westview Press, San Francisco.
- Potter, James M.
2000 Pots, Parties, and Politics: Communal Feasting in the American Southwest. *American Antiquity* 65(3):471-492.
- Rathje, William L. and Jeremy A. Sabloff
1975 Ancient Maya Commercial Systems: A Research Design for the Island of Cozumel, Mexico. *World Archaeology* 5:221-231.
- Rice, Don S.
1978 Population growth and subsistence alternatives in a tropical lacustrine environment. In Harrison, P. D., and Turner, B. L., II (eds.), *Pre-Hispanic Maya Agriculture*, University of New Mexico Press, Albuquerque, pp. 35–61.
- 1996 Paleolimnological analysis in the central Peten, Guatemala. In Fedick, S. L. (ed.), *The Managed Mosaic: Ancient Maya Agriculture and Resource Use*, University of Utah Press, Salt Lake City, pp. 193–206.
- Ringle, William M., Gallareta Negron, Tomás. Bey, George J. III.
1998 The return of Quetzalcoatl: evidence for the spread of a world religion during the epiclassic period. *Ancient Mesoamerica* 9(2):183-292.

Ricketson, Oliver G.

1929 *Excavations at Baking Pot, British Honduras*. Contributions to American Anthropology and History, No. 1. Publication 403. Carnegie Institution of Washington, Washington DC.

Robichaux, H. R.

2002 On The Compatibility of Epigraphic and Archaeological Data with a Drought Based Explanation for the Classic Maya Collapse. *Ancient Mesoamerica* 13: 341–345.

Robin, Cynthia

2003 New Directions in Classic Maya Household Archaeology. *Journal of Archaeological Research* 11(4): 307-356.

Robin, Cynthia, Jason Yaeger, and Lisa LeCount

2010 Living in the Hinterlands of a Provincial Polity. In *Classic Maya Provincial Politics: Xunantunich and its Hinterlands*, edited by Lisa J. LeCount and Jason Yaeger, pp. 315-336. University of Arizona Press, Tucson.

Sabloff, Jeremy A.

1973a *Continuity and disruption during terminal Late Classic Times at Seibal: Ceramic and other evidence*. In Culbert, T. P. (ed.), *The Classic Maya Collapse*, University of New Mexico Press, Albuquerque, pp. 107–131.

1973b Major Themes in The Past Hypotheses of the Maya Collapse. In Culbert, T. P. (ed.), *The Classic Maya Collapse*, University of New Mexico Press, Albuquerque, pp. 35–40.

Schwartz, Glen M. and John J. Nichols

2006 *After Collapse: The Regeneration of Complex Society*. University of Arizona Press, Tucson.

Sharer, Robert and Loa Traxler

2006 *The Ancient Maya*. Stanford University Press, Stanford.

Sidrys, Raymond V.

1983 *Archaeological Excavations in Northern Belize, Central America*. Institute of Archaeology, University of California, Los Angeles.

Simmons, Scott E., Pendergast, David M., and Graham, Elizabeth

2009 The Context and Significance of Copper Artifacts in Postclassic and Early Historic Lamanai, Belize. *Journal of Field Archaeology* 34(1): 57-75.

Smith, Michael E.

1987 Household possessions and wealth in agrarian states: Implications for archaeology. *Journal of Anthropological Archaeology* 6:297-335.

1999 On Hirth's Distributional Approach. *Current Anthropology* 40(4): 528-530.

- Smith, Michael E. and Frances F. Berdan
2003 *The Postclassic Mesoamerican World*. University of Utah Press: Salt Lake City.
- Stemp, W. J.
2001 Chipped Stone Tool Use in the Maya Coastal Economies of Marco Gonzalez and San Pedro, Ambergris Caye, Belize. BAR International Series 935. Oxford: John and Erica Hedges Ltd.
- Stemp, W.J., C.G.B. Helmke and J.J. Awe.
2010. Evidence for Maya Household Subsistence and Domestic Activities: Use-wear Analysis of the Chipped Chert Assemblage from Pook's Hill, Belize. *Journal of Field Archaeology* 35, 2: 217-234.
- Sutton, Mark Q and Brooke S. Arkush
2002 *Archaeological Laboratory Methods*. Kendal/Hunt, Dubuque, IA.
- Taschek, Jennifer T. and Joseph W. Ball
2004 Buenavista del Cayo, Cahal Pech, and Xunantunich: Three Centers, Three Histories, One Central Place . In *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*, edited by James F. Garber, pp. 191-206. University Press of Florida, Gainesville.
- Taube, Karl A.
2005 The Symbolism of Jade in Classic Maya Religion. *Ancient Mesoamerica* 16(1): 23-50.
- Tourtellot, Gair III
1988 Developmental Cycles of Households and Houses at Seibal. *Household and Community in the Mesoamerican Past*, edited by Richard R. Wilk & Wendy Ashmore. pp. 97-120. University of New Mexico Press, Albuquerque.
- Turkon, Paula
2004 Food and status in the prehispanic Malpaso Valley, Zacatecas, Mexico. *Journal of Anthropological Archaeology* 23:225-251.
- Urban, Patricia and Edward Schortman
2004 Opportunities for Advancement: Intra-Community Power Contests in the Midst of Political Decentralization in Terminal Classic Southeastern Mesoamerica. *Latin American Antiquity* 15(3): 251-272.
- 2011 Networks of Power: Political Relations in the Late Postclassic Naco Valley. University Press of Colorado, Boulder.
- Webster, David L.
2002 *The Fall of the Ancient Maya*, Thames and Hudson, London.
- 2000 The not so peaceful civilization: A review of Maya war. *Journal of World Prehistory* 14: 65–119.

1993 The study of Maya warfare: What it tells us about the Maya and what it tells us about Maya archaeology. In Sabloff, J. A., and Henderson, J. A. (eds.), *Lowland Maya Civilization in the Eighth Century AD*, Dumbarton Oaks, Washington, DC, pp. 115–144.

Welsh, W. B. M.

1988 *An Analysis of Classic Lowland Maya Burials*. BAR International Series 409. British Archaeological Reports, Oxford.

Wright, Lori E., and Christine D. White

1996) Human biology in the Classic Maya collapse: Evidence from paleopathology and paleodiet. *Journal of World Prehistory* 10: 147–198.

Willey, Gordon R., William R. Bullard Jr., John B. Glass & James C. Gifford

1965 *Prehistoric Maya Settlements in the Belize Valley*. Papers of the Peabody Museum of Archaeology and Ethnology, No. 54. Harvard University, Cambridge.

Yaeger, Jason

2008 Charting the Collapse: Late Classic to Postclassic Population

Dynamics in the Mopan Valley, Belize. In *Research Reports in Belizean Archaeology: Papers of the 2007 Belize Archaeology Symposium, Volume 5*, edited by John Morris, Sherrilynn Jones, Jaime Awe, and Christophe Helmke, pp. 13-22. Print Belize Limited, Belmopan.

Yaeger, Jason

2000 *Changing Patterns of Social Organization: The Late and Terminal Classic Communities at San Lorenzo, Cayo District, Belize*. Unpublished PhD dissertation. Anthropology Department, University of Pennsylvania, Philadelphia.

Yaeger, Jason, and David Hodder

2002 Climate-culture-environment interactions and the collapse of Classic Maya civilization. Paper presented at the Dumbarton Oaks Symposium: El Nino, Catastrophism, and Culture Change in Ancient America, Washington, DC.

Yoffee, Norman, and George Cowgill

1998 *The Collapse of Ancient States and Civilizations*. University of Arizona Press, Tucson.

Yoffee, Norman

2005 *Myths of the Archaic State: Evolution of the Earliest Cities, States, and Civilizations*. Cambridge University Press, Cambridge.