

The Skyband Group, Copán, Honduras

Penn State Excavations 1990, 1997

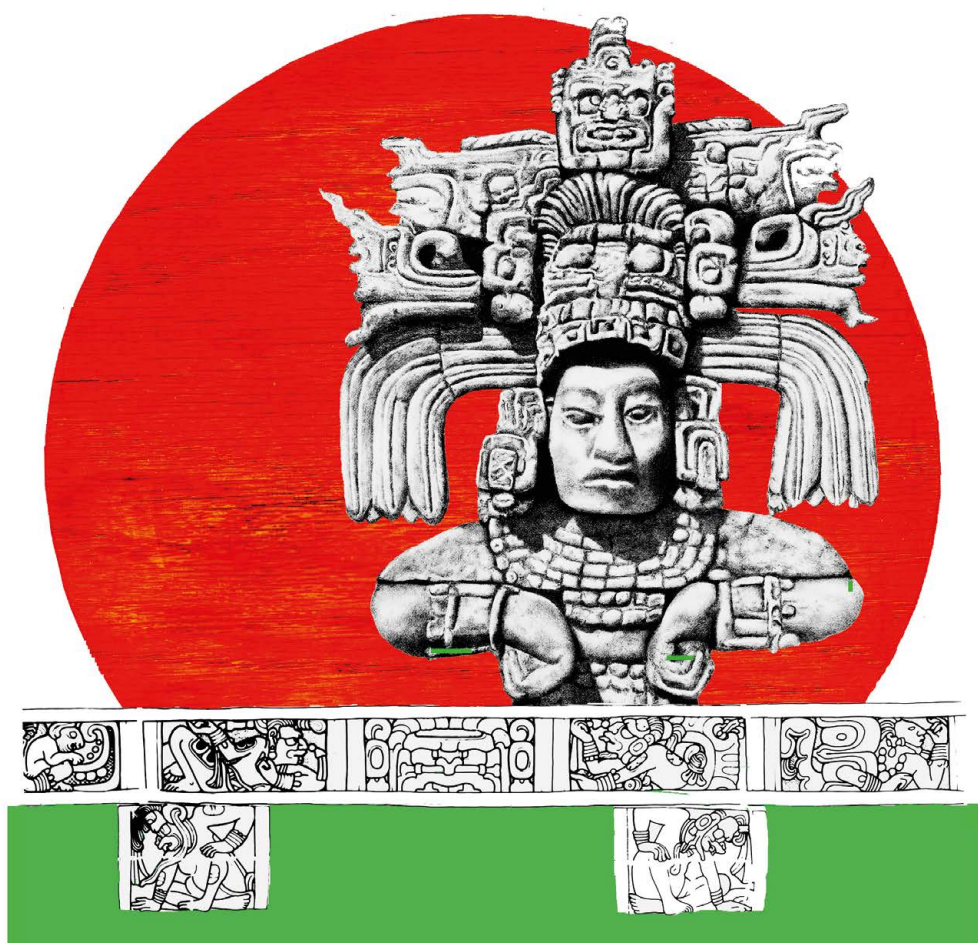
David Webster

With contributions by:

Barbara Fash, David Reed,
Rebecca Storey, Randolph Widmer,
William Scott Zeleznik



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Contents

List of Figures	vi
List of Tables.....	xii
Preface	xv
Chapter One: Maya Places and Elites.....	1
David Webster	
The Harvard Project	2
Proyecto Arqueológico Copán Phase I and II Projects	3
Classic Maya Elites.....	3
Maya Royal and Sub-royal Palaces	5
Palatial Places.....	9
Palaces at Copán.....	12
Courts at Copán.....	14
The House of the Bacabs and its Hieroglyphic Bench.....	15
Identifying Copán Palaces	21
Summary	23
Chapter Two: Group 8N-11.....	26
David Webster	
Pre-PAC II Excavations at Group 8N-11	26
Operation 14	27
Operation 50	27
The Site	28
A Causeway Connection?.....	30
Mapping	31
The 1990 Field Season	33
Methods.....	35
Expectations	37
Chapter Three: Operations in the Plaza and the Str. 66 Complex	38
David Webster, Randolph Widmer, and Rebecca Storey	
Operation 14: the Plaza	40
Stratigraphic Pit 2.....	41
Operation 14 Artifacts.....	42
Operation 50	42
The Plaza	43
Structure 66C.....	45
Structure 66S.....	52
Structure 66N	62
Structure 67	66
Benches	67
Construction Sequence of the Final Phase Str. 66 Buildings.....	67
Courtyard Configuration and Functions	69
Performance	70
Phase 2 Excavations in and around the Main Courtyard Buildings	72
Construction Costs of the Structure 66 Complex	76

Chapter Four: The Skyband Bench and its Neighbors78

David Webster

The Skyband Bench	79
The Group 10K-4 Bench or Throne	83
The Harvard Bench.....	84
The 9N-8 Bench	85
Context and Significance of the Skyband Bench	85
Construction of the Bench	86
Iconography and Symbolism of the Skyband Bench	87
Who or What was Enthroned on the Skyband Bench?	95
The Date of the Skyband Bench.....	96
Summary: Benches at Copán.....	96
Pauhtuns	98

Chapter Five: The Façade Sculpture100

David Webster and Barbara Fash

Recording the Sculpture.....	100
The Str. 66C Sculpture Program	102
Eccentric Flints	103
Rope Figures	103
Rattles.....	104
Solar Cartouches.....	104
The Str. 66S Sculpture Program.....	104
Roof Elements.....	105
Niches, Niche Masks, and Tree/vegetation Symbols	105
Young Lords.....	106
Astronomical and Chronological Implications of Str. 66C and the Skyband Bench.....	108
Summary	109
The Audience.....	111
Sculptors at Copán.....	112
Complications of the Str. 70C Sculpture.....	115

Chapter Six: Operation 50: The Ancillary Buildings116

David Webster

General Description.....	116
Structure 51	120
Structure 51S.....	120
Structure 51C.....	122
Structure 50.....	124
Structure 49.....	126
Benches	126
Relative Construction Phases of the Ancillary Buildings and their Relationship to the Str. 66 Complex.....	128
Abandonment of the Main and Ancillary Buildings.....	131
Feature 9	132
Feature 12.....	133
Overview.....	133

Chapter Seven: Operation 63: The 1997 Field Season134

David Webster

Field Procedures.....	134
Clearing and Mapping.....	135
Excavations	138

Sub-operation 1: Str. 46, the Causeway Building, Trenches 2, 3, 4, 5 and 10	139
Trench 2	141
Trench 3	142
Trench 4	142
Trench 5	142
Trench 10	143
Trenches 7, 14, and 20	143
Configuration of the Causeway Building	146
Sub-operation 2: The Causeway Connection, Trenches 1 and 8	148
Trench 1	148
Trench 8	151
Sub-operation 3: Trenches Near the other Ancillary Buildings	151
Str. 49 -- Trench 11	152
Str. 48 -- Trench 9	153
Str. 47 -- Trench 6	153
Str. 52 -- Trench 12	153
Str. 54 -- Trench 16	153
Str. 55 -- Trench 13	155
Str. 57 -- Trench 15	156
Str. 59 -- Trench 18	157
Str. 60 -- Trench 19	159
Str. 58 -- Trench 17	160
Stratigraphy and Topography in Las Sepulturas and the 8N-11 Locale	161
Operation 63 Artifacts	164
Causeway Building Ceramics	165
Op. 63 Summary	165

Chapter Eight: Features and Burials170

David Webster, Randolph Widmer, Rebecca Storey, David Reed, and W. Scott Zeleznik

Features	171
Op. 50 Feature List	172
Comments on Specific Features	177
Copán Burial Overview	180
Site and Chronological Contexts	182
Position in Relation to Structures	183
Grave Types	183
Orientation of Body or Grave	184
Age and Biological Sex	184
Body Position	185
Artifact Associations	186
General Copán Database Patterns	187
The Group 8N-11 Burial Sample	187
List of Burials from 8N-11 Operations	189
Burial Summary, Comparisons, and Interpretations	196
Biophysical Characteristics	199
Mortuary Scoring Patterns in the Overall Database	200

Chapter Nine: Artifacts203

David Webster, W. Scott Zeleznik, and David Reed

Character of the Sample, Analytical Challenges, and Procedures	203
Spatial Analytical Units	204
Sherd Analysis	205
Temporal Displacement	205

Copán Ceramics and Population Dynamics: Background Considerations	206
Preclassic.....	206
Early Classic	208
Middle Classic.....	208
Late Classic: The Coner Expansion.....	209
Pre-Coner Migrations and Dislocations?.....	212
Effects of Climate Change	214
The Group 8N-11 Ceramic Assemblage	215
Ceramic Types	215
Ceramic Forms.....	215
Utilitarian vs. Fine Ware Types	217
Chronology	218
Associations with Op. 50 structures.....	218
The Op. 63 Ceramic Assemblage	219
Chronology	220
Function, Use, and Imports.....	220
Ceramic Comparisons with Small Rural Sites	220
Chronology of Rural Sites	221
Lithic Artifacts.....	222
Chipped Stone	222
Ground Stone.....	225
Database Artifact Comparisons	226
General PAC II Site Comparisons	227
Intra-site Comparisons between the Str. 50/51 and Str. 66 complexes	228
Inter-site Database Comparisons	230
Overall Urban Core and Rural Database Artifact Comparisons	230
Comparisons with Group 10L-2	231
Summary	232
Chapter Ten: Group 8N-11: The Short Chronology	234
David Webster	
Chronology of the Copán Collapse	235
Group 8N-11 and the Short Chronology	236
The Evolving Copán Ceramic Sequence	236
The 1983 Ceramic Sequence.....	238
The 1993 Ceramic Sequence.....	239
Chronological Implications of Pre-1990 Operations at Group 8N-11	242
Chronological Evidence from the House of the Bacabs and Operations 50 and 63	243
General Chronological Implications for Group 8N-11.....	245
The Relative Sequence at Group 8N-11	245
Implications for the Short Chronology	247
Comparisons with Architecture and Sculpture Elsewhere at Copán.....	247
Chapter Eleven: The Long Chronology	250
David Webster	
Evidence for the Long Chronology: Methodological Considerations	250
Obsidian Hydration Dates.....	251
Critiques	255
Advantages and Disadvantages of Hydration Dating	256
Hydration Dates from Elite-rank Copán sites.....	257
Elite-rank Sites with Many Dates	259
Group 9N-8.....	261
Group 10L-2	262

Groups 8L-10 and 8L-12	262
Group 9J-5	263
Group 10L-18	264
Groups 10E-6 and 11E-2	265
Group 9M-22A.....	267
Group 5O-1	268
Groups 12F-3 and 14F-1	268
Group 6A-4-1	268
Elite Residence Summary	269
Group 8N-11 and the Long Chronology.....	270
Noise	272
Dates from Specific Contexts	274
The Long Chronology at Group 8N-11: Implications for the Collapse and Persistence.....	277
Issues and Biases of Hydration Dates and the Long Chronology	278
Duration of Ceramic Complexes.....	279
Ceramic Sequences, Transitions, and the Classic Collapse	280
Frozen in time?	280
Drought and Collapse	283
Other Slow Maya Collapses	284
Chapter Twelve: Final Thoughts.....	288
David Webster	
The Default Model	288
The Skyband Group as a Sub-royal Elite Residence	289
Something Else?	289
Ashmore's Directional Hypothesis	290
Plank's <i>Otoot</i> Hypothesis	292
Plank's Las Sepulturas <i>Otoots</i> in Groups 9N-8, 9M-18, 9M-22A, and 8N-11	293
Maca's U-group Hypothesis	295
Overview	297
Character of Dominant Buildings: Temples and Dwellings.....	297
The Early Skyband Buildings	298
The Skyband Bench	298
Royal Connections?	299
Displacement Mimicry	299
Community Building Mimicry	301
Dormitories, Council Houses, and Ritual Sites	301
An E-Group Conjecture	302
Chronology	303
Conclusions	304
Appendix A: Radiocarbon Dates from Burials and Archaeomagnetic Dates	306
C14 Dates from Burials	306
Archaeomagnetic Dates	307
Appendix B: Illustrations of Selected Artifacts	309
Comments on the Illustrations.....	309
Bibliography	320

List of Figures

Preface

Figure P-1. Location of Copán and the Skyband Group	xv
---	----

Chapter One

Figure 1-1. Map of Copán urban core.....	1
Figure 1-2. Type 3 and 4 sites in Las Sepulturas and El Bosque	13
Figure 1-3. Group 9N-8 (modified from Hohmann 1995: 18)	14
Figure 1-4. Plaza A, Group 9N-9	14
Figure 1-5. The 9N-8 bench.....	17
Figure 1-6. The ajk'uhuun title glyph on the bench (above) and as drawn by Ann Dowd (below)	18

Chapter Two

Figure 2-1. Air photo of the urban core.....	24
Figure 2-2. Group 8N-11 and the causeway terminus	25
Figure 2-3. Rattray excavates the plaza	26
Figure 2-4. Lidar image of Main Group and urban core. Ashmore's sites shown in red	29
Figure 2-5. Group 8N-11 and the causeway terminus	31
Figure 2-6a, b. Group 8N-11 as mapped by the Harvard and PAC I projects	32
Figure 2-7. 20 cm contour map of Group 8N-11 made during the 1990 field season by Scott Zeleznik	33
Figure 2-8. Clearing the site	34
Figure 2-9. East side of Group 8N-11 cleared of vegetation.....	34
Figure 2-10. Operation 50 buildings superimposed on the grid	35

Chapter Three

Figure 3-1. Str. 66 complex superimposed on contour map.....	38
Figure 3-2. Western face of Str. 66 after clearing, looking south. Str. 67 is in the center-right beneath a tree.....	39
Figure 3-3. View southwest from Str. 66C	40
Figure 3-4. Plan of Rattray's plaza excavation in the north section of the plaza	41
Figure 3-5. Profile of stratigraphic pit 2. Adapted by Webster from Langley 1982	42
Figure 3-6. Two sections of empedrado in front of Str. 66.....	43
Figure 3-7. Wall base paving scar of early building.....	44
Figure 3-8. Profile of north wall, Trench N16/E6.....	44
Figure 3-9. Multiple layers of empedrado in front of Str. 66S.....	45
Figure 3-10. Southern half of Str. 22 excavated.....	45
Figure 3-11. Hypothetical cross-section of Str. 66C	46
Figure 3-12. Restored front façade of Str. 66C	46
Figure 3-13. Drawing of west façade of Str 66 complex before restoration.....	46
Figure 3-14. Monolithic blocks from Plaza A, Group 9N-8.....	47
Figure 3-15. Reconstruction of west elevation of Str. 66C as if it were a free-standing building.....	47
Figure 3-16. High-quality masonry on the taluds, stairway, and terrace-level walls. Front of Str. 66C	48
Figure 3-17. Section of Str. 66C before restoration	50
Figure 3-18. Reconstructed plan of Str. 66C	50
Figure 3-19. Fallen vault stones on summit of Str. 66C	51
Figure 3-20. Plaster roof capping from Str. 9N-82-east.....	52
Figure 3-21. Fallen drain stone.....	52
Figure 3-22. Rear retaining walls of Strs. 66C and 66S after restoration.....	53
Figure 3-23. Cobble surface or apron east of Str. 66S	53
Figure 3-24. Stairway between Strs. 66S and 66C.....	54
Figure 3-25. West façade of Str. 66S after restoration	55

Figure 3-26. Connection between Strs. 66S and 66C	55
Figure 3-27. Diagram of corridor between Strs. 66S and 66C before restoration	56
Figure 3-28. Complicated masonry join between Strs. 66S and 66C	56
Figure 3-29. Profile of probing trench into Str. 66S	56
Figure 3-30. Section of Str. 66C before restoration	57
Figure 3-31. Excavated superstructure of Str. 66S	58
Figure 3-32. Schematic plan of Str. 66S	59
Figure 3-33. Room 1, Str. 66S during excavation	59
Figure 3-34. Interior of Room 2, Str. 66S	60
Figure 3-35. Room 3 Str. 66S after restoration showing niche in bench face and cist in the NE corner	60
Figure 3-36. Reconstructed cross-section of Str. 66S	61
Figure 3-37. Fallen vault stones and debris in Room 1, Str. 66S	61
Figure 3-38. Str. 66N after reconstruction	62
Figure 3-39. Schematic plan of Str. 66N	62
Figure 3-40. Section through Str. 66N before reconstruction	63
Figure 3-41. Offset of rear walls of Strs. 66C and 66N	63
Figure 3-42. Northeast corner of Str. 66N after reconstruction	63
Figure 3-43. Circular altar in corridor between Str. 66C and 66N	64
Figure 3-44. Str. 66N during excavation	64
Figure 3-45. Reconstructed cross-section of Str. 66N. The thatch roof is hypothetical	65
Figure 3-46. Schematic plan of Str. 66 buildings. Benches are shown grey	65
Figure 3-47. Elevation of north wall of Str. 67	66
Figure 3-48. The Str. 66 complex seen from the southwest	68
Figure 3-49. Schematic reconstructions of the Str. 66 façades	69
Figure 3-50. Widmer's trenches in the Str. 66 complex	72
Figure 3-51. Wall fragment of Str. 66C-sub revealed in Widmer's tunnel through the front stairway	73
Figure 3-52. Corner of early building beneath south talud of Str. 66C	73
Figure 3-53. Widmer's trench through Str. 66C, looking west	74
Figure 3-54. Surlo vessel in tunnel fill	74
Figure 3-55. Fragments of early construction (Str. 66N-1)	75
Figure 3-56. Early building fragments beneath the Str. 66 complex	76

Chapter Four

Figure 4-1. Tenoned sculpture elements from 66S	78
Figure 4-2. Location of Skyband bench in Str. 66C	79
Figure 4-3. The Skyband bench after excavation	80
Figure 4-4. Drawing and photo of the bench. Drawing by Barbara Flash	81
Figure 4-5. Small bench-like stone object from rural residence	82
Figure 4-6. The 10K-4 bench or throne	83
Figure 4-7. The Harvard bench. Image courtesy of Gordon Willey	83
Figure 4-8. Supports on the right end of the Harvard bench. Image courtesy of Gordon Willey	84
Figure 4-9. Construction details of the Skyband Bench	86
Figure 4-10. The south plinth of the bench and its joint with the Sky-band bench	86
Figure 4-11. Panels A and I	88
Figure 4-12. Panels B, E, H	89
Figure 4-13. Str. 18 mask	89
Figure 4-14. Central element of the Skyband bench	89
Figure 4-15. Panel C	90
Figure 4-16. Panel D	90
Figure 4-17. Panel F	91
Figure 4-18. Panel G	91
Figure 4-19. Venus figure from Str. 22	91
Figure 4-20. Skyband bench as exhibited in Copán Sculpture Museum	92
Figure 4-21. Red paint on central niche of bench	93

Figure 4-22. Two bacab supports	93
Figure 4-23. The four bench supports.....	94
Figure 4-24. Jaguar tenon sculpture from Str. 9N-81.....	97
Figure 4-25. Plans of Las Sepulturas structures with carved benches.....	98

Chapter Five

Figure 5-1. Fallen sculptural elements on grid squares	101
Figure 5-2. Field map of distribution of sculpture elements around Str. 66S.....	101
Figure 5-3. Sculpture fall patterns around 66C and 66S.....	102
Figure 5-4. Photographed sculpture element, by B. Fash	102
Figure 5-5. Eccentric flint elements	103
Figure 5-6. Rope figure	103
Figure 5-7. Reconstructed west façade of Str. 66C	104
Figure 5-8. Façade of Str. 66S as reconstructed in Copán Sculpture Museum.....	105
Figure 5-9. Roof elements on Str. 66S	105
Figure 5-10. Reconstruction of mask element from Str. 66S	106
Figure 5-11. Scribe sculpture from Str. 9N-82-sub.....	106
Figure 5-12. Sculpture above doorway of Str. 66S.....	107
Figure 5-13. Young lord images	107
Figure 5-14. K'atun lord image.....	107
Figure 5-15. Unfinished stela from Group 9M-22A. Photo courtesy of James Sheehy	112
Figure 5-16. Bench glyph from Abrams's replication experiments	112

Chapter Six

Figure 6-1. The ancillary buildings after clearing.....	116
Figure 6-2. Field plan of the ancillary buildings	117
Figure 6-3. Excavated ancillary buildings superimposed on the grid	118
Figure 6-4. Schematic plan of excavated ancillary buildings.....	118
Figure 6-5. Strs. 51C and 51S during excavation	119
Figure 6-6. Wall-base of Str. 50 and adjacent plaza floor	119
Figure 6-7. Rear substructure wall of Str. 51S.....	120
Figure 6-8. Strs. 51C and 51S superimposed on grid	121
Figure 6-9. Trench profile, rear of Str. 51S.....	121
Figure 6-10. Str. 51S after excavation.....	122
Figure 6-11. Str. 51C after excavation, superimposed on grid	123
Figure 6-12. Strs. 51C and 51S after excavation.....	124
Figure 6-13. Str. 50 with superimposed grid.....	125
Figure 6-14. Str 50 restored, viewed from its west end.....	125
Figure 6-15. Schematic plans of the Str. 66 complex and the ancillary buildings	127
Figure 6-16. Isometric reconstruction of Str. 66 complex and ancillary buildings	127
Figure 6-17. Profile of trench to rear of Str. 66S.....	130

Chapter Seven

Figure 7-1. Harvard map showing Operation 63 buildings.....	135
Figure 7-2. Causeway building shown on lidar image	135
Figure 7-3. Contour map showing locations of Operation 63 trenches	136
Figure 7-4. Str. 58 cleared of vegetation	137
Figure 7-5. Small ancillary building cleared of vegetation.....	137
Figure 7-6. Cleared southwest corner of Str. 1	139
Figure 7-7. Causeway Building trenches.....	140
Figure 7-8. Profile, east wall Trench 2.....	140
Figure 7-10. East wall of Str. 1 of Trench 3	141
Figure 7-9. Profile, north wall of Trench 2.....	141

Figure 7-11. Profile, north wall of Trench 2	142
Figure 7-12. Profile, north wall of Trench 4	143
Figure 7-13. Profile, north wall of Trench 5	144
Figure 7-14. Profile, east wall of Trench 5, Op. 63	144
Figure 7-15. Schematic section of the Causeway Building	145
Figure 7-16. Plan of Trench 10	145
Figure 7-17. Trench 7, showing part of the north wall of Str. 46	146
Figure 7-18. Profile, south wall, Trench 7	147
Figure 7-19. Plan of Trench 7, Feature 1	147
Figure 7-20. Trench 14, showing steps (left) and patio floor (right)	148
Figure 7-21. Schematic plan of Causeway Building	149
Figure 7-22. Cleared wall lines of the Causeway Building	150
Figure 7-23. Profile, north wall, Trench 1	151
Figure 7-24. Profile, South wall, Trench 8	152
Figure 7-25. Plan of Trench 8	152
Figure 7-26. Rear wall of Trench 11 and Feature 4	153
Figure 7-27. Profile, north wall, Trench 9	154
Figure 7-28. Profile, east wall, Trench 12	154
Figure 7-29. Trench 16 and Feature 6	155
Figure 7-30. Profile, west wall, Trench 13	155
Figure 7-31. Profile, north wall, Trench 15	156
Figure 7-32. Profile, east wall, Trench 15	156
Figure 7-33. Feature 7, Trench 15	157
Figure 7-34. Profile, east wall of Trench 18	158
Figure 7-35. Plan of Trench 18	158
Figure 7-36. Profile, north wall, Trench 19	159
Figure 7-37. Profile, east wall, Trench 17	160
Figure 7-38. Profile, east wall, Trench 17, Op. 63	160
Figure 7-39. Lidar image of Group 8N-11 and Str. 9M-101	162
Figure 7-40. Field sketch of possible stratigraphic deposits at 8N-11	163
Figure 7-41. Deep pit in Plaza A, Group 9N-8	164
Figure 7-42. Comparative scale of Str. 66 complex and the causeway Building	166

Chapter Eight

Figure 8-1. Locations of features and burials at Str. 66 buildings	170
Figure 8-2. Features associated with the Op. 50 ancillary buildings	171
Figure 8-3. Feature 3, Str. 51S	172
Figure 8-4. Feature 21 capstones	174
Figure 8-5. Feature 21 and talud	174
Figure 8-6. Feature 35, showing the slot that presumably was used to haft the object	175
Figure 8-7. Cached objects near Feature 36	175
Figure 8-8. Cut human tibia	175
Figure 8-9. Feature 37 cache. The oolite fragment is on the lower right	175
Figure 8-10. Plan of Feature 38	176
Figure 8-11. Copador vessel, Feature 38	176
Figure 8-12. Rim of clay funnel beneath the south talud of Str. 66C	176
Figure 8-13. Feature 40	177
Figure 8-14. Feature 42	177
Figure 8-15. Pearl oyster pendant	177
Figure 8-16. Excavating Feature 9	178
Figure 8-17. Plan of Feature 9	178
Figure 8-18. Plan of Feature 12	179
Figure 8-19. Map showing locations of burials in database	181
Figure 8-20. Histogram of burial locations	182

Figure 8-21. Histogram of site types associated with burials.....	182
Figure 8-22. Histogram of relationship of burials to buildings.....	183
Figure 8-23. Distribution of grave types	184
Figure 8-24. Burial orientation	184
Figure 8-25. Burials by age category	185
Figure 8-26. Body positions by time phase	185
Figure 8-27. Ceramic associations among burials.....	186
Figure 8-28. Numbers of ceramics in association with burials.....	186
Figure 8-29. Locations of burial trenches and burials around the ancillary buildings	188
Figure 8-30. Locations of burials around the Str. 66 complex.....	188
Figure 8-31. Calibrated radiocarbon dates for two burials in Str. 70	189
Figure 8-32. Plan of Burial 2	190
Figure 8-33. Plan of Burial 4 cist	190
Figure 8-34. Profile of Burial 5 cist	191
Figure 8-35. Burial 6.....	192
Figure 8-36. Burial 9.....	192
Figure 8-37. Ear flares with Burial 9 (Feature 23), but possibly associated with Burial 11a.....	192
Figure 8-38. Capstones of Burial 11 (a) and burial (b)	193
Figure 8-39. Burial 12 a.....	193
Figure 8-40. Burial 12 b.....	193
Figure 8-41. Capstones (left) and skeleton (right), Burial 15 (Feature 32)	194
Figure 8-42. Burial 16.....	195
Figure 8-43. Burial 17.....	195
Figure 8-44. Burial 19.....	195
Figure 8-45. Burial 21.....	195
Figure 8-46. Surlo bottle found with Burial 21	196
Figure 8-47. Rank ordered mortuary scores	201
Figure 8-48. Distribution of jade in the mortuary scoring	201

Chapter Nine

Figure 9-1. Obsidian core	224
Figure 9-2. Ratio of Fine to Utilitarian Ceramic Types.....	227

Chapter Eleven

Figure 11-1. Histogram of all hydration dates.....	252
Figure 11-2. Date distribution for rural sites	253
Figure 11-3. Dates before AD 950	254
Figure 11-4. Random scatter of dates	258
Figure 11-5. Dates from elite-rank sites.....	258
Figure 11-6. Date spans for elite-rank sites.....	260
Figure 11-7. Dates from Group 9N-8.....	261
Figure 11-8. Dates from Group 10L-2	262
Figure 11-9. Dates from Groups 8L-10 and 8L-12	263
Figure 11-10. Dates from Group 9J-5	264
Figure 11-11. Dates from Group 10L-18	265
Figure 11-12. Dates from Group 10E-6	266
Figure 11-13. Burial and Pabellon vessel from Group 11E-2 (courtesy of Stephen Whittington)	266
Figure 11-14. Dates from Group 9M-22A	267
Figure 11-15. Dates from Group 5O-1.....	267
Figure 11-16. Dates from Groups 14F-1 and 12F-3	268
Figure 11-17. Dates from Group 6A-4-1	269
Figure 11-18. Histogram of dates shown in Fig. 11-6.....	270
Figure 11-19. Dates associated with Op. 50 buildings.....	271
Figure 11-20. Dates from deep midden near Plaza A, Group 9N-8.....	276

Figure 11-21. Speleothem data and associated Copán dates and dynastic sequence.....	282
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Chapter Twelve

Figure 12-1. Locations of the named ootoots (red) and the two without names (blue).....	293
---	-----

Figure 12-2. Maca's quincunx model (causeways shown in blue). Adapted from Maca 2006, Fig. 4	296
--	-----

Appendix A

Figure A-1. C14 dates from burials	306
--	-----

Figure A-2. Archaeomagnetic dates superimposed on C14 dates.....	307
--	-----

Appendix B

Appendix B Figures 1-59. Special artifacts.....	310
---	-----

List of Tables

Preface

Table P-1. The Copán ceramic sequence (after Viel 1993a, b)	xix
Table P-2. The Copán Dynastic sequence (mainly from Martin and Grube 2008)	xix

Chapter Two

Table 2-1. Hydration dates from Op. 14	27
--	----

Chapter Three

Table 3-1. Room and bench space in the Str. 66 complex	67
--	----

Chapter Six

Table 6-1. Room and bench space in the Str. 50-51 complex	126
---	-----

Chapter Seven

Table 7-1. Absolute mound heights.....	137
Table 7-2. Distribution of Op. 63 trenches.....	138
Table 7-3. Features found in Op. 63 trenches.....	139
Table 7-4. Identifiable types/wares from lots associated with the Causeway Building	169

Chapter Eight

Table 8-1. 8N-11 grave types.....	197
Table 8-2. 8N-11 burial positions.....	197
Table 8-3. Simulated mortality outputs, long occupation.....	198
Table 8-4. Simulated mortality outputs, short occupation	198
Table 8-5. Occurrences of skeletal alterations recorded in the database.....	200

Chapter Nine

Table 9-1. Proportions of Coner complex rims vs. pre-Coner rims.1.....	210
Table 9-2. Rim sherd percentages from Habig (1994: 35).....	211
Table 9-3. Op. 50 Phase 1 identifiable types/wares from all ceramic phases	216
Table 9-4. Op. 50 Phase 2 identifiable types/wares from all ceramic phases	216
Table 9-5. Identifiable ceramic forms from all phases, Operation 50 Phase 1.....	217
Table 9-6. Identifiable ceramic forms from all phases, Operation 50 Phase 2.....	217
Table 9-7. Common utilitarian, fine, and imported types or wares, all ceramic phases	217
Table 9-8. Gross Op. 50 sherd frequencies.....	218
Table 9-9. Identifiable sherds per ceramic phase, Op. 50 Phase 1	218
Table 9-10. Identifiable sherds per ceramic phase, Op. 50 Phase 2	218
Table 9-11. Percentages of Op. 50 rims associated with specific structures	219
Table 9-12. Proportions of ceramic rim forms related to structures	219
Table 9-13. Gross Op. 50 chronological rim breakdown	219
Table 9-14. Reliable context Op. 63 sherds, all periods	220
Table 9-15. Identifiable Op. 63 sherds broken down by phase	220
Table 9-16. Functional Op. 63 proportions based on body forms.....	220
Table 9-17. Imported types/wares	220
Table 9-18. Sherd totals from all eight rural operations.....	221
Table 9-19. Phasing of identifiable rural site rim sherds.....	221
Table 9-20. Rural site rims from fine and utilitarian ware vessels.....	221
Table 9-21. Proportions of rims by general functions.....	221
Table 9-22. Proportions of fine ware rims.....	222

Table 9-23. Basic obsidian breakdown, Op. 50 Phase 1.....	223
Table 9-24. Basic obsidian breakdown, Op. 63	223
Table 9-25. Obsidian artifacts in Op. 50 features as opposed to general contexts	223
Table 9-26. Obsidian from eight rural sites compared with that from 8N-11	224
Table 9-27. Chert from Ops. 50 and 63	225
Table 9-28. Database sites or operations used in this chapter and associated hydration dates.....	233

Chapter Ten

Table 10-1. Various versions of the Copán ceramic sequence	237
--	-----

Chapter Eleven

Table 11-1. Hydration date spans for all elite-rank sites with more than 10 samples.....	259
--	-----

Appendices

Table A-1. Wolfman's archaeomagnetic dates from Copán.....	308
Table B-1. Artifact Contexts.....	318

Dedicated to our Friend and Colleague William Scott Zeleznik

Preface

David Webster

Many years ago Dumbarton Oaks published *The House of the Bacabs*, a volume I edited (Webster 1989) that described excavations at a Late Classic Maya palace at Copán, Honduras.¹ “House” referred both to a single imposing elite structure and to the sprawling set of courtyard compounds that it dominated. Later, in 1990 and 1997, I directed projects that investigated the nearby elite-rank Group 8N-11, nicknamed the *Skyband Group* after a carved throne that we found in one of its principal buildings. What follows is a companion piece to *The House of the Bacabs*, but with a more comprehensive presentation of our Skyband operations. Its main objective is to understand the character and functions of the Skyband complex and how they relate to Copán’s culture history, built environment, and sociopolitical organization. It also provides updated perspectives about the House of the Bacabs and some predictions about what future research will reveal concerning both elite and non-elite occupation of the valley. Originally intended as a short report, the volume has expanded into a long rumination on many Copán and Maya issues, including research history, methodology, chronology, and collapse, while retaining at its core our research at the Skyband Group. In short, it is an old-fashioned monograph of the kind Stephen Houston and Thomas Garrison (2018: Preface) lamented is no longer a traditional product of Maya archaeology.

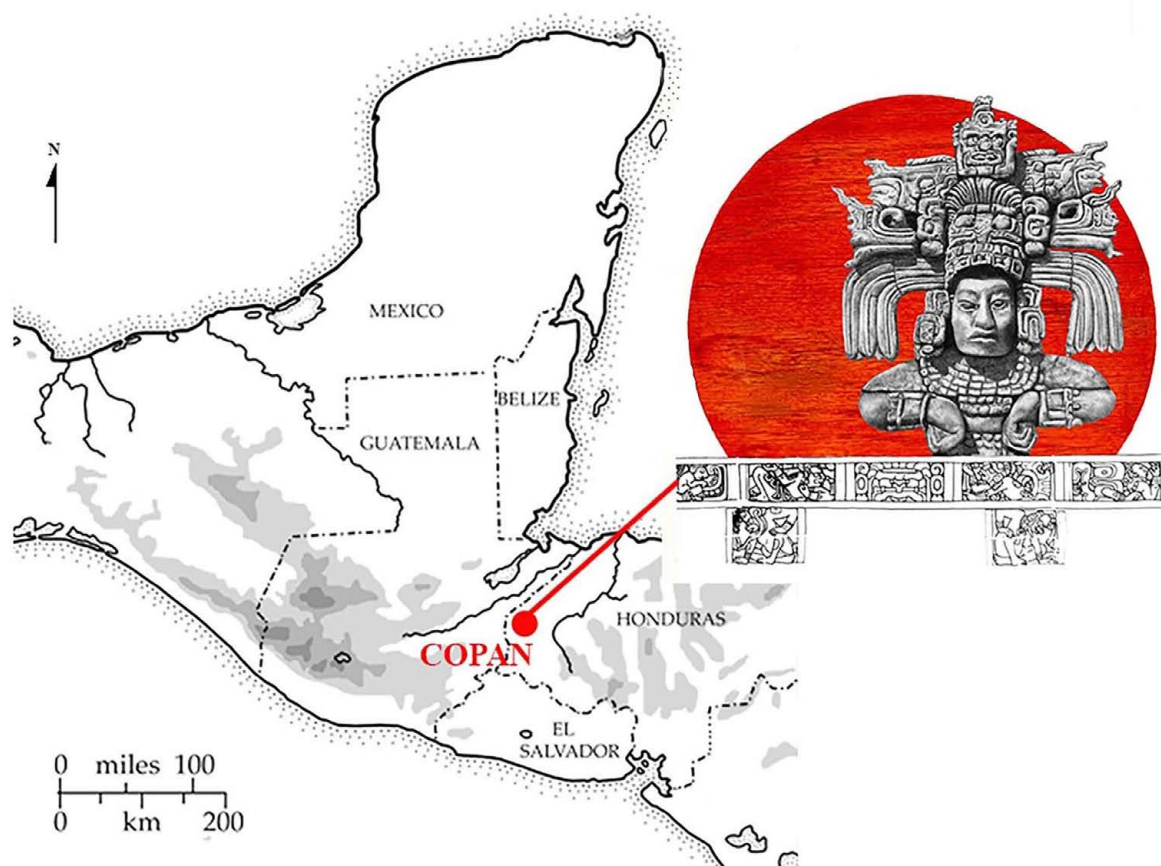


Figure P-1. Location of Copán and the Skyband Group.

¹ “Bakab” is the newer spelling; I use it throughout except when referring to the DO publication or specifically to Str. 9N-8-82C.

We have used the Skyband nickname in publications since 1993 but it might be superseded by events. A Chinese project directed by Li Winwei and Jorge Ramos began new research at the site in 2016 in cooperation with the Instituto Hondureño de Antropología e Historia and the Institute of Archaeology, Chinese Academy of Social Sciences (Li and Ramos 2017; Yang and Qu 2017; Li 2018, 2019; Chen *et al.* 2021). As of this writing I know only a little about their impressive discoveries, but I have patched whatever information I can into the following descriptions and interpretations. Except for a few comments about the Chinese work, what follows is accordingly focused on our Penn State University explorations of parts of the Group 8N-11 complex. Our research in some respects resembled and foreshadowed that of the Chinese, but in other ways was quite different.

Sub-royal elite identities are best attested by inscriptions in the western Maya Lowlands, but nowhere do we have better information about elite residences than at Copán. Architectural scale and stratigraphy, burials, inscriptions, sculpture, artifacts, and chronometric dates all indicate an apex of noble power and assertion in the mid-to late 8th century. Although nobles and/or titled people were present earlier, the real florescence of this important social component strengthened after the inglorious demise of the 13th ruler in AD 738, and Group 8N-11 is one of the most impressive groups in Copán's densely settled urban core. Whether lords prospered with the approval of later kings, with their grudging acceptance, or in competition with them, is unknown. The prevailing view emphasizes royal/elite competition and status rivalry that weakened the royal dynasty shortly before the collapse (see Sanders 1989: 102-103; Webster, Freter and Gonlin 1998; Webster 2005; Fash and Fash 1990; Fash 1991; Barbara Fash *et al.* 1992). Just how the Skyband Group might accord (or not) with this perspective is examined in the concluding chapter.

I considered three titles for this volume. *House of the Skyband Lord* had a dramatic cadence and conjured up the image of a titled person sitting on a celestial throne while overlooking his palatial household.² It seemed a bit of a stretch, though, because our research turned up no inscriptions that named such a person, nor any title, nor did we find a burial that might contain him.³ *Skyband House* was more cautious and better echoed our “House of the Bacabs” volume. Whether or not we could identify a particular noble person, at least what we found was consistent with an elite-level domestic establishment as we knew them from other sites. But unlike some of its neighbors the Skyband group has no inscriptions naming any building as a “dwelling” or “house” in Maya emic terms (*otoot* or *na*). The more I wrote, the less certain I was that 8N-11 was in fact functionally equivalent to Group 9N-8 or other palatial residences we had explored, especially in the absence of the *otoot* glyph that does appear at the House of the Bacabs.⁴ I settled on *The Skyband Group*, a prosaic but innocuously neutral hedge that best captures my current thoughts about how to interpret Group 8N-11 and some other Copán elite sites. It signals my ambivalence of about two alternatives that I call the “default” vs. the “something else” models that are explored in Chapter 12. During PAC II we regarded Group 8N-11 as probably another of the many elite residences in the Las Sepulturas enclave – at its core a palatial dwelling. Even as early as 1983 however, we had misgivings about this interpretation, as will become clear in Chapter 2. The default palace/residential presumption that dominates the following discussion might prove to be incorrect, especially as new information from the Chinese project is published.

Like *The House of the Bacabs*, this volume provides detailed descriptions of the architecture we exposed at the Skyband Group, its complex sculptural programs, and site chronology and its implications. Many kinds of information not contained in the *Bacab* volume, including overviews of burials, artifacts, and features, are also included. I present an unusually long and detailed analysis of chronology. The Skyband Group has the largest number of chronometric dates (169) associated with any elite residence in the Maya Lowlands apart from its neighbor Group 9N-8. One hundred and sixty-seven of these are obsidian hydration dates generated by AnnCorinne Freter, supplemented by two recent radiocarbon dates provided by Douglas Kennett, which have important implications for the social, political, and population collapse at Copán and at other centers and polities in the southern Maya lowlands. Because of the controversy surrounding application of the hydration method, I break the discussion into the traditional *short chronology* in Chapter 10 and the alternative *long chronology* in Chapter 11. Readers can make up their own minds about which they prefer.

² I recognize the sexist presumption in my use of pronouns here. There were powerful, titled, sub-royal Maya women elsewhere, but I know of none at Copán, although noble ladies are named in inscriptions. One such person, as described below, is identified as the mother of a titled person on the hieroglyphic bench we found in Group 9N-8.

³ Unless he is in one of the tombs found by the Chinese. Even so, they seem not to have found inscriptions with names or titles either.

⁴ See Chapter 12 for extended discussion of these terms. Nor is there any evidence that 8N-11 is the center of a larger corporate “house” in the Levi-Straussian sense.

PREFACE

We worked at the Skyband Group with the permission and cooperation of the Instituto Hondureño de Antropología e Historia and with generous funding from the Annenberg/CPB Project and the Pennsylvania State University. Our 1990 effort was an outgrowth of three previous projects: Harvard University's between 1975 and 1977, Proyecto Arqueológico Copán Fase I (PAC I) directed by Claude Baudez between 1978 and 1980, and the Fase II Project (PAC II) directed by William T. Sanders and me between 1980 and 1984 (Sanders (1986-1990)). Our 1990 season coincided with production of the Annenberg/CPB Foundation/Penn State University *Out of the Past* television series, also directed by Sanders and me, that provided funds for excavation and restoration.⁵ The 1990 research raised new questions that prompted our second NSF-funded field season in 1997.⁶ These two sets of excavations have enlarged our Copán settlement sample, rendered Las Sepulturas richer by the addition of impressively restored buildings and sculpture, and enhanced the visibility of Copán as an archaeological site and tourist attraction. Ours was a fortunate case of being able to carry out sound and essential research while enjoying the benefits of restoration and media exposure. Several *Out of the Past* video programs feature our investigations at 8N-11, including the discovery of the Skyband bench. Probably no excavations of palace-scale structures in the Maya Lowlands are so well-documented on film.⁷

We produced a lengthy preliminary report for the Annenberg/CPB Project and the Instituto Hondureño de Antropología e Historia (Webster *et al.* 1992) and final reports to the Hondurans and to NSF on the 1997 season. Only brief summaries of our excavations and sculpture have otherwise been formally published (Webster *et al.* 1998; Webster *et al.* 2000; Barbara Fash 2011). Hasso Hohmann (1995) unfortunately lacked sufficient information to include our 1990 work in his comprehensive analysis of Las Sepulturas architecture. Shannon Plank (2004) featured Group 8N-11 in her textual and iconographic study of elite Maya otoot buildings.

This is not an edited volume like *The House of the Bacabs*, but one that I mainly wrote in collaboration with several colleagues, so some chapters accordingly have two narrative “voices”. Readers will encounter abrupt and disconcerting shifts between the first person singular (I) and plural (we). In chapters with multiple authors I often use the first person singular to avoiding cumbersome circumlocutions such as “the senior author”. These shifts are appropriate because I wrote (or sometimes rewrote) most of the prose and because as project director I heavily interject my own interpretations and comments, with which other contributors might not agree, especially in Chapter 12. The alternative “we” usage is only fair because, authorship aside, my role is that of manager, compiler, coordinator, and editor given the communal effort of our research. I planned the structure and formatting of the monograph relying on earlier publications, reports, notes, and personal communications contributed by my colleagues. I also chose and prepared most of the illustrations.

Chapters 3, 5, 7, 8, and 9 are true joint efforts and so have listed co-authors, although most of the prose and many of the interpretations are mine. Except for Barbara Fash, with whom I co-wrote Chapter 5, other listed authors were Penn State-related participants in our research. We contracted Fash as a paid consultant to analyze, illustrate, and curate the abundant sculpture from the 1990 excavations. Her salary was generously provided by the Penn State University Graduate School and her long technical report, which includes many illustrations, is on file at the Penn State University Anthropology Department and at the Instituto Hondureño de Antropología e Historia. Her short overview of the sculpture, now somewhat dated, was included in our 1992 preliminary report. Fash (2011) wrote a more recent summary, and thanks to her efforts the reconstructed façade of one of our buildings is displayed in the Copán Sculpture Museum.

Chapters 8 and 9 depend heavily on work done by William Scott Zeleznik, a graduate student in our anthropology program. Scott (as he was invariably called) was indefatigable in mapping, excavation, general record-keeping, and the analysis of burials and artifacts during and after the two main field seasons in 1990 and 1997. His dissertation was to focus on Copán's political and social organization, particularly the role of Copán's elites, and Group 8N-11 was intended as a centerpiece of his presentation. Until about 2007 Scott worked vigorously on data analysis and produced extremely useful catalogues and statistical overviews of ceramics, lithics, features, burials, site locations, and other basic information pertaining not only to 8N-11 but to other Copán projects. He also submitted preliminary

⁵ Our main focus for the video project 1n 1990 was excavation of an elite residence. We also needed footage of the of small rural sites for contrast. Richard Paine accordingly excavated small structures in the Petapilla region of Copan (Op. 52). His work is included in our 1992 report and videos, but is not considered here. Coincidentally, the Tulane University excavations in Group 10L-2 also began during our 1990 season.

⁶ Residential Elite Compound Excavation at Copán. National Science Foundation Grant SBR-9514267. David Webster PI, 1997.

⁷ A huge amount of archived footage from this project never appeared in the finished video programs. The *Out of the Past* telecourse was adopted by many archaeologists for their classes and it continuously streamed on television between 1993 and 2018. Today it remains available on YouTube.

drafts of seven dissertation chapters to me and to William Sanders. Scott became seriously ill shortly thereafter and for this and other personal reasons he was unable to finish his dissertation. I held off writing this monograph for many years because I always hoped he would come back to it. Alas, this was not to be --- Scott died prematurely in 2017. His widow, Prof. Nancy Burns (Warren E. Miller Collegiate Professor of Political Science at the University of Michigan) graciously sent me digitized copies of additional materials Scott had produced, and I have made extensive use of his various notes, images, tables, and catalogues throughout this volume, which we dedicate to him. I reference his unpublished dissertation chapters in the bibliography and in text references as Zeleznik (n.d.) and list him as co-author of the burial and artifact discussions in Chapters 8 and 9. David Reed, an old Copán hand and a close friend of Scott's, contributed heavily to constructing and maintaining our Copán computer database and the spatial information in the accompanying GIS, so he is also co-author of these two chapters. Along with Scott, David made important analyses of Copán burials, including those from Group 8N-11. Penn State graduates Randolph Widmer and Rebecca Storey (both faculty at the University of Houston) followed up our main 1990 field season by trenching in and around the main 8N-11 buildings as they were reconstructed by Rudy Larios and his crew. Their many insights and discoveries are discussed in Chapters 3, and Storey was instrumental in the burial analysis reviewed in Chapter 8, so they are co-authors of both. My role of project director and senior author is most obtrusive in Chapter 12. The conclusions discussed there are my own and my co-authors might not agree with them.

Many people provided other valuable assistance. So abundant was the façade sculpture that we hired Melvin Virgilio Espinoza to assist with field recording during the 1990 season. AnnCorinne Freter generated the obsidian hydration dates presented in Chapter 11, and Elliot Abrams kindly provided estimates of construction costs. Others who participated in our research included Amy Kovak, Richard Paine, Philip Scarr, and Helen Warren. Pamela Ryan made computer reconstructions of some of the architecture, and Laura Stelson made the chronology charts in Appendix A. Evelyn Ratray and her crew of Mexican students explored the plaza of 8N-11 in 1982 as reviewed in Chapter 2. Nancy Gonlin read the manuscript and her editing and other suggestions are much appreciated, as are those of Eric Taladoire, who flagged many small errors.

We are indebted to the Instituto Hondureño de Antropología e Historia, and especially to its local representative, Oscar Cruz, who greatly facilitated our fieldwork. The late Arturo Sandoval, who worked with us throughout PAC II, was indispensable to our field research, carrying on an archaeological tradition in his family that began with his father and the Carnegie Institution. We hired Guillermo Murcia to do a breakdown of our ceramic collections into the standard categories established by Rene Viel, who also provided much valuable advice. Finally, our crews of Honduran field workers performed with their usual cheerfulness and professionalism. One of the great joys of working at Copán was returning for one field season after another to find these splendid people – who eventually became old friends and comrades – ready and eager to work and to lend their own archaeological expertise, often garnered over many years, to our efforts. I name them below.

Rudy Larios Villalta, the dean of Maya architectural conservators, worked with us during the 1990 excavations. He and his skilled team stabilized walls and other architectural elements and quickly produced the beautifully restored set of buildings at Group 8N-11 shown in many of the following photographs. Stonemason Orlando Lara helped to record and consolidate the architectural remains before restoration even as the main field season proceeded. All of us who worked at the Skyband Group benefitted immensely from the comments and suggestions of Prof. William T. Sanders, who remained closely involved in the succession of Penn State projects at Copán after PAC II ended. Bill unfortunately died in 2008 and did not see this monograph, but his influence permeates our work.

I make extensive use of chapter footnotes and ancillary material found in appendices. This information supplements the main text and conveys many important details and asides, particularly about Copán archaeology, which would otherwise clutter up the narrative. Non-English words (mainly Spanish or Maya) are italicized the first time they appear and thereafter are rendered in plain text. Tables below show the standard ceramic and dynastic sequences used throughout the monograph, although I note various refinements during discussion of specific issues, and I realize that both might undergo significant future modifications.

This is an illustration-heavy volume. Most of the drawings, photos, tables, graphs etc., derive directly or indirectly from our own PAC II and later Penn State projects. I digitized or otherwise made or altered most of them, many provided by co-authors such as Widmer, Storey, Reed, and Barbara Fash, to fit the formats of the discussions

PREFACE

and the publication. Those responsible for these illustrations are usually not credited individually. Uncredited illustrations should simply be regarded as products of our project. A few others, such as the map of the Copán urban core shown in Fig. 1-1, have been used by me and by others so often that they have become standards in the field, and they are similarly uncredited. Sources of illustrations provided by people not directly part of our projects are given in the image or in an footnote. Jennifer Taschek-Ball, whose wonderful drawings grace so much of the Maya literature, supplied the superb Young Lord sculpture that appears on the cover and in this preface.

Table P-1. The Copán ceramic sequence (after Viel 1993a, b).⁸

General Mesoamerican Periods	Copán Ceramic Complexes	Calendar Dates of Complexes
Postclassic	Ejar 2	AD 950-1000
Epiclassic	Coner/Ejar 1	AD 800-950
Late Classic/Epiclassic	Coner	AD 600-800
Middle Classic	Acbi	AD 400-600
Early Classic	Bijac	AD 100-400
Late Preclassic	Chabij	300 BC- AD 100
Middle Preclassic	Uir Phase (with Gordon funerary sub-complex)	900-300 BC
Early Preclassic	Rayo	1400-900 BC ⁹

Table P-2. The Copán Dynastic sequence (mainly from Martin and Grube 2008).

Succession Order	Name and/or Nickname	Dates (all AD)
1	K'inich Yax K'uk' Mo'	426-c. 437
2	K'inich Popol Hol	About 437
3	K'ahk'??-Ajaw? (Ruler 3)	?
4	K'altuun Hix (or Tuun K'ab Hix*)	?
5	Yu-?(ku?)-a (Ruler 5)	?
6	Muyal?-jol? (Ruler 6)	?
7	Bahlam Nehn (Waterlily Jaguar)	524-532
8	Wi' Yohl K'inich (Ruler 8)	532- 551
9	Sak-lu (Ruler 9)	551-553
10	Tzi?-Bahlam-ma (Moon Jaguar)	553-578
11	Butz Chan	578-628
12	K'ahk Uti'Witz' K'awiil (Smoke Imix)	628-695
13	Waxaklajuun Ubaah K'awiil	695-738
14	K'ahk'Joplaj Chan K'awiil (Smoke Monkey)	738-749
15	K'ahk'Yipyaj Chan K'awiil (Smoke Shell)	749-761
16	Yax Pasaj Chan Yopaat (Yopaat Dawns Anew in the Sky). ¹⁰	763-c. 820
Pretender?	Ukit Took'	822 ¹¹

*This name is used by Law *et al.* (2013).

⁸ Table 1 summarizes the general sequence published by Rene Viel (1983, 1993), who has been principal ceramist to various Copán projects since the 1970s. Later publications such as Willey *et al.* (1994), Maca (2002), Bill (1997), and Bill, Canuto, and Sharer (2004) give slightly modified versions of this sequence. Sharer, Canuto, and Bell (2011) following an earlier suggestion by Viel, call the interval of AD 100-400 the Protoclassic rather than the Early Classic. Bill (1997) subdivided the earlier part of the Coner phase into shorter segments based on the ceramic collections at Group 10L-2. Katherine Miller (2014: Table 1) has a variant chronology that I briefly discuss in Chapter 10. I have not yet seen a well-published, inclusive new sequence that integrates ceramic data from all the projects that followed ours and that might be used as a standard. Chapters 9-11 provide detailed discussion of the ever-evolving Copán ceramic sequence, its several variants, and its culture-historical implications.

⁹ After publication of his 1993 article Viel came the conclusion that the Rayo complex began at least by 1400 BC (personal communication to Webster in 1997) and I use that date here. William Fash (1991:66) reported a calibrated radiocarbon date of 1390±60 BC for Rayo/Uir deposits.

¹⁰ This king's name is given with variable spellings. Here I have used the most recent one I can find – see Taube and Zender (2009: 186).

¹¹ The identity of this shadowy individual is still controversial. Most epigraphers think he was a late pretender or unsuccessful candidate for the throne, but see Baudez (1994: 8) for other possibilities. Yax Pasaj Chan Yopaat is last attested at Quiriguá, which he apparently visited in AD 810 (Looper 2007: 38). He was the last well-attested dynastic ruler and he probably died not long after that date. In the absence of a firm death date for him, we can only say that dynastic rule ended sometime between AD 800 and 822, and probably earlier rather than later in that interval.

Field Personnel

Martín Guerra
José (Chepe) Pinto
Meliton Ramírez
Martin García
Domingo Vasquez García
Faustino Raymundo Carranza
Vicente García

Jorge Aldana Carranza
Nicolos Perez
Gonzalo Manchame
Jesus Perez
Julio Perez Amador
Silvestre Ramírez

Jose Perez Amador
Cirilo Cardona
Natalio Raymundo Canan
Manuelon Hernández
Vicente Aldana Carranza
Francisco Ramirez

Chapter One

Maya Places and Elites

David Webster

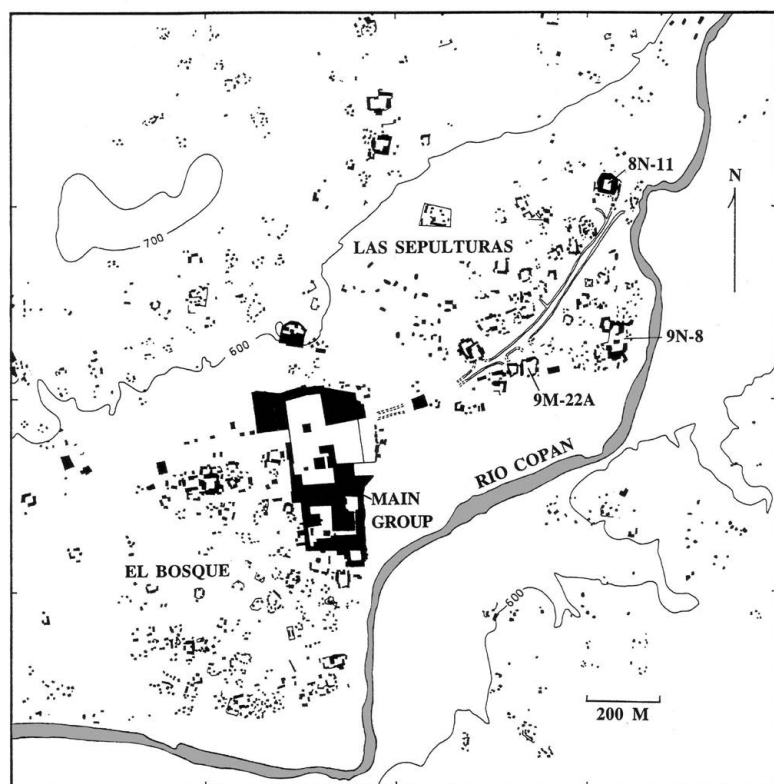


Figure 1-1. Map of Copán urban core.

Palaces and courts are now so conspicuous in the Maya literature that it is easy to forget how recently archaeologists began to investigate them systematically. When I began my career we knew about a few kings and their palaces, but practically nothing about the residences of non-royal elite people. There has since emerged a whole sub-genre that some Mayanists call “palatial archaeology” that focuses on such places (Arnauld, Michelet, and Nondédéo 2013: 469).¹ No site looms larger in this research tradition than Copán, Honduras. Between 1975 and 1977 Gordon Willey, along with his colleagues and students, conducted research there that included the mapping and excavation of impressive mound groups flanking Copán’s epicenter (Fig. 1-1), variously called the Main Center, the Principal Group, or the Main Group; I use the latter convention here. Today we understand the epicenter to be the regal-ritual/residential facility of the

royal dynasty at least since the early 5th century.² How we came to excavate Las Sepulturas Group 8N-11, nicknamed the Skyband Group, requires a bit of background beginning with Gordon Willey’s Harvard project (Willey, Leventhal, and Fash 1978; Leventhal 1979; Willey *et al.* 1994).³

¹ For overviews see Chase and Chase 1992; Inomata and Houston 2001; Hohmann 1998; Cuidad Ruiz *et al.* 2001; Sanders *et al.*, 2003; Christie 2003; Evans and Pillsbury 2004; Christie 2003; Christie and Sarro 2006; Elson and Covey 2006; Delvendahl 2008, 2010; Miller 2015). Shannon Plank (2004) provides an especially stimulating textual and cognitive analysis of Copán’s Las Sepulturas elite ootoot structures, including Groups 9N-8, 9M-18, and 8N-11. Palaces loom large in recent analyses and interpretations of Classic Maya monumental landscapes (Houck, Arroyo, and Powis 2020).

² There are many Classic Maya toponyms but none that unambiguously refers to a royal center or to a kingdom in some territorial sense that we understand. The term *ch'en* seems to mean “...the homes of kings and gods, which matter most in the Classic Maya political landscape” (Tokovinine: 2013: 38). Presumably this would be the Copán Main Group. The more inclusive expression *kab ch'en* might mean “...the holy grounds and the land, the polity” --- a landscape entity that always seems to be possessed by someone such as a ruler, and that *k'uhul kab* could refer to the specific domain of a “holy lord” (Tokovinine 2013: 36, 45). Just what such an entity might be on the Copán landscape is unclear. It could be the urban core dominated by the Main Group, but more probably it would be the 24 sq km Copán pocket that was so well delimited with inscribed monuments by the 12th ruler.

³ Groups 8N-11 and its neighbor 9N-8 were respectively designated CV68 and CV36 by the Harvard Project. A new system of numeration was adopted for the later PAC I mapping.

The Harvard Project

Wiley's main concern was the dense concentration of structures in the El Bosque and Las Sepulturas enclaves on the valley floor, respectively to the northeast and southwest of the Copán Main Group. All these together comprise what Wiley *et al.* (1994) called the Copán residential zone. I use instead the term "urban core" as a convenient heuristic label to partition settlement by topographic zones in the Copán pocket, and particularly by site density. Density apart, no specific "urban" connotations are implied (see Sanders and Webster 1988). Surface remains of more than 1000 ancient buildings are concentrated in these two enclaves that, along with the Main Group, cover an area of slightly less than one sq km. Settlement was originally greater than the map shows because much of Las Sepulturas has been eroded away by the river or buried by slope-wash. Alan Maca (2002, 2006, 2015) believes that sites on the northern foothills (*faldas*) of the Copán pocket should also be included in any definition of the settlement core of the polity. This idea, prefigured by William and Barbara Fash's interpretations of the expansion of valley floor settlement (Fash 1986: 92; Fash and Fash 1990: 28), seems sensible to me and relates to models of the urban core landscape reviewed in Chapter 12.⁴

One of the most insightful hypotheses of Wiley's project was that most architectural groups at Copán are the physical remains of ancient residences, and that these could be hierarchically classified in terms of their visible characteristics. A corollary assumption was that most groups of different scales, complexity, and elaboration represented residential remains of social units whose members had varied statuses, ranks, wealth, and political prominence. Archaeologists have since refined and modified the Harvard classification, recognizing that many other factors affected site scale, location, and configuration, including the time-period, duration and intensity of occupation, and possibly ethnicity.⁵ Although I and others for years have routinely referred to many Copán sites as *household* remains, households are cognitive social and economic formations that do not map easily onto architecture, as Shannon Plank (2004: 71) correctly insists. She restricts "residence" to places where ordinary subsistence behavior takes place, as opposed to "dwelling" (*otoot* in Maya) which can have larger meanings.⁶ While I believe that just such ordinary behaviors occurred at most of the residences we investigated, I use the term household sparingly.

Most important is the Harvard classification's predictive value for palace identification. On the one hand, most elite groups (Types 3 and 4 in the Harvard scheme) should yield unmistakable evidence of domestic activity in artifact assemblages, refuse patterns, use of structures and ambient spaces, burials, and architectural configurations. On the other hand, highly ranked groups should also exhibit distinctive features:

1. They should be internally more differentiated than commoner or quotidian residences because they had more varied and specialized functions. Certain mundane domestic activities might not be represented because they were carried out elsewhere by clients or lesser kin.⁷
2. The energy required to construct and maintain them should indicate levels of labor mobilization and expenditure (especially as measured by time inputs) far beyond that found in groups lower ranked groups (see Abrams 1994; Webster and Kirker 1995).
3. Architectural construction and embellishment should reflect elite control and deployment of political and religious symbols and the command of skilled labor – what some archaeologists call wasteful or costly signaling (Neiman 1997).
4. Elite rank groups might be associated with specialized forms of craft production or other economic behavior.
5. The most complex burials in these groups should be associated with elite status markers.

⁴ That is in etic and operational terms. It allows inclusion of Maca's own Group 9J-5, as well as two important sites tested by Wendy Ashmore (1991). Maca's spatial perspective accommodates a complex symbolic model of the Late Classic settlement zone following earlier suggestions by Ashmore and others. More about this issue in Chapter 12.

⁵ Harvard archaeologists correlated site size and character with rank at about the same time that J. Jefferson MacKinnon (1981) completed a sophisticated spatial analysis of Tikal settlement. MacKinnon came to the conclusion that the scale of Tikal residences and associated building materials were best explained by variations in occupational history rather than social rank. The possibility that the inhabitants of the Copán valley were non-Maya – more specifically Lenca – has long been entertained as reviewed in Chapters 9 and 12. Such ethnic diversity might have obvious implications for site patterning (e.g., see Sharer and Traxler 2006).

⁶ It also has the related sense of "container", in which something properly resides, "dwells", or is seated, such as *otoot* flasks for tobacco (Plank 2004: 221). Such places or objects are often "owned", as indicated by the Maya possessive *y-otoot*).

⁷ A complicating factor (Webster 2001) is that elite residential groups might lack evidence for certain basic residential activities that were disarticulated from the residential space. For example, maize might have been ground in politically dependent residences and brought to the elite residence, as it was in the case at some Aztec palaces.

6. Specific glyphic or iconographic evidence should provide direct insights into elite sociopolitical structure, offices, titles, and roles (although during the Harvard project archaeologists had far fewer insights about the sub-royal identities that have since become so informative).
7. Because elite people commanded abundant material resources and labor, as well as social, political, and ideological capital, many of their residences might show longer histories of occupation and/or more rapid expansion and modification than those of lesser folk. They might also be more vulnerable to rapid collapse and abandonment, or at least loss of elite activity.

Proyecto Arqueológico Copán Phase I and II Projects

The Harvard research provided impressive tests of these assumptions and began to shed light on the internal organization of Copán and other Maya polities.⁸ It was followed by Claude Baudéz's PAC I project between 1977 and 1980 (see Baudéz 1983). Both projects, but particularly the latter, overtly recognized that recovery, reconstruction, and analysis of inscriptions and iconography were essential to understanding Copán's sociopolitical organization and culture history. Elaborate embellishment, including façade sculpture and carved thrones, were among the diagnostic attributes of elite residential remains singled out by Willey and his colleagues. At Copán these attributes seem to be more commonly associated with elite residences than at other major Maya centers, although this might be a sampling bias because few have a comparably intense tradition of palace archaeology.⁹

Our Penn State PAC II project (1980-84) investigated several palatial sites in Las Sepulturas, including the sprawling Group 9N-8, the subject of *The House of the Bacabs*. What we found raised many issues and stimulated our two seasons of later research at the Skyband Group, which were direct extensions of the 9N-8 effort. We focused on the following questions:

1. Was the Skyband Group an elite residence (*otoot* -- "dwelling") like 9N-8 during its mature phase in the late 8th century?
2. What was its relationship to Copán's larger settlement patterns, and especially the Las Sepulturas causeway?
3. What happened at the Skyband Group as the polity collapsed, how long did it remain occupied, and by whom?
4. What does the history of the group and others like it tell us about the collapse of the Copán kingdom and its aftermath?

The first of these questions was most important because the sub-royal residence or palace explanation was the standard interpretation of most large Copán sites at the time. Much of what follows in this chapter is accordingly a nuanced and updated version of our *House of the Bacabs* book and other earlier analyses of Maya palaces. Revisiting them is necessary to link our old perspectives to newer and more pertinent information and interpretation. It turns out that the long delay between our work at 8N-11 and what we present here makes for a much richer overview because many new ideas about Copán have since emerged.

Classic Maya Elites

Three caveats are necessary here. First, it is difficult to define the concept of pre-modern "elites" because any complex society might have many different kinds of elite individuals, groups, or institutions, and because their identifying markers are frequently unknown or ambiguous. Here is a cross-cultural definition that I used in an earlier article on Copán:

⁸ Subsequent work has shown significant exceptions to the Harvard scheme. For example, the Rastrojon group was ranked Type 2 rank in the Harvard hierarchy, but two of its buildings were later found to have impressive sculpture (see B. Fash 2011: 164). The Copán sample of excavated elite sites is presently a bit top-heavy and centralized. Type 3 and 4 sites in the urban core have been particularly well-researched. Intensive excavation of more Type 2 and 3 sites in outlying parts of the valley would probably refine the Harvard typology in revealing ways. Some archaeologists (e.g., Maca 2006: 143-144) deprecate the old Harvard typology but without offering detailed alternatives. It remains a valuable rough-and-ready classificatory scheme if used thoughtfully. It is only fair to note that Willey and his colleagues in the late 1970s were not particularly interested in currently fashionable reconstructions of "lived space" and its social, ritual, and symbolic meanings to the ancient Maya, nor did they have the benefit of the epigraphic insights available today (see Plank 2004).

⁹ Applications of Gini index analysis to architecture have become very fashionable among Mayanists. Heather Riccards-Rissetto (2022) compared results for many Maya centers and found that Copán lies at or near the top in terms of this measure of structure and wealth differentiation. I personally doubt that Gini measures "wealth" as we normally think of it, but clearly Copán is exceptional.

“...in any preindustrial hierarchical society there exist individuals or groups that are differentially and invidiously ranked – and here I use the word “rank” in its broadest sense (i.e., the assignment of differential value to things or people in a hierarchical system) – whether on the basis of ascription or achievement. Those individuals or groups occupying the limited positions of highest value may properly be said to be elites.” (Webster 1992: 136).

This definition says nothing about how specific forms of authority, ranking, stratification, wealth, or “eliteness” are constituted, nor the prerogatives that might accompany high rank. It does not attribute to elites any sort of necessary political or managerial functions, or even wealth. In 1992 I believed that its very vagueness and generality were virtues because we lacked details about Classic elites. Our perceptions have since improved remarkably, but the definition remains useful, although I would now eliminate the term “invidiously” because in some cases elite ranking does not result in systemic disadvantage to others. Today we can better identify Maya individuals or groups at Copán and elsewhere who were associated with unusual amounts of social or cultural capital in the form of affiliation, descent, wealth, power, authority, force, rank, office and/or title, knowledge, and prestige. Elite Maya people possessed such capital through complex processes of pedigree, inheritance, achievement, royal reward, and by pretensions to privileged connections to the supernatural world. Details of how specific elite individuals or groups acquired and maintained their identities, social capital, and resources are usually unknown. What we can detect are some of the material and symbolic markers of eliteness as Willey and the Harvard archeologists recognized.

Titles apart, Copán’s elites are most conspicuously identified by energetic and symbolic investments made in their residences, which we shall see later are much better predictors of elite identity than artifact assemblages, mortuary practices, or dietary assays.¹⁰ Nevertheless, the identities and roles of many Copán elites remain unknown, including those who might have lived at or otherwise used the Skyband Group. A particularly thorny problem is the extent to which (or if) whoever presided over the Skyband Group participated in the highest levels of political decision-making at Copán. One possibility is that great officials and courtiers had only powers delegated from the king and that royal dictates applied to the whole kingdom. Complicating this interpretation is the increased assertiveness and wealth of Copán’s grantees after the demise of the 13th ruler, and especially during the reign of the 16th king. Another possibility is that during much of Copán’s late dynastic history nobles had powerful jurisdiction over their own lineages or other corporate groups, a pattern that intensified in the 8th century (Webster 2002; Sanders 1989).¹¹

We commonly speak of “elite” residences or “elite” burials, but properly speaking only people are elite. Houston, Stuart, and Taube (2007: 4-5) insist that only living human bodies exercise agency, although in the Maya case dead ancestors, gods, god impersonators, and supernaturals indirectly did so as well. If we forget this the archaeological record can be quite misleading. The “elite” residence 9N-8 contains houses and other facilities used by ordinary people pursuing quotidian routines, and some of them continued to do so long after the nobles departed. Monuments or objects originally made for or by elite people were often recycled into more ordinary contexts and sometimes show up in modest domestic remains. Alternatively, some ancient Maya people of exalted rank or prestige probably lived in very ordinary circumstances. In what follows I employ the adjective “elite” as a convenient modifier for buildings or other objects apart from people, but with the constant awareness that this is potentially misleading. The distinction is especially important for Copán, whose sub-royal elites are seldom unambiguously marked by domestic artifact assemblages or burial attributes as opposed to architecture.

¹⁰ Rulers and their immediate kin have conspicuously grandiose burials at Copán’s Acropolis. Elaborate sub-royal elite burials from Late Classic times are extremely rare. William Fash’s “Brujo” burial beneath Plaza A of Group 9N-8 was impressive, although it dates to earlier Middle Classic times. Nakamura (2000), Maca (2015), and Ashmore (1991) found elaborate burials in urban core contexts, but identities of the occupants are unclear.

¹¹ I know of no Classic Maya glyphic expressions that unambiguously refer to lineages as kin groups or to formal leadership positions in such groups – nothing, say, comparable to the Colonial expression *chibal*. Stephen Houston reminds me, however, that at Tamarindito “...the mother and father of a ruler are linked to different “*naah*,” the mother is linked to a “...Flower House,” the other to a “Maize Cob [Ajan] House”. House here apparently has the Levi-Strauss sociological implication and does not refer only to a structure. Although some archaeologists refer to “house societies” it is important to remember that this is not a term with the inclusiveness of others such as “state”, “chiefdom”, or “stratified” society, at least at certain scales of development. For example, Japan in late feudal times was highly stratified and had state-like centralization and bureaucracy, but was composed of numerous semi-autonomous “house” segments. See Katherine Miller (2015) for critique and discussion of the “house” concept.

Some Copán groups of impressive architectural scale and quality were not elite residences, but instead projected something of the old “minor ceremonial center” character. We located several such imposing sites during our PAC II surface surveys. They seem to be minor components of the larger set of elite groups, but one never knows for sure prior to excavation, and we shall see in Chapter 12 that our exploration of the Skyband Group itself raises provocative questions about this issue.

Maya Royal and Sub-royal Palaces

Hernan Cortés, Diego de Landa, and other Europeans who observed Contact-period northern Maya communities recognized that wealthy and powerful families lived in impressive residences. These compounds were spacious, well-constructed of durable materials, and clearly required much labor and skill to build and maintain. Clavigero (quoted in A. L. Smith, 1962: 183-184) says:

“The houses of lords, and people of circumstances, were built of stone and lime; they consisted of two floors, having halls, large courtyards, and the chambers fitly disposed; the roofs were flat and terraced; the walls were so well whitened, polished, and shining that they appeared to the Spaniards, when at a distance, to have been silver. The pavement of the floor was plaster, perfectly level, plain, and smooth.”

Such elaborate residences were built and maintained by the general populace as part of their labor obligations to lords and wealthy families. Some pioneering archaeology done in Yucatán, especially by the Carnegie Institution at Mayapán (1949-1955), was partly designed to detect earlier archaeological correlates of these 16th century compounds (Pollock *et al.* 1962). Among these operations was J. E. S. Thompson’s (1954a) excavation of a presumed noble residence.

During the mid-1520s the Spaniards contacted and subsequently conquered the highland Maya kingdoms of Guatemala. Their accounts indicate that many large centers were both political capitals and fortified elite residential enclaves housing noble lineages that shared complex patterns of co-rulership (Fox *et al.* 1992). Multiple palace facilities for lords of different lineages or ranks reflected such organization. Elite lineage compounds were called *nim ja* -- literally “long houses” or “big houses,” and they often had their own particular names (Carmack, 1981:159-160; Carmack and Weeks 1981: 329). A similar pattern characterized the ethnohistorically-documented Zapotecs (Oudijk 2002). Zapotec city-states called *queche* --- (comparable to the Aztec *altepetl*) were dominated by multiple elite lineages or noble kin-based “houses” called *yoho*. The *yoho* of the ruler was called the *quihui*, or “palace.” In post-conquest Mexican manuscripts images of palaces often represent the center of the *altepetl* or the descent lines of noble individuals (e.g., see Leibsohn 2009).¹²

Leaving aside whether we can project these Contact-period residential patterns back into Classic times, there was obviously a well-established and widespread tradition of impressive elite residential facilities in the 16th century. Independent royal and elite residences survived longer in southeastern Mesoamerica than anywhere else in the New World, vanishing only in 1697 when the Spaniards finally conquered Nojpetén, the capital of the Itzá kingdom deep in the forests of northern Guatemala (Jones 1998; Rice and Rice 2018). None of these elite residences, unfortunately, were described in detail by the Spaniards, but we can safely infer that residences of individuals or families of high wealth and social standing were themselves variable. Sixteenth century accounts do not discriminate well among the establishments of the most powerful rulers of Yucatán, the *halach winikob*, and those of lesser notables such as *batabob*.¹³ Matthew Restall (1997) argues that the term *halach winik* was an honorific title situationally applied to a particularly strong local *batab*, rather than to an established hereditary dynast in the older Classic Maya sense. If so, there might not have been a distinctive class of “royal” palaces in the early 16th century; the capitals of powerful *halach winikob*, such as that of the Xiu ruler at Mani, seem to lack palace remains comparable to those at Tikal, Piedras Negras, Palenque, or Copán (see Quezada 2014 for a discussion of the limitations of jurisdictional power and economic wealth of *batabob* and *halach winikob*).

¹² During our 1998 palace symposium at Dumbarton Oaks (Evans and Pillsbury 2004) our colleague Bill Isbell initially objected to the use of the term palace because there were no emic words in Quechua that corresponded to it. Apparently at that time Andeanists shied away from the palace label.

¹³ Tozzer (in Landa 1941) said that there were no known Contact period buildings that could be associated with “lords” (*señores*), but he thought that some structures were residences of “clergy” (p. 86). He later (p. 107) toyed with the idea that some buildings housed “lords.”

One reason that 16th century observations are not easily extrapolated to Classic sites is that until the early 1980s Classic and Early Postclassic Maya culture was still largely ahistoric (calendrical dates and some emblem glyphs aside). In the absence of readable historical records or other texts, the baseline for interpretation thus remained ethnohistoric accounts of Maya society. Many archaeologists, however, believed that great social, cultural, and institutional gulfs separated the late Maya from their Classic predecessors, so one could not confidently project ethnohistoric settlement or residential features very far back in time.

Early archaeological explorers reflexively applied the label “palace” (and sometimes “house”) to imposing structures they encountered at ruined Classic Maya “cities.” Such places, it was originally thought, must have had kings, and so also had royal residences and court facilities. “Palace” was the appropriate word in the European lexicon. Visitors to Palenque in 1784 used this commonsense label for Palenque’s imposing residential complex (Stuart and Stuart 2008: 22), as did John Lloyd Stephens in 1840.¹⁴ Inscriptions later showed that Stephens’s intuition was correct, and that the palace was closely associated with the Palenque royal dynasty. Later the French scholar Maurice de Périgny (1909: 476) imagined the imposing Río Bec A structure to be “...une vaste et solide habitation pour le seigneur et sa cour” (“... a vast and solid residence for the lord and his court...” -- my translation). His comment was particularly prescient for its court assumption. Still later Herbert Spinden speculated that important people, perhaps even nobles, lived in palatial residences. He contrasted obvious temple structures with “...other buildings, usually larger and situated on lower terraces, which may have served as dwellings for the priests and the nobility.”¹⁵ This latter group included the “...great rambling collections of rooms, usually arranged around courts and commonly called palaces” (Spinden 1975: 98 [original 1913]).¹⁶ Here Spinden nicely conflates architectural configuration and elite residential function in etic terms. What *otoot*, the Ch’olan term for “dwelling,” and associated terms such as *naah* (building, structure?) meant to the southern Classic Maya was only appreciated much later (see Plank 2004: 9-13).¹⁷

However reasonable all this now seems to us, the label and concept of “palace” as applied to Lowland Maya architectural complexes took curious detours before assuming (or reassuming) its current but more explicitly documented meaning (see Webster 1998, 2001; Inomata and Houston 2001). For a long time, palace was simply a default label for a particular class of impressive masonry buildings with low platforms that supported linear, multi-chambered arrangements of rooms, often with modular floor plans and sometimes vaulted roofs (see Andrews 1975: Fig. 6 for examples).¹⁸ This default usage had no necessary behavioral or functional implications and sometimes ignored or rejected outright the elite residence logic. For example, Linton Satterthwaite (1935), who tested palaces at Piedras Negras, insisted that “...those structures were used primarily for religious or civil ceremonies, and were not priestly residences, as has been supposed”.¹⁹ Thirty years later Willey *et al.* (1965), summarizing settlement patterns in the Belize Valley, signaled the ambiguity of the term palace by always placing it in scare quotes. Losing sight of the “great rambling collections of rooms” perspective of Spinden in favor of a particular building plan of individual structures created considerable confusion, as discussed shortly.

When what Gordon Willey called the “Maya Mystique” peaked in the 1950s (see Becker 1979; Webster 2005, 2007) A. V. Kidder and Michael Coe, among others, expressed doubt about the existence of palaces (in the European sense) at Maya centers. Kidder (1950: 11) insisted that “...nothing outside the main groups at Uaxactún, or for that matter at any other Maya city, can be thought to be a palatial residence”.²⁰ Coe (1956: 387, 410) thought that “palace” was a

¹⁴ Stephens (1969: 365) reported that at Palenque “We slept in the ruined palaces of their kings.....”

¹⁵ Several early Mayanists routinely used labels like “lords” or “nobles”. Gann and Thompson (1931) thought there were nobles, but their discussion of ‘Old Empire’ society is uncritically derivative of what they knew about the 16th century Maya. In his overview of Maya agriculture two years later, Cyrus Lundell (1933) suggested that simple swidden agriculture was confined to the margins of Maya politics and that higher population densities nearer the “cities” stimulated more intensive systems such as terracing. He imagined that “feudal nobles” were responsible for allotting land.

¹⁶ I use the term “court” mindful that the Maya themselves had no known word for this institution.

¹⁷ Plank (2004: 12) says that *otoot* means something that is inhabited by people or other animate entities, and that *naah* means something that is always inherently possessed.

¹⁸ Despite his focus on the design and construction of Maya buildings, Andrews (1980) was prescient in assuming that many “palaces” were elite residences.

¹⁹ Quoted in “Maya’s Fall Now is Laid to Revolt”, New York Times, Nov. 14, 1937. Most archaeologists today equate palaces with residential functions, but some retain the old configurational concept. For example, William Haviland (2008: 269) thinks that not all the “palaces” at Tikal were residential.

²⁰ Here Kidder leaves open the functions of the famous A-V building at Uaxactún, which underwent a temple-like to a residential, palace-like configuration. Both Kidder and Coe were heavily influenced by the then comparatively recent Uaxactún research. See Black 1990 for an overview of the Uaxactún project.

misnomer for a temple structure that had expanded to form “...a complex ceremonial establishment.” He bluntly echoed Kidder’s view, saying: “Structures clearly identified as royal residences are absent in the Classic Maya area In these “cities” the majority of the edifices were probably entirely ceremonial (including the so-called “palaces,” with the administrative hierarchy living in perishable structures.”²¹ William Bullard (1960: 369) thought instead that palaces housed “...cadres of priests, administrators, and others”. J. E. S. Thompson occasionally used the word “nobility” to describe people who lived in big centers (Thompson 1954b: 66) but he apparently meant privileged priestly leaders (Coe referred vaguely to “priest-kings”). The discovery of the tomb of *K’inich Janaab Pakal I* in 1952, just meters away from Palenque’s palace, challenged these entrenched ideas that the Classic Maya had no dynastic rulers, hereditary nobles, or royal or sub-royal residences.

Kidder’s and Coe’s strictures to the contrary, the big survey projects of the 1960s and 70s made the idea of elite residences, at least at the royal scale, increasingly commonplace. William T. Sanders, for one, remarked that “Architectural complexes like the Palace at Palenque and the Central Acropolis at Tikal, in my opinion, are quite obviously residences” (Sanders 1973: 345). So far as I can tell from the literature, the honors for starting off a systematic concern with palaces as elite residences are pretty much shared between the Tikal and Dzibilchaltún projects, with a slight nod to the former in terms of precedence.²² William Haviland (1963: 17), on the basis of his Tikal residential excavations and new epigraphic evidence, surmised that

“Perhaps there was a very definite “upper class,” as might be indicated by the very elaborate “tomb” burials in the Great Plaza-North Acropolis area, and also by the existence of hereditary dynasties. *Obviously, more attention should be directed in the future to possible “upper class” dwellings.*” (emphasis mine).

Haviland (1965: 21-23) believed that at least some of Tikal’s palaces housed an “elite theocratic class” and that variation in architecture was one indication of a “social continuum” (he always used palace with scare quotes in this article). Two years later he was more expansive, opining that a “...hereditary elite ruling class...” emerged during the last century BC (Haviland 1967: 323) and palace was no longer qualified by scare quotes. While he seems to have thought of rulers as basically theocratic, their positions were at least hereditary in accordance with the dynastic patterns detected by Proskouriakoff (1960). He thought that by Late Classic times an early two-class system had evolved into “...a social continuum from rich to poor, with the ruling elite apparently still constituting a discrete upper class” and reported that Peter Harrison began an extensive program of “palace” excavations at Tikal by the mid-1960s to investigate the architectural correlates of this continuum.²³

Although he never seems to use the word palace, Edward Kurjack (1974) was one of the first Mayanists to analyze a big, systematic settlement data set (from Dzibilchaltún) and intuit that striking social distinctions were embodied in its residential architecture: “Buildings of any kind are a highly visible form of wealth, manifesting the status of the social groups that control them” (Kurjack 1974: 83).²⁴ His insight no doubt partly derives from Haviland’s earlier publications, and also from the fact that at Dzibilchaltún one is not overwhelmed by the scale and magnificence of monumental architecture, so less grandiose groups were closely scrutinized. About the same time Dennis Puleston (1973) repeatedly used the term “elite residence” in his presentation of the Tikal settlement data, and Adams (1974) estimated the size of palace populations at Uaxactún.²⁵

²¹ In the same article Coe (p. 393) makes a more prescient speculation: “We have tended to think of the Classic Maya in terms of a stereotyped peasantry laboring in the service of a somewhat Olympian pantheon. However, if the majority of buildings in any one Classic Maya center were dedicated to the future life of certain individuals, then those persons must have possessed a great deal of political power to requisition the enormous amount of labor necessary for the erection of those monuments. In other words, authority may have been vested not only in a priestly class, but in a line of hereditary rulers who perpetuated themselves in the same manner as the Egyptian kings”. For some reason Coe did not make the reasonable assumption that such kings lived in palatial residences.

²² Long before archaeologists at Uaxactún had documented the evolution of a famous building from a set of temples to a “palace”, but their efforts did not stimulate widespread examination of this class of buildings elsewhere.

²³ Harrison’s research is most closely associated with the royal palace – the Central Acropolis. Somehow the larger palace-testing project got sidetracked. His 1999 book *The Lords of Tikal* barely mentions systematic excavation of other palatial (sub-royal) residences or the political implications of this class of settlement.

²⁴ Just how to characterize the dwellings of ordinary people was unclear at least up until the mid-1950s. For example, Robert Smith thought that the small Uaxactún structures excavated by the Wauchopes years before must have been for the “upper classes” (Smith 1955: 13). He imagined that lesser folk built their long-vanished thatched houses directly on soil or bedrock, not on “built-up” platforms. He also thought that the Wauchopes’ houses yielded more “luxury” pottery than common people would have used.

²⁵ Curiously, Puleston’s presentation and analysis of the Tikal settlement data tended to focus on individual structures rather than on site layout and character. At Dzibilchaltún, and later at Copán, site character was combined with individual structure features as the basis for the settlement typologies.

Despite these insights, many archaeologists still shied away from the implication of labels such as “palace” or “elite residence” well into the 1970s.²⁶ Jack Eaton (1974) excavated and partly restored the impressive Río Bec site of Chicanná near Becán. Today we would reflexively interpret Chicanná as the remains of a residence, some kind of elite otoot dwelling.²⁷ I was there during the excavation season, but I don’t remember this explanation being seriously entertained. Eaton did call Chicanná an elite *center*, and used the word palace in its configurational (as opposed to residential) sense, along with “house” (Chicanná means Serpent-Mouth-House).²⁸ One senses he teetered on the brink of the elite residential interpretation, but the closest he came is this comment: “The occurrence of...religious motifs suggests a ceremonial function for many of the buildings, whereas their actual internal arrangement and appearance suggests a residential function” (Eaton 1974: 137). We shall see later that his ambivalence about this spatial dichotomy anticipates our interpretations of the Skyband Group.

By 1980 Harry E. D. Pollock was so disenchanted with such ambivalence that he grumbled “I have little to contribute to further defining or redefining the unfortunate term “palace” (Pollock, 1980: 565). Although some contributors (particularly Haviland) to Wendy Ashmore’s (1981) overview of Lowland settlement patterns recognized elite residences, none seems to use the word palace. In sharp contrast, George Andrews (1980) compared the Central Acropolis at Tikal with the Vatican, the vast ritual/bureaucratic/residential complex of the Catholic popes. Andrews, an architect, proved more insightful about the presence and functions of “palaces” than most anthropologically trained archaeologists.

What turned out to be some of the first excavations of sub-royal palace groups were not originally planned as residential research. Recognizing that the University of Pennsylvania’s Tikal project had heavily invested in the core monumental architecture, William Coe (1962: 502) shifted attention to “small structures” to the east of the Great Plaza. Most of these were in fact not very small, but they were outside the monumental core and some were originally interpreted as minor ceremonial centers. “According to Bullard (1960) they were “....appreciably larger than house ruins but smaller than major centers. Ordinarily, they should include one or more pyramidal structures arranged in company with lower buildings, around one, two, or three adjacent plazas. Vaulted range-type structures may be present, but should not form extensive compounds” (Haviland 1981: 90).

One such minor center excavated by Marshall Becker and William Haviland was Tikal Group 7F-1. Originally interpreted as a “ceremonial cluster” (W. Coe 1962: 479), it turned out to be an elaborate elite residence associated with a number of impressive burials, although it took a while for anyone to grasp its true character.²⁹ Just about the time we commenced our PAC II palace excavations at Copán, Haviland (1981:116) concluded that

“Group 7F-1, then, was not a minor center. Rather its primary purpose was to serve as a residence for people of elite social status. Ceremonial activity did take place in the group, but was intense only during a period of time (ca. 9.8.0.0.0 to 9.12.10.0.0) when these people were on the outs with Tikal’s rulers, who presumably were at the head of any regional administrative and religious hierarchy. Conversely, the ceremonial importance of Group 7F-1 evidently was minimal at those times that the group’s occupants were involved in dynastic affairs at Tikal.”

Haviland concluded that domestic, political, and ceremonial functions all co-occurred at 7F-1, and that ritual activity might wax and wane with the wider political fortunes of the resident elites. He also realized that such compounds housed people of “low-class” status (Haviland 1981: 100; 2015), anticipating exactly what we later

²⁶ William Rathje (1970), in an influential article on the sociopolitical implications of Classic Maya burials, envisioned an essentially cargo-system-like political structure before AD 600 and saw the appearance of palaces as a barometer of the shift to less egalitarian conditions after that date. Revealingly, though he wrote almost two decades after the discovery of K’inich Janaab Pakal’s tomb at Palenque, the word “king” never appears in his analysis. This shift from Early Classic cargo-like systems to class-based Late Classic ones centered on royalty was favored by many at the time (see Sanders 1973).

²⁷ Merwin (1913: 101-102), who earlier worked in the area, thought core architecture at big southern centers like Tikal or Copán indicated “.... strong, centralized, political, or political-religious organization”. His surveys farther north in Campeche instead located many small clusters of buildings with what we would call today palaces, which he thought of as small, independent communities.

²⁸ Plank (2004: 222) thinks the great serpent-mouth doorways on Río Bec, Chenes, and Puuc buildings indicate their animate nature or their “being”.

²⁹ Just who the elite residents of 7F-1 were has been the subject of long debate. One possibility strongly argued by Tikal archaeologists (most recently in Haviland 2015) is that is that two of the 16 burials recovered there represent actual rulers or co-rulers of Tikal who had experienced some kind of political demotion or marginalization as a result of internal dynastic discord. In any case, associated objects and inscriptions link them closely to the former royal dynasty.

found in our PAC II excavations at Copán. Despite all this varied opinion, when Willey began his Harvard Copán project the residence/palace idea was clearly in the air (see Harrison 1970, 1999; Andrews 1980; Kowalski 1987 for the best overviews). Willey and his colleagues certainly had Kurjack's work in mind when they devised the Copán site typology, as did William Sanders and I when we began our own project there in 1980. Archaeologists identified many sub-royal residences beginning in the late 1970s not only at Copán, but also at Palenque, Aguateca, Calakmul, Tikal, and many other sites. I use the term "sub-royal" here, but other terms such as "second-tier" or "intermediate" elites" are also found in the literature (e.g., see Tsukamoto 2014: 50, 62).

Palatial Places

Today the old default label for buildings with a distinctive set of structural attributes has been replaced by more standard behavioral/functional definitions such as this one:

"Palaces are the residences of individuals of wealth or high social rank, along with their families and retainers, and they include facilities appropriate to the ritual, recreational, and economic functions of elite households and individuals as foci of social power" (Webster and Inomata 2004: 149).

Lamoureux-St-Hilaire (2020: 10) emphasized royal residences by using the term *regal palace* to mean: "...an elaborate multi-structure compound located in a site's epicenter that housed the ruler's household and that was the center of communicational, administrative, economic, and ceremonial functions of the royal court". The regal qualification is acceptable so long as it leaves open the possibility that palaces were not restricted to royalty.³⁰ "Palace" can thus apply to the residences of lesser elites or notable families as William Haviland, George Andrews, and others realized. Such compounds, like those of kings, housed or otherwise accommodated people of rank and also lesser relatives, retainers, servants, visitors, and a host of others. We shall see later that some Copán courtyards in "urban" sites of very high rank resembled their counterparts in modest rural residences in important ways.

Although Spanish explorers first encountered elaborate Maya residences in Yucatán, the most splendid palaces or *casas reales* they saw were those of Central Mexican rulers, sometimes called 'big houses' (echoing the Quiché usage) in the native vernacular (Hicks 1986: 41). The Aztecs had a bewildering number of terms for palaces of different grades, and by AD 1519 possession of a sub-royal palace was subject to strict sumptuary rules. Only royal palaces were supposed to have more than one level, and at least one royal prince was executed by his father Nezahualpilli, the ruler of Texcoco, for building himself a palace without permission (Evans 2004: 45-46).³¹ We should not think, however, of Maya sub-royal residences simply as lower-rank places that always existed under the aegis of dominant kings. Early on it became evident that the whole Río Bec landscape was littered with undoubted elite residences, even though big dynastic seats or royal monuments in the southern lowland style are very rare there (Merwin 1913). Many others have since been recorded by recent French and Slovenian projects (Šprajc 2014; Nondédéo *et al.* 2013). Surveys by Juan Pedro Laporte (2000) revealed a similar pattern over thousands of sq km in the eastern Petén zone of Guatemala. Just as important is what the palace concept does *not* imply -- that everyone of consequence lived in them.

For the archaeologist the adjective *palatial* is perhaps most relevant because it refers specifically to architectural phenomena and has no necessary connotation of elite ranking.³² Almost all architectural traditions in preindustrial civilizations had residential places that are distinctive for their extravagant scale, quality, and the status signals they project. Kent Flannery (1998) went so far as to identify such archaeological remains as diagnostic "footprints" of ancient complex societies, so they are often labeled "palaces" even before excavation. But what kind of window

³⁰ Although the definition seems spatially overly-restrictive to me. Conceivably rulers might have residential facilities outside of epicenters, and surely many important ceremonial functions of kings took place outside of their residences. Lamoureux-St Hilaire (2020: 12) cites Copán Group 10L-2 as a "kingly residence ...often described as a palace." Kingly residence vs. palace seems to me a distinction without a difference.

³¹ Susan Evans tells me it is doubtful that even royal Mexica palaces in Tenochtitlan had more than one story, although there were apparently light constructions on roofs.

³² That is, people of comparatively low rank might live in or even possess palatial residences. In both traditional China and Japan the residences of wealthy merchants and gentry were often more impressive than those of officials or military officers of higher social and official rank. The most hydropolied example is the mature Ottoman empire, where elite warriors, administrators, and royal consorts (including the mothers of sultans) originated as captured slaves, but rose to the highest social, military, and official ranks. Although the Topkapi palace population was the sultan's residence, by design its inhabitants were mainly non-relatives in the descent or affinal senses, especially in the male line. Most palace people were technically of slave rank despite their privileged positions.

into ancient sociopolitical organization and cultural behavior do such footprints provide, or alternatively obscure? This question is important because of how prominently palaces now figure in reconstructions of Maya society.

When Sanders and I proposed in 1988 that Maya centers were basically regal-ritual places we understood (having long worked at Copán) that the label could refer to residences of great lords as well as to rulers.³³ In other words, there might be multiple, nested courtly places. Here we are concerned with sub-royal palaces, a tricky concept focusing on the residences of what Elson and Covey (2006) call “intermediate elites”.³⁴ The people who lived in such places might have been unrelated to kings, or they might have been privileged royal relatives by descent or marriage as well-attested at Palenque, or demoted, out-of- power royalty as Haviland argued for the occupants of Tikal Group 7F-1. Maya art often shows individuals with sub-royal elite titles in subordinate attendance on kings; a famous example is Piedras Negras Panel 3 (O’Neil 2012: 162). By sub-royal palaces here I simply mean dwellings (sometimes labeled *otoots*) and associated facilities that are not the principal residences of a reigning ruler, and that are spatially detached from the contemporary royal infrastructure (temples, tombs, etc.). In some traditions (e.g., the Inka or Chimú) each new king established his own royal palace while those of his predecessors retained a kind of mortuary vitality. Something like this happened as Tikal’s Central Acropolis expanded. Successive rulers built new sections that were particularly identified with them, while the original core structure was preserved. The same pattern is clear from Palenque, so there was a kind of “nested palace” pattern, both in spatial and temporal terms (Harrison 1970; Harrison and Andrews V 2004; Stuart and Stuart 2008; Webster 2001).

Kings the world over, being rich and often bored, sometimes built multiple palaces throughout their lifetimes:

“...the Abbasid Caliphs seem to have had rather a disposable attitude towards them; once they had used one up they went and built another, and then abandoned it. So you get a succession of palaces one after another in Baghdad, and then they moved to Samarra, where they did the same thing” (Robert Irwin, as quoted in MacGregor 2010: 335).

Henry VIII of England was similarly profligate, possessing at least 42 palaces (Bryson 2010: 63), and early Japanese rulers often shifted both their palaces and their capitals, which amounted to the same thing (Kidder 2007). A hypertrophied example of the multiple sub-royal palace syndrome comes from Ming dynasty China (Clunas 2013), where a appanage system established by the Ming founder conferred various forms of the kingly title *wang* on royal relatives, including some affines. Hundreds of their extravagant compounds proliferated throughout the empire, supported by attached landed estates. If historic records were not available, such palatial proliferation might cause considerable confusion to archaeologists trying to reconstruct Chinese political institutions and social relations from residential remains. Some Maya kings and perhaps other notable people also seem to have had multiple palaces or estates (Ball and Taschek 2001). Recent research suggests that the imposing center of Behucal was a “royal country house” for the lords of the Pa’ka’n dynasty who ruled the El Zotz kingdom to the west of Tikal (Roman, Garrison, and Houston 2018: 74).

Palaces serve not only residential purposes, but ritual, political, and administrative ones as well. One complication is that such functions might be spatially segregated – i.e., the palace might be an institution whose facilities lacked close spatial coherence. Ethnohistoric accounts suggest that at Texcoco, one of capitals of the Aztec Triple Alliance, the royal residence was physically detached from large granaries, kitchens, and the market, all of which might have been conceptually part of the royal infrastructure. We also know that the Texcoco ruler Nezahualpilli built and lived in his own palace, but continued to use his father’s palace as an administrative center. About the same time, Motecuzoma II built his own palace and used his father’s to house royal wealth and as a lodging for distinguished visitors, most notably Cortés and his entire force of Spaniards (Evans 2004: 2021).³⁵ Archaeological

³³ I prefer to keep the regal-ritual concept separate from that of “city”, but some scholars, such as William Fash (2005) use both for Copán. Whatever we call them, most large centers in Mesoamerica had hypertrophied regal-ritual facilities.

³⁴ Presumably many of these people bore the widespread *ajaw* (lord) title, which remains incompletely understood. It probably refers to royal offspring and heirs (Houston (2016: 403), but might also include non-royal and unrelated lords. Stuart (2011: 255) says “I suspect that the term implies a role of ownership and rule over a certain segment of society and also over property, a role incorporated in the rigid but still poorly understood hierarchy of Maya economics and society”. There were very powerful and titled Maya women, so “lord” as used in this volume refers to both male and female elites. At Copán we have evidence only of titled sub-royal males, although related women appear in the inscriptions, as on the 9N-8C bench.

³⁵ According to some sources Tenochtitlan had as many as 60 to 70 elite or royal palatial facilities when the Spaniards arrived. If so, the great Mexico capital had a pronounced regal-ritual character, although in other ways it was much more urban than Maya centers. The rulers of

interpretation becomes more problematical if old Maya palaces continued in use, as in the Aztec case, or if reigning rulers had multiple facilities, because we might mistake these for sub-royal establishments in the absence of inscriptions or ethnohistoric accounts.³⁶

Stuart and Stuart (2008: 153-54) raised the possibility that the famous Palenque palace was not a residence at all, but rather that "... the principal buildings are best understood as the stages for courtly display, probably used on a daily basis in various capacities, but kept largely separate from areas of sleeping and eating". Something like this arrangement occurs at Copán, where the final kings centered their domestic lives (and some ceremonial activity) on Group 10L-2, attached to the southern end of the Acropolis, and used the great northern structures and civic spaces for their grandiose regal-ritual performances.³⁷ The giveaway here is physical attachment. Had Group 10L-2 been detached from the Copán Main Group like some of the Palenque palace royal residences we might not perceive it as much different from other impressive Las Sepulturas elite compounds such as 9N-8 and 8N-11, at least in the absence of images and inscriptions. Stuart and Stuart suggest that at Palenque the royal family lived in more modest facilities in Group C, located a short distance to the east of the main palace across an open space through which the Otulum stream flows. Liendo, Lopez, and Campiani (2014: 111) think that parts of the main Palenque palace were certainly residential, but that the royal family also spilled over into other detached domestic facilities to the east of the palace proper. The covered part the Otulum exactly corresponds with the space between the formal palace and the possible residential quarters, creating a large, level plaza that might constitute a kind of connection between the two zones (Kirk French, personal communication 2008).

Another possible complication results from Rene Viel's (1999) suggestion that at Copán there was an ancient and well-established tradition of shifting, competitive rulership among several dominant lineages or political factions.³⁸ This controversial idea has not gained wide acceptance among Viel's colleagues, although E. W. Andrews V (2004) finds the general notion of rotating royal lineages plausible, as does Prudence Rice (2004: 268). If succession worked this way, it would help explain one puzzling feature of Copán's political landscape – the presence of some groups in the urban core such as 9N-8 and 8N-11 that are unusually large and impressive.³⁹ Following Viel's reasoning, it would be more appropriate to say that they housed situationally "out-of-power" or "not yet in power" elites rather than sub-royal ones.⁴⁰ Such ostentation and its symbolic correlates at 8N-11 led Barbara Fash to suggest in 1992 that the group was the pre-inaugural residence of Copán's eventual 15th ruler (B. Fash, 1992, Appendix B: 37). We shall see later that the imagery associated with the Skyband Group is in fact extremely exalted, and that construction quality is comparable to many undoubted royal edifices. Related to Viel's proposition is that some Classic Maya polities (rather like the later Quiché) had traditions of co-rulers or joint-rulers, sometimes based on age-sorting (see Martin 2017 for a brief overview).

Delvendahl (2008) speculates that sub-royal Maya elites were required to maintain residences near royal courts to guarantee their good behavior, an echo of later Aztec political strategies. Martin, Carrasco, and Valencia (2015) support this view, suggesting that family members of subordinate rulers were required to live at Calakmul during the great hegemonic ascendancy of the Snake (*K'aanul*) kings during the 6th and 7th centuries. Canuto

Texcoco and Tenochtitlan both enjoyed detached rural pleasure palaces in addition to their urban residences.

³⁶ A variant on the multiple palace theme is that sometimes rulers built facilities in anticipation of exalted royal visitors. A fascinating example is the enormous marble palace of Jai Villas, built by the ruler of the Indian kingdom of Gwailor between 1872 and 1874 in anticipation of a visit by the Prince of Wales (see Ann Morrow 1986: 211 for a photo). Although not strictly speaking a pre-modern project, its construction was heavily pre-industrial, much of it built the old-fashioned way with human and animal labor. Twelve elephants were hoisted onto the roof to test its strength. My impression, judging from the photo, is that this single palace complex covers at least as much area as the Tikal epicenter. I once had a friend whose aristocratic Hungarian family built a downscale replica of Versailles for an expected visit by the Empress of Austria. She never showed up.

³⁷ See Traxler (2001) for Early Classic Copán palaces.

³⁸ See Henige (1974: 131-133) for a discussion of rotational or circulating succession systems. Spatial/palatial implications of such systems are unclear to me. Henige notes that in comparative perspectives such rotating systems produce shorter reigns than filial ones. The reign lengths of Copán's kings are too few to analyze in this manner, but tend toward the filial.

³⁹ I use these adjectives advisably. In 1968 I worked at Diocletian's palace in Split, Croatia (then Yugoslavia). Built over a very short interval in anticipation of the emperor's retirement, the palace was much bigger and more complicated than anything the Maya ever attempted. Its surface area (215 x 180 m) would cover much of Copán's Main Group Acropolis. Such comparisons are both revealing and sobering because Mayanists often describe the architecture they study in hyperbolic terms (see Webster 2018: Appendix B).

⁴⁰ Some epigraphers at one time identified royal relatives in the inscriptions, and particularly associated them with Group 10L-2 just to the south of the Acropolis (see Andrews V and Fash 1992 for an overview; also Stomper 2001). Had these identifications held up, such individuals would have been royals in the descent sense, but sub-royal as actual office holders. David Stuart realized that these were references to minor deities (Stephen Houston, personal communication). They might have been "housed" and enthroned in structures like 10L-32.

and Barrientos (2020: 198) think the reverse also occurred when some palace-grade architecture at La Corona was possibly repurposed to provide facilities for distinguished visitors from Calakmul. To complicate matters further, inscriptions at some dynastic centers appear to identify rulers who overlapped in time. David and George Stuart (2008: 145) point out examples from Palenque and suggest that there were intervals of co-rulership there. They raise the possibility that there were two contemporaneous royal courts, presumably each with its own set of facilities.⁴¹ Internal factionalism seems to have caused short, situational shifts in palace location from the main center at Early Classic Holmul to the site periphery, and then back (Estrada-Belli *et al.* 2009).

Stephen Houston thinks that “pretender courts” at some centers in the western Maya Lowlands might help explain the proliferation of palaces at some centers (personal communication to Webster, 2008). Here he refers to situations in which displaced dynastic factions or royal claimants established refugee establishments at centers distant from their own political seats. Kings of host centers provided royal visitors/refugees with protection and support, and no doubt tried to manipulate such guests to their own political advantage. Tokovinine (2011: 122) proposes a slight twist on this interpretation for the two Classic superpowers: “...extensive palatial complexes at Tikal and Calakmul were created largely to house hosts of voluntary and less-than voluntary guests to assure their loyalty...”. Whatever their pragmatic political circumstances, high-ranking visitors, especially those long in residence, might well have lived in palatial precincts of royal scale and quality even though they were not local rulers or, properly speaking of local sub-royal rank either.⁴² Houston’s “pretender court” or Tokovinine’s “less-than voluntary” patterns might cause some confusion elsewhere in the Maya Lowlands, but I think we can discount them at Copán. Andrea Gerstle (1988; Webster and Gerstle 1990) reviewed evidence for resident foreigners there, but they were housed in distinctly modest style within the larger local elite compound 9N-8.

Mindful of all these potential difficulties, my default assumption has been that most Late Classic Copán groups of palatial scale and quality were residences occupied by non-royal nobles who were integral parts of the Copán polity. This was our commonsense perspective when we began the PAC II fieldwork, and it appeared even more reasonable given the subsequent Tulane excavation of Group10L-2, what Lamoureux-St-Hilaire would call the “regal palace” of Copán’s last ruler just to the south of the Acropolis (Andrews V and Bill 2004). We shall see later that this assumption might not hold for the Skyband Group.

Palaces at Copán

Until at least the 1920s many archaeologists thought it was reasonable to extrapolate Contact period patterns back into Classic times. Sylvanus Morley, commenting on the architecture of Copán, noted the existence of possible palaces and remarked that “There seems to be no reason for doubting that some of the stone buildings were the residences of the rulers, nobles, and higher priests; in fact Landa so implies, speaking of the northern Maya cities” (Morley 1920:7). This statement was made before the “priest-peasant” model of Maya culture took hold, which greatly muddled archaeological perceptions of the functions of a whole class of large Maya buildings (see Becker 1979; Webster 1998, 2006; Webster and Inomata 2004). Contrast Morley’s sensible perspective with a much later one by Richard Adams: “...almost nothing can be designated as elite-class residences at Copán” (Adams 1977: 152). Ironically, Adams made this comment even as Willey and his students were unearthing just such a residence there (Willey, Leventhal and Fash 1978).

As the Harvard project unfolded the notion of Copán palaces was difficult to disentangle from the long-held concepts of a particular kind of building and from “minor ceremonial centers.”⁴³ For example, as late as 1982

⁴¹ Some Japanese rulers reigned for a time, then “retired” or became “cloistered”, a practice that resulted in a reigning emperor having one or even several previous emperors as contemporaries. Each had his own court facilities, prerogatives, and still potent or even pre-eminent authority. Were their palaces sub-royal? Imagine having to sort out the spatial and residential correlates of this kind of system from archaeological evidence alone.

⁴² An even stranger pattern is when some Maya kings were captured, languished at the victor’s court for long periods, then for some reason were sent back home. An example is K’an Joy Chitam, captured by Tonina but apparently restored to the Palenque throne a year later (Martin and Grube 2008: 171). Ceibal’s ruler Yich’aak Bahlam endured an even longer captivity (AD 735-742) at Dos Pilas (Marcus 2006: 235). Were such august personages debased as captives, or alternatively housed in royal-level facilities? Mary Queen of Scots, though under house arrest, maintained a respectable “prisoners court” during the reign of Elizabeth I.

⁴³ During the 1940s Carnegie Institution archaeologists tested what John Longyear (1952: 70) called “small groups” located well away from Copán’s Acropolis. “Small” here is a misnomer, because these groups were so impressive that Longyear interpreted them as outlying minor ritual places. We would now call most of these sites elite residences.

it was asserted that “One primary structure type of the southern Maya Lowlands is not common at Copán. This is the palace, defined as a multi-roomed structure that most often rests on a relatively low substructure” (Leventhal, Demarest, and Willey 1982: 6). This is puzzling because Leventhal had already excavated just such a palace building and because years earlier the Harvard archaeologists were quite aware that the many impressive Copán sites they had mapped and excavated were probably elite residences (Willey, Leventhal, and Fash 1978: 35). There appears to still be confusion here between residential functions on the one hand and architectural configuration on the other. And even as the residential nature of big Copán compounds became evident, excavators still wrestled with the old minor ceremonial center label (Willey, Leventhal, and Fash 1978: 36), a designation that has since then fallen out of use at Copán, although I revisit it in Chapter 12.

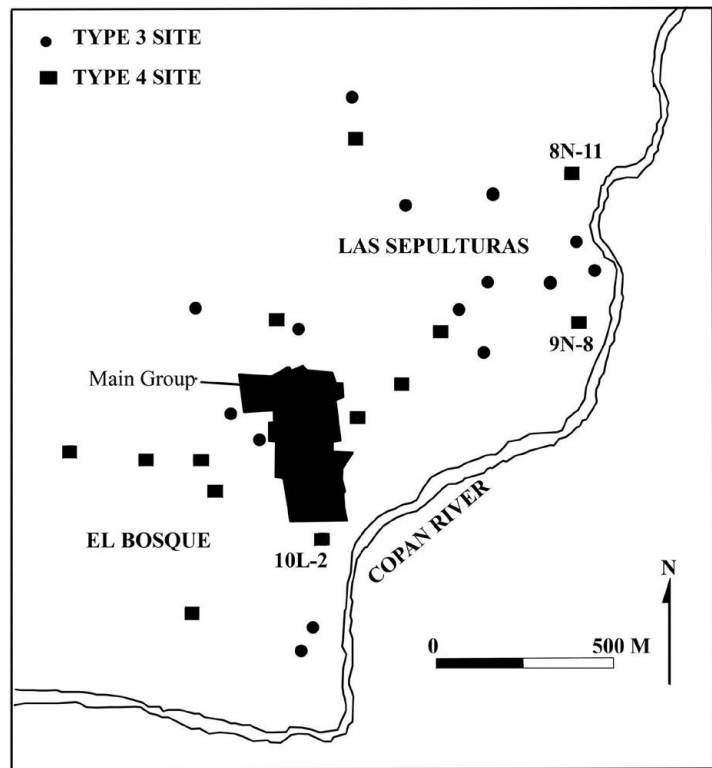


Figure 1-2. Type 3 and 4 sites in Las Sepulturas and El Bosque.

Setting aside for now the issue of exactly who built and possessed them, Copán proved a perfect place to investigate sub-royal palatial residences (Sheehy 1991; Leventhal 1979; Webster 1989; Webster *et al.* 2000; Willey *et al.* 1994; Whittington 1991a; Ashmore 1991; Maca 2002; Saturno 2000; Hendon 1987). Some 49 surviving architectural groups in the valley conform to the upper or elite levels (Types 3 and 4) of the Harvard settlement typology. Twenty-three of these are concentrated in Copán's El Bosque and Las Sepulturas enclaves (Fig. 1-2), which were dominated during much of the 8th and early 9th centuries by the imposing residences of great nobles.⁴⁴ Shannon Plank (2004: 89-90, 154) identified eight Copán buildings that are glyphically labeled as ootoots. Five are in the Main Group, two are in Las Sepulturas, and one is in the northern foothills (more about this in Chapter 12).⁴⁵ Royal buildings aside, all three outlying ootoots and others of comparable scale that have been extensively excavated or tested appear to deserve the sub-royal palace label in the senses described above. A few such precincts that we encountered on our rural surveys conform to the “minor ceremonial center” pattern as envisioned by earlier archaeologists, but they are a distinct minority in our roster of large sites.

Plank (2004: 28) remarks of the general Maya archaeological record that “...we quite probably have excavated examples of Classic period ootoots belonging to people of a wide range of social statuses.” This is certainly true at Copán, and variation is inherent in the logic of the Harvard classification. Some excavated Copán palatial groups accommodated kings, and others high court officials or possibly relatives of the ruler.⁴⁶ All these people presumably had vested interests in the stability and perpetuation of the kingdom, but at the same time belonged to larger political factions with their own interests and constituents, enabling them to jockey for power and meddle in dynastic politics (Sanders 1989; Pohl and Pohl 1994; B. Fash *et al.* 1992; Stomper 2001). Noble titles and iconography appear most conspicuously on the peripheries of the Maya Lowlands, especially at Palenque and Copán (Houston and Inomata 2009: 172).

⁴⁴ This settlement map of Las Sepulturas is a bit deceptive. Some buildings have been washed away by the river, and buildings north of the causeway have been completely buried or partly obscured by soil eroded from the northern foothills.

⁴⁵ Group 8N-11 is one of these, but oddly she says Group 8N-11 is only of Type 3 rank in the Harvard classification, which is not the case; it is properly listed as Type 4 in the PAC I map volume and clearly has all the hallmarks of that rank.

⁴⁶ Sometimes titled sub-royal nobles married into royal lines. Lady Great Skull of Yaxchilan, sister of the sajal Great Skull, married a king there in the mid-8th century.

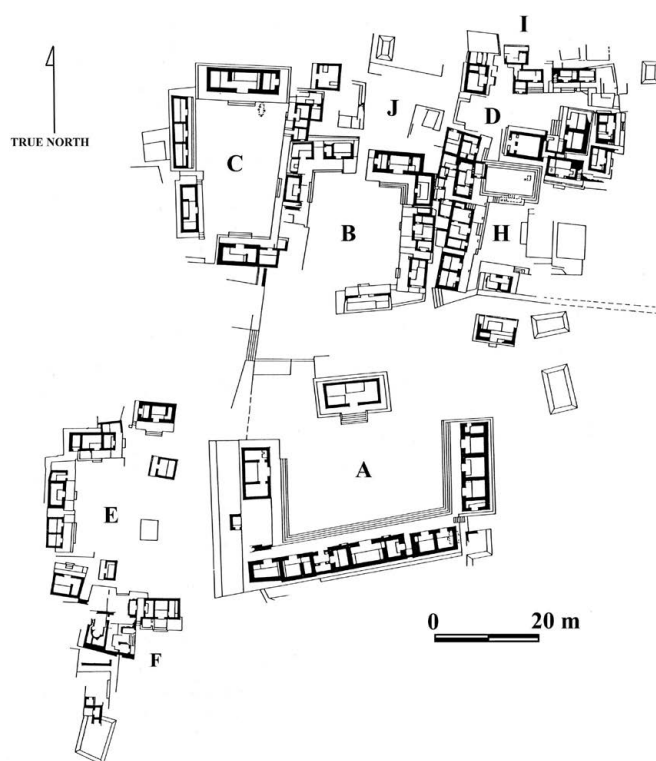


Figure 1-3. Group 9N-8 (modified from Hohmann 1995: 18).

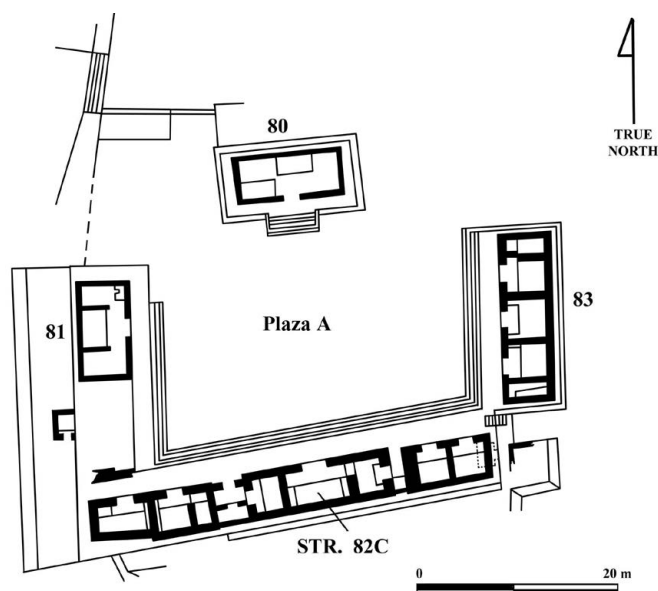


Figure 1-4. Plaza A, Group 9N-9.

Although imposing residences dominate the Copán urban core, there are no clear signs of the well-developed spatial zonation by rank that is characteristic of many modern urban centers. Such compounds instead have their own tightly attached smaller plaza groups or satellite mounds and are interspersed with other groups of lesser rank. A slight intimation of such zonation is that several major compounds of Type 3 and 4 rank, including groups 8N-11, 9M-22A, and 9N-8 are ranged along the Las Sepulturas causeway.⁴⁷

Courts at Copán

Copán's rulers maintained a royal court, but urban core elites also had residences that were mini-courts in their own right and that resembled or emulated essential features of the nearby Main Group. If propinquity to those of high rank is one indication of court affiliation, we estimate that 30% of the whole population of the Copán kingdom lived in these compounds by the late 8th century. No doubt many residents of nearby, modest residential groups were in some way attached to them as well (Webster *et al.* 2000: 163). Although we cannot prove it, these great palaces might have been the core physical embodiments of big corporate lineages or noble "houses" in the larger sociological sense of Levi-Strauss (Sanders 1989, 1992; Chance 2001; Gillespie 2000; but see Miller 2015 and Watanabe 2004 for critiques of such usage; more about this in later chapters).⁴⁸ Whatever their internal constitution, this perspective turns our attention to the palace – or more properly the personified court that it houses -- as a widespread human social institution, not to be confused with its hard infrastructure. In English, though, the infrastructure has become a metaphor for the institution, as in "Communicate this decision to the palace."⁴⁹ Unexpectedly, given its importance as a both place and as an institution, there are no known unambiguous Classic Maya terms for "palace" comparable to Aztec, Zapotec, or highland Maya nomenclature, although palace architectural elements are routinely shown in Maya art.

⁴⁷ Lack of zonation by rank is characteristic of many premodern urban centers. It is absent at Pompeii, where it is comparatively easy to otherwise distinguish the residences of people of different socioeconomic ranks (Beard 2008: 62).

⁴⁸ Some archaeologists draw a distinction between "lineage" and "house" organization, but they are clearly compatible, in the sense that "houses" are usually dominated by a core lineage. The main difference is that "house" organizations are characterized by a wider range of affiliated retainers, clients, slaves, specialists, and other non- or fictive kin. "Houses", however, are more durable than their core lineages because their institutional assets, tangible or otherwise, can be transferred from one set of proprietors to another when the core lineage is dispossessed, as was common in medieval Japan.

⁴⁹ In English this kind of assignment of agency to a set of structures or a place rather than to people is so commonplace that we seldom consider how strange it is. By figuratively ascribing animation and agency to structures and other material features it edges close to the Maya conception of the animated ootoot.

Courts are centers of patronage. Mayanists commonly assume that kings and their close relatives, or other “palace people” who used and consumed preciosities, acted as patrons in an economic sense. Surely, however, such patronage must have been very different from that, say, of traditional China (Clunas 2009), where the immense imperial court during Ming times attracted or commandeered otherwise independent artists and craftspeople on a huge scale. I suspect that in the comparatively tiny Copán kingdom sculptors and other artisans existed at first because of the requirements of kings— i.e., most of them had no other outlet for their skills than that dynastic institution until late in the kingdom’s history. Just how and why patronage diversified as multiple elite courts matured in the 8th century and as royal power waned is unknown (see discussion in Chapter 5).

Great palatial residences are scaled-up domiciles, facilities initially possessed or patronized by particular nobles, and eventually by their kin-groups or noble houses, but they have quotidian roots at Copán and elsewhere in the residences of ordinary people. At Copán these roots seem to be shallow. By the 8th century some of Copán’s sub-royal elites were not only eager to ape the prerogatives of royalty in their own buildings, but able get away with it, appropriating what once were probably royal architectural and symbolic prerogatives. In this way they became more like kings, but they also faced the challenge of differentiating themselves from one another. No doubt they did this in many ways, but the only ones we can see without excavation are architectural features, sculptural programs, and energy investments – all elements of the Harvard typology.

The House of the Bacabs and its Hieroglyphic Bench

Group 9N-8, nicknamed the House of the Bacabs after its principal building in Plaza A, is the most impressive of the elite mini-court establishments at Las Sepulturas and has one of a handful of ootoot buildings in the Maya Lowlands that can be unequivocally associated with a named and titled sub-royal noble.⁵⁰ Our 1980-84 excavations there confirmed all of our archaeological expectations (Webster 1989). In one sense they brought us full-circle back to Spinden’s spatial characterization --- rambling sets of rooms arranged around courts --- and away from the focus on range buildings. 9N-8 resembles 8N-11 in many respects, and especially important are comparisons between the dominant buildings in the two complexes, Strs. 82C (a named ootoot) and 66C. I describe the House of the Bacabs in considerable detail below because it has important implications for understanding the functions and especially the dating of the Skyband Group.

Important Maya buildings had sponsors, builders, and users, along with audiences or receivers of the information they projected. Sponsors (or patrons) initiated, underwrote, and designed projects and so were information signalers.⁵¹ Builders did the logistical and hands-on-work, although they deployed some independent or even unintentional agency. If there were texts some builders were also authors. Users were the people or other beings who identified with, possessed, inhabited, or otherwise employed structures. Just who filled these roles is often unclear and they often overlap, as when sculptors were titled people, or when titled nobles planned, funded, and inhabited their own dwellings or compounds. Our PAC II excavations showed that architecture at Group 9N-8, particularly in the dominant Plaza A, compared favorably in scale, quality, and symbolism with buildings in the Main Group that had royal sponsors, builders, and users.

More significantly, 9N-8 yielded unmistakable signs that all its plazas were parts of a huge elite residence consisting of at least eight or nine separate courtyards (some were washed away by the encroaching river).⁵² It reached its mature layout sometime during the last three decades of the 8th century and conforms to the rambling pattern envisioned by Spinden. Artifact assemblages from buildings (about 50), rooms (about 130), and ambient spaces

⁵⁰ As noted in the Preface, the nickname “House of the Bacabs” was specifically applied to the dominant building 9N-82C we excavated in Plaza A of Group 9N-8. It can also apply to the whole 9N-8 group that plausibly served as of a large corporate “house” in Levi-Strauss’s sense, or at least a well-defined cluster of plaza groups. “Skyband house” can similarly refer both to the building containing the Skyband bench and Group 8N-11 as a whole.

⁵¹ Neiman (1997) believed the elite payoff for costly or wasteful signaling was Darwinian – i.e., increased reproductive fitness for the sponsor of the monument (who was usually not the same as its “builder”). I think Maya efforts were comparatively cheap and that the payoff of sub-royal elite architectural display at Copán is better imagined of in terms of group selection. The important thing was that receivers properly evaluated the signals, both in terms of energetic effort and symbolic content. If they did not understand the signals the conspicuous display was wasted. One can take this a step further: messages can be understood but actively rejected.

⁵² I use the terms “courtyard” and “plaza” interchangeably to refer to a level, open space, usually rectilinear, wholly or partly surrounded by buildings. Plaza can also mean the horizontal physical pavement or surface of such a space. When referring to the whole arrangement of buildings and spaces I say courtyard or plaza group or compound, for which terms like “Plaza A” are convenient shorthands

were similar to those associated with low status residences, and midden refuse was common.⁵³ The ancillary buildings were arranged in distinct clusters, each with its characteristic courtyard or plaza, indicating well-defined social/residential units.

There is a tendency in the Maya literature to dichotomize the status-implications of architecture, as in this statement: “Maya nobility lived in large and well-constructed stone buildings that dwarfed the small wooden homes built by commoners” (Somerville *et al.* 2013: 1540). Energetic, diversity, and richness analyses of architecture, artifact, and mortuary data from 9N-8 show otherwise. There were plenty of people of low or modest rank living in various of the courtyard groups, and energetic studies by Abrams (1994) demonstrate a fairly continuous gradation of residential forms for Copán more generally.

Several hundred people probably lived in the various plazas of 9N-8 during its heyday. We recovered 287 burials from its various courtyards, and Rebecca Storey’s analysis showed that people of all ages and sexes were interred there, presumably close to where they had lived (Storey 1992, 1997). Alternatively, people who lived and died elsewhere were buried in precincts with which they somehow identified. These burials also indicated considerable status differentiation and place of origin within 9N-8 itself, including intimations of polygyny from Plaza E.⁵⁴

Many structures were obviously houses, or *domiciles* in the strict sense, but others served functionally specific ancillary purposes: kitchens, probable storehouses, shrines, and dormitories. There were workshops for specialized artisans, who themselves might have been of high rank (Sanders 1989; Hendon 1987; Diamanti 1991; Widmer 1997, 2009; Hohmann 1995). Some people were migrants. Katherine Miller (2015: 5) incorrectly says that PAC II archaeologists concluded that 9N-8 as a whole was “....an ethnic enclave of non-Maya and migrant peoples....”. In fact during PAC II we only identified Patio D as an enclave housing “foreigners” attached in some fashion to the resident lord (Gerstle 1988). Recovery of ball-game equipment from the floor of Str. 9N-81, a probable young mens’ house, raises the possibility that 9N-8 even had its own ball-court since washed away by the river.⁵⁵ Charles Cheek (2003) predicted that Copán elite residences would also have included “council houses” similar to that known from the Main Group (Str. 22A), but none of the 9N-8 buildings quite matches its distinctive architectural features. Energetic calculations by Elliot Abrams (1984a, 1994) revealed the large amounts of labor expended at 9N-8, particularly at the dominant elite building 9N-82C.

The hieroglyphic bench: In addition to façade sculpture, 9N-82C contained an inscribed bench or throne (Fig. 1-5) naming it as the ootoot, or residence-cum-audience structure, of the powerful noble/courtier *Mak’an Kanal*.⁵⁶ According to Noble (1999: 137) his name means something like “Covering Sky Place”. The bench inscription refers to Mak’an Kanal’s title, *ajk’uhuun*, to his parents Lady *Na Kin Ajaw* and *Kuk K’awil*, to his grandfather (and possibly his grandson), to the reigning 16th king *Yax Pasaj Chan Yopaat*, and to ceremonies conducted in the building, which was erected when the bench was dedicated (this point will become important later). The inscription also associates Mak’an Kanal with an honorific local title, *koxop ajaw*, a possible toponym (Jackson 2013b: 26).⁵⁷ Plank (2004: 140) says the arrangement of images and glyphs on the bench represents a skyband, but we never used that nickname for it.

All this appears pretty straightforward, but see Plank (2004: 134-135) for some alternative interpretations, including the possibility that Mak’an Kanal was dead before the bench dedication, which was made instead by a grandson or other descendant. Such uncertainties and details aside, Str. 9N8-82C and its interior bench provided detailed evidence for titled human agents identified as owners of sub-royal ootoots.

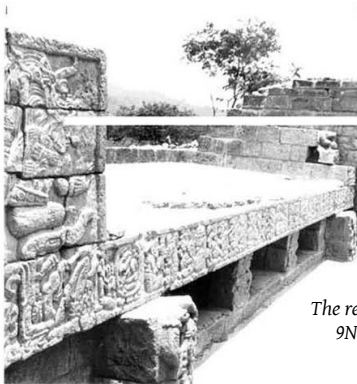
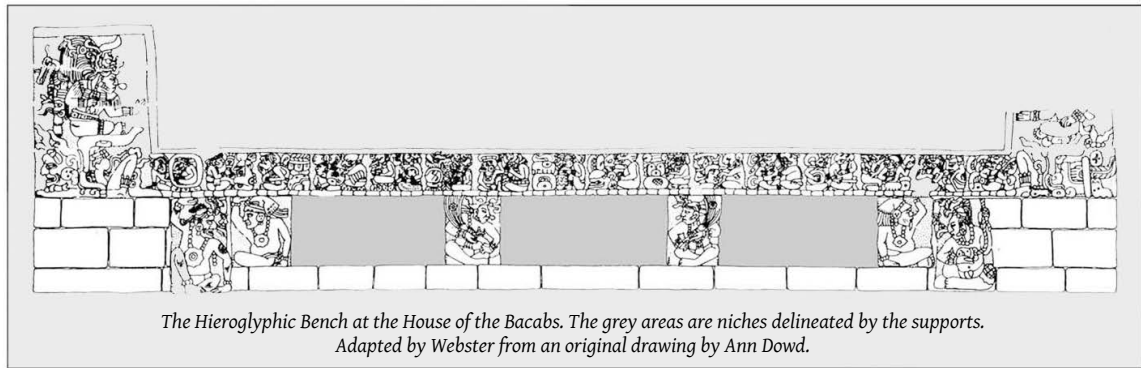
⁵³ Indications of late occupation at Copán came from superficial deposits in Plaza A that included small, side-notched projectile points made on fragments of prismatic obsidian blades. Such points are found elsewhere in Lowland Maya sites and are generally considered to be of Postclassic date.

⁵⁴ Status distinctions as reflected in Copán burials, except for those of royals, are distributed quite continuously as discussed in Chapter 8; see also the burial analysis of Reed and Zeleznik (2016).

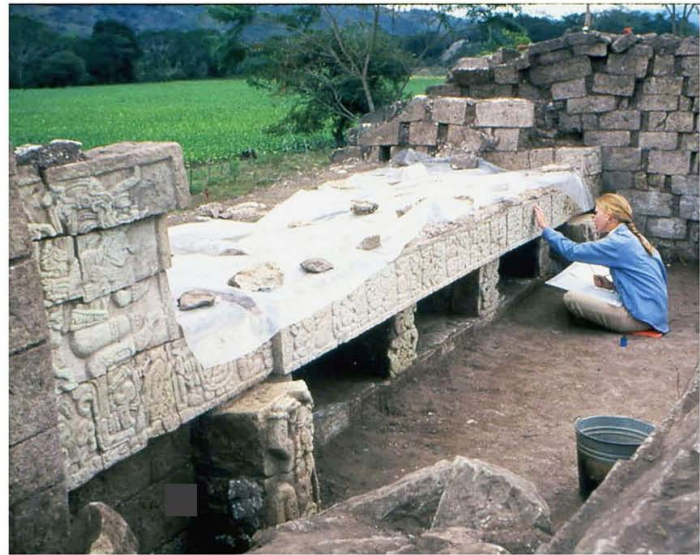
⁵⁵ But see Coe (2003) who thinks the game might often have been played more informally without a court.

⁵⁶ This name has been variously spelled in the literature. Barbara Fash (2011: 134) says *Mac Chaanal*, and Plank (2004: 133) says *Mak’ chanal*. Here I use the spelling given by Houston and Inomata (2009: 259).

⁵⁷ Jackson notes that this same expression occurs on Altar W’, another indication that this monument indeed came from Plaza A of Group 9N-8 (see discussion in Appendix of Webster 1989).



The reconstructed
9N-9 bench.



Ann Dowd draws the 9N-8 bench in 1981.

Figure 1-5. The 9N-8 bench.

Chronology of the bench: The Calendar Round date on the 9N-8 bench is variously given in the literature (see Plank 2004: 132 for difficulties of decipherment). Riese (1989: 83) interpreted it as 9.17.16.13.10 11 Oc 3 Yax (July 29, 787) and presumed that it referred to the bench dedication.⁵⁸ Stuart *et al.* (1987) place the dedication of the bench at 9.17.10.11.0 11 Ajaw 3 C'hen (July 10, 781), the same date later used by Noble (1999: 137), in her study of “seats of power”. In 1997 the display on the reconstruction of Str. 9N-82C in the Copán Sculpture Museum said AD 780. Shannon Plank (2004: 153) and Barbara Fash (2011: 133-134) both say AD 773. Fash gives the exact date as 9.17.2.12.0 11 Ajaw 3 Keh, or September 10, 773, which falls very shortly after the dedication of the royal Str. 11 bench in the Main Group. The 9.17.9.5.4 date on Altar W', which probably stood in front of the House of the Bacabs, falls just before the Stuart, Grube, and Schele reading. Plank (2004: 132) says the altar's date is 9.17.9.5.4, and so is within a few years of the bench dedication. Martin and Grube (2008: 211) mention the 9N-8 bench but puzzlingly give no date for it, nor does Sarah Jackson (2013b) in her detailed consideration of Maya elites.

Chronological vagaries aside, the important point is that near the end of the 8th century sub-royal nobles were erecting and dedicating such monuments and others in their own establishments, perhaps battenning off the unprecedented glyphic efforts at the Hieroglyphic Stairway and at Str. 11 in the Main Group. Dedication “....served to mark the political, social, or ritual activation of an object or monument (Stuart 1998: 374), in this case presumably the building housing the bench.⁵⁹ We shall see later that the date of the dedication of Str. 9N-82C and

⁵⁸ I used the on-line program at <http://www.pauhtun.org/cgi-bin/mayagreg.py> to convert Riese's and other Long Count dates to Gregorian.

⁵⁹ Despite the close relationships between the 16th king, Mak'an Kanak and the ajk'uhuun nobles at Group 9M-18, neither of their inscribed benches say that the king was present at their dedications.

its bench has implications for symbolic spatial patterns as claimed by Shannon Plank (2004) and Alan Maca (2006).⁶⁰ Most important is how the date relates to the contentious issue of Copán's elite chronology, competition, and political collapse as discussed in the final chapters. Chapter 4 discusses the four known carved benches located outside Copán's Main Group.

The *ajk'uhuun* title: When we discovered the bench in 1981 very little was known about Maya sub-royal titles. Our best guess in our 1983 article was "Calendar Priest". This glyph, now read as *ajk'uhuun* (sometimes called the God C title), is the second most numerous Classic Maya title (88 occurrences) after *sajal* (more than 100; see Martin 2020: 89). Jackson (2013b: 149-156) lists 46 monument inscriptions from eleven sites/regions that exhibit this title, as well as 18 examples on portable objects. Almost all date between AD 600 and 775. Images of *ajk'uhuunob* sometimes appear in very exalted contexts, most notably on the lid and legs of Pakal's sarcophagus (Van Stone 2005: 38; Chinchilla 2006). Coe and Kerr (1997: 90-101) summarize the evolving understanding of the title and the distinctive paraphernalia of those who bore it.⁶¹ It is certainly the most obtrusive title at Copán (Fig. 1-6).

The *ajk'uhuun* title remains imperfectly understood despite a long history of analysis, partly because it probably denoted different roles in different regions at different times. Coe and Kerr (1997: 90) associate it with holy books, papers, or headbands, and think it might be "...the most important scribal office of all....". Following Nikolai Grube, Coe and Van Stone (2001: 97) reduce the meaning to "he of the holy books" and note that *ajk'uhuunob* are often depicted as "masters of ceremonies". Jackson and Stuart (2001: 217) think the core of the title, *K'uh*, means "god" or "holy thing." They present a succession of suggested meanings and reject all but one: "He of the Holy Book".⁶² They nevertheless consider this meaning too narrow and say it might be expanded to something like "He of the Holy Paper", which would encompass both books and other objects such as royal and elite headbands as Coe and Kerr suggested.⁶³ They go on to offer two other suggestions: "one who venerates, worships" and "one who keeps, guards". More specifically, they think that such officials might have been involved in the co-ordination of craft production, oversight of tribute collection, and prestation of status objects in the political economy of Maya royal courts (see also McAnany 2013: 241).

Stuart and Stuart (2008: 164) prefer "one who venerates", or "worshipper". Van Stone and Zender (2011: 12) say that *ajk'uhuunob* were priests who were ".... the producers and curators of both art and writing ... apparently trained in both glyphic and symbolic communication." In addition to its priestly associations, the title obviously refers to courtiers of high rank who were in attendance on the king or who rendered very personal service to him. Tokovinine (2011: 79) suggests a more specific service – the title means "he of worship"/"he who guards". Houston and Inomata (2009: 173, 258) identify individuals with the title as subordinate figures in court scenes and suggest that they might be "....those who guard or keep precious goods".⁶⁴ A common interpretation is that the *ajk'uhuun*

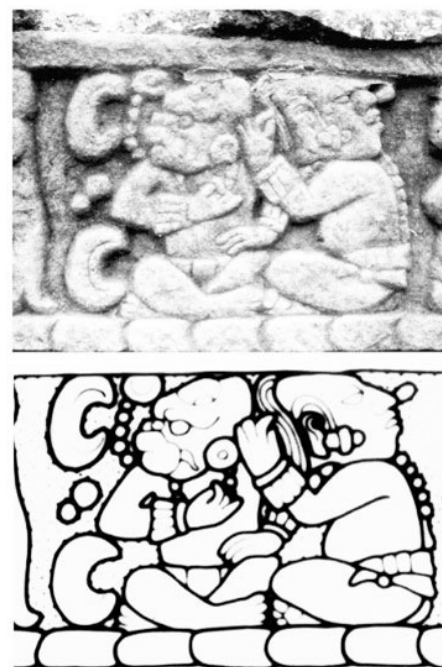


Figure 1-6. The *ajk'uhuun* title glyph on the bench (above) and as drawn by Ann Dowd (below).

⁶⁰ William Fash noted the abundant use of *bakab* imagery at Copán and suggested that they might have been patron gods of the kingdom.

⁶¹ It appears to be used both for actual office-holders and their descendants. According to Martin (2020: 89) an earlier version of the title was *ajk'uhna*.

⁶² Murals found at Xultun by William Saturno and his colleagues (Saturno *et al.* 2010) include a poorly-understood elite title with the root *taaj* (glyphically *ta-ji*) that has several longer variants. An alabaster vase found at La Florida in Honduras associates this title in some way with Copán's 16th ruler (Zender and Skidmore 2012: 4-7). Some archaeologists think it might refer to individuals practicing scribal and/or priestly roles.

⁶³ Curiously, their detailed comparison of the benches at Copán groups 9N-18 and 9N-8 fails to mention the obvious scribal iconography at the latter site, found both on a buried statue and on façade sculpture, that would seem to favor the "He of the Holy Book" interpretation. For transcriptions of the two bench inscriptions see Jackson and Stuart (2001: 228) and Plank (2004).

⁶⁴ An *ajk'uhuun*, along with ball-game paraphernalia, is shown as part of the palace scene on a famous polychrome cylinder in the Dumbarton Oaks collection. Another carved travertine vessel in the same collection shows an *ajk'uhuun* named Yiban (see Pillsbury *et al.* 2012: 124-125 for details). Hieroglyphic monuments at Maya centers frequently mention their own *sajalob*, *ajk'uhuunob*, and other nobles, but these grandees are never mentioned at other royal capitals except in the context of capture (Sarah Jackson, personal communication, Oct. 10, 2012). Occasionally a noble at one center will mention a connection with a king at another; see Tsukamoto (2014: 62-63) for a long distance example.

was literally a keeper of books (Rice 2004: 39). Looper (2007: 16) also uses this translation, consistent with the conspicuous scribal imagery on the façade of 9N-82-center whose sculpted image over the central doorway possibly depicts Mak'an-Kanal himself (but see Baudez 1989 who argues that it instead might represent the 16th ruler Yax Pasaj Chan Yopaat).⁶⁵ Shannon Plank (2004: 222) thinks that the façade program alludes to a supernatural centipede and an underworld portal and might be read as “White Bone Great Centipede House”. How this label relates to scribal functions is unclear, but Plank goes on to say (p. 231) that the building was obviously “owned” by a human agent, not by a god or a supernatural being.

Whatever their specific roles, ajk'uhuunob were sufficiently important at royal courts to be identified on the great sarcophagus of K'inich Janahb Pakal I at Palenque, presumably to still serve him in death (Chinchilla 2006: 42). Palenque ajk'uhuunob had the honor of connecting *k'atun* intervals to their life histories. Houston and Inomata (2009: 173) remark that “....these chronological titles are ordinarily the prerogative of royalty”. Ch'ok Balam, one of these august Palenque ajk'uhuunob, was captured by Ruler 1 of Piedras Negras around AD 624, so such lords appear to have participated in military campaigns, though their warfare roles are much less conspicuous than those of sajals. Iconography on the Palenque tomb indicates that their souls could even be reincarnated as celestial bodies, specifically stars, after they died (Chinchilla 2006: 42-46).

Ajk'uhuun is never part of the titles used by named kings, who are designated as *K'uhul Ajaw*, so it clearly denotes sub-royal rank. Nevertheless, ajk'uhuunob resembled rulers in that they acquired their titles through formal accession events. Jackson (2015b) argues convincingly that ajk'uhuun is one of five titles that seem to reflect actual offices rather than honorifics, and that such officials were attached administratively to royal courts, intimations of what she calls “mild bureaucracy”. We know that titled individuals sometimes had fluid court identities. In at least one instance (at Piedras Negras) a sajäl changed his title to ajk'uhuun, and at Toniná ajk'uhuunob could simultaneously hold other courtly titles.⁶⁶

Rulers often ‘possessed’ individuals who held the ajk'uhuun title, and Mak'an-Kanal was possessed by Copán's 16th king. Occasionally ajk'uhuunob were also possessed by *sajalob*. The title is usually held by males, but sometimes by women (Jackson lists seven examples prefixed by *ix*). More than one ajk'uhuun might be attached to any given king, and there are signs of internal ranking among them (Jackson and Stuart 2001: 219). Some individuals holding the title played very dominant political roles, as when two of them oversaw the accession of the child king of Toniná in AD 708 and later apparently engaged in wars on his behalf (Martin and Grube 2008: 183). Toniná's epigraphic record is especially rich in ajk'uhuunob references, but there are none to *sajalob* (Taladoire 2014: 61-63). Ajk'uhuunob titles there were conferred by the king, and these officers discharged political functions that seem to have risen to the level of regency. One of them, *K'el Ne Hix*, might have been a leading figure in military operations against Palenque. He apparently married a royal lady and was the father of Ruler 4 of the Toniná dynasty. Martin (2020: 89) cites three occasions in which ajk'uhuunob were war captives, so they probably participated in actual combat.

Perhaps it is simplest to agree with Coe and Kerr (1997) that ajk'uhuun refers to the varied activities of scribes, sculptors, royal negotiators, masters of court ceremonies, recorders of tribute, warriors, and lords who are chief mainstays of the royal person.⁶⁷ Whatever Mak'an-Kanal's precise functions at Copán, he certainly stood very high among the sub-royal nobility of the kingdom, and probably had a personal relationship with the king in addition to his official duties. This role was shared by others – another ajk'uhuun is recorded on the nearby bench in Group 9M-18 found by Richard Leventhal (see Chapter 4).⁶⁸ The *bakab/pauhtun* figures supporting the 9N-8 bench might metaphorically represent the courtly noble, who “.....is one who supported the throne or ruler as though an underworld supporter of upper surfaces, backs, bent, arms lifted up in strain against an inconceivable

involving El Palmar and Copán. Only one sajäl title is recorded at Copán at AD 688.

⁶⁵ The *pauhtuun* (God N) figures shown holding up the bench have many associations, one of which is as major patrons to scribes (Coe and Van Stone 2001 115). David Stuart thinks that the references to scribal and other activities conveyed by some Las Sepulturas sculpture programs might be symbolic, possibly associated with deities. They thus might not directly signal the offices or roles of the individuals who lived in the buildings (personal communication to Webster, 1997).

⁶⁶ Although they were formally seated at some point in their careers, there do not seem to be multiple seating events associated with the assumption of new or additional titles.

⁶⁷ I suspect that, as in Old Kingdom Egypt, there were many persons in the king's court who routinely, and presumably at his behest, undertook a variety of tasks as required by circumstances and who thus deployed a range of titles and skills.

⁶⁸ Sajäl, the other most frequent Maya noble title, occurs only once at Copán on Altar K (Sarah Jackson, personal communication, Oct. 1, 2012).

weight” (Houston and Inomata 2009: 182; see also Jackson 2013b for a discussion of this god-noble trope).⁶⁹ Personal relationships among ajk’uhuunob and rulers were apparently very durable and sometimes transcended generations. The travertine vessel in the Dumbarton Oaks collection shows both parents of an ajk’uhuun named *Yiban* wearing the paper/Jester God headbands of lordship usually associated with rulers (Van Stone and Zender (2011: 37).

Just how ajk’uhuunob or other Classic Maya elites originally got their titles is unclear, although sometimes ajk’uhuun positions were inherited. The basic issue is whether titles granted by the king conferred authority, prestige, and power on their holders, or whether nobles were granted titles because they were already powerful in their own right, so kings needed their support. The first scenario is the more bureaucratic of the two, while the second is more typical of court-dominated societies. By the 8th century both principles of preference and promotion probably operated, but the second seems ascendant at Copán.

Marken and Gonzalez Cruz (2007: 136) note the similarity between Palenque’s settlement and the Copán urban core with regard to impressive residences. Both have a very high proportion of groups that seem to fall into the elite range of the residential hierarchy. Inscriptions at Palenque identify residences with named and titled royal officers, most notably two “junior lords” or *sajals* *Aj Sul* and *Chak Sutz’* (Stuart and Stuart 2008: 164, 223; Marken and Gonzalez Cruz 2007: 142). The latter was sufficiently important to have his own throne room in Palenque Group IV. A panel from Group IV called the Tablet of the Slaves has an inscription mentioning *Chak Sutz*, while the central image depicts the contemporary ruler *Ahkal Mo’ Naab III* along with his parents, from whom he is receiving symbols of divine rulership. Such display and political assertion strongly resemble the self-presentation of the ajk’uhuunob of Copán. As at Copán, Palenque nobles appear particularly active in building their own grandiose compounds very late in the local dynastic sequence, although in fairness none of the visible architecture predates the final king by much more than a century, so “late” is a relative term. Tsukamoto (2014: 62) has identified similar sub-royal assertion at Plaza A at El Palmar, where an elite individual named *Ajpach’ Waal* was buried beneath the floor of a small temple and featured on its hieroglyphic stairway, dedicated in AD 726. This individual, or someone close to him, maybe his father, had a connection with Copán during the time of the 13th ruler, and might even have journeyed there as some sort of ambassador.⁷⁰

Other less direct evidence links 9N-8 to Copán’s dynastic establishment. Altar W’, dedicated in AD 790 (9.17.5.9.4 8 Kan 12 Mol), was found during the Peabody Museum’s 1891-92 field season.⁷¹ Morley (1920) later described it as one of the finest carved monuments at Copán, particularly distinguished by its unusual full-figure glyphs (see also Webster 1989). This monument came from “Group 6”, which Morley locates about 1000 m east of the Main Group. In 1936 the altar was moved to the front of the local airline office (Stromsvik 1946: 85). Although its original location is imprecisely recorded, the altar was found in a spacious courtyard surrounded on all sides by buildings with well-cut stone masonry. Directly behind it, on the south side of the courtyard, was a building with conspicuous amounts of sculpture that Morley called a “temple.” Only two impressive Las Sepulturas groups lie at an appropriate distance east of the Main Group --- 9N-8 and 8N-11.⁷² The only locale that fits Morley’s description is Plaza A of 9N-8, whose southern building was decorated with façade sculpture and whose carved bench had full figure glyphs like those on the altar. If the altar originated at 9N-8, it was set up within a decade or two of the dedication of the bench in the House of the Bacabs. Altars of W’ caliber at Copán are usually found in association with royal stelae and/or royal precincts, so its location suggests the exceptional importance of the residents of the House of the Bacabs if my supposition concerning its original location is correct (see Chapter 11 for further

⁶⁹ According to Van Stone and Zender (2011: 169) these supporting figures represent “...an old antlean god (ITZAM)...”

⁷⁰ *Ajpach’ Waal* was a mature adult in poor physical condition, and his tomb had very modest mortuary offerings despite his apparent high status (Neely (2021).

⁷¹ Altar W’ is a late monument at Copán, and very likely served as a throne (as altars are depicted on some polychrome vessels). It was carved about 14 years after the celebrated Altar Q, but unlike that monument has no named protagonist or titles. Two possibilities are 1) it was carved for Mak’an Kanal and set up by him or in honor of him when the 16th king was still in power (Str. 18, the king’s tomb, was dedicated in AD 800). If it were carved in place at around AD 790, then the resident lord commissioned or received it during the latter part of the 16th ruler’s reign when other royal monumental efforts were apparently slackening. If it were moved from some more royal context it must have been done after AD 790, suggesting the increased power of local elites when Mak’an Kanal (or an unknown successor) had the political clout to relocate it there. It might have been moved to Plaza A after the dynastic collapse, and if so it still attests both to the importance and durability of this particular sub-royal elite establishment.

⁷² Morley (or his sources) clearly overstated the distance of the original find. Any site 1000 m to the east of the Main Group would lie on the other side of the Copán river, a zone with less settlement and fewer large groups.

discussion).⁷³ The altar might originally have been in some other location and later moved to 9N-8, although the occurrence of the *koxop ajaw* expression on both the altar and the nearby inscribed bench suggests otherwise.

Identifying Copán Palaces

Despite all these promising beginnings at Copán and elsewhere, Mayanists in the late 1980s still had only a vague understanding of elites and their archaeological residues. Gair Tourtellot (1993:230) posed the most pressing question: “Where do elite people reside and how many were there?” He concluded from a survey of the literature that we “.....have severe problems when we want to identify the elite on the ground....” (Tourtellot: 1993: 232). These problems include

1. Recognizing elite residences using surface architectural traces.
2. Associating textual information with elite residences.
3. Relating known or suspected elite residences to a larger universe of well-documented, contemporaneous settlement.
4. Assessing the functional and demographic implications of specialized structures/rooms within elite residential compounds.
5. Explaining the variable configurations and locations of elite residences at major centers.

Our House of the Bacabs excavations finally resolved several of these issues, at least at Copán. Group 9N-8 is among the best-documented (and one of the biggest) sub-royal elite palace complexes at any lowland Maya center, and by far the best example of the residential establishment or named *otoot* of an *ajk'uuun*. Not only was the site itself impressive, but by the mid-1980s we could view it and other such places in the context of a much larger regional settlement system (Fash 1983a,b; Fash and Long 1983b; Freter 1988). We also had the associated texts, both in the form of actual inscriptions and sculptural programs (the best presentation is Hohmann 1995: 75-85; see also B. Fash 2011), a pretty fair grasp of intra-group use of space, and a large burial sample with demographic implications. The old “minor ceremonial center” designation often used to characterize imposing Classic Maya groups outside their associated monumental architectural cores seemingly could be discarded. Still, the tendency to see any kind of formal arrangement of large, ornate structures as ceremonial in function remained tenacious. Even as he worked at Copán, as late as 1983 Claude Baudez found it difficult to accept the relationship between residence and ceremonialism in societies such as the Maya -- something either had to be domestic or ritual, not both. Partial exposure of elite compounds such as the Type 3 group 9M-18 excavated by Richard Leventhal during the earlier Harvard project yielded ambiguous results because the mundane, domestic functions were not as obvious as at 9N-8, where exposures were more extensive.

Our excavations at Group 9N-8 showed that Maya lords used ritual display and ceremonies to signal and legitimize their statuses. Some of these activities took place in their residences, which were also places for ritual and performance. Religious, ritual, and political symbols and facilities are thus as much a part of their elite precincts as armories or tombs or chapels were parts of medieval European elite residences. A few pieces of façade sculpture and an inscribed throne had previously been found by Leventhal at 9M-18, but 9N-8 produced an even more revealing inscription and sculpted façade. Epigraphers in the early 1980s had a fairly rudimentary grasp of how to interpret such texts and displays, but it was evident that glyphs and iconography could be recovered from Copán's sub-royal palaces and used to infer titles, offices, court roles, and many other things essential to understanding the Late Classic political system.⁷⁴ These new insights about socio-political structure inevitably raised important questions about the celebrated Classic Maya collapse, a major theme of Chapters 10, 11, and 12.

Comparability: Although Group 9N-8 turned out pretty much as we expected, some questions remained. How typical was it of Type 4 groups in general? 9N-8 is, after all, the largest and most complex such compound in the

⁷³ Morley's description of the find spot says that the altar was partly buried by an “alluvial” deposit about a third of a meter deep that covered the floor of the courtyard. No such deposits were found in any courtyards at Las Sepulturas by PAC II projects, including in the subsidiary courtyards of Group 9N-8, which are 1-1.5 m lower than Plaza A. Nor were there any in the main plaza of 8N-11, which is about 50 cm lower than that of Plaza A at 9N-8. What Morley took for alluvial material might be soil developed since the courtyard was abandoned and/or slopewash from the nearby Str. 9N-82-center.

⁷⁴ Similar benches, both whole and fragmentary, are known from several other urban core sites as reviewed in Chapter 4. If enough testing were done, Las Sepulturas alone would probably yield at least five more “seats of power”. Such a set of monuments would greatly expand our understanding of the Copán court in the late 8th century.

urban core apart from the Main Group. It was distinctive not only in its scale and sculptural programs, including Altar W', but also in its sprawling arrangement of courtyard units and its specialized building and rooms, such as an apparent young men's house with ball game equipment, and at least one workshop that produced elite items from imported raw material. Much more common among mapped elite-rank sites at Copán is the pattern of single large plaza arrangements, as seen at Leventhal's Group 9M-18 and at Groups 8L-10 and 8L-12 in the foothills about 600 m to the northwest of 9N-9 (see Fig. 2-4).⁷⁵ Because the scope of our operations allowed us to expose virtually the whole site, 9N-8 remains unmatched in the extent of its sampling. The obvious danger lies in seeing this spectacular and particularly well-documented group as some sort of archetype and assuming that other Copán elite groups of different scales and configurations, many insufficiently (or not at all) tested, had a comparable range of functions and similar occupational histories.

This issue of comparability was important because in the late 1980s the Type 3 and 4 sites were looming ever larger in our sociopolitical and demographic reconstructions. If other such units generally fit the 9N-8 pattern, these reconstructions would be fairly straightforward. The only other comparable evidence we had at the time was the set of conjoined plazas at Group 9M-22 excavated by James Sheehy (1991) and John Mallory (n.d.; 1981), which together constitute a group of Type 3 scale. Somewhat later Alan Maca (2002) extensively probed the Type 4 Group 9J-5 (previously tested by AnnCorinne Freter), situated in the northern foothills of the Copán pocket. Although he encountered much midden material it is unclear from Maca's presentation whether he considers 9J-5 to be primarily an elite residence like 9N-8 or some kind of ceremonial complex. Interestingly, however, he recovered fragments of ball game yokes, just as we did in Patio A of 9N-8.

Palace chronology at Copán: Another issue was the timing of the florescence and demise of Copán's sub-royal elites as reflected by inscriptions and by the standard ceramic sequence introduced in the preface. Houston and Inomata (2009: 171) note that "The greatest visibility of nobles thus marks a span of only 150 years, give or take a generation, when populations peaked around the Classic world". They put this interval at AD 650 to 800, a reasonable fit with our Copán data. Excavations at Group 10L-2 showed that all of the standing masonry architecture was built between AD 700 and 850 (Andrews V and Fash 1992), and all big masonry structures visible in the urban core appear to be no earlier than AD 700.⁷⁶ The final phase architecture at 9N-8 and other Las Sepulturas elite-scale sites was dominated by Coner complex ceramics, generally thought to be of Late Classic date (but see Chapters 9, 10, and 11 for commentary). PAC I research (along with some later projects) concluded that the standard chronological sequence was attenuated at the late end (the *short chronology*). The alternative *long chronology* that emerged during PAC II extends Coner or Coner-like assemblages much later (see Webster, Freter, and Storey 2004). Our data indicate at least feeble elite activity in some compounds until ca. AD 1000, and continued occupation or other kinds of human presence for another century or two thereafter. We will return to the implications of the long chronology for Group 8N-11 and the Classic collapse later. The important issue here is how the duration of the Coner ceramic tradition affects the chronology of sub-royal construction activity and the eventual political and population demise of the Copán polity.

As for the origins of sub-royal elites, we knew that the locale of the House of the Bacabs was occupied (at least intermittently) since 1400 BC based on William Fash's discovery of Early to Middle Preclassic materials buried deep beneath Plaza A during our PAC II project (Fash 1991; Hall and Viel 2004: 37). He also found an impressive Middle Classic (Acbi) burial nicknamed "El Brujo" beneath Plaza A, showing that some early residents were of high rank (Fash 1991, 2005). Our excavations revealed that the group as a whole experienced its florescence in the late 8th century, as had Leventhal's nearby Group 9M-18. There were also tantalizing indications that elite activity at 9N-8 and elsewhere at Las Sepulturas continued long after the dynastic collapse. Given the evidence available in the late 1980s, some elite establishments seemed to have deep historical roots, retaining their identities and political influence throughout the maturation of the Classic kingdom and even after the demise of its kings. Others appeared to have much shorter occupational histories, waning or waxing with the maturation and collapse of the dynasty or with the fortunes of particular kings. The only way to sort out these architectural and chronological issues was to enlarge our excavated sample. Following chapters describe Las Sepulturas Operations 14 (1982),

⁷⁵ These impressive groups were tested and dated by AnnCorinne Freter (see Chapter 11) and later more intensively dug by Wendy Ashmore (1989, 1991); see Chapter 12.

⁷⁶ Salvage work by Seiichi Nakamura (Nakamura 2000; Price *et al.* 2014) revealed abundant evidence of early activity from the Late Preclassic through the Early Classic at Group 10J-45, about one km due west of the Acropolis. One burial made between AD 400-525 might be that of an early Copán ruler and another his spouse. If so, why these royal persons were buried far from the Main Group is puzzling.

50 (1990) and 63 (1997) at Group 8N-11 that addressed this deficiency, and that revealed the highly distinctive features of the Skyband Group, along with important data pertaining to the demise of the kingdom and its people.

Summary

There are many problems with the Harvard scheme of ranked residences, but as a rough heuristic device it has long provided useful insights about Copán's social and political organization, especially one that espouses royal/elite competition (see Sanders 1989; Webster 2005; Fash and Fash 1990; W. Fash 2005). Before our 1990 excavations we assumed that 8N-11 was some sort of spatially distinctive counterpart of 9N-8 – a sub-royal palace or noble's residence. I am increasingly uncomfortable with this interpretation and what little I know of the recent Chinese findings, along with our own evidence, suggests other possibilities. Many years ago Jack Eaton was perplexed by the combined temple (exterior) and residential (interior) configurations at Chicanná. More recently Anne Dowd (2017), following earlier suggestions by the Ricketsons (1937), Tozzer (in Landa 1941), and David Friedel (1986), envisioned temple/palace layouts, sometimes in E-group form, which housed professional priests. In any case, the following chapters reveal important differences between the 9N-8 and 8N-11 compounds that suggest the Skyband Group was not a noble's palace, but something else, a set of buildings whose features mimic such a residence. We already entertained this suspicion in 1983 (see Chapter 2) and I address it at length in Chapter 12.

Chapter Two

Group 8N-11

David Webster

The Las Sepulturas elite-scale site that most intrigued us in the late 1980s, given the obvious variability among them, was Group 8N-11, located about 200 m northeast of the House of the Bacabs (Fig. 2-1).¹ The mapped surface patterns of these two complexes were strikingly different, although the impressive scale and sculpture at 8N-11 placed it squarely in the same Type 4 Harvard rank as 9N-8. 8N-11's layout resembled the two elite-rank sites 8L-10 and 8L-12 in the nearby foothills about 750 m to the northwest that were tested by Wendy Ashmore a few years earlier (Figs. 2-2 and 2-4) and the Las Sepulturas Type 3 Group 9M-18 excavated during the Harvard project (Wiley, Leventhal, and Fash 1978). Group 8N-11, like other Las Sepulturas sites, was located on slightly elevated ground, probably an old river levee, in a locale that was originally swampy or boggy in many places. More important from our perspective was that 8N-11 occupied a strategic location near the end of the causeway linking Las Sepulturas to the Main Group, although no formal connection was known when we began our work in 1990.² We shall see in Chapter 12 how the causeways relate to three hypotheses about the symbolic character of the urban core landscape urban and assertion of royal authority.



Figure 2-1. Air photo of the urban core.

¹ The aerial photo is one of a series taken for the Instituto Hondureño de Antropología e Historia in May 1977 by Hardwick and Associates: Aerial Surveys and Remote Sensing, with a Zeiss RMK A 15/23 Camera, and a Pleogon lens with an R or a B \ filter at scales ranging from 1:16,000 to 1:10,000 to 1:8,000. The images were provided to us by the Instituto, and we used many of them as the basis for our PAC II surveys. Original negatives are available to researchers at the Copán Research Facility in Honduras. A sub-set of the images in print form is curated in the Copán archives at Penn State University.

² Its eastern location in the Las Sepulturas settlement enclave led William Fash to include 8N-11 in his 1977 program of test-pitting (Fash 1985: 35).

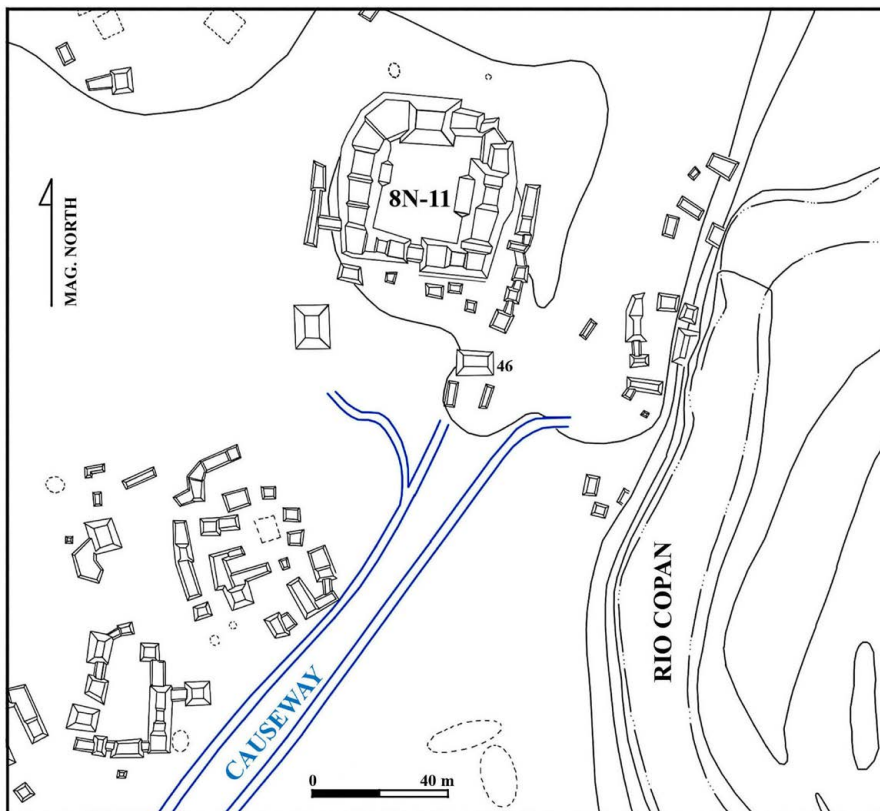


Figure 2-2. Group 8N-11 and the causeway terminus.

Even as we began to publish our findings at Plaza A of Group 9N-8, we wondered about the distinctive configuration of 8N-11 and speculated about its possible functions:

“Although Plaza A turned out to conform well to our expectations, recent excavation data suggest strongly that not all Type 4 sites at Copán were elite residences. The nearby site CV68 at the end of the causeway is of very different configuration from CV36 and probably holds surprises for us in the future” (Webster and Abrams 1983: 296).

Some structures at 8N-11 were higher than any of those at 9N-8, and instead of numerous conjoined courtyards there was a single, dominant plaza group surrounded by a ring of lineally arranged smaller structures on the east, and scattered ones on the south and west.³ This pattern is more typical of the mapped Type 4 sites at Las Sepulturas and outlying parts of the Copán pocket than the sprawling 9N-8 layout, which should not be taken as any kind of spatial archetype. The layout of the imposing royal residence Group 10L-2, attached to the southern edge of the Copán Acropolis, seems to resemble that at Group 9N-8. Still, why was 8N-11 so different from 9N-8?⁴ Several possibilities suggested themselves:

1. 8N-11 (and other groups with a similar pattern) was founded very late compared to 9N-8 and did not have time to evolve a complex set of courtyard arrangements, even though both were elite residences with essentially similar functions. This explanation would push the final phase construction well into the 9th century.
2. 8N-11 might be remains of a residence that somehow was more closely linked to the royal line, and so was unable to weather the collapse of the dynasty. 9N-8's sub-royal noble establishment apparently did so, growing in complexity in the process.

³ The lidar map shows what appear to be six or seven large structures to the north of Str. 70. We noted only slight traces of mounds there. Because the lidar image was made after the Chinese project excavations, the apparent structures are probably their backfill.

⁴ Long after our work at 8N-11 Alan Maca (2006) postulated that 9N-8 had a rare and distinctive “U-group” arrangement that was one anchor of a quincunx arrangement that defined the boundaries of Copán. Such a specific symbolic function might explain some of the differences in layout (but see comments in Chapters 7 and 12).

3. 8N-11 was an exception that did not conform to the Harvard residential hypothesis -- i.e., it was a ceremonial group or had some other nonresidential set of functions.
4. Group 8N-11 remained occupied long after the dynastic collapse; many of the smaller buildings were late additions, making our maps deceiving.

Assuming that 8N-11 was a noble's residence it must have functioned rather differently than 9N-8, both spatially and organizationally. Some parts of 9N-8 are distinctly "rambling" (remember Spinden's palace characterization quoted in Chapter 1). The layout of 8N-11 projected instead the impression of a compact and well-ordered central compound that, at least judging from its surface remains, lacked the multiple plaza arrangements of its bigger neighbor. The twenty or so ancillary buildings ranged around the big 8N-11 buildings clearly housed far fewer people than lived in the multiple courtyards at 9N-8.⁵ If the corporate lineage and/or "house" interpretations are correct, many of its affiliated or dependent people must have resided elsewhere.

Pre-PAC II Excavations at Group 8N-11

We unfortunately knew very little about 8N-11 apart from some brief testing during the Harvard project (Leventhal 1979; Willey, Leventhal and Fash 1979; Willey *et al.* 1994). William Fash and Ricardo Agurcia excavated test trenches in its central courtyard and also about 60 m farther to the southeast, near the end of the causeway (Fash 1983: 305-308; 1985). Their probes encountered shallow cultural deposits dated to the Middle and Late Classic periods, as well as indications of Preclassic activity. Later, under the aegis of our PAC II project in 1982, Evelyn Rattray briefly investigated part of the main courtyard of 8N-11 (Operation 14; Rattray 1982; Langley 1982).⁶ Although she planned multi-year excavations she only finished one season of work focused on the northern part of the main plaza.



Figure 2-3. Rattray excavates the plaza.

⁵ Here I use the term "ancillary" in its general English sense -- adjunct too, appended to, subsidiary to, supportive of, etc. Thus the several small courtyard groups at 9N-8 are ancillary to the dominant Plaza A. Hendon (1991) uses it more specifically to refer to platforms without superstructures that are associated with artifacts characteristic of domestic activities.

⁶ Rattray's unpublished 1982 report is on file at the Instituto Hondureño de Antropología e Historia, Tegucigalpa, and in the Copán archives in the Dept. of Anthropology, Penn State University.

Operation 14

Rattray's work in the plaza (Fig. 2-3) is reviewed in Chapter 3, but a short introduction is useful here. She and her Mexican students stripped off the plaza overburden to a shallow depth and dug six deep sounding trenches. Beneath the south stairway of Str. 70 Rattray discovered two elaborate burials (see Chapter 8, Burials 14-1 and 14-2), each with a single adult individual.⁷ One of these, an adult male, was in an elaborate tomb and accompanied by numerous mortuary offerings. Rattray also recovered 58 pieces of sculpture, and Barbara Fash later determined that at least 38 of them came from the Str. 66 complex. As she suspected, the others came from Str. 70C, where the Chinese project recently discovered an elaborate sculpted façade.⁸

Table 2-1. Hydration dates from Op. 14.

Trench	Level	Dates* (all AD)
S1W13	1C	927
N7E9	4	859
N7E9	5	799, 806
N7E9	6	699, 716
N7E9	7	524, 612
*Each date has an estimated ± 70 -year error range.		

Rattray encountered many artifacts in superficial deposits above the uppermost plaza floor, including spiked incense burners. She thought these reflected late ceremonial activity in the plaza during what she called an "Epi-classic" or "post-Copador" interval.⁹ When we began PAC II we believed the dynastic collapse was closely followed by the rapid and massive abandonment of the valley as reviewed in Chapter 10.

AnnCorinne Freter (1988: 317) later produced eight obsidian hydration dates from Rattray's probes, and they all fell into the proper chronological sequence. One of these came from a stucco plaza floor, and the others from levels 4-7 in one of Rattray's deep sounding trenches as shown in Table 2-1.

Rattray's plaza excavations encountered Middle Classic Acbi phase pottery, but only one date (from Trench N7E9 level 7) might be earlier than AD 500. All Acbi sherds were mixed with later Coner material. Although there was some sort of Acbi activity in the locale, most of the deposits, features, and major architecture at 8N-11 appeared to date no earlier than the Acbi-Coner transition, or after about AD 600-650. Freter's hydration dates were in excellent agreement with the implications of the associated ceramics, and also with Rattray's identification of post-collapse activity. Rattray's excavations produced firm evidence for obsidian discard during mid-to-late Acbi times, for early structures of Late Acbi/early Coner date, and for modification of the northern part of the plaza in the 8th century. Two of Freter's hydration dates imply post-dynastic activity in the locale spanning the mid-9th through early-10th centuries, consistent with Rattray's "Epi-classic" (but not post-Coner) speculation. Rattray's stratigraphy and Freter's dates appeared to show that 8N-11 was founded much later than 9N-8, but that activity persisted there well after the demise of Copán's royal dynasty in the early 9th century. Our hydration sample, however, was frustratingly small—only eight dates from 8N-11, as opposed to 476 from 9N-8 (the much larger array of chronometric dates we later accumulated during Ops. 50 and 63 is discussed in Chapter 11). Rattray's research and Freter's dates left us with a tantalizing but incomplete grasp of the group's functions and chronology. Their results resembled those from 9N-8, but many basic questions remained because Rattray had minimally investigated the buildings.

Operation 50

By 1988 our sample of low status residences, both completely excavated and test-pitted ones, was very large and representative (see Freter 1988; Webster and Gonlin 1988; Webster *et al.* 1997; Webster, Freter, and Gonlin 2000). We found ourselves in the unusual position, for Mayanists, of knowing more about the lower-ranking residential

⁷ Harvard/PAC 1 mapping conventions assigned site numbers within 500 X 500 m squares. Each square is identified by a number and a letter, and structures were numbered sequentially within each such. Most of the structures of the Skyband House group fall into square 8N, so the full formal designation of Str. 70 would be Str. 8N-70, etc. To streamline the discussion I drop the prefix, so 8N-70 is simply Str. 70, and so on. Two of the southernmost structures associated with Group 8N-11 fall into square 9N, and so formally are called 9N-1 and 9N-2 --- hereafter simply Strs. 1 and 2.

⁸ Their excavations showed that Str. 70 as mapped by Harvard and PAC I was three separate buildings, a tall central one they now label Str. 70C and lower flanking platforms on the east and west.

⁹ Copador Polychrome is the most conspicuous diagnostic ware associated with the Coner ceramic complex. Harvard archaeologists found similar censers in superficial deposits and caches at a Type 2 group in Las Sepulturas (see Willey and Leventhal 1979: 97-100 for descriptions and illustrations).

components of the Late Classic Copán kingdom than the high rank ones. Freter's extensive test-pitting also revealed more about the general occupation trends and chronologies of non-elite groups than elite ones. We were consequently gratified when Stephen Whittington and Scott Zeleznik worked that year at two elite-rank sites at Ostuman, far to the west of the urban core (see Chapter 11). Their excavations showed another distinctive site variant--the very large Type 4 group 10E-6 that (on present evidence) was built largely of indifferently worked stone and that lacked extensive sculptural embellishments.

The Annenberg/CPB funding fortuitously allowed us to turn our attention to Group 8N-11 in 1990 and do excavations on an appropriate scale. Scripts written for several of the *Out of the Past* video programs required investigation of an elite-rank compound, and 8N-11 was the obvious choice. Our work was designated Op. 50 and proceeded from January through May of 1990. We were assisted by 15-20 permanent workmen, and situationally by masons and other specialists. Randolph Widmer and Rebecca Storey followed up the main season by probing for burials and earlier constructions, and they recorded sculpture and other features recovered during restoration in 1993 (Widmer and Storey 2016). Their excavations were not given a separate operation number, but rather were a sub-operation (Phase 2) of Op. 50. In 1997 we returned to 8N-11 for mapping and test-pitting. Op. 50 research is described in Chapters 3, 4, and 5, and Op. 63, as our 1997 second season was designated, is summarized in Chapter 7.

During our 1990 season we should ideally have pursued the excavation strategy we used at 9N-8 -- complete horizontal stripping of all the main and ancillary buildings, along with associated ambient spaces and strategic deep probes. Lacking both the time and the funds for such an effort we devised a more limited strategy. We made a contour map of the main courtyard group and excavated more or less completely the easternmost of the large building complexes surrounding it, as well as the associated small structures. We chose the eastern complex because it had imposing buildings and because we knew there was fallen sculpture there.

We were particularly interested in inscriptions and iconography, which had been so informative about the sociopolitical identity of the lords of 9N-8. Where extensive lateral stripping of whole courtyard groups is impossible, as it was at Group 8N-11, such symbolic information provides a handy (if not totally reliable or predictable) short-cut to understanding both how elite compounds were used and their chronology. Given Rattray's previous discoveries, the eastern Str. 66 complex seemed to promise the best chance of recovering such material in substantial amounts. We predicted (on analogy with 9N-8) that we would find a well-preserved carved bench or throne in the principal building, with dates and other information about the identity and status of the occupant. Imposing buildings on the eastern sides of Classic Maya plazas are also often associated with major burials. So confident were we of finding a carved bench, along with a major tomb, that we wrote both discoveries into the *Out of the Past* television scripts before ever taking to the field. Anyone who has seen the videos knows we found the bench, but not the tomb. Still, one out of two isn't bad, and the Chinese later did find impressive burials in the northern Str. 70C. We predicted that the visible structures were built no earlier than the 8th century, and probably late in that century, as were final phase buildings at most or all of Copán's urban core elite sites (although, as we shall see, use and modification of many structures at 8N-11 and elsewhere extended well beyond that time).

Investigating the smaller ancillary buildings at 8N-11 was also critical. We could not presume that the single dominant plaza group would yield evidence of the full range of domestic or other facilities. Activities that took place in flanking structures might shed light on ritual vs. elite domestic functions for the whole group. If any kind of specialized economic production took place at 8N-11, it was probably not carried out in the main plaza. Because the flanking buildings were small we could excavate several of them, and we chose the set (Strs. 50-51) immediately to the east of the Str. 66 complex. In 1997 we returned with National Science Foundation support to map and test the other ancillary structures and to see how (or if) 8N-11 connected with the Las Sepulturas causeway.

The Site

Group 8N-11 is located about 850 m northeast of Copán's Main Group near the eastern extremity of the Las Sepulturas *sacbe* or causeway (Figs. 2-2, 2-4). It appears rather isolated, with few nearby structures of any consequence to the west and north. About 500 m to the northeast of the site the foothills and the river constrict to a width of about 100 m, creating a narrow entrance to the Copán pocket from that direction. Assuming the ancient river channel was in the same place as it is today, anyone approaching from the upstream part of the valley in the 8th

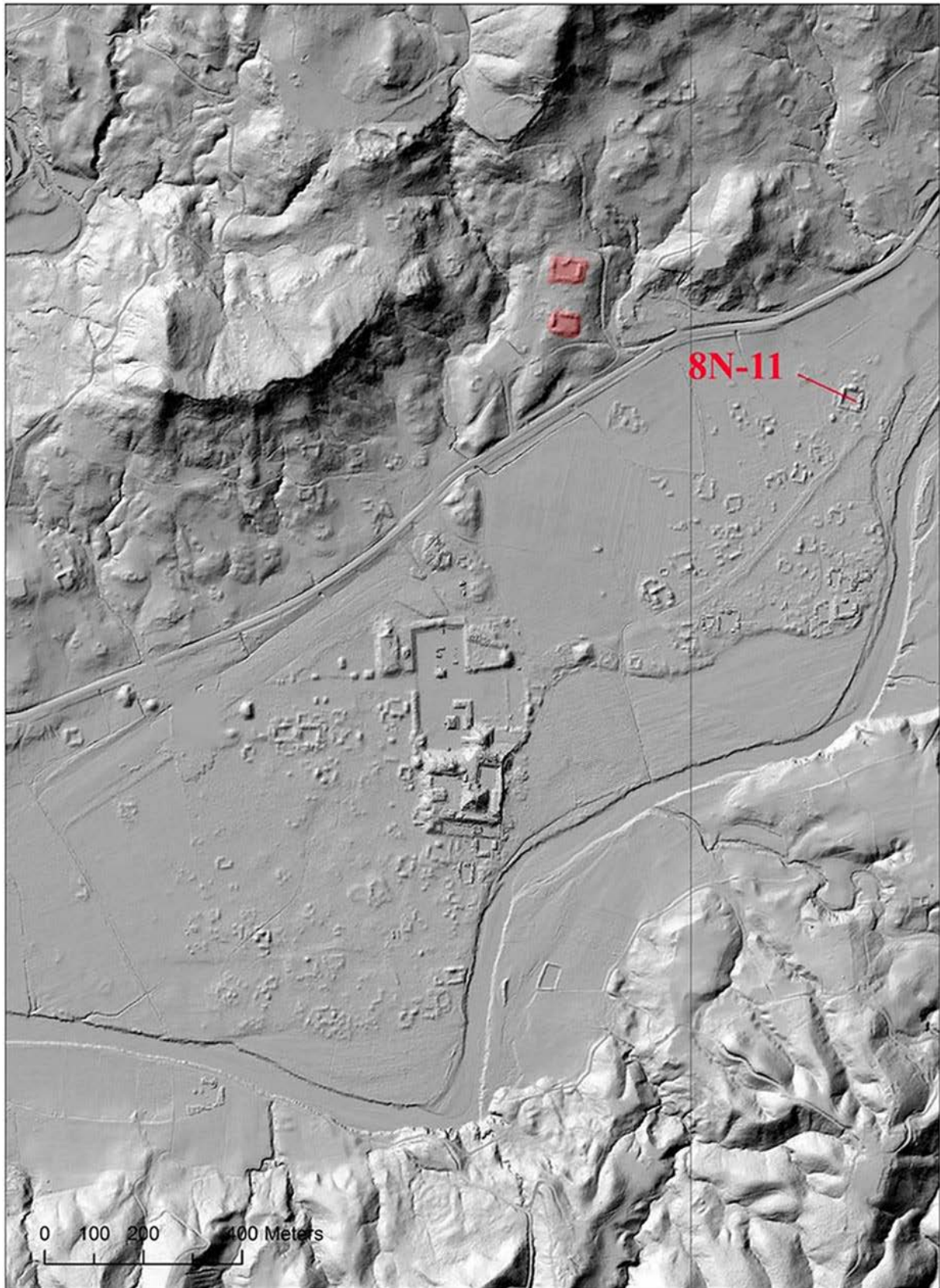


Figure 2-4. Lidar image of Main Group and urban core. Ashmore's sites shown in red. Image courtesy of Heather Richards-Rissetto.

century would have encountered 8N-11 as the first major group of the Copán urban core. Anyone walking along the causeway would end up there too, although what kind of physical connection existed was unclear. Proximity with the causeway terminus is one reason why we speculated in 1983 that 8N-11 might be something other than an elite residence. In the late 1980s Wendy Ashmore (1989, 1991) suggested that Group 8N-11 was the possible eastern anchor of a larger cosmographic model found at both Copán and Tikal. A second visually unobtrusive causeway extends to the northwest from the Main Group. Alan Maca (2002: 88) determined that it ends at a small foothill site, 9J-7 (yet unexcavated) located near the much larger Type 4 Group 9J-5 that he intensively tested.¹⁰ This pattern is puzzling – a major processional road ending not at an impressive group, but at a modest one.¹¹ The termination of the eastern causeway is also problematical for Maca's (2006) model of Copán as a symbolic spatial quincunx, an idea that is examined in later chapters.

A Causeway Connection?

The causeway traverses a densely settled residential zone rather than linking distant, discrete groups. The classic intra-site pattern of this latter kind is seen at Tikal, where great causeways connect royal-scale architectural complexes. At Copán substantial residential groups are instead arranged along the flanks of the causeway and some seem to have lateral connections with it, although these are not well documented. Causeways are often seen as ceremonial or processional routes, possibly related to the ritual circuits reported by Landa for the 16th century Maya. Some archaeologists think that they functioned like large plazas, as stages for rituals and other spectacles.¹² Whether the Las Sepulturas causeway was used in these ways is unknown, as is whether it had any directional associations for the Copán Maya (but see Maca 2006).¹³ Assuming that the causeway was designed to terminate at some elite-scale group, as so often happens at Tikal and Caracol, that group must have had unusual significance. Group 9N-8, the dominant residential site in Las Sepulturas, was not the intended terminus, although it was a significant place long before the causeway was built. That the causeway so conspicuously by-passes it to the north and east is one of the most interesting spatial patterns in the Las Sepulturas enclave.¹⁴

The causeway, or at least an early version of it, was probably built between AD 695 and 738 during the reign of Copán's 13th ruler Waxaklajuun Ub'aah K'awil (B. Fash 1992: Appendix B: 4). Today it is a low but distinct parallel-sided feature mapped as roughly 20 m wide along most of its length. Excavations show that the actual width, as opposed to the mapped image, is about 10 m (Davis Salazar 2006: 136). It is about 50 cm high, constructed of cobbles and clay soil, and apparently lacks the cut stone features associated with parts of the western causeway. The 1941 Carnegie Institution plane-table map (Fig. 2-5) shows the northeastern end of the causeway bifurcating into two branches, one ending at 8N-11 and the other at a large structure near the riverbank. This pattern is incorrect.¹⁵ As mapped by the PAC 1 project the causeway simply splays out at its northeastern end near, but not clearly at, Group 8N-11. Judging from its overall direction it points toward a gap to between 8N-11 and the riverbank structures as shown in Figs. 2-2 and 2-3. The most conspicuous set of buildings near the presumed terminus of the causeway is Str. 46, fronted by two lower parallel mounds initially (but incorrectly) interpreted as a ball court. We shall see later that this is a low but very distinctive set of buildings, recalling the pattern that Maca found near the end of the western causeway.

Whatever else they were, causeways were connective features. If the Las Sepulturas causeway were meant to connect in a general way with *some* outlying elite-rank group, it must be 8N-11 because there are no other candidates (the large group to the northeast shown on the Carnegie map does not exist). If 8N-11 could be shown to be integrally

¹⁰ The western causeway is much more amorphous than the eastern one and most of it is only faintly recorded on the PAC I map. The only section shown is on the El Pueblo map square, somewhat to the west and south of the structures in Group 9J-5.

¹¹ Although the most famous causeway that stretches for 100 km from Cobá to Yaxuna ends in a very small building at the latter site.

¹² Two Late Classic sacbes built at Chan Chan, Belize, are pretty clearly performance stages, and perhaps also processional ways as interpreted by Houk and Booher (2020).

¹³ Certainly large potential audiences were available in the concentration of residences ranged along the causeway, but there is no clear alignment of facilities for observation as there is, say, along the Street of the Dead at Teotihuacan. Moreover, some of the elite groups have enclosed plazas from which anything happening along the causeways would have been invisible – 9N-8 is a case in point.

¹⁴ Making too much of the causeway's ceremonial and professional roles might be a mistake. Given the undulating and boggy character of the Las Sepulturas landscape, always vulnerable to flooding, it was probably equally important as a dry, raised walkway and as a water diversion feature (see Chapter 7).

¹⁵ Many parts of the Carnegie map are clearly incorrect or deceiving. The big riverside mound shown connected to the causeway is actually a set of smaller mounds as mapped by PAC I (Fig. 2-2), and other mounds in this vicinity are omitted. Similarly, neither the PAC I map nor the recent lidar image shows the large group bisected by the road just to the northeast of 8N-11.

linked to the causeway, it (or some component of it) it might have been built during the first half of the 8th century. Dating of the causeway has implications for the florescence of the spacious masonry compounds at Las Sepulturas. The causeway is a substantial feature that takes up a lot of space. If it were built after the compounds were established it might have overridden, damaged, or wholly destroyed some of them in the process.¹⁶ No such destruction or superposition is evident. Instead, the late phase mapped groups appear to be well-oriented to the causeway, although not necessarily perceptibly connected to it.

If the causeway were indeed a project of the 13th king, much of the visible architecture in the Las Sepulturas elite compounds was probably erected sometime during his reign (AD 695–738), and more specifically well into the early 8th century (unless, of course, there was some more insubstantial version of it prior to this time). Barbara Fash (1992: 33) notes that “High relief stone sculpture facades are not found in Copán until the 13th ruler’s reign.....” (that is, the four decades following AD 697). For reasons that will become clear later, the final phase visible architecture in Las Sepulturas, especially that associated with large sites, generally post-dates the reign of the 13th ruler – i.e., it was built well after AD 738 – in fact during the final two decades of the 8th century.

Mapping

Buildings at Las Sepulturas have largely escaped the intense looting common in other parts of the Maya Lowlands, particularly in the Petén heartland of northeastern Guatemala. Group 8N-11 was in generally excellent shape, although local informants remembered that cut stone in the past had been carted away from some buildings (including Str. 66) and that some sculpture had also been removed for safekeeping. Preliminary mapping (Fig. 2-6) during the Harvard and PAC I projects presented Group 8N-11 according to the “Malerized” or “prism” conventions used by Maya archaeologists (see Hutson 2012 for a discussion). The PAC I revised version is the more accurate and shows some 24 structures visible on the surface.

Five large, conjoined buildings (nos. 66–70) define a central rectangular plaza measuring about 20 x 28 m on the PAC I map.¹⁷ This set of structures and its plaza appeared to us to be the architectural equivalent of Plaza A that dominates Group 9N-8. It has an enclosed, almost restricted look because the major entryway leading in from the south between Strs. 67 and 68 is shown on the PAC I map as blocked by construction. This is merely collapse rubble that blocks a southern entryway (correctly shown on the Harvard map), the direction from which the causeway approaches.

We learned from our excavations at 9N-8 that such prism maps, based as they are only on surface features, can be quite deceiving, as in the case of the passageway just noted. Collapse and other disturbance often make separate structures appear to be conjoined and larger than they are, and obscure details such as doorways, small stairways, and corridors. A striking Copán example is the urban core site 10J-45, originally mapped as a single large platform but shown by later excavation to consist of 17 structures (Price *et al.* 2014: 33–34). Such blurring aside, the impression given by the surface maps is important -- a set of unusually large buildings around a formal-

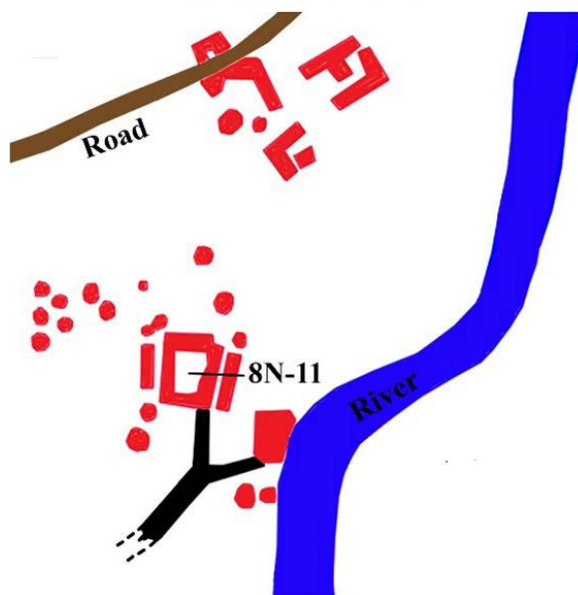


Figure 2-5. Group 8N-11 and the causeway terminus.

¹⁶ This pattern is found at some Lowland Maya fortified sites, where walls overrode or disturbed earlier buildings (see Webster 1976, 1979 for examples). Where there is no such superposition, as in the wall surrounding Mayapán, the inference is that the wall or other features such as a causeway were planned to avoid settlement or predate it.

¹⁷ Excavation revealed the area of the plaza to be larger (see Chapter 3).

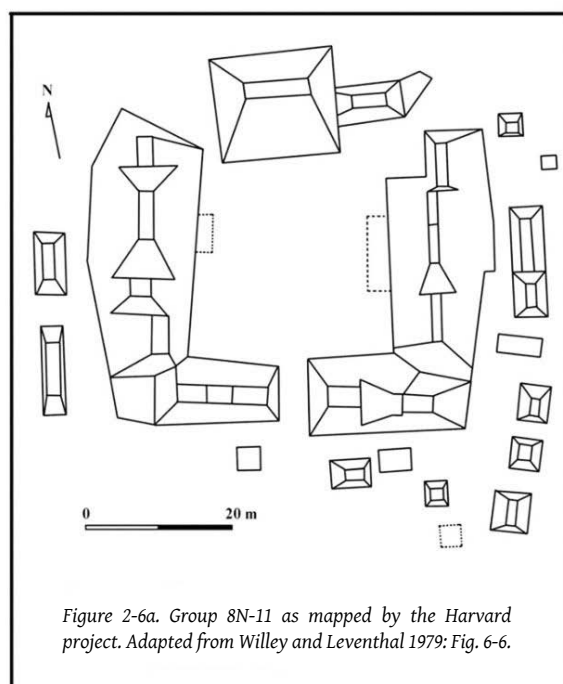


Figure 2-6a. Group 8N-11 as mapped by the Harvard project. Adapted from Willey and Leventhal 1979: Fig. 6-6.

Figure 2-6a, b. Group 8N-11 as mapped by the Harvard and PAC I projects.

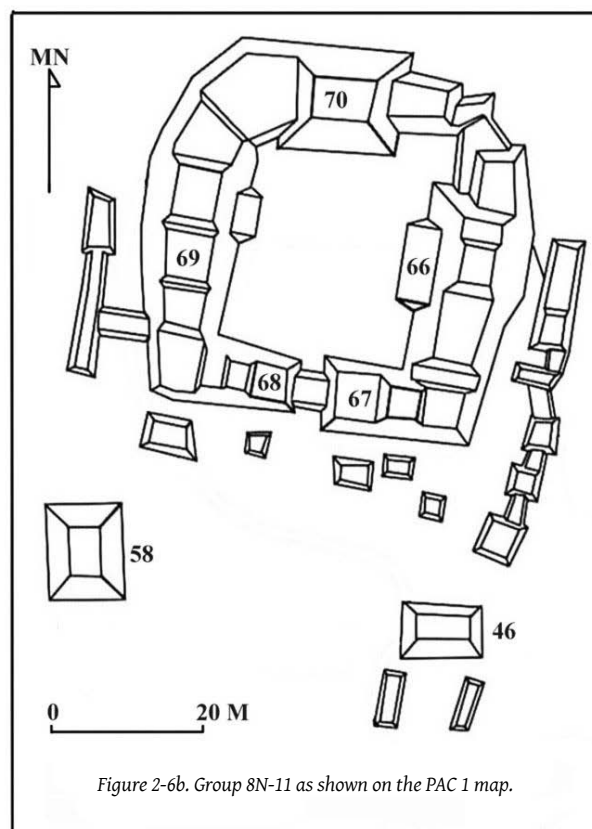


Figure 2-6b. Group 8N-11 as shown on the PAC I map.

looking plaza. The PAC I map turned out to be a good general guide to the character of the buildings and to some of their details, and especially the probable orientation of their main wall-lines. The group appeared to be aligned slightly to the east of magnetic north, as common at Copán (note the similar alignment of Ashmore's foothill groups shown in Fig. 2-4). Twenty smaller buildings are arranged around these larger ones, particularly on the east, south, and west, but do not themselves form coherent plaza arrangements. Two of the southern ancillary buildings (Strs. 49 and 58) are of imposing height. The main courtyard group of 8N-11 and its ancillary buildings occupy an area of about 9000 sq m, much of it open space. The more congested 9N-8 complex sprawls over about 17,000 sq m. For comparison, the Palenque royal palace (though incomparably more imposing) is rather compact – about 7000 sq m in area.

The riverbank group: A cluster of small structures numbered 40-44 and 9N-3 on the PAC I map lies along the bank of the Copán river about 50 m to the east of 8N-11 (see Fig. 2-2). Its entrance seems to have been on the west -- i.e., facing 8N-11-- and as shown in Fig. 2-5 the causeway might be construed to pass through the gap between it and 8N-11.¹⁸ We cut a path out to these mounds and cleared them during our first week in 1990. River erosion had created a kind of miniature version of the celebrated *corte* associated with Copán's Main Group. Some buildings, especially Strs. 42 and 9N-3, were being actively eroded away and there obviously had once been other structures in the vicinity.¹⁹ Sediments exposed in the river cut were poorly assorted sands and gravels below 30-40 cm of darker soil. As at 9N-8 the inhabitants of the 8N-11 locale had easy access to water and other river resources.

¹⁸ The lidar image (Fig. 2-4) shows what looks like a pair of parallel lines passing to the east of Group 8N-11 and continuing to the northeast. If so, the causeway does not actually end at the Skyband group. Only further testing will tell.

¹⁹ The river here has been re-engineered since the PAC I map was made. The PAC I Las Sepulturas section of that map (#15) shows the 590 m contour running just to the east of the surviving buildings of this group, where it effectively forms the edge of the deep cut of the river. This 590 m contour swings about and encloses most of Group 9N-8 and other groups to the northeast and west. No doubt the complicated pattern of this contour reflects not only natural processes of channel shifting but also ancient Maya transformations of the old terrace to drain wetlands, to accommodate structures and to prevent flooding. The 590 m contour abuts or crosses the causeway, the surface of which is 50 cm or more higher, depending on where it is measured.

The 1990 Field Season

One of our first efforts was preparation of a 20 cm contour interval map of the main courtyard and the flanking eastern buildings (Fig. 2-7), done the old-fashioned way without a total station. We later made an expanded and more sophisticated contour map during the 1997 season as shown in Chapter 8. No doubt the later Chinese project with its more sophisticated technology will improve upon both of these. Our 1990 map conveys much the same impression as the earlier PAC I map, although a possible second entrance to the plaza is visible at the northeast corner and the imposing heights of Strs. 66 and 70 are more apparent.²⁰ Str. 70 stood almost a meter lower than Str. 66 but its conical shape made it visually more prominent, especially compared to the long range structures that define the west and south sides of the courtyard. Inspection of maps and surface features, along with Rattray's findings, led us to conclude that the northern building probably had ritual (and more specifically mortuary) functions, much like the shrine on the northern side of Plaza A in Group 9N-8. The Chinese excavations have confirmed this suspicion. See Chen *et al.* (2021, Fig. 1) for excavation and reconstruction photos of Str. 70, now known to consist of the central Str. 70C and two lower, flanking buildings. The Chinese project has revealed a major staircase some 12 courses high, mosaic sculpture that includes Mexican year signs, a major central tomb, and three main stages of construction (Li and Ramos 2017; Li 2-18).²¹

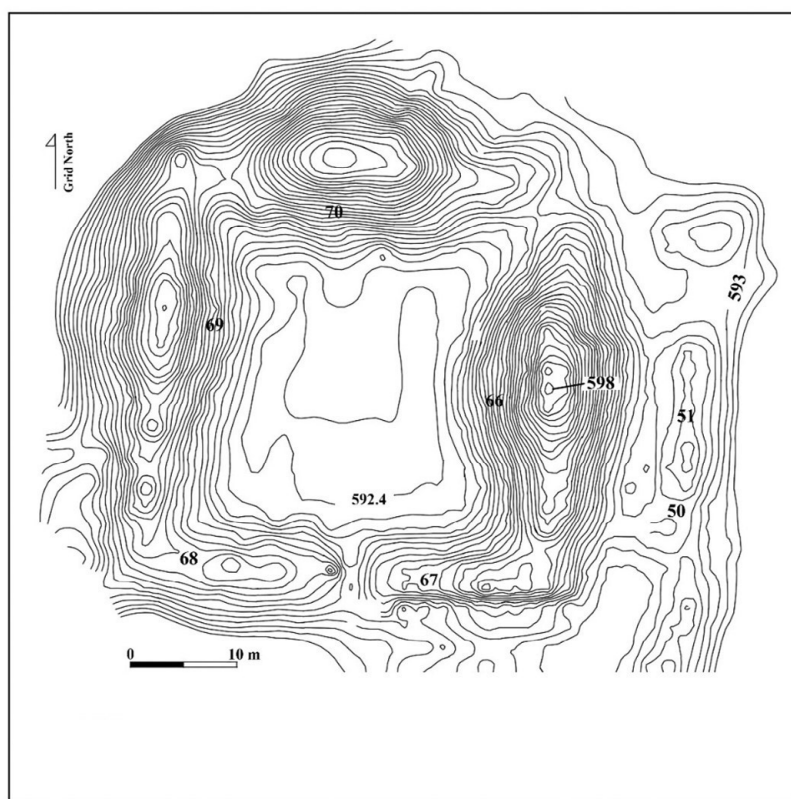


Figure 2-7. 20 cm contour map of Group 8N-11 made during the 1990 field season by Scott Zeleznik.

Attractive though Str. 70 was as a candidate for excavation in 1990, we thought that the Str. 66 complex promised a better chance of providing information on sub-royal residential and political facilities, and it seemed to have a close spatial relationship with a flanking set of smaller buildings to the east. Rattray found sculpture near a corner of the central stairway of Str. 66, so we assumed that under its collapse debris might lurk some reasonable counterpart of the House of the Bacabs at 9N-8, and in this we were correct.

In 1990 the 8N-11 locale was covered by low scrub and small trees, but fortunately few large ones. In preparation for mapping we cleared most of this vegetation from the courtyard and from the eastern part of the site. Figs. 2-8 and 2-9 give a good idea of the appearance of the cleared buildings. We could not recover Rattray's old 2x2 m grid from 1982, so we imposed a new one by cementing two datum points into the courtyard.²² The baseline thus

²⁰ Although sometimes disparaged as a distorting convention (see comments in Hutson 2009), I have excavated many buildings previously rendered by the "prism" convention. My experience is that such representations, when done carefully, work about as well as contour maps as excavation guides. Zeleznik made two different versions of the 8N-11 contour map, one in 1990 and another in 1997. The 1997 map is better and slightly different, but does not show Strs. 50-51. The original 1990 map is shown here, but later chapters use the 1997 version.

²¹ I have not been to Copán since the Chinese project began. Judging from their reports and from the remote sensing images I have seen, their work has mainly focused on the northern Str. 70C and its flanking structures. If so, the eastern and southern structures 67, 68, and 69 have been at best minimally tested, in sharp contrast to Group 9N-8 where exposures were much more complete.

²² Both markers were set in concrete inscribed with the legend Op. 50, 1990. The southern datum -- our N0E0 point -- is about 6 m north of the center of the southern entrance to 8N-11. The second concrete datum is N16E0 on a bearing of 6° from the first.



Figure 2-8. Clearing the site.



Figure 2-9. East side of Group 8N-11 cleared of vegetation.

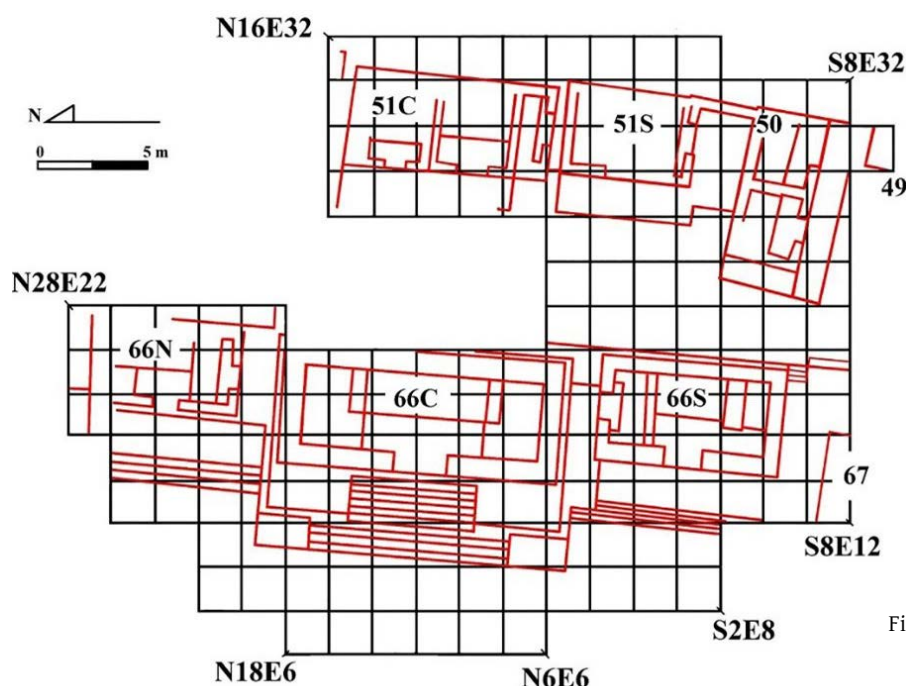


Figure 2-10. Operation 50 buildings superimposed on the grid.

established ran 6° east of magnetic north and was intended to approximate the main alignment of the front of the Str. 66 complex, insofar as we could judge it from surface features. The principal southern datum point was given the 0N/0E designation and had a base elevation of 592.362 m asl.²³ It anchored a 2x2 m grid (Fig. 2-10) that extended over the whole eastern side of the site. Each grid square is designated in field notes and other records by the co-ordinate of its southwest corner. Most mapping, excavation, and lot assignment proceeded using these 2x2 m grid squares. Unless otherwise specified, terms such as “north” or “south” used in the narrative or shown on drawings refer to grid directions rather than to magnetic or true cardinal directions. Elevations are both absolute and expressed in relation to this datum point; for example 592.46 m indicates both an absolute elevation above sea level, as well as a point about 10 cm higher than the 8N-11 base datum. During the 1990 field season we excavated some 688 sq m of this grid as shown in Fig. 2-10, exposing all of six separate structures and small sections of four others. Our principal concerns were the Str. 66 complex, which turned out to have three separate buildings, and the linear set of ancillary buildings immediately behind it (Strs. 50, 51S, and 51C). We managed to clear all of these structures down to their final-phase surfaces, along with some of their ambient spaces. Left unexcavated at the end of the season was a section of the grid between 66C and 51C that included most of the rear (east) wall of the former building. This area was later cleared by Randolph Widmer and Rebecca Storey during their Phase 2 sub-operation, and they also probed the interior fill of the central Str. 66C building.

Methods

Excavation methodology was modeled on that generally used by PAC II. Our goal was extensive lateral excavations that exposed many buildings and rooms of the latest occupation phase(s) in a short time.²⁴ We realized that, as at 9N-8, most of the material excavated would (volumetrically) be either fill, collapse, or overburden that had accumulated since abandonment. Screening such material is extremely laborious and hugely unproductive in terms of small artifacts in primary contexts. Under the circumstances one can opt either for a small, well-

²³ We shot in this base elevation from the main datum point in Plaza A of Group 9N-8, some 250 m to the south. The latter was at a level of 592.87 m and was used by Rudy Larios during his restoration of the Plaza A buildings. The elevation of the 8N-11 main plaza is thus roughly 50 cm lower than its 9N-8 counterpart, which itself is raised above surrounding courtyards by a huge artificial platform. Some stratigraphic implications of this elevation difference are discussed in Chapter 7. Our datum is about 5 cm higher than the old one used by Rattray for Operation 14. I expect our elevations are a bit off in an absolute sense, given the antiquated equipment we had, but their principal significance is a relative one. The superior mapping technology available to the Chinese crew no doubt generated a much more accurate map that I have not yet seen, but its relationship to our own should be pretty clear.

²⁴ A major interest of the Instituto Hondureño de Antropología e Historia during PAC II and our later work was to reconstruct many large and impressive buildings in the Sepulturas zone to augment the attractions of the Main Group for tourism.

controlled sample or a much larger, less well-controlled one. We chose the latter strategy, partly because of the time constraints of the video project, and accordingly used screens only for particularly sensitive deposits.²⁵ We did, however, take numerous soil samples from sensitive contexts as we had done at 9N-8. Most of our workmen were veterans of many previous field seasons at Copán and were extremely alert for even the smallest visible artifacts. Lots were spatially coterminous with grid squares except where context (e.g., a feature or a room floor) dictated some larger or less arbitrary unit of collection. Levels were defined by a combination of natural or arbitrary stratigraphy depending on circumstances. Lots generally corresponded to levels within trenches and were given sequential numbers (1-465 for the main field season) according to a master lot list. Any unusual patterns of artifacts or architecture were given feature numbers. Burials were assigned temporary field numbers, and then later numbered sequentially in the laboratory by Rebecca Storey according to the running master list she maintained for Copán (see Chapter 8).

During our excavations at Group 9N-8 we routinely excavated trenches along the perimeters of final phase buildings to search for burials and caches, and for signs of architectural stratigraphy such as superimposed plaza surfaces or old building fragments. We continued this strategy at 8N-11 with nine trenches (see Chapters 3, 6, and 8 for locations). These trenches were narrow (usually a meter or less), appropriately long, and were widened out when necessary to explore a burial or other feature. Because they did not align with the grid we gave each an arabic letter (A, B, C, etc.) and located them on our plans of architecture. During the main field season we dug most of these burial trenches around the ancillary buildings and the back of Str. 66S. Widmer and Storey later used similar trenches to explore the perimeters of the other main structures, particularly Str. 66N. Because of limitations of time and the good building preservation, we dug only a few probes into intact, final phase architecture during the main field season (e.g., through room floors or beneath benches). Most of the information we have about architectural stratigraphy results from the follow-up work by Widmer and Storey and by the restoration crews, whose collective probes generated lot numbers 466-717. Four lot numbers were not used, so there are 713 separate recorded lot contexts from the 1990 main season and the follow-up work, most representing distinct levels in the 2x2 m trenches defined by our grid.

Our excavations and the deposits they exposed revealed very few sealed artifact contexts in the strict sense (beneath superimposed, intact plaster surfaces, etc.). Most trenches were very shallow and had only a few levels, so lots and general contexts from both 8N-11 operations were susceptible to disturbance and mixing. Exceptions are artifacts recovered from middens, intact fill, or sub-floor contexts, particularly as exposed by Widmer and Storey in their probes of Str. 66, and from walls, benches, or other construction elements dismantled by the masons. Although gross stratigraphic associations are often revealing, the contexts of most individual artifacts are somewhat insecure except when they are parts of features, burials, caches, or intact architectural elements such as benches.

Restoration: During excavation we had to anticipate and prepare for the restoration that began immediately after our main field season under the direction of Rudy Larios, as required by the Instituto Hondureño de Antropología e Historia. We segregated cut stones into separate piles, each marked by its 2x2 m grid origin. Each piece of sculpture was given a spot grid co-ordinate and elevation, drawn at a scale of 1:20, and finally photographed in place (see Chapter 5). Barbara Fash used the resulting distribution maps in her reconstruction of the mosaic façade sculpture of the main buildings. We benefited from the services of the stonemason Orlando Lara, who supervised structural aspects of the excavation such as shoring up and repositioning architectural elements as we encountered them.²⁶ Some of the measurements that follow derive from wall alignments and other such features that were provisionally repositioned before reconstruction by Lara and his assistants. Because the 8N-11 architecture was in generally good shape we were able to make many accurate measurements of building dimensions, floor space, and bench configuration during fieldwork. We later checked our original field measurements against the restored ones. Figures given throughout this report represent a combination of both. In the accompanying illustrations spot elevations are indicated this way: x 592.34, etc.

²⁵ One hundred and thirty six of the lots we recorded during the main field season were pure collapse, and 151 were collapse debris mixed with middens, fill, or with superficial deposits found above living surfaces.

²⁶ Minor restoration thus proceeded with the excavations.

Barbara Fash cataloged, reconstructed, and analyzed the 8N-11 sculpture as discussed in Chapter 5. All excavated structures were restored by Larios, and façade elements of Str. 66S are featured in the Copán sculpture museum (Fig. 5-8; also see B. Fash 2011). Scott Zeleznik cataloged the burials and ceramic and non-ceramic artifacts. He and David Reed analyzed their distributions and implications as reviewed in Chapters 8 and 9.

Expectations

The following specific expectations guided our 1990 work, in keeping with those lessons learned during the Harvard/PAC I projects and the elite-scale groups we excavated during PAC II:

1. Despite its impressive appearance, 8N-11 would show evidence of domestic activities in artifacts, features, middens, and burials; these might be most apparent in association with the eastern ancillary buildings.
2. The main occupation began late (certainly after AD 600 and possibly after AD 750) and ended abruptly at roughly around AD 800-822, when the sudden demise of Copán's royal dynasty dragged down many sub-royal elite groups as well. The final phase big buildings were probably erected and used during the last several decades of the 8th century, or possibly briefly into the 9th century.
3. Quality and scale of construction, as well as associated iconography and inscriptions, would indicate extremely high elite status for the principal noble who dominated the group. More specifically, a carved and inscribed bench would be associated with the main eastern structure, along with a tomb.
4. Ancillary buildings might include workshops of attached economic specialists or have other specialized functions such as shrines, kitchens, or young men's houses, all known elsewhere at Las Sepulturas, and particularly at 9N-8.

Some of our expectations worked out but others did not. We are on very firm ground in regard to basic aspects of the architecture described in the following chapters, especially the plans of the structures and their construction techniques. Descriptions and illustrations of the upper walls and roofs are based on projections from intact basal levels, informed reconstruction, and comparisons with buildings elsewhere in Las Sepulturas. Although some architectural details remain unclear or ambiguous, I believe the general descriptions of the buildings are quite accurate, as are those of the sculptural programs. Chronological implications are not so straightforward and are discussed in Chapters 9 through 11. More specifically, parts of the smaller ancillary buildings might post-date the 8th or early 9th centuries.

Chapter Three

Operations in the Plaza and the Str. 66 Complex

David Webster, Randolph Widmer,
and Rebecca Storey

During the 1990 season we exposed all three buildings of the Str. 66 complex that dominates the eastern side of the Group 8N-11 plaza (Fig. 3-1). Two of the structures turned out to be extravagantly embellished, and their sculptural programs are illustrated and analyzed in Chapters 4 and 5. Chronology of the Str. 66 buildings is discussed both here and in Chapters 10 and 11. Excavations of the ancillary structures to the rear (east) of the Str. 66 complex are described in Chapter 7.

On our contour map Str. 66 appeared to be a linear, rubble-strewn mound about 33.5 m long (N-S) and 26 m wide (Fig. 2-7). It consisted of three visibly distinct parts, a high, wide, central section and lower extensions to the north and south, suggesting three separate structures.¹ Excavations showed this to be the case, and we labeled them separately as explained below. The final phase architecture is aligned about 10.5 degrees east of magnetic north and relates to the contours of the unexcavated mound as shown in Fig. 3.1.² Maximum height of the central section before excavation was 5.95 m above our main datum point in the plaza. Rattray's 1982 excavations were restricted mainly to the plaza, but she also probed the northwestern section of the central building, where she encountered part of a *talud*-like feature that we later identified as the sloping northern balustrade of a large stairway.

We knew from Rattray's excavations that sculpture was associated with the central and northern parts of the Str. 66 complex. Carved stone was visible in on the front (west) slope of the mound, as were beveled vault stones. The

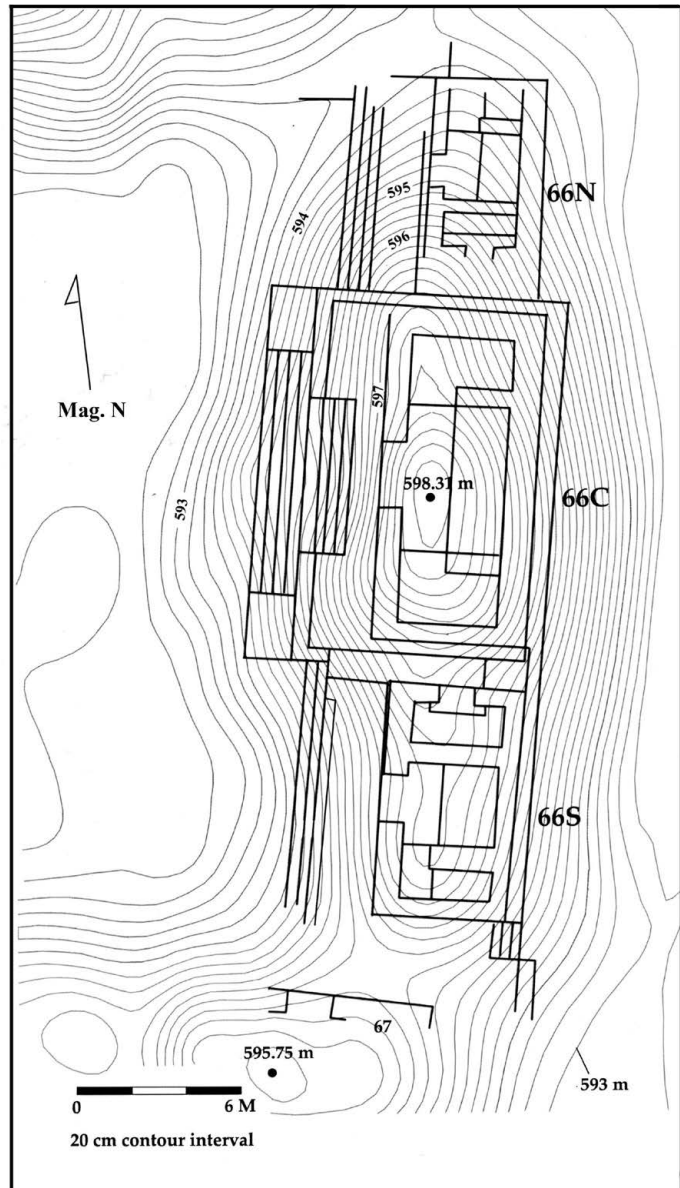


Figure 3-1. Str. 66 complex superimposed on contour map.

¹ The unexcavated Str. 69 (Fig. 3-3) on the western side of the plaza also has a tripartite arrangement, although the highest section of the mound is offset a bit to the north. Despite this similarity in general form, Str. 69 is much less imposing than Str. 66 judging from its surface configuration.

² As described in Chapter 2, our grid was laid out 6 degrees east of magnetic north in an attempt to align it with what from surface appearances was the orientation of the Str. 66 buildings. The actual orientation of the main structures 66C and 66S turned out to be 10.5 east of grid north; Str. 66N tends about one degree further to the east.



Figure 3-2. Western face of Str. 66 after clearing, looking south. Str. 67 is in the center-right beneath a tree.

west side of Str. 66 was unfortunately severely disturbed over a section of its upper slope in grid units N8/E12, N8/E15, N16/E12 and N16/E14. This whole area of about 2 x 12 m had a scooped-out appearance with construction fill weathering out of it, as clearly visible on the slope of the unexcavated building (Fig. 3-2; see also Fig. 3-10 below). Directly below, and spilling out onto the plaza, was a debris talus of extremely jumbled cut stone, most of which was obviously thrown down during the disturbance. This debris as shown on the "Malerized" maps (Fig. 2-6) gave the impression of a west-facing, outset stairway that protruded farther from the building than the actual one does.

According to the late Arturo Sandoval, an old veteran of Copán archaeology who assisted us throughout our excavations, the disturbance took place in 1967 or 1968 when the *alcalde* of the *municipio* required cut stone for construction in the town of Copán. Dr. Jesús Nuñez Chinchilla, Copán's resident archaeologist, had his employees remove visible pieces of sculpture to safe storage at that time.³ Barbara Fash's subsequent work revealed that many other pieces of mosaic sculpture had been removed from 8N-11, possibly even before the buildings collapsed. The northern and southern sections of Str. 66 fortunately escaped serious looting or other disturbance. Fig. 3-3 shows some of the unexcavated portions of the main courtyard group as of 1990.

The Harvard/PAC I maps label the whole western side off 8N-11 as a single building called Str. 66, so the three separate sections required new designations as shown in Fig. 3-1: 66C (central), 66N (north), and 66S (south). Probes by Widmer and Storey show that the central, northern, and possibly the southern buildings had had two or more construction phases. Total north-south length of the excavated and restored Str. 66 complex is approximately 34.2 m, and maximum width (across 66C) is 10.5 m. We determined the orientation of the final phase architecture by measuring along the front of the Str. 66 restored complex, especially along the large stairway of Str. 66C, but individual structures vary slightly from this alignment, especially Str. 66N. The main structures at 8N-11 define

³ Stone might also have been removed from the east side of Str. 69, which shows signs of similar disturbance.



Figure 3-3. View southwest from Str. 66C.

a rectangular plaza measuring minimally 25 m x 30m. I say minimally because we could not be sure about the unexcavated southern and western perimeters. Nevertheless, the 8N-11 plaza is more spacious than Plaza A at Group 9N-8.

Operation 14: the Plaza

Evelyn Rattray's Operation 14 project briefly investigated the northern part of the plaza as described in Chapter 2 and provided the first intimations of its features. Her 1982 field report describes her research, which included several deep soundings that produced variable deposits indicating complex stratigraphy at the site. Here I focus on her most important excavations, those undertaken along the northern edge of the plaza just in front of Str. 70 (now called 70C to reflect the Chinese discovery of three separate sections). Most of what follows comes from a detailed summary by James Langley (1982) of stratigraphic pit 2, part of an exposure of some 20 sq m near the eastern corner of the main stairway (Fig. 3-4). This pit eventually reached a depth of 1.94 m; see Fig. 3-5 for Langley's "schematic" profile of the stratigraphy.⁴

Rattray was not permitted to excavate standing architecture, but she exposed enough of the first stairway riser of Str. 70C to show that its total length was 7.7 m with a bearing of 96° east of north. Clearly the stairway was a monumental one; its end stones were well-cut monoliths some 1.10 and 1.33 m long, and about 31 cm high. The Chinese excavations later exposed 12 risers (Li and Ramos 2017). We shall see shortly that the somewhat narrower stairway of Str. 66C contains similar masonry. Two cist and tomb burials that Rattray discovered beneath the stairway are described in Chapter 8. They are the only burials from our work at 8N-11 that currently have radiocarbon dates unless the Chinese have additional ones. Their excavations revealed a major tomb in the center

⁴ Long before Rattray's 1982 project Rene Viel dug a 6 m deep sounding in the main courtyard of 8N-11 (see Chapter 7) but I have not seen his profile.

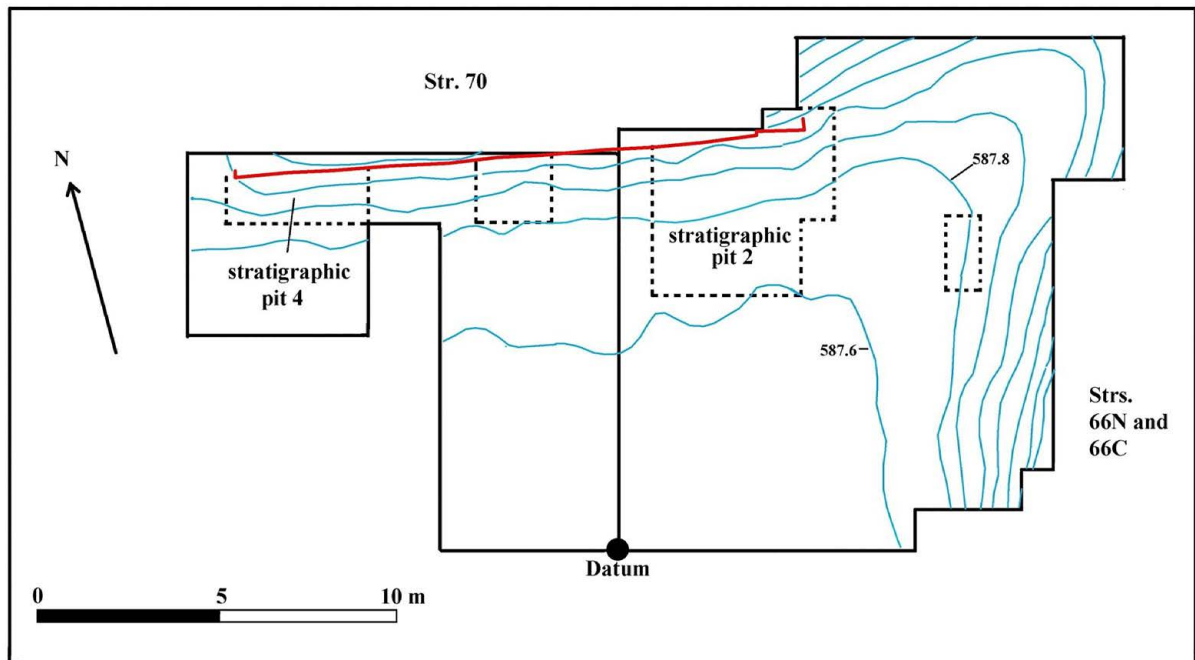


Figure 3-4. Plan of Rattray's plaza excavation in the north section of the plaza. Adapted by Webster from Langley 1982 Fig. 1.

of Str. 70C dating to the Acbi-Coner transition, and others in the building's west extension (Li and Ramos 2017), supporting our original mortuary-structure suspicion.⁵

Stratigraphic Pit 2

The first two strata in stratigraphic pit 2 (Fig. 3-5) were typical collapse debris consisting of rough cobbles and stone fragments as well as cut and faced stone, all mixed with a thin layer of brown humus (Layers 1A --1B). Langley remarked on the paucity of sculpture in this collapse, which was unexpected because Str. 70C is both a large and formal building and the visual focal point for anyone entering the courtyard through its southern entrance. Nevertheless, the only significant sculptural piece from the whole pit was the head of a small feline (CPN 3487) found not in the surface debris, but in a deeper level of what appeared to be re-deposited fill beneath a cobble floor. Other sculpture pieces recovered during Rattray's northern and eastern excavations obviously came from Str. 66C.

At a depth of 12-15 cm below the humus level was a well-preserved floor (2A) of hard white stucco, sloping slightly upward to the north and running up against the base of the stairway. Apart from the stucco itself, there were three other associated features to this floor: a layer of *cascajo* grouting (2C) above a well-laid cobble floor (3A), itself resting on a thick layer of fill with much rubble and abundant artifacts (3B).⁶ This set of features, together about 50 cm deep, is typical of floor construction at Las Sepulturas. There thus seems to be a single major plaza floor in this part of the plaza. Langley was puzzled, however, by a layer of *cascajo* (1C) that directly overlay the stucco floor. This looks like underlayment for a higher floor that partly lapped against the stairway riser. Disintegrating stucco at the bottom of the humus layer (1B) strongly resembles a stucco resurfacing like those we later found in front of Str. 66.

⁵ It is not clear to me whether these dates relate to the skeletal material, to the burial contexts, or both. Apparently some or all of these tombs might predate the final phase architecture of the Str. 70C complex, and if so our own as well.

⁶ *Cascajo* is the term used locally for deposits of small angular stone chips, composed of the greenish volcanic tuff that is ubiquitous at Copán. Presumably much of this material was produced when masons made cut stone or sculpture and was opportunistically used as underlayment for plazas and for many other construction purposes. Up through Early Classic times construction at Copán heavily consisted of earth and river cobbles, so copious use of *cascajo* equates nicely with Middle and especially Late Classic settlement expansion.

The deposits changed markedly in strata 3C-3E. Soil was hard and dense with very few stone inclusions and with layers of artifacts lying flat on compacted surfaces that suggested to Langley “habitational or occupational floors.” Level 3C included potsherds, bone fragments, obsidian, chert, a jade axe, and burnt clay. Level 3D had a similar layer of artifacts but they were on a surface that had a much harder baked clay texture. A posthole appeared in stratum 3C and two more in 3D, each with signs of burning. Langley was unsure whether these levels reflected episodic deposits or continuous accumulations over time. Beneath was a transitional layer (3E) with few, randomly scattered artifacts. Some cultural materials were encountered in stratum 4A in a matrix of softer, reddish-brown clay about 1 m below the surface. The lowest stratum of dark brown clay (4D) was practically devoid of artifacts, but sterile deposits were never reached.

Operation 14 Artifacts

Unfortunately Rattray left us no catalogue of artifacts from her Op. 14 plaza excavations, so we must rely on brief field notes. Almost all cultural material in Langley’s pit came from levels 3B and below. The most common artifact was burned clay, ranging from small fragments to others 20 cm long. Many fragments are clearly remains of wattle-and-daub walls with pole impressions still visible. Most were recovered from levels 3B-3E in close association with the suspected occupation floors. Lithics were abundant and consisted mostly of broken obsidian blades or seemingly unworked chert. Rene Viel, Copán’s project ceramist, monitored the excavations and observed that strata 3C and 3D yielded Coner phase material, with late Acbi pottery in the underlying stratum 4A. Human remains consisting of lower leg bones sawn off about 20 cm above the ankle were found at the 3E level. Langely calls this a burial, and if so it was probably placed under the floor of a large wattle-and-daub structure. This building burned down at some point and its remains were then buried by fill brought to level the plaza. One last feature deserves mention, a “...remarkable accumulation of small broken stone which on investigation proved to be a dump of stone chips, apparently the debris of a stone workshop...” (Langely 1982: 15). We found a similar but much later accumulation of such material behind Str. 66 as described in Chapter 6.

In summary, Rattray’s northern soundings revealed rather shallow stratigraphy, much of which consisted of fill and floor levels associated with Str. 70C. Her final report says that although she found Acbi and other early sherds, they were always mixed with Coner material. If this is true, then all the deposits in stratigraphic pit 2 date no earlier than the Coner-Acbi transition. The apparent wattle-and-daub structure can be no earlier than this time, and represents the oldest building detected along the northern edge of the plaza. So far the Chinese-excavated materials seem to accord chronologically with Rattray’s findings.

Operation 50

We began our own Op. 50 excavations by probing down to the latest plaza surface immediately to the west of the Str. 66 complex. Our exposure was a narrow section 2-4 m wide along the front of the eastern buildings,

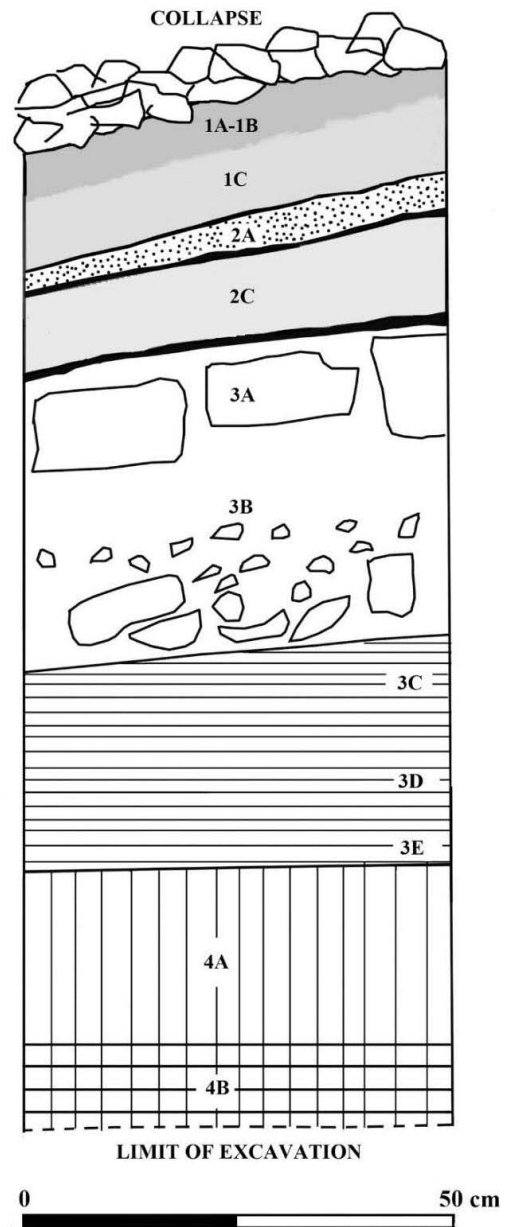


Figure 3-5. Profile of stratigraphic pit 2. Adapted by Webster from Langley 1982.

an area still covered by unexcavated collapse and so least exposed to disturbance. Except for a portion on the northwestern edge of the central building, this collapse had not been cleared by Rattray.

The Plaza

The first intact construction feature was a cobbled stone surface (*empedrada*) only 15-20 cm below the present ground level (Fig. 3-6).⁷ Like plaza constructions elsewhere at Las Sepulturas it consisted of three elements -- the stone layer itself, a thin overlying layer of floor grouting consisting of small cascajo chips, and then a plaster capping. The stone layer was a mixture of river cobbles and small irregular slabs of tuff and limestone. Plaster and cascajo layers were most well-preserved up against the stairways of the buildings and deteriorated to the west where only the *empedrada* layer was intact. Possibly the Maya plastered only the margins of the whole patio, leaving the center open for drainage or for shade trees such as those commonly seen in traditional Honduran town plazas today. The plaster was quite thick - as much as 10-15 cm - and lapped up onto the risers of the front stairways and taluds of the buildings. When combined with the underlying cascajo layer, the surface overlying the *empedrada* reached a maximum thickness of approximately 24 to 25 cm. In some places it was clear that the cascajo, as well as the *empedrada* itself, continued beneath the stairways and balustrades, indicating that these components of the construction (but not the plaster itself) predated the final phase structures.

The patio had a distinct upward slope from west to east, consistent with good drainage away from the buildings. Elevation of the intact *empedrada* just in front of 66C was approximately 592.38 m but there were numerous dips and slumps, most notably a large depression in N14/E8 and N16/E8 where the surface had subsided some 20-25 cm, suggesting an underlying cavity. Stones over this subsidence were larger and more jumbled than those elsewhere, and it is not clear whether Rattray removed an upper layer of more regular paving there. Also visible in these units was what appeared to be the base of a wall line and corner at the same level as the plaza (Fig. 3-7). It was oriented at a different angle than that of the nearby stairway of Str. 66C and was another clue suggesting an earlier building phase. The significance of this feature only became clear during reconstruction, and in Widmer's and Storey's architectural probes described below.

William Fash (1985: 35-36) dug a 1.75 m deep test trench in the center of the plaza in 1977 and encountered a single plaza floor. Just beneath the floor was what appeared to be part of a low cobblestone platform, perhaps related to the wattle and daub platform Langley found in front of Str. 70C. Fash recovered artifacts down to a depth of 1.15 m, below which was sterile soil. Artifacts included the lid of a Teotihuacan-style vessel and several blades of green Pachuca obsidian, all mixed with Late Classic sherds. In 1990 we dug a similar 2x2 m sounding trench (Fig. 3-8) to a depth of 2.75 m in unit N16E6, about 1.5 m to the west of the north end of the 66C stairway and to the east of Fash's sounding. Our trench also penetrated a single *empedrada* layer buried about 12-15 cm below a



Figure 3-6. Two sections of empedrado in front of Str. 66.

⁷ Empedrada simply means "cobbled" and so refers to a specific kind of stone surface. Here we use it mainly in this sense, but floors usually consist of three elements -- a cobble layer underlain (or sometimes overlain) by grouting and then covered by plaster. Thus there might be multiple cobble repairs or resurfacings but only a single floor.

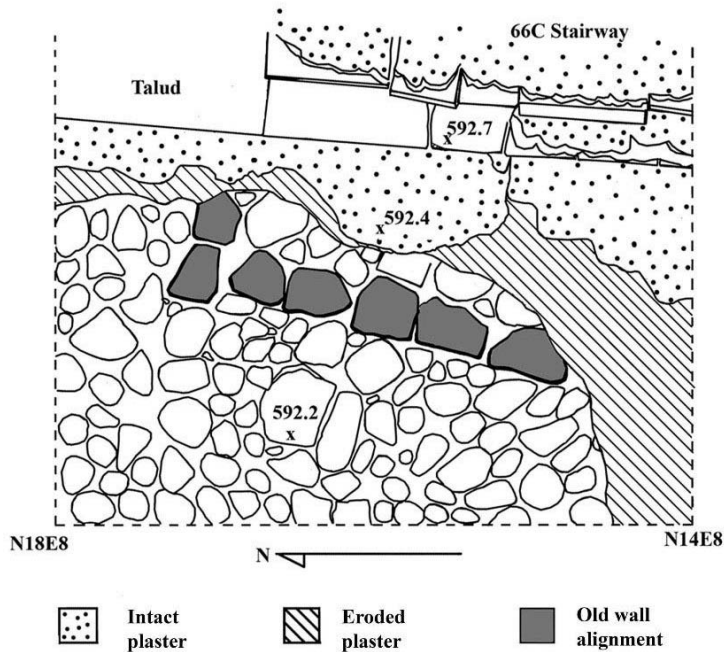


Figure 3-7. Wall base paving scar of early building.

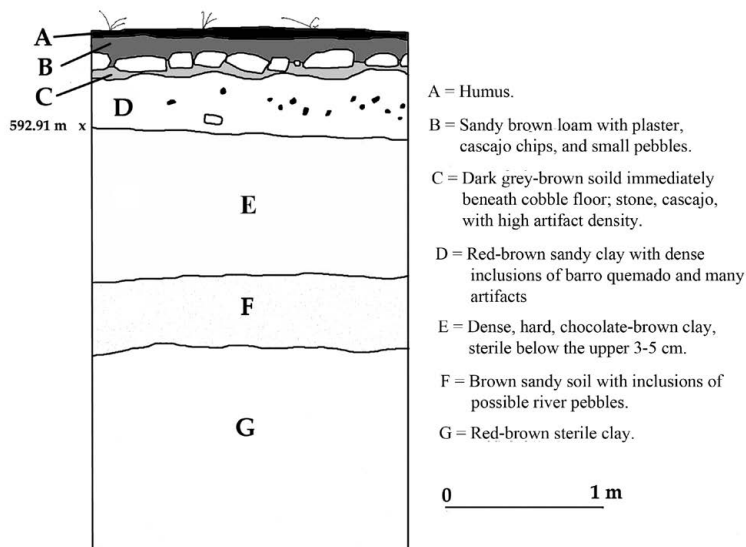


Figure 3-8. Profile of north wall, Trench N16/E6.

layer of humus and black sandy loam that in turn was underlain by cascajo (probably the remains of the foundation for the eroded plaster capping). Beneath this empedrada and cascajo, down to a depth of about 65 cm below the surface, we found no signs of other buried floors, but abundant artifacts in layers of red-brown and chocolate-brown soil. At the base of this level was a hard, sterile, chocolate-brown clay. Below the first 3-5 cm of level E there was no cultural material right down to the 2.75 m depth where we halted excavation. The stratigraphy above the clay layer is thus very simple, and artifact-bearing deposits shallower than those in Fash's trench. Based on his trench and ours, we at first incorrectly thought that 8N-11 had only a single plaza surface near the buildings as well. Later probes by Widmer and Storey revealed multiple resurfacings in front of Str. 66S (Fig. 3-9) and others related to two earlier construction phases (see below). Langely was probably correct in suspecting that there was one cobble floor with two stucco cappings in front of Str. 70C.

According to Rattray and Fash the situation elsewhere in the plaza is more complex than found in our sounding trench, and cultural deposits somewhat deeper, indicating that the original ground surface sloped down toward the west and north.⁸ Thickness of the surviving plaster capping above the empedrada showed that it had been resurfaced more than once. Present evidence thus suggests that only one episode of empedrada construction on the eastern side of Group 8N-11 is associated with the final phase architecture. Widmer's and Storey's probes beneath Str. 66C and along the front of the Str. 66 complex revealed a more complex situation. Three separate architectural phases there involved renovations of what was essentially a single main plaza surface, a process that produced multiple pavings. At least two episodes of empedrada construction are evident, for example, in front of Str. 66S (Fig. 3-10). An important lesson is that single soundings can give a false impression of construction phasing. Rattray and Fash encountered early sherds in their probes, but as in our

⁸ See extended discussion in Chapter 7.



Figure 3-9. Multiple layers of empedrado in front of Str. 66S.



Figure 3-10. Southern half of Str. 22 excavated.

own sounding these were always mixed with Coner material.

Structure 66C

Str. 66C is the largest of the three eastern buildings and we devised an unorthodox strategy to excavate it because of the associated video project. Normally such a building would be initially explored with a slot trench, then completely exposed by a set of excavations that proceeded along its whole length, usually beginning at the base of the front stairway, and working upward, or alternatively by expanding the slot trench laterally. In order to visually juxtapose images of the original, featureless mound and the underlying architecture for the video cameras, we instead first cleared off the whole southern half of the building, leaving the northern rubble in place (Fig. 3-10). The northern half was cleared when initial filming was complete.

Alignment of Str. 66C, measured along its most intact front wall lines after reconstruction, turned out to be about 4.5° east of grid north, or 10.5° east of magnetic north. It thus joins the stairway of Str. 70's east platform (see below) at an acute angle of about 85°, or just shy of a right angle. From the beginning it was evident that most of the Str. 66 complex consisted of fine veneer masonry, in contrast to that we found later in the ancillary structures.

The substructure: One of the most impressive features of Str. 66C is an imposing substructure that elevates the summit building significantly higher than that of the House of the Bacabs at Group 9N-8. Having dug both substructures, it was clear to me how much finer the masonry of 66C is, especially that of the stairway. The substructure of 66C measures 14 x 10.75 m and has a maximum height of 3.69 m (Fig. 3-11). It consists of two levels when seen from the front. A basal, or lower level consists of an outset stairway constructed of very large stone blocks flanked on each side by sloping balustrades (*alfardas*). The sloping faces of the balustrades immediately reminded us of the *taluds* seen in Central Mexican architecture, hence the nickname we adopted in the field, although of course there are no corresponding *tableros*. The balustrades are 2.42 m wide and 1.64 m (11 courses) high, and their faces have a reconstructed slope of about 45 degrees. Outset stairways are common on imposing structures at Las Sepulturas, but balustrades of this kind are unknown there. Ours is constructed of stones cut just like beveled vault stones. In fact, when we saw the first few talud courses we speculated that they might be the remains of a vault section that had slumped down coherently. One reason for this rare design might be that there was an oversupply of vault stones from some other project or from some razed building, maybe an earlier stage of Str. 66. The stairway continues above the talud level, where it is inset between two vertical terrace walls (Figs. 3-11, 3-12).

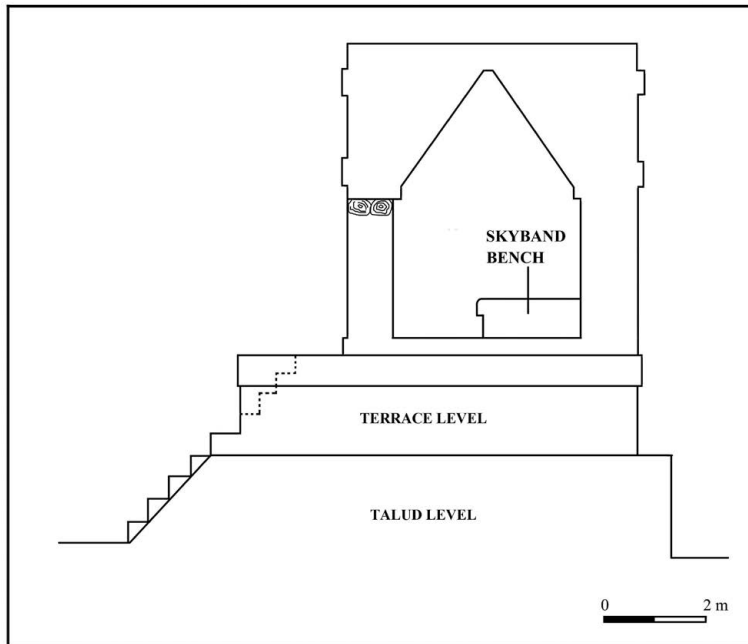


Figure 3-11. Hypothetical cross-section of Str. 66C showing the talud and terrace levels of the substructure.

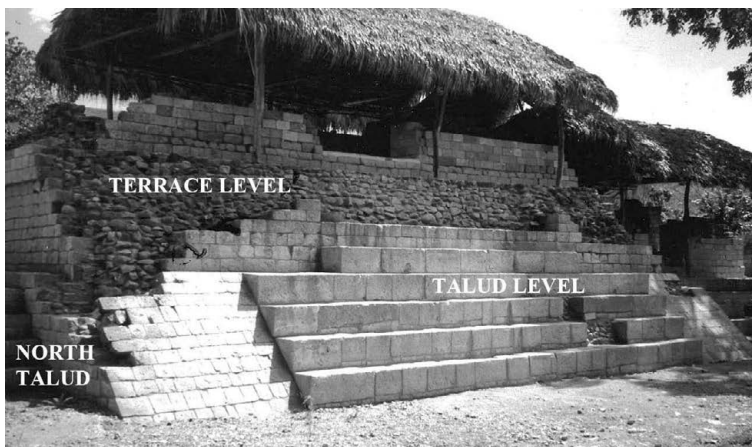


Figure 3-12. Restored front façade of Str. 66C showing the talud level, the terrace level, and the central stairway.

The lower section of the stairway between the balustrades is 9.10 m wide and consists of four risers composed of very large stone blocks. Individual blocks are 40 to 43 cm square in cross-section and of variable length up to 1.49 m. They are well-finished on all four long sides and ends (see Fig. 3-16 below), a conspicuous expenditure of energy because only two faces would be visible even if the stones were unplastered.⁹ The longest of these blocks tend to be on the outer ends of the stairway, with shorter ones in the middle (Figs. 3-12, 3-13). Some of the shorter blocks, particularly in the lowest three steps, have thin support stones wedged beneath them to properly adjust their heights. Risers are about 43 cm high, and treads are 40-42 cm wide. All treads retained thick layers of plaster, as did the tops of the taluds. At least one large block was missing from the second step at the south end of the stairway, and another was displaced. The displaced block shows cut marks on its upper surface, and the Maya themselves might have moved it at some time before the building collapsed. A distinctive feature of the four lowest steps is that they are slightly outset from the talud-balustrades when viewed from the side, an arrangement that gives the stairway visual prominence (Figs. 3-10, 3-12, 3-16).¹⁰

Very few construction stones at 8N-11 or elsewhere at Las Sepulturas were too big or heavy to be lifted by a single person.¹¹ Part of the front stairway of Str. 83 in

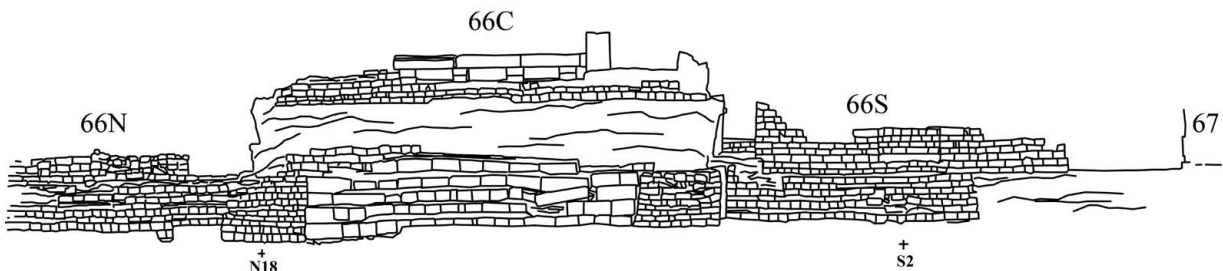


Figure 3-13. Drawing of west façade of Str. 66 complex before restoration. Modified by Webster from a drawing by Fernando Lopez. Note the large central stairway stones.

⁹ Similar "wasted" effort is seen in some large Preclassic stairway constructions at Nakbé and El Mirador.

¹⁰ Can it be long until someone suggests that the pattern of angular shadows cast by the stairway represents a serpent?

¹¹ This is true of most other Maya monumental constructions I have seen. Apart from special components such as some stairway blocks, lintels,

Group 9N-8 is made of similarly large cut stones. Rattray observed them on the lowest riser of Str. 70C, and the Chinese later confirmed their scale. Similar large cut stones were found in a jumbled line in the northeast entrance to Plaza A of Group 9N-8 (Fig. 3-14). We interpreted them as part of some barrier that closed the gap between Strs. 80 and 81, but in retrospect they might have been brought from somewhere else and dumped there.



Figure 3-14. Monolithic blocks from Plaza A, Group 9N-8.

Whatever their origins, unusual effort was necessary to drag the Str. 66C blocks to the site, to lift them into place, and to create their symmetry and fine finish. No doubt their size, as well as the fact that they were buried deeply beneath fallen masonry from the superstructure, accounts for the good preservation of the lower western part of the substructure. Just why the Maya used such large stairway stones and took the trouble to finish them on all surfaces is unclear. Once plastered (as they obviously were), they were not visible. The simplest explanation is that, like the talud stones, they were opportunistically scavenged from some other demolished building. That the riser-heights of some of the smaller stones had to be adjusted is another indication that they were not purpose-made for the stairway.

Figs. 3-10 and 3-13 show that the stairway was less well-preserved above the level of the taluds, both because this section was more vulnerable to collapse and because stone was deliberately removed from it. A fifth large step level is intact just above the taluds (riser 43 cm, tread 58 cm), but constricts to a width of 5.76 m, centered on the

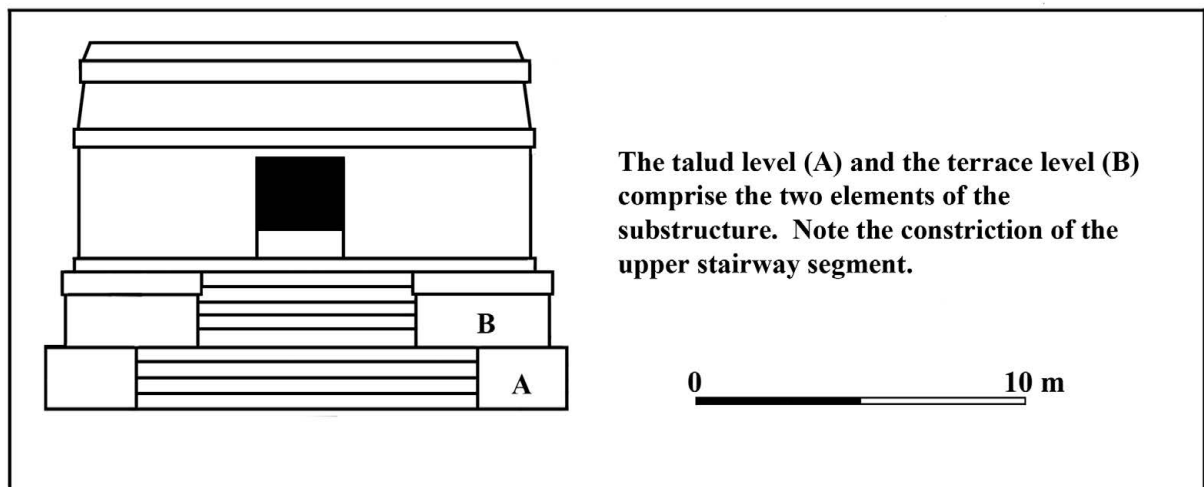


Figure 3-15. Reconstruction of west elevation of Str. 66C as if it were a free-standing building.

bench slabs, drain stones, and elements of mosaic sculpture, virtually all other construction components could be carried by one or at most two people. Much of the fill and facing stone of most structures could be carried by women or children. Suitable labor might thus have been drafted from many elements of a kingdom's population, one reason why Maya buildings were cheap to build.



Figure 3-16. High-quality masonry on the taluds, stairway, and terrace-level walls.
Front of Str. 66C.

center line of the building. This constriction is caused by two vertical terrace walls that rise behind and above the taluds and set back from them about 56 cm. Terrace walls were almost entirely fallen or torn out, but enough remains to reconstruct their original configuration. The front (west) faces of the terrace walls are about 3.55 m long and their outer corners are inset from the northern and southern edges of the taluds about 42 cm. They constrict the width of the central stairway above the talud level, hence the shorter length of the upper (5th) large stairway block segment, which was adjusted to match the narrower, upper stairway section (Fig. 3-15). All told there are nine risers, three fewer than on the Str. 70C stairway.

Just what the upper stairway was like is problematical because of extensive disturbance. Many of the stone blocks looted from the building apparently came from this section of the mound. The lowest two courses of the front vertical face of the north terrace wall extend to the south to form an upper stairway segment, but only a fragment is preserved. We originally hypothesized that there was a set of steps made of small stones (two courses for each riser) above the level of the fifth intact large-block step. This shift from large to small stairway blocks is seen elsewhere at Copán, for example, on Str.10L-2-32 just south of the Acropolis (where the small block risers, however, are below the large blocks). Rudy Larios later reconstructed four such double-block steps for Str. 66C (height = 40 cm each, with 36 cm treads). Access to the doorway of the superstructure would have been via these upper steps, with the highest one leading to the level of the terrace in front of the doorway. This upper, central terrace is just over 1 m wide, about half the width of the flanking terrace segments to the north and south (see Fig. 3-11).

On the north and south sides of the substructure the terrace level consists of vertical walls 2.05 m high, set back from the edge of the talud level about 42 cm. The horizontal surfaces behind of these vertical walls were about 2.13 m wide, forming a spacious terrace surface in front of the superstructure walls. Only the south terrace wall was intact, and it served as the basis for Larios's reconstruction of the others. Its upper three courses are outset 10 cm, forming an upper molding 56 cm wide. It presumably ran all around the upper edge of the terrace level, including the segments on the front façade, but Larios did not reconstruct this feature along the rear of the building.

Height of the rear (east) substructure wall is about 1.9 m at its northeast corner. The rear superstructure wall of 66C is set back 75 cm from the edge of the substructure and about 30 cm further to the west than the rear superstructure wall of 66S. The rear wall of Str. 66N is offset to the west even farther, so the rear elevation (i.e., seen from the east) of the whole upper part of the Str. 66 complex presented a staggered visual plane instead of a flat one.

Exterior masonry of Str. 66C (Figs. 3-12, 3-16) consists of well-cut and faced veneer tuff blocks (*quadradas*) like those throughout the Str. 66 complex (except for the Str. 66N superstructure). Masonry of the substructure is of slightly variable quality. The visible segments of the north, south, and east walls have blocks that are highly uniform, but they appear in some places to be rather roughly cut. This is especially apparent on the south wall that faces the corridor between 66C and 66S (Fig. 3-10). Traces of thick plaster are preserved on this wall (as are two rectangular holes for construction scaffolding). In contrast, the masonry of the taluds and the front stairway is noticeably finer, as is that of the rear substructure wall.

We originally thought that this variation in quality was produced by the renovation of the west façade of 66C, leaving earlier masonry exposed elsewhere. One possible indication of such renovation would be that the west terrace walls extend down behind the talud-level construction. Later restoration showed that this was not the case. In looking over the building after reconstruction I came to the conclusion that the rough appearance of the south substructure wall of 66C was probably caused by damage. The whole adjacent corridor was filled with collapse from the vaulted superstructures of both 66C and 66S. Violent collapse could well have cracked and abraded a large section of the wall stones, which then weathered, producing a rougher look than the masonry exposed elsewhere. An alternative explanation is that some wall stones were recycled from earlier, more roughly-made buildings. Whatever the origins of the cut stone, everything visible on 66C appears to have been built during the same construction phase, with some elements, such as the taluds and front stairway blocks, made of especially fine masonry. This impression is consistent with evidence turned up later by Widmer, Storey, and Larios during probing and reconstruction.

Elliot Abrams pointed out to us that many 9N-8 buildings show considerable variation in the quality of stonework, including not only in how finely stones were cut and set, but also in color, the latter presumably reflecting different quarry locales. He suggested that such variation might also indicate that stone from older buildings was scavenged when newer ones were built. Despite the slight variations in the masonry of the Str. 66 complex the general impression is of highly uniform stone cutting, coursing, and color. Such uniformity in turn supports the idea of a short and unified building effort for most of the construction, with the exception of the superstructure of 66N (see below).

The Superstructure: The superstructure of 66C was badly preserved as shown by the cross-section made before restoration (Fig. 3-17). Virtually all of its exterior wall faces had collapsed, and wall bases were preserved only to a height of 65-96 cm. The northern end of the superstructure (i.e., north of the bench) had almost entirely fallen away. Original preserved wall heights before restoration (some roughly reset by masons) were:

- Outer west wall, Str. 66C: 80 cm (5 courses).
- Outer south wall, 96 cm (6 courses).

Enough fortunately remained of the interior wall faces to reconstruct the general configuration of the superstructure (Fig. 3-18). Larios restored the superstructure walls to a maximum of six courses (1.13 m). Masonry is of high quality throughout. External restored dimensions are 12 m (N-S) x 5.9 m (E-W), not counting a narrow basal molding which would increase these dimensions by 10-12 cm.

The superstructure building at first appeared to have a single large room that we labeled Room 1, (internal dimensions 10.6 x 3.7 m). A 2.4 m wide doorway in the west façade led into the room via a step up (ca. 38 cm) from the plastered west terrace. The doorway is centered on the stairway and on a massive bench set back from the interior front wall 1.7 m. Front superstructure walls, measured at the door jambs, are 90 cm thick. Side walls on north and south are about 86 cm thick. Not enough remained of the rear superstructure wall to determine its thickness, but rear walls in such buildings are typically substantial and Larios reconstructed its width as about 1.2 m. Original height of the superstructure building was approximately 6 m. Along with its supporting platform,

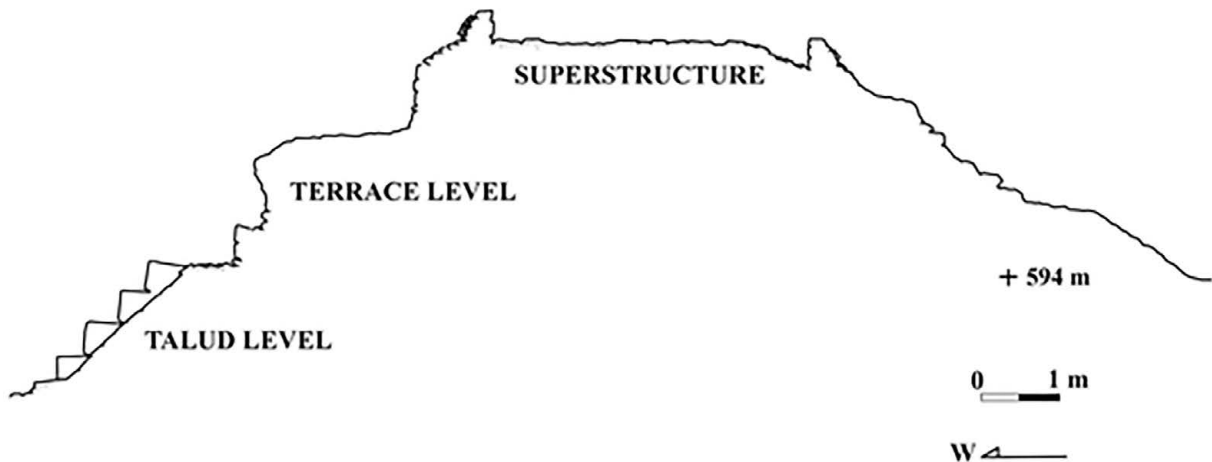


Figure 3-17. Section of Str. 66C before restoration, taken through southern part of building between grid points N5.32E8.87 and N5.90E26.82.

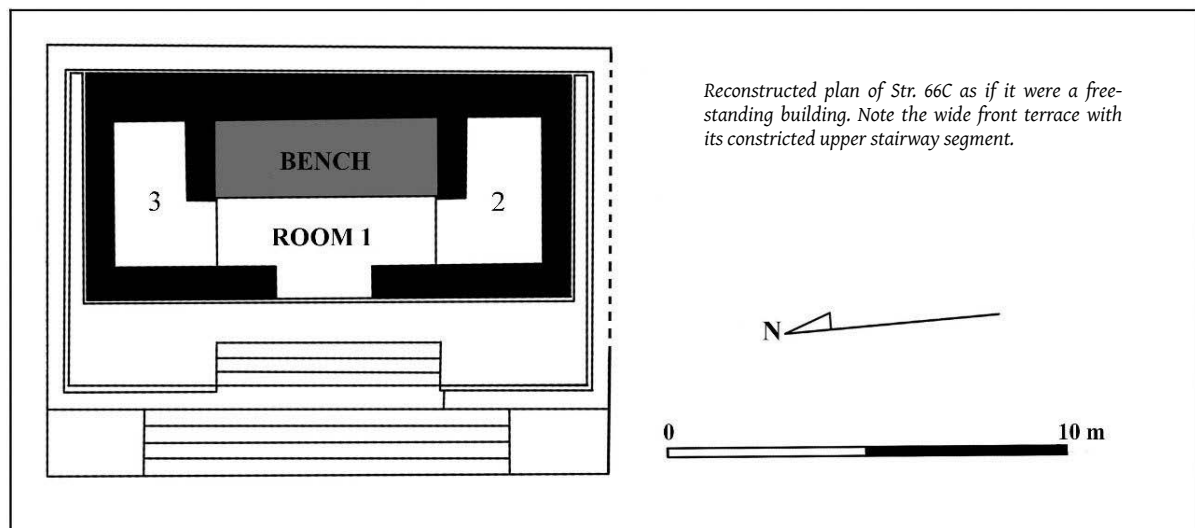


Figure 3-18. Reconstructed plan of Str. 66C.

Str. 66C was originally almost 10 m high, making it one of the most imposing buildings at Las Sepulturas, standing about 2 m higher than the House of the Bacabs. Fig. 3-48 (see below) shows how impressive it is even as a ruin.

Total interior space in the superstructure was about 35 sq m, counting the surface of the bench and its associated plinths. Room 1 turned out to be more complicated than we originally thought because it has three distinct parts. At both ends are interior spaces about 2.57 m wide with floors 29 cm higher than the middle floor section, so one has to step up to enter them. Most of the central section of the superstructure, what we now call Room 1, was taken up by the monumental carved bench that we had earlier predicted would be found there (see Chapter 4 for details). The bench had a wide masonry plinth or wall at each end -- the southern one almost completely fallen. The steps leading up into the raised end sections rooms are roughly in line with the inner edges of the bench plinths, which might originally have been full interior dividing walls that extended all the way up to the vault.

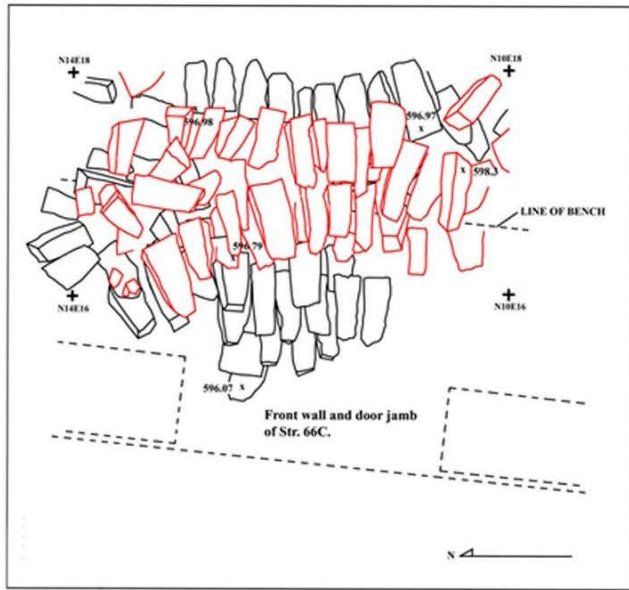


Figure 3-19. Fallen vault stones on summit of Str. 66C.

If they did, they partitioned the superstructure into three rooms instead of one, a pattern that is found in other buildings with carved benches, so I have numbered them as Rooms 2 and 3.¹² The plinths/walls are 5.6 m apart, and the bench or “throne” spans the whole space between them. The bench is 75 cm high and originally about 2 m wide, but the collapse of the rear superstructure wall dragged part of the bench down with it. Plaster was well preserved on horizontal surfaces throughout the interior of Room 1, including the bench surface. The only signs of paint (orange-red) were on the face, surface, and footing of the bench.

The plan of the 66C superstructure is far from unique at Las Sepulturas. During PAC 1 James Sheehy (1991, 2017) uncovered two vaulted buildings on the northern edge of the impressive Type 3 Group 9M-22A, located south of the causeway about 200 m west of Group 9N-8. Both Strs. 194B and 195B had interior plans like that of Str. 66C and were probably built at just about the same time, or perhaps a bit earlier. Str. 195B, the larger and more ornate of the pair, appears to have been erected during the first decades of the 9th century. It sports a wide outset stairway, another similarity with 66C (although there are no talud-balustrades) and the superstructure is only slightly smaller in area. It seems to mimic Str. 66C in some ways but its sculptural themes are different. Both of Sheehy’s buildings had large but uncarved benches painted with a red pigment containing specular hematite. Str. 195B was also profusely decorated with high quality façade sculpture. Sheehy recovered more than 350 pieces, including beautifully carved human heads and an unfinished stela suggesting the presence of a workshop (see Chapter 5; the chronology of Group 9M-22A is discussed in detail in Chapters 10 and 11).

Archaeologists commonly assume that masonry superstructures with thick walls were vaulted. We learned at 9N-8 that this was often true, but in some cases sturdy walls supported flat beam and mortar or even thatch roofs. Whether such comparatively cheap roofs were integral parts of the original designs or compromises made during construction is unknown. As soon as we began to excavate the summit of 66C it became apparent that the superstructure was vaulted along its north-south axis. We found beveled vault stones throughout the collapse rubble, some of them coherently-fallen. Seven courses were still roughly stacked just inside the main doorway and partially over the front of the bench (Fig. 3-19). These clearly fell from above when the lintel failed. The main direction of the collapse was to the east or southeast, accounting for the poor preservation of the rear superstructure wall. The end walls collapsed outward to the north and south. Our impression was that the 66C vault fell first, damaging the adjacent Str. 66S and

¹² I remember comparatively few well-cut rectangular stones from Room 1 of Str. 66C, so I suspect that the walls did not extend all the way to the vault. Neither of the spaces flanking Str. 66C’s central room has a bench, almost universal interior features of elite structures. Their absence strongly suggests that these spaces were not formal rooms but rather compartments used for some non-domicile purposes.



Figure 3-20. Plaster roof capping from Str. 9N-82-east.



Figure 3-21. Fallen drain stone.

perhaps causing its vault to fall in tandem.¹³ Nowhere did we find any signs of deliberate destruction such as burning of wooden lintels or supports sufficient to cause such collapse. The vaults and upper superstructure walls of both 66C and 66S seem to have failed for purely structural reasons.

A sample of beveled vault stones from 66C averaged 59 cm in length, with a range of 41–79 cm. Their beveled faces were generally from 18 to 22 cm wide, with a few narrower ones. Several vault stones retained very thin coatings of fine white plaster on their beveled surfaces. Puzzlingly, we found no signs of the thick, durable plaster capping that was associated with vaulted buildings at Group 9N-8 (Fig. 3-20). Other roof features were a broken drain stone and its basal support, both found in collapse along the rear of the Str. 66C just east of the corridor between it and 66S (Fig. 3-21). William Fash recovered similar drain stones to the rear of the House of the Bacabs. Roof drains functioned to direct rainwater away from building walls, and ours almost certainly fell from the southeast corner of 66C. Water discharged from this point would have inconveniently inundated the corridor/workspace between the main and ancillary buildings, where the living surface was largely packed earth, and it is unclear how the Maya coped with this problem. The partial stone paving we found along the back of 66S might have been one accommodation to the periodic muddiness of the space.

The drain stone is only one of the approximately 650 pieces of carved stone we recovered from the collapse debris of Strs. 66C and 66S. Most were found during the main excavation season, and the rest were recovered during restoration or by Barbara Fash, who searched through many deposits of stray sculptures elsewhere at Copán. It is clear that both 66C and 66S were decorated on all sides, as we shall see in Chapter 5.

Structure 66S

The substructures of 66C and 66S share a common, continuous rear (east) wall with no visible seams or joints, indicating that it is a single construction (Fig 3-22).¹⁴ It rests on a foundation of ballast stones projecting about 30 cm to the east beyond the vertical face. These stones were originally covered with plaster (with no intervening cascajo) defining an irregular cobbled surface or apron projecting from the rear of 66S at a level of about 592.71 m (Fig. 3-23).¹⁵ Prior to restoration the rear substructure wall was preserved to a height of 1.56 m (10 courses)

¹³ When the two big buildings collapsed is unclear – see Chapters 10 and 11.

¹⁴ Lack of seams complicates our understanding of the chronological relationship between Str. 66C and 66S. Such seams helped unravel the sequence of construction in the 9N-82 complex at Group 9N-8 (see Webster 1989: 32–33).

¹⁵ This surface is surprisingly irregular in shape given the general formality of the nearby buildings. Possibly it was at one time more regular and extensive, and stone was robbed from sections of it for other constructions.



Figure 3-22. Rear retaining walls of Strs. 66C and 66S after restoration. The narrow corridor that separates the two buildings is visible on the second level. Note the absence of any visible seam in the lower wall.



Figure 3-23. Cobble surface or apron east of Str. 66S.



Figure 3-24. Stairway between Strs. 66S and 66C.

above the ballast stones. Courses vary in thickness from 14 to 18 cm, with narrow courses most frequent. Masonry is rougher than that found on the 66S superstructure. The rear superstructure walls of 66S and 66C are inset 50-55 cm from the substructure wall, and the narrow terrace thus formed was plastered over.

At the southeastern end of the substructure wall was a narrow stairway of four risers leading up to a terrace/corridor between Strs. 66S and 67 (Fig. 3-24).¹⁶ It would have served as the main entry from the eastern ancillary buildings into the main 8N-11 plaza. A well-made stairway of four risers runs along the whole front (west) of Str. 66S for a distance of 8 to 9 m (Fig. 3-25, 3-26). Risers and treads are about 40 cm high and wide, and each riser is composed of two courses of well-cut stone, very different from the monolithic blocks of 66C. Once plastered they would have made the stairway as visually imposing as that on Str. 66C.

The stairway leads to a spacious terrace about 1.9 m wide fronting the superstructure façade. Presumably the southern end of the stairway articulated with another one that ran at a rough right angle to it along the front of Str. 67. We did not excavate as far as this connection in order to preserve a large tree at the intersection of Strs. 66S and 67.

Construction phasing of 66S and 66C: The 66S substructure abuts the adjacent substructure wall of 66C on its west side and was clearly added to it. The best visible join is at the juncture of the north end of the 66S stairway and south wall of the south talud. A corridor 1.18 - 1.33 m wide (Fig. 3-26, 3-27) separates the north superstructure room of 66S from the south substructure wall of 66C (the variation in width occurs because the walls are not exactly parallel). Front and rear sections of the corridor are visible in Figs. 3-22 and 3-26. The floor plaster of

¹⁶ The material to the left of the stairway in the photo is probably the substructure of Str. 67. The little stairway was probably inserted later between the two buildings.



Figure 3-25. West façade of Str. 66S after restoration. The construction of the stairway is very different from that of Str. 66C. Fine quality masonry is evident both on the structure and the substructure.



Figure 3-26. Connection between Strs. 66S and 66C.

freestanding building for some time before 66S was attached to it. But why then is the rear wall of the 66S substructure contiguous with that of 66C with no seams, and with identical masonry? The final phases of construction of 66C and 66S thus appear to be virtually contemporary, part of the last major renovation of the group. Why the Maya essentially finished the southern substructure wall of 66C and shortly thereafter abutted the stairs of 66S against it in a way that required a jury-rigged architectural solution is unclear. As the buildings stand, when viewed from the front (west), one would conclude (correctly) that 66S had been added to 66C. Viewed from the rear (east) one would just as confidently conclude that the two structures were built at exactly the same time.¹⁷

The only probe into Str. 66S during the main field season was a 2.2 x 1.2 m trench we dug through the construction fill of the terrace just in front of the central doorway. Traces of a cobble surface and rubble of a possible platform appeared at a depth of 1.12 m, roughly at, and just below, the change in fill shown as a dotted line in Fig. 3-29. This material might be a remnant of an earlier building or perhaps the capping of a tomb, but we found it on the

the corridor laps up against both walls. At the eastern end of the corridor was a raised, plastered bench about 44 cm high and 1.46 m long as reconstructed by Larios (see Fig. 3-33 below). There was no rear (east) wall to the corridor, but neither was there easy access to the rear plaza from it because there is no eastern stairway, but rather a sheer drop of about 1.56 m. The little bench presumably reduced the danger of falling.

In building the substructure of 66S and the corridor the Maya faced a problem. There was a 42 cm wide outset on the 66C substructure at the top of the talud level along the south substructure wall. Because the top of the 66S substructure (as measured at the surface of the west terrace) is lower than the top of the outset, the addition created an inconvenient two-level corridor which would have made walking difficult. A simple solution would have been to make the 66S substructure the same height as the top of this outset. The Maya solved the problem in a different way by raising the height of the corridor to cover the outset element. They also extended the corridor level beyond the outer face of the west superstructure wall, out to the stairway. This created a raised platform about 1.4 x 2.33 m in area and 36 cm high at the northern edge of the west terrace of 66S. (Fig. 3-28). These decisions obliged them to raise the floor of Room 1 because there is a step up into it from the corridor.

The simplest explanation for these peculiar construction features is that Str. 66C was a

¹⁷ The phasing of these respective flanking buildings is important to Plank's (2004: 153) concept of a widely-shared otoot template imposed by the last ruler on the Copán pocket landscape (see Chapter 12). Her template includes a dominant three-room central structure with an interior central bench or raised altar, to which smaller buildings or rooms were later added on either side. Such places typically exhibit elaborate sculpture, iconography, and inscriptions, sometimes including glyphic otoot labels.

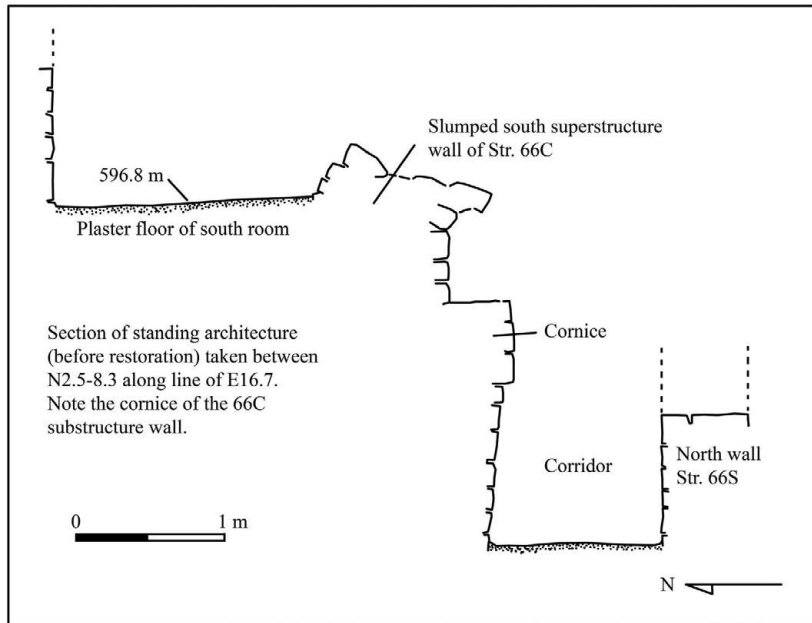


Figure 3-27. Diagram of corridor between Strs. 66S and 66C before restoration.

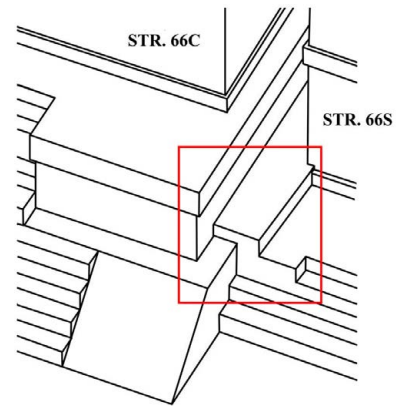


Figure 3-28. Complicated masonry join between Strs. 66S and 66C.

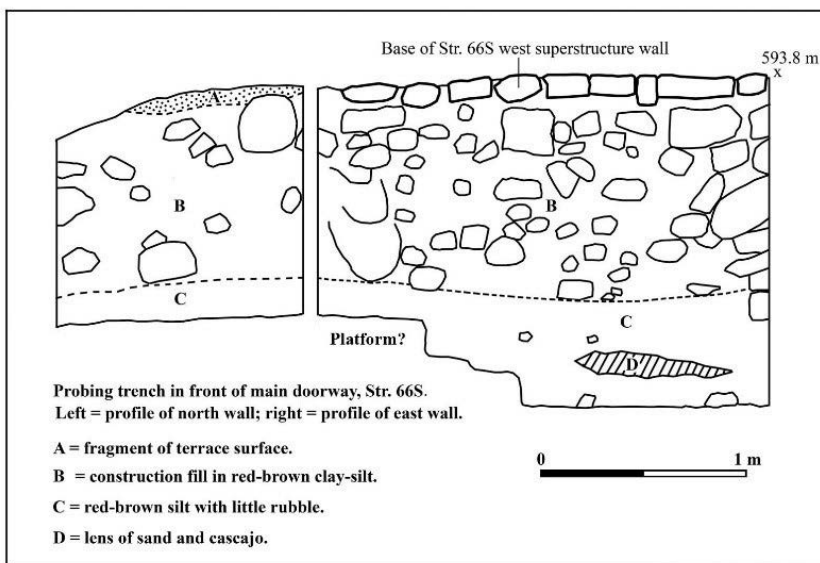


Figure 3-29. Profile of probing trench into Str. 66S.

last day of excavation and did not investigate it further. Widmer unfortunately lacked the time to probe 66S but he did record successive empedrada levels in front of its stairway, and masons found faint traces of what might be a double rear wall during restoration. This suggests that an earlier building of considerable size stood beside Str. 66C but was unconnected to it. To build 66S the Maya simply made one contiguous rear wall, producing the front façade with its curious masonry join we see today.

According to Rudy Larios, masonry architecture during Yax Pasaj's time tends to be

finer than that of the earlier 8th century (personal communication 1997). We were struck in the field by the very fine stonework on Str. 66S. As already noted, the masonry on some parts of Str. 66C is rougher, which might argue its slightly earlier date. We also noticed that the collapsed construction matrix from each building had rather different colors, another hint that they were built at different times. Such fine chronological distinctions, however, are complicated by the reuse of construction material. Str. 66C almost certainly used stone recycled from the earlier Str. 66C2nd that we will discuss shortly.

The rear stone paving: Between 66S and the ancillary buildings to the east is an irregular stone paving (Fig. 3-23).¹⁸ The southeastern edge of the paving is irregular but well-defined (I suspect some stones were robbed in ancient times). It is not aligned with the rear of 66S or with Str. 50, nor does it extend east to the Str. 50-51 complex, so there is no continuous cobble surface linking these buildings. The elevation of the paving (approx.

¹⁸ The photo is deceiving because it shows a gap between the paving and the rear wall of Str. 66S. We had earlier removed the stones there.

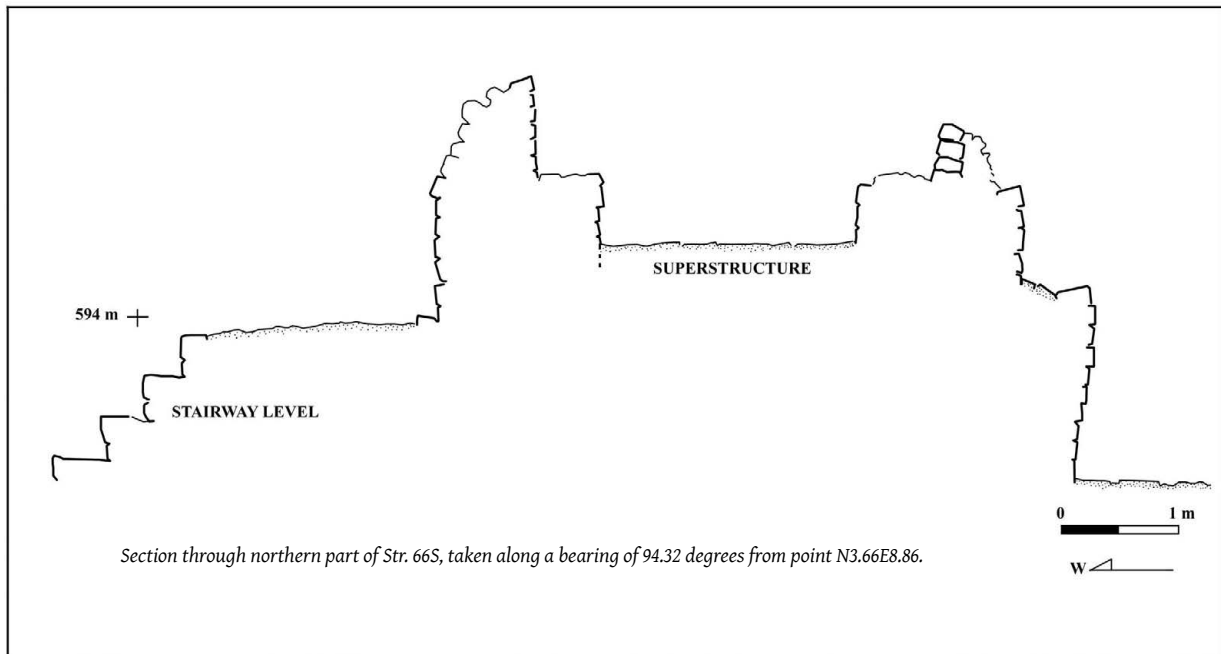


Figure 3-30. Section of Str. 66C before restoration.

592.58 m) agrees reasonably well with that of the empedrada surface of the main plaza adjacent to the western stairway of Str. 66S. We do not know whether the rear paving is a continuation of the western one because Str. 66S was insufficiently trenched. Our impression is that it does not run under the 66S substructure, but rather abuts the ballast-stone foundation of its east (rear) wall. This assumption might be incorrect because the Maya could have torn up part of an old surface and inserted new wall footings into it, leaving the rest of the old surface irregular but intact. They seem to have done this in places along the front of the Str. 66 complex. Our guess is that the paving segments behind 66S were originally contiguous with the main patio of Group 8N-11.

Feature 9, a sheet midden, lay immediately above the stone paving segment between Str. 66S and Str. 50 and is discussed in detail in Chapters 7, 8, and 10. After the main field season Widmer and Storey trenched along the rear wall of Str. 66S. They recovered one burial south of the southern stairway and four others were in front of the main 66S staircase (see Chapter 8).

The superstructure: Fig. 3-30 shows a cross-section of Str. 66S through the center of the mound. The superstructure was well-preserved – better than that of Str. 66C -- and was made of highly uniform and finely-cut masonry (Fig. 3-31). Only the width of the rear wall, and especially the location of its outer (east) face, could not be determined with reasonable accuracy.

Heights of some preserved superstructure walls before restoration (some reset by masons) were:

- East door jam, Room 1: 1.27 m (8 courses).
- West inner wall, Room 1, above bench: 1.03 m (8 courses).
- Outer west wall face near NW corner: 1.68 m (10 courses).
- Northern jamb of west door 1.28 m (7 courses).
- South jamb of west door 1.23 m (7 courses).
- Southwest corner: 73 cm (4 courses).
- South outer wall: 1.47 m (9 courses).
- South exterior wall: 1.47 m (9 courses)
- Door jamb between Rooms 2 and 3: 1.31 m (9 courses).
- West inner wall, Room 2: 1.30 m (8 courses).
- North inner wall, Room 2: 1.93 m (14 courses).

External dimensions of the superstructure (Fig. 3-32) are 8.7 m (north-south) by 4.8 m (east-west), with an added 5 cm for the rounded basal molding along all but the east side. Larios restored the main (west) façade wall up to the bottom borders of paired niches on either side of the doorway that held panels of deity-mask mosaic sculptures described in Chapter 5. Front (west) walls measured at the central door jamb are 85 cm wide. End walls are 60-66 cm wide, and the rear wall about 80 cm.

Interior space (7.35 x 3.3 m) was divided into three rooms were built in three stages. External walls and doorways were first constructed, and later the interior dividing walls, which were not well-bonded with the exterior walls, were added. Finally the associated benches were put in place. I think the builders always had this final three-room plan in mind and that the sequence implies no actual phasing in terms of use.

Room 1: The northern Room 1 (Fig. 3-33) was entered through a doorway 1.26 m wide opening onto the narrow corridor between the Str. 66S superstructure and the south substructure wall of 66C. A step 12 cm high leads up into the room. Most of the interior space was taken up by a C-shaped bench about 1.25 m deep and 58 cm high. Room 1 was completely separated from the central Room 2 by an interior wall about 70 cm wide that probably extended up to the vault. A set of small, square, cord-holder holes was on the exterior corner of the east jamb of the main doorway.

Room 2: Room 2 (Fig. 3-34, 35) was entered through the 1.75 m wide central doorway in the west façade. One stepped up from the west terrace about 49 cm to the floor of the room. The dominant interior feature is a large rectangular bench set back from the front wall 1.36 m. This bench is about 75 cm high and is of extremely fine construction, although not decorated in any way. It is about 3.15 m long and 1.9 m deep, and on its surface were two roughly circular burn marks, as well as a fragment of a human (?) scapula. Two cord-holders are cut into the north wall of Room2, but because the opposite wall was not well-preserved we located no counterparts there.



Figure 3-31. Excavated superstructure of Str. 66S.

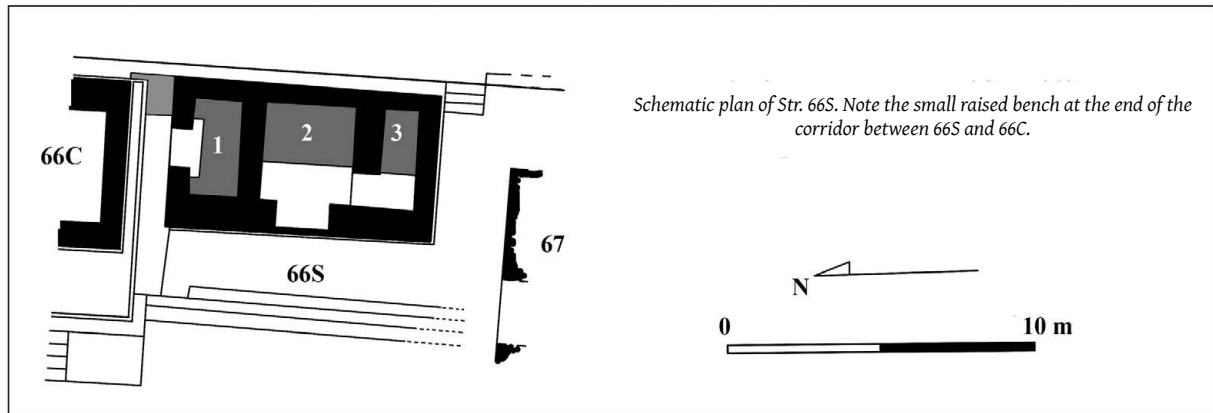


Figure 3-32. Schematic plan of Str. 66S.



Figure 3-33. Room 1, Str. 66S during excavation. Visible at the left is the raised bench at the end of the corridor separating Str. 66S and 66C.

Other interior features include large niches or insets in the side walls above the bench. The dimensions of these niches are unknown because the top and east sides collapsed, but they were at least 50 cm high, 70 cm long, and 40 cm deep. Edges of the stones around the openings were rounded.

Room 3: Room 3 is separated from Room 2 by a partial transverse wall 85 cm wide. Access is through a doorway 1.15 m wide and a step 30 cm high. The floor of the room measures 1.2 x 2.01 m, with the space between the transverse wall and the inner south wall taken up by a rectangular bench 50 cm high. The front face of this bench has a small, plastered niche, and on its floor was a circular burn mark about 14 cm in diameter indicating that a brazier or censer had been placed there. Similar burn marks occurred on plaster surfaces in rooms of Str. 83 in Group 9N-8, and



Figure 3-34. Interior of Room 2, Str. 66S. Jamb of main doorway on left, and cord-holders visible on north wall. Note the substantial but undecorated bench.

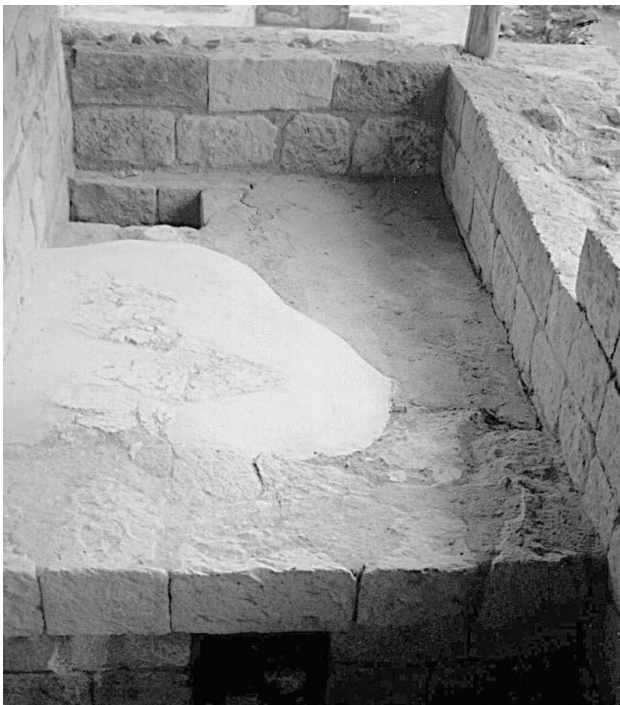


Figure 3-35. Room 3 Str. 66S after restoration showing niche in bench face and cist in the NE corner.

Randolph Widmer (2009: 178) found a crushed censer complete with charcoal on the bench of Room 2, Str. 110B. The builders of the Room 3 bench made a small stone-lined cist about 70 cm deep in its northeast corner (Fig. 3-35). Two sides of this cist were formed by the intersection of the building walls, and the other two sides were cut stone, as was the base. It was an integral part of the bench design and was covered by intact plaster, but we found nothing in it.

At some point the wall between Rooms 2 and 3 was widened, as indicated by an interior face found during reconstruction. The north face of the original wall forms the rear of the southern niche in Room 2. The niche was created by leaving a cavity as the second wall layer was added to the first. During reconstruction Widmer removed a cache from the interior of the original wall. It consisted of two vase-shaped Sepultura censers, one inverted over the other, enclosing a spondylus shell (Feature 37 – see Chapter 8). Red pigment was in the bottom of one vessel, as were six *olivella* shell beads, small, crushed pieces of shell, part of a marble bead, and many fragments of minerals, including cinnabar.

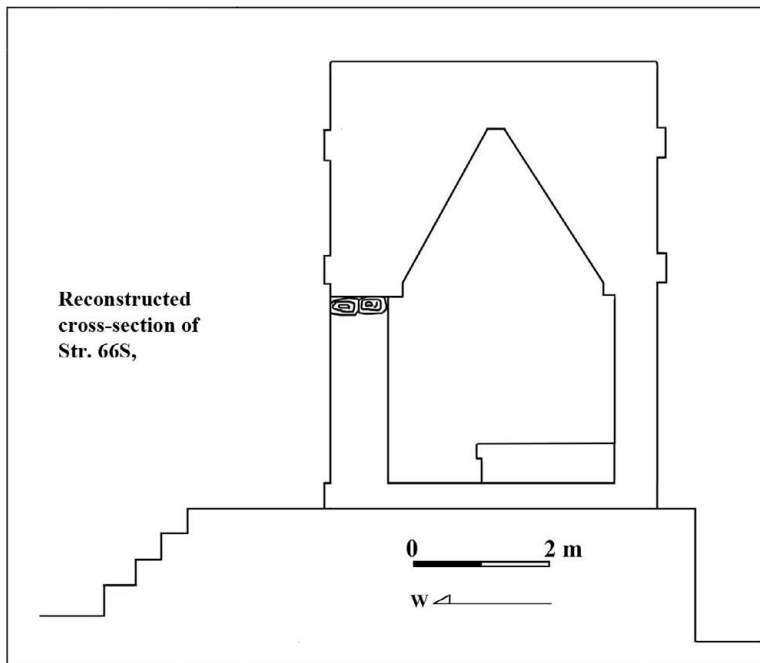


Figure 3-36. Reconstructed cross-section of Str. 66S.

The roof: The 66S superstructure had a vault with a north-south axis (Fig. 3-36). Beveled vault stones were found in trenches N0 E16, S2 E16, and S2 E14 (Fig 3-37). A sample of the vault stones averaged 51 cm in length, with a range from 41--56 m (the most common length was 56 cm). Most of the wall collapse debris of 66S lies to the east and south. The vault clearly fell to the east, toward the rear of the building, either when the lintel over the main doorway failed or when Str. 66C collapsed. We found several rectangular capstones inside the doorway, and others fallen in a line might also have come from above the lintel. A few vault stones were associated with loose fragments of plaster 3-4 cm thick that probably originally covered their beveled surfaces. Many substantial pieces of surfaced plaster 10 cm or thick were in the superstructure debris, probably fragments of the roof capping.

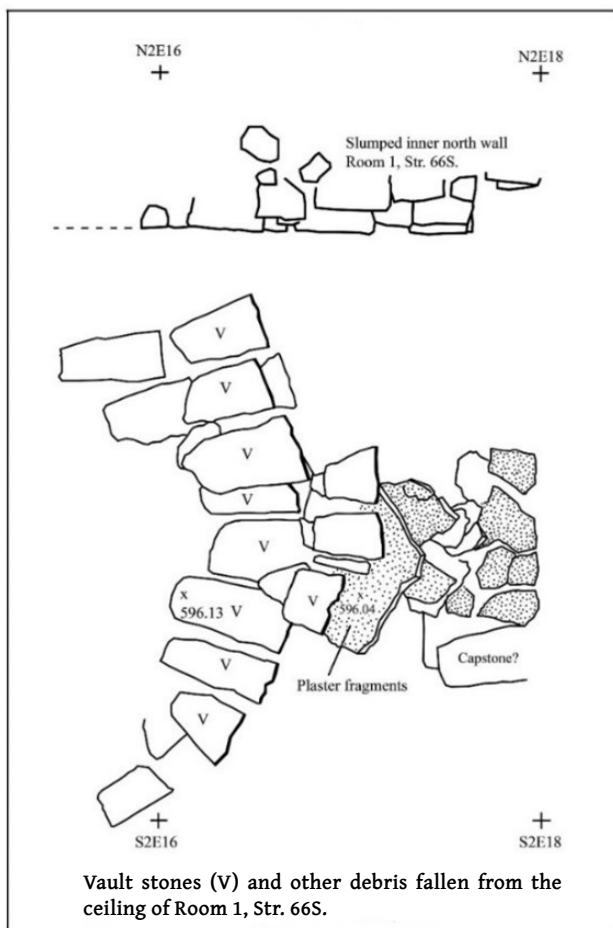


Figure 3-37. Fallen vault stones and debris in Room 1, Str. 66S.

The Str. 66S rooms had well-preserved plaster on their horizontal surfaces except for the floor and bench surfaces of Room 2, which were damaged by structural collapse. No signs of paint were evident on any of this plaster. Exterior horizontal surfaces on Op. 50 structures often retained coatings of thick well-preserved plaster, but there was very little on vertical surfaces, and fragments that we did find *in situ* were very thin. Plaster was expensive at Copán because good limestone deposits are scattered and deforestation had reduced fuel supplies by the 8th century. One advantage of finely faced masonry is that only thin plaster coats were necessary to cover it. The lack of inscriptions on 66C and 66S interior wall or bench surfaces might thus be a bit deceiving. If inscriptions or images were originally painted onto vertical plaster walls or façades all traces might now be gone.

Str. 66S was inadequately trenched so we have scant evidence for early construction, apart from the cobble surface in our probe of the west terrace and an early empedrada Widmer found in front of the building. Other hints derive from reconstruction, during which Widmer and Larios found evidence of an earlier rear wall. These features provide little detailed information, but Str. 66S does seem to cover earlier architecture as do Strs. 66C and 66N as we shall see shortly.

Structure 66N

Str. 66N extends to the north of 66C and is joined to the central building in a much more straightforward manner than 66S is (Figs. 3-38, 3-39, 3-40). The bearing of the front stairway is not exactly the same as that of 66C, but shifted about one degree farther to the east. As at 66S, its front stairway is set back about 2.4 m from the front of 66C to make the central building visually dominant.

The substructure: The substructure is about 6.9 m wide (east-west), 8.2 m long (north-south), and about 1.22 m high measured above the west plaza level (Fig. 3-40). Its east and north sides are vertical retaining walls. The north wall was well preserved (4-5 courses) but the wall on the east was largely fallen.¹⁹ Unlike the rear substructure wall of 66S, that of 66N (mostly excavated by Storey and Widmer) is not contiguous with that of 66C but rather inset to the west about 1.17 m (Fig. 3-41), so it butts up against the north substructure wall of 66C (Fig. 3-38). The substructure was obviously built after that of 66C and it also connects to the eastern platform of Str. 70, which probably predates it (Fig. 3-42). The simple join between 66N and 66C suggests that the either that the Maya builders remembered and avoided the difficulty they had when erecting Str. 66S, or more likely the addition of Str. 66N occurred after 66C had been free-standing for some time. The rear wall of the substructure is 10 courses (1.9 m) high. Masonry is cut stone,



Figure 3-38. Str. 66N after reconstruction. The substructure of 66N abutting the north wall of Str. 66C, shown before reconstruction (right). Note how stone robbing has disturbed the upper part of the north talud of Str. 66C.

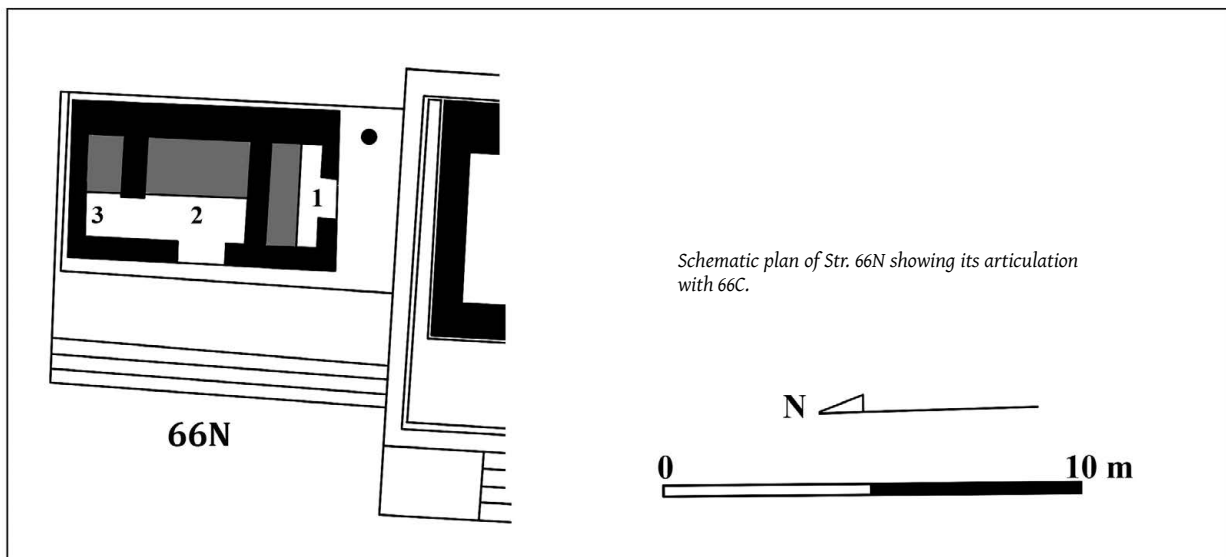


Figure 3-39. Schematic plan of Str. 66N.

¹⁹ Larios restored the north wall of Str. 66N's substructure but not the superstructure.

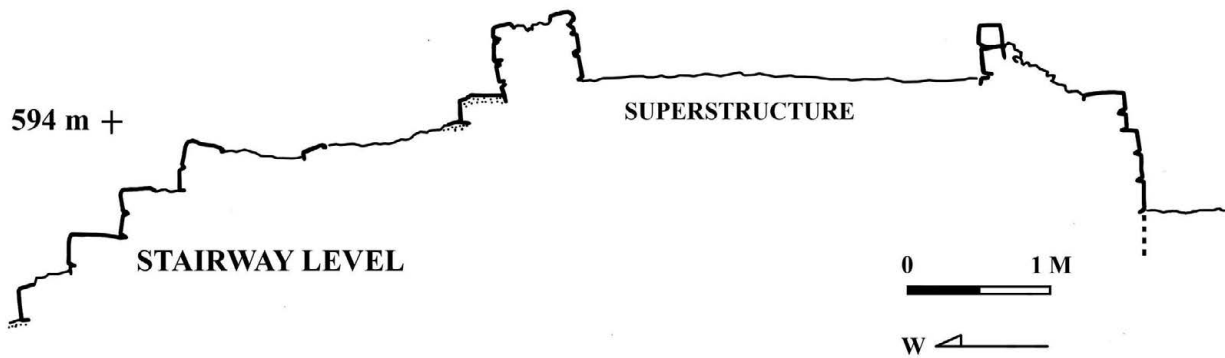


Figure 3-40. Section through Str. 66N before reconstruction, taken along a bearing of 94.32 degrees from N21.01/E9.97.



Figure 3-41. Offset of rear walls of Strs. 66C and 66N.



Figure 3-42. Northeast corner of Str. 66N after reconstruction. The wall of the North Platform is visible on the right.

but rougher and not quite so finely laid as that of the rear walls of 66C and 66S. A stairway of four risers runs most of the length of the west side of the substructure for a distance of 7.1 m. Restored risers are 34-35 cm high with treads of 35-36 cm. The steps are made of well-cut stone blocks comparable in quality to those of 66S. A broad but poorly preserved terrace 1.9 m wide runs along the west surface of the substructure. A fragment of intact plaster on it, just in front of the superstructure wall, has an elevation of 593.91 m, the best indication of its original level. This is exactly the same level as the intact plaster on the front terrace of 66S, so some care was taken to create visual conformity among major construction elements over the whole length of the Str. 66 complex.

The northern end of the stairway articulates with the lowest step of another one running at near-right angle along the northern edge of the plaza. This is a small segment of another building we called the North Platform that was exposed at the northwestern corner 66N during reconstruction (Fig. 3-42). It had a substantial retaining wall of well-cut stone about 1.01 m high on a good cobble surface. We originally thought the North Platform was a later building, but the recent Chinese excavations show that it was an eastern extension of Str. 70C (Li and Ramos 2017).²⁰ It now seems likely that Str. 66N is the later of the two, and that it was built to abut the corner of the already-existing east extension of Str. 70, possibly closing off an opening into the plaza from the northeast.

²⁰ Str. 70 has a high central section (now designated by the Chinese Str. 70C) flanked by two lower platform extensions on the east and west.



Figure 3-43. Circular altar in corridor between Str. 66C and 66N.

When clearing the peripheries of Str. 66N, Widmer and Storey encountered rich midden deposits as much as 30 cm deep that had accumulated up against its north and east walls (especially the latter). These middens, as well as numerous associated burials, led Widmer to conclude that 66N was a domicile (see Chapter 8).

The Superstructure: A corridor 1.4 m wide separates the 66N superstructure from the substructure wall of 66C. The exact dimensions of the superstructure are uncertain because the east and north walls were badly slumped, but its outer measurements were about 4.25 m (east-west) by 6.5 m (north-south). The 66N substructure is not high enough to cover the top of the 42 cm wide outset of the Str. 66C substructure retaining wall, so the Maya leveled the intervening corridor by extending the basal superstructure molding to the south of the south wall, eventually joining the outset and adjusting the disparity in heights. The front of this basal molding -- actually a little terrace -- projects about 29 cm from the front of the west wall of the superstructure. Patches of plaster remain along the north side of the corridor.

Widmer recovered two features from this general area as described in Chapter 8. Feature 23 was a ground, faceted basalt cobble smashed down into the terrace plaster near the eastern end of the corridor. Nearby was Feature 22, a small circular altar 36 cm in diameter and 9 cm thick, sunk flush with the corridor floor (Fig. 3: 43). Beneath the altar was an infant burial and lower still a box-like construction which Widmer interpreted as a possible support for a post related to an earlier building phase.



Figure 3-44. Str. 66N during excavation.

Rooms: The 66N superstructure (Fig. 3-44) is divided into three rooms and the overall layout resembles those we later found in small ancillary structures to the east (see Chapter 6). Room 1 faces south and is entered by a 1 m wide doorway in its front wall opening into the corridor. Door jambs are 43 cm wide. The interior measures 1.5 x 2.7 m, and most of the interior space is taken up by a low bench 38 cm high and 1.05 m wide. This bench is an extremely crude construction faced with pebbles. During restoration Widmer concluded that Room 1 originally had a door that opened to the west onto the front terrace. It was later blocked off with crude masonry and another one was built through the south (or corridor-facing) wall. The interior bench of Room 1 must have been a later addition. Sculpture obviously fallen from Str. 66C was associated with the corridor and the southern end of the building.

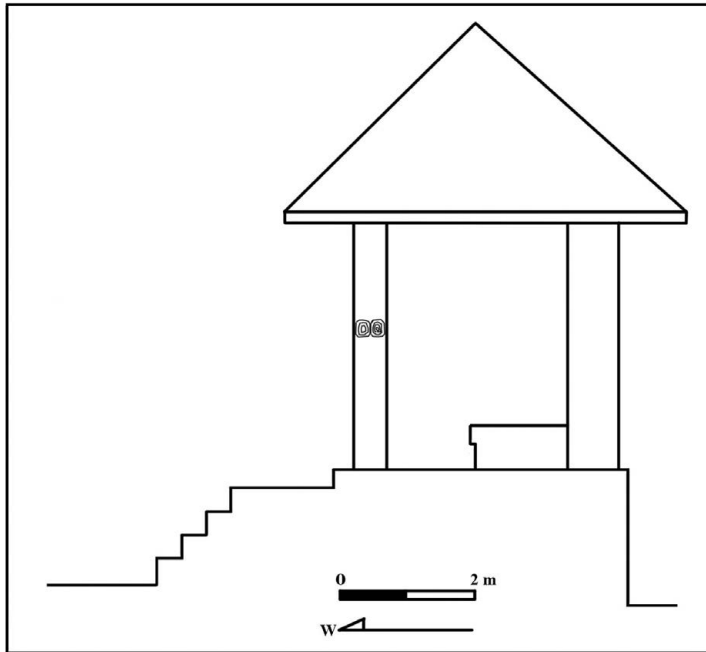


Figure 3-45. Reconstructed cross-section of Str. 66N.
The thatch roof is hypothetical.

Room 2 is separated from Room 1 by a very flimsy wall 50 cm wide. The room is roughly square (2.62 x 2.55 m) and its main doorway (1.15 m wide) is on the west. Door jambs are 45 cm wide. A rectangular bench measuring 2.55 m x 1.5 m. fills much of the interior space and showed signs of plaster. The front of the bench is about 64 cm high and is made of well-cut stone, but the rear (east) section has slumped badly. We recorded only vestiges of a north interior dividing wall during excavation. Larios later restored one that does not extend all the way across the width of the superstructure, but rather creates a narrow interior doorway about 1.15 m wide leading into the northernmost Room 3. Exact size of this room remains uncertain because of the severe slumping of the north and east superstructure walls, but it probably was slightly smaller than Room 1 and it might have had a low bench.

The superstructure exhibits some of the crudest construction anywhere in the Str. 66

complex, which accounts for its poor preservation (the maximum restored height of the front wall is only 88 cm). Walls were narrow, flimsy, and built with unfaced cobbles that were not properly coursed (see Figs. 3-38, 3-44). Cut stone was mainly used in corners, door jambs, and benches.

Except for the Room 2 bench, the masonry was much inferior to that of 66C and 66S and even to that of the ancillary structures discussed in Chapter 6. One particularly shoddy patch of masonry is in the front superstructure wall just to the south of the main doorway into Room 2. When Widmer and Larios dismantled this wall they discovered that this section had been rebuilt during the renovation of Room 1 and that the crude masonry was the fill of an empty niche.

We found no vault stones associated with 66N, and the narrow and poorly made exterior walls could not have borne the weight of a vault. They might have supported a light beam-and-mortar roof, but we found no positive evidence for that either (e.g., large slabs of roofing plaster or fallen gutter stones). The original roof was probably thatch. I show it this way in Fig. 3-45, but my reconstruction might be incorrect.

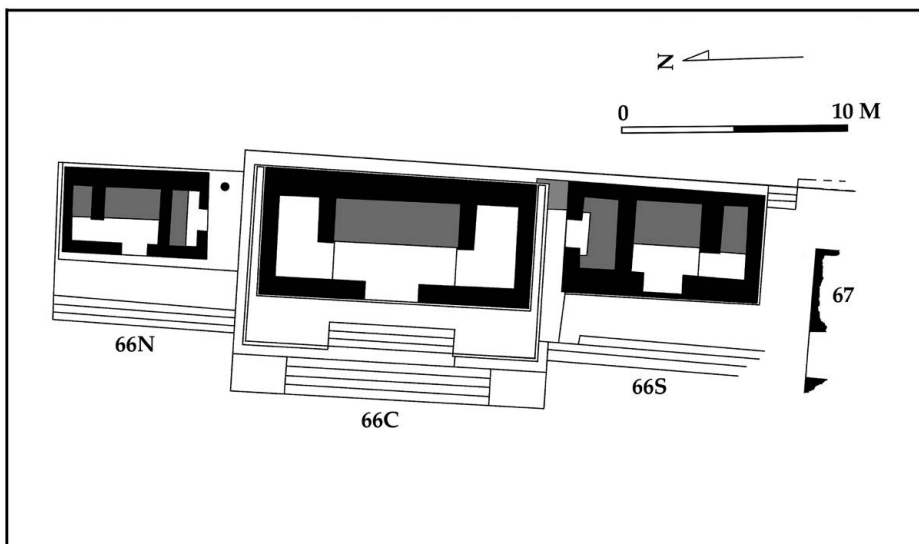


Figure 3-46. Schematic plan of Str. 66 buildings. Benches are shown grey.

Str. 66N superficially resembles 66S and it added an element of visual symmetry to the whole Str. 66 complex. On the other hand, the superstructure lacks the superb construction and elaborate façade sculpture of its southern counterparts, and if the roof were thatch, Str. 66N would have been visually quite different from the other two buildings (see elevation drawings below). Based on measurements taken both during excavation and after restoration the final-phase Str. 66 complex was laid out as shown in Fig. 3-46.

Why the substructure of Str. 66N is of higher quality than the superstructure is an interesting question. 66N is almost certainly the last of the three final-phase buildings to be erected. Either the builders decided to put less effort and fine materials into the superstructure, or else the superstructure was built considerably after the substructure. Such sloppiness hints that when the superstructure was built the political fortunes of the building's patrons had declined, an interpretation consistent with the "long chronology" discussed in Chapter 11 (see Chapter 12 for additional comments). It might also explain the slightly different alignment of the substructure, assuming that the Maya were concerned about such details.

A second possibility is that 66N was a special-purpose building that did not warrant heavy superstructure elements or symbolism. We found such buildings in other Las Sepulturas courtyard groups. Sometimes they served rather modest domestic functions, but even important buildings occasionally had comparatively flimsy construction. An example is Str. 81 in Patio A of 9N-8, which had sculpture, ball-game equipment, and other ritual paraphernalia suggesting that it was a young mens' dormitory. The adjacent Str. 80 shrine was a similar light building with a thatch roof. Quite possibly such structures embodied symbolic archaism, retaining traditional "house" or "domicile" features important to the Maya. We shall see in Chapter 8 that Str. 66N was a hot-spot for burials compared to the adjoining bigger buildings.

Structure 67

To the south of 66S and separated from it by a corridor about 3.21 m wide we struck part of the Str. 67 superstructure (trenches S8E12 and S8E14). It was the northeast corner of the front façade of a long, rectangular building that flanked the northern side of the main entrance to the 8N-11 courtyard (Fig. 3-47). The wall was constructed of very fine masonry and total length of the exposed segment was 5.62 m, including a doorway 1.6 m wide. Assuming the doorway was centered, Str. 67 was some 11 m long. Wall thickness was about 67 cm and the height as reset by the masons was 1.82 m. A small basal molding 16 cm high and outset about 10 cm ran along the base of the wall, and about 67 cm above it there was another outset of 5-7 cm. At some point the central doorway to Str. 67 appeared to have been walled up by crudely laid layers of cut stone, now badly slumped and disturbed by tree roots. Oddly, the doorway had been partly blocked by building collapse before this crude wall was built. The masonry "insert" plugged a kind of gap in this collapse material, and itself rested on a 30-40 cm thick layer of rubble that had accumulated on the floor of the threshold.²¹ We did not have time to penetrate this doorway and examine the interior of Str. 67. Quite possibly it contains a late burial or some other feature that was purposefully hidden.

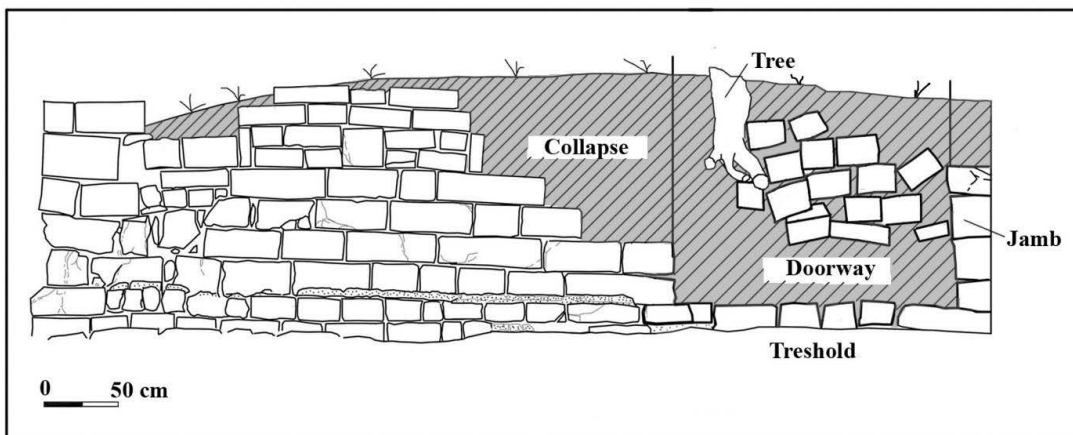


Figure 3-47.
Elevation of
north wall of
Str. 67.

²¹ What we took to be a crude blocking wall might have been a section of masonry that slumped coherently from above the doorway. If so, it fell long after much of the rest of the front wall had collapsed. In the field we all thought that this section was roughly built and purposefully wedged into a gap in the collapse filling the doorway.

Despite the impressive wall masonry we observed no sculpture or vault stones in the collapse debris. A building of this quality probably had a beam and mortar roof.

Near the east wall of Str. 67, just south of the little stairway between it and 66S, was a small, terrace-like construction (probably part of Str. 67's substructure) with a stone paving beneath it. Widmer later excavated beneath the pavement and uncovered Burial 17, an adult female with a deformed skull in a cist beneath stone slabs. This is one of the most formal tomb-like arrangements we found during Op. 50.

On the eastern end of the terrace floor between Strs. 67 and 66S was Feature 12, a dense scatter of obsidian (see Chapters 6, 8, and 10 for details). Obsidian flakes were very abundant here -- in fact 60% of all flakes recovered during the main field season came from this single feature. Other forms of obsidian such as blade fragments were rare, however, and it is not certain that this is a primary activity area, although it is clearly an extremely late context that probably post-dates the in-filling of the Str. 67 doorway.

Benches

A major architectural distinction among elite groups in Las Sepulturas is structures with benches and those without them. Rooms without benches (and often without durable walls) presumably had special functions. Table 3-1 lists the internal room and bench proportions for each big 8N-11 building.²² Benches at 8N-11 compare in scale and quality very favorably with those at 9N-8 (see Hendon 1987: 433-435 for a discussion).²³ In fact the Skyband bench is slightly larger than the hieroglyphic bench used by the ajk'uhuun in the House of the Bacabs. We shall see later that the ancillary buildings dug during Op. 50 were also well appointed with benches.

Table 3-1. Room and bench space in the Str. 66 complex.

Str.	Room	Total floor area (sq m)	Bench area (sq m)	% Bench area
66C	1	19.44	10.73	55%
	2	7.96	none	none
	3	7.87	none	none
66S	1	4.88	3.83	78%
	2	10.05	6	60%
	3	4.55	2.31	46%
66N	1	3.13	1.95	62%
	2	6.64	2.94	44%
	3	3.9	1.35	35%

Construction Sequence of the Final Phase Str. 66 Buildings

The Str. 66 complex (Fig. 3-48) was not planned as a coherent whole but developed over some considerable amount of time. Str. 66C was the earliest of the visible buildings, although the architectural stratigraphy is ambiguous about its specific chronological relationship with 66S. Barbara Fash (Webster *et al.* 1990: Appendix A) thought that Str. 66S postdated its larger neighbor, possibly by many years. I think the interval was a short one, but either interpretation still leaves unexplained the contiguous rear substructure wall of the two buildings. The Str. 66N substructure was clearly added to the pre-existing Str. 66C and is also later than the eastern extension of Str. 70C as exposed by the Chinese. Judging from its slipshod walls, probable thatch roof, and lack of decoration, the superstructure might be considerably later than the substructure.

Order of construction aside, the architects of the final phase buildings of the Str. 66 complex carefully thought out the appearance of the whole arrangement as they made successive changes. The two flanking structures were both set back from the central one about the same distance, preserving the visual dominance of 66C, which was also the tallest. Care was taken to build imposing stairways with risers of roughly the same scale, and to make the front terraces of the flanking buildings of equal height. The most visually jarring note was the imbalance between the north and south ends of the complex due to 66N's inferior scale and shoddiness. If Str. 66N had a beam-and-mortar roof instead of the thatch one shown in Fig. 3-45, the visual balance would have been better.

²² These measures are approximate because some walls were poorly preserved. When calculating internal room space I counted the main door vestibules as integral parts of the interior rooms to which they gave access, not as exterior space.

²³ Most of the 8N-11 benches have better masonry, for example, than those in Str. 9N-83, a long range structure adjacent to the House of the Bacabs.



Figure 3-48. The Str. 66 complex seen from the southwest at the end of the main field season in 1990. Part of Str. 67 is visible on the extreme right, and the tree on the left edge grows from Str. 70. Composite image from three photos taken by Susan Evans.

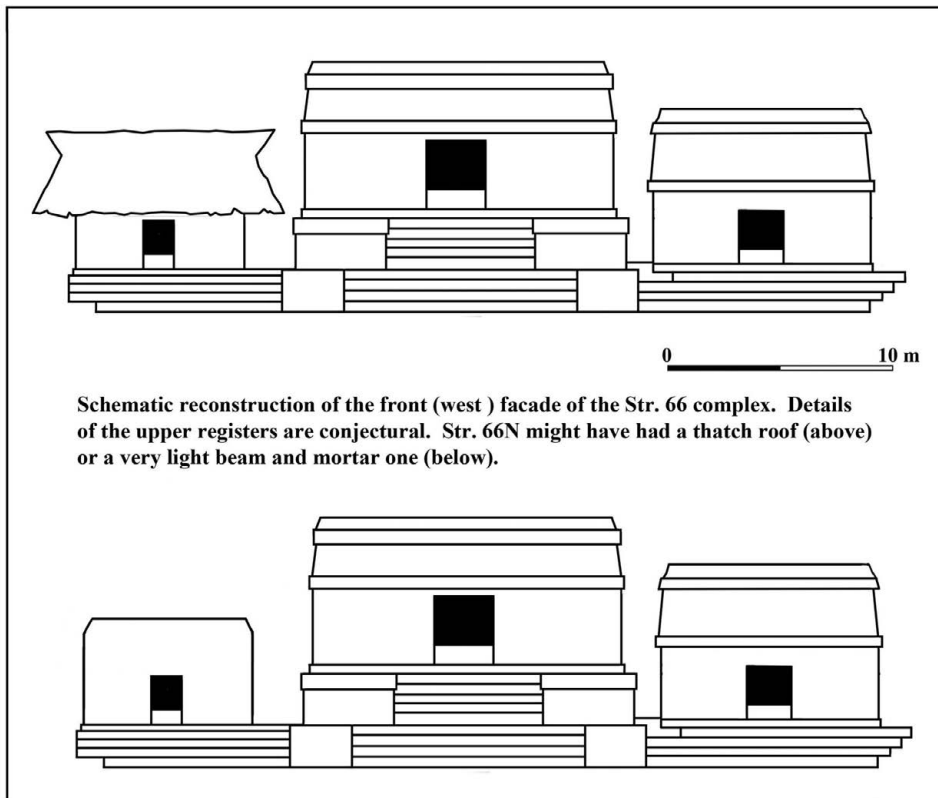


Figure 3-49. Schematic reconstructions of the Str. 66 façades.

The architectural phasing of the Str. 66 complex (Fig. 3-49) recalls the sequence reconstructed for the three main southern buildings in Courtyard A at Group 9N-8 (see Webster 1989: 33-34). Two lateral buildings there were attached to the central House of the Bacabs at different times, but visually integrated by a single final stairway. One of them, 9N-82-east, was vaulted, whereas 9N-82-west was probably thatched. This set of buildings taught me to be cautious about reconstructing roofs. 9N-82-west had good, thick wall construction despite its light roof. Its eastern counterpart had inferior wall masonry but was definitely vaulted. Judging from the walls alone one would guess that this pattern was reversed. The final configuration at Courtyard A is also different in that neither of the two flanking buildings exhibited sculpture, and both had inferior construction compared to the compared to the central one.

Hendon (1991) envisioned a class of “dominant structures” in elite Copán groups that functioned as residential/ritual spaces. Such buildings usually (but not always) had fine, durable construction materials and projected complex messages through their painting or sculptural programs. Thus the dominant building at 9N-8 is Str. 82C, the House of the Bacabs. Str. 66C similarly loomed over the east side of the great plaza at 8N-11, but whether it dominated the whole group or was living space as normally conceived is problematical. Str 70C is very impressive and has major tombs, and in any case the issue of “dominance” has to do not only with scale and elaboration, but with the associated messages encoded in sculpture and inscriptions and their effect on the viewer.

Courtyard Configuration and Functions

How did the Maya perceive the mature 8N-11 courtyard as lived space, especially when compared with Patio A at 9N-8 (Fig. 1-3)?²⁴ Patio A at 9N-8, along with its neighbor Patio B, sit atop a huge artificial platform roughly 70 m long (N-S), 30-40 m wide (E-W), and 1-2 m high. This elevation imparts a degree of visual dominance to the core architecture *vis-a-vis* the surrounding courtyard groups (see Sanders 1989: 90). The whole 8N-11 locale, by contrast, is quite flat, although considerable infilling occurred as indicated by our deep soundings.

²⁴ See Inomata (2006) and Tsukamoto and Inomata (2014) for the functions and significance of plaza spaces.

Access was also different. Patio A has no large central entrance, but instead two smaller ones on the northern perimeter of the plaza, respectively to the east and west of the Str. 80 shrine. Either of these wide gaps might have been closed off with perishable barriers or otherwise controlled, and we found intimations of such barriers in the northwest gap as described above. Which gap was the principal approach is unclear, although the northwest one best qualifies as the main entrance. Anyone coming from the west climbed an impressive stairway and then turned right, passing between Strs. 80 and 81. Those entering this way had an oblique view of the façade of the House of the Bacabs with Altar W' (maybe) sitting in front of it. The dominant Str. 82C was not seen straight on, but from a diagonal. On the east side of the courtyard was a set of rather plain residential structures, and the Str. 80 shrine was visually de-emphasized. Patio A created immediate impressions of substantial residential architecture dominated by the political symbolism (and no doubt political functions) of the House of the Bacabs. Visitors probably felt they were entering a private residential space via an off-center and comparatively informal entryway. Because the 9N-8 plaza is large and the buildings around it are quite low, they imparted a distinct impression of spaciousness.

The mature 8N-11 has a somewhat larger plaza and only one formal entrance for those visitors who approached from the direction of the causeway after passing through a set of smaller ancillary structures (see Chapter 7). The direct view from the entrance focused on Str. 70C, a shrine or ritual building with impressive burials and elaborate façade decoration. It was as visually imposing as the eastern buildings because of its abundant sculpture, including figures with Mexican year signs and crossed-torch motifs, and the Str. 66 complex, for all its symbolic load, was visually downplayed. Grandiose though the Skyband bench was as a political or ritual statement, a great lord or an image sitting on it would not be the immediate focal point. The front steps and terraces of all the buildings might have served as viewing platforms for events in the plaza.

The 8N-11 courtyard appears designed for both more restricted and more formal purposes than Patio A at 9N-8, and its buildings project a much greater symbolic load (how this was viewed is discussed in Chapter 5). Although its plaza is a bit larger, its high buildings would have made the space seem more intimate. "Design", however, presupposes that the Maya arranged these spaces deliberately for varied spatial experiences, which might be wrong given the complex histories of construction. Whatever rituals or other activities took place in the 8N-11 courtyard involved comparatively few people compared to the enormous plaza spaces of the Main Group.

Performance

A considerable literature analyzes the capacities of Mesoamerican plazas to accommodate people during performances and thus materialize social relations.²⁵ Plaza scale is often assumed to be a rough measure of the size of the audience and the comparative rank of plazas in terms of their civic/ritual functions (Tsukamoto and Inomata 2014). Analyses of Maya plazas tend to focus on the big dominant ones appropriate for royal or polity-scale performances, and Inomata (2006) restricted his discussion to the Copán Main Group plazas. Smaller spaces such as Plaza A at 9N-8 had similar functions, but for socio-political groups of lesser size and presumably more restricted membership. Lower still in rank and capacity would be the smaller plazas at 9N-8, which seem to have been private spaces for important sub-groups. Most of these courtyards probably had domestic functions and are the analogues of the small plazas around which many rural residential structures are arranged. If we take the long view, it was such modest and ancient plaza spaces that morphed into the much grander elite/royal ones.

Such spatial logic applied to Group 9N-8 indicates that Plaza A held the largest assemblies, the constituencies of the Bakab lords, while the smaller plazas had more specialized and/or socially intimate gatherings. If we envision plaza spaces as venues for both extraordinary experiences and mundane ones, then 9N-8 provided both. But what about 8N-11? Because of the configuration of the site we cannot envision its main plaza as the dominant one among several smaller ones. We can, however, form some idea of its capacity. Maya archaeologists commonly use standard density measures expressed as ratios of people to space: 1: 0.46 sq m, 1: 1 sq m, and 1: 3.6 sq m (e.g., see Inomata 2006; Liendo, Lopez, and Campiani 2014; and Tsukamoto 2014). The 8N-11 plaza measures roughly 750 sq. m. Using these ratios, it would accommodate groups of 208, 1600, or 2700 people. If the plaza were engineered to accommodate participants linked socially or politically to the Skyband Group, the low end of this range is entirely reasonable, but we don't know that such collective assemblies ever occurred there.²⁶

²⁵ See Mongelluzo (2011) on how palace spaces, including those at Copán, might have been experienced.

²⁶ That plaza scale is somehow reflective of the numbers of people who might congregate there is one possibility. On the other hand, many

A problem with these calculations is that the basic proportions and scales of many plazas were determined long before the surrounding late-phase (usually Late Classic) buildings were in place and when populations were lower. Earlier configurations had very different layouts of plaza and other ambient space, and entryways. This was certainly true of Plaza A in 9N-8 (see Webster 1989) and also of 8N-11, although we know less about the earlier phases there. Whether a mature plaza arrangement was “engineered” with an eye to certain functions and capacities is unclear given all this earlier architectural contingency.²⁷ Just what kinds of events took place in the main 8N-11 courtyard is unknown, although solar and other astronomical rituals were presumably important.

Many archaeologists characterize Maya plazas, causeways, and other features as instruments of “spatial causality,” where repeated exposures to carefully designed ritual stimuli reinforced social memory, learning, and identity (Ardren 2014). This seems questionable to me for the big plazas at Las Sepulturas. Plaza A at 9N-8 underwent many renovations, and the ones we know best all occurred over an interval of 30 years or so. Anyone who repeatedly visited that space over a lifetime would have experienced not a recurring set of spatial impressions and stimuli, but rather a very dynamic one conveyed by the mess of frequent renovation and construction. The message, if any, lay with this dynamism, rather than a comforting familiarity. I strongly suspect the same is true of Group 8N-11 (see also comment in Chapter 12).

Many Maya courtyards and associated monuments are arranged to accommodate processions or circumambulations, particularly in a counterclockwise direction (see O’Neil 2012 for examples). Whether such dynamic or sequential viewing occurred at 8N-11 is unknown, and in any case depends on what images might be on the unexcavated buildings. There are no features such as stelae or altars at the plaza level, so the focus of attention was upward toward the front building façades. All of the Str. 66C and 66S façade sculpture is high above the eye level of anyone standing in the plaza and could only have been seen at a distance unless one actually climbed the stairways on the western structures (and we cannot know who was allowed to do this). Processions would have entered the main plaza of 8N-11 from the direction of the causeway, but their pre-entry approach would have been visually blocked to any observer on the front of Str. 70C or on the Str. 66 complex.

Both the 9N-8 and 8N-11 courtyards were also accessed via small and informal entryways. Presumably much day-to-day traffic (bringing in food, water, etc.) utilized these passages. In Courtyard A of 9N-8 a set of stairs led down from the southeast corner toward the river, and at its base we found remains of kitchen-like activities. The gap to the east of Str. 80 probably served as access to and from the nearby Str. 9N-78, identified by Widmer as another kitchen because of its deep, trashy midden (see also Hendon 1987: 503-505). This building sits awkwardly in the space between Plazas A and H and faces south, toward the northeast entrance into Plaza A (see Chapter 11 for midden dates). The counterpart to this informal entrance at 8N-11 seems to be the corridor and stairway between Strs. 66S and 67, but this refers to the final-phase arrangement. Just what kinds of other entryways were present at the northeastern and northwestern corners of the compound, especially before the construction of Str. 66N and the North Platform, remains unknown. Our current partial grasp of architectural stratigraphy suggests a trend toward reduced access and greater exclusivity.

However one entered the 8N-11 courtyard, the buildings surrounding it conform well to a general Maya pattern of what Hillier and Hanson (1984) call *building genotypes*. Most conspicuous is their very shallow ‘spatial syntax.’ Whatever went on in most of the central rooms of all three principal buildings was visible from the courtyard unless screened off by perishable doors or curtains. Such lack of depth creates a stage-like quality to much elite architecture, at least when buildings front on plazas. Only the various side rooms of the Str. 66 complex made provision for visual privacy. The little ancillary buildings discussed in Chapter 6 exhibit this same shallow spatial character even though they surely had few or no comparable functions as places of display or spectacle. In her study of three nearby Las Sepulturas residences Hendon (1987: 530) makes the distinction between *independent access* and *dependent access* rooms. The former are directly entered from outside spaces, while one must go through another room to enter the latter. The Str. 66 complex is evenly split along these lines if we count the two lateral

Maya and other plaza spaces in ancient Mesoamerica seem overly large, given reconstructions of the potential “audiences” they might serve (Sullivan 2014). An alternative is that they were geared not just to crowds of spectators, but to dancing, processions, and other more dynamic, lower-density ceremonies.

²⁷ Monuments, shrines, or ball-courts associated with plazas sometimes indicate specific functions. These are missing at 8N-11, but the buildings themselves might have served similar marking purposes.

sections of Str. 66C as rooms. At Str. 66S the single dependent access room is part of the original design of the building. At Str. 66N a similar room was created by partitioning an existing larger space.

Wendy Ashmore (1989, 1991) thought that elite groups at Copán and Tikal had strong north-south architectural and symbolic axes. Her excavations of Copán groups 8L-10 and 8L-12 (see Chapters 11 and 12) convinced her that “...the east-west axis was primary, and probably only that one held direction and geographic significance” (Ashmore 1989: 9). Ashmore suggested that this axis is integral to the position of 8N-11 at or near the end of the eastern causeway. To the extent that any such conceptual axis existed at 8N-11 it could have been either a north-south or an east-west one. Admittedly the northern Str. 70C is impressive, but there seems to be no imposing structure on the south side of the plaza. Later we shall see convincing evidence of east-west symbolism derived from several lines of evidence, including astronomical alignments.

If we expand our perspective to Group 8N-11 as a whole, the contrast with Group 9N-8 is stronger. The latter group has multiple courtyards and its overall layout is a rambling, cell-like pattern of separate conjoined plazas. Plaza A is clearly dominant, but otherwise 9N-8 gives the impression (remember Spinden’s characterization) of numerous spatially discreet plaza groups that grew through accretion over generations. No such cell-like pattern is evident at 8N-11. Most of the ancillary buildings form a rough concentric ring around the main courtyard and face toward it. Some buildings we tested, such as Strs. 46 and 58, seem rather isolated and do not face the main courtyard group. These departures might have something to do with the termination of the causeway. Marcello Canuto and Ellen Bell (2013: 6) illustrate plans of the distant centers of El Cafetal and El Paraíso, plausibly part of Copán’s larger sphere of political influence. These sites are roughly the same scale as 8N-11 but show distinctively different arrangements. El Cafetal is similar in that it has a single large courtyard, but different in its multiple entrances. El Paraíso has multiple sunken courtyards with restricted access. In neither case do we know how these architectural complexes evolved.

Phase 2 Excavations in and around the Main Courtyard Buildings

After our 1990 field season Randolph Widmer and Rebecca Storey spent two months working at 8N-11 as it was prepared for restoration. They used the same Op. 50 designation, but their work is here designated the Phase 2 sub-operation. The account below is based on their field notes and reports, their drawings and photos, and a recent book chapter (Widmer and Storey 2016).

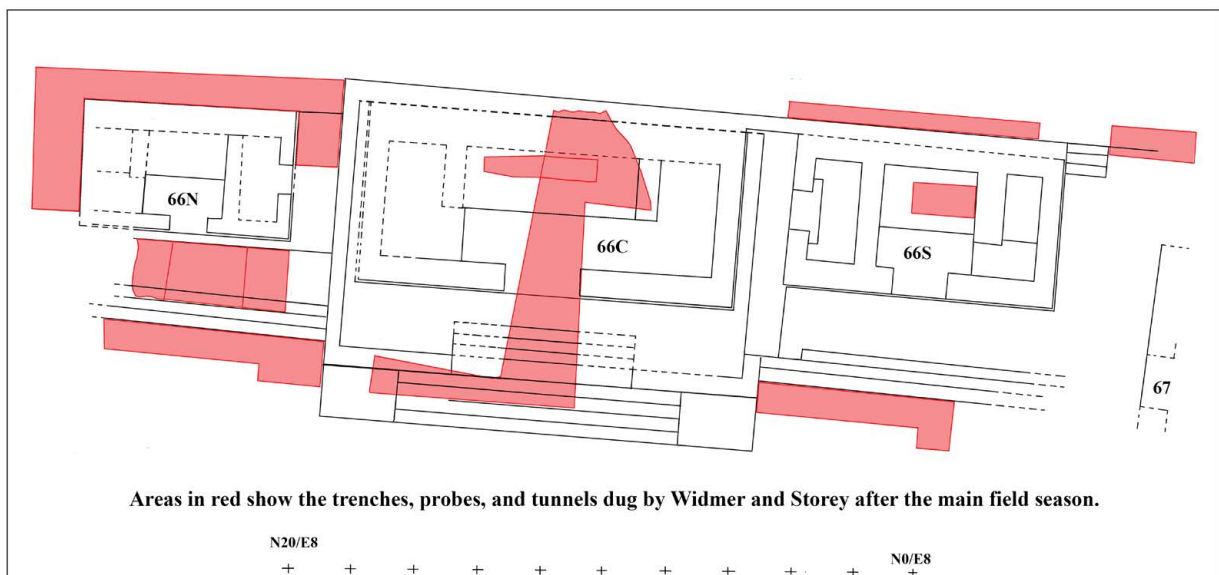


Figure 3-50. Widmer’s trenches in the Str. 66 complex.



Figure 3-51. Wall fragment of Str. 66C-sub revealed in Widmer's tunnel through the front stairway.



Figure 3-52. Corner of early building beneath south talud of Str. 66C. Note the squared-off stairway blocks.

The main goals of the follow-up work (Fig. 3-50) were:

1. To explore the peripheries of the substructures and recover tombs, burials, fallen sculpture, and caches or offerings and to trench the interior of Str. 66C.
2. To detect earlier architectural phases as well as tombs and offerings.
3. To monitor the dismantling of walls, stairways, benches, and other architectural features by the masons and to record artifacts and features retrieved as restoration progressed.

Widmer and Storey explored the architecture under difficult conditions. Much of our grid had been destroyed and they had very limited access to a transit for mapping or recording elevations, resorting instead to string and line level. Guillermo Murcía assisted them by examining crucial deposits of ceramics as they came in from the field. Information about early-phase architectural features derived both from formal probes and from features exposed as the masons dismantled the last architectural components in preparation for restoration. We had already detected signs of possible early construction in our initial Op. 50 plaza trenches (Fig. 3-6) and in our probe through the Str. 66S front terrace (Fig. 3-29).



Figure 3-53. Widmer's trench through Str. 66C, looking west. Note the character of the fill.

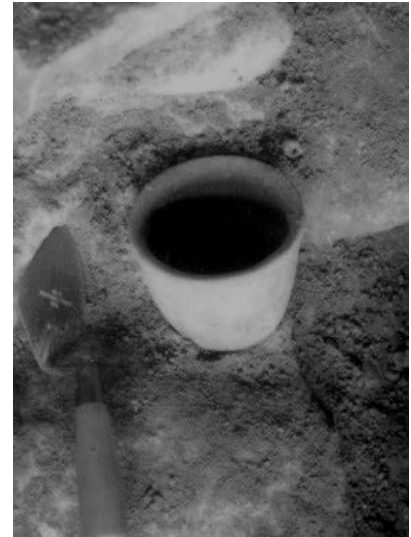


Figure 3-54. Surlo vessel in tunnel fill.

Widmer and Storey found several features and architectural fragments near Str. 66C including a large depression and bell-shaped pit (Feature 21) beneath the north talud, a ceramic funnel-shaped pit (Feature 38) beneath the south talud, and several caches in the building fill. They are discussed and illustrated in the overview of features and construction episodes in Chapter 8.

Tunneling revealed part of the front wall and stairway of an earlier building that Widmer designated 66C-2nd (Fig. 3-51). It was built of river cobbles and roughly finished tuff quadradas on two terrace levels. The staircase of this earlier building had been mostly torn out, but its position was indicated by scars in the empedrado and by a fragment under the south talud (Fig. 3-52). This stairway was aligned about 18 degrees east of magnetic north, or about 7.5 degrees further to the east than the orientation of the final phase of Str. 66C.²⁸

Widmer's tunnel (Fig. 3-53) through the central axis of 66C ended when it ran up against the inner surface of the rear retaining wall. Fill exposed in the tunnel consisted of river cobbles. There were at least two separate construction episodes (See Chapter 10). Cobbles in the bottom fill layer had been placed in loose dry soil. Higher up they were laid in an originally wet matrix of reddish-tan clay which then dried and hardened. Widmer also dug a vertical probe into the fill of the Skyband bench that exposed a wall line about 46 cm below its surface.

These architectural fragments allow a rough reconstruction of 66C-2nd. The building was about 6.59 m wide and 12.1 m long, not counting the missing stairway, and its front façade was aligned about eight degrees more to the east than that of the final set of buildings. The rear wall was unterraced. A 20-cm deep trashy deposit from Feature 21, a pit beneath a patch of empedrada associated with Str. 66-2nd, yielded only Coner sherds. Deep inside Str. 66C Widmer found faint traces -- pavement scars and distinctive powdery fill -- of a still earlier building we call 66C-2nd-sub. All the rest of its masonry appears to have been removed and recycled so we have no good idea of its dimensions or character.

Widmer and Storey expected to find burials in the interiors of the Str. 66C buildings and were surprised when none appeared in Str. 66C. They did, however, find burials and features beneath the empedrada in front of the final phases of the complex (see Chapter 8) and a small cylindrical Surlo vase in the tunnel fill (Fig. 3-54). They concluded that the main 66C structures probably had no important mortuary functions, but instead served other purposes. Rattray's burials from the shrine-like Str. 70C in 1982 and the recent Chinese finds suggest that this building was the main elite mortuary repository for 8N-11, probably associated with feasting and drinking (see Chapter 12).

²⁸ Widmer detected an even earlier faint alignment beneath the talud that was oriented about 25.5 degrees east of magnetic north. What it connected to is unclear, but it had roughly the same bearing as the front of Str. 66N-2nd.

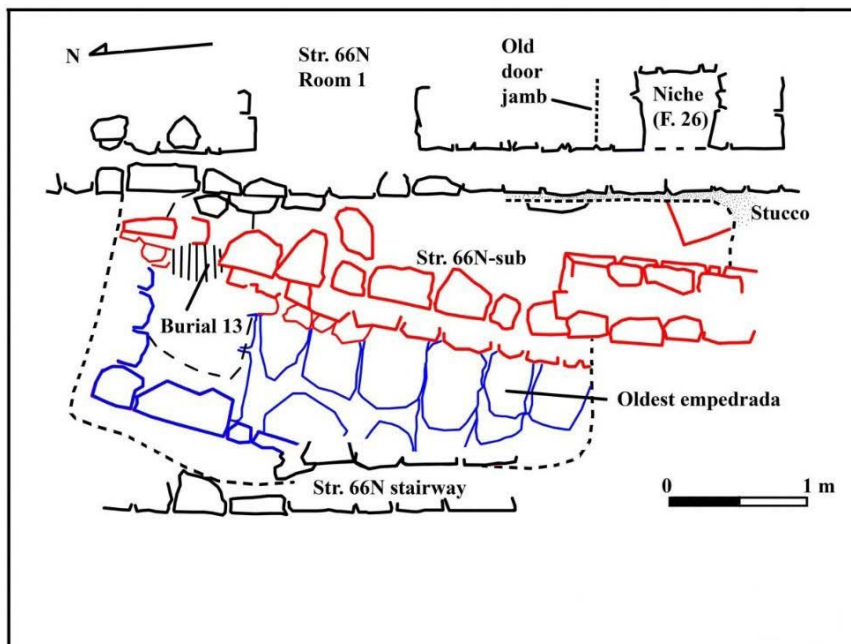


Figure 3-55. Fragments of early construction (Str. 66N-1) found beneath the terrace and front stairway of Str. 66N.

Next Widmer and Storey trenched along the north and east walls of the 66N superstructure where they uncovered middens and six burials. Burial trenching and probes beneath the staircase and the front terrace turned up two remnants of an earlier staircase, two floors, and a west-facing superstructure wall with a door in it (Fig. 3-55). Other parts of this building, called Str. 66N-2nd, were found by the masons.

Fig. 3-56 shows the locations of fragments of Strs. 66C-2nd and 66N-2nd and of the earliest-known empedrada surface. The rear walls of Strs. 66C-2nd and 66N-2nd were contiguous, so Widmer concluded that both were built at the same time.

Widmer and Storey devoted comparatively little time to Str. 66S. They found several caches and burials in front of the building, as well as associated architectural features (see Chapter 8). A probe of the bench exposed fill, a trashy deposit, and part of an earlier rear wall that seemed to align with similar fragments associated with Strs. 66C-2nd and 66N-2nd so there might be an earlier structure there too.

An unresolved question is whether the two early buildings 66C-2nd and 66N-2nd were razed at the same time. Obviously 66C-2nd was leveled to accommodate 66C, but Str. 66N has the appearance of a late, tacked-on addition to the north end of 66C. If it is indeed late, then did 66C stand for some time with an early adjoining building of different character and alignment? This seems unlikely, and we have no evidence about how the early buildings were joined. I think 66N-2nd was probably razed at the same time as 66C-2nd but that it was not immediately rebuilt. If so, the final phase of 66N and particularly the superstructure might be quite late.²⁹ The relative sequence of construction events at the Str. 66 complex is reviewed in Chapter 10.

Eighty-eight lots in our main excavations turned up small fragments of barro quemado, burned fragments of the mud used in wattle and daub construction. These were widely scattered and were typically few in any particular lot. One exception was a concentration fragments weighing almost 4 kg in a trashy deposit below the main plaza floor in Trench N16/E2 (level 3), located a few meters west of the front stairway of Str. 66C. None of the late phase buildings we examined showed signs of wattle and daub construction, so all this scattered material might be redeposited remnants of the early architecture detected by Widmer and Storey, or by Langley at Str. 70C. Our later Op. 63 excavations showed that some of the southern and western ancillary buildings had wattle and daub superstructures (see Chapter 8).

²⁹ Buildings of special importance were sometimes buried very carefully or reverently; the Rosilila structure covered by Str. 16 in the Copán Main Group is one of the most spectacular examples in the Maya Lowlands. Clearly no such importance was attached to the earlier constructions of the Str. 66 complex, which argues against their ritual or symbolic importance.

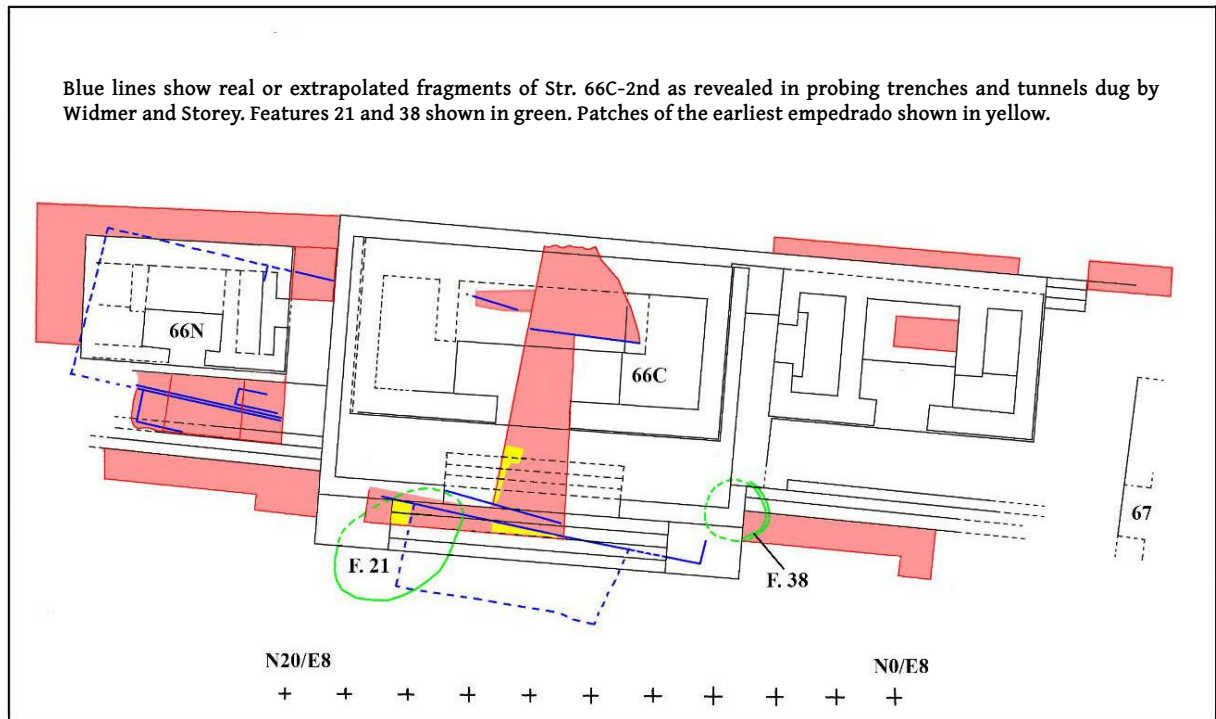


Figure 3-56. Early building fragments beneath the Str. 66 complex.

Widmer and Storey monitored the restoration of the Str. 50-51 complex but found no burials or signs of multiple construction phases, although some important caches were recovered (see Chapter 8). Their work added 23 features to those we identified during the main field season, 16 additional burial contexts from around the main buildings, and much useful information about sculpture fall. They determined that all known building episodes dated to Coner times. Their efforts underscore the value of having archaeologists working alongside restoration crews (Widmer and Storey 2016).

Construction Costs of the Structure 66 Complex

Fundamental to the Harvard project's hierarchical ranking of Copán groups was construction scale and quality. Elliot Abrams (1984, 1994) carried out time-motion studies during restoration work at 9N-8 to quantify such effort using the currency of person-days (pd) of labor. He also replicated monument carving and made ethnographic observations of vernacular construction methods in the valley, allowing him to rank over 200 Copán structures, mostly residences, in order of their construction costs. Abrams kindly applied his methods to the Str. 66 complex at my request. According to his calculations based on Larios's restorations, Str. 66C required 9674 pd of labor, Str. 66S 5090 pd, and Str. 66N 3129 pd. Abrams's estimates do not include the carving of sculpture, so they underestimate the costs of the two decorated buildings.³⁰ On the other hand, his base figures would be 20 to 40% lower if significant amounts of material from earlier razed buildings were recycled, as seems likely. In any case, investment in the whole Str. 66 complex was something like 18,000 pd. In contrast, Abrams calculated the cost of the principal building in the royal temple/otoot of the 13th king, Str. 10L-22, at 24,705 person days. No single construction of Copán's sub-royal lords anywhere was this large, but they still built on impressive scale. Christine Carrelli (2004: 123-127) made preliminary construction estimates for Copán Acropolis structures erected by first two dynastic rulers. She found that the elaborate Motmot building, dating to AD 425-435, absorbed only slightly more labor than the main Str. 66 buildings at 8N-11.

What about the cost of the other buildings around the 8N-11 main courtyard? Until all are excavated we cannot do the necessary math, but my eyeball guess, based on the architectural masses shown in the maps in Chapter 2 and

³⁰ Abrams (1994: 116-117) says the number of specialized plaster-workers at Copán probably exceeded that of skilled sculptors. His estimate of construction cost for Str. 66N would vary depending upon whether one assumed a thatch or a beam-and-mortar roof.

my own experience at the site, is that the Str. 66 complex amounts to something like 40% of the total. A ballpark figure of 44,000 pd (minus sculpture) for the whole courtyard complex seems reasonable to me. No doubt the Chinese excavations will produce more precise measures.

To put these calculations in perspective, rural Copán commoner structures consumed from 15 to 150 pd of labor (Gonlin 1993). At the other extreme, Str. 82C, the most impressive single building in Group 9N-8, absorbed an estimated 8567 pd, including sculpture (Abrams 1994: 132). Whoever was responsible for the Skyband group built on a somewhat grander and more ostentatious scale than his neighbor. These construction figures are order-of-magnitude estimates, but even so Str. 66C could have been completed (again ignoring the sculpture or incorporation of earlier building materials) by a work force of 100 people, most unskilled, in a few months. How the builders of 8N-11 recruited the necessary labor for their ambitious constructions is unknown, but they did not have to make burdensome demands on their political constituents (see Webster and Kirker 1995).

What to make of such investments depends on the available labor. The sprawling, interconnected plazas of the mature 9N-8 compound certainly housed several hundred people during the 8th century – enough to underwrite any single construction project there. The Skyband compound is much smaller and its ancillary structures must have housed fewer occupants. How then was labor for constructions like Str. 66C recruited and mobilized? William Sanders (1989) suggested that lords of dominant elite residences at Copán were political leaders of maximal lineages that might include hundreds or even thousands of people. If this model is correct there was plenty of available labor, but *where* did it come from? How were dependent lineage members distributed over the landscape? Dependent households might have been scattered throughout the whole Copán valley. If, on the other hand, such households clustered close the residence of their lord, there are some obvious concentrations near 8N-11, notably the big site to the east near the river and two others about 60 m to the southwest, adjacent to the causeway (Fig. 2-2). The riverside group is partly destroyed, but altogether at least 60-70 structures were located within 150 m or so of the 8N-11 courtyard. A labor pool of some hundreds of people was immediately available if all these structures were occupied during the late 8th century. We should be cautious about such speculation though, because these small clusters do not relate to 8N-11 as a spatially coherent “neighborhood”, and each appears to have its own rather distinct plaza groupings.

It is always dangerous to judge residential capacity from surface appearance, but we could hazard a few guesses about the other large buildings of Group 8N-11. In 1990 we thought that the high, conical shape of Str. 70C, along with the burials found by Rattray, suggested a shrine or mortuary function, and the Chinese excavations bear out our prediction. Structures 68 and 69 are lower range structures that appear to have been built of high-quality masonry. We observed sculpture in their collapse material and more has since been found by the Chinese. Quite possibly excavation would reveal sets of lineally arranged residential rooms like we found along the eastern side of Plaza A at 9N-8, but with sculpture on the façades. If the main courtyard buildings were heavily residential there was capacity for at least a few dozen people.

Late Classic royal projects consumed much labor, but kings, unlike sub-royal nobles, could potentially recruit workers from all segments of the polity. An unresolved issue is the degree to which kings had unimpeded or impeded access to labor from the Copán population at large. In the latter case they had to negotiate with lesser grandees, who in turn mobilized their own constituents for royal projects much like *calpulli* leaders did for Mexica kings in Central Mexico. Final-phase architecture at 8N-11, like that at 9N-8, probably dates after AD 775 when royal building projects are commonly thought to tail off steeply (but see Chapter 12 for an alternate view). Li and Ramos (2017) report several stages of construction at Str. 70C. They suggest the second stage dates mainly to the time of the 12th ruler (AD 628-695), with subsequent enlargements and lateral extensions added by rulers 15 and 16. They say Str. 70C might have been built by the 16th king (Li: 2018, Abstract). Presumably they mean here the final phase building, which is consistent with our own chronological data.

Chapter Four

The Skyband Bench and its Neighbors

David Webster

Because of the quantity of sculpture we recovered at Group 8N-11 and the importance of its symbolism we present our findings in two parts. This chapter describes and analyzes the Skyband bench found in Str. 66C. It is the most intact component of the sculptural programs, its context is straightforward, and it supplies the nickname we use for the building and for the group as a whole. Façade images on Strs. 66C and 66S and their larger symbolic and behavioral implications are described in Chapter 5.

When the Harvard project began there were very few excavation data from Copán residential contexts of any scale, so Willey and his colleagues devised the rough-hewn categorization described in Chapter 1 that identified sculpture as a major indicator of elite-rank sites. Today we would say that the presence of such symbolic and ideological capital, along with architectural mass and quality, are the most obvious markers of elite residential (or other) elite places. Sculpture is a valuable analytical tool because it is often visible even without excavation, as at 8N-11. We now know that the Harvard sculpture/rank correlation is often deceiving. Excavation of palatial groups such as 9N-8 revealed the presence of people of both high and low social, economic, and political standing, so many sectors of such sites have no sculpture at all. Some impressive Copán structures have little or no sculpture, and some imposing buildings have shoddy construction. Nevertheless, many Type 3 and 4 sites, and some of lesser rank in the Harvard system, do have façade sculpture and sometimes carved benches or thrones, signaling specific buildings or spaces where elite behavior was concentrated.



Figure 4-1. Tenoned sculpture elements from 66S.

The fallen mosaic sculpture fragments we encountered during the first days of our Op. 50 excavations (Fig. 4-1), along with those found by Rattray in 1982, raised our hopes of finding a carved bench as we had at the House of the Bacabs. So confident were we that we wrote such a discovery into our telecourse scripts before fieldwork even began. What we did not anticipate was the wealth of fallen façade sculpture. Barbara Fash curated, catalogued, illustrated, and interpreted the hundreds of elements we recovered and produced an appendix for our preliminary 1992 field report.¹ She also included a short section on the Op. 50 sculpture in her overview of the Copán Sculpture Museum (Fash 2011). I have taken much of what follows directly from her 1992 report and catalogue, and also from her 2011 overview. In her report Fash was careful to say that her findings were tentative, and she has updated her ideas in Chapter 5, which we co-wrote. Other iconographers and epigraphers have also offered opinions concerning the symbolism projected by the sculptural programs and their implications for the meanings and functions of the buildings. My intent here is to describe the bench and its context in sufficient detail so that readers can make their own interpretations.

The Skyband Bench

The principal feature of Str. 66C is a large carved bench or throne in Room 1 (Figs. 4-2, 4-3, 4-4).² Like its neighbor at 9N-8, the bench was an integral part of the building as originally constructed. Its iconography represents one variant of the bicephalic monster imagery found elsewhere at Copán (see Baudez 1994: 254). Such benches sometimes substitute for the body of the Cosmic Monster, which in turn represents important celestial elements such as the heavens generally or the Milky Way (Chinchilla 2006: 43). Carved, painted, or otherwise adorned thrones served as potent political symbols in Classic Maya art, and in royal contexts were often the focal points of tribute and gift presentation (Noble 1999; Stuart 1995: 368; Schele and Looper 2005). Classic period thrones are late products of a tradition stretching back to Early Preclassic times, and they signaled complex hierarchical relationships in Olmec polities (Guernsey, Clark, and Arroyo 2010; Cyphers and Di Castro 2009).

Thrones have long figured in changing conceptions of Classic Maya political organization. George Brainerd (1954: 75) saw in them the hint “....of a sort of “royal family” separate from the members of the priestly establishment...”. Thrones and benches were essential to the ‘seating’ of great kings, and various kinds of supernaturals are also

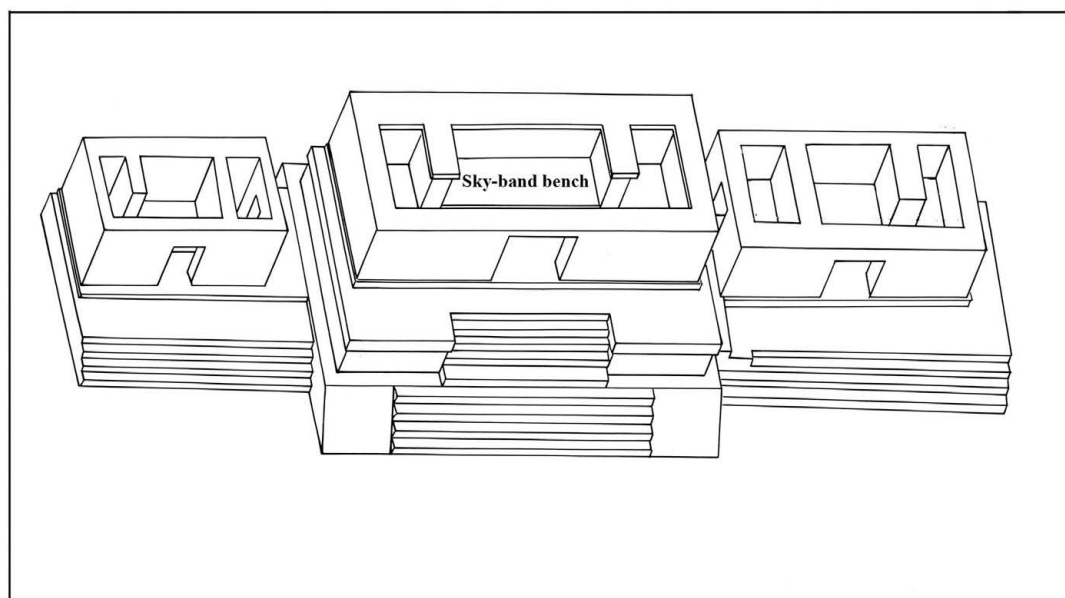


Figure 4-2.
Location
of Skyband
bench in Str.
66C.

¹ Barbara Fash's work was generously funded by the Graduate School of Penn State University. Her detailed sculpture catalogue, which includes many illustrations, is on file in the Copán archive at the Penn State Anthropology department.

² The bench was given field number 622 and is designated CPN 21502 in the continuous Copán sculpture list. The bottom image in Fig. 4-4 is a composite I made from photos of individual elements, so the proportions might be slightly off. A superb color photo of the bench is shown in the catalogue for *Lives of the Gods: Divinity in Maya Art* (Metropolitan Museum of Art, 2022, pp. 94-95). Curiously, this photo of the reconstructed bench lacks the beak segment of the bird on the right, which was in place in 1990 when we found it. A superb color photo of the bench is shown in the catalogue for *Lives of the Gods: Divinity in Maya Art* (Metropolitan Museum of Art, 2022, pp. 94-95). Curiously, this photo of the reconstructed bench lacks the beak segment of the bird on the right, which was in place in 1990 when we found it.

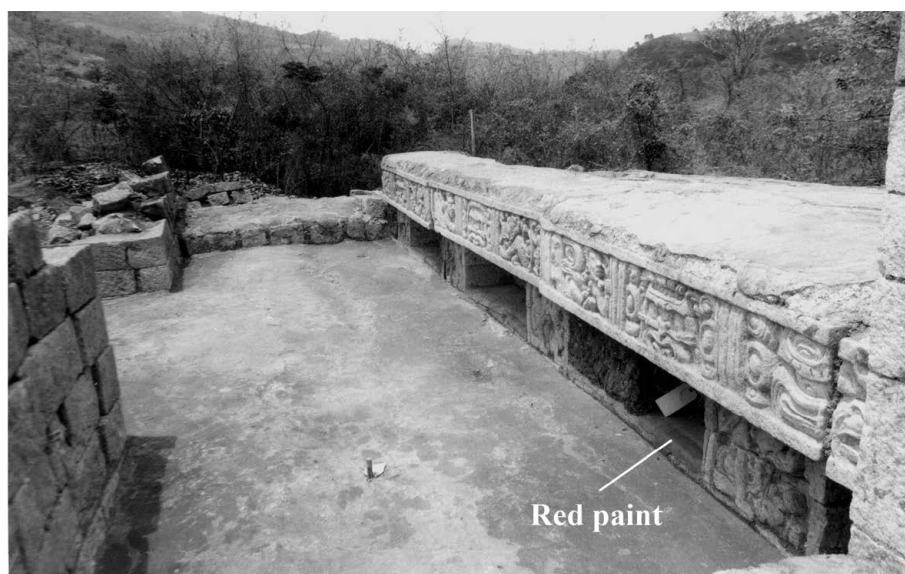


Figure 4-3. The Skyband bench after excavation.

shown sitting on them in Maya art. We saw in Chapter 1 that individuals with sub-royal titles were sometimes formally seated in similar fashion (Jackson 2013a,b). Copán is unusual among Classic Maya polities in the degree to which non-royal elites commemorated their statuses, offices, titles, and rituals with sculpture in general, and more particularly with elaborately carved stone thrones such as that we found in the House of the Bacabs in 1981. The Copán Main Group has several royal thrones, and ours is the fourth sub-royal example one from urban core compounds (see also Noble 1999: 78-79; Baudéz 1989, 1994). Others existed as well, but are known only from fragments.³ Apparently the Chinese found no carved or inscribed bench in Str. 70C.

At Piedras Negras, where Linton Satterthwaite (1937) discovered one of the first royal thrones in the 1930s, sub-royal nobles could erect sculpture on their own initiative, but only on a smaller scale than royal ones (Stephen Houston, personal communication to Webster, 2008). Thrones today crop up with some frequency, but we do not always know who used them.⁴ Norman Hammond and his colleagues recovered several presumably royal ones during their work at La Milpa, Belize.⁵ They were in separate buildings and were decorated with paint rather than sculpture, but they lacked glyphs or other symbols and so remain anonymous. Hammond thinks they were all used by kings, and that several rulers made successive thrones during the century or so during which Late Classic La Milpa thrived. Similar painted thrones are well-known from Bonampak, both as shown in the famous murals and as actual objects, but have abstract, apparently textile, designs (Miller and Brittenham 2013: 238-241). Stephen Houston, judging from inscriptions, suggests that Maya thrones might have been called *the-mu* or *the-ma*.⁶

Fortunately Copán's thrones were not only painted, but often inscribed with carved glyphs and other symbols that provide detailed information. By the late 8th century some of Copán's nobles employed sculpture on thrones, altars, and building façades at a level that suggests *lèse-majesté*. Overall sculptural programs at 8N-11, for example, compare very favorably with those documented at the royal residential compound, Group 10L-2, excavated by E. Wyllys Andrews V and his colleagues. See, for example, the reconstructed façades of Andrews's Str. 32 and our own Str. 66S as illustrated by Barbara Fash (2011: 151, 168). Interestingly, no carved throne was found at 10L-2, probably because it was the king's prerogative to use the much more imposing ones associated with temples and other great buildings on the adjacent Acropolis. Although the 10L-32 bench was plain, Andrews V and Fash (1992: 68) think it originally supported carved stone altars.

³ Pieces of a throne are rumored to have come from Group 10K-7 about 300 m due west of the Main Group, but I have never seen them.

⁴ A carved throne, its pieces scattered among many collections, was recently identified as coming from Ixtutz, Guatemala, where it had been dismantled by the Maya. Its pieces are now being reassembled (Nicholas Carter, personal communication, January 2021).

⁵ Archaeological Institute of America lecture by Norman Hammond at Penn State University on Sept. 24, 2008.

⁶ <http://decipherment.wordpress.com/2008/04/24/te-mu-and-te-ma-as-Throne/> (2008). More recently Houston and Inomata (2009: 142) give the spelling as teem.

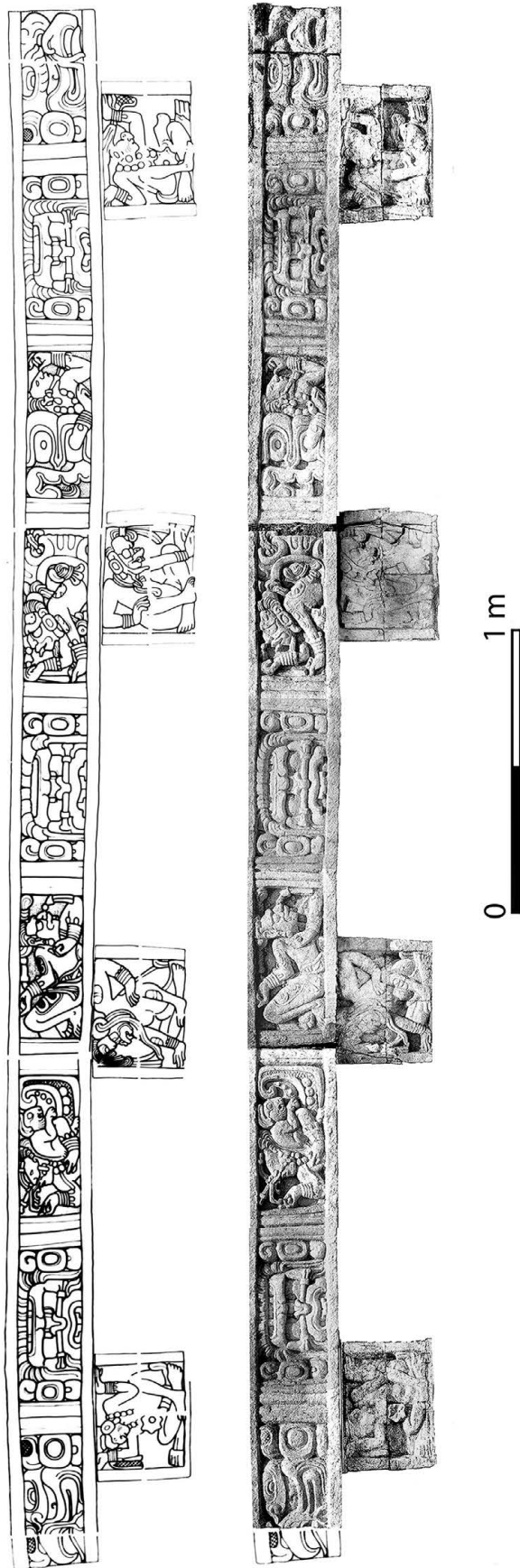


Figure 4-4. Drawing and photo of the bench. Drawing by Barbara Flash.

Elsewhere in the Classic Maya lowlands rulers sometimes conferred thrones on lesser individuals as signs of royal favor. Ruler 3 of Piedras Negras gave such a throne to a royal woman, presumably his wife, apparently in appreciation of her child-bearing (Stephen Houston 2016). Although we cannot be sure that our Skyband throne was possessed by a male noble, this seems likely because of the war-related iconography of the sculpture on the building where it was found and the association of other Copán benches with males. Whether thrones were actively conferred on lesser Copán nobles by kings or were independent prerogatives of grandees of sub-royal rank who simply required the king's acquiescence is unknown. Given the apparent proliferation of thrones after the abrupt and embarrassing demise of the 13th king Waxaklajuun Ubaah K'awiil in AD 738, one is tempted to suspect the latter – or at least that increasingly anxious rulers found it expedient to gift benches as political largess to important underlings. Noble (1999) believes that carved benches, or “seats of power” of other kinds, including perishable ones, broadly signaled rank, office, and privilege at Copán and elsewhere. Schele and Looper (2005) later used that term to describe seats or platforms, also sometimes often perishable, that served important ritual functions throughout Copán's history.⁷

If Noble's view is correct, our bench and its three counterparts from other sites in Copán's urban core represent just the highest levels of such symbolic expression, but there might be very modest examples as well. In 1986 we recovered a stone bench-like object (Fig. 4-5) from our residential excavations in the small rural group 34C-4-2. It might be an effigy bench representing the most modest end of Noble's continuum. At just 17 cm long it could hardly “seat” a real person, and I suspect it was a miniature throne for an image.⁸ Similar artifacts interpreted as miniature tables were recovered during the Harvard excavations (see Willey *et al.* 2004: Fig. 208). A more elaborate small throne with two jaguar heads was recovered from Group 10L-2 (Andrews V and Bill: 2005: 251).



Figure 4-5. Small bench-like stone object from rural residence. Photo by Edy Barrios and used with his permission.

⁷ Traxler (2001: 64) notes that Early Classic Copán royal palaces seem to lack durable thrones or benches and surmises that perishable or movable ones were used instead. Late Classic royal/elite complexes are by contrast richly equipped with such features.

⁸ It might be wrong to draw too sharp a distinction between thrones and altars. Nancy Gonlin showed a picture of the object to Karl Taube, who concluded it was a stone altar upon which a brazier was placed for offerings. The artifact form mimicked a temple or house, with the hearth symbolically in the center; some of the Sepulturas forms are burned in the middle (Gonlin personal communication, 2022). A monument from El Cayo shows a miniature throne/altar supporting a god image (Stuart 2011: 263). Prufer and Dunham (2009) recovered a small rosewood bench from an Early Classic cave deposit in Belize and interpret it as part of a shaman's kit. When our Copán object appears I immediately interpreted it as a model house, and only years later did I shift to the bench option. Following Taube, perhaps both are correct.

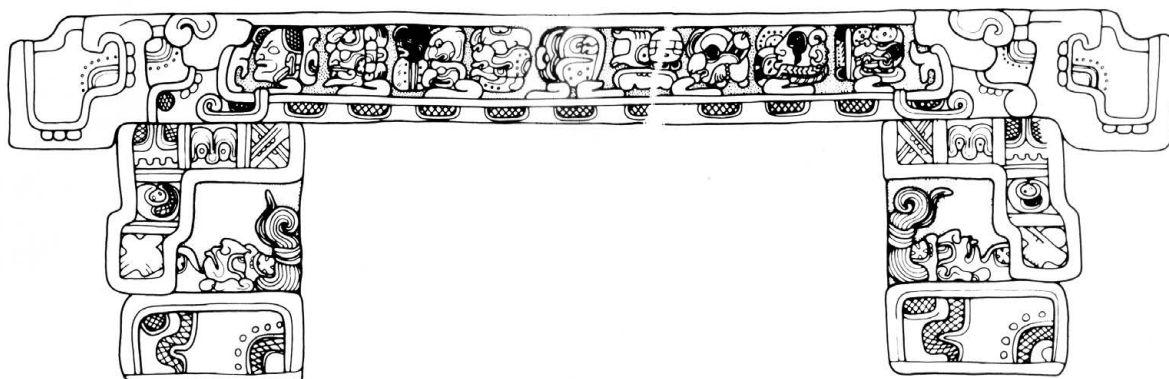


Figure 4-6. The 10K-4 bench or throne. Image used with the permission of the University of Oklahoma Press. Original drawing by Barbara Flash.

The Group 10K-4 Bench or Throne

The first carved bench/throne found at Las Sepulturas (Fig. 4-6) was salvaged from Group 10K-4 by Arturo Sandoval in the 1960s and has only a general architectural context (see Baudez 1989: 74 and 1994: 235).⁹ Its specific context seems to have been a west-facing building north of the modern highway and just east of the modern town. The bench was dedicated during the reign of Yax Pasaj Chan Yopaat, most likely in the last two decades of the 8th century. According to Baudez the supports symbolically depict the king himself as a bakab holding up the main body of the bench, which represents a *cauac* (earth) monster. The bench was originally displayed incorrectly in the Museum of Anthropology in Tegucigalpa and is confusingly illustrated and located in the literature. Baudez attributes it

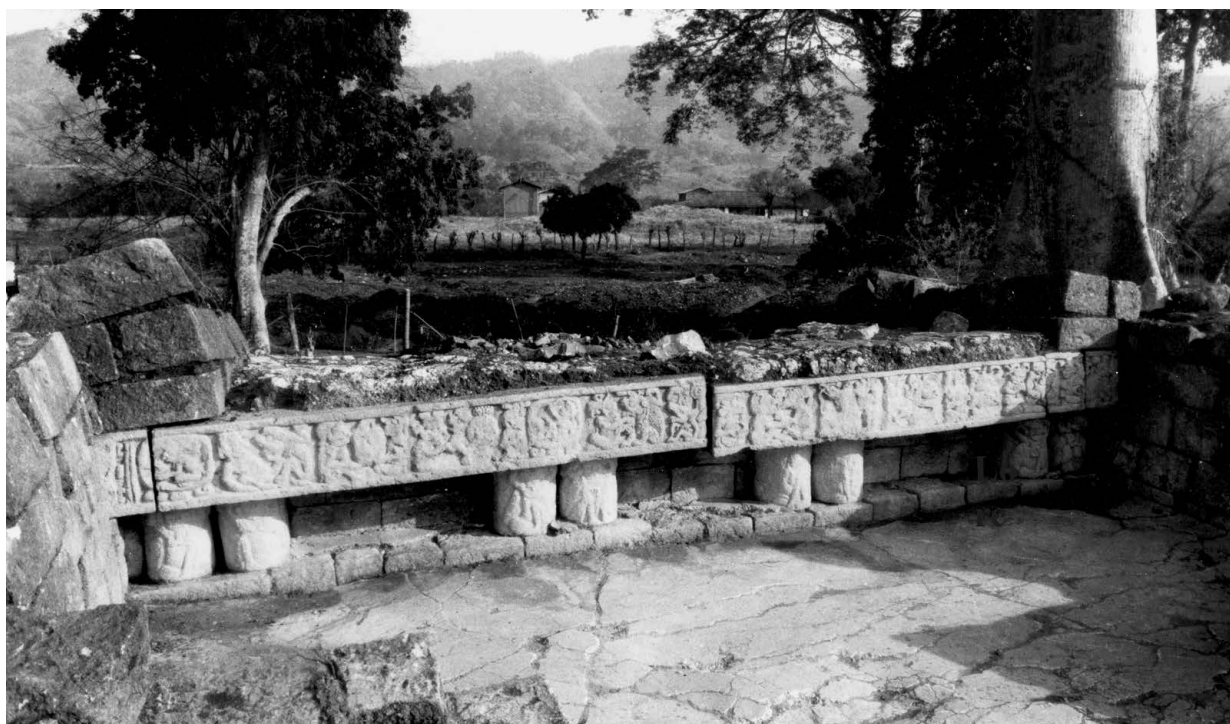


Figure 4-7. The Harvard bench. Image courtesy of Gordon Willey.

⁹ Elisabeth Wagner (2006: 152) identifies 10K-4 as the western iconographic anchor of a quadripartite system of palatial residences and emphasizes its night-related imagery.



Figure 4-8. Supports on the right end of the Harvard bench. Image courtesy of Gordon Willey.

to a structure in Group 10K-4 while Schmidt *et al.* (1998: 592) say it comes instead from Group 9K-47. These two sources also illustrate the bench with the supports differently positioned. The Baudez illustrations and spatial location are the correct ones.

Baudez (1994: 235) describes sun imagery and other glyphs that associate the bench with the reign of Copán's last king, and notes celestial and bakab symbolism as well. According to Houston (2009: 174) the inscription on the bench "...identifies the owner as a youth, who carried the epithet 'person of the road-house' (*aj-bih-naah*), probably in reference to a causeway or elevated Maya road nearby". Group 10L-4 is a considerable distance from the Las Sepulturas causeway, so this is probably not the roadway indicated. On the PAC I map Group 10K-4 consists of

four small structures that lie just to the north of the modern highway and about 800 m west of the Great Plaza. If we knew exactly where the very amorphous western causeway ran there might be some connection with these buildings. In any case, the bench appears to have been found far from any point of entry into the Great Plaza of the Main Group. Possibly there was an ancient route through the Copán pocket that skirted the northern foothills of the valley, just as the main road does today. Such a route would have funneled travelers right past several royal monuments set up by Copán's 12th ruler K'ahk Uti'Witz' K'awiil to the east of the modern town

The Harvard Bench

During the Harvard project Richard Leventhal discovered a second bench (Figs. 4-7, 4-8) at the Type 3 Group 9M-18 (Willey, Leventhal and Fash 1978). It was in the dominant building 9M-146, glyphically identified as the ootoc of the father of the resident *ajk'uhuun*. Also inscribed on the bench was a dedicatory date read as 9.17.17.00 11 Ahau 13 Pax by Baudez and Riese, and alternatively 9.17.10.000 12 Ajaw 8 Pax by Linda Schele (Baudez 1994: 232).¹⁰ I convert the Baudez/Riese date as Dec. 6, 787, and the Schele date as Dec. 2, 780. Dates for this bench are given variously in other publications. Willey, Leventhal and Fash (1978: 39) originally favored AD 780; Noble (1999: 221) puts the dedication in AD 777, and Barbara Fash (2011:133) says AD 782. Just how the Harvard bench dedication relates to that at 9N-8 depends on which date is accepted for the latter (see Chapter 1). Either the two benches are roughly contemporary or the Harvard bench is a bit earlier. Jackson and Stuart (2001: 224), who give a detailed comparison of the two benches, simply sidestep the issue by saying that they are "of similar date". Regardless of such uncertainty, the Skyband dedication falls squarely into the reign of Yax Pasaj Chan Yopaat. Van Stone (2005: 118) points out that although both the Harvard and the 9N-82 benches record the name of the 16th king, each spells it out differently.

The three rooms in the building that housed the Harvard bench were painted red, black, and green, presumably with reference to Maya cosmological conceptions, and the bench was in the central, black-painted, north-facing room (all three rooms of 9N-82C seem have been painted red). Eight cylindrical supports, unfortunately rather weathered, are arranged into four sets of two each that hold up the main bench slabs. Baudez (1994: 232) calls the carved figures on them "Atlantean", a term also used by the Harvard archaeologists (Willey, Leventhal, and Fash 1978: 39). Van Stone and Zender (2011:70) call some supports of the 9N-8 throne "Atlantean".

¹⁰ Wagner (2006: 155) surmises instead that the bench might have been dedicated shortly before 9.17.10.0.0. (in April 781).

Each set of figures on the Harvard bench exhibits paired “death” and “bakab” images (note the shell pendant visible on the bakab figure in Fig. 4-7). The noble named on the bench bore the ajk’uhuun title, but unfortunately the part of the inscription that lists his name is unreadable. Although the bench was personally dedicated by the 16th ruler Yax Pasaj, the inscriptions associate the resident ajk’uhuun with the deceased 15th ruler K’ak Yipaj Chan K’awiil (Jackson and Stuart 2001: 224; Houston and Inomata 2009: 259; Jackson 2013b: 27). The elite/royal relationship at Group 9M-18 persisted over at least two generations because Yax Pasaj seemingly performed a period-ending ceremony there honoring the ajk’uhuun who served his predecessor (Fash 2005: 98).

The 9N-8 Bench

Abrams and I found the third bench, discussed in detail in Chapter 1, during our 1981 excavations at the dominant Plaza A of Group 9N-8. It was the principal feature of the central north-facing room of Str. 9N-82C, the House of the Bacabs (see also Webster 1989; Riese 1989; Hohmann 1995; B. Fash 2011). Its importance here is fourfold. First, by 1990 we already had fairly precise expectations about where such benches were located – hence our prediction that one would be found in the Str. 66 complex at Group 8N-11. Second, the 9N-8 bench was dedicated sometime in the 780s, most likely in AD 781 or 787. Third, the building containing the bench appears to date from the second main construction phase of Str. 9N-82C in Plaza A (Webster 1989: 32-33). Finally, all three construction phases must have been completed in less than 20 years if the conventional short chronology for Copán is followed (see Chapter 10). We shall see later that the 9N-8 bench has iconographic similarities with the Skyband bench.

Context and Significance of the Skyband Bench

Even as we uncovered the Skyband bench its theme was immediately recognizable as a variant of the skyband motif common in Mesoamerican iconography since very ancient times (Miller and Taube 1993: 154; Bricker and Bricker 1999; Doering and Collins 2010; Miller 1991). Skybands are found on Olmec monuments, including what might be altars/thrones of rulers, and they are well-known in Maya art, including the Dresden, Paris, and Madrid codices.¹¹ They embellish Palenque’s Temple of the Cross and the sarcophagus of its greatest king, K’inich Janaab’ Pakal I (Chinchilla 2006). Planetary bands were carved on inaugural stelae of Maya rulers at Piedras Negras and elsewhere, often associated with ancestral imagery and solar rebirth (Stuart and Stuart 2008:196-7; Marcus 1992: 336). Geometric skybands occur on the two most well-known Maya mural compositions -- below the actors at San Bartolo and above them at Bonampak (Saturno 2009; see also Taube *et al.* 2010). Estrada-Belli and Tokovinine (2016: 154) depict the skyband on the painted stucco relief on Building A at Holmul, and a Middle Preclassic example is from Nakbé (Hansen 2016: 377). Explorations of the Early Classic Temple of the Night Sun at El Diablo Guatemala revealed powerful solar and celestial themes and an upper frieze that probably represents a gigantic skyband (Roman, Garrison, and Houston 2018: 82-83). Skybands have a literally deep history at Copán. They are found on the early dynastic buildings Motmot and Mascarones associated with Copán’s founder and his son, buried deep beneath Str. 10L-26 (Fash, Fash, and Davis-Salazar 2004: 78).

Skybands typically take the form of bicephalic serpents whose heads are linked by a body depicting celestial symbols. Kings are often shown wearing sky-belts and carrying bicephalic serpent bars as parts of royal regalia. An example is the ruler Bird Jaguar pictured on Lintel 2 at Yaxchilan with a skyband on his backpack. The much later figure above the central doorway of Uxmal’s Palace of the Governors appears to show a ruler wearing stacked skybands (Bricker and Bricker 1996) and on Naranjo Stela 32 a ruler sits on a similar stack (V. Miller 1991: 27). The syncretism of serpent and sky imagery probably derives from the fact that “sky” and “serpent” are homonyms in Maya. On the 8N-11 bench the serpent heads are replaced by those of birds. Van Stone and Zender (2011: 60) remark that “...the sky, in the sense of its uppermost stratum, was personified by a bird”. Skybands generally indicate celestial settings, although sometimes they frame terrestrial scenes or form bases for seated figures or images. Given its scale and context, the 8N-11 bench probably was the seat for a real person, not a just a sculptured figure or altar.

¹¹ The Paris Codex shows new katun lords or priests seated on skybands draped with crocodiles (Rice 2020: 241). See various chapters in Vail and Hernandez (2013) for discussions of skybands in these codices and also in post-Conquest Maya books.

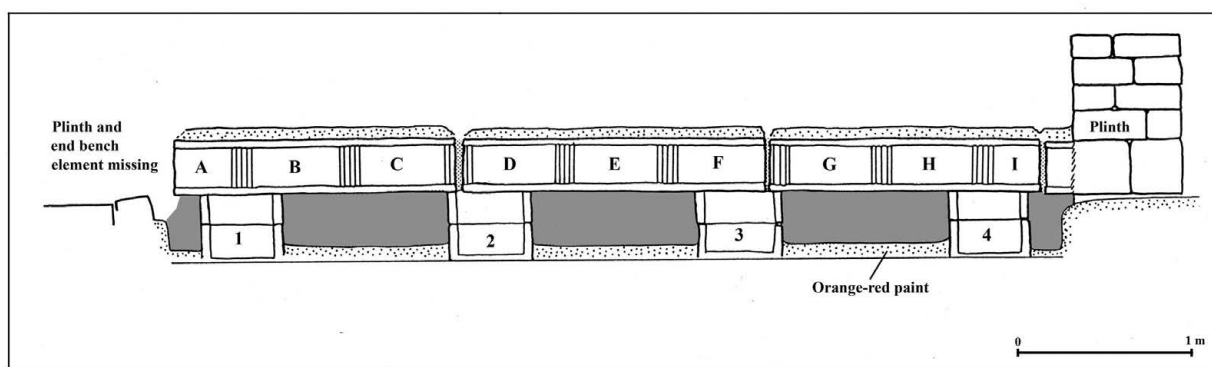


Figure 4-9. Construction details of the Skyband Bench.

Construction of the Bench

The Str. 66C bench, like the one in the House of the Bacabs, was built as an integral part of the original superstructure, not added later. It is composed of three main construction elements: slabs, supports, and plinths (Figs. 4-9, 4-10). Three tuff slabs, each 31 cm thick, make up the body of the bench. The central slab is 1.82 m in length and the end slabs are slightly shorter. Each end slab additionally has (or had) an adjoining small terminal piece, separately secured into the end plinths by tenons, that makes them visually equal in length to the central slab. Only the southern terminal piece was intact because of the good preservation of the southern plinth.

Barbara Fash later located the missing northern one that had been removed at some unknown date. How this sculptural element left the site is puzzling because the bench was quite deeply buried, partly beneath coherently fallen vault stones, and there was no sign of a deep looter's trench on the summit of the mound. Nor, given its masonry context, could this end piece have easily fallen from the mound summit as did so much other sculpture. It was probably removed before the vault collapsed, perhaps along with cut stones from the top of the northern plinth. We encountered a similar situation the House of the Bacabs, where the top of the carved western plinth was apparently removed before the vault fell.



Figure 4-10. The south plinth of the bench and its joint with the Sky-band bench.

Total reconstructed length of the intact bench as measured between the plinths is 5.6 m. Main bench slabs are about 59 cm wide (i.e., front to back), but this is difficult to see because their horizontal surfaces are covered in plaster about 6-8 cm thick. This plaster surface was fractured longitudinally along the eastern (rear) edge of the bench slabs by the fall of the vault (Fig. 3-9). Most of the bench fill behind the slabs is composed of cobbles in an earth matrix. The plastered bench surface was preserved to a width of 1.9 m and was restored by Rudy Larios as 2 m wide. The bench thus had a spacious sitting area of about 11.2 sq m, big enough to accommodate several persons. Anyone standing in the 8N-11 courtyard could have seen most of the bench and anyone sitting on it framed by the wide Str. 66C doorway.

The two in-situ benches discovered earlier at Las Sepulturas each had raised, sloping, bolster-like end-pieces, almost like the arms of huge couches. Perhaps these were used in conjunction with the large pillows shown in Maya palace scenes (see the many examples in Pillsbury *et al.* 2012). The 9M-18 bolsters were plain, but those of the 9N-8 bench were heavily carved as illustrated in Chapter 1. Such bolsters make the benches visually more imposing and they are found on non-decorated benches at Las Sepulturas as well.¹² Similar features on the Skyband bench consisted of vertical plinths or walls as illustrated in Chapter 3. The surviving southern plinth is 64 cm wide, preserved to a height of 99 cm (5-6 courses), and constructed of excellent tuff masonry. Although the top surface is flat, it shows no sign of plaster or other surface finish and must have originally extended farther upwards. This raises the possibility that the plinths were actually interior walls dividing the central room from the slightly raised southern and northern compartments. Only the base of the northern plinth is preserved so it cannot inform us about either possibility. That each end of the superstructure interior has a raised floor segment makes the wall alternative the more convincing. The narrow plinth walls would not have been exceptionally strong, but they certainly would have helped to support the vaulted ceiling. On the other hand, if the northern plinth was ripped apart when the bird sculpture was removed (i.e., before the vault collapsed) the wall alternative seems less likely. I cannot distinguish between these possibilities, but in either case the House of the Bacabs had one small, elevated space on either side of its big central room, so this tripartite arrangement might have been a standard pattern.¹³ James Sheehy (1991) discovered very similar room plans in two adjacent structures at Group 9M-22A.

Four tuff supports hold up the horizontal Skyband bench slabs. Each is about 49-50 cm wide, 38 cm high, and is composed of two levels of blocks, the lowest resting on the floor of Room 1. The two central supports were positioned so that the joints between the bench slabs were not over their centers, but rather over their outer edges. This is a weak design and when the vault collapsed it fractured the outer edges of the central supports but left the end ones undamaged. Supports are recessed under the face of the bench by several centimeters and are spaced so as to create three central niches, each about 1 m wide, and two small end niches about 26 cm wide. Niches are 31 cm deep and backed with well-cut stone. Each niche has a raised floor (ca. 8 cm) and both floor and interior walls were plastered. All the Las Sepulturas carved benches have a similar arrangement of niches, but the supports that create them are markedly different. The 9N-8 bench has six rectangular supports, two of which at either end are larger than the others and are outset from the front of the bench by several centimeters. Wear patterns show that they served as handy steps used to mount the bench. The Harvard bench is supported by four sets of double drum columns and looks quite different.

Iconography and Symbolism of the Skyband Bench

The vertical edge of each bench slab is divided into three carved panels. Each of the resulting nine panels has top and bottom borders consisting of plain horizontal bands five cm wide and is edged with vertical bands of four lines. In some skyband representations elsewhere the lower border of the image is decorated with abstract representations of the scuts of serpents. Stone and Zender (2011: 231) state that skybands have “...explicitly ophidian details...”.¹⁴ Our bench seems to be an exception. Its bottom border is plain, consistent with avian (as opposed to serpent) imagery.¹⁵

The space available for decoration in each panel measures about 27 cm x 52 cm and each has elaborately carved images in deep relief. Both quality of carving and preservation are excellent. I designate the panels as A to I from left to right in the following illustrations (modified from field photos and drawings by Barbara Fash). Panel figures exhibit minor glyphic or other symbolic elements.¹⁶ Interpretations that follow have been culled from the suggestions or publications of various iconographers and epigraphers who have analyzed the bench.

Panels A and I: Each end panel (Fig. 4-11) represents a bird head in profile facing outward and away from the center of the bench (i.e., in opposite directions).¹⁷ They might be components of the ancient Principal Bird Deity

¹² I can personally attest to the comfort of sloping backrests, having reclined against them on many occasions while eating my lunch.

¹³ Only one side room in the House of the Bacabs communicated directly with the central one; the other room had to be entered by an exterior door.

¹⁴ But see Tokovinine (2013: 51) who says the skyband “...represents the body of the celestial caiman...”.

¹⁵ The 9N-8 bench has a bottom border of scut-like markings. According to Plank (2004: 132) the glyphs are arranged along the body of a Starry Sky Caiman supported by four bakabs and two ancestral figures. She calls the 9N-8 bench a skyband (p. 140).

¹⁶ Houston, Stuart, and Taube (2007: 17) call these signs “god-markings” that refer to some quality of the deity represented.

¹⁷ The photo of the left bird head (A) is shown without its nose piece, which was found by Fash after the bench was excavated. The drawing

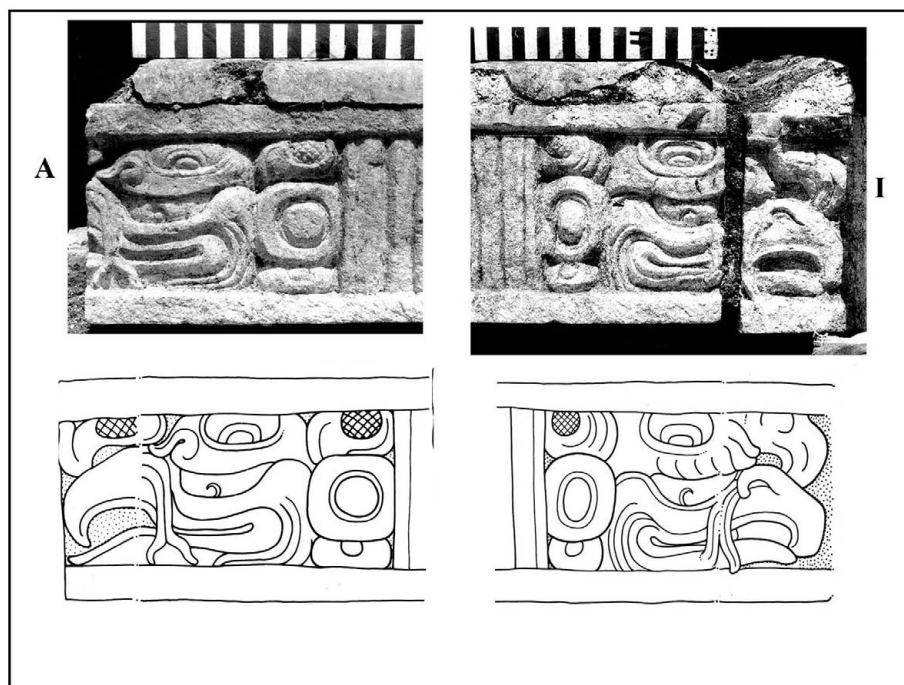


Figure 4-11. Panels A and I.

complex as defined by Bardawil (1976) and the Classic prototype of the monster-bird Vucub Caquix of the Popol Vuh (Taube 1993: 9). Houston, Stuart, and Taube (2006: 236-41) associate the Principal Bird Deity with the creator god Itzamnaaj (God D), sometimes as a messenger, and Estrada-Belli (2011: 102) calls it “.... The iconic symbol of kingship among the Preclassic and Classic Maya.” Bird images are juxtaposed with skybands on Piedras Negras stelae, notably on the ends of the skyband depicted on Stela 32. Part of the San Bartolo mural shows the Bird Deity descending from a skyband (O’Neil 2012: 15). Both bird panels have the cross-hatched *Ak’bal* sign that represents the Sun God in his night or dark aspect, as seen also on Panel D.

Although essentially similar as general motifs, each bird image exhibits minor variations of possible symbolic significance. Barbara Fash (1992) calls them *moan* or *katun* birds in profile and notes similar depictions on Piedras Negras monuments.¹⁸ Bricker and Bricker (1999) refer to them as raptorial birds. Taube (2010: 103; Taube *et al.* 2010: 56) identifies the two heads as eagles, motifs closely related to the three deity masks arranged along the bench (Panels B, E, H). He notes that the upper brows are marked with apparent celt signs and that the heads probably had four-direction connotations, although because the bench abuts parallel walls only two heads could be shown. Simon Martin (2016) concurs with Taube’s interpretation and enlarges on the deep tradition of Bird/Sun/Royal imagery and ideology.

Panels B, E, and H: These panels (Fig. 4-12) resemble one of the mask forms found on the riser of a step-bench in Temple 18 in the Main Group (Fig. 4-13, 4-14), the burial structure of Yax Pasaj Chan Yopaat, Copán’s 16th ruler, or at least built during his reign (Baudez 1994: 189-197).

Baudez identified two alternating kinds of masks on the interior step-bench of that building. He believed that such paring expresses “....the basic duality of the earth: the nourishing earth on one side, the abode of the dead on the other” and notes a similar theme of opposition on the Harvard bench.

Mask E on the Skyband bench is visually dominant because it is centered on the doorway of Str. 66C. Minor variations among the three mask designs are particularly seen in the treatment of foreheads, hair, and the notched teeth often associated with sun god images. Barbara Fash (1992: Appendix B) originally proposed that these might be Pax (sun) images associated with the month of the same name, during which the Postclassic Maya

shows the intact element.

¹⁸ *Moan* (or *muán*, *muwaan*) birds “....are associated with the topmost layer of the Maya universe, with clouds and rain, and the underworld....” Mary (Miller 1991: 55). Anyone sitting on a skyband with such motifs might be construed to be sitting atop the universe.

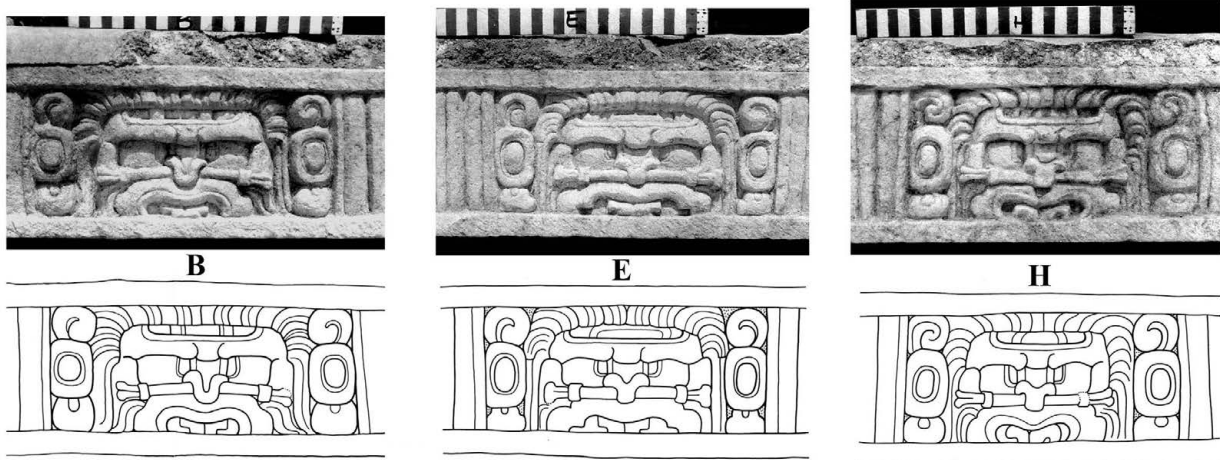


Figure 4-12. Panels B, E, H.



Figure 4-13.

The mask on the step bench of Main Group Str. 18 is shown on the left. On the right is the central “sun” or “celt” element on the Skyband Bench just after excavation.



Figure 4-14.

in Yucatan carried out important rituals involving warfare, sacrifice, and war captains. Alternatively, following up a suggestion by Linda Schele, Fash thought they might represent a World Tree deity. The Brickers (1999: 435) describe the panels as “...frontal views of the personified Sun or Sun God.”, an anthropomorphic Sun God variant associated with kingship and generally with “shining”, “radiance” or “brightness.”

All three faces have the distinctive crossed eyes associated with the diurnal aspect of the sun (see Pillsbury *et. al* 2012: 357) and collectively they seem to refer to the diurnal cycle. Taube (2010: 103) favors the Sun God interpretation and identifies eastern (day) and western (night) aspects of the Sun God, noting that “...the sun god is a being of sacrifice and war in Classic Maya art”. It is thus tempting to see in these masks the k’inich (sun-faced or radiant) element of royal names and titles associated with the sun.

Stephen Houston (personal communication February 2017) doubts that these masks, and similar ones found on skybands at sites such as Dos Pilas, represent the Sun God. According to his nuanced interpretation, the three masks depict animated celts with the qualities of luminosity and innate vitality noticed earlier by the Brickers. Such images, he thinks, probably represent the Celt-Sky concept found on several Maya monuments elsewhere and in some texts they serve as direct substitutions for the Celt glyph.

David Stuart has delved deeply into the many layers of meaning of stone monuments and notes that the stone itself “...is an inherently powerful and timeless substance...” (2006: 286). The Maya probably considered it to be an animate material, and it was sometimes associated with the cauac monster, with celts, with shining, and with

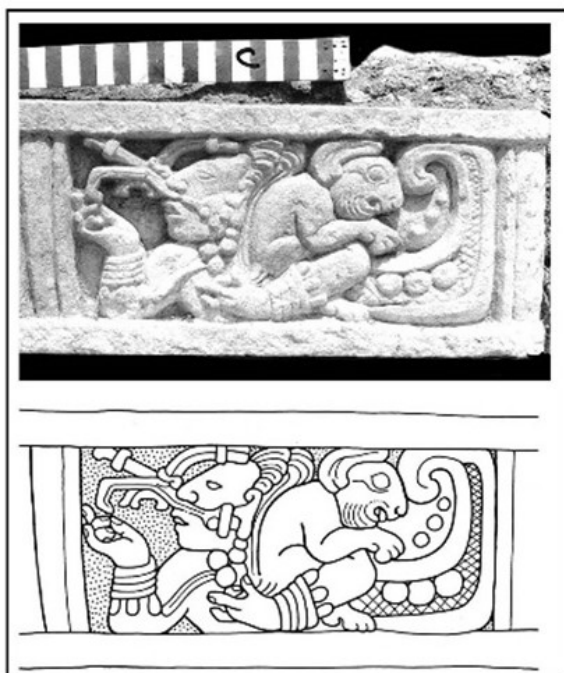


Figure 4-15. Panel C.

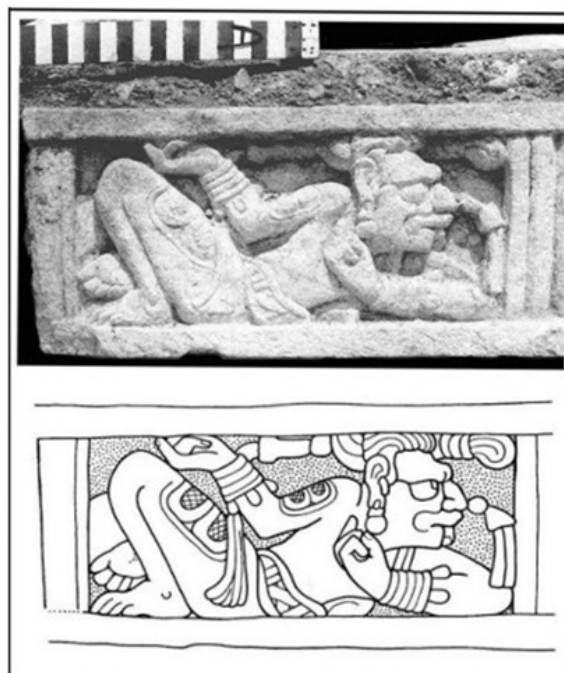


Figure 4-16. Panel D.

flashing (Stuart 2010: 291-296). Stuart's specific analysis focused on monolithic, free-standing stelae and altars. Benches like ours are certainly monumental, but not monolithic because they are assembled from smaller pieces.¹⁹ Unlike most free-standing stelae and altars, benches are incorporated into larger stone architectural masses, so whether the shining, flashing, radiance, brightness, and celt themes imply any of the meanings attributed by Stuart to stelae and altars is unclear. Whatever the specific meanings of the three masks, some general iconographic solar/war/radiance themes seem obvious and there is possibly some connection to the "Shiner" iconography reviewed by Simon Martin (2016).²⁰

Panels C, D, G and H: Two panels with anthropomorphic beings flank either side of the central sun/celt mask (Figs. 4-15 through 4-18). Three of the images face inward toward the central mask while the fourth (G) faces away from it.

Panel C: This panel shows a personified, full-figure representation of the young Moon Goddess with the commonly-associated rabbit and with the curving moon (*Uh*) sign on the right, the latter with *Ak'bal* crosshatching. The probable directional reference is north, faced by the image.²¹ Zender and Skidmore (2012) call this figure the Moon Goddess and her companion rabbit.

Panel D: This full-figure composition represents the Sun God in his night or dark aspect, as marked by the *Ak'bal* signs on his arms and legs. The directional reference is to the west where the sun sets. Bassie-Sweet (2019: 76) calls this figure the *ak'ab* god, who elsewhere is shown as the patron god of the month Mol.

¹⁹ We saw in Chapter 3 that monolithic stones compose much of the Str. 66C stairway. Why the sculptors of the bench did not use similarly impressive stones is an interesting question, and their absence reinforces the idea that the stairway stones were removed from an earlier building.

²⁰ The Maya identified several aspects of the sun. Recently Stephen Houston and his colleagues exposed an Early Classic structure at El Zotz with solar symbolism on three of its facades: north = the piscine sun of the horizon, east = the mid-day sun, and west = the night or underworld sun. Possibly the three slightly different panels on the Skyband bench had some similar significance.

²¹ Or perhaps more properly "zenith". Hopkins and Josserand (n.d.) point out that many Maya languages have words for east and west, presumably the path of the sun, but either lack words for north and south or use them very sparingly. They believe north and south were envisioned by the Maya as the zenith and nadir of the sun, and so are not really directions as we think of them. Neither are east and west directional points in our sense, but rather quadrants of the horizon marked out by the sun in its seasonal round of rising and setting.

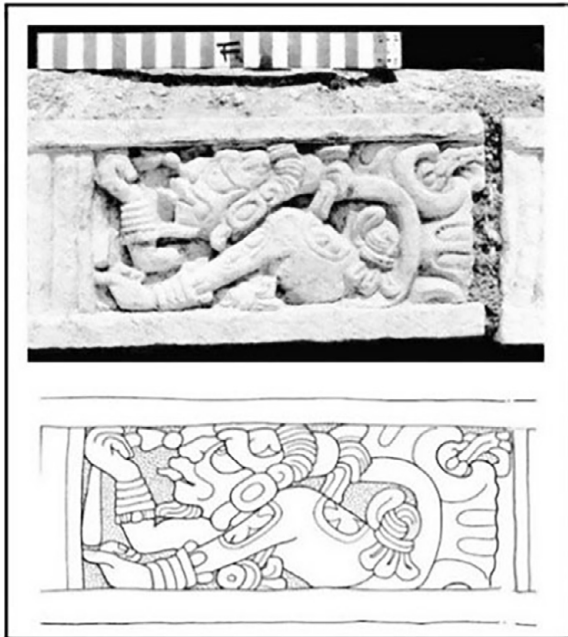


Figure 4-17. Panel F.

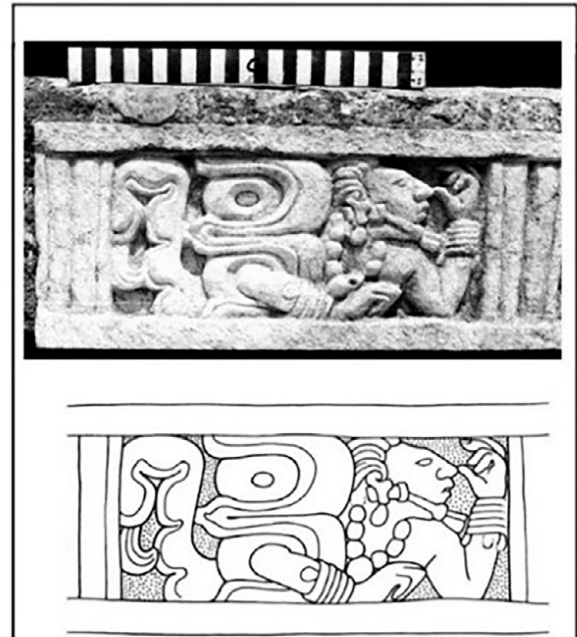


Figure 4-18. Panel G.

Panel F: The figure on Panel F is similarly marked on its arms and legs as the Sun God in its day or rising aspect and so is associated with the direction east. Houston pointed out to me the centipede emerging from a solar (K'in) disk over the figure's back in the upper right-hand corner. Together these elements probably signal Yax and beams of light.²² The face has a Roman nose, a large "god eye," a tendril by the mouth, and what appears to be the flower-like K'in logogram on the forehead. Patricia McAnany (2010) suggests that these features relate the face to the K'inich Ajaw glyph found on many Maya monuments. Coe and Van Stone (2001: 112-113) translate this title as Sun-eyed Ruler or Sun-faced Ruler and associate it with the Sun God L. Bassie-Sweet believes that it, along with Panel D, simply contrast the concepts of "day" and "night" and are not aspects of the same god.



Figure 4-19. Venus figure from Str. 22.

Panel G: This panel shows a full-figure image of a celestial deity symbolized by the scorpion tail, which emerges out of an Ek' glyph closely associated with stars, planets, and constellations (Stone and Zender 2011: 61). Chinchilla (2006: 44) says it is a "...young scorpion-tailed god" and notes that Ek' signs seldom adorn images of real living people. Personages shown with such images are unambiguously labeled as some kind of celestial body. Barbara Fash (2011: 167) calls this image a "...bright star (possibly Venus)...". The Panel G figure probably faces away from the central mask to maintain its symbolic reference to the direction south. There is a striking similarity between elements of this panel and the Venus iconography on the cosmogram doorway of Temple 22 in the Main Group (Fig. 4-19).

We shall see shortly that the sky/sun/celt imagery on the bench is mirrored in the solar imagery on Str. 66C's front façade as reconstructed by Barbara Fash. Both the bench and the building face the western horizon where the sun sets (see Chapters 5 and 12 for more precise directional associations). The orientation of the bench face allows

²² He also informs me that he increasingly suspects that solar disks in many Maya depictions relate to seasonality – the beginning of the dry season.



Figure 4-20. Skyband bench as exhibited in Copán Sculpture Museum



Figure 4-21. Red paint on central niche of bench.



Figure 4-22. Two bacab supports.

Panels C (moon) and G (Venus) to each face their reference direction, but precludes this for panels D and F, which instead both face inwardly toward the central Mask E.

Paint: The bench was decorated with paint in addition to relief carving. An extremely thin layer of fine plaster covered the figures and is especially obvious on Panels C, D, and F. These fragments were an orange-red color, as was a much better-preserved band of plaster 5-7 cm wide along the front edges of the niche floors (see Figs. 4-20, 4-21). Very faint traces of similar paint were also found on the horizontal surface, so the whole bench seems to have been painted this color. It is tempting to imagine a color association with the direction east, where the sun rises.²³ Victoria and Harvey Bricker link the position of Str. 66C with important celestial, and especially solar,

²³ Megan O'Neil (2012: 21) suggests that the color also symbolizes the power and heat of the sun, which emanated from the lord who sat on the bench.

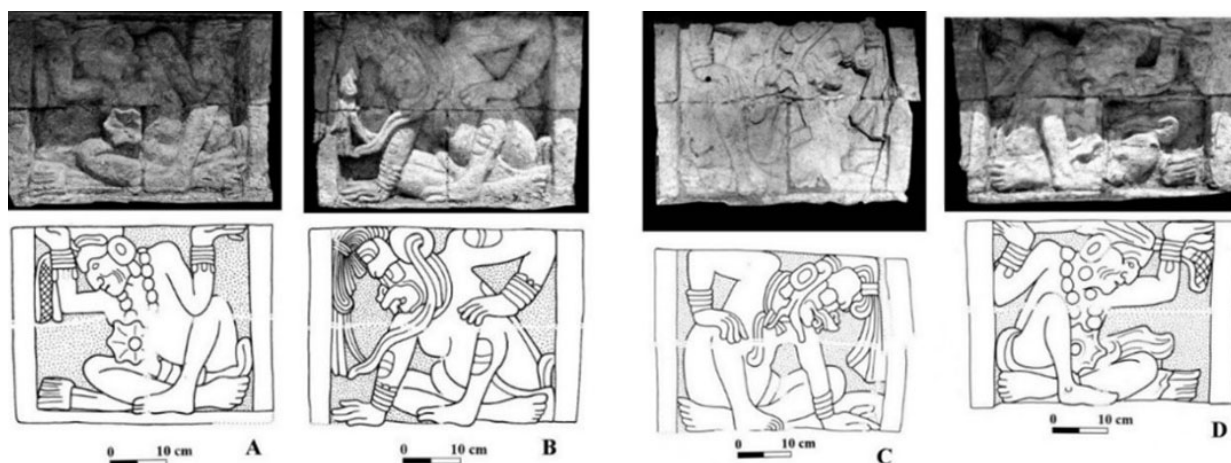


Figure 4-23. The four bench supports.

alignments, as described in Chapter 5. Persuasive as this color correlation might seem, most of the north-facing bench at Group 9N-8 was also painted red, as were the spacious south-facing ones that Sheehy found at Group 9M-22A, so there seems to be no consistent directional pattern.²⁴

Supports: Bench supports (A-D from left to right) depict carved anthropomorphic figures situated within narrow edge bands on all sides except along the top (Figs. 4-22, 4-23). Each support is made of three conjoined blocks. The two figures at either end (A, D) have iconography -- wrinkled faces, water-lily headbands, and shell pendants -- indicating they are *pauhtuns* or *bakabs* (sky-bearers).²⁵ Note the similarity of the shell pendants to those shown on the bench found in the House of the Bacabs (Fig. 1-5) and on the Harvard bench (Fig. 4-8).

Each *pauhtun*/*bakab* figure supports the Skyband bench with two raised arms like those on the Harvard bench, but on the 9N-8 bench only one arm is employed. The two central Skyband supports show figures with less human-looking (masked?) faces. They hold up the bench both with arms and shoulders and lack obvious *pauhtun* iconography. Much of the carving appears inferior to that on the bench panels, although this impression might be wrong because the supports are not so well-preserved.

Taube (1993: 94) relates *pauhtuns* to God N, who is sometimes depicted supporting skybands on pottery vessels. *Pauhtuns* hold up a royal cosmogram on Temple 22 in the Copán Main Group. *Bakabs* or *pauhtuns* are generally represented as old male deities associated with thunder, earth, agricultural fertility, and world-trees.²⁶ In 16th century Yucatan *bakabs* were quadripartite deities who not only supported the sky, but were related to wind and to a number of important monthly ceremonies. According to Miller and Taube (1993: 155) Mesoamerican sky-bearers are also closely associated with rulership, symbolically supporting the office or burden that is passed from one king to another and generally helping to maintain an ordered society (see also Taube 2003: 463-464; Estrada Belli 2011: 98-99). Taube states that that "In Late Classic Maya art the class of subordinate lords bearing the *sajal* title are often portrayed as *Pawahtuns*, quite probably referring to their collective role in supporting the higher office of kingship...." (Taube 2003: 464). *Pauhtuns* support the bench used by the *ajk'uhuun* who lived in Group 9N-8, so Taube's suggested metaphor might cover a wider range of titles. That bench also shows that subordinate elites at Copán could either use *pauhtun* imagery in a self-referential manner (*pauhtuns* support the official who in turn supports the king), or alternatively portray themselves as politically supported by others. In either

²⁴ The Hieroglyphic Bench was bi-colored. We found faint traces of sky-blue paint on the images on the vertical bench face. Blue would have been a much more costly and complex color for the Maya to make.

²⁵ *Bakab* seems now to be the recent preferred spelling. Here I retain the old spelling to echo that in our earlier Dumbarton Oaks publication except when referring to some specific use of the new one. Although I use *bacab* instead of *pauhtun*, Miller and Taube (1993: 155) remark that these concepts were probably identical to the Maya.

²⁶ *Pauhatun* ideology is preserved in some modern Maya communities in the form of aged or grandfather spirits (*Mam* in Classic Ch'oltian) who are linked to cycles of birth, death, and agricultural seasonality. Baudéz (1989:80) thinks there are also images of young *pauhatuns* at Copán, most notably on the western support of the 9N-8 bench.

case, they used the same imagery that Taube links with kings. Whether they did so by unilateral appropriation or emulation of royal behavior or by royal permission or fiat is unknown.

Alan Maca (2006) notes the association of the bakab title with the 13th ruler of Copán on Stela A and suggests that it refers to the king as the central and sustaining entity in the polity as a quadripartite whole (see Chapter 12). He also repeats a suggestion by William Fash that bakabs were the patron deities of Copán (Maca 2006: 150-151) and that they might have been patron deities of the lineage that dominated Group 9N-8.²⁷ Two huge pauhtuns are at the corners of Str. 11 in the Main Group, which might cover the tomb of the 15th ruler.

David Stuart (personal communication to Barbara Fash) interprets the divisions of the bench to represent folds or partitions of the quadrupartite universe. The paired sets of images may also relate to the Maya logogram/concept of TZ'AK ("whole", "complete") that seems to denote some sort of binary relationship or opposition and which is found on many monuments (Stuart 2003: 1). Whatever the specific message, the overall theme of the bench is clearly astronomical or celestial. Stone and Zender (2011: 231) say that "Skybands typically serve as scenic frames for celestial events, designate celestial architecture (e.g., the thrones of sky gods), or decorate ceremonial bars held by divine kings".

Who or What was Enthroned on the Skyband Bench?

Because of its distinctive imagery we call the elite human individual (or animate being of some kind) who used the bench and who owned or possessed the building the Skyband Lord. I emphasize once again that skyband is only our nickname for the group as a whole and its presumed patron, owner, or inhabitant. The term does not appear as part of any associated elite title or name, nor did the Maya use it as a label for any specific structure in Group 8N-11. The pauhtun title is not glyphically recorded on the Skyband bench or elsewhere in the parts of Group 8N-11 that we excavated, nor is the otoot dwelling glyph associated with Strs. 9N-8-82C and 9M-146. Linda Schele suggested that the iconography has important directional connotations similar to those found on some other Mesoamerican carved monuments. The implication is that any person or other being sitting on the bench would be in a very exalted position *vis-a-vis* the Maya cosmos -- i.e., symbolically on top of and in the center of things.²⁸

Another suggestion is that the Venus figure is related to the Tlaloc/Venus warfare conspicuous in the iconography of other Mesoamerican centers. Plank (2004: 104) thinks that the imagery of the royal otoot, Temple 22, links Copán's 13th king with warfare and with maize, both themes of the Str. 66C façade sculpture described in the following chapter.

Although the bench is rich in imagery it lacks the dates or long glyphic inscriptions found on other carved benches from Las Sepulturas. Its sculptors used glyphic qualifiers such as the ak'ab, k'in, and ek' signs to augment the celestial images, but these are very different from the elaborate full-figure glyphs on the House of the Bacabs bench. According to David Stuart (1995: 86) "Inscriptions were....an essential element of large-scale public art at many sites in the southern lowlands, and large monuments or buildings could not be considered complete without some sort of hieroglyphic decoration". 8N-11 thus seems unusual, but perhaps only because of limited sampling or preservation. Had we dug all the central buildings inscriptions might have turned up. Alternatively, the mosaic sculptures found by the Chinese on Str. 70C and the sculpture assemblages on the Str. 66 building façades might have functioned something like giant glyphs (see Chapter 5). Inscriptions might also have been painted on the long-vanished exterior façade plaster of the Str. 66 complex.

Inscriptions on the 9N-8 bench not only signal the high status of its owner/user, but also explicitly acknowledge his relationship to the contemporary ruler Yax Pasaj Chan Yopaat, just as the Harvard bench bears the personal name of the previous fifteenth king (Noble 1999: 221). The Skyband bench lacks not only inscriptions but any other overt symbolism indicating a similar linkage with a ruler, with a subordinate lord, or with the royal dynasty.

²⁷ Bacab figures are depicted wearing star-shaped shell gorgets. Widmer found a workshop that produced such gorgets (among other things) at Group 9N-8, and a related tool-kit dates to the mid-10th century (see Chapter 11). If this dating is correct, both gorgets and bacab associations long outlasted the royal dynasty.

²⁸ Saturno notes that the north and west wall narratives of the San Bartolo mural are layered above a skyband, thus placing them in a "...supernatural, or at least ambiguously natural setting" (in Taube *et al.* 2010: 4). Presumably anyone sitting on the Copán bench would be similarly perceived.

Although far from the royal monuments at the Main Group, the skyband imagery is so exalted that one wonders just whom, besides the ruler, could have sat on the bench without trespassing on royal prerogatives.²⁹ The bench represents at least a partial cosmogram of the kind more completely realized on the façade of Temple 10L-22 on Copán's Acropolis, built during the reign of the 13th king.³⁰ Whoever sat on our Skyband bench was similarly framed within larger displays of solar and war imagery on the façade and roof sculpture. More generally, "At Uxmal, the graphic importance of the skyband composition in the panoply of the enthroned ruler is making a strong statement about the importance of celestial matters to that ruler and his regal authority" (Bricker and Bricker 1996: 194). The Skyband bench in effect inverts the image of king as sky-bearer (as on Yaxchilan Lintel 2) to the sky as king (or lord)-bearer.

In our Spirit World program from *Out of the Past* David Stuart sits on the bench and echoes comments of Linda Schele by saying:

"Given these symbols we can see that the figure or ruler who would have been sitting where I'm sitting now, perhaps a lineage lord, was really placing himself in the center of the Maya universe. So this lesser noble in the Copán Valley was making a claim that really 18 Rabbit was able to do before. He was showing himself with these sacred symbols that before had been reserved for Maya kings."

Here he echoes our default assumption that the bench accommodated a human being but leaves open the issue of who that person was – ruler, lord, lineage head, or even some sort of image. His comment nicely captures the apparent elite drift away from royal dominance and the appropriation of royal symbols that seem to set in at Copán after the mid-8th century (but see an alternative perspective in Chapter 12). Alternatively, the bench might have been a seat for images of gods or supernaturals, not a real person, much as the 10L-32 bench in the royal residential compound supported altars.

The Date of the Skyband Bench

So far as I know, all carved benches at Copan post-date AD 700, and probably AD 750. Despite the lack of dates, narrative inscriptions, or reference to any noble protagonist, it is tempting to conclude that the Skyband bench was carved and set in place a few years after a period-ending date of 9.17.10.0.0 (AD 781). Riese (1989: 83), who knew of the previously-found benches, states flatly that all such monuments with carved leg supports postdate 9.17.0.0.0. If so, all three of the other carved benches fall squarely into the reign of the 16th king, or at least cannot be earlier. There seems to be a spate of bench dedications within a few years during the third decade of his reign, roughly when royal projects begin to tail off and a broader elite "high culture" solidified -- high culture here taken to mean the capacity to project cultural ideals of exclusivity, superiority, and authority.³¹ The Skyband bench is no older than the reign of Yax Pasaj Chan Yopaat and probably should be grouped with the others from Las Sepulturas during the decade from AD 780 to 790. Barbara Fash allowed a bit more time in her report by suggesting that the bench and the sculpture on the buildings must postdate the reign of the 13th king Waxaklajuun Ub'aah K'awiil, and that they were made during the time of the 15th successor K'ak' Yipyaj Chan K'awiil. Astronomical associations that help narrow down the construction date of Str. 66C and the bench more precisely are discussed in Chapter 5.

Summary: Benches at Copán

Part of the difficulty of interpreting the Skyband bench is the considerable variation in elite use of sculpture and other elements of symbolic capital even within the Las Sepulturas zone, much less at elite sites in the whole Copán valley. The Harvard bench appears to be unaccompanied by abundant façade sculpture; Leventhal recovered only three pieces from the collapse in front of its building, and none of the other structures seem

²⁹ Elizabeth Wagner (2000: 31) identified certain Classic Maya structures with carved or painted benches as *nik te na*, in whose rooms Maya rulers were enthroned and held court. If Str. 66C were a *nik te na* one would expect to find a king's name there. The 9N-8 bench is such a named place, but the noble who possessed it was not a ruler.

³⁰ Stomper (2001: 222-223) points out the propensity of Copán's 13th king to raise buildings that symbolically linked him to the cosmos. For visual impressions of both the Skyband Bench and Temple 22, see our *Out of the Past* video program called *The Spirit World*.

³¹ Archaeologists have long known that Copán's last king built all his big structures except his tomb (Str. 18 on the Acropolis) during the first 13 years of his reign. Cassandra Bill (2017) puts this interval at AD 763-775. All of our Copán sub-royal benches and the big final-phase architecture associated with them thus all seem to date to a period when royal construction, and presumably royal political power, had slackened, but see Chapter 12 for late royal initiatives that complicate this view.

to have displayed elaborate decoration either. James Sheehy (1991) later excavated the nearby Type 3 site 9M-22A and recovered more than 350 pieces of sculpture associated with Str. 9M-195. Prominently displayed around the upper entablature were eight sun god/jaguar masks, and the iconography as a whole suggests to some that the building was used by a royal sculptor (Sheehy 2017; Houston 2000: 150; Houston, Fash, and Stuart 2015). Despite the elaborate sculpture there was no carved bench or signs of the paint that symbolically distinguished the rooms found by Leventhal at Group 9M-18. Nor did the Chinese find a carved bench in Str. 70C despite its abundant façade decoration.



Figure 4-24. Jaguar tenon sculpture from Str. 9N-81.

Str. 9N-82C, the House of the Bacabs, presents us with still another variation – a hieroglyphic bench and abundant façade sculpture, but no painted rooms (although the carved bench surfaces were covered with light blue plaster). Uniquely, a carved altar of royal scale and quality (Altar W') probably originally sat in its principal Plaza A, right in front of the bench room until it was moved during the Carnegie project.³² Some other buildings in the group also had traces of sculpture. Str. 9N-81, notable for its ball-game equipment and probably a young mens' house, had two jaguar heads flanking its doorway (Fig. 4-24).³³

8N-11 presents a fourth variant – a carved bench with very exalted imagery but no inscription (though with glyph-like elements) in a building rich in façade sculpture but with seemingly unpainted rooms. None of the other groups had more than a single elaborately decorated building, but at 8N-11 there are at least three, including Str. 70C recently found by the Chinese project.

Figure 4-25 shows plans of all three buildings where carved benches have so far been found at Las Sepulturas. They are of reasonably similar scale but have different orientations, color schemes, and front stairways. The only other shared patterns are that benches and façade sculpture are heavily concentrated in the biggest buildings in each group, and that the buildings have three internal rooms or at least subdivisions, albeit with some distinctive internal details. Both 9M-146 and Str. 66C look more designed or “canonical” than the House of the Bacabs, which shows the most signs of internal modifications and complexity of layout. Plank (2004: 90) calls the floor plans of Strs. 9M-146 and 9N-82C “essentially identical”, but there are important differences among the several ootoot buildings she discusses.³⁴ Str. 9N-82C seems to me to have the most domicile-like or elite residential configuration.

The first hieroglyphic bench retrieved from Las Sepulturas by Arturo Sandoval reportedly had a west-facing orientation. As for the others, two (at 9N-8 and 9M-146) are oriented toward the northwest, and the third (at 8N-11) faces generally west. There are thus only vague directional tendencies in the known benches except that none faces east or south. By vague I mean that they do not conform closely to our notions of cardinal directionality. This is not to say that they lack astronomical associations important to the Maya as we shall see later.

³² “Altars” also served as thrones for humans or gods (e.g., see polychrome vessel with individual seated on an altar in Hohmann (1982: Fig. 40).

³³ William Fash (2005: 97) notes the similar pairing of jaguar masks in the East Court of the Acropolis.

³⁴ Plank (2004) gets a number of details wrong in her comparisons of ootoot buildings at Las Sepulturas. Her interior plan of Str. 9N-8C (Fig. 5.41b) omits the doorway that connects the main room with the eastern one. The interior of the Skyband building might or might not have been divided into three rooms as she illustrates in Fig. 5.41c (see discussion in Chapter 3). If there were only one room, then the building interior is radically different from the others. If there were three, then the two small flanking rooms lack the imposing benches found in the other tripartite arrangements and both are connected to the central room. Plank recognized the distinctive features of the Str. 66C plan but dismissed them as “variations” (p. 141). Having spent many hours in each structure, I am struck as much by the differences as by the similarities. She also claims (p. 141) that the plan of Str. 66C is the same as that of the royal ootoot Str. 22 in the Main Group, which it is not. She is careful to point out that her concept of ootoot patterning accommodates considerable variation, so my criticisms here are meant to raise the question of how much variation is acceptable.

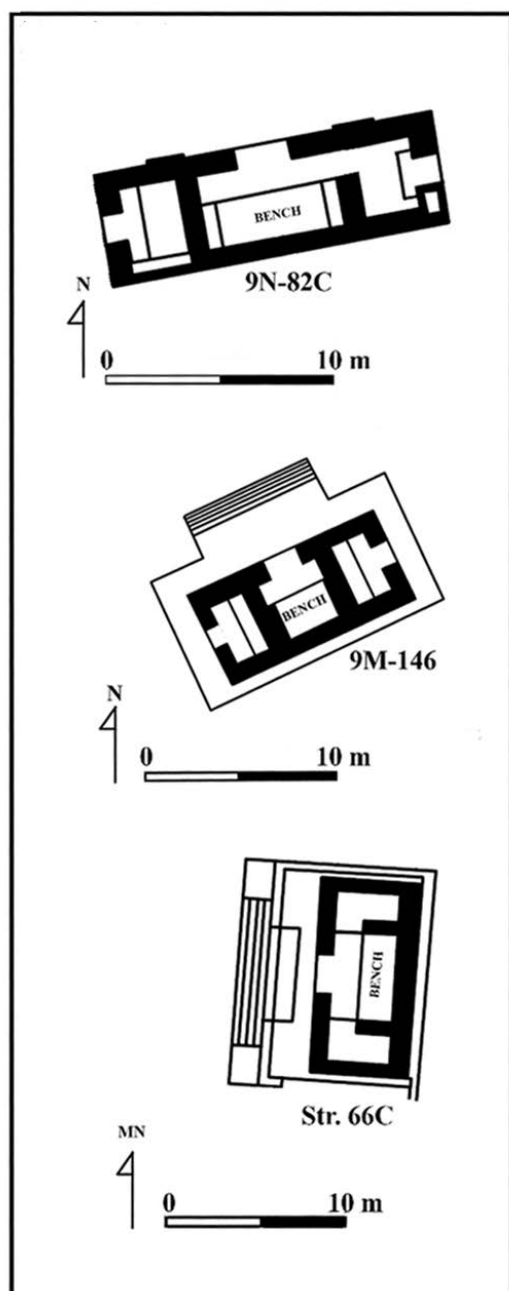


Figure 4-25. Plans of Las Sepulturas structures with carved benches.

Some imposing Late Classic Copán buildings might have had non-permanent thrones, possibly a pattern at Early Classic palaces. Many Maya thrones were portable and are shown being borne on the shoulders of humans or human-like figures at several sites. Pakal's royal throne in Palenque House E is held up by two figures depicted as aquatic deities but associated glyphs make it clear that they were real people who served in his royal court (Stuart and Stuart 2008: 157-158). A celestial band ran along the rear side of Pakal's throne.

Pauhtuns

The most impressive carved bench at Copán is in the temple atop Str. 10L-11 in the Main Group. Built by the 16th ruler Yax Pasaj Chan Yopaat, it was dedicated in about AD 772 or 773 and exhibits conspicuous pauhtun iconography. All of the intact Las Sepulturas carved benches have basal supports featuring similar sky-bearer (*pauhtun*/*bakab*) imagery albeit in rather different forms.³⁵ William Fash (1986: 337-338) suggested that *pauhtuns* were the patron deities of the elite lineage that dominated Group 9N-8. Widmer (2009: 190-191) thinks that the star-shaped shell gorgets shown on three of the bench *pauhtuns* there "...represent a supernatural badge or symbol linking the deities of the supernatural world with the living apical ancestor of the lineage". This interpretation derives from his nearby workshop excavations in Patio H of 9N-8 where (among other specialized activities) he found evidence of the production of the same star-shaped gorgets shown on the 9N-8 bench figures. But the supporting figures on the Harvard bench have the same gorgets, as do two of those holding up the Skyband bench. Why would three separate elite residences/lineages share the same symbols of an ancestral or supernatural patron? One could argue that 8N-11 and/or 9N-18 were detached but integral components of the 9N-8 elite residence, but this interpretation seems extremely labored and would assign a very sizable proportion of the inhabitants of Las Sepulturas to this lineage or elite "house". All we can safely conclude is that iconographic conventions stressed *pauhtun* or *bakab*-like figures, some of whom are shown with star-shaped gorgets whose sociopolitical implications are currently unclear.³⁶ Variations among the benches show that there were many experiments with monuments of this kind during the last reign, and that elaborate masonry "seats-of-power" were recent innovations among the sub-royal elites at Copán. What unites them thematically is the consistent "sky-bearer" iconography, which to the Maya might be a trope signaling the functions of their collective owners as supporters of the dynasty, and more indirectly of the cosmos.

³⁵ Fragments of some of the other benches found at Copán have sky-bearer iconography (see Baudez 1989: 80). Baudez notes similar imagery at Palenque a century earlier, which is interesting given the late 8th-century dynastic connections between the two great centers.

³⁶ Baudez (1989: 79) says that *bakab* imagery is unknown at Copán prior to the reign of the 16th king, but Maca (2006) refers to a *bakab* reference on Stela A.

THE SKYBAND BENCH AND ITS NEIGHBORS

Later we will review how the façade sculpture from the Str. 66 complex contrasts with that found by the Chinese at Str. 70C. Here I only reiterate that although Li and his colleagues attribute extremely exalted royal and “sacred” meanings to their motifs, there was apparently no carved or inscribed bench in the building itself. This leaves us with a puzzling question: if Str. 70C is so dominant in its themes and spatial location, why was the Skyband bench, loaded with equally impressive celestial, royal and political symbolism, not placed there? Why did some lordly protagonist instead situate himself on the less dominant eastern side of the compound in a building with a different symbolic and ritual load? Or did some other supernatural being sit on the bench and possess or inhabit the building?

Chapter Five

The Façade Sculpture

David Webster and Barbara Fash

Harvard, PAC I, and PAC II excavations all routinely revealed elaborate façade sculpture associated with Type 3 and 4 groups, particularly in the Las Sepulturas enclave. Wendy Ashmore (1989, 1991) later recovered sculpture during her probes of Groups 8L-10 and 8L-12 in the northern foothills of the Copán pocket, and William Saturno (2000) found still more at the impressive up-valley center of Río Amarillo (La Canteada). There are, however, exceptions to this expected distribution as conceived by the Harvard settlement typology, as briefly noted in Chapter 4. Steve Whittington (1991a) and Scott Zeleznik excavated the elite groups 10E-6 and 11E-2 at Ostuman, far to the west of the Main Group, and found buildings of imposing scale, but built of crude masonry and with little associated sculpture. Alan Maca (2002), contrary to his expectations, found few traces of sculpture during his tests of the Type 4 Group 9J-5 in the northern foothills near the end of the western sacbe.

Our hunch that we would find sculpture at 8N-11, partly based on Rattray's earlier work, fortunately bore fruit.¹ Both Strs. 66C and 66S were richly embellished on all sides by mosaic sculpture; so frequently did sculpture elements turn up that we employed Melvin Virgilio Espinoza to record them as excavation proceeded in 1990. The master Copán sculpture catalogue maintained by Barbara Fash lists 646 pieces, most of which derive from our main Op. 50 season.² She determined that others found earlier by Rattray came from the Str. 66 complex. Randolph Widmer, Rebecca Storey, and the masons found more than 100 other fragments during restoration, mainly behind Str. 66C, and these were plotted by Luis Reina. Fash later retrieved still others from various stockpiles elsewhere at Copán.

Recording the Sculpture

During the main field season all major sculpture elements were photographed and sketched *in situ* when first exposed in our 2x2 trenches and their vertical and horizontal positions were recorded (Fig. 5-1). Barbara Fash used our co-ordinates, and those of Reina, to plot each piece (Figs. 5-2, 5-3).³ The fall patterns she constructed almost perfectly define the perimeters of Strs. 66S and 66C and clearly show the directions in which the walls collapsed when their vaults failed. A few pieces were found well away from the buildings, particularly to the east, presumably moved by people to the ancillary residential locale (some 25 pieces retrieved by Fash from greater distances are not shown in Fig. 5-2). Many pieces are standard architectural elements or unidentified fragments that cannot be assembled into larger compositions. Nevertheless, 646 is an impressive number when compared to the 231 fragments recovered during the excavation of Str. 9N-82C, which until 1990, along with Sheehy's site, had the best-known sculptural programs at Las Sepulturas.

Fash and her co-workers combined our field drawings and sculpture co-ordinates into the larger 1:20 distribution map. Each piece of sculpture was drawn and photographed to a standard scale in the Copán laboratory (Fig. 5-4). It was then fitted if possible to related pieces, color-coded, and assigned to one of fourteen general motif groups. These were later refined down to seven thematic groups for both Str. 66S and 66C as follows:

1. Small human figures, feather plumes, small masks, and vegetation.
2. "K'atun" figures and borders.
3. Niche masks and tree imagery.
4. "Rope" figures, feathers and headdresses, and borders,
5. Rattles of three different kinds, each with different feathers and handles.
6. Eccentric flint roof ornaments.
7. Solar cartouches.

¹ Various Out of the Past video programs show excavation of the sculpture in the field.

² Our own field lists recorded more pieces, but many were architectural elements and fragments that could not be identified later by Fash.

³ Fig. 5-2 shows one of Fash's preliminary maps with the Str. 66C sculpture still to be added.

THE FAÇADE SCULPTURE

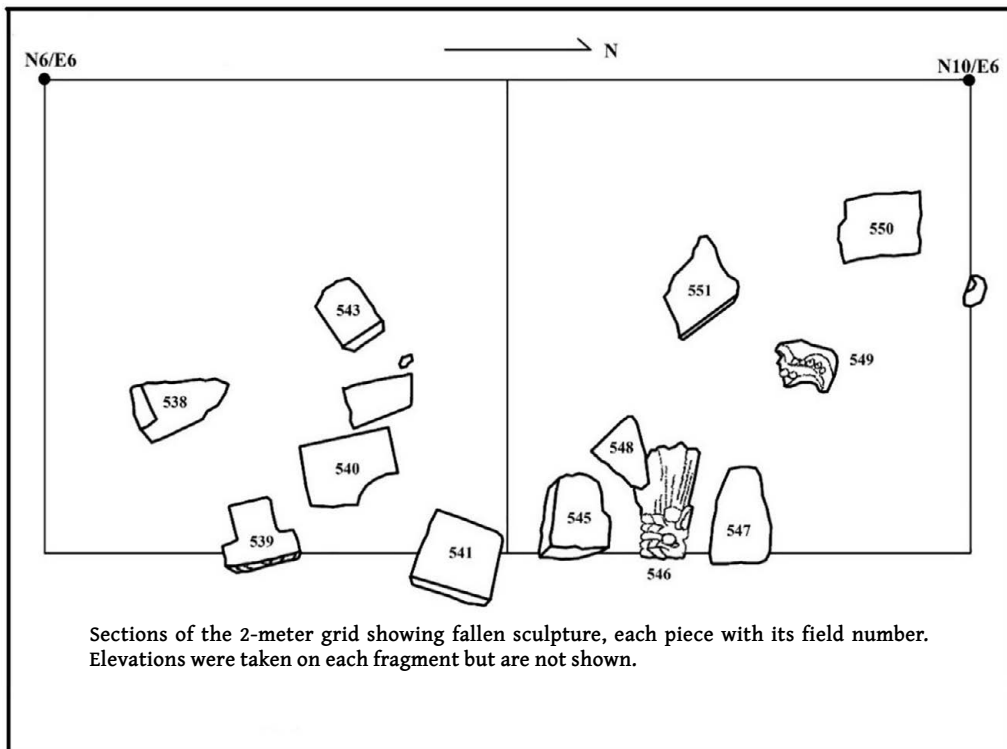


Figure 5-1. Fallen sculptural elements on grid squares.

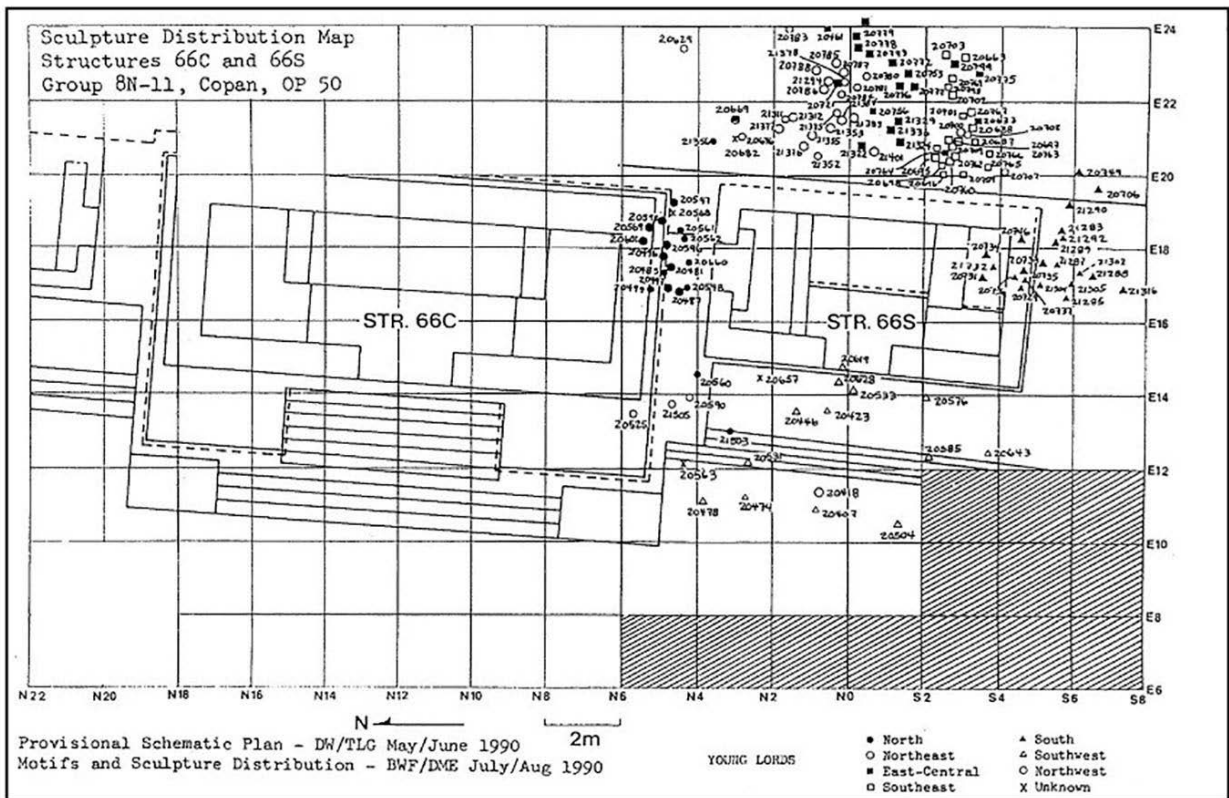


Figure 5-2. Field map of distribution of sculpture elements around Str. 66S.

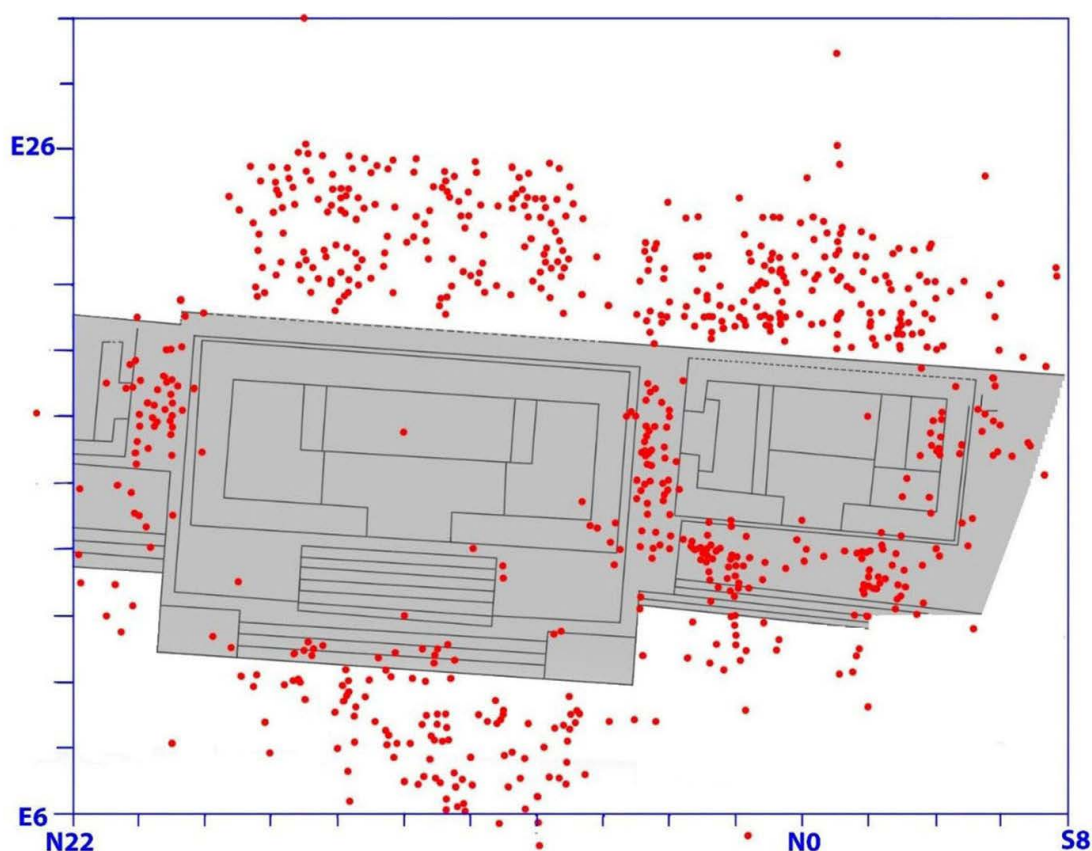


Figure 5-3. Sculpture fall patterns around 66C and 66S.

The fall patterns of these groups could then be related to Strs. 66C and 66S and to the corridor between them, thus facilitating reconstruction of individual compositions originally on the buildings. To save space we show only one of Fash's distribution maps here (Fig. 5-2) as an example of how she charted out the overall fall pattern (Fig. 5-3). In her 1992 report Fash lists all the sculpture motif groups by CPN number and provides refined information about distribution and structure associations. Many border fragments and other incidental pieces of sculpture could not be sorted into groups or related with assurance to those described above. Some 78 pieces coded as sculpture were architectural elements such as cord-holders and drain stones.



Figure 5-4. Photographed sculpture element, by B. Fash.

The Str. 66C Sculpture Program

About half of the recovered sculpture pieces appear to have been associated with Str. 66C and they fell from all sides of the building. Removal of so many fragments from the front of the building before the 1990 field season (see Chapter 2) makes details of its façade more problematical than that of its southern neighbor, so no reconstruction drawing is currently available. The main elements are clear, however, as illustrated in Fash's 1992 report and more recently in her 2011 book on the Copán Sculpture Museum. Some 165 pieces can be related to larger assemblages distinguished by three main motif groups – eccentric flint roof ornaments, rattles, and rope figures. These were found on all sides of the building so each façade presumably had redundant themes.

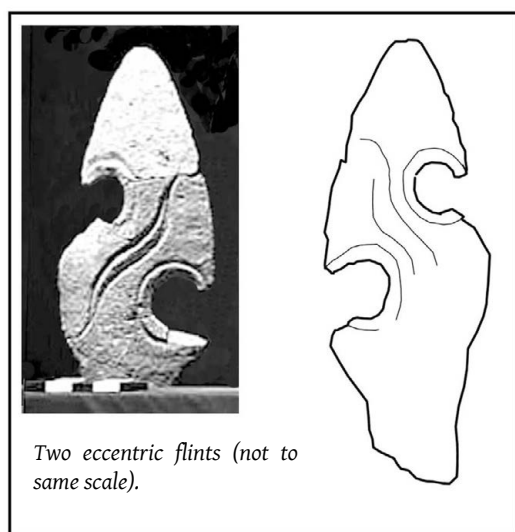


Figure 5-5. Eccentric flint elements.

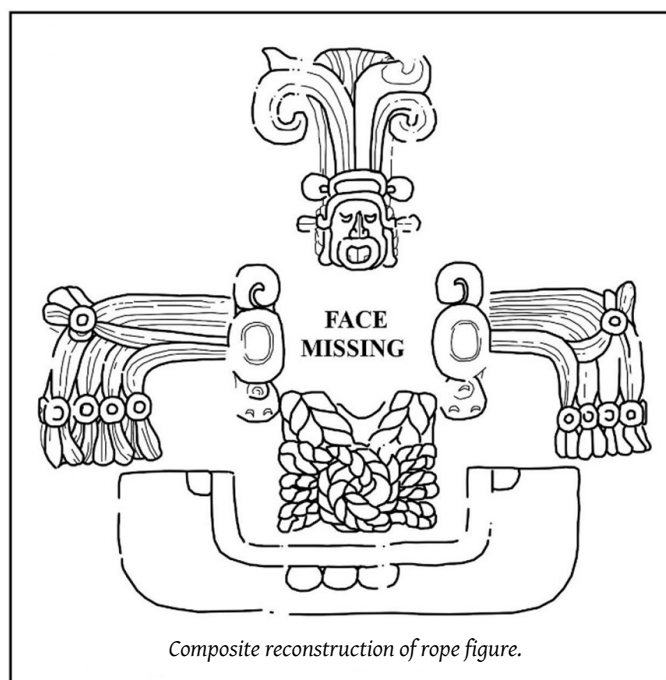


Figure 5-6. Rope figure.

Eccentric Flints

Eccentric flints (five recovered – all broken) are pointed, leaf-shaped forms with sub-circular shapes cut out of their sides (Fig. 5-5). Each is bifacially carved and has a long tenon. They were probably arranged around the edge of the roof where they stood as vertical elements about 90 cm high, silhouetted against the sky. Such roof ornaments are like the *almenas* (merlon-like roof projections) used in highland Mexican architecture. Fash notes that eccentric flints are abundantly shown in Maya art, but that the ones at 8N-11 are unusual for their impressive size and their free-standing display. She cites their strong iconographic associations with funerary contexts and with war and sacrifice. Roof ornaments of this kind might signal the purpose of structures and perhaps even their names (Webster *et al.* 1998: 331).

Rope Figures

A second prominent motif (Fig. 5-6) was a human figure nicknamed the *rope figure* because rope-like knotted elements are displayed on its chest. Exactly how many of these images originally existed is unknown, but Fash thinks that six or seven are likely – three on the east façade, one on each end, and two above and to the side of the doorway on the main west wall. They appear to be armless, and we found fragments of only one face.⁴ Face pieces might have been exposed on the surface after they fell, where they attracted attention and were disproportionately carried off. Fash draws attention to a very similar rope display on one of the figures from Str. 10L-22A, the proposed *popol na* that she and William Fash excavated in the Copán Main Group (B. Fash *et al.* 1992).⁵ She speculates that the lord of 8N-11 held an office that utilized this insignia, and notes that rope/knot motifs found elsewhere in Maya art often have military overtones. A depiction of Copán's 16th ruler Yax Pasaj Chan Yopaat in military regalia on Main Group Str. 18 shows just such a knot. Jeffrey Stomper (2001: 215) followed up Fash's argument in more detail by suggesting that 8N-11 was one of the nine important places symbolized by the proposed toponyms arranged around the upper façade of Str. 10L-22A – specifically that denoting the “Black Water” place, or *Ik Nab Nal*. The connection here is that the figure associated with the *Ik Nab Nal* toponym on Str. 22A wears a knotted pendant around his neck like those found on the Str. 66C rope figures.

⁴ Elizabeth Wagner informed me in 1995 that she identified two heads on the art market she believes might have come from Str. 66C.

⁵ Wagner (2000: 40) also makes this comparison, and calls the 8N-11 figures Sungod-busts.

Rattles

Rattle elements are the most abundant motifs. A frieze of stylized rattles comprised the principal entablature design and ran around all four sides of the building, although it is uncertain exactly how all the rattles were positioned. Barbara Fash (1992) illustrated many rattle components, but because she did not make a complete reconstruction none are illustrated here. Three different kinds of rattles were found, all in the form of complex assemblages made from multiple mosaic pieces. Rattles include feather, gourd, and handle elements, and can be seen elsewhere at Copán, most notably on the well-known Ik figure in the West Court of the Main Group. Although sometimes shown in paintings, rattles were rarely used for façade decoration by the Maya. They appear as façade sculpture on Str. 9N8-82C, the House of the Bacabs, and on the buried Early Classic Rosalila temple the Main Group. Their meanings are unclear, but Taube (2013: 96) suggests that rattles reflect the wider Mesoamerican relationship between music and flowers.

Solar Cartouches

Fash and her colleagues reconstructed six solar cartouche elements. In the center of each are *K'inich Ajaw* (Sun God) motifs identified by their filed teeth, crossed eyes, and *k'in* signs. These figures wear rope pectorals, and Fash suggests that the rope is thematically associated with the binding of war captives.

Although the main attributes of the sculpture program on Str. 66C are known their meaning, in the absence of inscriptions, remains unclear. One possibility raised by Fash is that resident lords had military functions or titles in the royal court, just as the occupants of the House of the Bakabs seem to have had scribal ones.⁶ Although the imagery of the façade sculpture on Str. 66C seems to have different themes than the Skyband bench there are possible connections. For example, the Venus imagery on the bench might relate to the theme of Tlaloc/Venus warfare. Similar, if much more exalted themes related to the sun and to warfare (and by extension to political power and authority) are found in Palenque's Cross Group (Stuart and Stuart 2008: 210). Viel's (1999) conception of diarchy at Copan (see Chapter 1) surmised that one of the competing or alternating royal factions was identified with war.

The Str. 66S Sculpture Program

Str. 66S fortunately escaped the disturbance inflicted on Str. 66C so details of its façade are easier to reconstruct (Fig. 5-7). Barbara Fash oversaw the installation of a full-scale reconstruction of the west façade in the Copán Sculpture Museum (Fig. 5-8). Because of its smaller size, the building would have appeared even more profusely decorated than 66C, producing a visual imbalance when the intact structures were seen from the front.

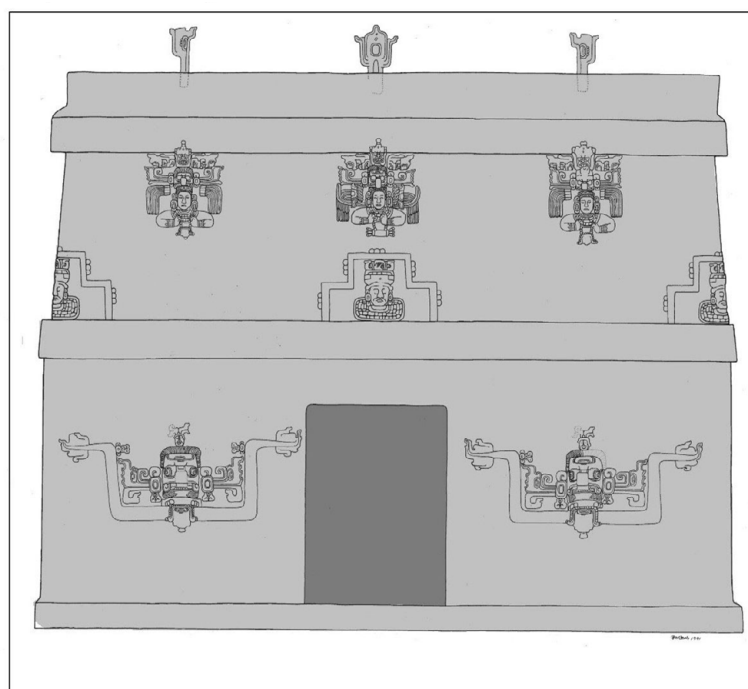


Figure 5-7. Reconstructed west façade of Str. 66C.

⁶ Wendy Ashmore (1991: 216) found sculpture with a shield motif at Group 10L-12 and speculated that it might identify a resident warrior.



Figure 5-8. Façade of Str. 66S as reconstructed in Copán Sculpture Museum.

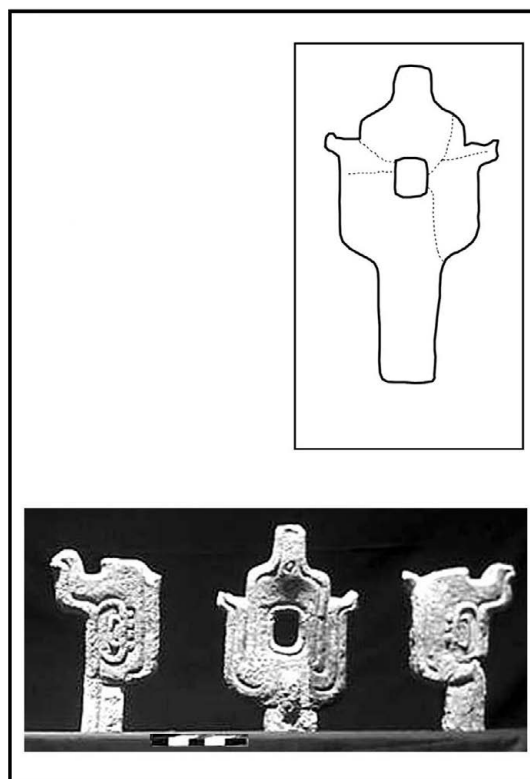


Figure 5-9. Roof elements on Str. 66S.

Two hundred and sixty-five pieces of fallen sculpture from around 66S were reassembled into larger compositions. General motif groups include:

1. Vertical tree-leaf roof elements.
2. Niche masks.
3. Tree symbolism (in niches on the west façade).
4. *K'atun* lords.
5. Borders.
6. Young lords.

Roof Elements

Like its northern neighbor, Str. 66S had vertical roof elements, probably 11 in all, that Fash interprets as various stylized forms of vegetation (Fig. 5-9). They are carved on one side only, unlike the bifacial flints of Str. 66C. Fash decided to call these “tree-leaves” after Linda Schele pointed out to her their similarity to world tree iconography. She notes that other scholars relate similar depictions to maize iconography. Exactly where these elements were placed is unclear, but Fash thinks they probably encircled the crest of the roof. Plant or flower roof elements are found on other buildings at Copán, including Str. 10L-22A (Wagner 2000: 39).

Niches, Niche Masks, and Tree/vegetation Symbols

When we exposed what remained of the west façade wall of 66S we found the basal registers of two wide niches still in place on either side of the central doorway. These were parts of complex frames, generally like the serpent frames found on the north façade of the House of the Bacabs. Many of the sculpture pieces in these niches had fallen in semi-articulated piles on the wide front terrace. They represent the components of two large masks (Fig. 5-10) with floral extensions extending from the frame on either side. Similar floral motifs are found around the

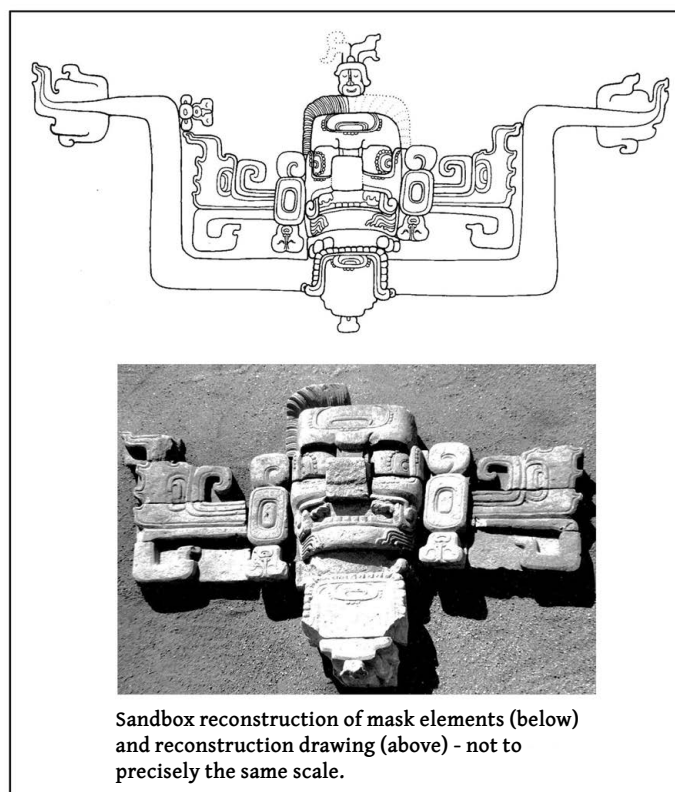
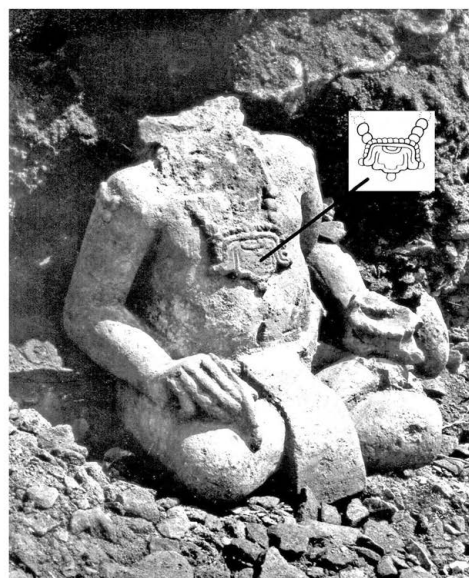


Figure 5-10. Reconstruction of mask element from Str. 66S



The scribe figure from Str. 82.sub in Group 9N-9. The pectoral resembles an element on one of the mask assemblages on the Str. 66S facade.

Figure 5-11. Scribe sculpture from Str. 9N-82-sub.

jaguar figures on façade sculpture at the Copán site of Rastrojon, and farther afield they sprout from shoulders of the ancestral figures on the sides of K'inic Janaab' Pakal's sarcophagus at Palenque (Fillooy N. 2010: 58). Taube (2013: 11) illustrates similar motifs, which he identifies with the Maya world tree sprouting from a censer.

Each mask had a large projecting nose that had been broken off and removed from the site, leaving only the tenon in place. Many other fragments were still in the coherently fallen piles, so it is likely that the noses were removed before the building collapsed (as was one end element of the Skyband bench as noted in Chapter 4). Other mask parts had also been removed, further complicating reconstruction. Fash provisionally suggested that the masks had graceful borders with water lily pendants sprouting leaves and stems. Other maize-like leaves probably projected from the ear-flare scrolls or the heads of the masks, or from some part of the frame elements. Foliated *qjaws* were also parts of the assemblages. The element just below the face of the mask resembles that worn around the neck of the "Scribe" figure found by Elliot Abrams in the fill of Str. 9N-8C in 1981 (Fig. 5-11).

Fash (1992: 25) originally concluded that "All of the motifs are found associated with representations of the *Wacah Chan* ("World Trees" or Maize Plant) in Maya art.....The fierce looking mask embodies the tree spirit from which sprouts leaves and vegetation.....". She further suggested that the vegetation masks might have visually projected the name or function of Str. 66S, much as the 9N-8 imagery alludes to scribal functions and titles of the House of the Bacabs. Her more recent summary (2011: 169) identifies iconographic elements – scroll eyes, wavy beards, and cropped hair – representing a Maya deity seemingly related to watery places, including the primordial sea which itself is a "...fertile place of creation". Because the masks depict such an unusual Maya deity she thinks that they might have functioned rather like huge glyphs that named the patron of Group 8N-11. Similar plant and fertility themes continue on the upper parts of the building (Fig. 5-12).

Young Lords

The most striking and intricate assemblages depict young lords dressed in maize god costumes and are arranged just beneath the upper molding of the building (Figs. 5-12, 5-13). Fragments and fall patterns indicate about eight



Figure 5-12. Sculpture above doorway of Str. 66S.



Figure 5-13. Young lord images.

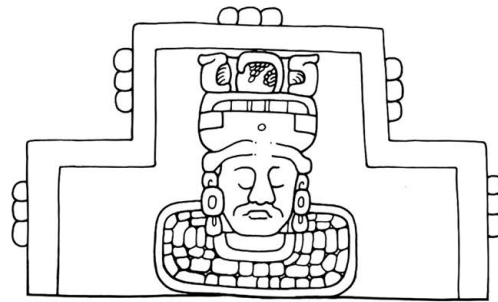


Figure 5-14. K'atun lord image.

such figures, three on the east, one each on the north and south, and two (or perhaps three) on the west. Fig. 5-13 (left) shows a sandbox reconstruction by Barbara Fash. Figures are depicted from the headdress down to the upper torso. Their arms are arranged in various positions on their lower frames as if they were resting on the base of an opening. All but one of these figures wears a beaded water-lily pendant (also shown on the stepped niche masks – see below). Three head/face elements carved in deep relief were recovered, each of exceptional quality (Fig. 5-13). These young lord figures are not identical. The central one on the east façade is especially distinctive, with an elaborate costume and a pendant jade bar instead of a water lily. These themes echo the world tree iconography on the niche masks, and the headdresses of the small maize figures resemble the big masks on either side of the doorway. Fash (1992: 31) posits two interpretations of the young lords. First, they represent the young maize god and signify “...life, fertility, and bountiful harvests...”, with the k’atun signs referring to rituals involving maize. More recently she suggests that the central figure on the east façade might be “...the noble patriarch of the group who commissioned the building...” (B. Fash 2011: 169). A similar pattern is seen on the scribal imagery on the House of the Bacabs.

Classic Maya accession structures with benches or thrones are sometimes called “flower-houses” (Houston and Inomata 2009: 142; Taube 2013). Flowery qualities such as color, fragrance, and elegance are partly metaphors for the sophisticated and formalized rhetoric often associated with Mesoamerican elites.⁷ Str. 66S projects flowery or vegetation themes consistent with this idea, but unfortunately its central bench is undecorated. Had we found the Skyband bench in 66S this set of associations would be more compelling.

K’atun sign elements were conspicuous among the fallen sculpture elements. Fash’s distribution maps show that most of the constituent fragments were found on the north, south, and east sides of the building, with very few from the west (the front façade). They were originally positioned above the forehead of the face of an aged man (Fig. 5-14; we found parts of two such faces). He wears a heavily beaded collar on his upper torso and seems to lack arms (like the rope figures on Str. 66C). Seven such k’atun lord assemblages could be reconstructed, each in a

⁷ They suspect that the ancient title *ajaw* refers to the quality of shouting, which in might relate to the venerable association of Mesoamerican kings such as Aztec *tlatoque* with rhetoric or public speaking.

stepped niche just above the medial molding. Fash suggests that one was situated at each corner of the building and that the other three were on wall facades. She hypothesizes that the aged k'atun lord represents God N, and that there is a general allusion here to the number five. A very similar k'atun sign is depicted on the Hieroglyphic Stairway. Many of the border elements probably formed basal frames beneath the k'atun lords and might signify “nah” or “house of”, allusions found elsewhere on Copán buildings. Unfortunately, the frames cannot be precisely reconstructed. In her 2011 book Fash interprets the stepped-niche elements as the upper halves of four-lobed (quatrefoil) signs whose lower parts are conceptually hidden behind the molding. The quatrefoil in turn represents a cave and associated underground moisture, and the edge of the molding is the horizon (see also Tokovinine 2013 for cave signs and their significance). Another possibility is that such quatrefoils also refer to the Maya glyph for “sun” or “day” and thus convey a double symbolic meaning embodied by solar and earth/cave signs (see Stuart 2010).

Astronomical and Chronological Implications of Str. 66C and the Skyband Bench

Additional insights about the 8N-11 sculpture appeared shortly after our 1997 field season and help to pin down the date of Str. 66C and the Skyband bench more precisely. As described in Chapter 2, we oriented our site grid 6° east of magnetic north in an attempt to approximate the alignment of the Str. 66 complex, but excavation revealed that we had misjudged it. The orientation of the final phase Str. 66C stairway turned out to be 10.5 degrees east of magnetic north. Widmer's and Storey's excavations later showed that the alignment of the earlier Str 66C-2nd was roughly 18 degrees from magnetic north. For some reason the Maya builders did not retain this orientation but shifted their final phase buildings further toward the west.⁸

After scrutinizing published maps of Str. 66C, Harvey and Victoria Bricker (1999) proposed that this westward shift aligned Str. 66C with rare celestial events linked to the symbols carved on its façade sculpture and bench.⁹ They determined that the long axis of the final building and its front doorway and bench face an azimuth of 285.1 to 285.6 degrees, a position of sunset that falls between the vernal equinox and the summer solstice. At Copán's tropical latitude there were two days of solar significance each year during this interval in the late 8th century -- the days of solar zenith passage on April 30 and August 13 (Gregorian).¹⁰ A vertical rod or column observed at noon on these two days would cast no shadow. The Brickers (1999: 437) concluded that “The building that contains the Skyband Bench is oriented to sunset on days of solar zenith passage”, a finding consistent with a dominant east-west axis for Maya elite groups as envisioned by Wendy Ashmore (1989, 1991).¹¹ They were careful to point out that this orientation is general rather than precise, and that Structure 66C was not an observatory built to determine the day of solar zenith passage but rather the architectural commemoration of an ideologically important celestial event. A few other instances of this architectural alignment are known elsewhere in Mesoamerica, such as at the Caracol at Chichen Itzá. The solar zenith passage was long familiar to the Maya generally and to the people of Copán. During the mid-7th century the kingdom's 12th ruler erected Stelae 10 and 12 with a similarly oriented baseline.

The Brickers report two other celestial events that appear to be linked to Str. 66C: a rare synchronization of the solar and Venus cycles that occurred in AD 784-785, and a commensuration between the Venus cycle and a lunar eclipse in AD 785. The solar, lunar, and Venus symbolism associated with Str. 66C, and especially with the bench, is obviously consistent with all these astronomical phenomena, as is the warfare imagery of the façade sculpture as interpreted by Barbara Fash. None of the other three carved benches found at Las Sepulturas sites exhibits any comparable astronomical alignments.

Although she does not cite the Brickers, Elisabeth Wagner (2006: 150) identifies a similar sacred cosmographic implication for Strs. 66C and 66S: “Both refer to the regenerative aspect of the eastern cardinal region that is associated with renewal, rebirth and regeneration indicated by the rising sun as well as the sprouting plants or the young maize god in the associated iconography”. The astronomical alignments and associations are the only

⁸ As always, when dealing with ruined and reconstructed buildings, such directional estimates are approximate.

⁹ This exact alignment is not shared by all buildings. For example, the stairway in front of Str. 66N has a bearing slightly more to the east than Str. 66C.

¹⁰ Aveni (2012: 788) points out that these two days of annual solar passage divide the year into intervals of 260 and 105 days, the former coincident with the length of the Tzolkin calendar.

¹¹ There is considerable skepticism and debate about the significance of Maya structural alignments with astronomical phenomena of purported significance (see Šprajc 2021 for a recent review). Having no skills as an archaeoastronomer and not wishing to wade into these controversies, I presume that the Brickers's alignment is correct and intentional to its builders, regardless of what it might have meant to the Maya. See also Chapter 12.

direct hints at just what kinds of rituals might have been held in the main courtyard of Group 8N-11 (see Chapter 12 for another astronomical possibility).

There was a spate of bench dedications at palatial groups just after AD 770 and the construction of the Skyband bench is probably an instance of it (though calendrically-unspecified).¹² The Brickers's insights support this general chronology and imply that Str. 66C and the Skyband bench were either built shortly before AD 784 or 785 in anticipation of these astronomical events, or shortly thereafter in commemoration of them.¹³ Judging from other dated benches at Las Sepulturas, the convergent astronomical associations, and comparisons with sculpture in the Main Group, we can be sure that Str. 66C dates sometime during the interval of AD 770 to 790, with the flanking buildings added a little later. This is a critical interval in the political history of Copán and apparently a difficult time for the 16th ruler Yax Pasaj Chan Yopaat. All of his known projects (with the exception of his tomb, Temple 18) were apparently completed by AD 776, or within the first 13 years of his long reign (but see Chapter 12). Nor does the king seem to have sponsored major additions after AD 780 to his ancestral residence at Group 10L-2 (Fash *et al.* 2004). What does follow this date is an apparent boom in construction at the nearby compounds of Copán's sub-royal elites, particularly in Las Sepulturas, reflecting the increasing weakness of the dynasty as the Fashes and others have noted. Carved thrones are a conspicuous element of this noble assertiveness, and the Skyband bench is probably part of this pattern.¹⁴ It remains to be seen if such thrones were erected anywhere after AD 790 during the last two tumultuous decades of the dynasty's existence.

Barbara Fash suggested in her 1992 report that Strs. 66C and 66S were built during the reigns of different rulers because of the coarser construction on 66C. She thought that 66C probably dated to the reign of the 13th ruler. Strs. 66S and 66N presumably were added much later, most likely late in the reign of Yax Pasaj Chan Yopaat, given similarities with Str. 10L-32 in his royal compound. If this is the correct chronology, then the Skyband bench predates the other carved thrones from Las Sepulturas by at least 40-50 years and Str. 66S as we see it today must have replaced an earlier building on the same site that utilized the same rear wall. Fash made her suggestion long before the Brickers published their astronomical observations. These newer data, along with other evidence already cited, make it more likely that Strs. 66C and 66S date between AD 780 and 790, with the former a little earlier than the latter. Although the warfare imagery and themes identified by Fash appear earlier in the Copán dynastic sequence, they are especially obtrusive during the reign of Yax Pasaj Chan Yopaat. Building materials recycled from Str. 66C-2nd and used in the external fabric of the final-phase building might account for the somewhat rougher quality of some of the masonry of Str. 66C. Str. 66N is clearly the latest of the three buildings. Its crude superstructure makes it somewhat anomalous, and quite possibly it was tacked onto Str. 66C around AD 800 or even later.

Hasso Hohmann (1995), who produced the most precise architectural measurements of the Las Sepulturas groups, determined that the long axes of the eastern and western structures in Plaza A at Group 9N-8 are oriented directly north.¹⁵ These buildings, Strs. 9N-81 and 9N-83, must be just about the same age as the last phase of our Str. 66C, so there seem to have been multiple astronomical considerations in play around this time. When the Chinese publish their findings along the western side of the 8N-11 courtyard, the eastern and western set of structures might turn out to be an E-group, a possibility explored in Chapter 12.

Summary

Barbara Fash sums up her interpretations by relating the iconography of Str. 66C to the themes of warfare and sacrifice, particularly embodied in the eccentric flints and rattles, and cites other such depictions in Maya art. She suggests that the principal dignitary of 8N-11, whom we nickname the Skyband Lord, was a lineage head who discharged the functions of Copán war chief and who represented his kin group at the king's *popol na*, or council

¹² The florescence of elite residences at Las Sepulturas and elsewhere at Copán after AD 700, and especially after mid-century, correlates well with a Late Classic construction boom at the Main Group as discussed by Cheek (1986).

¹³ They were thus built a decade or so after Yax Pasaj Chan Yopaat is usually said to have finished off his great projects in the Main Group (apart from his tomb). We shall see in Chapter 12 that some archaeologists think he thereafter shifted his construction efforts to locales in the adjacent urban core.

¹⁴ The impressive vaulted tomb Maca found in 2005 some 400 m west of the Acropolis suggests that there were very assertive nobles much earlier – around AD 650 (see Hearn 2007). Just who the 50-year old man interred in the tomb was, and what role he played in the Copán political system, remain unclear.

¹⁵ Personal communication to Webster, March 14, 2019.

house, at the Main Group. Taube (2010:134) concurs in the warfare interpretation, noting that “The individual who occupied the celestial throne bench of Copán Str. 66C was probably identified not only with war but also as a person representing the physical power and presence of the sun”. Having devoted much of my career to the study of Maya war I am intrigued by this interpretation and I hope it stands up. Ashmore (1991: 216-217) found façade sculpture with shield motifs at Str. 8L-87 and speculated that it might be the residence of a warrior. War imagery also adorned Str. 5 at the upriver center of Río Amarillo (Saturno 2000). Sarah Jackson (2012) notes that Classic Maya court imagery emphasized governance metaphorically linked to farming, plants, and earthy things. She goes on to say that cosmological and agricultural metaphors mesh in courtly identities and presentations. To these I would add war as a third leg of presentation at both royal and elite courtly residences. Strs. 66C and CCS are spectacular concentrations of these metaphors (see also von Schwerin 2011 for many possible thematic similarities with Waxaklajuun Ubaah K’awiil’s Temple 10L-22 in the Main Group).

In his follow-up to the Fash’s *popol na* suggestion, Stomper (2001) argued (as William Fash had earlier) that the noble who lived at 8N-11 was the Classic-period equivalent of the *holpop* (“head of the mat”), an officer who helped govern towns and polities in Contact-period Yucatán. In this capacity he would have represented an important subdivision of the Copán polity centered on his lineage. Fash and Stomper ascribe Main Group Str. 10L-22A to the reign of Copán’s 14th ruler K’ahk’Jop’laj Chan K’awiil (Smoke Monkey) and think its dedication in AD 746 was part of a political reaction to the embarrassing loss of the 13th king in AD 738.¹⁶ At this juncture several powerful *holpopob* were formally accommodated as advisors in the new facility of the *popol na* on the Copán Acropolis. Accepting this idea for the sake of argument, the original *holpop* at 8N-11 in the mid-8th century must have been associated with the *first* set of buildings under the Str. 66 complex (if indeed they are this early). I personally think that the later sculptural programs at Str. 66C are more in accord with the military interpretation and that they (and especially the bench) are too exalted for a noble who played this role. One might argue that the mid-8th century *holpops* were upgraded during the reign of the last king Yax Pasaj Chan Yopaat and took on new roles, or even that the king himself, who preferred warfare imagery, sometimes used the bench.

More generally a combination of celestial, military, vegetation/fertility themes dominates the Str. 66 complex sculpture, with the first two prominent on Str. 66C and the latter on Str. 66S. The close juxtaposition of similar interrelated themes is found elsewhere in Mesoamerica, most notably in the murals at Cacaxtla, Mexico. According to Barbara Fash Str. 66S shares many stylistic features with Str. 10L-32, part of the Copán royal residence attached to the southern end of the Main Group, and specifically with the elaborate figures and masks with vegetation themes flanking its doorway. Similar depth of relief, attention to very fine detail, and an almost identical configuration of vegetation might indicate that carving episodes on these two buildings were very close in time. Str. 10L-32 was built late in the reign of Yax Pasaj Chan Yopaat, the last ruler in the dynastic sequence (Andrews V and Fash 1992; W. Fash *et al.* 2004), and during his reign many complexes in the valley appear to have acquired sculptured façades and benches (W. Fash 1991; Saturno 2000). We saw in Chapter 4 that the date-bearing benches from Las Sepulturas were dedicated in the 770s or 780s.

Our original expectations for the Str. 66 complex were conditioned by our earlier experience with Str. 9N-8-82C. I anticipated that Str. 66C not only had a carved bench, but also a sculptured façade (remember that Rattray had found fragments of it in 1982) and that it would dominate its flanking buildings, as does the House of the Bacabs. What surprised me was the close juxtaposition of two extravagantly embellished buildings on the same side of the courtyard. That both buildings were decorated on all sides and had impressive roof ornaments were also departures from the House of the Bacabs pattern. Str. 66C physically dominates the eastern complex because of its height, volume, and centrality. The adjacent Str. 66S more than holds its own in façade sculpture, however, and in some ways the two buildings would have fought with each other for visual prominence. The spectacular façades of the two main buildings contrast strongly with the (apparently) very plain face of Str. 66N and its rather shabby superstructure. Before the addition of 66N the whole eastern side of the courtyard had a lopsided appearance and the eventual construction of that plain, shoddy building did little to correct this impression. Why the Maya decided to link a substandard building to two splendid ones is unknown. When Str. 66N was built the residents of 8N-11 probably still commanded sufficient labor to make a high-quality sculptured superstructure. I suspect that it is a very late addition made after the residents of 8N-11 distanced themselves from whatever roles were signaled

¹⁶ Here they depart from the usual equation of Temple 22 with the 13th king.

by the sculptural programs on the two older structures. Remember, though, that there was some kind of earlier building beneath Str. 66N.

The extremely high quality of the 8N-11 sculpture was immediately apparent (Barbara Fash calls the faces of the young lords “exquisite”). It was generally much superior to the sculpture at Plaza A of 9N-8 (note the rough finish of the jaguar sculpture illustrated in Fig. 4-24). Absence of inscriptions is surprising considering the abundance and quality of sculpture, especially given their presence at other sub-royal elite groups at Las Sepulturas. Formal inscriptions and dates might be associated with other 8N-11 buildings but it is strange that they would not also be featured on the visually imposing Str. 66 complex. Lack of dates and glyphs, plus the great variation in iconographic themes and absence of sculptors signatures, makes it impossible to interpret the 8N-11 sculptural programs with the same detail and precision as the scribe/bakab sculpture at 9N-8.¹⁷ To put this another way, the sculptural programs at 8N-11, at least on present evidence, seem more abstract and de-personalized than those at the House of the Bacabs.

Whatever the specific meanings of the sculpture, the patron of Group 8N-11 was clearly associated with a rich and exalted imagery that distinguished him from other lords and that signaled his importance in the Copán political/ritual system and probably his military roles. His palatial infrastructure might have been smaller than that of the ajk’uhuun lord of Group 9N-8, but his symbolic perquisites and presentations appear much grander. Houston, Stuart, and Taube (2007: 85-87) point out that the celestial, and especially solar, imagery associated with Classic Maya rulers reflects their embodiment of time and its passage. One wonders just how such imagery wound up so far from the Main Group (see Chapter 12 for possible royal connections).

The Audience

Following Fraser Neiman (1997), the audience who observed the main 8N-11 buildings consisted of “receivers” of messages planned by sponsors and encoded in architectural mass, material, design, orientation, and canonical symbolic forms.¹⁸ Receivers able to “read” messages properly internalized information about status differences, which in turn increased the fitness of the sponsors and builders of the messages. But in a more mechanical or kinetic sense, how did the Maya intend the sculptural programs to be viewed or read? Both Strs. 66C and 66S had symmetrical distributions of sculptural elements that lack the sequential and/or directional narratives found, say, in the San Bartolo murals (Saturno 2009). Obviously the primary human audience stood in the courtyard and observed the main western façades straight-on. So long as Str. 66C was free-standing an observer could also have viewed it from several angles and/or circumambulated it to see all the sides. Information was projected in all directions even though the primary direction was to the west. Because the side walls of the House of the Bacabs at Group 9N-8 had no sculpture, information was projected only north and south (see Chapter 10 for some implications of this arrangement).

That it had sculpture on all sides suggests that Str. 66C was originally intended as a free-standing building. The later construction of Str. 66S seriously interfered with the visibility of the Str. 66C sculpture by screening off its south façade from most angles. It also made the circumambulation of the whole complex more difficult, as did the addition of Str. 67. Even more puzzling is the embellishment of the upper north wall of 66S itself (notice in Fig. 5-2 the dense fall of sculpture in the corridor between 66S and 66C). The sculptors knew that anything depicted there was over-shadowed by its larger neighbor and could only be seen in a distorted way from the narrow corridor between them. Moreover, if mosaic elements were sculpted in place, working in the corridor would have been difficult. Both buildings also projected information to the rear (east), even though that direction was distinctly secondary with regard to any potential human audience and ritual space. Of course we might be wrong in assuming that humans were meant to be the principal viewers. Greek temples were in one sense “prayers in stone”, and visibility to the gods was more important than impact on any human audience (Connelly 2014: 153). Perhaps, like the Greeks, the Maya were concerned less with what people could see than with a four-sided display serving a supernatural audience.

¹⁷ But remember Barbara Fash’s suggestion above that some sculpture elements might ‘label’ the building from the ancient Maya perspective, a point followed up by Shannon Plank (2004). For another alternative idea about the builder of Temple 22 see Chapter 12.

¹⁸ Neiman was a proponent of “wasteful” or “costly” signaling and Maya monuments were among those he used as examples. Abrams’s calculations (Chapter 3) indicate that the cognitive impact on viewers masked lower expenditures of labor than previously imagined. Steve Houston calls sponsors “enablers”.

Sculptors at Copán

What can we say more generally about sculptors at Copán? Unlike their counterparts at Piedras Negras and other western Maya centers none left signatures on their work. Houston, Fash, and Stuart (2015: 16) remark that this might mean that they were of low status. On the other hand, James Sheehy (1991, 2017) excavated Str. 9M-195, part of the large Type 3 elite residential compound 9M-22A in Las Sepulturas, about 425 m southwest of Group 8N-11. This profusely-decorated building had images of human hands holding what appear to be chisels or other sculptural implements made of boars' tusks.

Even more impressive was a 1.7 m long stela Sheehy found behind Str. 9M-194B (Fig. 5-15). It was unfinished, but had four roughed-out rectangles that might have cartouches for glyphs. Houston and Taube (2012: 40) suggest that Sheehy's structures and their courtyard group was the residence of a high-ranking sculptor (see also Wagner 2006: 151). Whatever the rank of individual sculptors at Copán, however, their masters either appear to have been unwilling to allow them the privilege of signature, or it was simply not part of local tradition for them to do so.

Elliot Abrams addressed the issue of sculpting through energetic and replicative experiments he carried out at Copán in 1981 (Abrams 1984a, 1984b). He had our workmen copy some complex sculptures, including panels of the 9N-8 bench, and their initial efforts were respectable (Fig. 5-16). One can only wonder what they might have produced after a few months of practice. Abrams concluded that the Hieroglyphic Stairway on Temple 26 in the Copán Main Group could have been made by five master sculptors and five assistants in two years. Similarly, he calculated that two sculptors could have made one of Copán's large stelae in about six months. He thinks that during the heyday of sculpture production in the 8th century there was a full-time corps of about 10-12 artisans.

Later intensive investigations of the Hieroglyphic Stairway provided additional insights about its construction with implications for the wider use and production of sculpture in the urban core (Stephen Houston 2008, 2016; Houston, Fash, and Stuart 2015). The bottom part of the stairway, dedicated in AD 710, was built over an interval of about 15 years by the 13th ruler Waxaklajuun Ubaah K'awiil to honor his dynastic predecessor. The upper section, built in six years or less, was dedicated in AD 755 by the 15th ruler, partly as an expression of Copán's resurgent power after the embarrassing demise of Waxaklajuun Ubaah K'awiil in AD 738. Houston and his colleagues show that the lower stairway exhibits a very different and in some ways more fluid and sophisticated iconographic sensibility than the upper segment. Given the short interval during which the latter was constructed, they calculate that 45 or so skilled sculptors might have been engaged in the effort, considerably more than Abrams envisioned. Variety among segments of the upper section suggests different teams of sculptors but the whole section is distinguished from the lower stairway by more chunky glyph-blocks and figures with "....larger, balloon-like contours" (Houston, Fash, and Stuart 2015: 20).¹⁹



Figure 5-15. Unfinished stela from Group 9M-22A.
Photo courtesy of James Sheehy.



Figure 5-16. Bench glyph from Abrams's
replication experiments.

¹⁹ Mark Van Stone (2010) detected the "hands" of multiple sculptors even in single monuments at Palenque.

Quite possibly Waxaklajuun Ubaah K'awiil's heavy use of sculptors on royal projects, of which there were many in addition to the stairway, monopolized most of the available talent and the vigor of his reign inhibited lesser nobles from accessing master sculptors for their own use until after his death. Completion of the upper section of the stairway was a big project that could have served as training ground for a new generation of artisans, some of whom might have already been attached to the upwardly-mobile nobles of the urban core. Alternatively, such elites might have increasingly harnessed experienced sculptors to their own households during the reigns of the 15th and 16th rulers. All four of the late-8th century carved benches we now have stylistically resemble the carving on the lower segment of the Hieroglyphic Stairway. To my admittedly untutored eye, the supports of the Skyband bench instead resemble the quality of carving on the upper Hieroglyphic stairway segment, so two teams might have worked on it.

Hints about how sculpting was organized and how many people were involved are found at other sites. Houston (2013, 2016) estimates that at least some 42 sculptors were active during Late Classic times at Piedras Negras, most probably non-elites. Some Piedras Negras sculptors bore the *ch'ok* title that suggests they were “juniors” or apprentices. Because they frequently signed monuments, he is able to gauge the length of their work-lives in many cases and to make some reasonable estimates of the size of the sculptor corps active at any given time (or at least those sufficiently ranked to sign their work). He informs me that over any short interval there might have been something like four or five active sculptors, with at least eight working during the reign of Ruler 7. With one exception, signatures of individual sculptors suggest work-lives of ten years or less. Such estimates are very similar in scale to those of Abrams for Copán.

Houston (2016: 407) thinks that signing a monument in some sense placed the sculptor in the same privileged visual arena that depicted its patron and other elites, so sculptors as “instruments of the king” probably had to have permission to affix their signatures. Judging both from Copán's larger population and its many monuments, sculptors were probably more numerous than at Piedras Negras. It is tempting to think that the Copán sculptor corps was especially large and sophisticated during Waxaklajuun Ubaah K'awiil's time and then became more attenuated during the reign of the weak 14th ruler, who raised no monuments for 17 years. Given the probable human life-spans of the 8th century there might have been considerable attrition in a small group of skilled artisans over this interval and consequent loss of experience and tradition. Recovery might have been slow, accounting for the reduction in quality and greater variety (i.e., diminished “quality control”) of carving on the upper stairway finished by the 15th king. The later proliferation of sub-royal elite sculpture (both on thrones and building façades) seems to reflect a revival during the reign of the last king Yax Pasaj Chan Yopaat, but with a new form of deployment. Sculptors, including those with the highest skills, somehow became available to great nobles who lived in palatial compounds such as 8N-11 and 9N-8.²⁰ Copán archaeologists commonly presume that such elites became much more assertive and prominent as a result of the 13th ruler Waxaklajuun Ubaah K'awiil's debacle in 738, but if so they seem not to have become conspicuous patrons of sculptors for another generation or so.

Houston (2016: 495) lists six relationships governing the deployment of sculptors, most of which emphasize royal patronage. In some cases monuments carved at royal Maya courts were transported to distant centers as royal gifts. In other cases highly talented and even literate masters themselves moved from court to court, “loaned” by one ruler to another:

“...masters (*anab*) were sent to sites of equivalent status, both lender and recipient being ‘sacred lords’ (*k'uhul ajaw*). At this level there must have been sustained negotiations for such services, considerations of alliance and regional politics, and above all, a pronounced sense that the relationship between king and sculptor was highly personal” (Houston 2008: 239).

Insofar as master sculptors were relatives of the king the ruler was in a position to exercise control over them, and their status alone was an important element of the political gift.

²⁰ Similar co-option seems happen a generation or so earlier at Palenque, where the Tablet of the Slaves sported by the sajal Chak Sutz' (see Chapter 1) is of exceptional quality. Given the dynastic connection between Copán and Palenque one wonders if the western Maya influenced elite presentation at Copán.

This kind of reciprocity could also work within kingdoms, which would explain the burgeoning of sub-royal elite sculpture at Copán after AD 700–750. Both the 15th and 16th kings took part in dedicatory rituals at residences of titled nobles (*ajk'uhuunob*) who possessed impressive carved benches, and in one case abundant façade sculpture. How to conceive of such intra-polity loans is the critical question. The inscription on the 9N-8 bench itself gives a nod to the ruler and is thus consistent with Houston's idea of a negotiated loan, and there were surely highly personal relationships among the last king and his *ajk'uhuun*. On the other hand such a loan clearly was not between formal equals.²¹ Maybe by the mid-8th century Copán's sculptor corps had recovered its numbers and was only partly controlled by the ruler. In this case, the king could still show his favor by loaning his "attached" masters to some nobles, while other sculptors, whether or not members of the royal dynasty, could more widely and freely dispose of their skills. Alternatively all master sculptors were still attached directly to the royal court, possibly as relatives, but the king expended them as political capital in a decentralizing polity. Negotiations in this case had the character of what we might call "forced largess". Finally, elite grandees might have maintained a master sculptor or two and used their skills independently of royal permission. In the absence of signatures the ranks and affiliations of Copán's sculptors unfortunately remain a mystery.

Benches or thrones have long played a significant part in conceptions of Maya politics, including the Classic collapse. In 1937 Linton Satterthwaite attributed the destruction of thrones at Piedras Negras to violent social upheaval by "human agencies" who aimed at the overthrow of corrupt leaders, thus reinforcing the peasant revolt perspective popularized by J. E. S. Thompson (1954) a bit later.²² Some sculpture at 8N-11 does appear to have been intentionally damaged or dismantled while the buildings were still intact. The removal of the north end element of the Skyband bench is an example, and Barbara Fash also found that the noses of the two vegetation deities flanking the central doorway of Str. 66S had been broken off. Although their tenons remain in place the large nose pieces themselves have never been located. Whether such damage represents casual as opposed to organized desecration remains unknown, but the former appears more likely given the largely intact surrounding façade sculpture. The missing human heads from Str. 66S might have been carried off long after the façades collapsed, but some might have been removed while the buildings were intact, particularly the faces of the Str. 66C rope figures. This was certainly the case at Sheehy's nearby Group 9M-22, where an effigy head was removed from the dominant building 195B and deposited in front of Str. 189 some 70 m to the southwest (Sheehy 2017). Barbara Fash was unable to match some of the 8N-11 pieces found by Rattray in 1982 with those we later recovered from the Str. 66 complex. She observed fallen pieces along the western edge of the plaza, but the probable origin of some of her displaced pieces is the northern Str. 70C as the Chinese project discovered. All this aside, nothing like the destruction so evident at Piedras Negras was visited on the 8N-11 buildings that we examined or on the carved bench.

The eastern buildings at 8N-11 certainly met our initial expectations of rich ornamentation and symbolic import. Nevertheless, it bears repeating that the general distribution of sculpture and its symbolic attributes at elite-rank sites at Copán, common after the reign of the 13th king, remains unpredictable and does not accord clearly with the Harvard typology. Some elite groups such as those at Ostuman and 9J-5 appear to have little or no sculpture. Some Type 3 sites have buildings with elaborately decorated façades and in the case of 9M-22 a plain or unfinished stela (Sheehy 1991, 2017). At least one site of this rank, 9M-18 (Leventhal 1979) boasts a carved throne, although façade sculpture appears otherwise minimal. Another set, Groups 8L-10 and 8L-12, has buildings with façade sculpture as well as text elements (Ashmore 1991). Each new excavation of a Copán elite group provides a somewhat different permutation of sculptural elements. The House of the Bacabs at Group 9N-8 was heavily embellished with façade sculpture, has a bench that is both inscribed and dated, and was associated with a royal-caliber altar. The Skyband group is generally similar but has more abundant sculpture and a more thematically-exalted throne, albeit without inscriptions. Group 10L-32 has the most impressive royal iconography, but a plain bench. Alan Maca's objectives in testing the Type 4 site 9J-5 included recovery of abundant sculpture and a carved bench (Maca 2002). He anticipated such features partly because of our earlier finds at Las Sepulturas, the scale of 9J-5, its fine masonry, and its ostensible role as one spatial anchor of a symbolic quinquex that "established the boundary of the city" (Maca 2002: 286). His excavations there, amounting to some 768 sq m, turned up only

²¹ Unequal at least in formal rank. In terms of the sociopolitical realities of the 8th century Copan kingdom, it is quite possible that a sub-royal grandee might have been as politically potent as the ruler. Tlacaoel, the famed Mexica "Snake Woman", is an obvious example from another Mesoamerican political tradition.

²² Quoted from "Maya's Fall Now is Laid to Revolt" in the New York Times, Nov. 14, 1937.

about 20 scattered pieces of sculpture.²³ Such departures from our expectations indicate that we are far from understanding who had the right to display sculpture at Copán and why, who could mobilize the requisite talent and labor, and what the larger socio-political and ritual meanings of such displays were.

Complications of the Str. 70C Sculpture

Almost all of the preceding description and analysis was written before the Chinese discoveries at Str. 70C. The elaborate façade sculpture of this building, arranged into some 13 motif sets, has only so far been briefly reported and published (Li and Ramos 2017; Li 2018; Li 2019). Most striking and unexpected are the Mexican year signs and crossed-torch motifs that Li (2019: Abstract) believes were “....exclusively used by the royal family”, namely that of the 16th king during whose reign construction was probably completed (a date in accord with our own earlier findings).

Li believes that Str. 70C was an ancestral temple and that residents of Group 8N-11 as a whole were of high status, closely related to the dynastic line. Its sculpture programs manifesting a “militaristic spirit” and its location far from the Main Group reflect “the political reform of the 16th king to share powers with the elites” (Li 2019 Abstract). Reform or not, the Chinese data complicate our earlier interpretations of Group 8N-11 and its political significance. We will return to this issue in Chapter 12, but for now the important thing to remember is the Chinese presumption that the group is the remains of an elite residence.

²³ The situation at 9J-5 is complicated by the razing and rebuilding of its main structure and by Maca’s comparatively restricted exposures. Still, had any part of this group been as richly decorated as 8N-11 far more sculpture should have been found.

Chapter Six

Operation 50: The Ancillary Buildings

David Webster

The Harvard and PAC I maps of Group 8N-11 (Figs. 2-4, 2-5) show the main 8N-11 courtyard ringed by smaller buildings, particularly on its southern and eastern perimeters. We excavated and tested most of these in 1990 and 1997 (the 1997 fieldwork is discussed in Chapter 7). During the 1990 season we decided to excavate the eastern set of ancillary buildings as completely as possible because it had the most impressive structures. We especially hoped to find evidence of specialized activities such as craft production such as Widmer (2009) detected in Plaza H of Group 9N-8. Although the eastern buildings shown on the earlier maps were given separate structure numbers (49, 50, 51) we recognized that they were all linked and that there were more than three of them. It was not clear, however, which way they faced or how they were conjoined. All were roughly aligned with the rear substructure walls of the Str. 66 complex. Between the two sets of buildings was a narrow corridor about 5-6 m wide that would have been a convenient open-air workspace, almost like a formal patio.

General Description

We entirely excavated Strs. 50 and 51 (here called the 50-51 complex) and exposed a small part of Str. 49. These buildings appeared as vegetation-covered mounds a meter or so high with definite wall lines visible on their surfaces. Fig. 6-1 shows Strs. 51C and 51S during an early stage of excavation after the brush was removed. Fig. 6-2 shows our original field plan of the 50-51 complex made after we stripped off the overburden, but because much detail is lost at its scale schematic plans are depicted in Figs. 6-3 and 6-4. Although we excavated burial trenches along the walls of the ancillary buildings (see Chapter 8) neither we nor Widmer and Storey probed their interiors to any degree. During restoration Rudy Larios's team found no traces of earlier buildings, although there was abundant evidence of minor remodeling. Preservation was generally very good even before restoration as shown in Fig. 6-5.



Figure 6-1. The ancillary buildings after clearing.

Field plan of the ancillary buildings after excavation.
The blue numbers are elevations.



Figure 6-2. Field plan of the ancillary buildings.

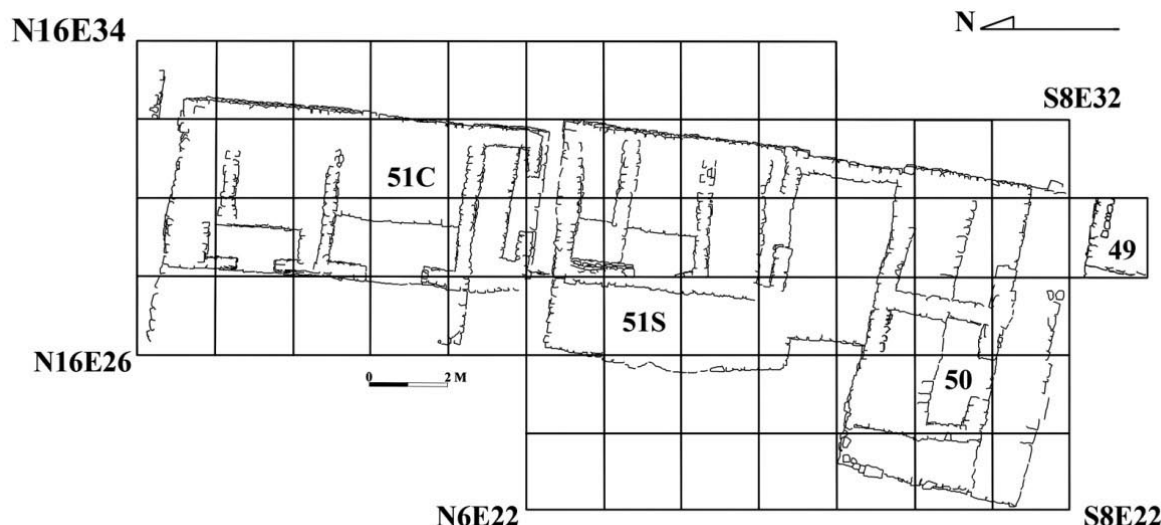


Figure 6-3. Excavated ancillary buildings superimposed on the grid



Figure 6-4. Schematic plan of excavated ancillary buildings.

Because there were no plastered or cobbled plaza floors around the ancillary buildings (counting the broad front aprons as parts of the structures) we had to estimate the levels of the old living surfaces using three lines of evidence: 1) the basal courses of the retaining walls, 2) deposits such as middens lying on the old surfaces, and 3) signs of construction or leveling that appeared in our probing trenches. Fortunately the Maya did not simply use natural earthen surfaces in this part of the site but brought in fill to level the immediate vicinity of the buildings, which we detected in our burial trenches. For example, near the

northwest corner of Str. 50 (Fig. 6-6) the wall base was set slightly down into reddish silt/sand subsoil. Then about 27 cm of plaza fill was deposited in several layers with the resulting surface at about the 592.58 level. This is almost exactly the same elevation as the irregular cobble surface extending from the back of Str. 66S (Fig. 3-23) and is a good approximation of the general elevation of the corridor/patio surface between the two building complexes.

Smoothed cobbles were often used in the construction of the ancillary buildings, especially for horizontal surfaces, probably because of their abundance in the nearby river. Walls consisted more commonly of roughly cut stone (Fig. 6-7). Exterior and interior masonry walls might originally have extended right up to the level of the roofing, but the collapse rubble was quite shallow, not enough in most places to account for high masonry superstructure walls. Quite possibly some upper wall sections were made of perishable materials as they sometimes were at 9N-8.¹ The high, uniform walls shown in some of the following reconstruction drawings might thus convey a false impression.

Elliot Abrams did not calculate construction costs for our ancillary buildings, but they are quite well-built, although only of Type 1 scale in the Harvard site classification. Even the rear walls of the Str. 51 complex had basal moldings and wall outsets (Fig. 6-7). None of our excavated Type 1 sites in the rural areas of Copán produced

¹ Most notably at Str. 9N-81 in Plaza A, a facility for ball-players and/or a young mens' dormitory.



Figure 6-5. Strs. 51C and 51S during excavation.

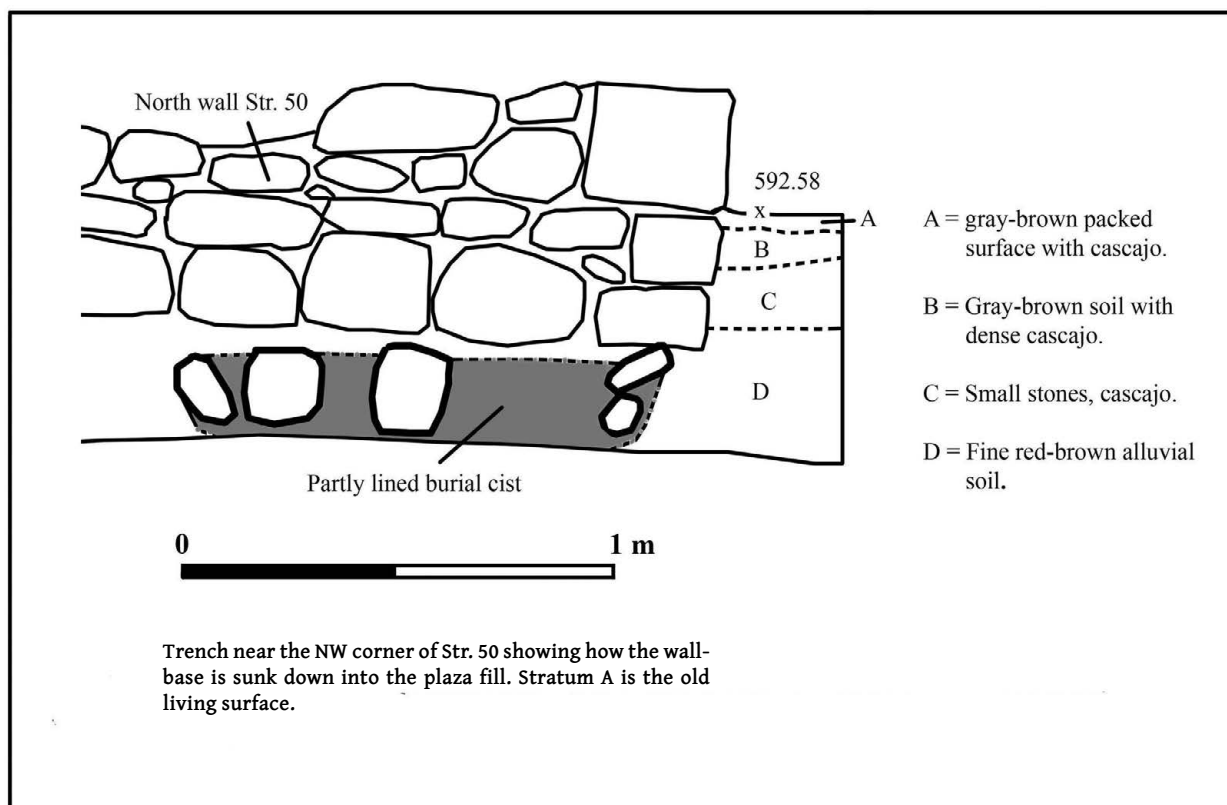


Figure 6-6. Wall-base of Str. 50 and adjacent plaza floor.

anything remotely so solid, spacious, or elegant (Webster and Gonlin 1988; Gonlin 1993). Nevertheless, masonry quality at its best is inferior to that on Strs. 66C and 66S. Its noticeably rougher appearance is seen in the juxtaposition in Fig. 6-7, and especially when compared with the front façades of the main buildings.

Structure 51

The most complex of the little eastern buildings was Str. 51, which turned out to be composed of three separate structures we call 51-north, 51-center, and 51-south (hereafter 51N, 51C, and 51S). Only a small portion of 51N was exposed by our excavations and it will not be discussed further. Both of the other buildings, 51C and 51S, are fronted by stone terraces and have main doorways that face west toward the rear wall of the Str. 66 complex. The wide corridor thus served as front (and partly enclosed) plaza space. Total length of Strs. 51C and 51S together is 16 m and width is 4-4.2 m, not counting the western terraces that are about 2 m wide. Each building was originally free-standing and separated from its neighbors by wide corridors that were later filled in.

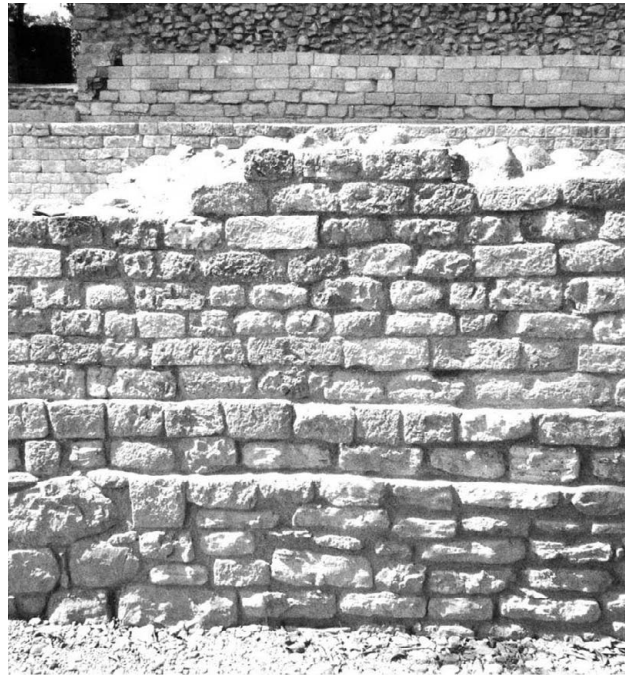


Figure 6-7. Rear substructure wall of Str. 51S. Note the outsets and moldings, and the contrast of the masonry with that of Str. 66C in the upper background.

Construction is variable throughout the Str. 51 complex, a mixture of cobbles, roughly faced stone, and well-cut blocks, the latter usually found in door jambs, corners, or bench faces. All of the ancillary structures typically had the highest quality masonry on their benches. Walls are narrow compared to those of the main Str. 66 buildings, but generally solid-looking. They range between about 30-45 cm in width and are preserved only a few courses high. Rear (east) and north superstructure walls were almost completely fallen, so estimates of room size given below are only approximate. No vault stones were found anywhere in the structures, nor was there any sign of the distinctive collapse debris associated with beam and mortar roofs, so thatch roofs are indicated for this and all the other small buildings. There is less variation in construction quality among the Op. 50 ancillary buildings than among those at 9N-8, which are usually more substantial and well-built, but there are comparatively shoddy small structures there as well, as in Plaza D of 9N-8 (see Gerstle 1988).

Structure 51S

Str. 51S is 6 meters long (north-south), 4 m wide, and has three rooms (Fig. 6-8). Room 1 faces south and opens onto a broad terrace linking 51S with Str. 50. A 1.2 m wide doorway leads into Room 1, whose interior dimensions are 3.2 m long by 1.8 m wide. We found concentrations of ceramics spilling out of the doorway of this room and on the nearby terrace (Features 2 and 3). Most of the interior space is taken up by a rectangular bench about 44 cm high. Room 1 did not connect with any of the other rooms and was separated from Room 2 by a narrow wall. Room 2, the central room, is entered through a main west doorway 1.2 m wide. This room is only 3 m long and 1.8 m wide, but has a very well-constructed bench about 67 cm high. A single fragment of red-painted plaster was found in the collapse. The northernmost Room 3 has an elevated floor and is entered from Room 2 by way of an interior doorway. This room is very cramped and of an unusual shape -- only 80 cm wide but about 3 m long, with most of its interior space again taken up by a bench.

We found the rear (east) wall of Str. 51S badly slumped (Fig. 6-9) but coherently so, enabling Rudy Larios to restore it.² Along the front (Fig. 6-10) is a well-made terrace about 2 m wide and 25 cm high as measured from the plaza surface to the west. This terrace is paved with cobbles and has retaining walls on three sides. It effectively

² I suspect that deposit B is the remains of daub that bled off the superstructure and then propped up the wall as it slumped.

augments the area of the corridor and increases (along with the terrace in front of 51C) the amount of usable exterior space in front of the buildings. A small, crudely-made cylindrical or “column” altar 30 cm in diameter and 18 cm high was set just in front of the west retaining wall, roughly centered on the doorway. Beneath it we found the flexed burial of a middle-aged adult male accompanied by a Chilanga cylinder vessel (Burial #2a – see Chapter 8). Associated fragments of neonate bones were later identified in the lab by Rebecca Storey as Burial #2b. Such altars might be features for sacrificial offerings to commemorate ancestral individuals. They are portable, and so prone to repositioning, and they sometimes wind up in caches as at Piedras Negras (O’Neil: 2012: 175). Our altar is very modest and certainly not associated with any elaborate burials or even ritual contexts. It might have been placed in front of Str. 51 at some late date or even moved from some other location. As we excavated along the rear (east) wall of Str. 51S we encountered unusual amounts of broken pottery but always in the collapse fill, never buried by it as a midden would be. When the masons later disassembled this wall they also found much pottery, probably originally incorporated into wall fill.

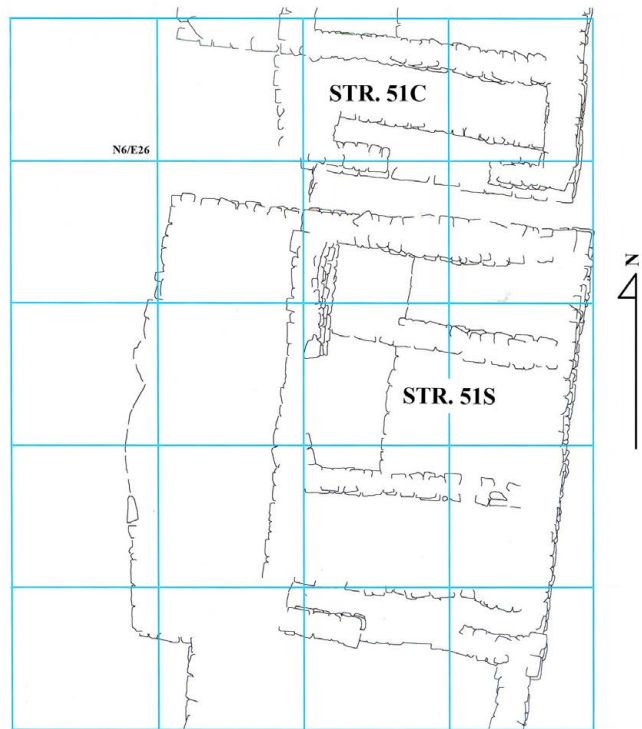


Figure 6-8. Strs. 51C and 51S superimposed on grid.

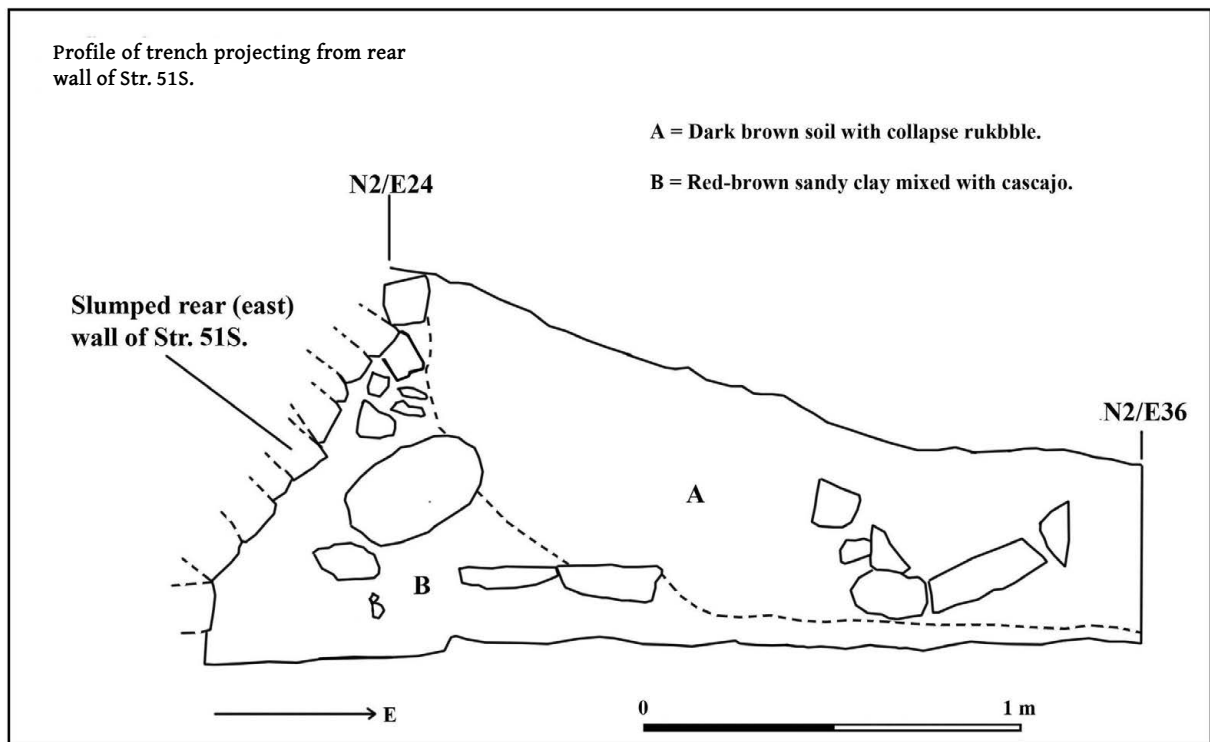


Figure 6-9. Trench profile, rear of Str. 51S.



Figure 6-10. Str. 51S after excavation. The broad terrace on the right links it to the rear of the original free-standing Str. 50.

Structure 51C

This building's front walls were less well-preserved than those of 51S and the masonry seems slightly inferior. It differs from 51S in having two wide doors in its front (west) façade that lead into two main rooms (2 and 3). Divisions and extensions eventually created one or two other rooms, depending on how one analyzes the interior space. Str. 51C is separated from 51S by a corridor only 45-50 cm wide (Fig. 6-11). The southernmost Room 1 is very odd. It faces south with its central doorway (1.4 m wide) and opens onto the unusually narrow corridor. A large person could squeeze along the corridor only with difficulty, so access to the room must have been extremely inconvenient. Interior space is 1.6 m (north-south) by 2.8 m, most of which is occupied by a bench about 30 cm high. There are similar examples at Las Sepulturas elite groups of tiny rooms that sometimes have inconvenient access. One is the southernmost room of Str. 83 in Group 9N-8, which is not only small, but accessible only by edging along a very narrow, elevated terrace or by way of some long-disappeared wooden ladder or scaffold. Plaza H of 9N-8 has an even smaller slot-like room that Widmer identified as part of a lapidary workshop (Widmer 2009: 176). We dug a little probing trench through the Room 1 bench and hit paving contiguous with the nearby floor in front of the room. The bench and the whole room were clearly late additions that took up much of the space of an originally wider corridor. During restoration the masons uncovered a dedicatory cache in the bench fill (Feature 44) that Widmer thought were freshly struck obsidian blades. Ann Freter later dated them to the mid-10th century (see Chapters 8 and 10). A terrace surface with large, uneven stones extends west from Room 1. This terrace also seems to have been a late addition that filled in the gap between the main terraces in front of 51C and 51S.

Room 2 is the most spacious one in the complex, roughly square (3.2x 3.4 m) with a main western door 1.4 m wide. A large, well-made bench about 45 cm high takes up most of the interior space. The completely separate Room 3 on the north is similar in construction and size to Room 2 except that the western doorway is narrower (about 93 cm) and the bench is C-shaped with a narrow upper molding. At some point an inner transverse wall was built over the northern end of this bench to create a slightly raised northern section. Although this section was poorly preserved, it would have been about 3 m long and scarcely more than 80 cm wide. I have labeled this Room 4 but it might simply be a narrow, closed-off section of Room 3.

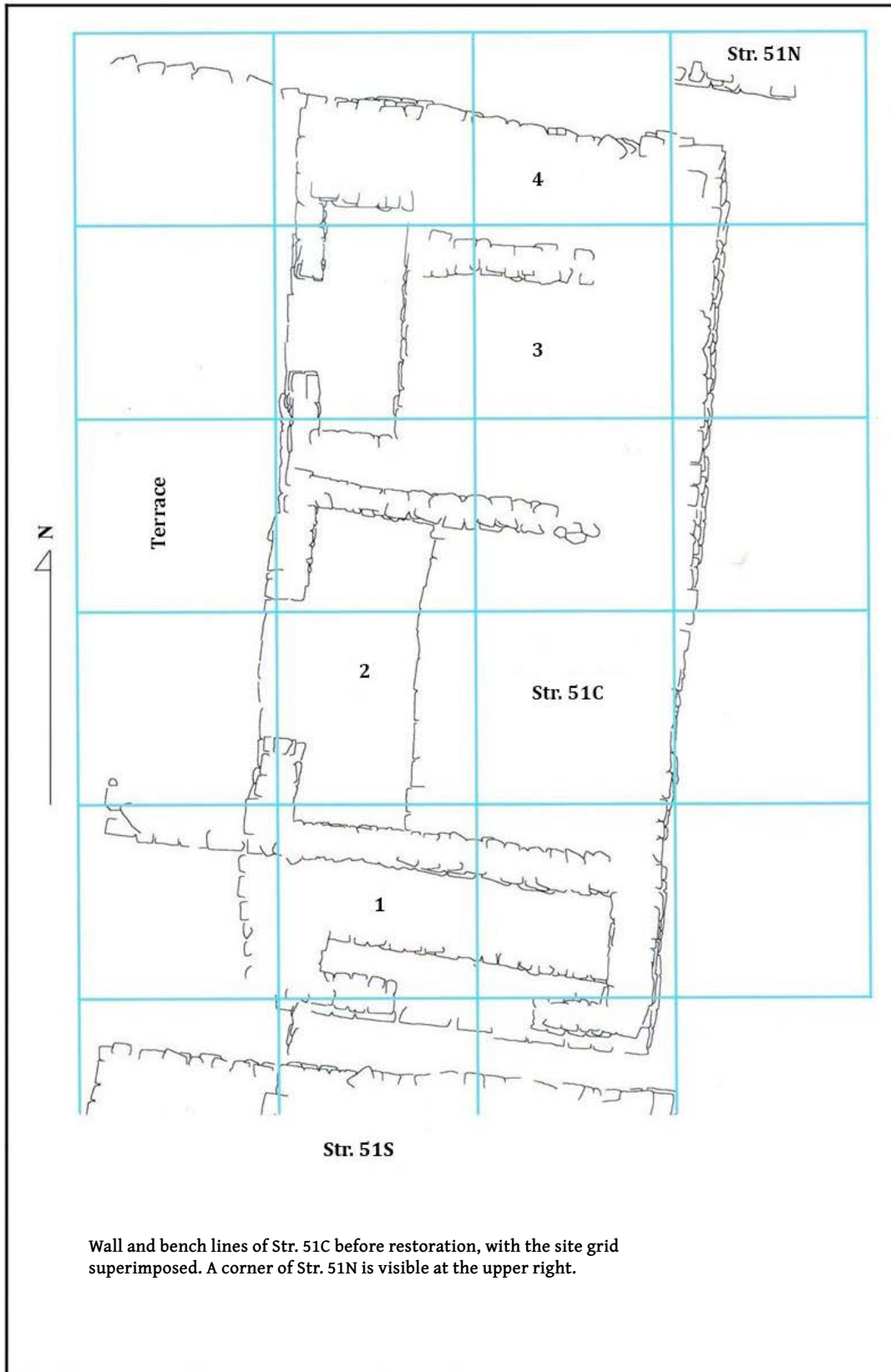


Figure 6-11. Str. 51C after excavation, superimposed on grid.

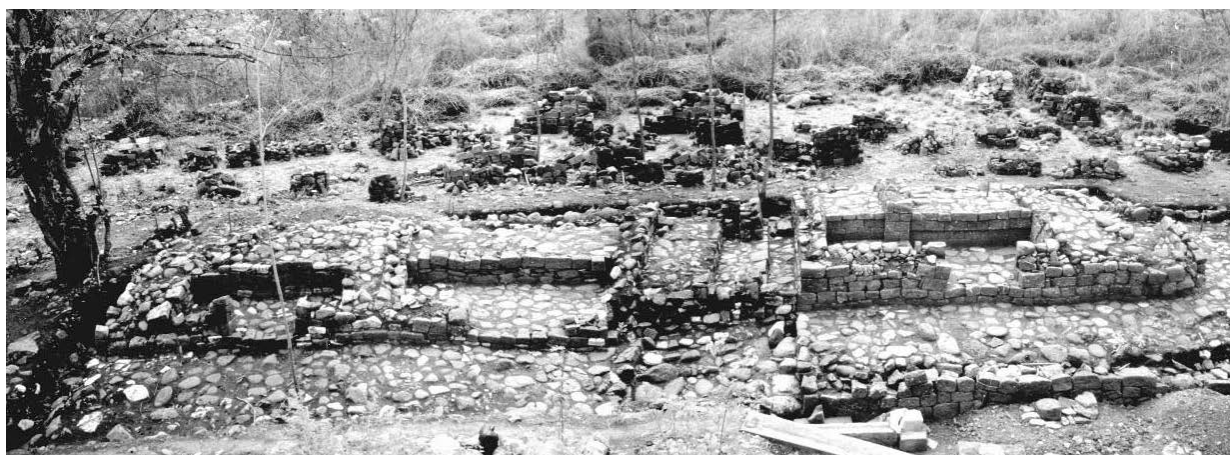


Figure 6-12. Strs. 51C and 51S after excavation. The narrow Room 1 fills the original corridor between them. Much well-cut stone is evident on the front facades, and especially on the interior benches in 51S. Note the wide front terraces largely made from cobbles. The stone piles in the background are collapse material segregated by grid location.

Str. 51C clearly grew by accretion. Rooms 2 and 3 were the original sections, each with its own entrance. They are fronted by a west terrace like that of 51S. The north and south retaining walls of this terrace are visible, but the west wall remained unexcavated during the main field season. A corridor about 2 m wide separated 51C from 51S (Fig. 6-12). At some point Room 1 was wedged into this narrow space, reducing the corridor width to 45-50 cm, the reason there is such restricted access. The space between the 51C and 51S terraces was filled with boulders at the same time to create the floor for Room 1 and the terrace to the west and to link the earlier separate terrace sections. We also found traces of an earthen floor underlying a cobble one near the north wall of 51C. The earthen surface in the corridor to the west of the terraces along the front of Strs. 51S-51C appeared blackened and charcoal-stained, especially after a rain. Either there was a lot of burning there or burned materials were discarded in this area.

Structure 50

Twin doorways, each about 1 m wide, pierce the front (south) wall of Str. 50 (Fig. 6-13). Originally there might have been only one large room measuring roughly 5.6 by 2.4 m with a long rectangular bench about 36 cm high. Remains of plaster are preserved on the central and western sections of the room floor and there was a small fragment on the west terrace as well, the only intact plaster observed anywhere in the Str. 50-51 complex.

At some point a transverse wall was added to divide this large single space into two non-connecting rooms of roughly equal size – Rooms 1 and 2. This wall clearly overlies the continuous bench surface and the intact floor plaster in front of the bench. The resulting plan is similar to that of the early phase of Str. 51C (i.e. before the addition of the corridor room). When Larios reconstructed Str. 50 he also included a second transverse wall added to the bench to the west of the main one (see Fig. 6-14). The southeastern half of Room 1 was particularly disturbed, and because we did not identify this wall during excavation it is not illustrated here.

Assuming that there were two distinct construction phases represented at Str. 50, the first one had an unusual plan for a small Copán building --- a single rectangular room entered by two exterior doorways and with a very long bench. Alternatively, the Maya might have added the transverse wall immediately after completing the interior space so that there were always two functioning rooms, each with a single doorway. This plan is seen in the original form of Str. 51C and is similar to the buildings that flank the House of the Bacabs in Group 9N-8. A final but remote possibility is that the front wall of Str. 50 was rebuilt to create two doorways when the interior dividing wall was added. The best explanation is probably the first -- two doorways originally led into a single long room whose large bench was later divided into sections by interior walls. If this sequence of events is correct Str. 50, with its spacious interior, might originally have had more formal functions than the other buildings in

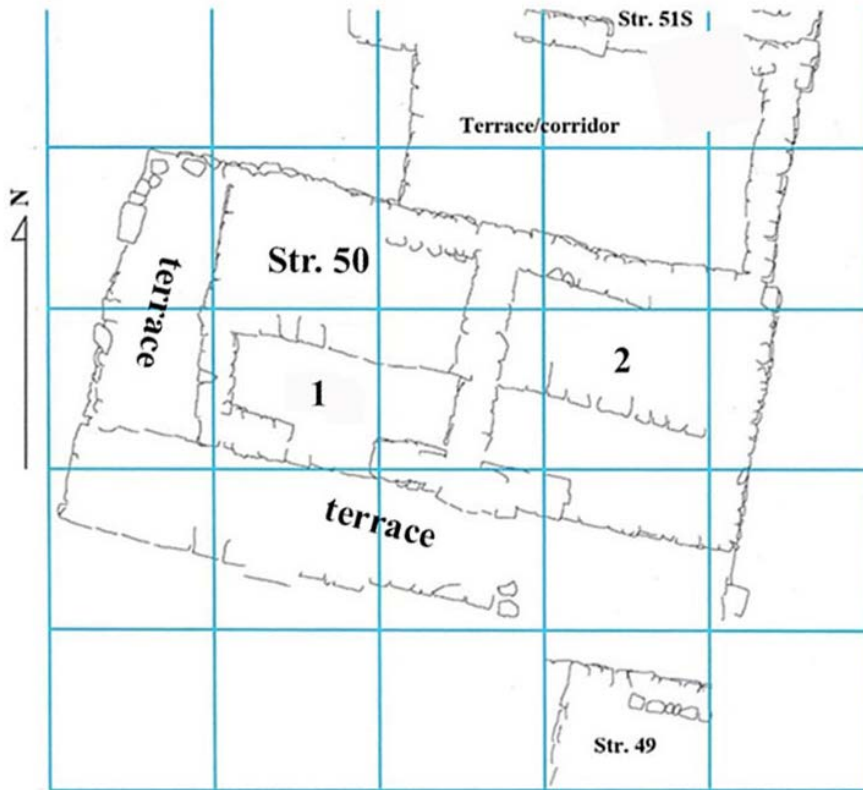


Figure 6-13. Str. 50 with superimposed grid. Wall and bench lines of Str. 50 before restoration, with the site grid superimposed. Note the broad terrace or corridor connecting Strs. 50 and 51S, and the low wall that blocks off its eastern end.



Figure 6-14. Str 50 restored, viewed from its west end. Str. 51S is just visible in the upper left corner, as is the connecting terrace. Note the late partition walls built over the wide bench and front floor of the superstructure.

the complex. Notice again, however, the general similarity of Strs. 50 and 51C if we disregard the interior bench division in the latter.

Str. 50 was originally a freestanding building. A broad terrace or corridor 2.3 m wide and 4.6 m long later attached it to Str. 51S. This surface articulates without an obvious break with the south end of the 51S front terrace and butts up against the rear wall of Str. 50, so presumably it was part of the 51S building effort. The east retaining wall of the terrace, however, is slightly inset from the adjoining superstructure walls and there is a seam with each. Footings of a low superstructure wall along this edge suggest a light screen wall here that prevented access to the terrace from the east. If the terrace/corridor were covered by a perishable pent roof it would have provided abundant sheltered space.

Structure 49

In the southeastern corner of our excavations we exposed a corner of Str. 49, but not enough to provide much information. It is connected by a terrace to Str. 50 and the visible surface lines of stone suggest a well-made structure.

Benches

To round off this descriptive summary of the ancillary buildings it is worth repeating that each of the reasonably intact rooms in the Str. 50-51 complex has a bench (Table 6-1) as did all of the rooms we dug in the big 8N-11 buildings. Bench space takes up an even larger proportion of room space in the ancillary buildings than it does in the Str. 66 complex (see Table 3-1). Every room that was adequately investigated and preserved during Op. 50 had a bench, even those that were small, shoddy, and inconveniently-shaped additions. The only exceptions might be the two side rooms in Str. 66C, but their raised floors could be considered benches. Benches are hallmarks of Las Sepulturas architecture in general, although at other elite groups there is always some small percentage of structures that lack them (see Hendon 1987: 530). They are interpreted as sitting, sleeping, socializing, and working places, and for the Maya being seated is an idiom for being at home (Plank 2004: 71). If so, people (alive or dead), gods, or supernaturals, all had homes in most excavated 8N-11 buildings.

Very few of our excavated rural Copán sites had benches, at least well-built and well-preserved ones (Webster and Gonlin 1988; Gonlin 1993). Solid masonry benches thus have an unexpectedly skewed urban/rural distribution at Copán, although more recent excavations in Río Amarillo and elsewhere are turning them up. One wonders what this says about use of interior space and/or status if Sandra Noble (1999) is correct that rank was partly signaled by a gradient of permanent and perishable seating facilities. Alternatively, if many rural people at Copán had non-Maya (Lenca?) traditions about use of interior space, there might be some ethnic dimension to this pattern.

Considerable care was usually lavished on bench construction in our ancillary structures. Each one shares a common feature as reconstructed by Larios, a molding projecting the upper half or third of the bench face out a few centimeters beyond the plane of the basal courses (this design is also seen on the benches in the Str.

Table 6-1. Room and bench space in the Str. 50-51 complex.

Structure	Room	Total floor Area (sq m)	Bench area (sq m)	% Bench area
50	1	6.3	3.99	63%
	2	6.28	3.99	63.5%
51S	1	4.65	3.4	73%
	2	5.67	3.12	55%
	3	3.56	1.8	51%
51C	1	3.24	2.76	85%
	2	9.8	6.39	65%
	3	7.07	5.75	81%
	4	3.1	2.93	95%
Totals		49.67	34.13	69%

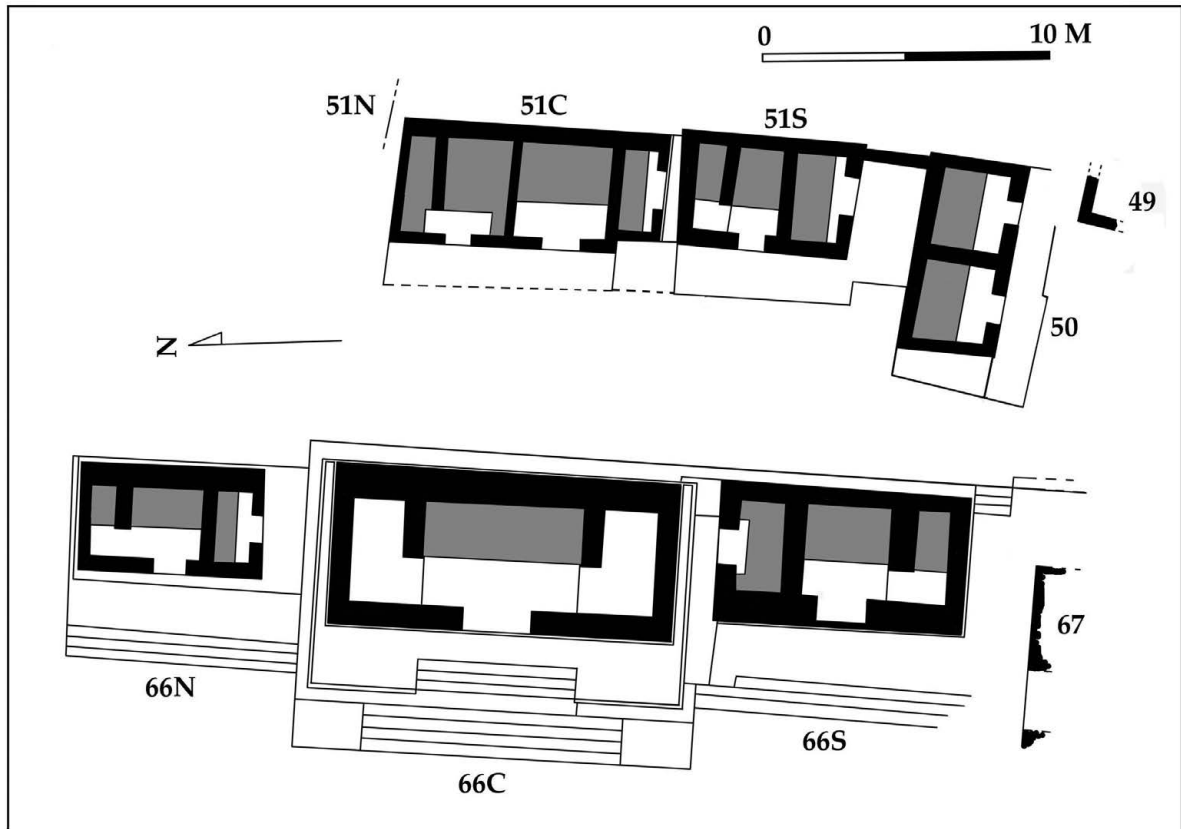


Figure 6-15. Schematic plans of the Str. 66 complex and the ancillary buildings.

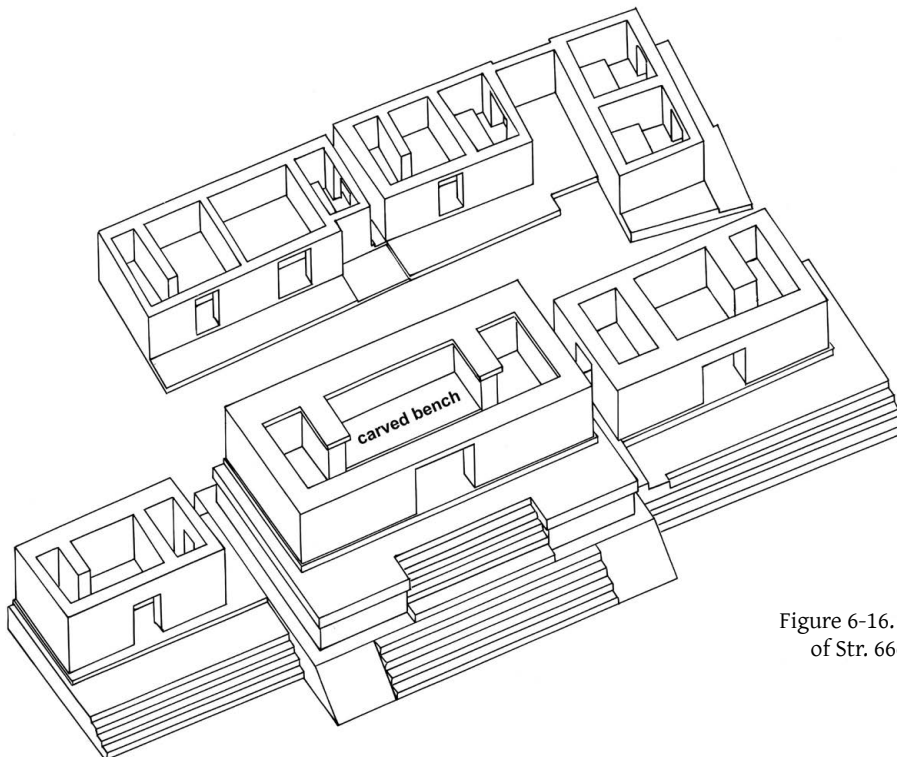


Figure 6-16. Isometric reconstruction of Str. 66 complex and ancillary buildings.

66 buildings). If spacious benches were facilities for sitting, sleeping, and general socializing as Hendon (1987) concluded, then each room in the ancillary buildings had a domicile function. To put this another way, no plain or otherwise-configured rooms appear especially designed for storage, specialized production, cooking, etc. (although of course the Maya used interior space flexibly). We suspect that many special activities occurred on the broad front and side terraces that were probably sheltered by pent roofs, or in the adjacent corridor. These “exterior” spaces were both spacious and well-constructed and probably should be considered integral parts of the footprints of the buildings. Figs. 6-15 and 6-16 show how the ancillary buildings relate to the larger Str. 66 complex. We wondered why the Maya simply did not extend the western terraces all the way across the corridor to join the rear walls of the Str. 66 complex to create a solid masonry surface (although drainage might then have been a problem).

The Str. 66 complex was evenly split between independent access and dependent access rooms. Given the apparent residential character of the ancillary buildings we might expect more dependent access spaces but this is not the case. In the mature layout only two of the nine rooms have restricted interior entryways, and both rooms seem to be afterthoughts created by dividing interior bench space.

We hoped to find signs of specialized economic activities on interior floor and bench surfaces like the workshop Widmer (2009) found along the west side of Patio H in Group 9N-8. He thought that elite lapidary, shell, cloth, and feather production in his buildings was probably intermittent and characterized by low output in rooms that did double-duty as domestic and production space. Only because the buildings in Patio H suddenly collapsed were artifacts and features indicative of craft production preserved *in situ* on their floors. He concluded that “The failure to identify similar craft workshops both at Copán and other Classic Maya sites appears to be a sampling issue” (Widmer 2009: 199). One problem is curation; in the absence of catastrophic abandonment events (as found at Aguateca), rooms were often cleaned out, leaving nothing to find.

Archaeologists tend to excavate the largest and most impressive room complexes at big sites, ignoring the smaller ones. We had this lesson in mind when we dug the 8N-11 ancillary buildings but even so we came up empty-handed. Had we been able to similarly dig whole structures during our 1997 work (see Chapter 7) we might have turned up evidence for specialized structures or activities that eluded us in 1990. On the other hand, in her statistical analysis of artifact distributions at other elite residences in Las Sepulturas Hendon (1987: 547) concluded that “... most of the structures analyzed showed evidence for a variety of activities.”

Relative Construction Phases of the Ancillary Buildings and their Relationship to the Str. 66 Complex

All of the ancillary buildings in the 50-51 complex were eventually connected, but some were originally free-standing and were built and remodeled at various times, just the pattern that we would expect if 8N-11 as a whole had residential functions. Notice for example that the rear walls of Strs. 50C and 50S are not conjoined and that the northern building is offset about 40 cm farther to the west. Similarly, the front (west) wall of Room 1 in 50C, is set back from the main façade wall about 50 cm.

Str. 50 almost certainly predates Str. 51S. I suspect that originally 51C and 50 were connected by a broad terrace and that 51S was later built into the space between them. Room 1 of 51S was then added late in the construction sequence and so had to be wedged into an inconveniently narrow space. This addition probably occurred sometime in the early 9th to the 10th century judging from cached obsidians found beneath its bench (see Chapter 11). 51S in turn predates at least the southern room of 51C. The whole complex, despite a superficial impression of unity, obviously grew by accretion.

When the first structures were built is unclear, but the burial beneath the little altar in front of 51S had a painted Chilanga cylinder. If it is not an heirloom it might indicate a transitional Acbi/Coner (7th century) date for the burial, and by extension for the building, or at least the substructure, but I regard this possibility as extremely unlikely. On the other hand, the masons recovered a piece of sculpture from beneath the bench surface of Room 2 in Str. 51C that closely resembles in motif and quality those from Strs. 66C and 66S. Its position in the fill suggests a late date for the building and even the possibility that some additions were made after the larger, central structures were abandoned or had collapsed and when scavenged sculpture was available for fill.

No well-prepared cobble or plaster surfaces connect the 50-51 complex with the rear of Str. 66, so we lack horizontal stratigraphy that reveals their relative dates. Nor did our burial trenches turn up the same set of strata underlying the ancillary complex as later found by Widmer under the Str. 66 buildings, or by our deep probe in the main plaza. We encountered sterile soil around the 50-51 complex at shallow depths, but no signs of earlier structures or floors in our burial trenches on the perimeters of the complex. While it is conceivable that undetected earlier buildings exist beneath the 50-51 complex it is far more likely that it is a late series of essentially single-phase buildings to which a few minor modifications were made over a long time. One clue is that the whole complex is aligned with the rear wall of the latest phase of the Str. 66 complex, which as we saw in Chapter 3 has an orientation different from that of its earlier-phase buildings. Taking all this into account, the ancillary buildings were most likely built over a period of two decades or so during the late 8th century, beginning sometime after AD 770 or 780. They then experienced minor renovations over a longer interval. Zeleznik did a statistical analysis of artifact distributions (see Chapter 9) and concluded that when the Str. 66 complex was built (and particularly Str. 66C) there were more early sherds available to scrape up for fill than there were when the ancillary structures were built. If these distributions are reliable, the ancillary buildings must date after about AD 785 and perhaps significantly later.

Artifact accumulations also reflect the importance of the corridor/patio between Strs. 66 and the 50-51 complex, which with the exception of Str. 50 presents a blank rear wall to the east. Its doorways and front terraces are oriented toward the corridor, as is the west terrace of Str. 50. The space functioned not just as a corridor but also as a convenient area for many activities. We have two indications of the level of the living surface that the Maya used here. One is the amorphous cobble paving behind Str. 66S described in Chapter 3. Its elevation is about 592.64 m, and an associated intact piece of plaster has an elevation of 592.71 m. Trash had accumulated above this cobble surface and collapse debris lay directly upon it, as did the Feature 9 midden that will be discussed later. To the east of the stone paving there was only an earthen surface. Burial trenches around Str. 50 indicate that about 20 cm of *cascajo* mixed with earth was deposited to prepare and level this surface, which would have been slightly lower than the cobble floor at about 592.58 m. Much trash and collapse debris lay on this surface and it was blackened by charcoal.

We made one of our most enigmatic discoveries in the corridor. Along the rear wall of Str. 66S was an accumulation of green tuff *cascajo* chips, mostly devoid of artifacts or admixtures of other materials (Fig. 6-17). The deposit extended a distance of 2-3 m along the wall to the south of the corridor separating Str. 66S and 66C and an unknown distance (but at least 2 m) to the north. Some of the chips were 5-8 cm long but most were much smaller. The *cascajo* stood out in our profiles as a uniformly green-grey talus deposit about 60 cm deep that sloped away from the rear wall toward the east for as much as three meters. This pattern suggests that it was dumped either from the corridor between Strs. 66S and 66C and/or down from the little rear terrace. Alternatively it could have been brought into the space between the major building complexes and then dumped. We were unable to excavate all of the deposit but its volume amounted to at least several cubic meters.

Three explanations come to mind for this *cascajo*: 1) stone for building construction or sculpture was worked in the main plaza to the west and the resulting detritus was hauled out and dumped from the corridor; 2) such activity took place instead in or around the Str. 50-51 complex; or 3) the material was brought in from outside 8N-11 and stockpiled for construction (or other) use. In her 1992 report Barbara Fash noted that much of the façade sculpture of Str. 66S was carved in place after the rough blocks were tenoned into the walls. Our pile of chips almost certainly post-dates this sculpture, but it represents exactly the kind of debitage that would be produced by some similar effort. Whatever the explanation, there was a messy and inconvenient deposit that was never cleaned up right in the much-used corridor/patio.

So far as I remember, this is the only large deposit of architectural/sculptural detritus found during the Penn State excavations except those used as fill (although see Sheehy 1991 and 2017 for his apparent sculpture workshop in Las Sepulturas group 9M-22A).³ I have always presumed that cut stone for Copán buildings, except when looted from earlier structures, was probably produced *en masse* and to basic specifications well away from building sites, possibly at or near the quarries.

³ Langley reported similar but smaller concentrations of *cascajo* in the Op. 14 excavations (see Chapter 3).

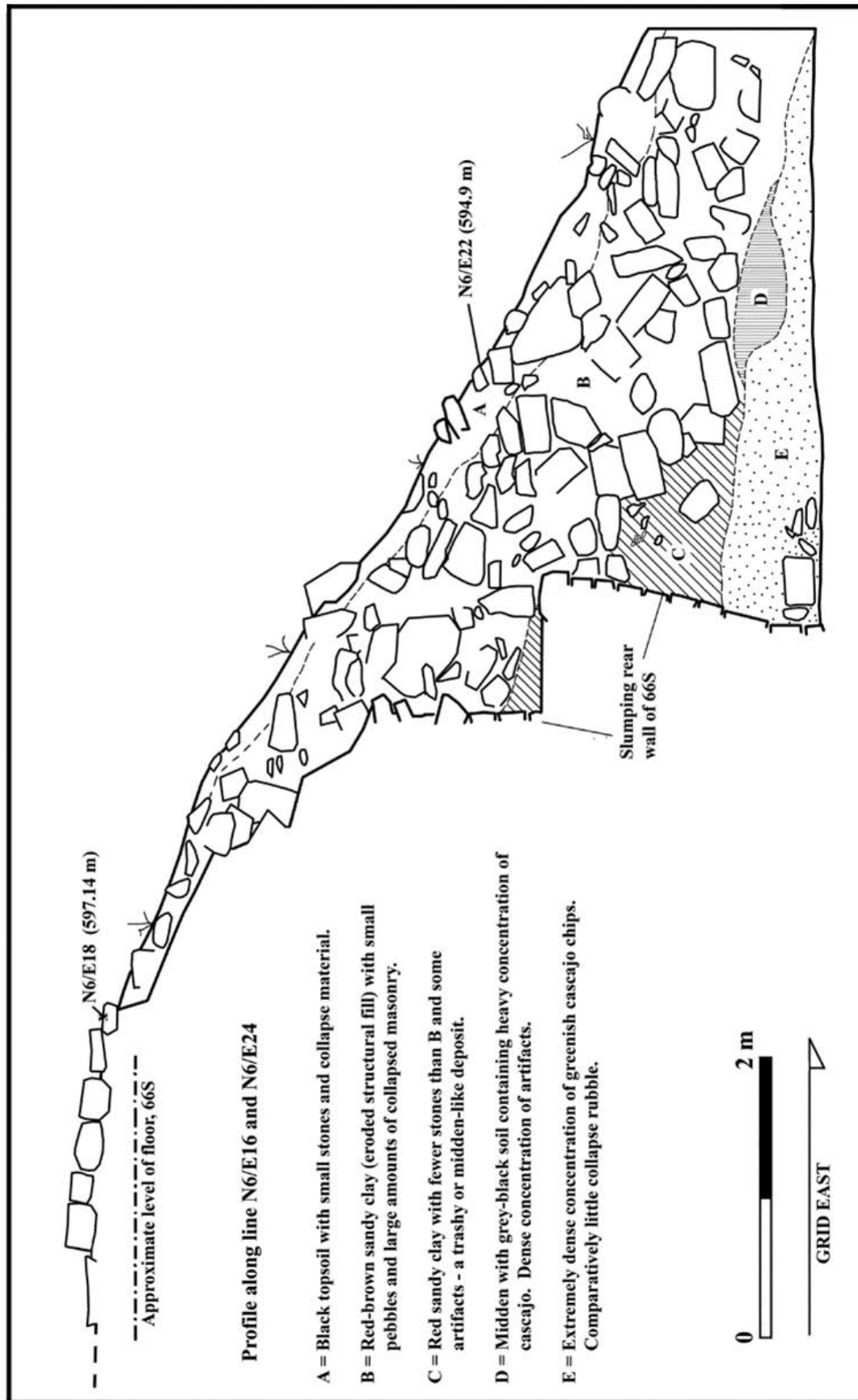


Figure 6-17. Profile of trench to rear of Str. 66S.

If building walls, etc. were assembled once sufficient prepared stone was stockpiled near the construction site there would be little trimming detritus there. I agree with Barbara Fash that sculpture is a conspicuous exception, and that many mosaic elements must have been produced on-site or even after rough pieces were installed on façades.

Cascajo chips were valuable for construction purposes, particularly as underlayment for plaster floors, so they were probably routinely cleaned up and re-deposited. Whatever the specific origin of the 8N-11 cascajo, it represents some late but not quite terminal activity shortly before the ultimate abandonment of the site. A thick, trashy, midden-like deposit disturbed part of it and overlies it stratigraphically, and a lens of similar trash also lies on the rear terrace of 66S, probably tossed there from the corridor. Both the cascajo and trashy deposits were eventually buried by building collapse. We encountered a similar but smaller accumulation of cascajo along with some sherds buried beneath the collapse of the rear (east) side of Str. 51C (N10E32). All this points to continued late activity at 8N-11, bringing us to the larger issue of the abandonment processes involving both the main and ancillary buildings.

Abandonment of the Main and Ancillary Buildings

Elite residential groups at Copán show wide variation in the timing and circumstances of their abandonments, or declines in their structure histories.⁴ We have a good grasp of the basic abandonment events at 8N-11. Here I mainly consider the behavioral and relative sequence of abandonment, not the chronological timing, which is addressed in Chapters 9, 10, and 11. The question of just how Group 8N-11 was abandoned is complicated by the incomplete nature of our excavations that left three of its major building complexes untouched, and many minor ones insufficiently sampled. Virtually all architectural information pertaining to the pattern of abandonment processes comes from Operation 50, from Widmer's and Storey's later probes, and from the tests of the smaller structures in Op. 63 (see Chapter 7). The following conclusions might be radically changed when data from other parts of the group are published by the Chinese project.

Mayanists increasingly identify ritual termination deposits at elite sites that are sometimes associated with violent episodes of destruction (Stanton, Brown and Pagliaro 2008). Maca (2002) reports evidence of termination rituals and the razing of large structures at Group 9J-5 about the time of the royal collapse, followed by reoccupation, rebuilding, and reuse extending to about AD 925. Group 10L-2, the royal compound, experienced deliberate burning and abandonment sometime around the end of the 9th century (Andrews V and Bill 2004; Bill 2017) followed by a short interval of use by squatters. William Fash and Rudy Larios detected similar burning on the façade of the House of the Bacabs in Group 9N-8. Abrams and I determined that the nearby Str. 81, probably a young mens' house judging from its ball game paraphernalia, had also burned. None of the 50 or so other structures at 9N-8 seem to have been deliberately defaced or burned, and at least marginally elite economic activity might have continued in some courtyards there at least into the 10th century (Widmer 2009) paralleling the situation at Maca's site.

No signs of deliberate burning or other kinds of termination destruction were found on any of the major buildings of the Str. 66 complex or the ancillary structures to the east. Nor is there much obvious defacement of sculptural elements of the kind often archaeologists often interpret as either termination rituals or purposeful defacement (which are sometimes confused with the effects of inter-group or intra-group conflict). It is tempting to imagine that the almost intact condition of the Skyband bench rules out such termination or desecration behavior because it would have been such a tempting target. On the other hand, the burning at the House of the Bacabs left the carved and inscribed bench there untouched except perhaps for removal of part of its western plinth. We saw in Chapters 4 and 5 that sculpture (including one piece of the Skyband bench) was removed from the 8N-11 buildings before they collapsed, and continued long afterwards, though apparently not on a large and organized scale. As the centralized Copán polity dissolved, the fortunes of important elite places associated with distinct social, political groups or supernatural entities were variably determined by complex factors we do not understand. To extrapolate from the fate of one elite group to others is risky and probably deceiving.

⁴ Abandonment is here taken to mean two things: 1) disuse of a building and lack of maintenance, or 2) use of a building for new purposes unrelated to the old ones (see Chapter 12 for the possible significance of the second meaning).

Apparent lack of destruction aside, the Op. 50 evidence for abandonment is sketchy. Rattray found spiked censers and other artifacts just above the final plaza floor. She believed these represented “Epiclasic” or “post-Copador” ceremonial activity, by which she presumably meant activity that took place after the main buildings had been abandoned and after Copador pottery ceased being used. If Rattray’s interpretation is correct, the people who made these deposits either did so after the Str. 66 buildings collapsed, or else they were remarkably uninterested in using the interiors of the rooms. During excavation we paid particular attention to deposits within a few cm above the surfaces of floors and benches but found little debris. Not only were the main room interiors quite clean, apart from thin accumulations of dusty soil, but there were no whole artifacts on their surfaces such as Hendon (1987) occasionally reports for Group 9N-8. Interior surfaces at 8N-11 thus conform to Baily’s (2007: 203-204) definition of *true archaeological palimpsests* – i.e., successive activities created deposits on these surfaces, but they were repeatedly removed, leaving little or nothing (at least that we can find) to show how they were used. Stanton, Brown, and Pagliaro (2008: 228) think we should not expect to find midden-like deposits on the floors of palace buildings that relate to their pre-abandonment elite functions.

One interior doorway had been blocked up in the House of the Bacabs, but we found no signs of similar late renovations to either Str. 66C or 66S. Someone did reconfigure the southern end of Str. 66N as described in Chapter 3. The other tantalizing probable modification is at Str. 67, where what looks like a crude stone wall rested on a distinct debris layer blocked the wide central doorway (see Chapter 3). This debris probably represents collapse rubble from a beam and mortar roof (we found no vault stones in clearing part of the front wall of the building, nor any sculpture). Because we did not excavate the interior room we unfortunately have no artifact samples from this deposit. Our impression in the field was that someone had walled up part of this doorway at a late date after the building had begun to collapse.

Although the rooms of the Str. 50-51 complex were mostly clean and devoid of artifact concentrations there are exceptions. Features 2 and 3 consisted of broken vessel fragments spilling out of the door of Room 1 in Str. 51C onto the nearby terrace level (N2/E26 and 28), and another concentration of broken jar sherds was found near the southeast corner of the building (S2/E30). The terraces and the corridor between the Str. 50-51 complex and the Str. 66 buildings were clearly important activity areas. In addition to Features 2 and 3 there are several other deposits in the area that must have accumulated at or after the time of general abandonment. We shall see in Chapter 11 that some of the ancillary rooms were probably used and even renovated long after the Str. 66 complex was abandoned, as suggested by the buried sculpture element. The large deposit of cascajo chips tipped up against the rear substructure wall of Strs. 66C and 66S must be a late deposit, as are the midden materials that accumulated above it. Except for its inconvenient position, the cascajo conforms reasonably well to the “provisional discard” process described by Stanton, Brown, and Pagliaro (2008: 230) – i.e., it might have been stockpiled for future use, a practice well known for the living Maya (Hayden and Cannon 1983).

Feature 9

Just to the southeast at the southern end of the corridor/patio between Strs. 50 and 66S was Feature 9, a shallow sheet midden some 15-18 cm deep (see Chapter 8). It contained abundant domestic refuse such as large utilitarian basins and jars and fragments of manos and metates as well as some special objects. The midden exhibited no obvious stratification and apparently was the result of short-term, perhaps single-incident, deposition. Ritual termination deposits with purported micro-ritual significance tend occur on the front surfaces of Maya buildings (frequently imposing ones) or in adjacent plazas (e.g., in the corners). Feature 9 instead was in a narrow corridor behind a big building, an inconspicuous and inconvenient spot that would normally have experienced a great deal of foot traffic. That the midden was never subsequently cleared away or its sherds broken and trampled flat indicates that the refuse was deposited late in the use of Group 8N-11, perhaps long after its elite functions had ceased. My use of the words “midden” and “refuse” here will annoy some archaeologists. Recent fashion advocates micro-stratigraphic study of such deposits to discern details of ritual behavior and their implications for social memory.⁵ Sympathetic as I am to such analysis, Feature 9 looks like a plain old midden to me.

⁵ Some archaeologists cringe at the idea that ancient people had conceptual categories such as “refuse” or “rubbish”. They regard such terms as our own unwarranted emic projections and think that for ancient actors there was no disjunction between sacred and profane in what appears to us to be rubbish. I think they have a point about rubbish, but not the one they intend.

Feature 12

Feature 12, described in more detail in Chapter 8, was a dense scatter of obsidian flakes and blades lying on the raised corridor floor between Strs. 66S and 67, also a late context. Whether the people who made these deposits preserved some sort of elite identity at Group 8N-11 is less important than what they tell us about the collapse of the buildings (see Chapters 8 and 11). For now, we should bear in mind that none of the excavated buildings appear to have been purposefully damaged in serious ways, that abandonment was generally neat and orderly, and that there is plenty of evidence of late activity at and around the ancillary buildings to the east of 8N-11's main courtyard.

Overview

The long, conjoined layout of the eastern ancillary buildings is distinctive compared to what we found in 1997 as described in the following chapter. Strs. 49 and 51 remain unexcavated, but addition of these buildings would make the whole complex at least 40 m long. What kind of social groups might have used them as permanent or episodic residences is unknown. The overall arrangement, along with the scale and quality of the architecture, is suggestive of a dormitory-like facility rather than the little Type I residential sites we dug elsewhere. The whole complex grew by accretion and does not seem to result from some original plan. The formal-looking Str. 50 might be a meeting house or young-men's house such as Str. 10L-223 in the Main Group (Cheek 2003) or Str. 81 at 9N-8.⁶ More about this in Chapter 12.

⁶ Its linear layout reminded me of the 50 m long Str. XXV at Becán, which I partly excavated in 1970 (Webster and Ball 2021: 5). The difference is that Str. XXV seems to have been planned and built as a single effort and is a much more integrated and formal-looking building. Both sets of buildings look like living facilities to me, but not the kind we normally associate with households.

Chapter Seven

Operation 63: The 1997 Field Season

David Webster

Our 1990 season left us with a tantalizing but incomplete picture of the Skyband Group and especially its many small buildings. Informative though the information from the Str. 66 complex and the Str. 50-51 complex was, we lacked the broad overview of the site that only more extensive horizontal stripping could provide. In 1996 I accordingly submitted an NSF proposal for two more seasons of fieldwork. The first season focused on mapping and testing the rest of the ancillary buildings, particularly those on the south and west peripheries of the site numbered as shown in Fig. 7-1. We also wanted to search for a specific connection between some part of 8N-11 and the causeway. Our plan for the second season was to excavate the remaining large structures (67-70) around the main courtyard. As it turned out we received only enough funds to accomplish the first phase of research, which I directed as Op. 63 between July 1 and August 10 of 1997, assisted by Scott Zeleznik and Amy Kovak.¹

Our necessarily restricted goals were:

1. Finish mapping the southern part of the site.
2. Determine if the 1990 sample of architecture, features, and artifacts was reasonably representative of other parts of 8N-11.
3. Document evidence for specialized activities not found in the 50-51 complex.
4. See if the shallow stratigraphy in the eastern half of the group occurred elsewhere.
5. Retrieve additional burials.
6. Find or discount a formal connection between 8N-11 and the causeway.

Because we lacked funds for restoration we were not permitted to excavate architecture, although we could clear vegetation and superficial soil from buildings and investigate their surfaces, wall-lines, and peripheries. Most of our crew of six fieldworkers were veterans of the 1990 excavations.

Field Procedures

Our Op. 63 research primarily focused on buildings to the south of the main 8N-11 courtyard (Figs. 7-1, 7-2). Two of these shown on the Harvard map are particularly notable. Str. 58 is the more imposing, an isolated, oval-shaped, pyramidal mound some 3.34 m high and obviously constructed of fine masonry (Fig. 7-3). Our contour map (Fig. 7-3) shows a lopsided protrusion to the north and I suspect that there are two sections -- a tall one with a lower northern extension. The second distinctive building is Str. 46, a rectangular mound almost two meters high fronted on the south by the two low, parallel platforms 9N-1 and 9N-2 (hereafter simply Strs. 1 and 2).² Collectively they form a single complex we nicknamed the Causeway Building for reasons made clear below. The maps also show how the eastern end of the causeway appears to connect to the southern end of Group 8N-11, with the Causeway Building nearest the terminus.

As it approaches 8N-11 the causeway is about 20 m wide and very indistinct. The Harvard map shows it flaring out about 90 m to the south-southeast of the site in such a way that it might include Strs. 58 and the Causeway Building as well as the broad, flat area between them that leads to the southern perimeter and the entryway

¹ I confess to a bit of envy of the Chinese archaeologists. Had our proposal been fully funded we would long ago have excavated Str. 70 and the conclusions of this monograph would be much richer.

² Harvard/PAC 1 mapping conventions divided the valley into squares 500 m on a side, each identified by a number and a letter. Structures were assigned sequential numbers within each such square as they were found and mapped. Most of the structures in the Group 8N-11 locale fall into Square 8N, hence the full formal designation of Str. 70 would be 8N-70. Strs. 1 and 2 fall into square 9N, and so are formally called 9N-1 and 9N-2. Although Group 8N-11 is an integral part of the Las Sepulturas settlement enclave it is shown and numbered on the PAC 1 map Chorro section, while Strs. 1 and 2 are on the adjacent Las Sepulturas map section.

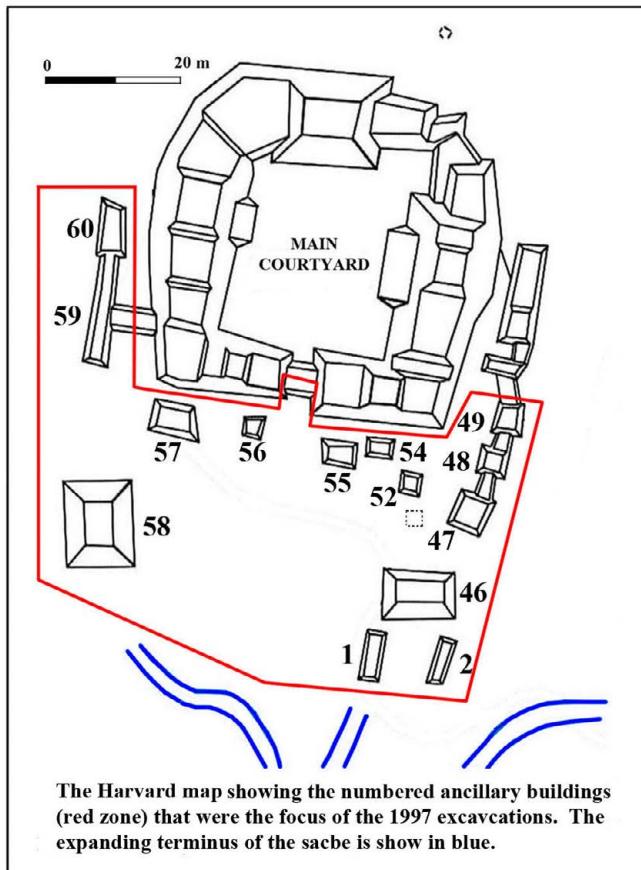


Figure 7-1. Harvard map showing Operation 63 buildings.

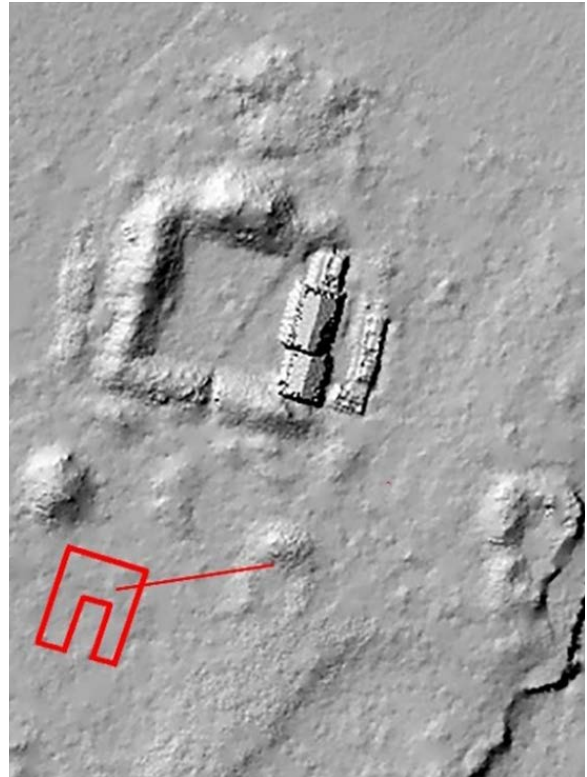


Figure 7-2. Causeway building shown on lidar image. Image courtesy of Heather Richards-Rissetto.

into the main courtyard. The 1941 Carnegie map (Fig. 2-4) shows two branches, one leading to the main 8N-11 group and the second to a large structure in the sites along the river to the east. The lidar image correctly shows this riverside complex as a small courtyard group rather than a single large structure.³

Excavation and recording proceeded somewhat differently than in 1990. Horizontal control for mapping and excavations was based on the permanent datum points previously established during Op. 50 in the main courtyard of Group 8N-11, but we did not extend the 1990 grid. Instead we used our original datum to set up a series of secondary, impermanent points to the south of the main courtyard. These in turn enabled Zeleznik and Kovak to map the southern and eastern concentrations of small architecture, to establish and record the locations of our test excavations, and then to tie them into the 1990 grid. Vertical control was based on the absolute elevation of our primary main 1990 datum (592.362 m asl) and all elevations are expressed in relation to it.

Clearing and Mapping

We spent two days clearing the small southern and eastern structures that had become heavily overgrown during the seven years since our previous project. Zeleznik and Kovak concurrently mapped the main 8N-11 courtyard and added the southern and eastern structures using a standard theodolite and entered all elevations into a computer mapping program. Fig. 7-3 shows the resulting contour map of the site and the Op. 63 trenches.⁴ Of particular interest

³ The lidar image was made after the Chinese project was underway. It is deceiving because it shows various features that represent recent deposition or disturbance. For example, what seems to be a large, low platform between Strs. 46 and 58 was not there when we did our research and is probably back-dirt from the Chinese excavations. The same is true of the large amorphous mounds to the north of Str. 70.

⁴ Zeleznik used newer mapping software to make his 1997 map and to graft it onto the 1990 Op. 50 elevation readings. The contour map shown here is consequently a bit different and more accurate than the one shown in Chapter 2. No doubt it will be superseded in turn by a new Chinese-project map made with the latest technology.

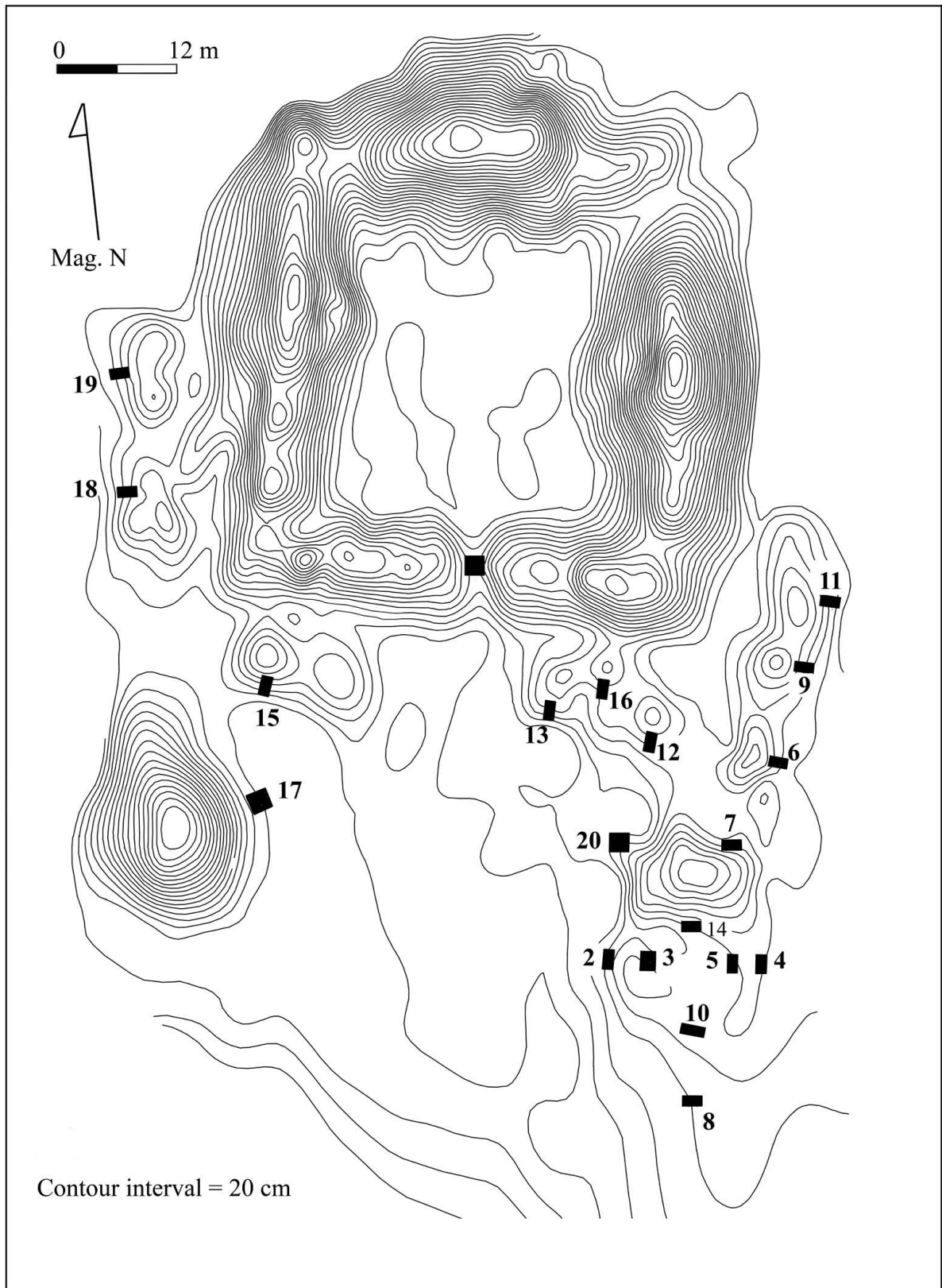


Figure 7-3. Contour map showing locations of Operation 63 trenches.

was whether an extensive cleared area would show even faint traces of some specific causeway connection apart from that mapped during earlier projects; it did not, but new evidence showed up on the lidar image as discussed later.

Clearing included stripping buildings of as much thin topsoil as possible to expose any stone alignments or other features. This was particularly effective at the conjoined Strs. 46, 1, and 2 (the Causeway Building) where the layout of the low southern section of the complex became evident, and wall alignments also appeared on the summit of Str. 46. Such stripping allowed more judicious placement of test excavations than would otherwise have been possible. Figs. 7-4 and 7-5 show mounds that have been cleared in this fashion. Table 7-1 lists heights for all mounds relative to the general level of the southern locale, which is about 592 m.

Table 7-1. Absolute mound heights.

Structure	Maximum elevation
46	594.38 m
47	593.78 m
48	594.04 m.
49	593.91 m
52	593.69 m
54	593.63 m
55	593.38 m
57	593.34 m
58	595.34 m
59	593.23 m
60	593.31 m



Figure 7-4. Str. 58 cleared of vegetation.



Figure 7-5. Small ancillary building cleared of vegetation. A test-pit is at left-center.

Table 7-2. Distribution of Op. 63 trenches.

Trench designation	Trench size	Location
Trench 1	2x2 m	In the corridor between Structures 67 and 68 (the main southern entrance to the courtyard).
Trench 2	2x1 m	West side of Structure 9N-1.
Trench 3	2x1 m	East side of Structure 9N-1.
Trench 4	2x1 m;	East side of Structure 9N-2.
Trench 5	2x1 m	West side of Structure 9N-2.
Trench 6	2x1 m	East side of Structure 47.
Trench 7	2x1 m	North side of Structure 46.
Trench 8	2x1 m	Approximately 5 m to the south of the doorway in the Structure 9N-1-2 complex.
Trench 9	2x1 m	East side of Structure 48.
Trench 10	2.65x1 m	In the southern doorway leading into the courtyard of the Structure 9N-1-2 complex.
Trench 11	2x1 m	East side of Structure 49.
Trench 12	2x1 m	South side of Structure 52.
Trench 13	2x1 m	South side of Structure 55.
Trench 14	2x1 m	South side of Structure 46 on the central axis of the building.
Trench 15	2x1 m	South side of Structure 57.
Trench 16	2x1 m	South side of Structure 54.
Trench 17	2x1 m	Immediately to the east of Str. 58.
Trench 18	2x1 m	West side of Structure 59.
Trench 19	2x1 m	West side of Structure 60.
Trench 20	2x2 m	Northwest corner of Str. 46.

Excavations

Test excavations, most measuring either 2x2 or 2x1 m, were opportunistically placed to intercept what on the surface appeared to be the rear or sometimes side walls of structures and to reveal features such as floors, terraces, or stairways. Such placement provided limited information about the configuration of each structure, but a good idea the nature and quality of its construction as shown both by intact masonry and by collapse material. Middens, features, and burials are often found off the backs or sides of structures at Copán and showed up in several of our Op. 63 trenches. Lacking a grid, we positioned each trench as seemed most appropriate given the orientation of the building judging from its surface appearance. Each corner of every trench was tied in to the original 1990 grid co-ordinates to locate it properly. In most cases we were quite successful in finding the walls of the buildings with the anticipated orientations. We ultimately completed 20 test excavations whose locations are shown in Fig. 7-3 and listed in Table 7-2. Because so many trenches were located to the rear of buildings there is an obvious bias in our collections toward activities that took place in these spaces.

Sub-operations: Our 20 trenches can be grouped into three sub-operations, each with a different purpose:

1. To investigate the Causeway Building complex.
2. To expose a causeway paving or other large, prepared surface at the southern approaches to 8N-11.
3. To expose rear or side walls of the other ancillary buildings and recover artifacts, burials, and features adjacent to them.

I discuss each set of trenches according to these groupings. For the sake of convenience associated features (Table 7-3) we found in suboperations are described in this chapter, not in Chapter 8, although they are listed there as well.

OPERATION 63: THE 1997 FIELD SEASON

Table 7-3. Features found in Op. 63 trenches.

Number	Trench	Level	Lot	Description and Comments
1	7	3	35	Spiked censer fragments in midden deposit at the SW corner of the trench.
2	7	3	38	Flanged censer fragments in the same midden deposit as Feature 1, but at the eastern end of the trench.
3	8	2	40	Possible remains of earlier construction (Str. 48-sub).
4	11	4, 5	50	Circle of pebbles in west end of trench.
5	8	6	59	Pit with mixed stone and sherds.
6	16	1	77	Smashed whole vessel and sherd concentration.
7	15	4	79, 81, 82	Midden below substructure wall base with Burial #1 and two large Casaca-striated vessels.
8	18	3	99	Burial # 2 (infant) below substructure wall base.
9	19	5	100	Midden with carbon and barro quemado near remains of a possible early structure.

Sub-operation 1: Str. 46, the Causeway Building, Trenches 2, 3, 4, 5 and 10

Soil buildup over what remains of the low (southern) section of the Str. 46 complex was fortunately very shallow. Superficial clearing of vegetation exposed traces of stone alignments that allowed us to position four exploratory trenches (numbered 2 through 5) in a line across the apparent wall sections (Figs. 7-6, 7-7).



Figure 7-6. Cleared southwest corner of Str. 1. Southwest corner of Structure 1 after superficial clearing. Trenches 2 and 3 visible in right foreground.

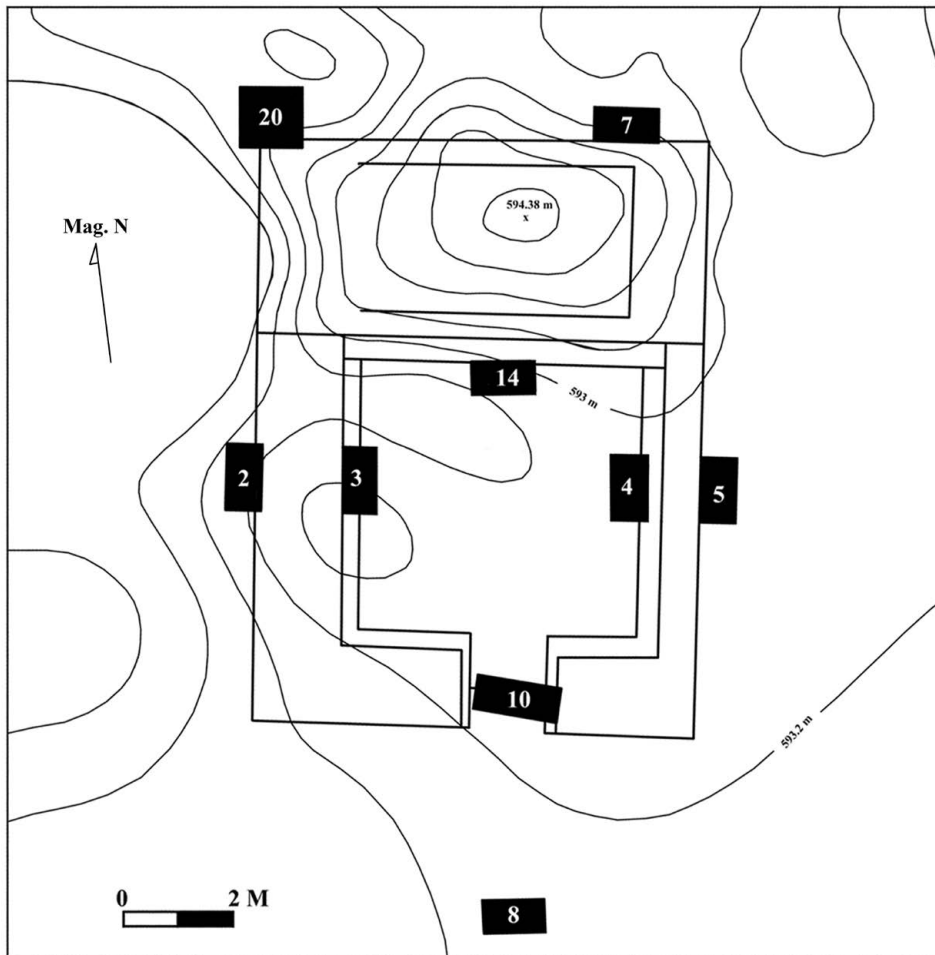


Figure 7-7. Causeway Building trenches.

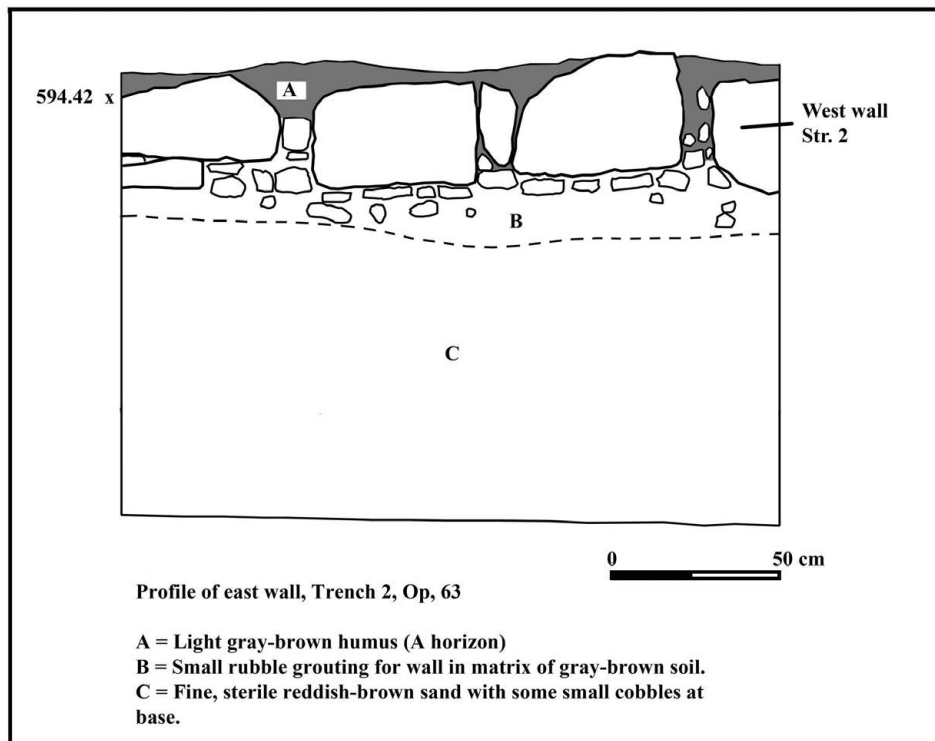


Figure 7-8. Profile, east wall Trench 2.

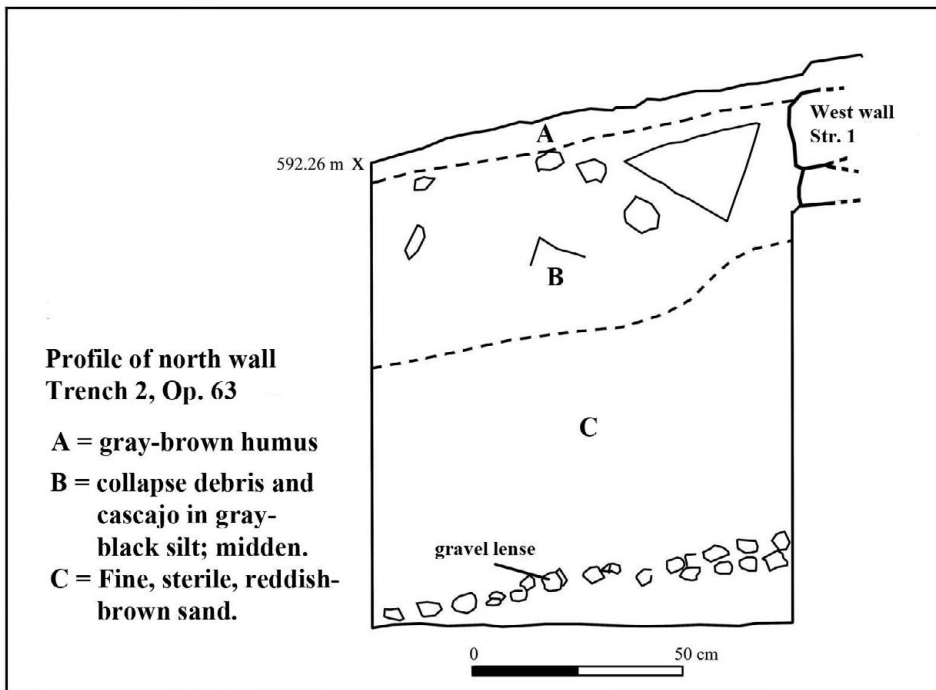


Figure 7-9. Profile, north wall of Trench 2.

Trench 2

This trench penetrated to a maximum depth of one meter and exposed the west edge of Str. 1 (Figs. 7-8, 7-9). A shallow A horizon of grey-brown humus overlay a sloping layer of grey-black silty clay and collapse debris from the building, mixed with shallow midden material. Of special note was an abundance of large jar, basin, and censer sherds, including one with a cacao pod *adorno*. Beneath was a deposit of fine, sterile, reddish-brown sand. The west edge of the platform was a two-course stone wall some 35-40 cm high resting on a thin layer of small rubble (floor underlayment) in grey-brown soil. At about the base level of the wall were remnants of a hard-packed soil that was probably the old living surface. Well-preserved Copador Polychrome sherds were retrieved from below the level of this surface, but we could not trace it coherently farther to the west.

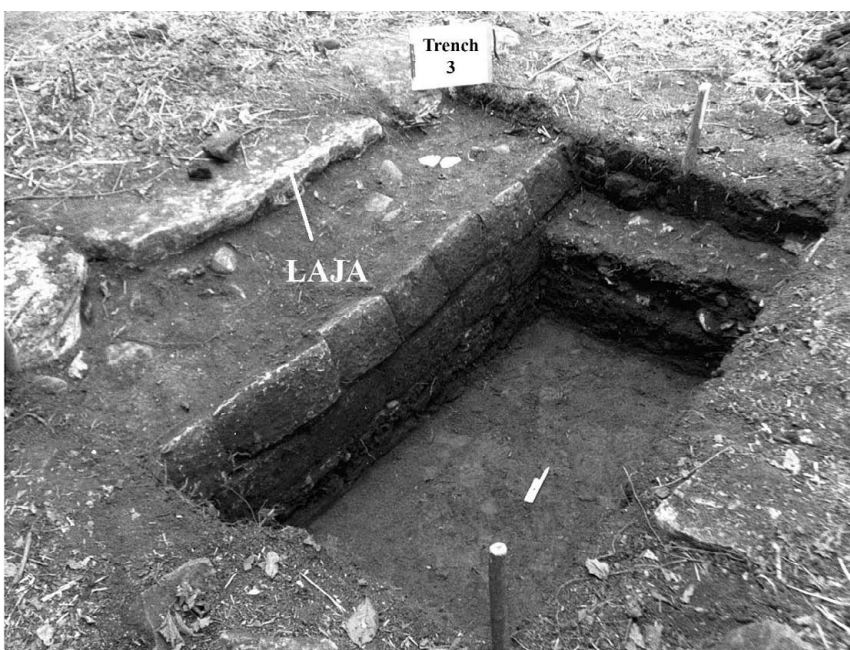


Figure 7-10. East wall of Str. 1 of Trench 3.

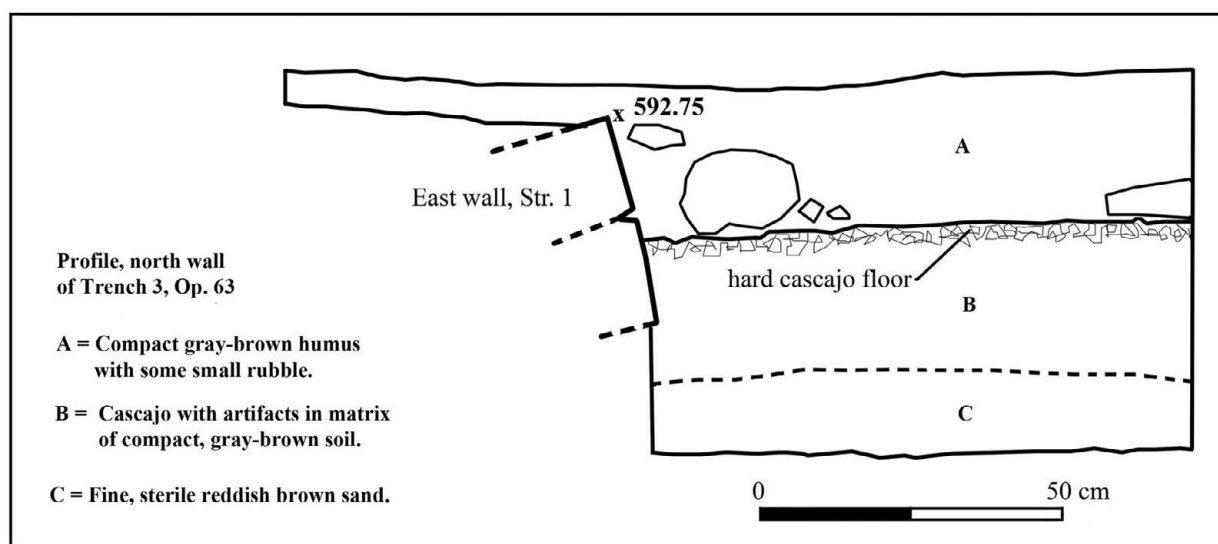


Figure 7-11. Profile, north wall of Trench 2.

Trench 3

This trench (2x1.5 m) was parallel to Trench 2 and some 2.03 m farther to the east, adjacent to the other (east) side of the Str. 1 platform (Figs. 7-10, 7-11). After stripping off about 23 cm of grey-brown A horizon we struck a hard, compact, level floor made of cascajo. This floor abutted a two-course stone wall about 35 cm high that paralleled the wall found in Trench 2, but was slightly lower in general elevation. The wall was very well built and sat on its own layer of foundation stones. Beneath the floor was a deposit of grey-brown soil with cascajo rubble, sherds, and obsidian. The trench bottomed out at a depth of 60 cm in the same sterile, reddish-brown sand found in Trench 2.

Trench 4

Trench 4 (2x1m) is the counterpart of Trench 2 but located on the east side of Str. 2 (Fig. 7-12). After stripping off the A horizon we hit dark grey-brown silty clay with wall collapse and many cascajo fragments. This midden-like layer had the same kinds of ceramics found in Trench 2--large broken jars, basins, and censers with cacao pod *adornos*. At the base of this deposit (roughly 43 cm below the surface) was a soil change, possibly an old living surface. It extended to the east from the base of a well-made, two-course masonry wall some 40 cm high. This eastern wall of Str. 2 ran north-south, paralleling those found in Trenches 2 and 3. Below the probable surface was reddish-brown sand with considerable gravel, grading into a fine red-brown sand with no gravel; these last two deposits were mixed, possibly by a pit. Trench 4 bottomed out at 1.10 m.

Trench 5

This trench explored the west wall of Str. 2 (Figs. 7-13, 7-14). Level 1 was about 25 cm of wall debris and cascajo in a dark grey-brown A horizon. Immediately beneath it was a cobble surface on a thick layer of cascajo and pebbles in dark grey-brown silt, another obvious underlayment for a floor. This floor abutted a three-course wall (ca. 40 cm high) of cut stone running north and south, paralleling the walls found in the earlier trenches. Still further down was a thick layer of reddish-brown sandy clay with inclusions of cascajo and pebbles, and very gravelly in texture. Trench 5 penetrated to a maximum depth of 1.25 m and produced Coner complex pottery right down to the bottom. It unexpectedly lacked the fine sterile sand found in Trenches 2 and 3. Some kind of local disturbance might explain this lack of stratigraphic continuity.

Strs. 1 and 2 were clearly of Coner date and were laid down on a deposit of fine, sterile sand that was just beneath the surface; it seemed to us to be a natural river deposit, although conceivably it is very clean fill. The profile in Fig. 7-13 shows it has a decided slope to the west. Our deepest probes near Str. 2 revealed that this sand either

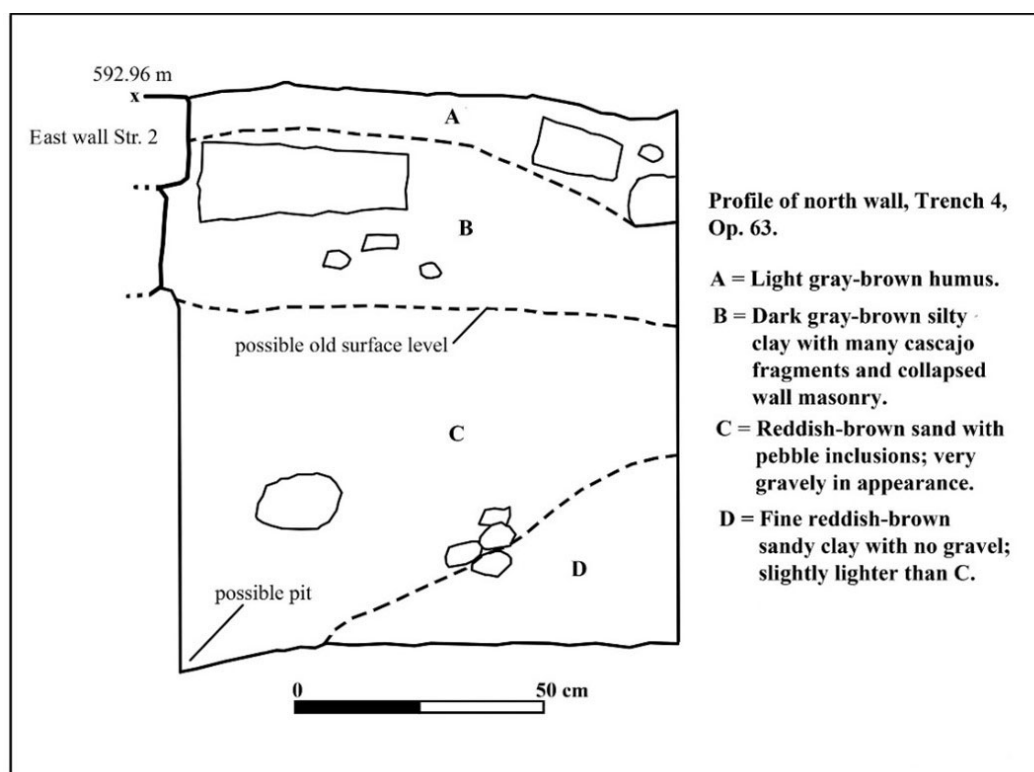


Figure 7-12.
Profile, north wall of Trench 4.

naturally slopes off instead to the east, or that there was some kind of pitting on the east side of the building. A schematic cross-section of the two structures and the four trenches adjacent to them is shown in Fig. 7-15. Note that the top of Str. 2 is slightly higher than Str. 1 and that the whole complex slopes perceptibly to the west.

Trench 10

Surface clearing and mapping revealed that a low wall with a doorway (Fig. 7-16) not recorded on the Harvard/PAC I maps connected the southern ends of Strs. 1 and 2, thus forming an enclosed patio. Our long, narrow Trench 10 spanned the doorway in this wall. About 25 cm below ground level we struck a layer of packed cascajo with fragments of plaster lying on it. This was obviously the floor of the entryway and of the little patio itself, at an elevation of approximately 592.46.

At the east and west ends of the trench were low door jambs about 30-35 cm high. Between them ran a well-made stone step about 20 cm high with very faint traces of plaster on its tread, suggesting that the internal patio of the Causeway Building was paved with this material. Extending out to the south from the step was a hard-packed level of cascajo about 4-7 cm thick. It seems to represent a definite surface but it almost totally obscures the riser (because of resurfacing?). We dug down in front of this step to a depth of 95 cm and bottomed out in reddish, gravely sand.

These four trenches revealed some previously unexpected characteristics of the Causeway Building that enabled us to make the provisional maps shown below. Strs. 1 and 2 were clearly not a ball court as once suspected, but long sides of a little enclosed patio or forecourt. We next turned our attention to Str. 46, the tall mound that dominated the northern end of the complex.

Trenches 7, 14, and 20

Three trenches explored the peripheries of Str. 46, the high rectangular building from which Strs. 1 and 2 extended to the south. On the summit we observed what appeared to be the southeastern corner of the superstructure and part of a slumping rear (north) wall. Although we have no other details from this upper part of the mound, there

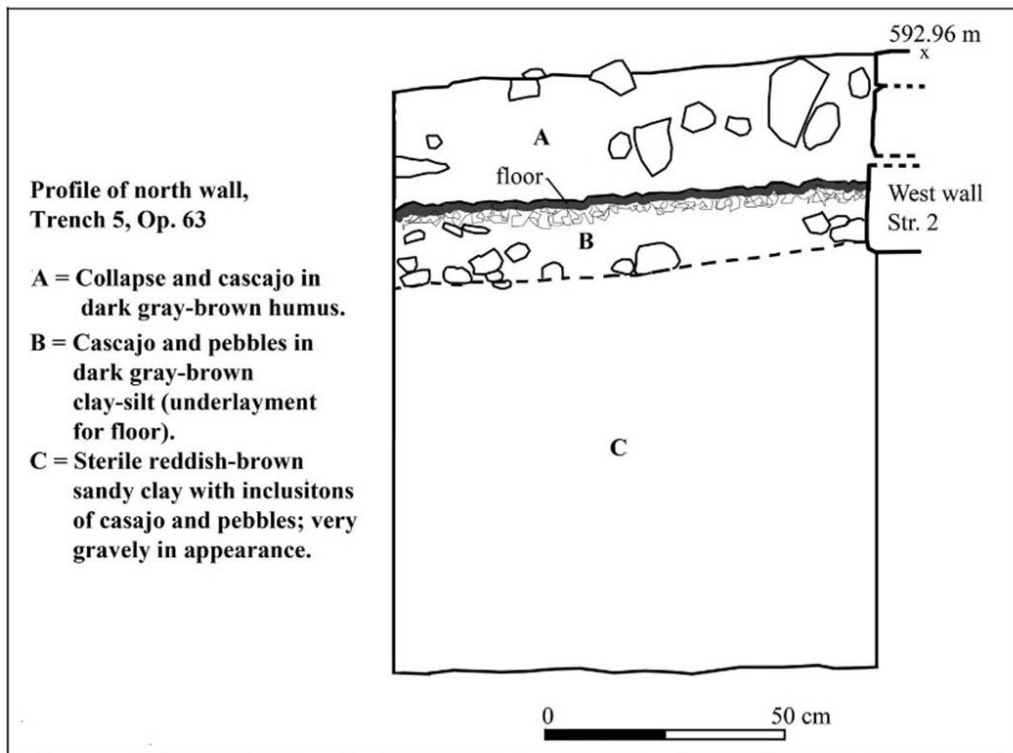


Figure 7-13. Profile, north wall of Trench 5.

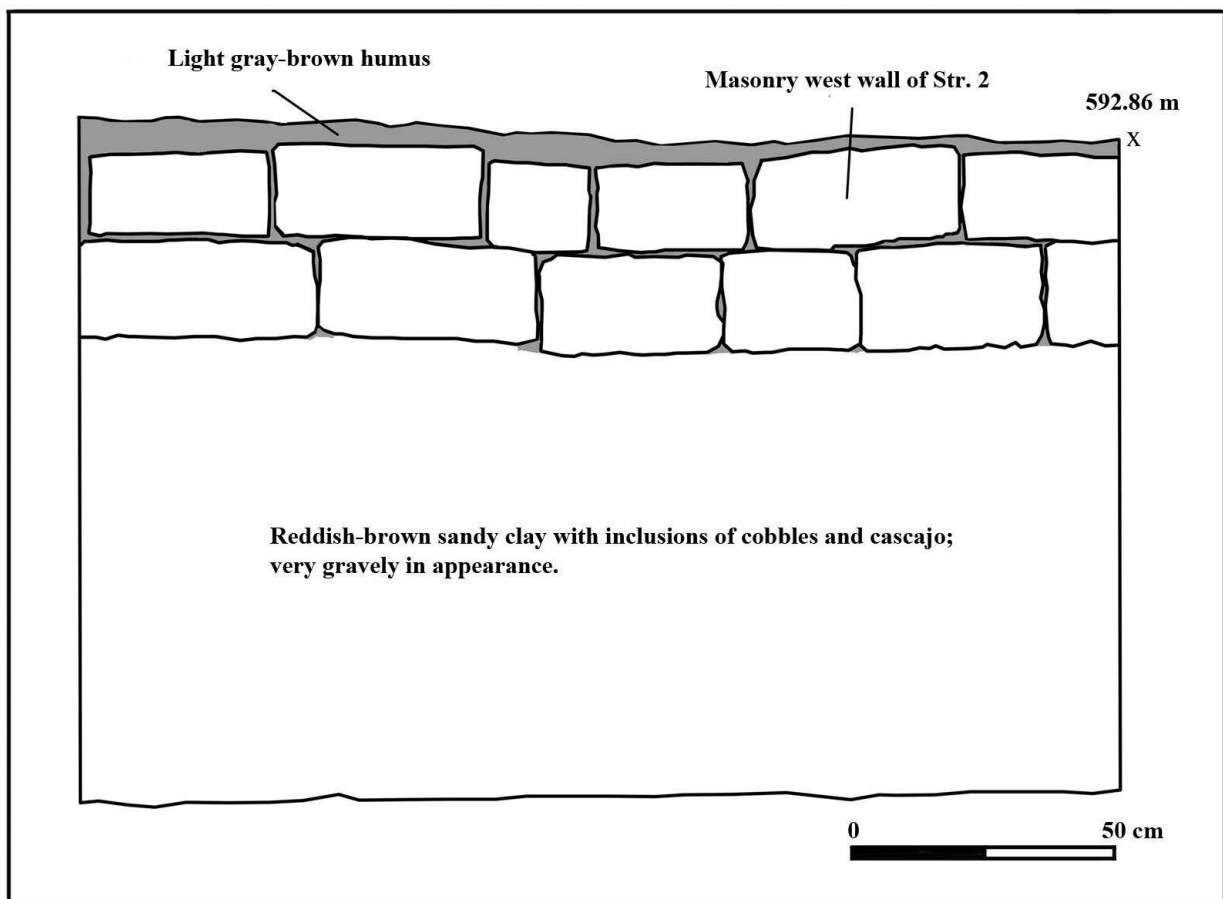


Figure 7-14. Profile, east wall of Trench 5, Op. 63.

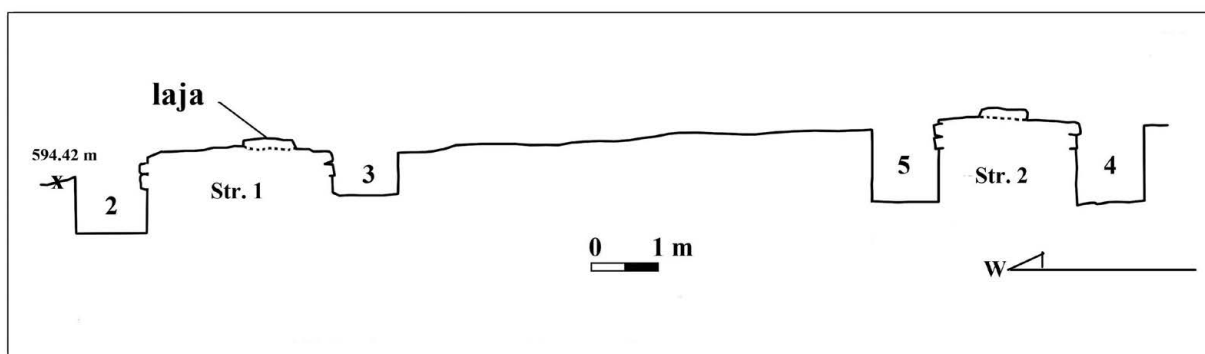


Figure 7-15. Schematic section of the Causeway Building.

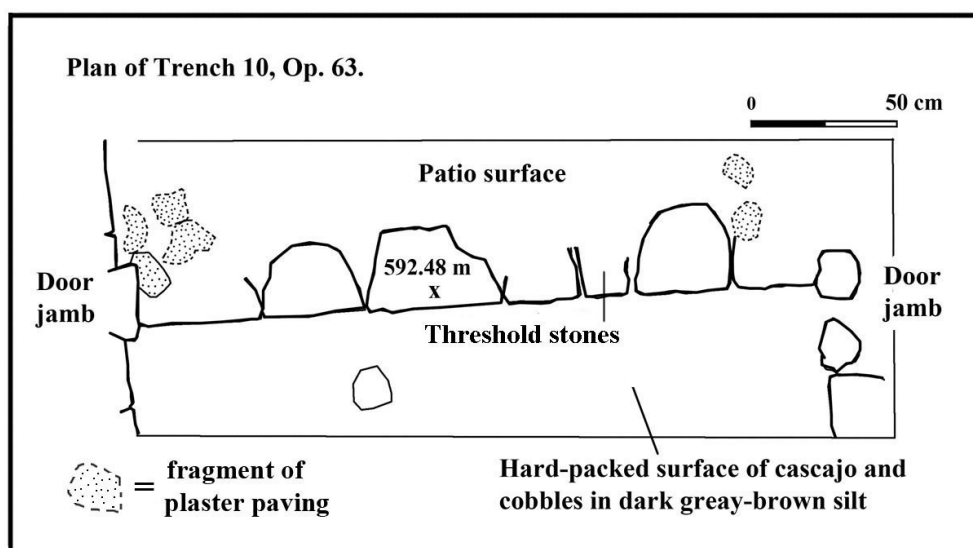


Figure 7-16. Plan of Trench 10.

was obviously a south-facing superstructure some 10-12 m long and 4-5 m wide, probably with a stairway leading down to the little patio to the south. There were no vault stones or sculpture or any signs of a substantial roof, so the summit building was probably thatch and rather plain in appearance.

Trench 7 was positioned to intercept the rear (north) wall of the building near its northeast corner (Figs. 7-17, 7-18). We exposed a very well-made masonry wall with an outset basal molding, still intact to a height of five courses (90 cm). This wall sat on a layer of gravel in dark, reddish-brown sandy clay, beneath which was sterile reddish-brown sand with large gravel. This deposit and the base of the wall were at ca. 592.48, an almost perfect match for the level of the entryway and inner patio to the south, so it is what remains of the old paving or surface.

A midden had built up to a depth of about 20 cm at the wall base above the paving and was then buried by collapse and humus. This midden included Feature 1 (Lot 35, Fig. 7-19), a concentration of spiked censer sherds that did not constitute a whole vessel.⁵ Protruding from the east wall of the trench was Feature 2 (Lot 38), a set of flanged censer fragments. Feature 2 appeared to sit right on the floor, while Feature 1 was a bit higher. Fragments of similar vessels were found in the midden throughout the trench, and sherds collected from below the floor surface included definite Coner types.

Trench 14 was set along what we judged to be the central axis of the southern edge of Str. 46 (Fig. 7-20). As anticipated, it exposed the lowest step of a stairway and the remnants of a second one, each about 10-19 cm high. A cobble floor surface extended south from the base of the first step (and partly laid up against it, hence the difference in tread heights) into the patio, and was 8-12 cm higher than the surfaces we detected Trench 10 at the

⁵ Such censers are common in late contexts in Maya sites and might symbolically reference the spikes characteristic of ceiba trees, central to Maya conceptions of world structure and order.

entryway. Below was a deposit of cascajo in black silty clay grading into brown sandy clay. About 75 cm below the surface we struck reddish-brown pebbly sand, and the trench bottomed out in this material at a depth of 80-90 cm.

We hoped that Trench 20 (not illustrated) would reveal the northeast corner of Str. 46, but we found no trace of it, although there was some collapse rubble. Unless we positioned this trench incorrectly, which is unlikely, the east and northeast parts of Str. 46 appear to have been disturbed, or even torn off. Such damage would explain why the site map shows the east wall of Strs. 46 and 2 as nicely aligned, but the west wall of Str. 1 too far to the west to join that of Str. 46.

Configuration of the Causeway Building

Our six trenches together, along with associated alignments and masonry exposed by surface cleaning, revealed the basic configuration of the Causeway Building (Figs. 7-21, 7-22). Str. 46 was a standard, well-constructed masonry building with a high substructure and a front, south-facing stairway. It originally measured about 7x14 m and supported a somewhat smaller, flimsy superstructure. Extending to the south from each end of its façade were two parallel, stone-edged platforms, each about 13.1 m long. At their southern ends they turned inward, forming a southern wall pierced by a doorway 2.4 m wide. These several components defined and enclosed a small patio about 8.4 m wide and 9.5 m long, with a prepared surface that either sloped upward to the north, or more probably had a raised apron in front of Str. 46 that we did not detect. The stairway from the patio led up to the summit of Str. 46.

Both Strs. 1 and 2 were essentially low platforms edged on their outer perimeters by well-made but stone retaining walls two or three courses high. These platforms were elevated only about 30-40 cm above the original interior patio surface. Between each set of retaining walls, running roughly down the middle of each platform, was a row of flat limestone *lajas* (flagstones). Some of these were very large -- as much as 1.5 m long and 80-90 cm wide. Limestone deposits are highly localized in the Copán valley and sources of such *lajas* are rare, so considerable effort went into their acquisition and placement. Although the stones were irregular in shape, care had been taken to align the longest, straightest edges with each other along the sides facing the patio. There were several gaps in the *laja* alignments, probably because stones were robbed from the building (one was found displaced to the west of Str. 1). Because the *lajas* were quite thick, they served to elevate part of the platforms a bit above the level of the interior walls (see Fig. 7-15). This arrangement immediately suggested to us sets of low benches on which people or images might sit.⁶



Figure 7-17. Trench 7, showing part of the north wall of Str. 46.

Masonry retaining walls of the platforms were of surprisingly high quality given their low elevations. Stonework was better than that on the Str. 50-51 complex and compared favorably with most of that on the Str. 66 complex. In fact, it most resembles the bench-facings in the big buildings, on which the Maya builders lavished unusual care. If these low platforms were late additions to Str. 46 the cut stone might have been recycled from some other building.

⁶ An alternative explanation is that they served as basal supports for large timber wall elements, but I think this is very unlikely.

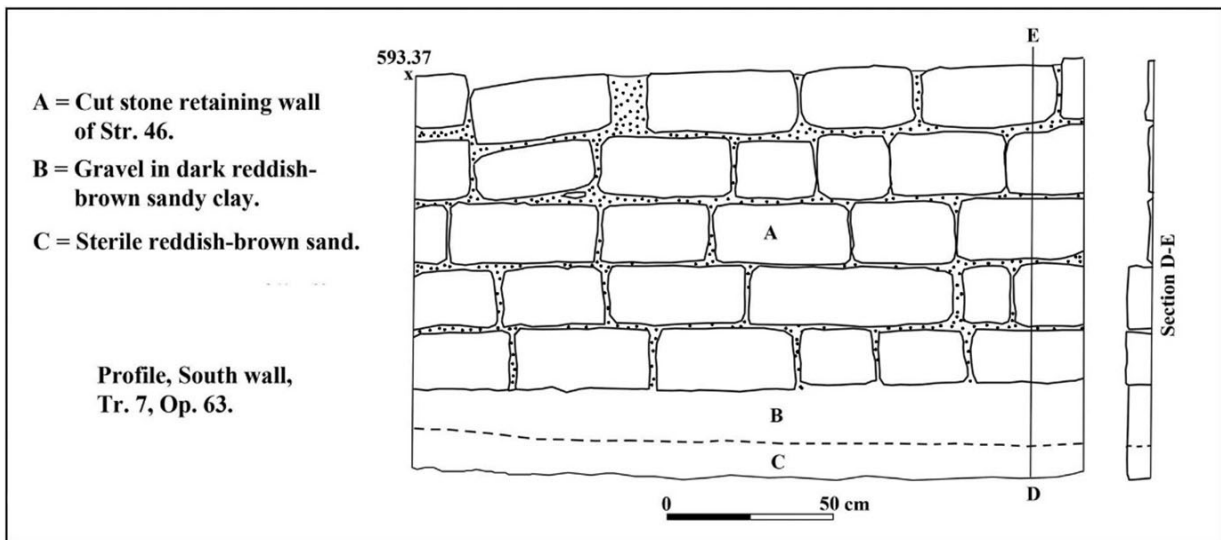


Figure 7-18. Profile, south wall, Trench 7.

We found no evidence of large posts, so whether Structures 1 and 2 supported walls and a roof is unclear. If such elements existed they probably formed parts of very light and entirely perishable ramada-like structures. Had there been substantial bajareque walls we would have encountered lenses of redeposited clay, particularly in Trenches 2, 3, 4, 5, and 10, and there would have been more soil obscuring the walls. Quite possibly what we call a plaza or forecourt floor were actually the entrance and paved interior of a large perishable structure. If so, Strs. 1 and 2 would have been interior raised benches. Only careful excavation, which we were not allowed to do, might confirm this idea.

Anyone approaching the Skyband group from the south (i.e., from the causeway) would first encounter the Causeway Building -- hence our nickname. Its decidedly strange plan is unprecedented so far as I know at Copán. The whole layout is curiously asymmetrical because Str. 1 is wider than Str. 2, and the plaza doorway is not exactly centered on the south wall. To all appearances Str. 46 is a standard Late Classic building, but the two low wings

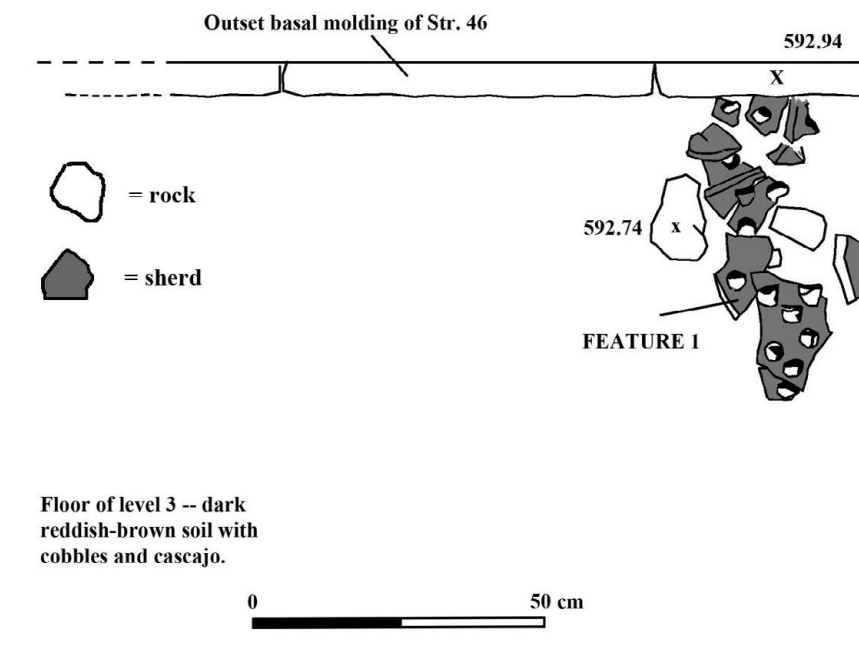


Figure 7-19. Plan of Trench 7, Feature 1.

to the south and their connecting wall/doorway form an unexpected extension. I suspect these platforms were late additions to Str. 46, probably built well after the dynastic collapse, although our inability to excavate architecture kept us from exploring this possibility. Nevertheless, if there is any phasing of construction it probably involved adding Strs. 1 and 2 to Str. 46. We shall see in Chapter 11 that there are late dates from Operation 63 that might indicate protracted use of the locale.

The overall layout looks like a crude replica of the main 8N-11 courtyard. Despite its asymmetry and modest construction the building has a formal arrangement that suggests ritual functions. Censer fragments also hint at ceremonial use and recall those found by Rattray in the main plaza of 8N-11. The long, broad benches could have easily accommodated many people in a comparatively intimate space, or alternatively images might have been arranged along them. Building and listed details of some 3456 sherds (see Tables 7-3 and 7-4 at the end of this chapter).



Figure 7-20. Trench 14, showing steps (left) and patio floor (right).

Sub-operation 2: The Causeway Connection, Trenches 1 and 8

The recent lidar image (Fig. 7-2) shows something we could not see on the surface in 1997 -- a long, dark, linear feature south-southeast of Str. 46 that seems to point to the gap between Group 8N-11 and the set of riverside mounds. It is probably one edge of the causeway. What seems to be a very faint line to the west is also visible, and the two together form a pronounced flare as shown on the Harvard and PAC 1 maps. We did not clear or map this far south and so did not record either feature. We dug two widely separated trenches to detect any prepared surface that might reveal the paving of the causeway or the entryway into the main group, and both fell within the flare shown on the lidar image.

Trench 1

Trench 1 was a 2x2 m probe placed directly in the south entrance of the 8N-11 courtyard, between the end walls of Strs. 67 and 68 (Figs. 7-7, 7-23). We did not expect this trench to expose either of these walls because the opening was clearly wider than 2 m. Our intent, rather, was to determine the character and elevation of the surface that led through the entryway. Below a 65-70 cm thick layer of collapse debris we encountered a solid surface at an elevation of about 592.24 m. It consisted of cobbles above a floor underlayment of pebbles and cascajo in loose, red-brown clay. Remnants of stucco at the west end of the trench indicate the cobbles had been plastered. Beneath the underlayment, 80-90 cm below the present ground surface, was a deposit of dark reddish-brown sandy clay that graded at the bottom of the trench (depth of 1.6 m) into a much sandier material. Definite Copador Polychrome sherds were recovered from below the cobble floor, so it is a Coner phase feature. The basal deposit of the trench (approximate level = 591.45 m) was sterile red-brown sand. Vault stones were present in the upper levels of the collapse and judging from their positions they fell from Str. 68. We found no such stones during our partial exploration of Str. 67.

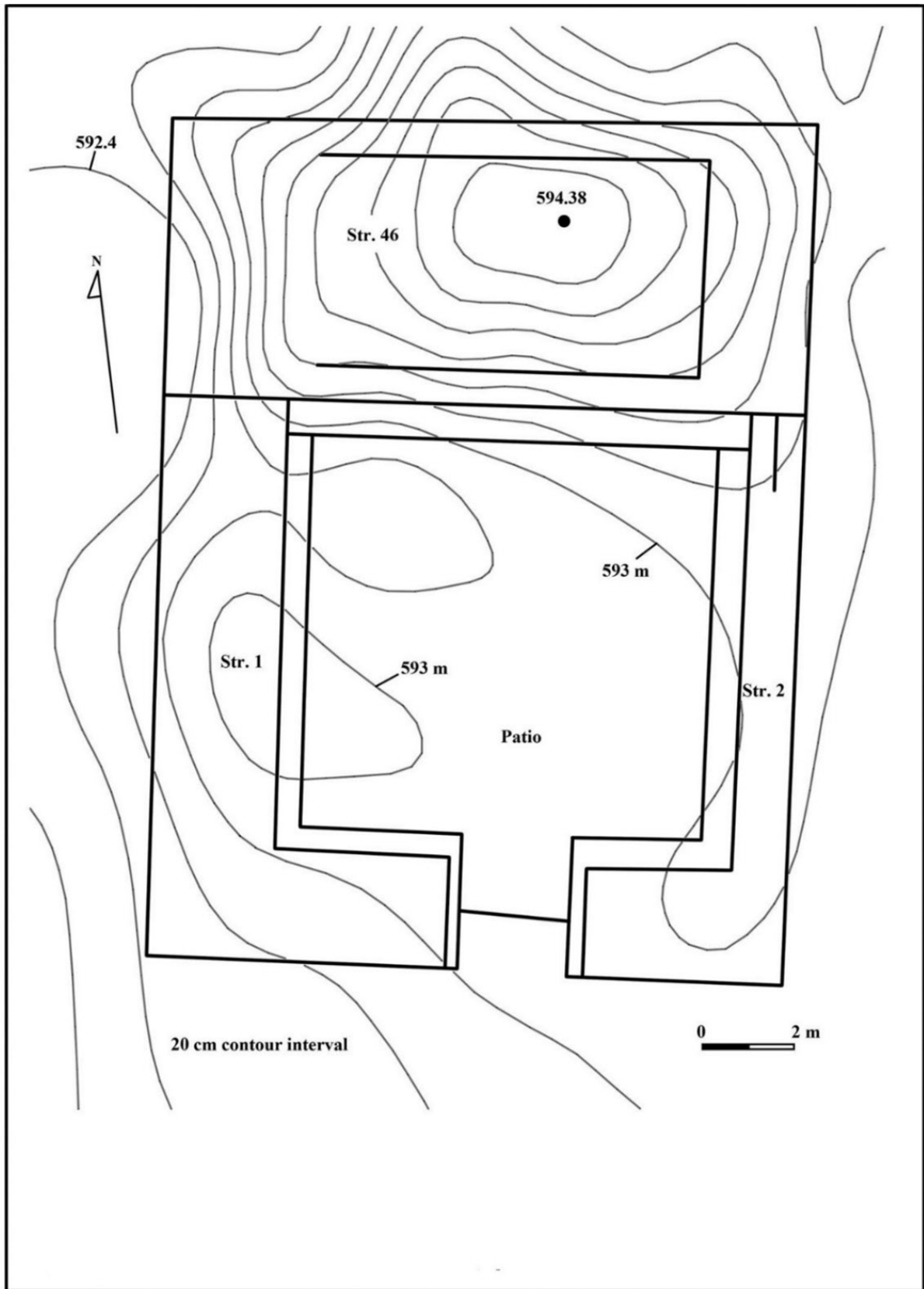
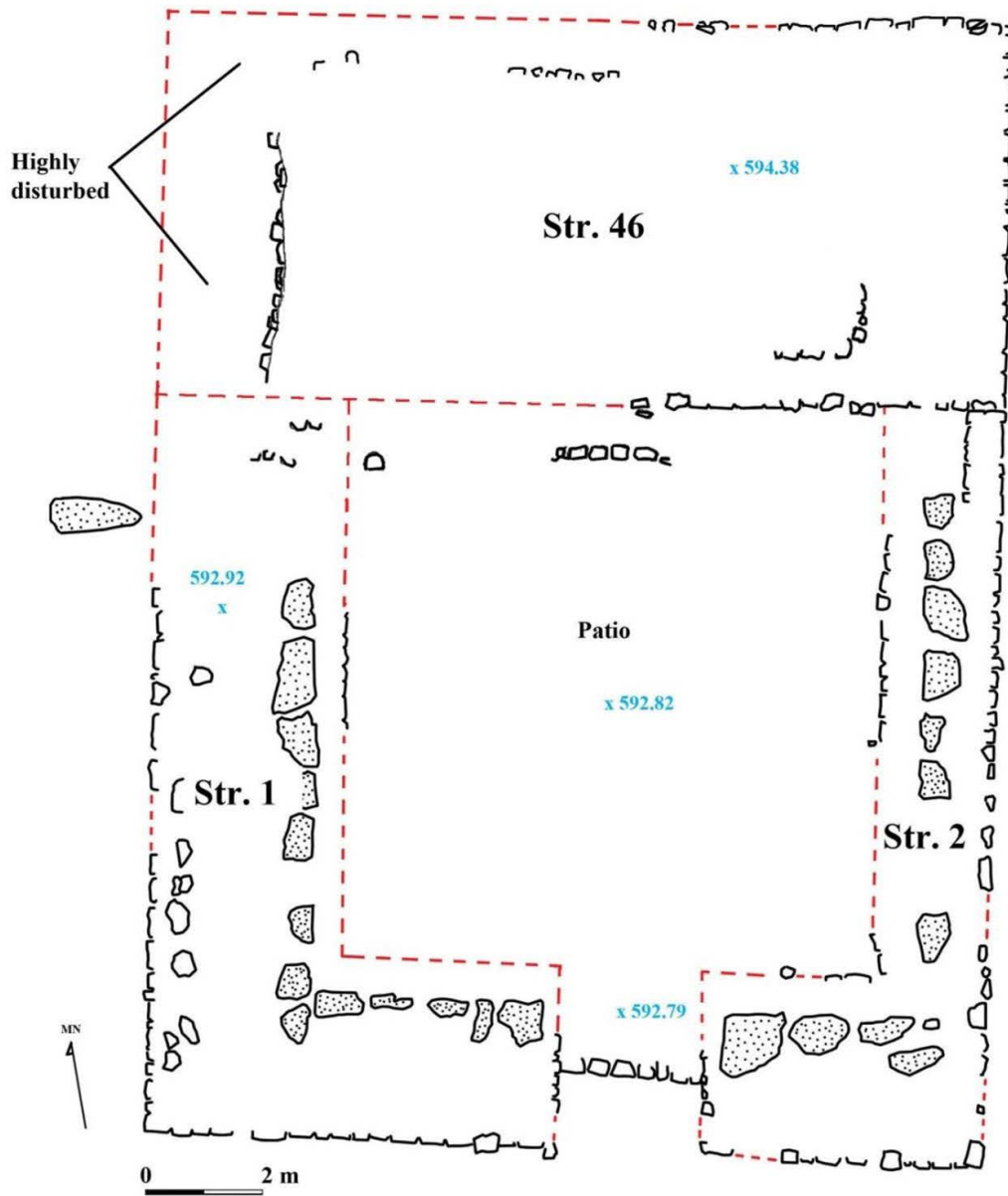


Figure 7-21. Schematic plan of Causeway Building.



Wall lines of the Causeway Building as exposed by clearing and excavation.
Stippled stones are lajas.

Figure 7-22. Cleared wall lines of the Causeway Building.

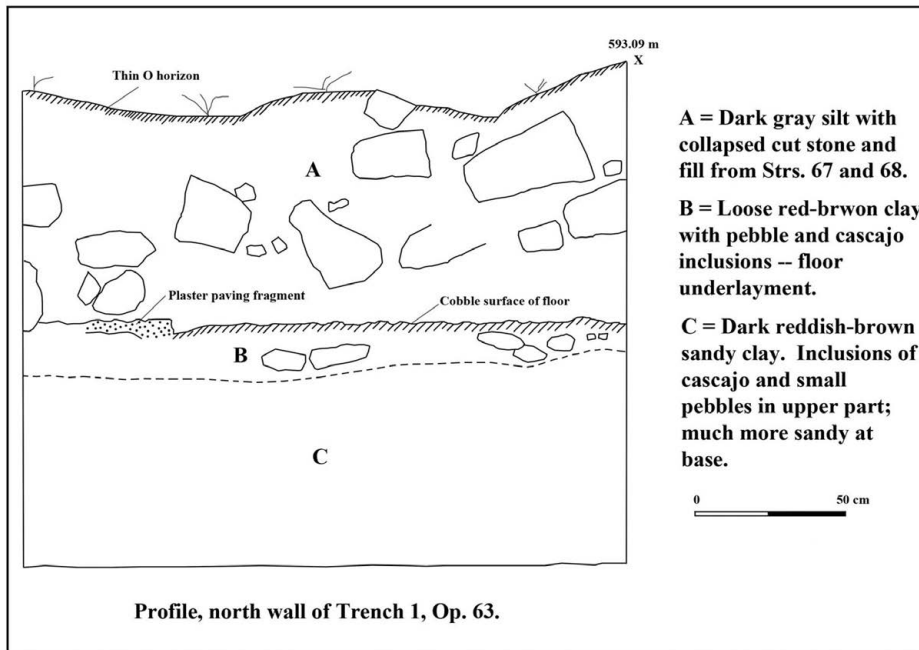


Figure 7-23. Profile, north wall, Trench 1.

Trench 8

Trench 8 was situated five meters south of Trench 10 and in line with it. Below 15-20 cm of A horizon and grey-brown silty clay we struck a level of cobbles and cascajo, much heaved by roots, with a general elevation ranging from about 592.49-592.60 (Figs. 7-24, 7-25). This layer is clearly paving and there are no known nearby structures to which it might relate.

Despite its irregularity this surface is a good match for that found in Trench 10 in the entryway of the Causeway Building. A concentration of rocks and part of a deer cranium (Feature 5) were found in a shallow pit beneath the level of the pavement in the southeastern corner of the trench. We could not be sure whether this pit predated the pavement or was intruded down through it and then covered with the floor. The pavement itself otherwise sat on a deposit of reddish-brown sandy clay with cascajo inclusions in the upper part, but very homogeneous at the base.

Trenches 1 and 8, along with the surfaces found in other excavations, strongly support the idea that the whole area to the south of the main courtyard of 8N-11 was roughly paved, although not exactly level. The surface in Trench 8 is about 30 cm higher than that found in Trench 1, which is about 50 m distant. Minor irregularities of this sort probably made little difference to the Maya.

Scott Zeleznik's detailed analysis of temporal trends in the Op. 63 ceramics revealed that although the upper causeway paving is clearly a Coner construction there is a definite increase in pre-Coner ceramics with depth. In the lowest level of Trench 8 (Lot 68) nearly 75% of the sherd collection was pre-Coner, an unusual ratio for 8N-11 contexts in general. Possibly there was some early causeway-like construction here that was later modified to conform to the growth of Group 8N-11, and especially the Causeway Building.

Sub-operation 3: Trenches Near the other Ancillary Buildings

Most of the remaining ancillary buildings appeared on the surface to be low, amorphous mounds (Fig. 7-5) and surface clearing often exposed alignments that guided our placement of test excavations. We began with the three buildings between the Str. 50-51 complex and the Causeway Building, all of which at some point might have been conjoined.

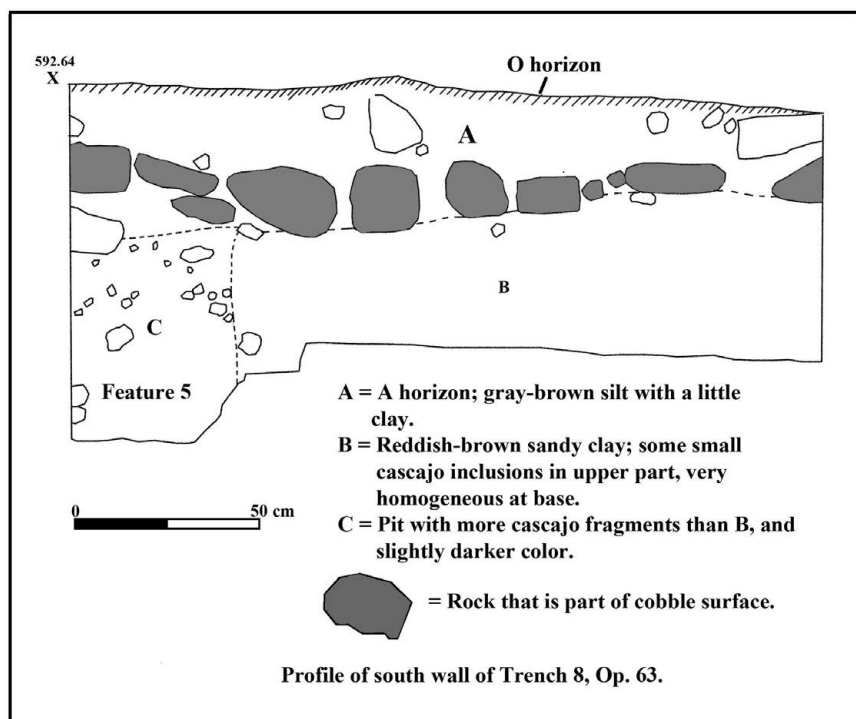


Figure 7-24. Profile, South wall, Trench 8.

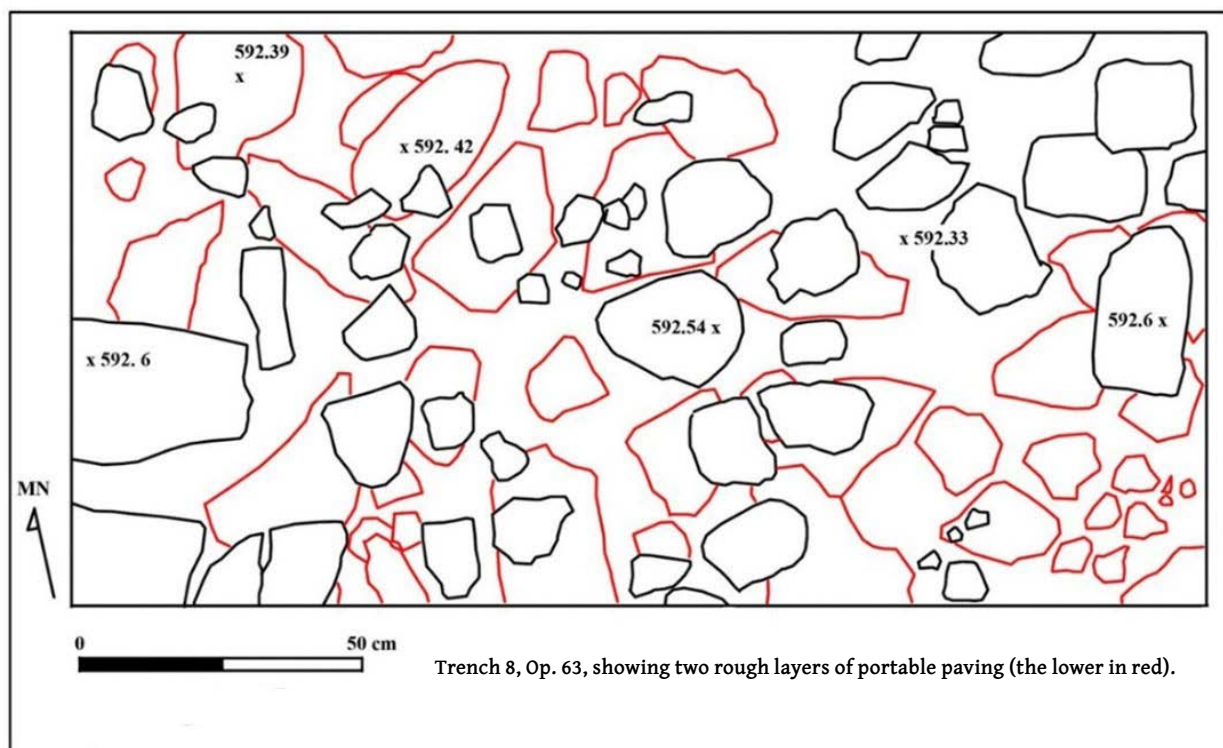


Figure 7-25. Plan of Trench 8.

Str. 49 -- Trench 11

The long axis of this 2x1 m trench extended out from the east wall of Str. 49, a corner of which had been exposed in 1990 (Figs. 7-26, 7-27). Our trench revealed the rear wall still standing to a height of 95 cm (5-6 courses). Beneath a shallow A horizon and a thick deposit of collapse and cascajo in black silty clay we struck a well-made cascajo floor

extending to the east at the level of the basal wall course. The soil above the floor was a mix of collapse and shallow midden material that yielded many jar and basin sherds, as well as obsidian. The floor itself rested on reddish-brown silty clay. Feature 4 was a roughly circular rock concentration that appeared to be the capping of a shallow pit dug down into the latter stratum. Its surface was slightly below the base of the wall and the floor. We dug this material out to a depth of about 20 cm but found no burial, cache, or other artifacts apart from several pieces of obsidian and some tiny bone fragments.

Str. 48 -- Trench 9

The long axis of this 2x1 m trench extended out from the east wall of Str. 48. Again we removed a thick layer of humus and collapse, exposing the remains of the building's rear wall (Fig. 7-28). About all that was left intact was a slumping mass of structure fill some 62 cm high. Extending out from the base of this material for about 1.4 m was what we identified in the field as part of an earlier platform (Str. 48-sub) roughly 25 cm. high. In retrospect it is conceivable that we did not position our trench properly to intercept the rear wall of Str. 48, which might be farther to the west. If so, 48-sub could instead be a terrace or apron similar to those associated with the completely excavated Str. 50-51 buildings. Whatever it represents, Str. 48-sub rests directly on dark reddish-brown sandy clay. If it is an earlier construction, it is one of the rare instances of architectural phasing we found in any of the Op. 63 buildings.



Figure 7-26. Rear wall of Trench 11 and Feature 4.

Str. 47--Trench 6

The long axis of this 2x1 m trench (profile not illustrated) extended out from Str. 47, which seemed to have a squarer shape than either Strs. 48 or 49. After we removed the usual humus and collapse the western end of the trench exposed a poorly-made wall still intact to a height of about 75 cm. This wall in turn sat on a 20-25 cm thick deposit of dark brown sandy clay mixed with cascajo. The trench bottomed out in sterile reddish-brown sand.

Our probes showed that Strs. 47, 48, and 49 all have their basal wall courses and/or their associated floors at a level of roughly 592.52 m. They either rest right on a reddish clay/sand deposit or on thin layers of fill that approximate this level. Such correspondence suggests that all were built about the same time and that Str. 48-sub is in fact an apron, not an earlier structure. Four small and indistinct mounds (Strs. 52-55) lie to the south of Str. 67. We tested only three of these, leaving the smallest, Str. 53, untouched.

Str. 52 --Trench 12

The north end of this trench exposed a badly slumping masonry wall about 75 cm high (4 courses). Its base was at a level of 592.64 m and slightly intruded into a deposit of dark reddish-brown sandy clay (Fig. 7-29). A shallow midden had accumulated against the base of the wall.

Str. 54 -- Trench 16

We apparently positioned this shallow trench (Fig. 7-30) too far to the south to intercept whatever (if anything) remained of the rear wall). All we found was a layer of humus and collapse in dark soil underlain by dark brown, sandy clay. At the northern end of the trench, at the intersection of the collapse deposit and the clay, was Feature

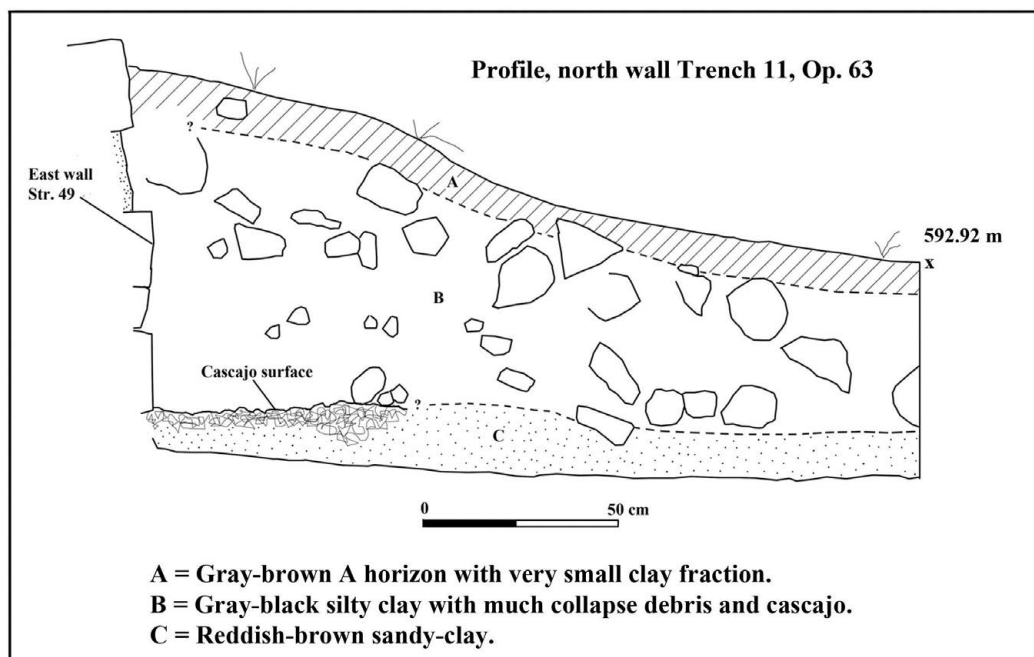


Figure 7-27.
Profile, north
wall, Trench 9.

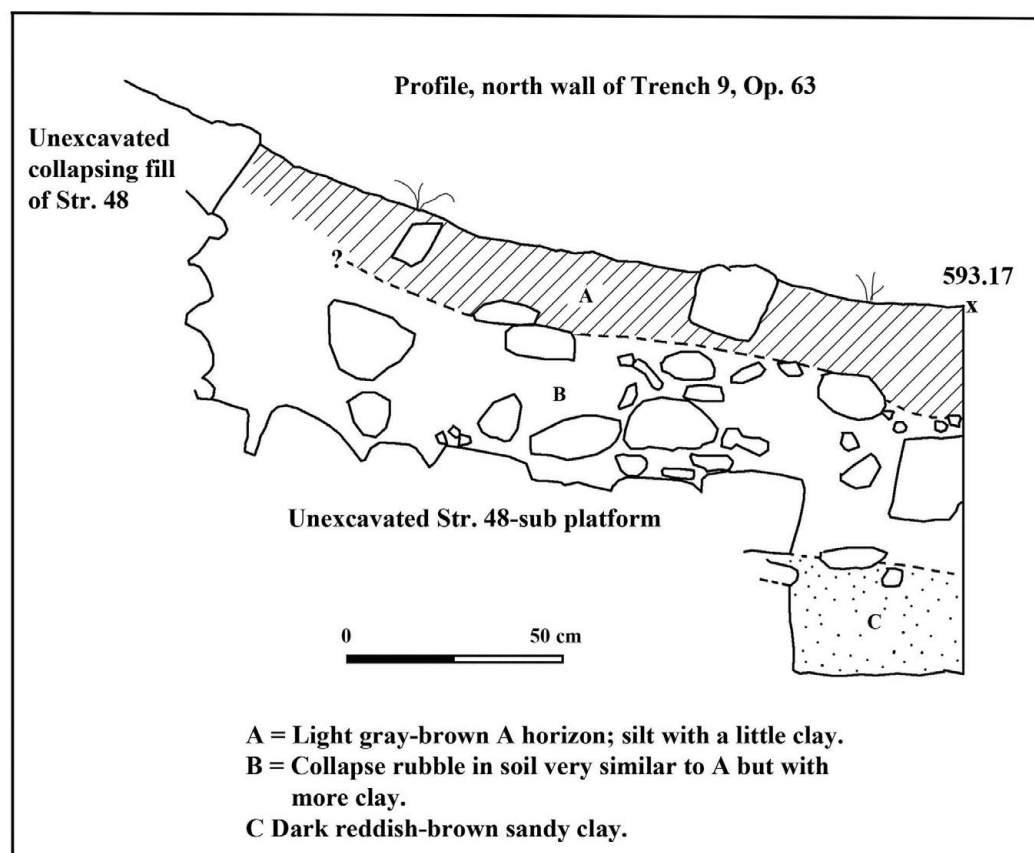


Figure 7-28.
Profile, east wall,
Trench 12.

6 (Lot 77), a whole (or almost whole) smashed, inverted jar with a cream-orange paste, probably eroded Copador Polychrome, and also sherds of Raul and Casaca Striated jars. The trench was quite trashy-looking and probably represents a shallow midden intermixed with collapse.

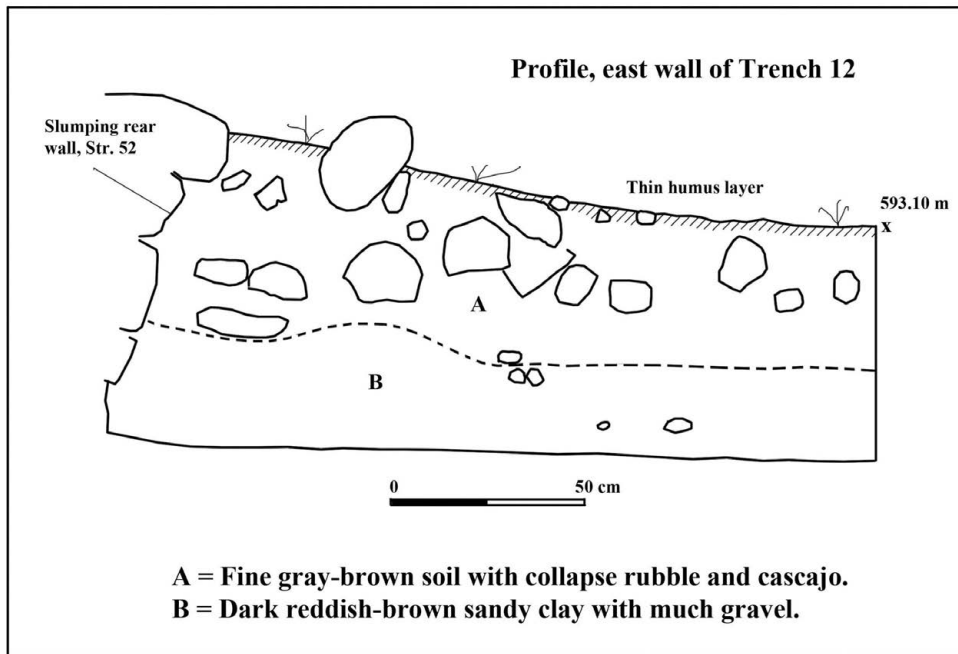


Figure 7-29. Trench 16 and Feature 6.

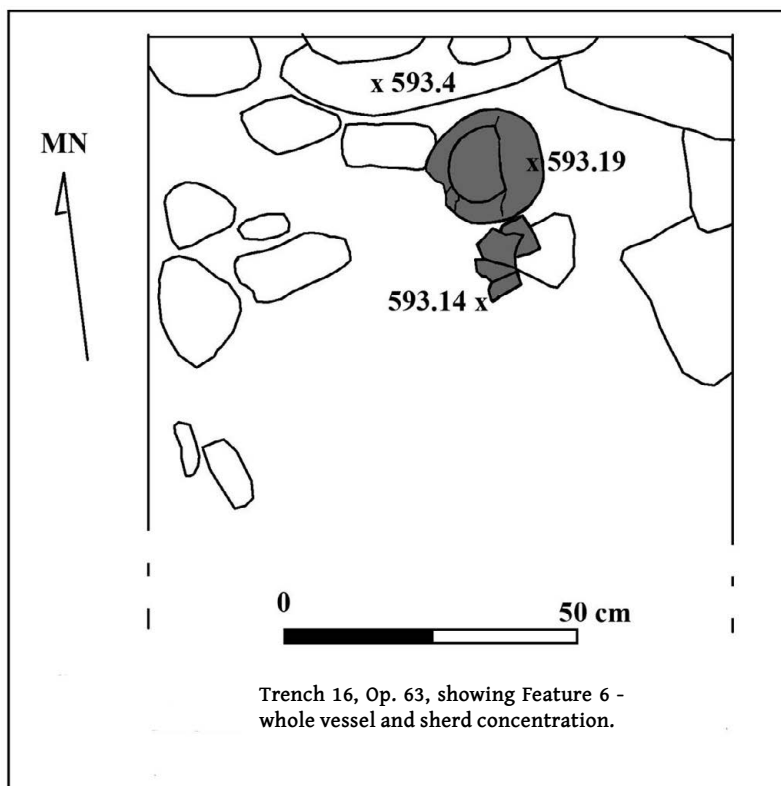


Figure 7-30. Profile, west wall, Trench 13.

Str. 55 -- Trench 13

This trench exposed the rear wall of Str. 55 (Fig. 7-31). Although slumped outward to the south, the wall was in good condition and preserved to a height of 1 m (8-9 courses). Masonry was well-laid and comparable to that at the rear of the Str. 50-51 complex. The base of the wall rested on a lens of loose, dark, reddish-brown sand that extended under the building and that had many artifacts. Comparatively little stone rubble had collapsed

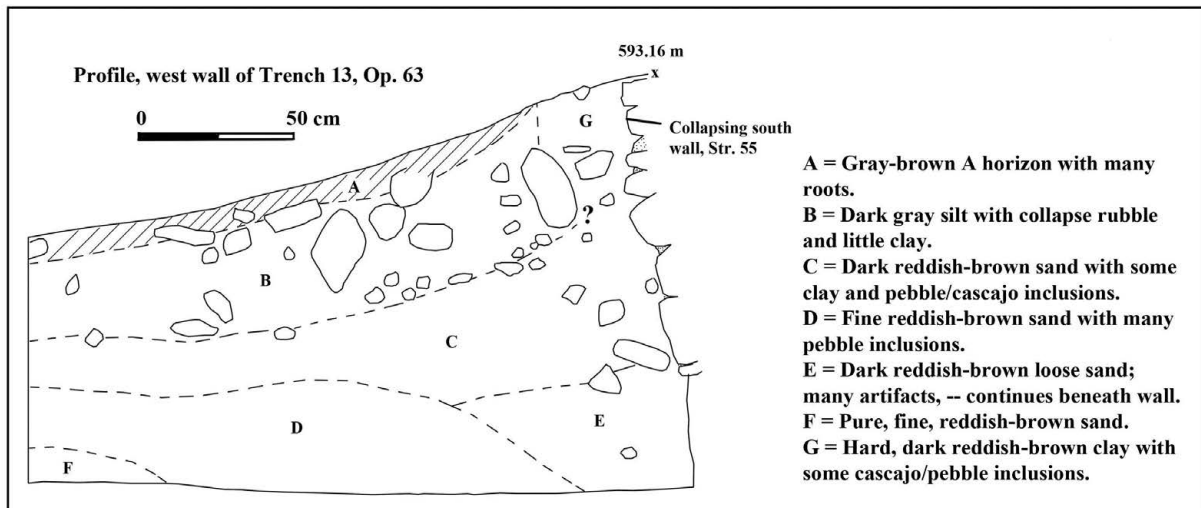


Figure 7-31. Profile, north wall, Trench 15.

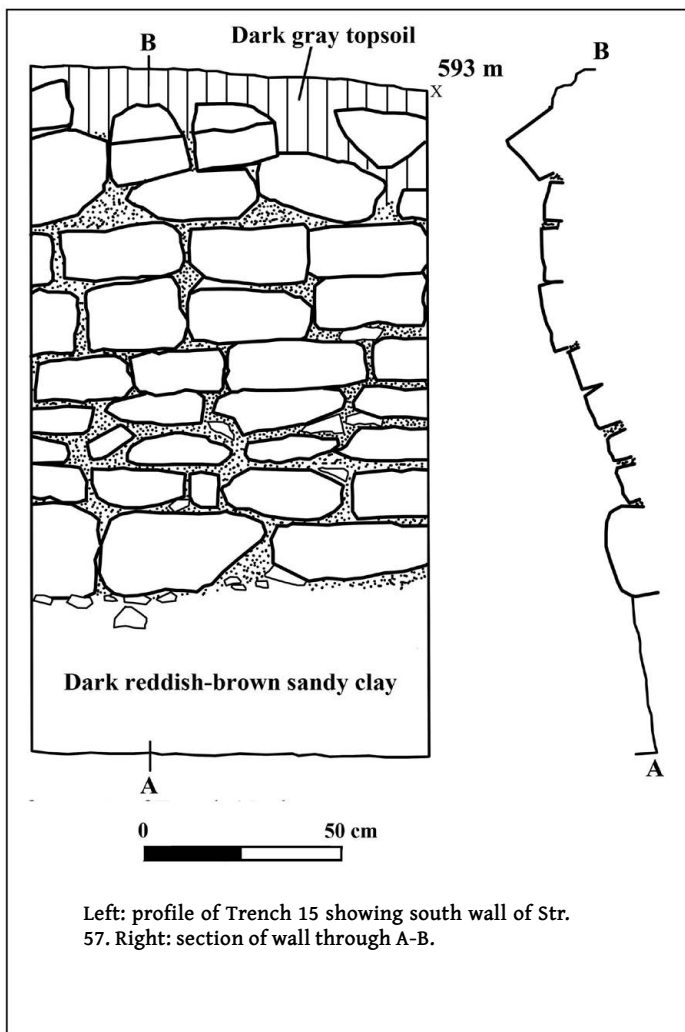


Figure 7-32. Profile, east wall, Trench 15.

off the rear of the building. A deposit of dark reddish-brown sand and clay lensed out from the lower half of the wall, suggesting that all or part of the superstructure was originally adobe or bajareque.

Str. 57 -- Trench 15

Str. 57 appeared to be roughly 10 m long, and we positioned our trench near the wall about 4 m in from the west end. Its northern end (Fig. 7-32) exposed a masonry wall still standing to a height of 1.25 m (9 courses). Although slightly slumped it was very well made--the best we found in any of the small structures we tested during Op. 63. Its bottom course was slightly outset from the vertical plane of the wall to create a little basal molding. An unusually thick layer of collapse extended to the south of the wall, so the stone parts of the superstructure were probably substantial. The lower sections of this collapse were very trashy, yielding chunks of charcoal, many sherds, obsidian blade fragments, ten pieces of calcined bone, and the split tooth (probably a canine) of a large mammal. Deeper still was a deposit of red-brown clay lensing out from the lowest 2-3 courses of the wall, with much casajo near the wall. The wall itself sat directly on a lower stratum of very sticky reddish-brown sandy clay. Trench 15 produced the only complex feature found during Op. 63.

Feature 7: This feature first appeared as a large stain in the sticky clay layer at the same

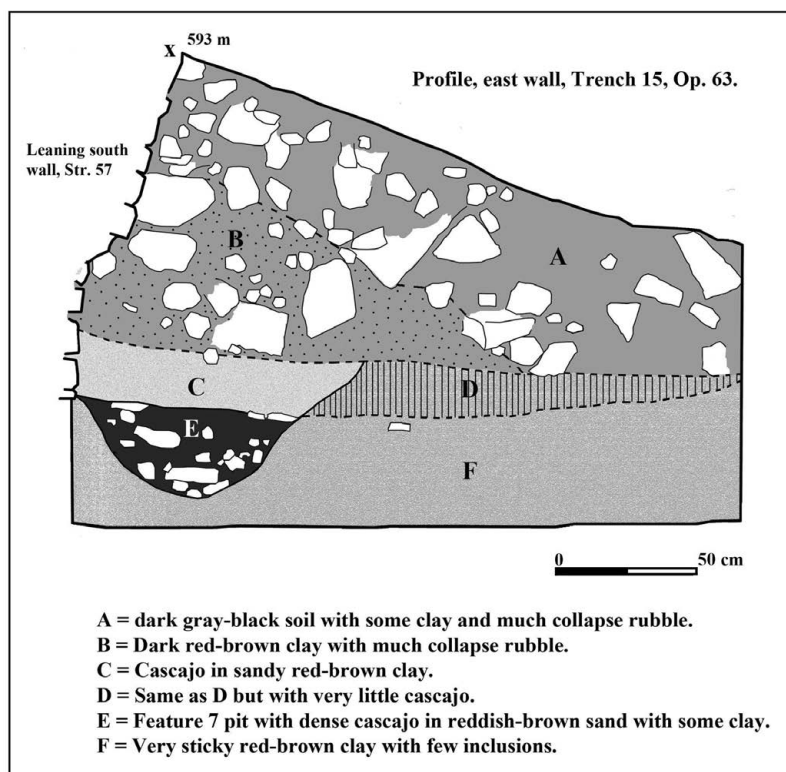


Figure 7-33. Feature 7, Trench 15.

level as the base of the wall, immediately below the cascajo deposit. Its darker soil, mixed with cascajo and tuff blocks, stood out strongly against the reddish brown clay as an irregular pit extending partly under the east wall of the trench. The profile of this wall (Fig. 7-33) suggests that the pit was intruded down through the layer above. Crushed but still coherent remains of the base of a large vessel about 50 cm in diameter outlined the west edge of the pit (Fig. 7-34). A second partial vessel of similar size was in line with it to the east. Neither vessel appears to have been whole when it was buried, and each was packed with cascajo in a matrix of loose brown soil. Just above (but not in) the eastern vessel was the primary burial of an infant (Burial 63-1). The skull and some long bones were clearly visible but the burial was in very fragile condition, so we sent it to the lab in its matrix of earth. It was clearly a neonate, probably placed in a flexed position. Removal of the cascajo showed that the interiors of both vessels were partly encrusted with carbon, and later examination of their exteriors showed them to be the Casaca Striated type so abundant during the Coner phase.

To sum all this up, the Maya buried the bottom parts (at least) of two large Casaca Striated jars in line with the base of the wall, in effect creating two shallow, pottery-lined pits. Interiors of the vessels were either already burned or were burned in place, and the vessels then were filled with sandy brown soil and cascajo. We cannot be sure whether the infant burial was placed above the eastern jar at the same time or later intruded down into the soil that buried the jars, but it was not burned.

Str. 59-- Trench 18

The Harvard and PAC I maps show Strs. 59 and 60 connected to one another, and both in turn linked to the rear of Str. 69 by a transverse wall. Clearing revealed what appears to be a spoil pile spilling down from the rear of Strs. 68 and 69 that creates the impression of such a connection, so both were probably free-standing buildings rather than joined as the maps suggest. Str. 59 appeared to be about 10 m long, 5-6 m wide, and 50-60 cm high. No wall alignments were evident on the surface, but the line of a probable bench could be seen on top of the mound. Construction material was rough stone and cobbles with very few visible cut stones. Trench 18 (Fig. 7-35) exposed the collapsing rear wall of the building at its mid-section, still standing to a height of 50-60 cm. Extending out from beneath the wall was a layer of sticky, reddish-brown clay mixed with cascajo, a trashy deposit that had many sherds and flecks of charcoal. It ran under the wall and so at least partly pre-dates it. It must be a fairly

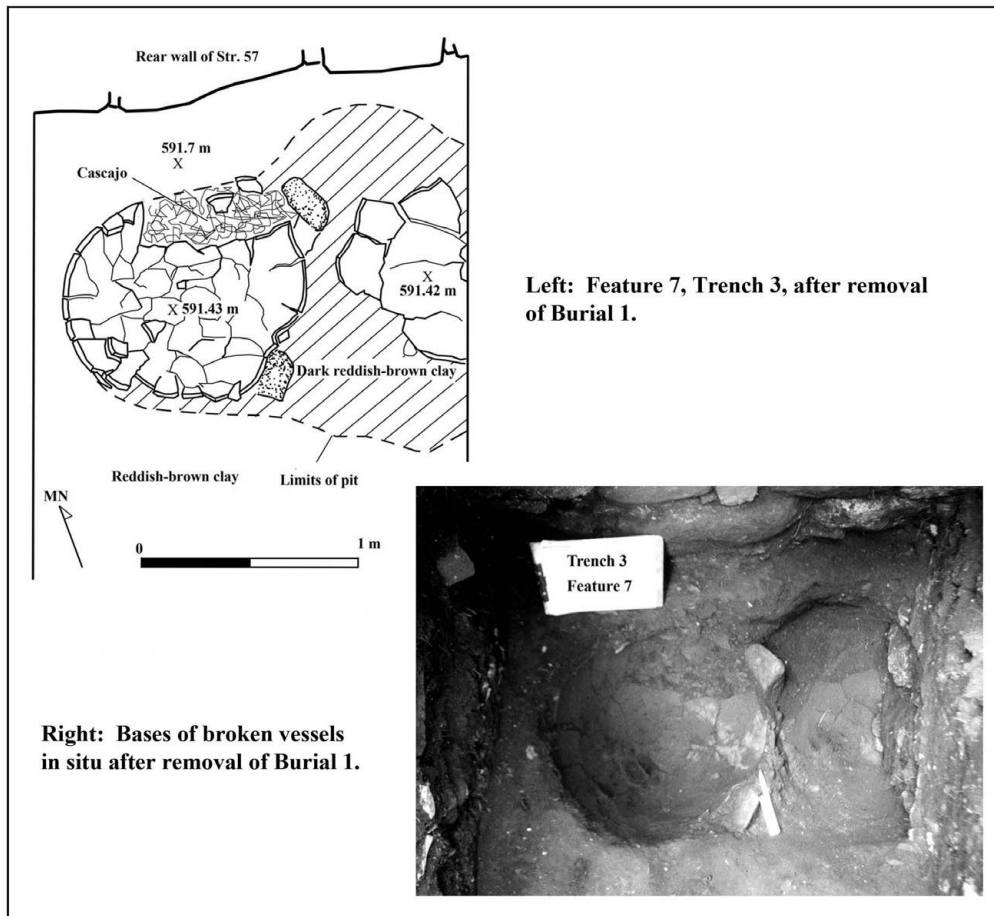


Figure 7-34. Profile, east wall of Trench 18.

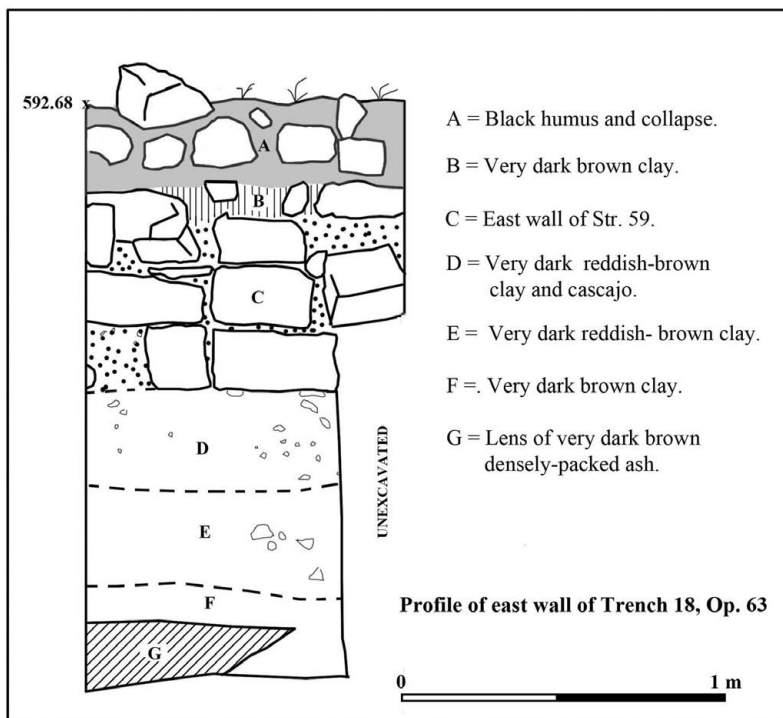


Figure 7-35. Plan of Trench 18.

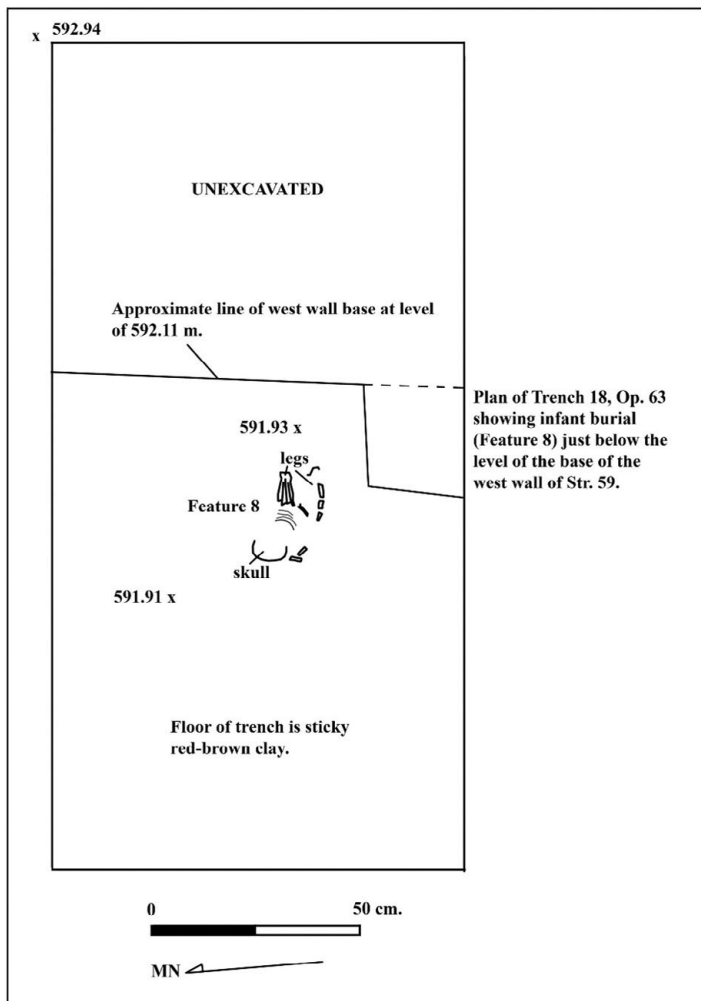


Figure 7-36. Profile, north wall, Trench 19.

a pit indicating that this primary burial was intruded into the trashy deposit. The burial was in poor condition (not least because of a heavy downpour the night before we took it out) so we removed it with its matrix and sent it to the lab for later analysis.

We had hoped that our Op. 63 test trenches would significantly enlarge our burial sample but we only found the remains of the two infants described above. More interments would probably have turned up had we been able to pursue our Op. 50 strategy of long, narrow burial trenches along structure walls. Nevertheless, our impression is that burials are not particularly abundant around any of the ancillary buildings in Op. 63.

Str. 60 -- Trench 19

This trench tested the peripheral Str. 60, located just behind the highest part of the Str. 69 complex. Surface clearing showed Str. 60 to be much better constructed than Str. 59. It was about 70 cm high and only one faint stone alignment -- probably a transverse superstructure wall -- could be seen on its surface. The east end of the trench (Fig. 7-37) exposed portions of a badly collapsed wall that seemed to have its base at about the 592.36 m level, out from which extended a layer of reddish soil with cascajo fragments, the only indication of a possible living surface. Trench 19 eventually penetrated to a depth of 1.6 -1.9 m, more than a meter below the apparent level of the wall base, revealing a succession of reddish soil levels. These deposits were unusual in that even the lowest of them still produced sherds, barro quemado, and traces of carbon. This is our westernmost trench, and it reinforced our impression that the stratigraphy along the western periphery of 8N-11 is quite different

late accumulation because Coner types, including Copador Polychrome and Surlo, were identified during excavation. Still lower were layers of dark clay grading from reddish-brown to dark brown, and finally a lens of dark brown ash, apparently in an artificial pit.

Near the base of the west end of the trench (which bottomed out at a depth of 1.85 m) was a fragment of what appeared to be a north-south transverse wall built of angular blocks of tuff, and we recovered much bajareque from this area. Almost certainly there was some sort of earlier structure with perishable walls here, probably associated with the ash layer. Copador Polychrome sherds were still associated with this structure fragment. The meter or so of material between the wall and the base of Str. 59 wall must thus be Coner-period fill.

Feature 8, another infant burial (Burial #2, Lot 99), was recovered from the trashy, red-brown clay deposit that runs beneath the wall (Fig. 7-36). The burial itself was about 30-40 cm to the west of the wall and about 27 cm below its base. Whether or not it predates the construction of Str. 59 is unknown. The feature consisted of the bones of a human infant in a flexed position lying on its left side with the head facing south. Both femurs were clearly visible, and it was clearly another neonate like Burial 1. We detected no signs of

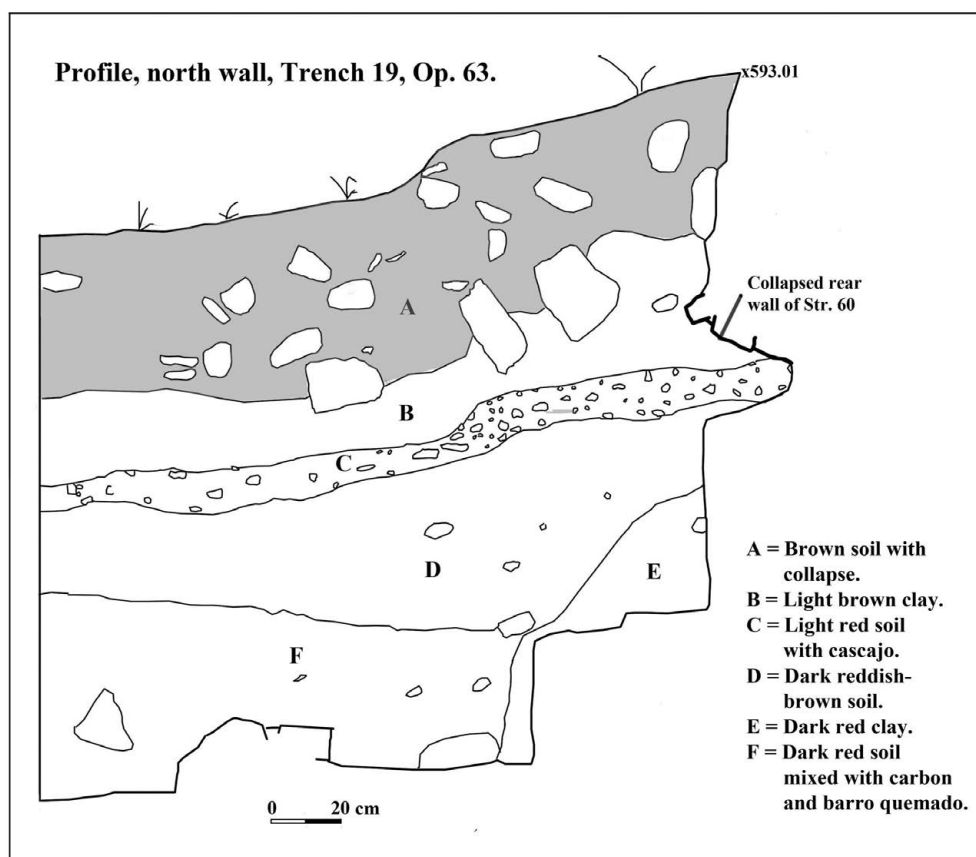


Figure 7-37. Profile, east wall, Trench 17.

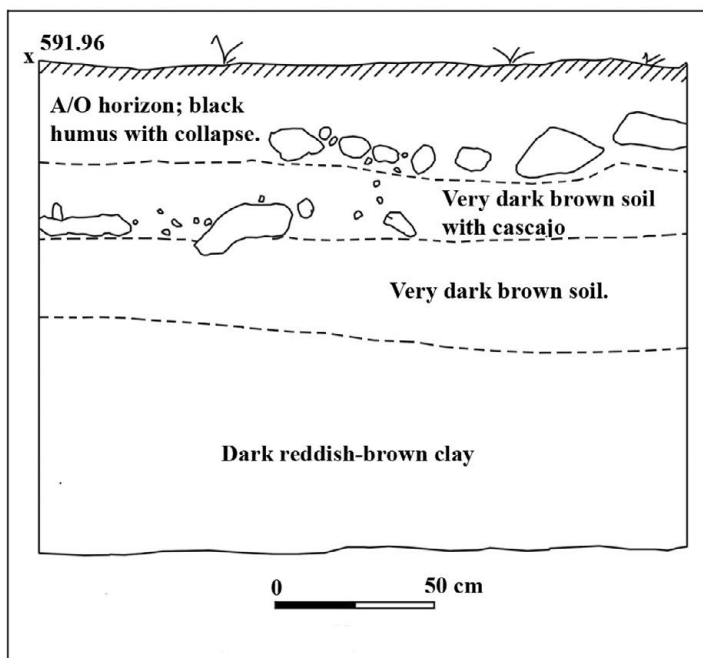


Figure 7-38. Profile, east wall, Trench 17, Op. 63.

-- notably deeper -- than that closer to the river to the east. A similar situation is seen in Trench 18. Both of these trenches produced abundant ceramics, and even those from the deepest levels included Coner types. Our surface clearing of Str. 60 and the subsequent excavation of the test trench revealed no indications of sculpture. If the immediately adjacent Str. 69 complex was as copiously decorated as its counterparts on the other side of the courtyard, at least some fallen sculpture pieces should have shown up. Alternatively, only the front façades had sculpture and none fell to the west.

Str. 58 -- Trench 17

Str. 58 presented us with a problem. It was by far the largest and highest of the ancillary buildings (Fig. 7-4) and so had considerable amounts of collapse that would require much time to clear away in order to find a wall. We left this building until the end of the season and had only a few days to investigate it. Instead of

trying to position Trench 17 to expose a wall, our practice elsewhere, we placed it several meters to the east of the main building collapse hoping to find traces of a pavement and to sample the stratigraphy, which turned out to be very straightforward (Fig. 7-38). A thick layer of dark humus and some stray collapse material overlay a deposit of

dark brown soil mixed with cascajo. Still lower was a deep layer of dark brown clay grading into a more reddish-brown clay as depth increased. The trench bottomed out at about 1.45 m below the surface. We found material in each level of Trench 17 and even the basal deposits turned up Coner sherds. Once again an excavation on the western edge of the 8N-11 complex showed much deeper stratigraphy than those farther to the east.

No obvious traces of a well-prepared surface extended to the east of the building. The deposit of dark brown soil immediately below the humus and collapse is the best bet for the remains of such a surface. Reinforcing this idea was a dense concentration of stones extending from the eastern wall of the trench and lying on this soil. If this represented a prepared surface it was at a level of about 591.55 m, much lower than those found in Trenches 1, 10, 8, and other nearby excavations.

Stratigraphy and Topography in Las Sepulturas and the 8N-11 Locale

Although the Las Sepulturas landscape today appears to be fairly flat there are many indications that it was more undulating during Classic times, and especially prior to the dynastic establishment in the early 5th century (Hall 2001; Hall and Viel 2004). PAC II excavations in the eastern sections of the residential zone raised interesting questions about the stratigraphy and landforms there, and the depositional and erosional processes that created them, and Operations 50 and 63 provided additional insights.

Apart from intentional human modification, three basic geomorphological processes have formed the landscape that we currently see at Las Sepulturas and elsewhere on the floor of the Copán pocket: slope-wash from the northern hillsides, river flooding and deposition, and river erosion, the latter most evident along the southern margins of the settlement zone.⁷ During the video project in 1989 I partly exposed the rear wall of Str. 9M-101, situated north of the causeway about 656 m southwest of the main plaza of Group 8N-11.⁸ Earlier PAC I excavations at 9M-99 some 20 m to the northwest had encountered a deeply-buried structure and I wanted to test other deposits in the locale. The PAC I map shows 9M-101 as a large but low rectangular building. On the surface it appeared as an indistinct debris cluster, including cut stone, about 14 m in diameter and 2.2 m high. My excavation revealed a higher building with fine masonry, a probable beam and mortar roof, and an original west-facing, sculptured façade. 9M-101 is thus typical of Las Sepulturas architecture dating to the second half of the 8th century.

9M-101, as expected, turned out to be deeply buried (see Webster, Freter, and Gonlin 2000: 118-119). The adjacent modern cornfield is at the 592 m level and the original cobble floor laid down by the Maya was 2.8 m lower at about 589.4 m. This is important for two reasons. First, a seasonal stream (visible on the PAC I map) washed sediments from the northern foothills into the locale, creating a colluvial fan that buried not only 9M-99 and 9M-101 but also about 25 other presumably substantial nearby buildings shown only as indistinct mounds on the PAC I map.⁹ Even the causeway to the south of 9M-101 is very indistinct or invisible, possibly as a result of this same deposition, which seems to have begun sometime in the late 8th or early 9th centuries. More important is that the final plaza level at 8N-11, whose late-phase buildings must be almost exactly contemporary with 9M-101, is *above* the 589.4 m level. In other words, the late 8th century landscape of Las Sepulturas, at least north of the causeway, was much different than what we see today. 9M-101 and other buildings to the southwest of 8N-11 (Fig. 7-39) were built in a swale whose surface was about 3 m lower in absolute elevation than the main courtyard surface at Group 8N-11. This swale must originally have been a low, swampy zone made habitable for a time by artificial drainage and reclamation (Hall and Viel 2004; see also Davis Salazar 2006).¹⁰ When maintenance of these control features ceased or they failed, slope-wash buried Str. 9M-101 and neighboring sites.

⁷ The river washed away settlement remains there, and if they were dense and numerous the effect would be to make our population estimates too low by 1000 people or so. Given our discovery of ball-game paraphernalia in Plaza A of Group 9N-8, I have long thought there was a ball court somewhere to the south of Str. 9N-82.

⁸ This excavation was part of Freter's earlier Op. 40 test-pitting program and is featured in our Collapse video.

⁹ When I approached Copán for the first time in 1980 I saw house-floors buried a meter or more by the road-cut in the lower foothills just to the north of Las Sepulturas. In retrospect, I should have dug several of them. Fortunately, in 1977 William Fash had earlier tested sites in the northern foothills that turned out to have been deeply buried by sheet erosion or colluviation. Much of this material was redeposited on the valley floor, obscuring Group 9M-101 and other sites in the locale. Fash correctly points out its post-abandonment implications, but when the erosion began and how long it lasted beyond the end of dynastic times remain unclear. See William Fash (1985; 1986: 84-85) for a list of deeply buried Late Classic buildings found during PAC I, including several he encountered while test-pitting the northern foothills.

¹⁰ Davis-Salazar provides a good account of hydrological conditions in Las Sepulturas, including the role of the eastern causeway in controlling runoff and erosion, but she oddly fails to mention the obvious implications of the 9M-101 excavations.

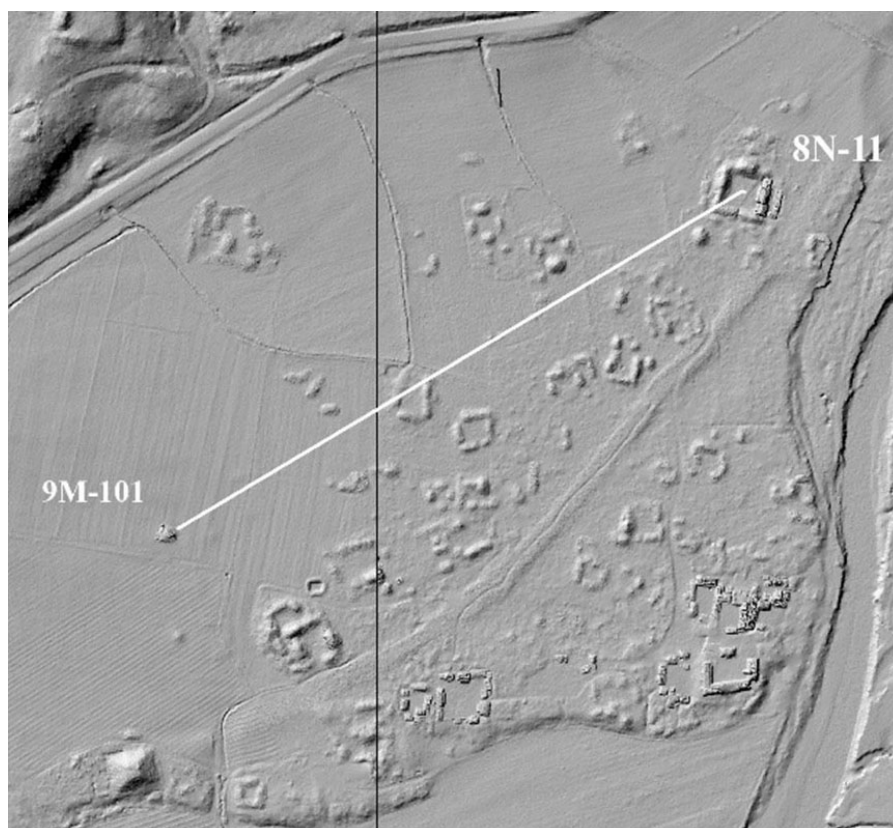


Figure 7-39. Lidar image of Group 8N-11 and Str. 9M-101. The plaza of Group 8N-11 is 3 m higher in elevation than the base of 9M-101. Image courtesy of Heather Richards-Rissetto; slightly altered by Webster.

One of the first things we did in 1990 was to cut a path to the riverside mounds (Strs. 8N 40-44 and 9N-3) about 30-50 m east of 8N-11. This set of structures immediately overlooked the river channel, which was actively washing them away and creating a miniature *corte* similar to the big one visible at Copán's Main Group. The riverside group seems to face west, but it is difficult to be sure given the destruction of parts of it. In any case, this set of mounds must have originally been farther from the river before it made a swing to the west and began to undercut them. Clearly evident in the cut was a dark surface soil formation 30-40 cm thick above a mass of exposed river sediments several meters deep consisting of poorly assorted sands and gravels. Conceivably there are buried structures in these deposits, but if so we could not see them. Our impression was that these eastern mounds were built on alluvial materials laid down by the river sometime prior to the Late Classic. The locale of 8N-11 is a hydrologically and topographically dynamic landform. Its sediments indicate river action, but since at least Early to Middle Classic times the area was sufficiently distant from the river to be unaffected by active erosion, high enough to escape the kind of slope-wash that almost buried 9M-101, and thus attractive for settlement.

Long before our Op. 50 work Rene Viel recovered a pure Late Preclassic (Chabij phase) deposit lying on river gravels only about 65-70 cm below the surface immediately behind Str. 66 (personal communication to Webster, 1997). Ricardo Agurcia retrieved a similar Late Preclassic collection at a shallow depth nearer the causeway to the south. If both these deposits rested on or beneath contemporary Preclassic soil surfaces they, along with our observations of the river cut, suggest slow, shallow deposition in the intervening centuries between the Late Preclassic and the major occupation at 8N-11. This is an important point. One possible explanation for the general paucity of Preclassic materials on the valley floor is that they are deeply buried by subsequent deposition. Viel's and Agurcia's test-pits seem to indicate otherwise, at least for zones immediately adjacent to the river channel around Group 8N-11. Their findings also suggest that the eastern buildings of the group were laid down just above these old alluvial deposits.

Unfortunately, the situation cannot be so simple. Viel also dug a deep trench in the main 8N-11 plaza just to the west of Str. 66C and carried it down 6 m before he hit similar gravels. His trench revealed much the same deep stratigraphy in the plaza encountered by Rattray, and by us in our sole deep sounding there (see Fig. 3-5). All this, along with the seemingly sterile sands we reached at shallow depths around the Str. 50 complex, predisposed me

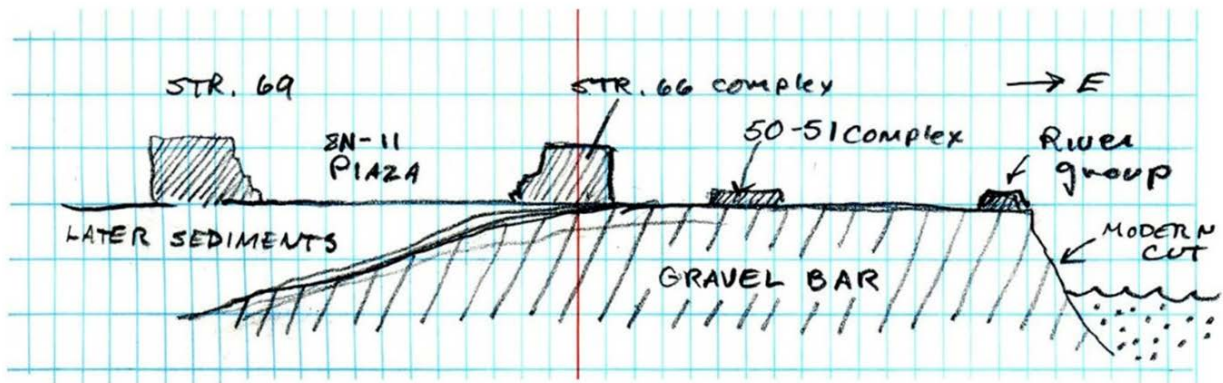


Figure 7-40. Field sketch of possible stratigraphic deposits at 8N-11.

to think that the eastern parts of Group 8N-11 and the “river group” were built on an old sand and gravel bar, perhaps an old levee that had formed prior to Late Preclassic times and that sloped off steeply to the west. This could only happen if the regime of the river were very different from that of recent times, as documented by Hall and Viel (2004). I made a little sketch in my field notebook that schematically showed this set of supposed relationships (Fig. 7-40).

Our later Op. 63 trenches, especially around the Causeway Building, seemed to support this interpretation. Discounting collapse debris, these trenches usually produced very shallow cultural stratigraphy as described above. Most of the eastern trenches bottomed out in sterile deposits of sand, sandy clay, or sandy gravel at depths considerably less than one meter (the exception is Trench 5). All this is consistent with our observations of the old river cut washing away parts of Structures 8N-41 and 8N-42, which visibly had their foundations on, or just above, river gravels and sands deposited when the river flowed and/or flooded at a much higher level than it did in 1990.

But if the eastern part of Group 8N-11, including the Causeway Building, is situated on a series of old alluvial sand and gravel sediments, then what accounts for the deeper deposits beneath the main courtyard and those near Str. 58 in Trench 17? The character of these deposits, plus the artifacts found in trenches dug through them, show that they are not water-deposited but must represent intentional in-filling, consistent with major terraforming of the valley floor by the Maya after about AD 550-600 (Hall and Viel 2004: 26). This date would explain why there are few signs of pre-Acbi settlement at 8N-11 and is consistent with Rattray’s findings.

Group 9N-8 offers some other clues, especially in deep trenches dug by William Fash in Plaza A in 1978 and 1981 (see Fash 1983, Appendix B, and Fash 1991: 63-76 for overviews). 9N-8 is close to the Copán river, whose occasional high floods have periodically changed the course of its channel. In the process it washed away some southern sections of the site and destroyed or buried other parts of Las Sepulturas to the east of the famous Main Group Corte. Despite their proximity to the river there are no signs that the remaining Late Classic courtyards at 9N-8 ever received loads of alluvium as Morley once imagined (see discussion of Altar W’ in Chapter 1). The base datum used by Rudy Larios during reconstruction puts the current level of Plaza A at about 592.87 m, or about 50 cm higher than the 8N-11 main courtyard, which also lacks such deposits.

In his deep Plaza A trench Fash encountered burned soil, organic material, and domestic artifacts at about the 585.35 m level. These were remnants of an old living surface and dwelling of Rayo/Uir (Early/Middle Preclassic) date. A layer of sterile river sediments about 50 cm deep accumulated above this the earlier cultural deposit. Still higher, and about 2 m below the current courtyard surface, was a Gordon phase (Middle Preclassic) cemetery. Much of the material above this cemetery was a clean reddish clay-sand (visible in Fig. 7-41) associated with Early Classic (Bijac) features and ceramics. It was clearly deposited by the Maya, not by the river, because the surrounding ancillary plazas are at lower elevations than Plaza A, which was purposefully elevated to accentuate its visual and social dominance. If there are no river deposits in Plaza A higher than those below the Gordon phase cemetery, it is very unlikely that there are higher river deposits at nearby 8N-11 either.

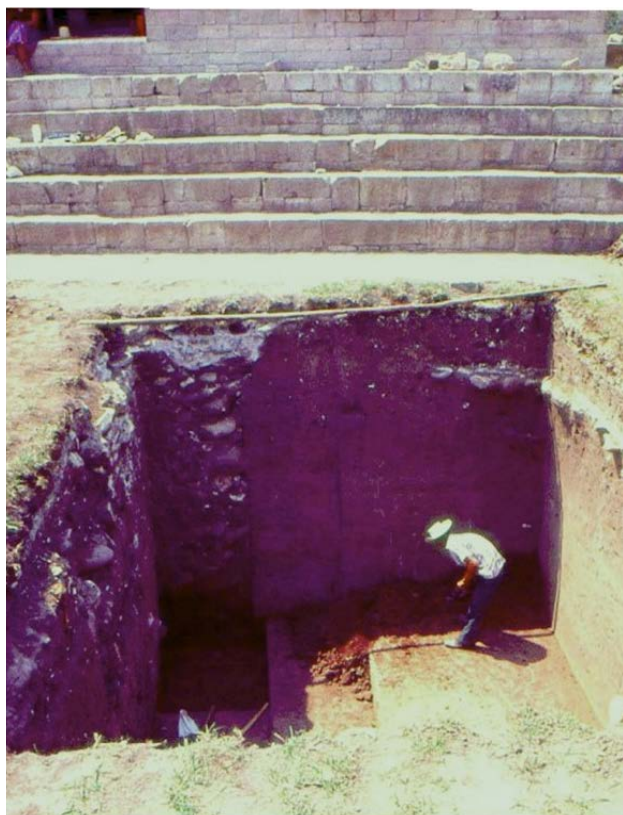


Figure 7-41. Deep pit in Plaza A, Group 9N-8.

Given all this, my original supposition that the eastern part of 8N-11 sits just above an old set of alluvial deposits dating at least to Late Preclassic times is probably wrong.¹¹ But how then do we explain the pure Late Preclassic deposits found by Viel and Agurcia? The stratigraphic situation at 8N-11 thus remains unclear, but indicative of much human in-filling in the western side of the site. It could be pre-Acbi in date, but if so, where are the early habitations that all this effort presumably accommodated? My suspicion is that this terraforming at 8N-11 took place in mid-to-late Acbi times. In retrospect we should have dug a deep trench similar to Fash's somewhere to the east of the Str. 50-51 complex in 1990 and carried it down to what was clearly sterile soil.

Operation 63 Artifacts

Op. 63 artifact accumulations were generally sparse, although many contexts around the peripheries of buildings produced concentrations we identified as shallow middens. Nowhere were these very deep, and often we could not separate midden contents from overlying collapse debris. In August of 1997 Scott Zeleznik analyzed and recorded all the Op. 63 lithic artifacts and bone fragments as well as other special finds. During early September Guillermo Murcia, who had earlier catalogued the ceramics from Op. 50,

sorted the identifiable sherds from Op. 63. Zeleznik checked Murcia's compilation and chose some 13,292 of these sherds for statistical analysis. Both ceramic and lithic artifacts from 8N-11 as a whole, including those from Op. 63, are discussed in Chapter 9, but a few general observations about the Op. 63 collections are useful here.

Virtually all of our ceramic material, as in Op. 50, is Coner. Only two lots were composed of pure pre-Coner sherds, and both were so small (one and ten sherds, respectively) that they are inconclusive. Everywhere else, even in deep excavations such as Trench 17, early sherds were mixed with Coner ones just as Rattray reported for her 1982 plaza probes. We found no sherds of the Ejar complex, widely assumed to post-date Coner.¹² Imported ceramics from either the Petén (17 sherds) or central Honduras (90 sherds) were vanishingly rare --- only 0.8% of those identified. We detected no artifacts or artifact concentrations indicating any kind of specialized production. Jars, basins, and other utilitarian types and forms consistent with residential activities dominate the assemblage.

Zeleznik found that trenches that penetrated apparent causeway fill, especially Trench 10, produced unusual concentrations of sherds predating the Acbi/Coner transition that increased with depth. Samples were small, but he tentatively suggested that an earlier version of the causeway in this locale was remodeled and enlarged in Coner times. If so, the early causeway connected with a very different set of buildings that we could not detect because we were not allowed to penetrate architecture.

Obsidian ($n = 652$) as expected was the most abundant chipped stone material, and virtually all Op. 63 lots produced the broken prismatic blade fragments that dominate the sample. There were only four retouched artifacts and five core fragments. Chert artifacts ($n = 84$) are rare and only one was retouched. Most pieces recovered are irregular flakes or chunks, many of which might be "artifacts" only in the most general sense that they are

¹¹ Wrong, that is, about the western part of the site. There was probably an old levee or raised deposit near the river, a kind of an island in the low, swampy Sepulturas landscape that was suitable for early occupation. The river farther to the east would be a good place to check this out if it has not been destroyed by modern hydraulic projects.

¹² By this I mean Ejar as defined by Viel in 1983 and 1993 -- see discussion in Chapters 9 and 10. We of course had no information in 1997 about the larger neo-Ejar assemblage later found by Manahan (2003) in the El Bosque urban enclave.

detritus discarded at the site or broken pieces of very crude cores. The paucity of retouched obsidian and chert implements is consistent with lithic assemblages from Copán domestic contexts elsewhere. More surprising is that ground stone artifacts ($n = 13$) are so few. We recovered only nine mano and metate fragments and just two of the small, polished greenstone axes that are consistently associated with Copán sites of all ranks. Twenty-three lots produced fragments of mammal and bird bone, and eleven lots had pieces of barro quemado, consistent with other evidence for perishable superstructures.¹³

Causeway Building Ceramics

Pending more detailed discussion in Chapter 9, ceramic artifacts associated with the Causeway Building sub-operation deserve brief comment here given the building's strange character. Some 3327 identifiable sherds, or over 25% of those in Zeleznik's sample, were associated with the Causeway Building, the best sampled structure during our 1997 season. In the field I expected that ceramics recovered from the locale would clearly signal special ritual and social activities -- large proportions of serving vessels such as vases, cylinders, bowls, and plates, and higher than expected proportions of Copador Polychrome and other decorated types. Table 7-43, appended to the end of this chapter, tells a more mundane story. Copador Polychrome (1.4%), Surlo (1.8%) and other decorated wares were surprisingly sparse, as were fine wares generally (7.2%). Only 16 sherds were from imported wares, most from elsewhere in Honduras. Food preparation and storage vessels -- *calderas* (basins), and jars -- make up very high proportions of those recovered from this locale, as they do around the ancillary structures of the 50-51 complex. Casaca Striated sherds alone amount to 41% of the Causeway Building collection. Trenches 7 and 2 produced concentrations of pottery, including many jar and basin sherds, from the shallow middens in back of Strs. 46 and 9N-1. We recovered eight broken spiked and flanged censer fragments from behind Str. 46 (see Fig. 7-17), but they were too few to be assembled into whole vessels. Censer sherds or adornos are scattered and rare in any of our 8N-11 excavations. We did not have the opportunity to compare the ones we found with those recovered by Rattray from the main 8N-11 courtyard, where similar (and according to her very late) ritual activity took place. Excavations around the front (south) of the Causeway Building produced high ratios of bowls to jars, and serving vessels to storage or food preparation vessels (Table 7-43).¹⁴ Whatever feasting and ritual activity took place seems concentrated in this area, providing weak support for the interpretation that it constitutes a formal end-point of the causeway. Except for censer fragments and adornos, the overall Causeway Building ceramic assemblage is very similar to the much larger Op. 50 one discussed in Chapter 9. Only 1.6% of identifiable sherds predate the Acbi/Coner transition, and more than 95% of the whole ceramic inventory is solidly Coner. There were no Tohil Plumbate or Fine Orange sherds diagnostic of Viel's Postclassic Ejar complex. If the Causeway Building is indeed a very late construction as I suspect, people who used it still utilized an essentially Coner or Coner-derived ceramic tradition. The paucity of the Coner diagnostic Copador Polychrome also suggests a late construction date. See Chapter 11 for dates from 8N-11, for the significance (or not) of the absence of Plumbate and Fine Orange diagnostics. Chapters 9 and 12 discuss the issue of chronological displacement between artifact inventories and the original functions of buildings.

Op. 63 Summary

We accomplished several of our goals despite the fact that our Op. 63 fieldwork was much more abbreviated than originally planned. Our excavations showed that all the tested structures except Strs. 46 and 58 face inward toward the main courtyard group. Based on mapping alone one might imagine that the cluster represented by Strs. 53-55 was a set of buildings arranged around a partial patio space, but this turned out not to be the case. Because the small Op. 63 structures generally stand separately from one another, unlike the conjoined ones in the 50-51 group, we cannot assume they were contemporary.

¹³ Barro quemado is often thought to indicate burning and I have excavated buildings elsewhere where large amounts of such material were present. Although it is found in many contexts at 8N-11, I never saw it in amounts that suggested violent burning and destruction, as was the case at a building I excavated at Kaminaljuyú in 1969.

¹⁴ In his dissertation ms Zeleznik expressed surprise at the generally undistinguished collections from around the Causeway Building taken as a whole and noted a sampling issue. Ceramics from excavation units placed to the rear of Str. 46, taken by themselves, would list the building highly among all the others in terms of ritual and ceremonial content. Unexpectedly the more abundant materials make the whole complex look very ordinary. If we had just tested the rear contexts, our perspective would be severely distorted.

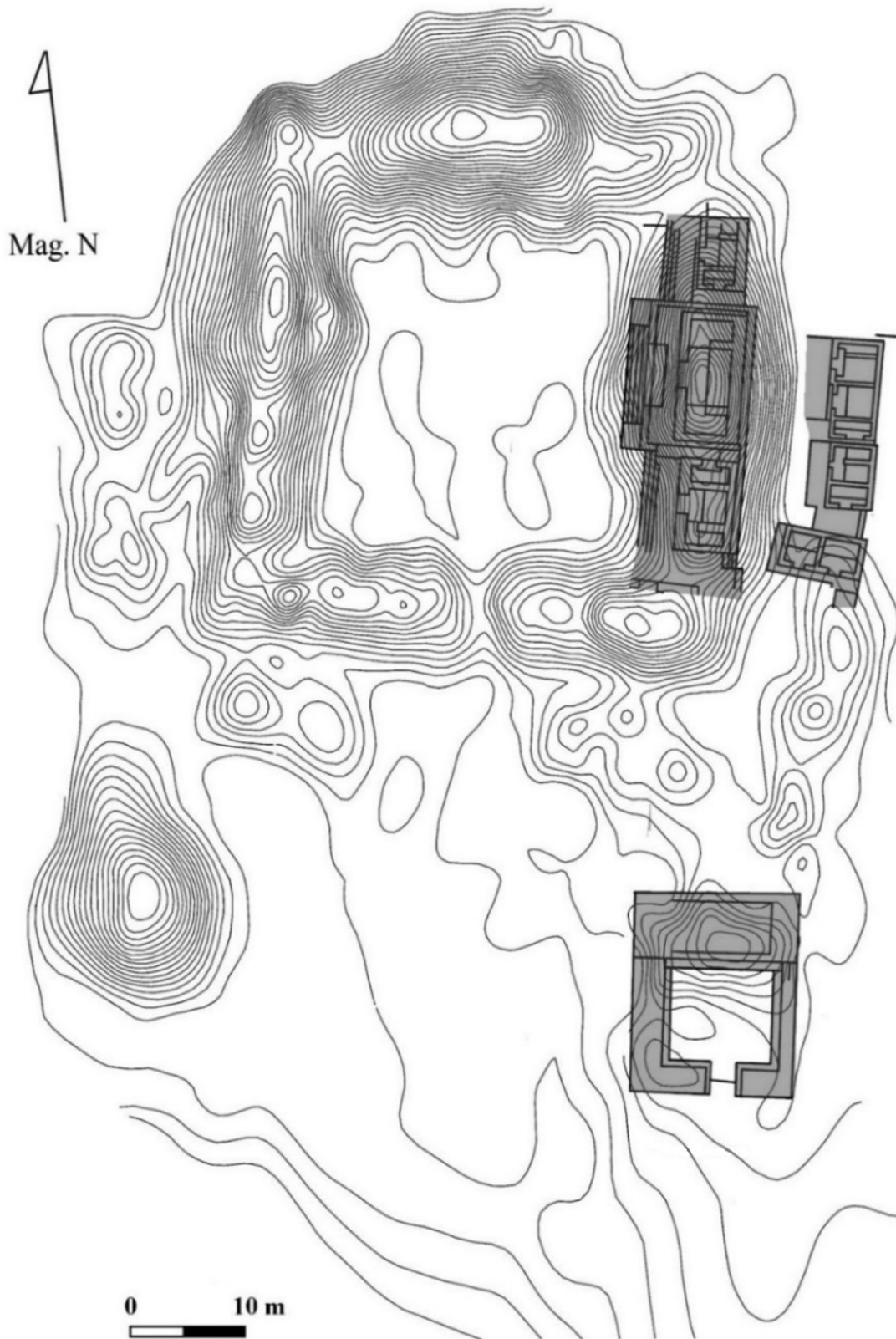


Figure 7-42. Comparative scale of Str. 66 complex and the causeway Building.

Insofar as we can judge by our limited Op. 63 probes, the character and scale of these small ancillary buildings is generally similar to those of the 50-51 complex, but somewhat more varied in construction quality and scale. For example, Strs. 57 and 60 have much better masonry than Str. 59. There were no vaulted buildings, and superstructure walls must all have been wholly or partly perishable ones (adobe or bajareque) that supported thatch roofs. No trenches produced good evidence for any kind of special economic activities, nor did they reveal any signs of major construction phasing (with the possible exception of Str. 48). We found no sculpture in any of our 1997 excavations. This was surprising, not because we expected these little buildings to have sculpture, but because people commonly removed pieces of mosaic sculpture and discarded them away from their original locations, as occurred at the Op. 50 ancillary buildings. Nevertheless, when Zeleznik lumped all the buildings and locales together he determined that “Operation 63 excavations consistently produced higher ratios of ritual and ceremonial ceramics than the Operation 50 excavations”.

The Causeway Connection

Our mapping and test-pitting of the large area to the south of the main 8N-11 courtyard proved no definite connection between the causeway and any particular structure. It confirmed the earlier Harvard\PAC I mapping (Fig. 2-2) that showed a splayed-out and rather amorphous “end” to the causeway that might have incorporated any or all of the buildings in the southern part of the locale. One could also read the lidar image to show that part of the causeway continued northeast between the rear of the Str. 50-51 complex and the riverbank buildings, and thus upstream toward the Santa Rita alluvial pocket.

Perhaps more significant is what the Maya did not do – create a distinctive, symmetrical, and impressive terminus, or a route that would lead large processions easily into the main 8N-11 courtyard. Nevertheless, our work strongly implicates the Causeway Building as a specific target. The recent lidar image provides a more nuanced pattern that reinforces this interpretation. Whether the endpoint in Late Classic times was the building as we have reconstructed it is unclear because the southern arms and plaza of the complex might have been added to Str. 46 later, an interpretation that I favor. The causeway as mapped might have channeled people through the space between Str. 58 and the Causeway Building, and then through the southern entry into the main Skyband courtyard. This idea would be more compelling if these two structures were similar, if Str. 58 faced south (which it almost certainly does not), and if they more formally bracketed the approach. Anyone approaching Group 8N-11 along the causeway in the late 8th century would have been confronted by a broad but rather undulating open area flanked by Str. 58, Str. 46, and whatever low part of the Causeway Building existed at that time. They might have seen only the front of Str. 46 if it still lacked its low protruding forecourt. A turn to the left routed them just about mid-way between Str. 58 and the Causeway Building and toward the southern entrance to the main 8N-11 courtyard. Although Str. 58 remains enigmatic, it certainly did not resemble the Causeway Building, so there was no attempt at symmetry in the arrangement. It almost certainly faces east, not south toward the causeway’s approach, and it was probably a rather plain building. Had it been heavily embellished with sculpture we would have seen some on the surface.

Although it faced the approach of the causeway, the Causeway Building was off-center from the entrance to the main 8N-11 courtyard, and more or less directly south of the eastern buildings we excavated in 1990. This pattern, the termination of the Las Sepulturas causeway at a small building rather than at an adjacent imposing group, puzzled us in 1997, but resembles what Maca later found at the terminus of the western causeway leading up into the northern foothills. It would be very interesting to strip off the little building that defines that terminus to see what special features might be there.

Trenches 1, 8, and 10 provided evidence that the general area south of the main courtyard was paved, although this paving was not very well-constructed, is damaged, varies in level from place to place, and slopes slightly upward from south to north. This flat area could have accommodated large crowds or performances. Assuming that any of our excavations (especially Trench 8) penetrated causeway construction fill, then the causeway (or this part of it) was built in Coner times but perhaps incorporated elements of an earlier one. Maca (2002: 102) encountered surfaces near Group 9J-5 that he attributed to the western causeway. He also found both zoomorphic and anthropomorphic censer fragments there, recalling the censer fragments around our Causeway Building.¹⁵

¹⁵ Although rare at 8N-11, censers of various kinds are abundant and widely distributed in Honduran Lenca sites to the east (Wells and Davis-Salazar 2008).

Doubt remains about the intentions of the original causeway designers if they worked during the early 8th century. Most or all of our visible (final stage) structures at 8N-11 appear to have been built a half-century or so after the reign of Waxaklajuun Ub'aah K'awiil, so the connection between the causeway and whatever groups existed around AD 730 might be quite different than what we see today, especially if the final configuration of the Causeway Building is late. One possibility suggested by the early sherds in Trench 8 is that the end of the causeway was modified during the late 8th century to accommodate a new set of Late Classic structures. And of course we know next to nothing about the earlier buildings that lie beneath the final phase Str. 66 complex (and possibly elsewhere) that are probably relevant to the original causeway connection.

Characterizing the Causeway Building as “small” is a bit deceiving. When it is juxtaposed with the major architecture (Figs. 7-42) one appreciates how much area it covers. Str. 46 was an imposing and formal building, but the visual impression of the whole complex depends on what kind of superstructure, if any, the rest of the complex supported. If this were a large, thatched, timber building its visual mass would have been very impressive.

Whether the southern 8N-11 buildings formed a coherent pattern depends in part upon whether one accepts the short or long chronologies reviewed in Chapters 10 and 11. If the long chronology is correct, the Causeway Building (or at least its southern patio) could have been built much later than the other 8N-11 structures, thus accounting for its strange design. In that case it might be wrong to interpret it as functionally linked to the main buildings, to the causeway during its mature phase in the late 8th century, or to Str. 46. Following up this line of reasoning, as early as 1983 we recognized that a major difference between Groups 9N-8 and 8N-11 was the distribution of their smaller ancillary buildings. Most of those at 9N-8 were coherently grouped together as separate courtyard units while those at 8N-11 were lineally arranged or individually scattered. The first pattern suggested coherent social/residential units nested around the dominant compound. The linear or scattered distribution at 8N-11 made far less sense given our residential expectations, assuming that the overall plan of the group was dated to the 8th or early 9th century. Another distinct possibility, given the long chronology discussed in Chapter 11, is that some of the smaller ancillary buildings were added later. The only obvious spatial pattern is that all of them seem to face toward the main courtyard. Their artifact signatures, along with their often substantial construction, indicate domestic activities at odds with our expectations about how Maya families organized social space, hinting at some other functions for the small buildings and perhaps the group as a whole. We will return to this issue in Chapter 12.

OPERATION 63: THE 1997 FIELD SEASON

Table 7-4. Identifiable types/wares from lots associated with the Causeway Building.

Ceramic type	Rim	Body	Total sherds	% of total Causeway sample
Aquino café	1	10	11	0.3%
Arroyo	3	17	20	0.6%
Casaca Striated	129	1240	1369	41.1%
Caterpillar	10	22	32	0.1%
Cementario	2	13	15	0.5%
Chilanga	17	27	44	1.3%
Cocorico Polychrome		1	1	0.003%
Copador Polychrome	8	40	48	1.4%
Petén import	3	3	6	0.18%
Gualpopa	13	15	28	0.8%
Hastalgorro	5	29	34	1%
Izalco Usulután	1	7	8	0.2%
Lorenzo	23	51	74	2.2%
Mapache		2	2	0.006%
Masica	2	41	43	1.3%
Melano		4	4	0.1%
Prospero	1		1	0.003%
Raul	34	406	440	13.2%
Reina	4	15	19	0.6%
Sepultura group	24	288	312	9.4%
Sisero Rojo	21	83	104	3.1%
Sovedeso		1	1	0.003%
Surlo (all varieties)	8	52	60	1.8%
Titichon	84	234	318	10%
Ulua import	2	8	10	0.3%
Zico group	22	301	323	10%
Total	417	2912	3327	-----

Chapter Eight

Features and Burials

David Webster, Randolph Widmer, Rebecca Storey, David Reed,
and W. Scott Zeleznik

Features and burials normally warrant separate chapters, but we present them together here because they are overlapping categories at 8N-11 for reasons explained below. Forty-four features and 25 mortuary contexts were identified during the 1990 main field season and the restoration phase. Included in the discussion are three burials from Rattray's Op. 14 and the only two we found during Op. 63 in 1997 (Operation 63 features and burials are described more fully in Chapter 7). Locations of non-burial features associated with the Str. 66 complex are shown in Fig. 8-1 along with those that later proved to be burials. Seven others found around the ancillary buildings (Fig. 8-2). No burials were found in association with Str. 51C and only one with Str. 50. The rear peripheries of Strs. 66C and 66S were prime locales but were similarly unproductive except for Feature 9.

The following discussion, along with the artifact overview presented in Chapter 9, derives from a massive database assembled by Scott Zeleznik and David Reed (see Chapter 9 for details). It includes a GIS that recorded many spatial data for 1013 sites in the valley and is linked to artifact information for 30 sites or operations and mortuary data for 53 sites, including those from Group 8N-11. The Skyband burials are discussed in the context of this larger information set. Ranked distributions of all Copán burials in the database are shown below in Figs. 8-29 and 8-30.

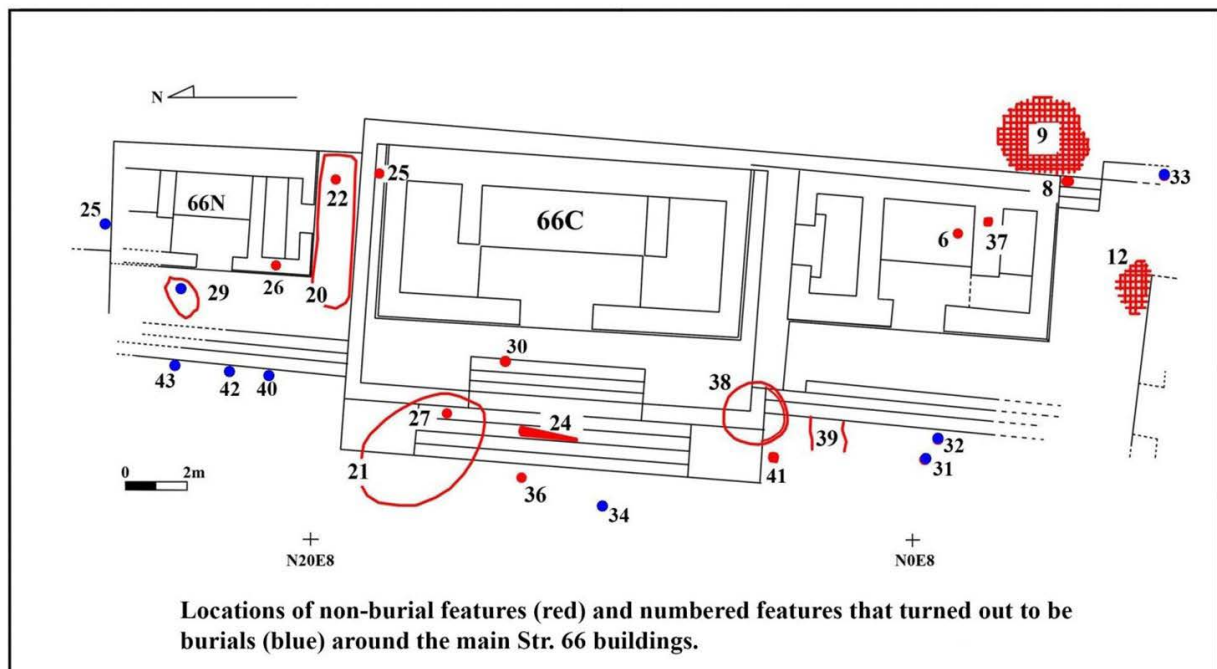


Figure 8-1. Locations of features and burials at
Str. 66 buildings.

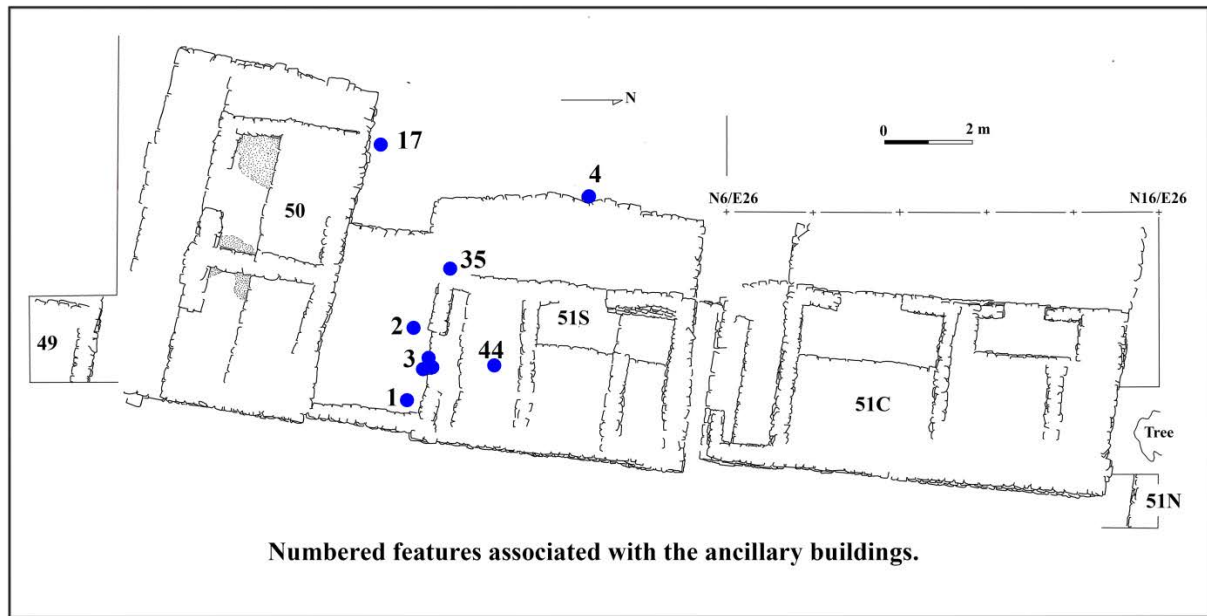


Figure 8-2. Features associated with the Op. 50 ancillary buildings.

Features

We recorded features numbered 1-20 during the main field season, and those numbered 21-44 derived from Widmer's and Storey's later sub-operation as described in Chapter 3. Our practice in the field was to assign a feature number to any unusual construction detail, cache, distinctive in-situ artifact, or artifact concentration. Sometimes a feature turned out to be totally inconsequential. A good example is Feature 26, a small wall niche in Str. 66N whose fill turned out to be sterile. Others were simply unusual artifacts in fill or collapse. Some features were associated with living surfaces, middens, and burials. Fifteen others, distinctive patches of stone, turned out to cover burials and so have both feature and burial numbers in the lists below. Non-burial features were typically small concentrations of stones, artifacts, bones, burned earth, or charcoal. Widmer's and Storey's probes recovered several formal caches, special objects, and some extensive sheet middens that labeled as middens.

Middens: We found many small midden-like deposits but only a few of these were assigned formal feature numbers, especially during the Op. 50 Phase 2 excavations. The term "midden" requires some explanation here. T. Patrick Culbert cautioned that

"If one defines a midden as an archaeological deposit left untouched by cultural or natural processes after being discarded by the ancient inhabitants of a site, such deposits are rare at Tikal or any other major Maya site. Stratified middens – deposits in which middens accumulate stratigraphically over long intervals of time – are almost unknown." (Culbert 2003: 49).¹

Culbert's caveat is important. Most middens at Group 8N-11 and other elite Copán compounds are shallow palimpsests of material that have been deposited and re-deposited (an exception from Group 9N-8 is discussed in Chapter 11). They often contain mixed and diverse materials, both in the functional and chronological senses. Straightforward behavioral implications are often obscure, and for dating purposes the most important artifacts in such middens are obviously the latest ones. Shallow middens were typically located to the rears and sides of buildings. Widmer and Storey found a particularly deep midden some 20-30 cm thick along the east and north sides of Str. 66N and they recovered several burials from this locale. The most important middens, discussed below and in Chapters 3 and 10, are Features 9 and 12. Feature 9 was a concentration of artifacts on the earth/cobble surface behind the rear substructure wall of Str. 66S. It extended across the corridor and partly lapped up against

¹ In this he echoes Robert E. Smith's earlier comment about the paucity of middens at Uaxactún and its implications for constructing ceramic sequences (Smith 1955: 13). Ball and Taschek (2001) did find deep middens at Buenavista del Cayo, but they are still few and far between.

the front of the west terrace of Str. 50, a possible been a kitchen locale. Nearby was Feature 12, a concentration of obsidian flakes in the corridor between Strs. 66S and 67.

Op. 50 Feature List

Feature 1: S2E30, level 5, lot 38. Part of broken vessel (plate with nubbin legs) in collapse rubble near southeast corner of Str. 51S. Also in association are one Casaca Striated jar sherd, ten Surlo Simple cylinder sherds, and a vase fragment.

Feature 2: S2E30, level 5, lot 53. Broken jars on terrace between Str. 51S and Str. 50, just southwest of the doorway to Room 1. Probably 2-3 vessels. Same general context as Feature 1. There were 195 sherds in Lot 53, the bulk (153) from Casaca Striated jars; also Titichon basin sherds and one tecomate sherd. Seven obsidian fragments.

Feature 3: N2E26/N2E28, level 3, lot 71. Broken vessels spilling out of door of Room 2, Str. 51S, onto the terrace level and in the collapse along the outside walls (Fig. 8-3). Most material was directly above the floor of the entryway or the terrace. Of the 173 sherds in this deposit some 139 were Raul jars; also some Titichon and Lorenzo basin forms and a Surlo cylinder sherd. This lot yielded one of the rare imported Ulua (Babilonia) sherds found in Op. 50.

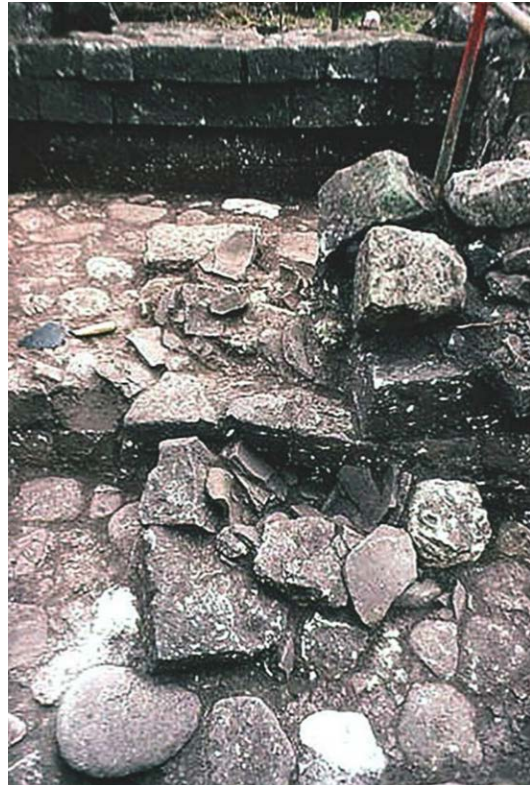


Figure 8-3. Feature 3, Str. 51S.

Feature 4: N4E24, level 3, lot 86. Carbon concentration, burnt ceramics, obsidian (n = 4) barro quemado, and dark soil in the floor fill in front of Str. 51S. Fifty-five sherds, most (31) from Casaca Striated and Raul jars; some Surlo sherds. One small metate fragment.

Feature 5: N4E14, level 1, lot 120. Metate fragment and piece of a long bone, species unidentified, resting on a plaster surface of the western end of the floor of the corridor between Strs. 66C and 66S. About 10 cm above the floor, in collapse fill, were fragments of a deer (?) jaw and other bones; these were probably later and unrelated to the metate fragment and long bone.

Feature 6: S2E16, level 1, lot 156. Unidentified bone (scapula fragment – probably human) resting 3.5 cm above the plaster bench surface in Room 2, Str. 66S. It was in front of the wall niche described in Chapter 3. Patches of burned plaster were in the center of the bench about one m to the north.

Feature 7: S2E24, level 3, lot 162. Flexed infant burial located in midden just north of north (rear) substructure wall of Str. 50. Later designated as Field Burial 1 (see below). The burial was in a small pit dug into a midden deposit that had accumulated between the north wall of Str. 50 and the attached terrace, above the level of the original living surface.

Feature 8: S6E18/S6E20, level 2, lot 258. Concentration of sherds found just above the bottom step of the stairway at the east end of the corridor between Str. 67 and 66S. Fourteen sherds, all from Cruz Incised, Raul, and Arroyo jars, and obsidian fragments.

Feature 9: S6E18/S6E20/S6E22, level 2, lots 253, 273, and 295. Sheet midden with 2704 sherds in the corridor between the rear wall of Str. 66S and the west wall of Str. 50. See detailed description below and in Chapter 11.

Feature 10: N6E30/N6E32, level 4, lots 319, 657. Ceramics from below wall base in Burial Trench B. The 225 sherds included an unusually wide range of types (Sisero, Cementerio, Arroyo, Chilanga, Copador Polychrome, Surlo, Usulatan, with Raul and Casaca Striated jars predominating.

FEATURES AND BURIALS

Feature 11: N2E24, levels 3-5, lot 277. Flexed adult male burial in an extremely crude stone cist in front of the terrace retaining wall of Str. 51S, and below the circular stone altar. Top of the cist was at elevation of approximately 591.7 m. An intact hemispherical Chilanga bowl was below the altar and about 30 cm above the burial. It had remnants of painted linear decoration and was burned inside and out. The human remains were later given the Field Burial number 2.

Feature 12: S8E14, level 3, lot 313. Concentration of obsidian debitage (313 pieces) and 697 sherds in a midden-like deposit just above the floor in the corridor between Strs. 66S and 67 (elevation approx. 593.92 m). Mixed with collapse debris; some jute shells. Jar and basin forms predominate. See below for extended discussion.

Feature 13: S2E22/S2E24, levels 3-5, lot 366. Flexed adult female burial found just outside the north retaining wall at the northwest corner of Str. 50. The burial was in a crude, narrow cist just below the level of the Str. 50 wall base (592.35 m). Orientation was east-west with the head to the east. Obsidian and seventy-eight sherds were in association, with Casaca Striated jar sherds predominating (41), but unclear whether any of these were offerings.

Feature 14: S8E22/S8E24, level 4, lot 370. Flexed adult burial just to the south and slightly beneath the south terrace wall of Str. 50. Later given Field Burial number 7. The burial was in a crude cist beneath a layer of cobbles above three roughly rectangular capstones at a level of about 591.8 m. Ninety-five sherds including 67 from Casaca Striated and Raul jars. Also six obsidian fragments, but none in definite association with the burial.

Feature 15: East of Str. 50, S8E30, level 4, lot 377. Flexed burial of infant; Field Burial 3 (see below).

Feature 16: S6/E30/S8E30, level 5, lot 384. Primary flexed burials just outside the east wall of Str. 50, near the southeast corner of the building in Burial Trench G. The burials were in a crude cist measuring 1.2x 0.6 m, lined on all four sides with stone. The top of the cist (592.43 m) was dug down about 20 cm below the basal course of the nearby structure wall. Remains of two superimposed individuals were in the cist and were given burial Field Burial numbers 3 and 4. Two hundred and forty-three sherds were in the general context, with Casaca Striated (144) and Raul (47) jars predominating. Also a wide range of other types including Cruz Incised, Hastalgorro, Titichon, Gualpopa, Lorenzo, Surlo, Usulatan, and Copador Polychrome, and one rare Ulua (Babilonia) sherd. A special find was half of a small perforated ceramic disk. Thirty-one obsidian fragments.

Feature 17: S2E24, level 4, lot 386. Circular pit about 1 m in diameter near northwest corner of Str. 50 in Burial Trench E, below level of the floor. Possible storage pit with a considerable concentration of stones and 81 sherds, mostly from Casaca Striated (44) and Raul (12) jars. One large, polished stone pebble.

Feature 18: S8E22/S8E24, level 3, lot 406. Flexed child burial found south of the south terrace wall of Str. 50. Later given Field Burial number 6. Four sherds from Raul (1) and three from Casaca Striated jars. One chert fragment.

Feature 19: S2E20; level 4, lot 435. Flexed infant burial east of rear wall of Str. 66S in Burial Trench I. Later given Field Burial number 8. Three obsidian fragments and one piece of ground stone.

Feature 20: N18E14/N18E16, levels 2-3, lot 440. This midden material, mixed with collapse, was in the corridor between Strs. 66N and 66C and yielded our third largest concentration of obsidian (no = 134). The obsidian collection resembled that from Feature 9 in that it consisted predominantly of blade fragments (83.6%). One hundred and twenty-seven sherds include a variety of types, mostly jar forms. Casaca Striated (47) and Raul (18) sherds make up about half the collection. Jute shell and two obsidian non-blade fragments.

Feature 21: N12E10-12/N14E10-1, lot 469. Slumped circular depression in the empedrada near north talud of Str. 66C (Figs. 8-4, 8-5). The depression might have signaled an underlying burial so it was numbered as a feature. Excavation revealed instead an underlying bell-shaped pit about 2 m in diameter and 1.5 m deep. It extends under the north talud and staircase of Str. 66C and beneath a deep layer of re-deposited midden material on a floor remnant associated with Str. 66C-2nd. The pit had very dense deposits of sherds (including extremely large fragments), faunal bone, and horizontal lenses of ash and charcoal, particularly near the bottom. Ceramics are exclusively Coner with copious amounts of Casaca Striated. Unfortunately there was very little obsidian in the pit, so we have no hydration dates from it. Widmer suggests that it was a Middle Classic (Acbi) borrow-pit for clay that



Figure 8-4. Feature 21 capstones.



Figure 8-5. Feature 21 and talud.

was later filled in with Coner period trash. In any case, if it is associated with any known building it is probably Str. 66C-sub.

Feature 22: N18E18, lots 577, 578. Cylindrical stone about 36 cm in diameter and 9 cm thick sunk flush with the corridor floor in the eastern end of the corridor between Strs. 66N and 66C (see Fig. 3-43). The general shape resembles a small cylindrical altar. Beneath the stone was an infant burial (Field Burial 16) and lower still a box-like construction that Widmer interpreted as a possible support for a pillar related to an earlier building phase. The feature consists of all these elements.

Feature 23: N24E16; faceted olivine basalt cobble found pressed into the plaster on the north substructure projection in the corridor between Strs. 66C and 66N.

Feature 24: N13E10, lots 543, 544, 631. Empedrada patch in front of the outer terrace wall of Str. 66C-sub.

Feature 25: Burials 9 and 11a, b (see below) found just below Feature 23.

Feature 26: N18E16, lot 516. Fill (no artifacts) from niche in front (west) superstructure wall of Str. 66N.

Feature 27: N16E10, lot 532. Copador Polychrome vessel (Fig. 8-5) with monkey figure from trash deposit and fill exposed during the trenching under the wall of Str. 66C-2nd.

Feature 28: N24E16, lots 554, 556, 559. Primary flexed infant burial near the front terrace wall of Str. 66N. Later given Field Burial number 13.

Feature 29: N22E12-14, N24E12-14, lot. 559. Large ashy layer (part of midden “pad”) beneath Str. 66N.

Feature 30: N12E12. Empedrada patch beneath 66N-1.

Feature 31: S2E10, lot 563. Secondary disarticulated bundle burial, mainly long bones, beneath the empedrada in front of Str. 66S, just to the right of the centerline of the Str. 66 stairway, and just to the west of Burial 15. Later given Field Burial number 14.

Feature 32: N0E10, lot 572. Primary flexed adult burial in a stone cist beneath the empedrada surface in front of Str. 66S, just to the right of the centerline of the Str. 66S stairway. Later given Field Burial number 15.

Feature 33: S6E18, lots 579, 601, 602. Primary flexed adult burial in a well-constructed tomb beneath terrace to south of stairway, east end of corridor between Strs. 66S and 67. Later given Field Burial number 17.

Feature 34: N10E6-8, lot 594. Primary burial beneath empedrada in front of Str. 66C. Later given Field Burial number 20.

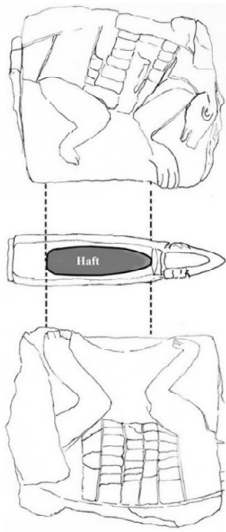


Figure 8-6. Feature 35, showing the slot that presumably was used to haft the object.

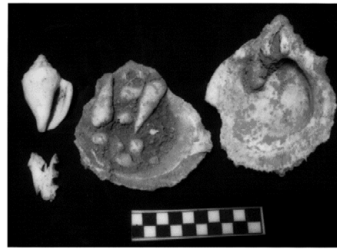


Figure 8-7. Cached objects near Feature 36.

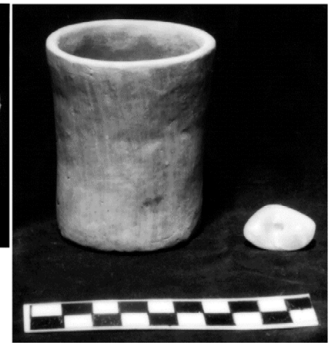


Figure 8-8. Cut human tibia.



Figure 8-9. Feature 37 cache. The oolite fragment is on the lower right.

Feature 35: S2E26, lot 609. Schist object (Fig. 8-6) with incised armadillo-like figure found in a midden near the slumped SW corner of Str. 51S and probably originally part of a dedicatory cache. It has provision for hafting, so Widmer called it a “mace head”.

Feature 36: N13E9, lot 616. Cache of two spondylus shells (each from a different organism) placed on top of one another and enclosing six fragments of hematite or cinnabar. Also 12 jute shells and two marine conch shells – one partial and one complete (Fig. 8-7 left). This cache was below the stucco remnant of the plaza that abuts the final Str. 66C staircase and so is associated with its final construction phase. No pit distinguishable. Field Burial number 20 (an infant) was found in the same general locale but it is not associated with the cache.

Widmer found two other artifacts nearby in the fill of Str. 66C, presumably both caches, that he did not give feature numbers. The first was a small cylindrical vessel (Fig. 8-7 right) with a jade fragment and the second was a cut human tibia (Fig. 8-8).²

Feature 37: S4E16-18, lot 620. Cache inside the niche fill of the double wall dividing Room 2 from Room 3 in Str. 66S (Fig. 8-9). It consisted of two crude, vase-shaped Sepultura censers, one inverted over the other, enclosing a spondylus shell. The bottom vessel contained pieces of crushed shell, an oolite fragment, six pieces of hematite or cinnabar, six drilled olivella beads, three pieces of unmodified green stone, some traces of non-specular red paint, a marble bead fragment, and many small mineral fragments. When Widmer trenched through the middle of the

² Two small vessels with this basic shape were recovered from elite tombs by the Chinese project. Analysis of residues yielded evidence for ritual drinking of fermented or other liquids (see discussion in Chapter 12). Similar small cups were part of the Feature 37 cache (Fig. 8-9), and another small Surlo cup or vase was found by Widmer in the fill of Str. 66C (Fig. 3-54).

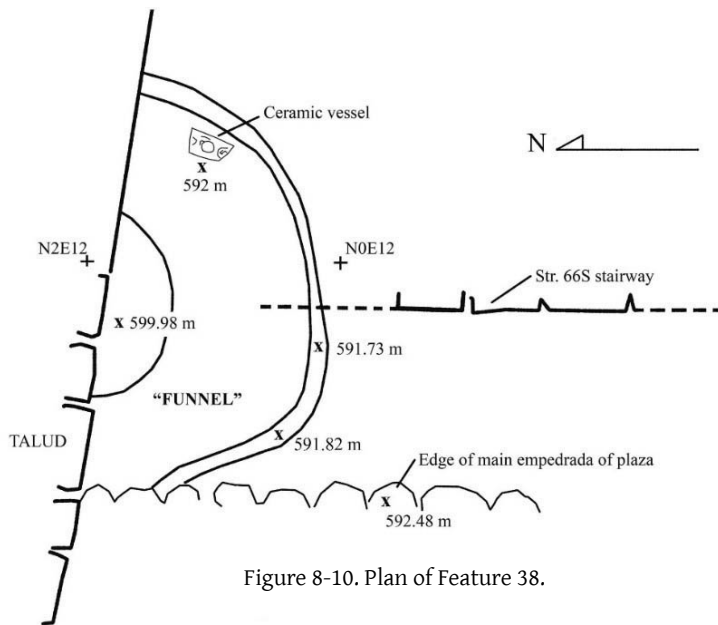


Figure 8-10. Plan of Feature 38.

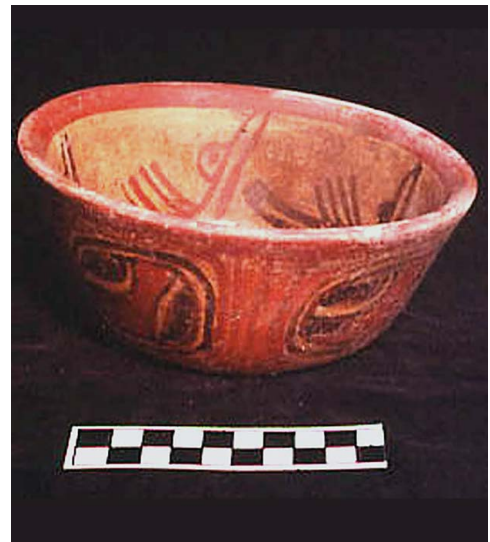


Figure 8-11. Copador vessel, Feature 38.



Figure 8-12. Rim of clay funnel beneath the south talud of Str. 66C.

adjacent bench he found no other offerings, but he did expose the line of an earlier rear substructure wall.

Feature 38: N4E10/12, lots 651, 678. Clay funnel-shaped basin beneath the empedrada and south talud of Str. 66C at its intersection with Str. 66S (Figs. 8-10, 11, 12). The upper rim of the feature was sealed with stones at an elevation of 591.82 m, and Widmer excavated the underlying fill down to a level of 589.98 m without finding the bottom. The basin tapers toward the bottom, hence its funnel-like shape. It extends under the levels of both the last phase and the earlier phase buildings. It is about 2 m in diameter and at least 1.84 m deep. Widmer thought the shape was suggestive of a drain rather than a water-storage device. At some point the basin/funnel was filled with rubble and earth that was practically devoid of artifacts, so dating is unclear, although an out-flaring-sided Copador Polychrome bowl was found about 10 cm above its rim (Fig. 8-11). Like Feature 21, the basin or funnel might predate all other construction on this side of the plaza. If it is associated with a particular building it would be Str. 66C - sub.

Feature 39: N2E10, lot 652. Section of slumped empedrada stones above Field Burial 25, just to west of Str. 66S stairway.

Feature 40: N20E12, lot 673. Capstones of burial beneath empedrada in front of stairway of Str. 66N (Fig. 8-13). Later given Field Burial number 23.

Feature 41: N4E10, lot. 663. Circular depression in empedrada near south talud, of Str. 66C.



Figure 8-13. Feature 40.



Figure 8-14. Feature 42

Feature 42: N22E12, lot 665. Adult burial (Field Burial number 22) beneath empedrada near front stairway, Str. 66N (Fig. 8-14).

Feature 43: N22E12, lot 677. Capstones beneath the empedrada near the front stairway of Str. 66N, slightly to the north of its centerline. Later given Field Burial number 24.

Feature 44: N0E26, lot 592. Dedicatory cache of obsidian blades found by the masons while restoring the bench in Room 1, Str. 51C. Widmer recorded these blades but did not give them a feature number. Because of their chronological implications I listed the here as Feature 44. Chapter 11 reviews the associated hydration dates.

Special find: Widmer found an oyster-pearl pendant (Fig. 8-15) in level 3 beneath the south talud of 66C, along with other artifacts including small mica flakes, a large broken chert biface, and a fragment of carved scallop shell. He did not number this material as a formal feature but we display the pendant here.



Figure 8-15. Pearl oyster pendant.

Comments on Specific Features

Several non-burial features merit more detailed description because of their chronological implications that are discussed in Chapter 11.

Feature 9: As explained in Chapter 6, Feature 9 was a sheet midden strewn across the corridor between Str. 66S and Str. 50 (Figs. 8-16, 8-17). It is not strictly speaking a terminal midden because we found small lenses of trash above the sloping cascajo layer a short distance to the north (Fig. 6-17), but it is the last material deposited directly on the corridor surface at this locale. It comprised level 2 in several adjacent squares and was overlain, especially near the rear wall of 66S, by collapse debris. The midden rested partly on the cobble floor to the rear of Str. 66S (Fig. 3-23) and was of variable depth, with a rough average of about 27 cm. We recovered approximately 20 bags of artifacts from it, including 2704 sherds, most of which were identifiable. Only about 4% of these were pre-Coner; all the rest were either firmly Coner phase or types overlapping the Acbi and Coner phases. Some 74% of all the sherds were from Casaca Striated or Raul jars. Casaca Striated is a component of both late Acbi and Coner, but Raul is a Coner jar form. Their co-occurrence, along with many other Coner types such as various forms of Surlo, dates this deposit firmly to the Coner phase despite the presence of some earlier material. Only four sherds of Copador Polychrome, the diagnostic Coner complex marker, were identified, but our highest concentration of sherds imported from the Ulua Valley



Figure 8-16. Excavating Feature 9.

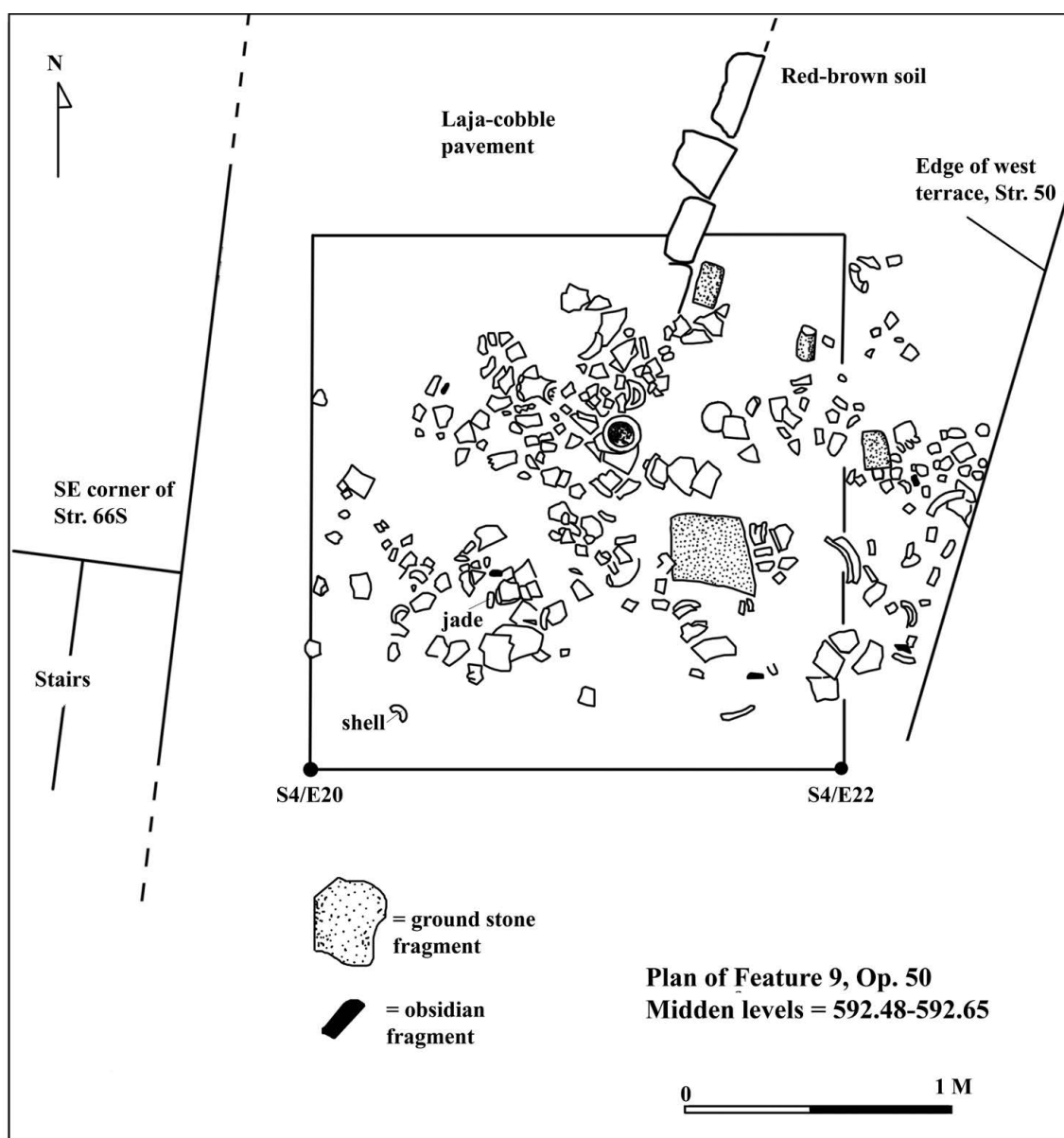


Figure 8-17. Plan of Feature 9.

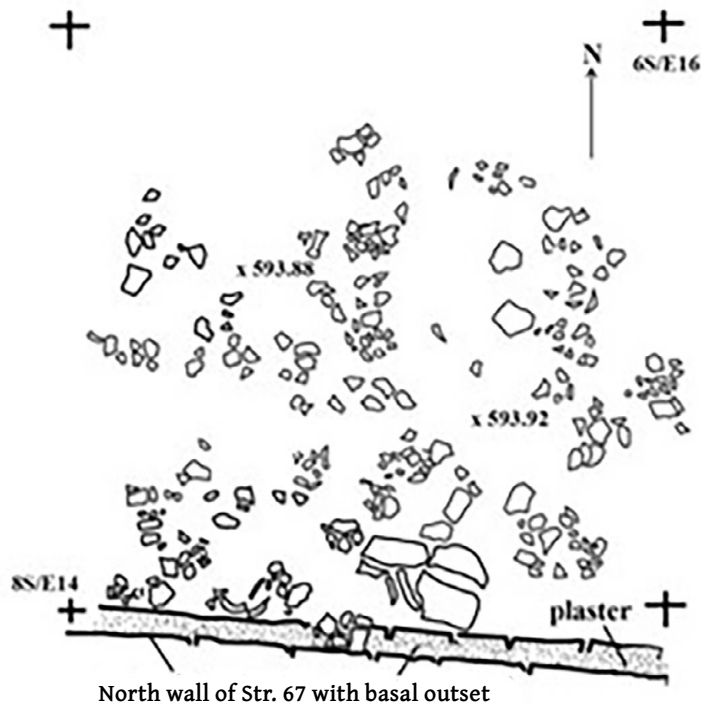


Figure 8-18. Plan of Feature 12.

(n=25) came from this midden. Implications of Feature 9 for the late duration of Coner are discussed in Chapter 11.

The midden consists mainly of artifacts consistent with kitchen activities, including the fragment of a heavily worn footed rhyolite metate, two manos, and sherds of large, constricted-neck jars and other vessel forms suitable for food preparation and storage. There is also an abundance of obsidian artifacts (n = 266), some 90% of which were prismatic blade fragments. Other artifacts include an obsidian projectile point, jute shells, fragments of limestone, animal bone, a plant seed, and burnt bone. Less indicative of domestic functions were part of a shell pendant, the base of what appears to be a broken jade perforator, a ceramic bead, a jade button-like ornament, and the canine of a large mammal, possibly a jaguar (see Appendix B for illustrations). Scott Zeleznik, who helped excavate this midden, thought the material came from two sources. The pendant, bead, perforator,

button, and canine might have been swept out of the rooms in the main plaza through the corridor between Strs. 66S and 67, and the mundane domestic debris probably came from the west terrace of Str. 50, a likely place for outdoor food preparation. As we exposed Feature 9 William Sanders reminded us of the kitchen midden found next to a modest stone platform at the base of the stairway leading down out of the southeast corner of Plaza A in Group 9N-8, although this appears to be a primary context rather than refuse. In both cases it would have been convenient to prepare food just outside the main plazas and then carry it in by way of little stairways.

Whatever its origin, Feature 9 shows a slight cumulative blurring of materials of different ages. It certainly did not, however, accumulate gradually, but rather as a single event or several almost simultaneous ones. Its position would have impeded movement through the corridor between Strs. 66S and 50, and the large rim sherds on its surface would have been broken or trodden flat had people routinely walked over them for any length of time. It is clearly refuse as opposed to what the Tikal archaeologists called a problematic deposit.³ We shall see in Chapter 11 that twelve obsidian hydration dates from Feature 9 also indicate late deposition.

Feature 12: A dense scatter of obsidian flakes and blades, along with bits of bone, barro quemado, and collapse rubble, extended from the north wall of Str. 67 across the corridor floor between Strs. 66S and 67 (Fig. 8-18). Sherds from the feature (n = 697) heavily derive from Casaca Striated jars (470 fragments). Like Feature 9, Feature 12 must be a very late deposit because the debris would have made movement across the corridor inconvenient and even dangerous for bare feet. It yielded our largest single concentration of obsidian (313 pieces). Some 93% of these were flake fragments, a sharp contrast with the blades in Feature 9. Ken Hirth informs me that at Xochicalco such flake scatters are good evidence for obsidian production. He also says that production there often took place in outdoor spaces such as corridors where the light was good, and where (counter-intuitively) production debris was left in place and walked over, at least for short periods of time.

³ Archaeologists increasingly shy away from reflexively calling late accumulations found associated with Maya buildings “refuse”, “termination deposits”, or “problematic deposits”. Instead they interpret many of them as purposeful or reverential deposits made with more complex motivations, including retention of social identity (see the varied opinions on this matter in *Ancient Mesoamerica* 2020: 31: 1). However this may be, Feature 9 seems to be non-problematical refuse to me.

Whether deposits such as Features 9 and 12 were made by people still preserving some sort of elite presence at Group 8N-11 is less important than what they tell us about the collapse of the buildings. Both deposits were buried by collapse debris from Strs. 66C and 66S, although whether both these buildings fell as a single event is unknown. We will later review detailed chronological information from both features. For now, we should bear in mind that none of the excavated main buildings appear to have suffered severe and purposeful damage and that abandonment was neat and orderly before their collapse.

The rooms of the Str. 50-51 complex were for the most part reasonably clean and devoid of artifacts, but there are exceptions. Feature 3 consisted of numerous broken vessel fragments spilling out of the door of Room 1, Str. 51C, onto the nearby terrace level (N2/E26-28), and another concentration of broken jar sherds was found near the southeast corner of the building (S2/E30). The terraces and the corridor between the ancillary and the Str. 66 buildings were clearly important activity areas. Several other deposits in the area must have accumulated at or after the time of elite abandonment. Features 9, 12, and 3, along with much other debris, suggest late activity at 8N-11. We shall see later that some of the ancillary rooms were probably used and renovated after the Str. 66 complex was abandoned.

Copán Burial Overview

Just how many burials have been collected since the Copán excavations of the late 19th century is unclear. Shintaro, Tiesler, and Price (2018: 194) call it “...the largest skeletal series from the Maya Lowlands”. A recent numerical estimate by Katherine Miller Wolf (2019: 31) lists 1200 individuals and 361 isolated human remains from all projects, as logged into a running master list of successive CP (Copán Project) numbers first established by Rebecca Storey during PAC II.⁴ By contrast, Bruce Welsh’s (1988) ambitious overview of burials from the entire Maya lowlands contains only 1170 individuals. Whatever the exact numbers, Shintaro and his colleagues are correct -- Copán has the biggest burial sample of any Maya center or polity. In 1982 our late Penn State colleague Prof. James Hatch and his field school extracted about 150 burials from Las Sepulturas alone during just one six-week period. PAC II and related research contributed scores of burials from intensively excavated urban core sites and a much smaller number from rural excavations and test-pitting.

Rebecca Storey has catalogued and analyzed Copán burials since the 1980s. Scott Zeleznik and David Reed, building on her work and that of Stephen Whittington (1991b, 1992), compiled an extensive database of 736 individuals.⁵ Some derive from the old Carnegie Institution excavations in and around the Main Group, but most are from the Harvard, PAC I, and PAC II projects. To these were added a few later collections such as that from 8N-11. Burials recovered from the Main Group are not included in the database, nor are those accumulated by many other projects over the last 20 years, such as reported by Price *et al.* (2014), by Nakamura (2000), or by Maca (2002, 2015) from Groups 9J-5 and 11K-6.⁶ Nor does it include the 8N-11 burials found recently by the Chinese project. Such exceptions aside, the Zeleznik/Reed sample is extremely comprehensive and it provides robust insights about Copán mortuary patterns and larger sociopolitical issues, as shown by many illustrations below by David Reed. Katherine Miller (2015; Miller and Freiwald 2018) used Groups 8N-11, 9N-8, and other PAC II sites as the bulk of the mortuary sample used to analyze biodiversity, relatedness, and mobility in Copán populations as reflected in bulk strontium and dental morphology.

Although we use the term “burial” here, many human remains recorded in our database are not from documented mortuary contexts. Some were salvaged opportunistically from disturbances such as road-widening. Others were sent to the lab with contexts never properly recorded or lost. Still others were from good contexts but not mortuary ones. For example, some individuals found in Group 9N-8 were crushed beneath collapsing vaults or beam and mortar roofs. Sometimes remains identified as single burials in the field turned out in the lab to include fragments of other individuals. All these non-burials account for the “none” or “missing” categories in subsequent displays, as do individuals for whom age, sex, and other data could not be determined.

⁴ Katherine Miller-Wolf gives a good overview of how the burial collections were accumulated and curated and cites much of the basic literature that we utilize in this chapter. She also notes that many burials from recent projects have not been catalogued, including more than 200 found in Seiichi Nakamura’s excavations (Nakamura 2000; Shintaro, Tiesler, and Price 2018). Miller-Wolf informed me (personal communication 2023) that about 80 burials have been retrieved from the northern and eastern 8N-11 buildings by the Chinese project, but I know nothing about most of them.

⁵ Storey 1992, 1997, 1999; Whittington 1989, 1991b, 1997; Zeleznik n.d., 2002; Zeleznik and Reed 2006, Reed and Zeleznik 2001, 2002, 2016)

⁶ Maca (2015: 173) says the only “monumental” tomb located outside the Main Group is the one he found at Group 11K-6. Whether this is a royal tomb is unclear. Its occupant, a man about 50 years old, appears to be a foreigner as indicated by his isotopic signature and most of his mortuary goods. The tomb found by Nakamura is a much simpler sub-floor interment.

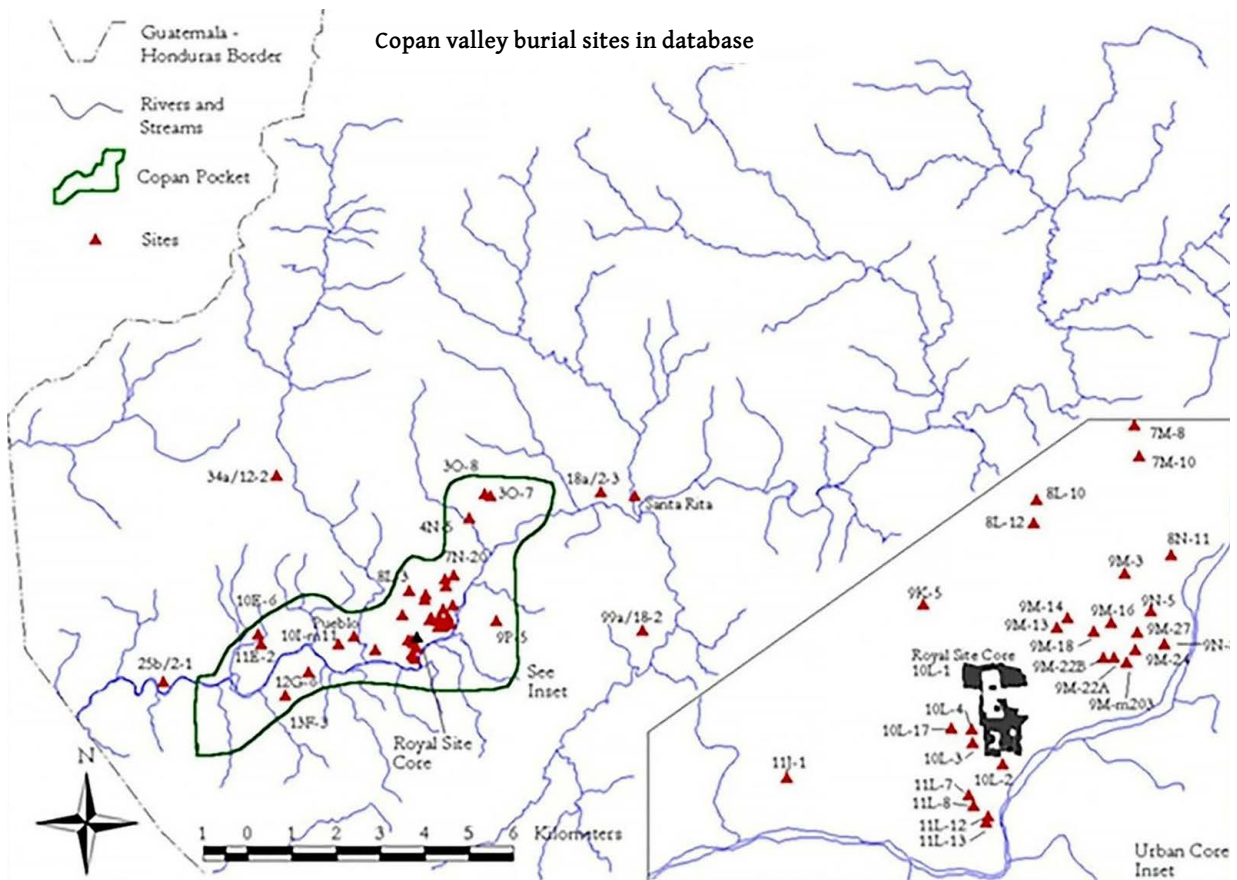


Figure 8-19. Map showing locations of burials in database.

Many years ago, in a classic article on ancient Maya burials, William Rathje (1970: 360) lamented the insufficiency of his sample, noting that “The ideal study would involve burial populations from temples, palaces, and house platforms in and around a single ceremonial center. The available data, however, are incomplete from any one site....”. Very small and skewed mortuary samples are still common. Andrew Scherer (2018) reports only 43 burials from the ambitious, multi-year projects in Guatemala’s Buenavista Valley region. Most of his sample comes from elite contexts (which sometimes include sacrificial burials) and it over-represents adults.⁷ Rathje would presumably be pleased at Copán’s huge and comprehensive burial collection from residential sites of all ranks as displayed in our GIS (Fig. 8-19).

Below we first summarize basic mortuary patterns for Copán that are derived from the Zeleznik/Reed database. We then describe our Skyband burials and compare them with larger database patterns and offer some conclusions about Copán politics and society. Zeleznik and Reed, influenced by Welsh’s earlier pan-Lowland analysis, devised a system of 51 coded variables to investigate status and burial distinction in their database sample. Some burials lacked pertinent data, but the majority were complete enough to serve as subsets for various calculations. Coded variables included:

1. Associated artifacts.
2. Character of the grave space or “container”.
3. Placement/orientation within the grave space.
4. Biophysical characteristics of the individual(s): e.g., age-at-death, sex, isotopic signature, etc.
5. Location of the burial vis-à-vis associated sites and individual structures (e.g., site rank, building scale and character, in structure or in fill, etc.).

⁷ Scherer attributes this imbalance partly to the lack of intensive excavations of small residential remains that were originally planned but never carried out.

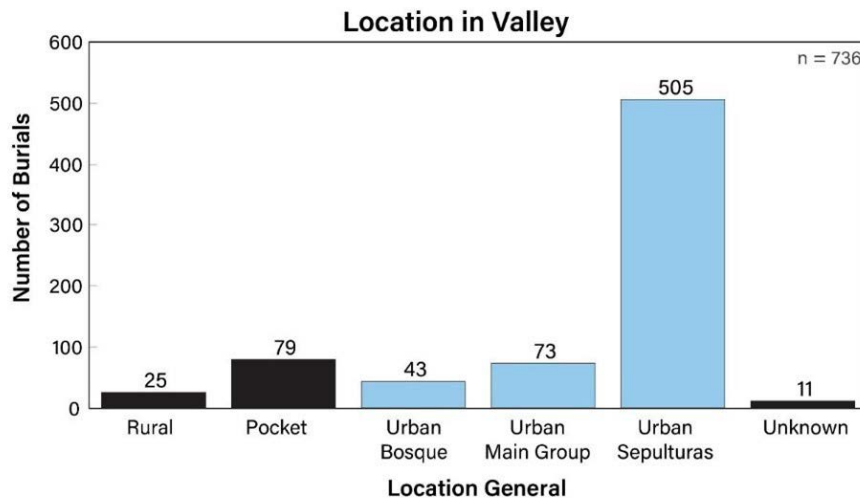


Figure 8-20. Histogram of burial locations.

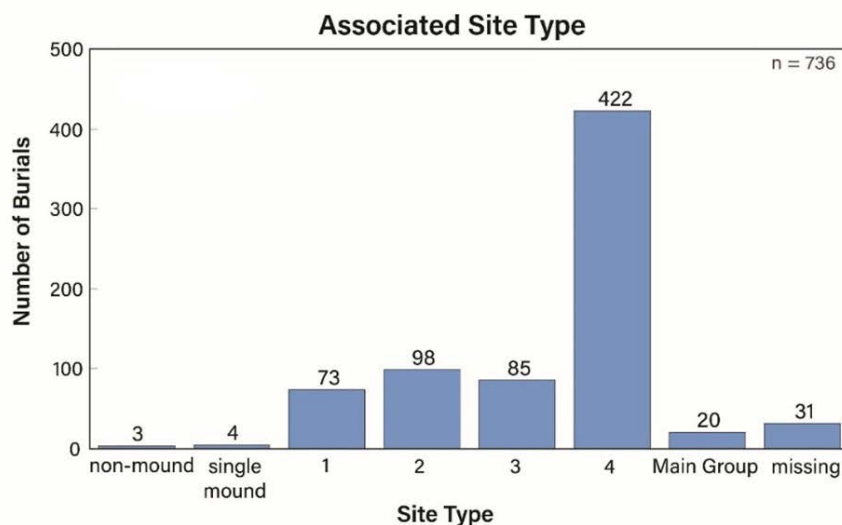


Figure 8-21. Histogram of site types associated with burials.

Site and Chronological Contexts

A very large proportion of the database burials (Figs. 8-20, 8-21) comes from urban core sites, particularly of Type 3 or 4 rank, creating a potential bias. We should ideally have a large sample from more humble residences or contexts, especially those distant from the Main Group.⁸ Fortunately, this bias is partially offset by the extremely modest nature of most burials even from big groups such as 9N-8 or 8N-11. In fact, burials from small rural sites (see Gonlin 1993 for examples) could scarcely be simpler than most of those from the big urban core groups. Many residents of impressive groups were of very modest social standing and/or people who lived in small residences elsewhere were brought to the big sites for burial.⁹ A second bias is chronological. Most database burials ($n = 601$) come from contexts post-dating AD 600-650, the Acbi/Coner transition (see Chapters 9 through 11 for discussion of the Copán ceramic sequence and issues with applying the term Late Classic).

⁸ Some 60 burials do come from sites at least 3-4 km distant from the Main Group. The 25 burials labeled “rural” in Fig. 8-20 are from outside the Copán pocket. The bias here is not so great as it appears because roughly two-thirds of the polity’s population lived in the urban core and the Copán pocket, including people of all social ranks. People of modest social standing lived in sections of the big elite-level sites such as 9N-8 and many were buried in such places.

⁹ Although we excavated in likely contexts we found very few burials during our extensive exposures of small sites, some of which were far from the urban core. Some well-tested rural sites lacked burials entirely.

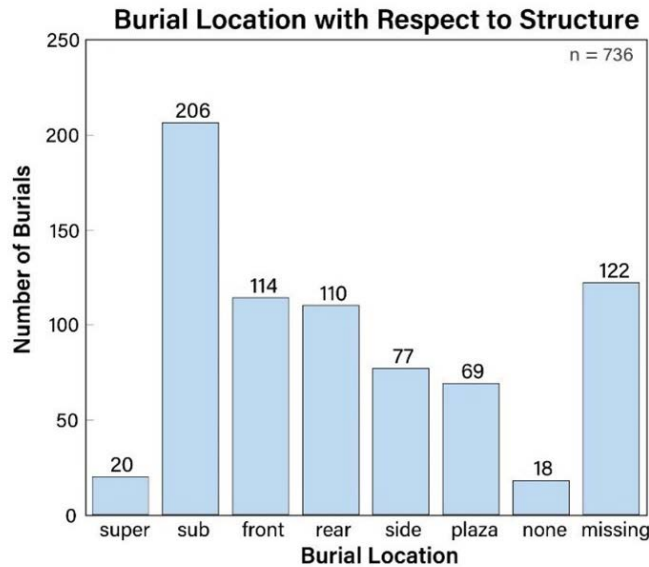


Figure 8-22. Histogram of relationship of burials to buildings.

Position in Relation to Structures

Most burials in the database were found in or under the fill of structures or deposits immediately to their fronts or rears (Fig. 8-22). How many come from such contexts depends more on excavation strategies than from systematic pursuit of burials or shared ancient mortuary practices. During PAC II we routinely exposed superstructures and trenched near substructure walls, which were often also probed during reconstruction, so such contexts are well represented. Other contexts, such as fill beneath plazas or in substructures, were usually explored by more limited excavations and are under-represented in our samples.

Grave Types

We categorized grave types from our PAC II and later projects in the following manner (see Diamante 1991 for basic information on our burial categories and sample):

1. **No treatment or treatment unknown:** Recovered by salvage, placed in fill, records incomplete, etc.
2. **Pit:** Burial in an unlined pit in a deposit such as a midden, fill, or earthen floor. This classification was used when the outlines or profile of a pit could be discerned, but where there were no signs of other elaborations defining the burial space. Many “no treatment” burials were probably made in pits that we could not detect. Burials in Categories 1 and many in Category 2 are sometimes called “simple burials” by Maya archaeologists (e.g., Sherer 2018: 307).
3. **Cist:** A simple pit covered with unmodified stone and/or wholly or partly lined or ringed with unmodified stone. Diamanti (1991: 210) identified as “cobbled” a pit capped with rounded river stones, and we include these in the cist category. Many cist graves are essentially slightly “improved” pits.
4. **Crypt:** Similar to cists but with some or all of the stone capping or lining purposefully modified and usually more formally arranged.
5. **Simple tomb:** A chamber whose walls were made of well-cut stone and which often supported a covering of stone slabs.
6. **Complex tomb:** A tomb composed of cut stone walls and with the interior enhanced with features such as benches, vaulted ceilings, plastered surfaces, or niches.

Distribution of these grave types is shown in Fig. 8-23. Most burials either had no discernible prepared contexts (as in individuals placed in middens or in the fill of plazas) or they consisted of simple pits whose outlines we could only sometimes detect. Many listed as “none” or “missing” probably fall into this modest end of the range. Other burials were placed in cists that were often just pits with a few added features. The subset of burial contexts at small rural sites outside the urban core falls into the pit/cist range.

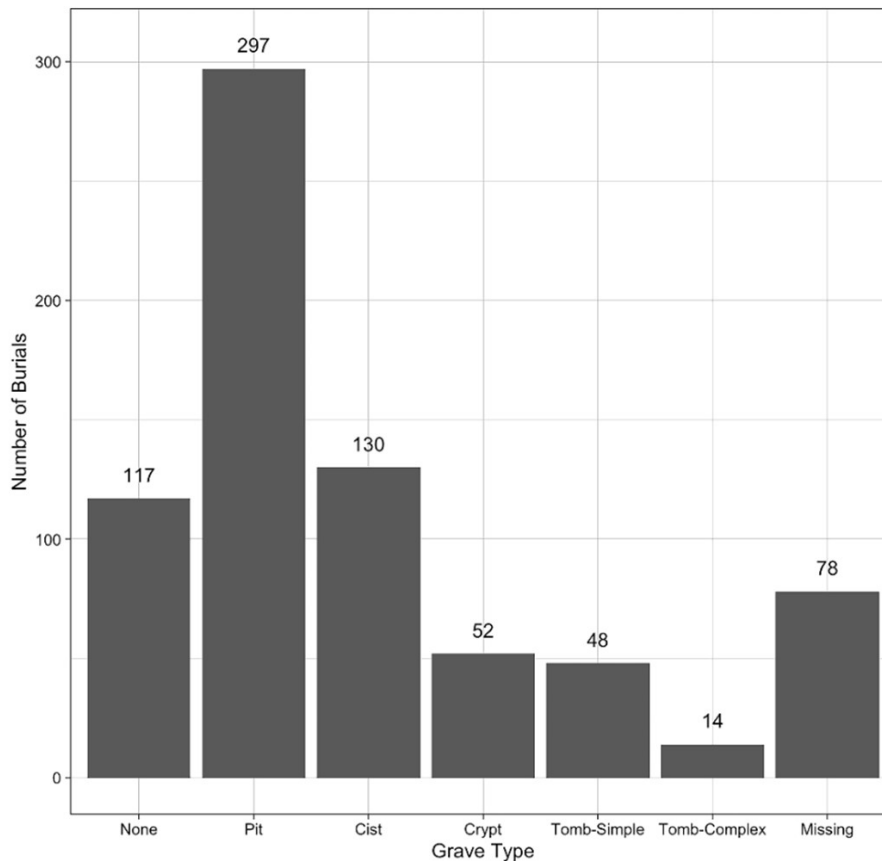


Figure 8-23. Distribution of grave types.

Frequency and Percentage of Body Orientation

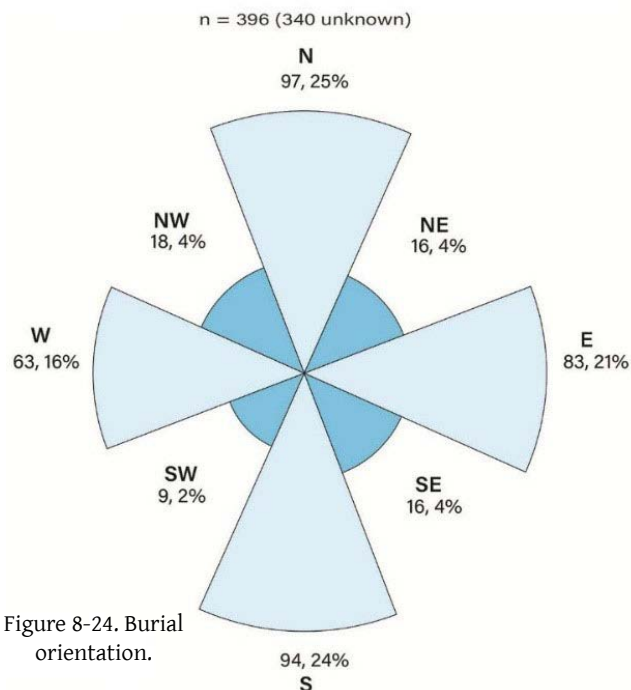


Figure 8-24. Burial orientation.

Orientation of Body or Grave

Fig. 8-24 shows little consistent patterning of burial orientation in terms of cardinal directions as we think of them. The Maya were concerned instead with quadrants of earth/heaven, but this preference does not stand out strongly in the distribution either.¹⁰

Age and Biological Sex

Relative age determined by Storey and Whittington is shown in Fig. 8-25. There are significantly more men than women of young adult age but more women than men in the older adult range. A very large proportion of individuals (90 infants and 159 children) falls into the preadolescent range as Rebecca Storey (1992) observed long ago. Age assessments, and those specifically listed below for 8N-11, were made by Storey and Whittington before modern age-transition methods as recently developed by our Penn State colleague George

¹⁰ Scherer, Golden, and Houston (2018: 170) say that Maya people lived in “moral communities” with shared ethical and correct behavior. Such behavior is manifested by consistent burial orientation in elite and commoner graves at Yaxchilan and Piedras Negras, but no such clear patterns emerge at Copán.

FEATURES AND BURIALS

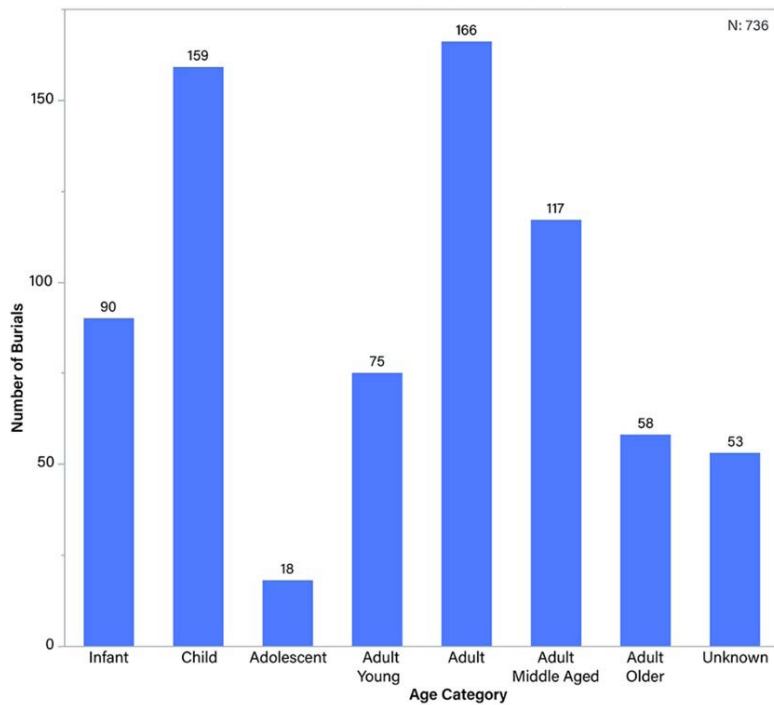


Figure 8-25. Burials by age category

Milner and others were available. They are thus somewhat antiquated by today's standards, particularly with regard to individuals more than 50 years old (older adult range) who were probably more numerous than it appears. Milner tells us that infants are under-represented in the overall 8N-11 sample and that the age interval for adolescents is probably too short (see Shintaro, Tiesler, and Price 2018: 201 for age distribution in a smaller burial sample from Nakamura's excavations). Biological sex could be determined for 282 individuals, and the ratio shows a remarkably even split between males (n =138) and females (no =144), about as close to the expected as one could hope. Whether the Maya themselves recognized non-binary sexual or gender identities or orientations is unknown and is an interesting issue.

Body Position

Primary burials predominate during all time phases (Fig. 8-26), but extended positions are most frequent prior to the full Late Classic, with an increasing preference toward flexed burials thereafter. Secondary burials are rare and are subsumed in the "disarticulated" count.

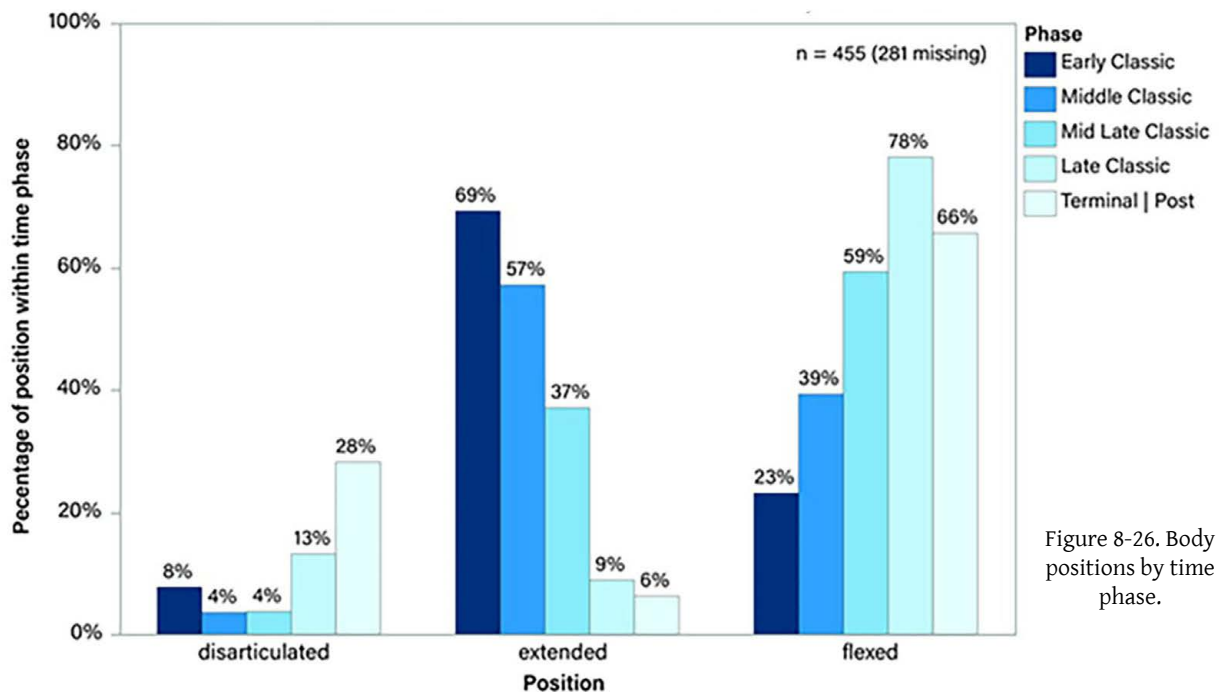


Figure 8-26. Body positions by time phase.

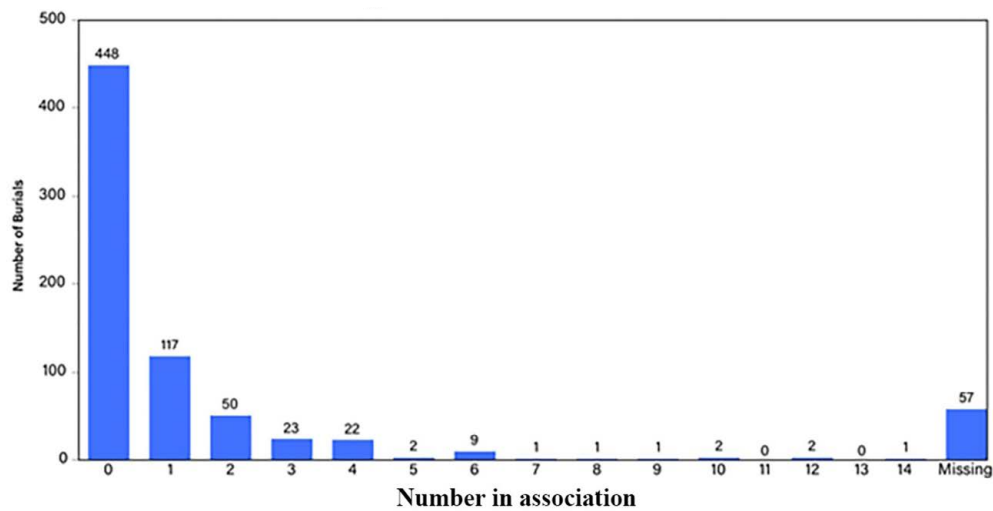


Figure 8-27.
Ceramic
associations
among burials.

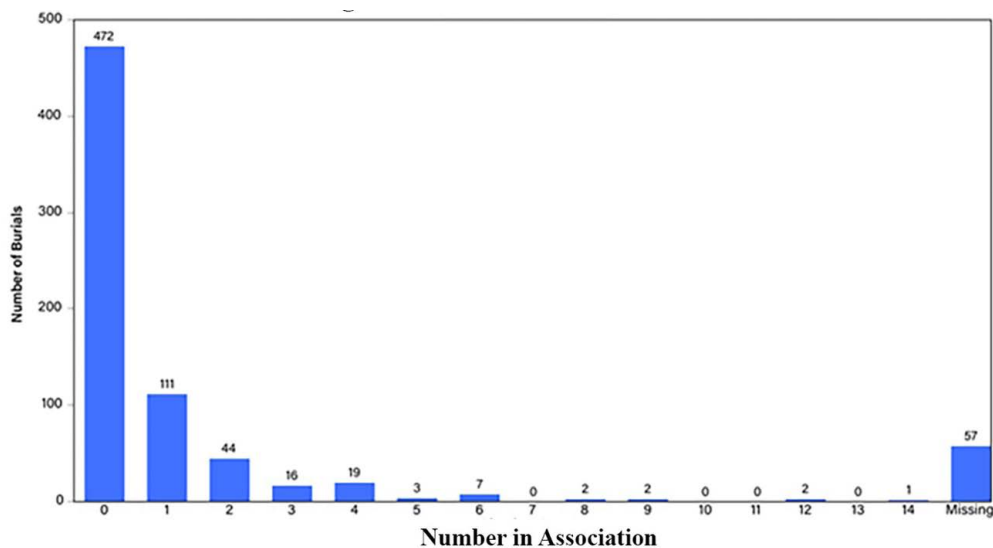


Figure 8-28.
Numbers of
ceramics in
association with
burials.

Artifact Associations

Most burials have no discernible mortuary offerings, as shown in Fig. 8-27.¹¹ Artifacts in clear association with burials are usually ceramics and are preponderantly fine wares, either whole vessels or parts of vessels (Fig. 8-28). Most fine ware types are found even in the smallest rural sites, so people had wide access to them (see Chapter 9 for distinctions among Classic plain and fine wares). Imported ceramics are very rare in burials, occurring in just 45 cases, but see Chapter 9 for a cautionary tale about the most distinctive Coner fine ware type, Copador Polychrome, which might be more properly called an import.

Burials occasionally included jade, shell, obsidian, beads, pigments, and odd bits of minerals such as crystals (see 8N-11 list below). Jade (either true jade or “social jade”) occurred in 81 burial contexts and ranges from good-sized ear flares to tiny fragments, the latter most common. Oddly, obsidian, which is abundant and found at Copán sites of all ranks, occurred in fewer burials (22) than jade.

¹¹ We say artifact associations because it is sometimes unclear if an artifact was intentionally placed with a burial. For example, infant burial 63-1 was found in a trashy deposit just above the remains of two large Casaca Striated vessels with burned interiors (Op. 63, Feature 7). Whether those who made the grave knew of the underlying deposit is unknown.

General Copán Database Patterns

In an initial statistical analysis Zeleznik (2002: 16) discerned the following general patterns in the Copán burial scores (see Figs. 8-47 and 8-48 below for graphs of the ranked scores):

1. About one-third of burials had fine ware ceramics, mainly serving vessels and plates; utilitarian ceramics were rarely placed in burials.
2. Graves in high-rank residential sites exhibit most variability in burial treatment, both because some of their inhabitants were unusually privileged and because such sites had burials ranging from the most distinguished to the least distinguished individuals.
3. Rank in the burial continuum is poorly correlated with residential site rank except at the extreme upper end (again because big, impressive sites had burials of both the most distinguished and least distinguished individuals).
4. Graves located behind structures or in middens were simpler than those placed inside structures, in front of them, or in their fill.
5. More burials had jade (real or social) than had obsidian.
6. Objects of personal ornamentation or adornment were more common than utilitarian objects.
7. Orientation or position of the body (flexed, extended, etc.) seem to have no role in distinguishing individuals.
8. True glyph representation is the only mortuary element confined to the upper end of the burial distribution (false glyphs are commonly found on Copador Polychrome pottery).¹²
9. Older individuals received generally better burial treatment than younger ones; children and infants had very few signs of social distinction.
10. Age is a better predictor of burial treatment than sex except at the extreme upper and lower ends of the distribution.
11. For adults, the lower end of the distribution is heavily weighted toward older women, and the upper end is weighted toward older men.

The Group 8N-11 Burial Sample

We sometimes encountered burials during our normal clearing activities, their locations signaled by slumping plaza surfaces, by stone cappings, or by disturbances of superficial middens. Elsewhere we made a concerted effort to locate them by excavating burial trenches along the peripheries of buildings, most notably around Str. 50 and the rear of the Str. 51 complex. Locations of burial trenches around the Op. 50 ancillary buildings are shown in Fig. 8-29. Oddly, we found no burials behind either of the Str. 51 buildings, which seemed to us to be prime spots, but instead a cluster associated with Str. 50. Widmer and Storey later did similar probes around the main courtyard buildings (except the rear of 66C), including three sides of Str. 66N and the front and rear of Str. 66S (Fig. 8-30). Burials are conspicuously absent in and around Str. 66C.

Given the nature of the Group 8N-11 and its stratigraphy, all the burial *contexts* we found must date late in the Copán sequence, no earlier than the Acbi/Coner transition. Obviously the same cannot be said about the skeletal or mortuary remains themselves, some of which are re-deposited earlier ones. Most burials are nevertheless solidly Coner, although what that means depends on the alternative chronologies reviewed in Chapters 10, and 11. Without a good suite of radiocarbon determinations we cannot place absolute dates on most burials, but almost all contexts are associated with the last phases of architectural activity at the site as described in Chapters 3 and 6. Some burials are probably very late intrusions made by people still living in the vicinity long after the buildings were largely or wholly abandoned.

Our Op. 50 excavations recovered 25 numbered burials. Rattray found three Op. 14 burials in 1982, and two others appeared during Op. 63 in 1997, bringing the site total to 30 (the two Op. 63 burials are listed here but described in Chapter 7). The list below slightly inflates the numbers of individuals compared to those in our field lists and earlier reports because in a few cases what appeared to be a single burial turned out, when examined in the lab by Storey, to have bone fragments from additional individuals. Some burials have both feature numbers and field burial numbers for reasons explained earlier. Excavations frequently turned up slumped sections of plaza surfaces

¹² The database records 13 burials with true glyphs and 63 with effigies (figurines, whistles, carved objects, etc.).

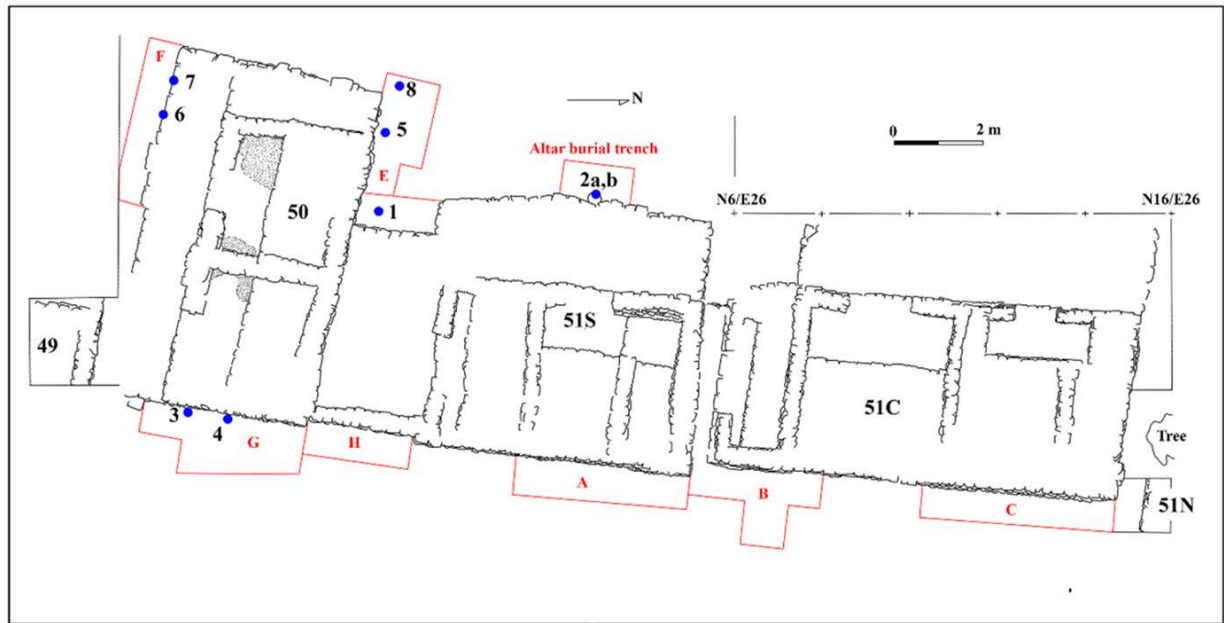


Figure 8-29. Locations of burial trenches (red) and burials (blue) around the ancillary buildings.



Figure 8-30. Locations of burials around the Str. 66 complex.

(e.g., see Feature 21 above), concentrations of what appeared to be capstones, or other indications of burials, so we routinely assigned feature numbers to them. Some of these were unproductive, but 15 did cover burials that were then assigned numbers from the master burial catalogue as well. Burials that we recognized immediately have only burial numbers. Surprisingly few burials were found in the fill of buildings when we tested them during the main excavation season or the follow-up restoration work.

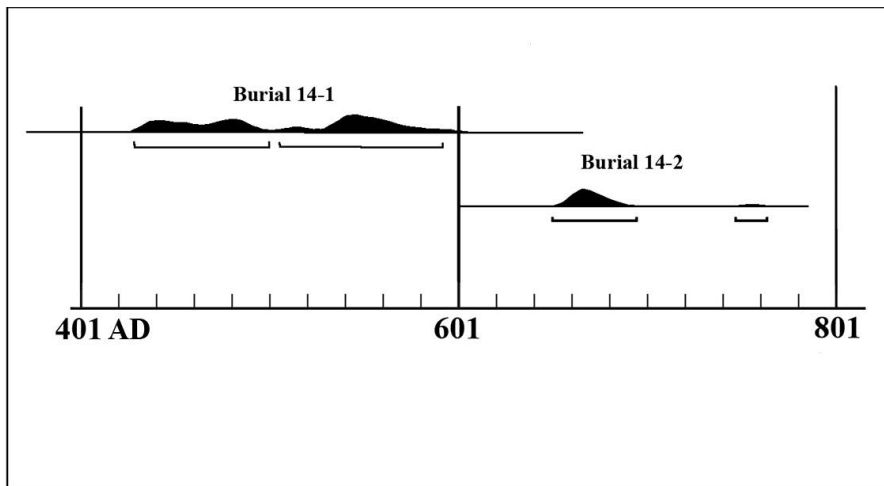


Figure 8-31. Calibrated radiocarbon dates for two burials in Str. 70.

List of Burials from 8N-11 Operations

Burial 14-1 (CP1B): Adult male in his 30s found in a complex stone tomb measuring 1.94 x .74 x .7 m. Situated in plaza fill (stratigraphic pit 2) in front of and mostly beneath the south (front) side of Str. 70, or 70C as the Chinese now call it. Flexed secondary burial lying on left side, head to north. Cranial deformation and indication of cranial wound. The tomb has a plaster floor and five cut stone wall courses, with the uppermost beveled to support large slab capstones. There was a niche in each side wall and two plain Surlo vessels were in the west niche. Other artifacts were a chert biface, two jade disks, and one rectangular jade pendant. Katherine Miller (2015: 265) lists this individual as potentially non-local. This is the only 8N-11 burial for which we have isotope data (see below).¹³

Burial 14-2 (CP184): In Rattray's stratigraphic pit 4. Primary extended burial of a middle-aged female, lying on right side, head to north. Found in a stone cist in the plaza fill partly beneath the front stairway of Str. 70. Fragmentary vessel (olla?) in association.

These two Op. 14 burials are currently the only ones among the 8N-11 sample for which we have radiocarbon dates.¹⁴ Our assumption when the burials were discovered was that they dated to the mature phase of the site, the mid-to-late 8th century, but the two calibrated dates shown in Fig. 8-31 tell a different story.

Burial 14-1 most likely dates to either the fifth or sixth century. It appears to be firmly Acbi in date and is unexpectedly early given what we know about Str. 70. Rattray found no unmixed Acbi deposits in her excavations and the Surlo vessels associated with the burial, along with the excavation context, indicate a Coner date for the tomb itself. Either the C¹⁴ date is incorrect or a long-dead individual, possibly a group ancestor, was placed in a later tomb. We favor the latter explanation. Re-interment of a sociologically important individual is consistent with the secondary nature of the burial, with its rich mortuary offerings, and with the impressive tomb later found deep within the structure by the Chinese. Given the traces of Acbi activity in the locale, a late 7th century date for Burial 14-2 seems perfectly acceptable and the statistical possibility remains that it that it could date well into the 8th century as Rattray originally thought. Conceivably an early Acbi/Coner building lies beneath the latest phase of Str. 70C, and the burial is associated it. The Chinese will sort this out, but they do interpret the final phase architecture of what they now call Str. 70C to be firmly Coner, probably dating to the reign of the 16th ruler.

Burial 14-3 (CP188): Infant; no further details known.

¹³ The identity of this individual is unknown in the absence of inscriptions. His tomb is elaborate and well-placed, but his mortuary offerings are modest. Worth remembering is that the titled sub-royal elite individual Ajpach' Waal, was buried at distant Palmar in AD 736 with similarly modest offerings.

¹⁴ UCIAMS nos. 132209 and 132210. These dates were run courtesy of Prof. Douglas Kennett in 2014. Burials provide the best radiocarbon samples available for Copán, but I do not have direct access to the burials in the collections at Copán. I supplied Kennett with samples from a collection originally made by David Reed for his dietary research. Only two from Group 8N-11 have been dated, but Kennett's lab supplied with many new calibrated AMS dates, most from other PAC II urban core burials. Some 110 such burial dates are included in the chronological display in Appendix A.

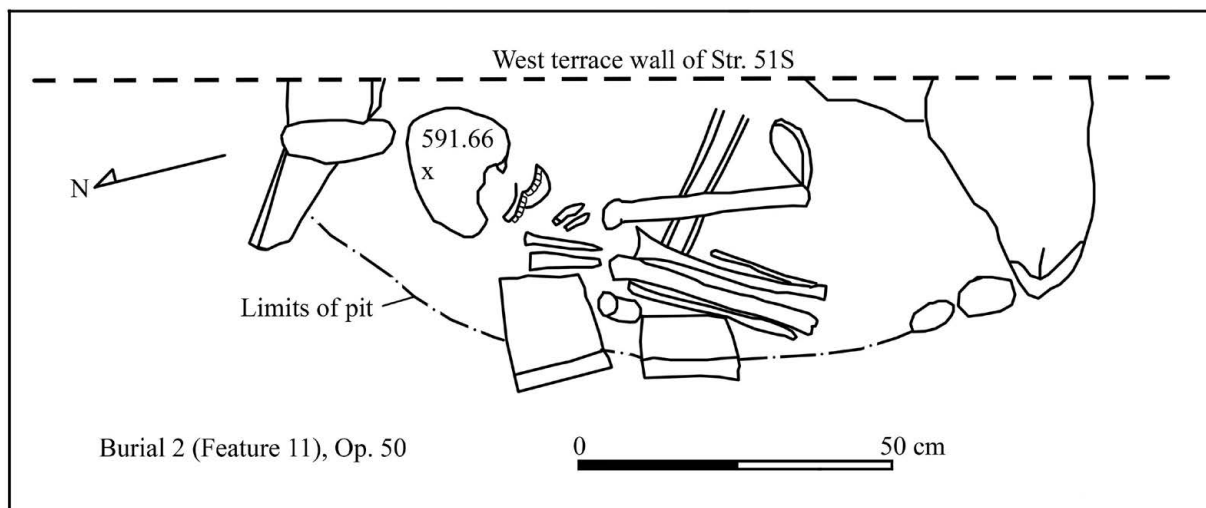


Figure 8-32. Plan of Burial 2.

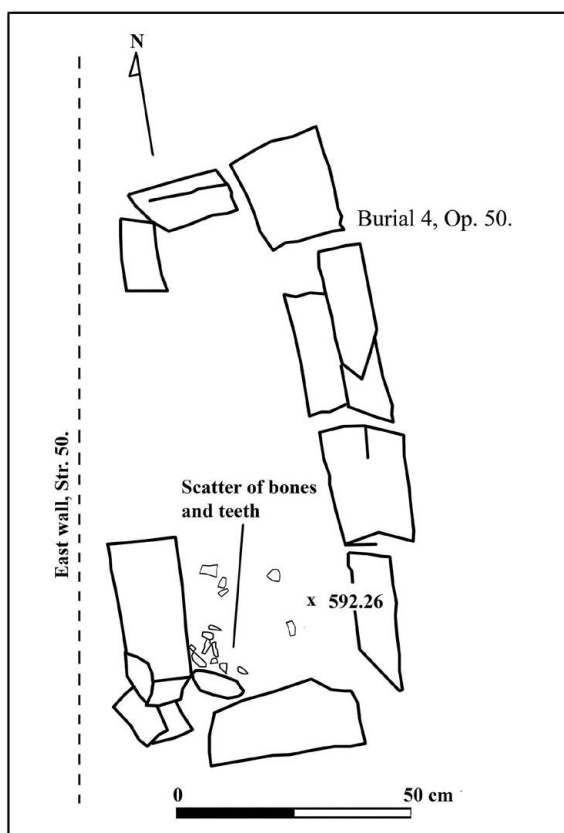


Figure 8-33. Plan of Burial 4 cist.

Burial 50-1 (CP467): From burial trench D, S2/E24, lot 162. Located just north of the north wall of Str. 50. Primary flexed burial infant with head to northeast, in pit in a midden above final living floor. Also labeled Feature 7. The burial was very fragmentary and was removed in its matrix. Two obsidian blades were recovered, but not in clear association with the burial.

Burial 50-2a (CP 483): N2/E24, lot 299, level 5 in burial trench in front (north) of Str. 51S (Fig. 8-32); also labeled Feature 11. Primary pit burial beneath a circular altar in a crude cist with capstone at level of 591.85 m. It was a middle-aged adult male lying flexed on its right side, head to north. Excellent preservation. A Chilanga cylindrical vessel was below the altar and about 30 cm. above the burial. The vessel was burned inside and out and had red-orange painted rectilinear designs on a buff-colored ground. Katherine Miller (2014: 265) lists the individual as potentially non-local.

Burial 50-2b (CP483): N2/E24, lot 299. Neonate found in burial trench beneath altar (i.e., same context as 50-2a). In the field we identified only the adult individual as Burial 2. Tiny fragments of a neonate were over-looked during excavation but detected in the lab. The position below the altar suggests the neonate burial was an offering. See Burial 16 for a similar situation.

Burial 50-3 CP472): From burial trench G. S8/E30, lot 377, level 4, east of east wall of Str. 50. Secondary flexed burial of neonate. Very fragile and removed in matrix. Also called Feature 15. No artifacts, general midden context. In pit immediately south of Burial 50-4 and seemingly in the same cist context.

Burial 50-4 (CP534, 531): From Burial Trench G. S6/E30/S8/E30, lot 388, level 5; oval cist in midden context near east wall of Str. 50. (Fig. 8-33). Also called Feature 16. Primary flexed burial of unsexed young adult immediately

FEATURES AND BURIALS

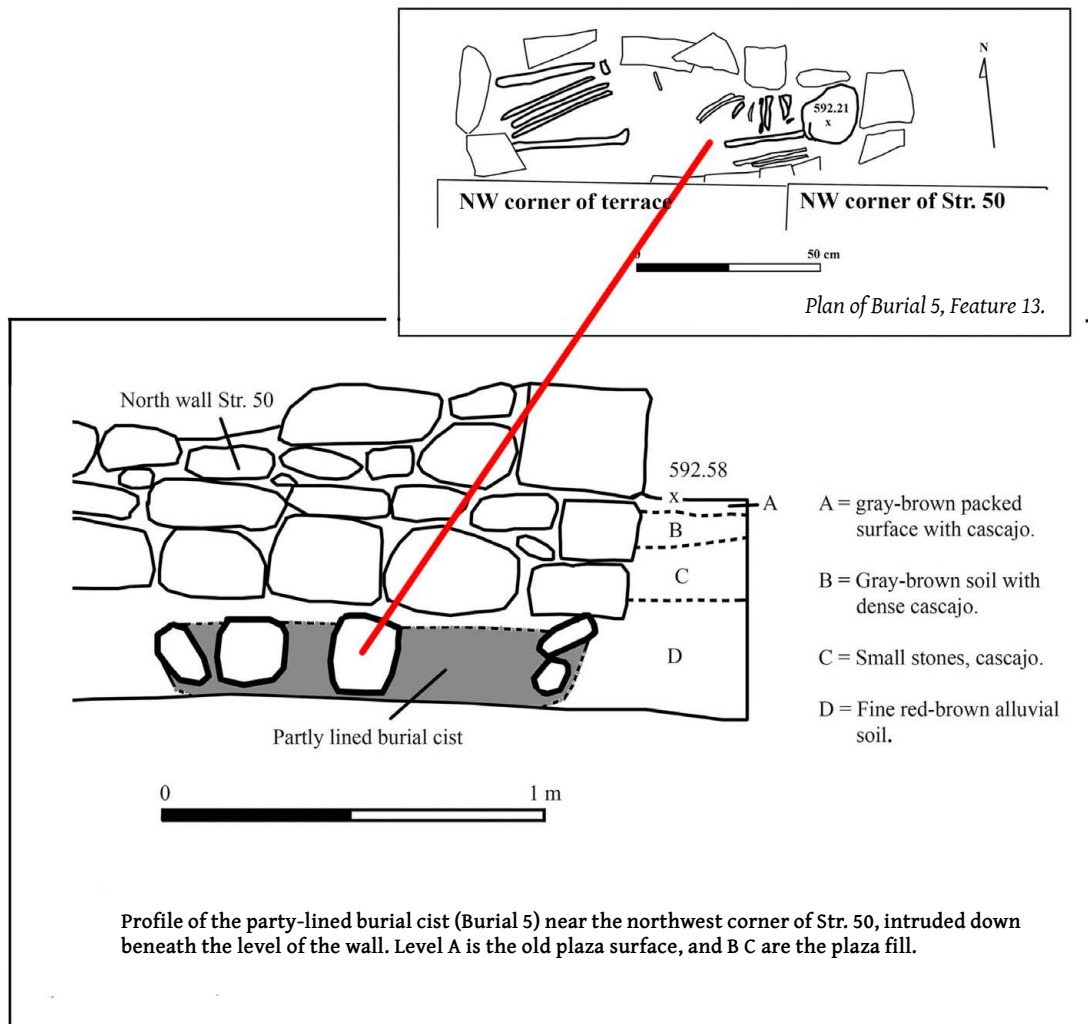


Figure 8-34. Profile of Burial 5 cist.

to the north of Burial 50-3. Very poor preservation. No artifacts. Apparently a fragment of another individual was identified in the lab, hence the two CP numbers.

Burial 50-5 (CP475): S2/E22/ S2/E24, lot 395, level 4, Burial Trench E (Fig. 8-34). Primary, flexed on left side, face down, head to north. Extremely fragmentary remains of old adult female. Also called Feature 13. Line of cist stones and some capstones in midden context north of north wall of Str. 50. No artifacts. Near the northeast corner was Feature 17, a probable storage pit about 60 cm in diameter.

Burial 50-6 (CP532): S8/E22/S8/E24, lot 414, level 3, Burial Trench F (Fig. 8-35). Also called Feature 18. Primary flexed burial lying on right side, head to west. Child 3-5 years of age in pit below flagstones (and partly under) of the south terrace wall of Str. 50, in plaza fill at level of 592.25 m. No artifacts.

Burial 50-7 (CP 474): S8/E22, lot 432, Burial Trench F (Fig. 8-36). Also called Feature 14. Primary flexed burial lying on left side, head to west, with cranial deformation, filed and inlaid incisors. Located south of the south terrace wall of Str. 50 in fill of plaza. Middle-aged adult female in cist beneath three crude capstones partly under the terrace retaining wall. One piece of obsidian in unclear association. Katherine Miller (2014: 265) thinks this individual potentially non-local.

Burial 50-8 (CP533): S2/E20, lot 450, level 5 in Burial Trench E just east of Str. 66S. Primary flexed neonate, head to north, lying on left side in a pit dug into a midden below the surface of the plaza. Preservation very poor.

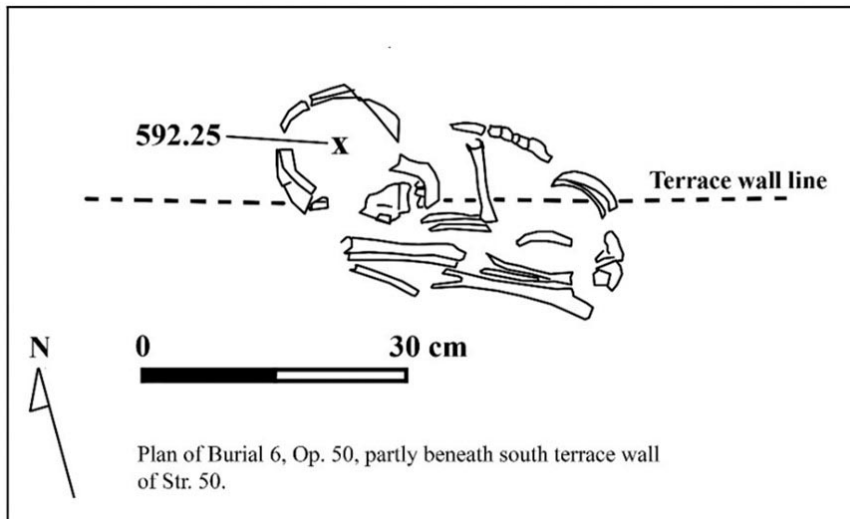


Figure 8-35. Burial 6.



Figure 8-36. Burial 9.



Figure 8-37. Ear flares with Burial 9 (Feature 23), but possibly associated with Burial 11a.

Also called Feature 19. No artifacts, but fragment of mosaic sculpture (CPN 604) found immediately above but association possibly fortuitous rather than deliberate capping.

Burial 50-9 (CP471): N28E18, level 2, lot 487. From pit in midden near the corner where Str. 66N meets the North Platform between Str. 70 and 66N (Fig. 8-36). Burials 11a and 11b are together called Feature 25. Very fragmentary primary flexed burial oriented to north, but head missing. Unsexed child between 2-3 years of age. Two crude ear flares (Fig. 8-37) in possible association but see Burial 50-11a below. Along the length of the east and north walls of 66N is a shallow midden about 30 cm deep, lensing out away from the wall. Also found in this midden were burials 10, 11a, 18, and 19.

Burial 50-10 (CP536): N28/E20, level 2, lot 492). Primary flexed neonate burial lying on back, head to east, in midden at northeast corner of Str. 66N and immediately adjacent to the east wall.

Burial 50-11a (CP463): N28E18, level 4, lot 501 (Fig. 8-38, 8-39). Adjacent to north wall of 66N. Primary burial of young to middle-aged adult male lying flexed on back in cist with stone capping in plaza fill. Directly below Burial 50-9, but related? Also called Feature 36. One small Surlo cup and two small, irregular jade ear flares in association (see Fig. 8-7 above). The two ear flares listed with Burial 50-9 are probably associated with this adult individual instead.

Burial 50-11b (CP463): N28E18, level 4, lot 501. Very fragmentary remains of unsexed adult mixed with remains of Burial 50-11a.

FEATURES AND BURIALS



Figure 8-38. Capstones of Burial 11 (a) and burial (b).



Figure 8-39. Burial 12 a.



Figure 8-40. Burial 12 b.

Burial 50-12a (CP470): N0E12, level 2, lot 550 (Fig. 8-39). Secondary, flexed, and disarticulated bundle burial of a middle-aged adult male missing the face and maxillary teeth. Possible decapitation with mandible and temporal bone together. Located in front of niche in central staircase of Str. 66S. Context is pit in plaza fill slightly to the south of the centerline of Str. 66S. No artifacts.

Burial 50-12b (CP470): N0E12, level 2, lot 550 (Fig. 8-40). Infant remains only recognized in lab. Same general context as Burial 50-12a. Both 12a and 12b are part of a cluster that includes Burials 14 and 15, although contemporaneity is unclear. No artifacts.

Burial 50-13 (CP535): N24E16, level 5, lot 556. Also called Feature 28. Primary flexed infant burial lying on back, head to south. Found in pit in fill under the wall base of the west front platform of Str. 66N-sub. This is probably the oldest burial context we found. No artifacts.

Burial 50-14 (CP526): N0E10, level 2, lot 563. Also called Feature 31. In pit in plaza fill located in front of the of staircase of Str. 66S. Secondary disarticulated adult in bundle burial, middle to old age, probably male. No artifacts.

Burial 50-15 (CP477): N0E10, lot 576 (Fig. 8-41). Also called Feature 32. Young adult female primary flexed burial lying on right side, head to north. Below cist with capstones in plaza fill in front of the west staircase of Str. 66S. In association were a Copador Polychrome bowl painted with animal figures and containing a

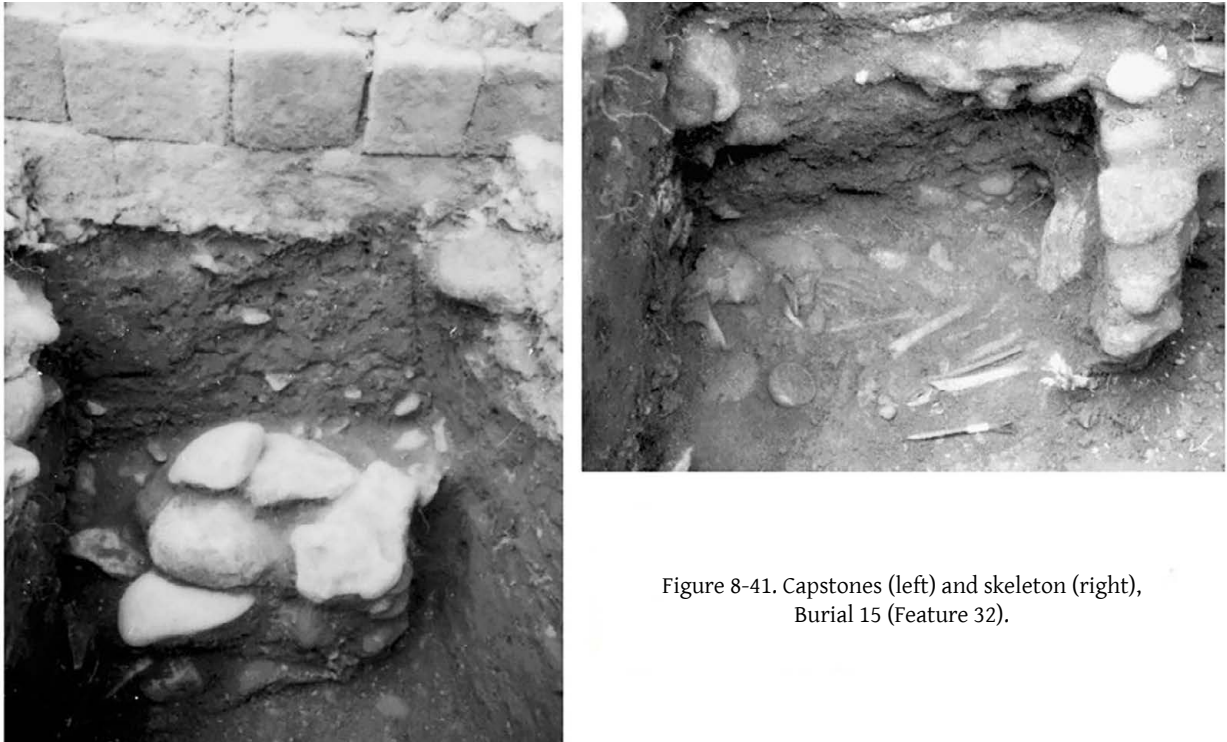


Figure 8-41. Capstones (left) and skeleton (right), Burial 15 (Feature 32).

piece of fossil coral, three greenstone fragments, six olivella beads, three pieces of cinnabar/hematite, and one fragment of highly polished marble. Good preservation.

Burial 50-16 (CP473): N18E18, level 3, lot 578. Primary flexed burial of neonate, head to west, in fill or pit below the circular altar Feature 22 in the corridor between Str. 66C and 66N (see Fig. 3-42). Found just above a stone box-like construction. The position beneath an altar suggests an offering rather than regular burial, as in Burial 50-2b.

Burial 50-17 (CP587): S6E18, level 4, lot 602. Also called Feature 33. Located to east of the stairs at SE corner of Str. 66S in structure/plaza fill partly beneath wall (Fig. 8-43). Primary, flexed burial on back, head to south. Good preservation. Young to middle-aged female with lateral cranial deformation. From a rectangular cist with only one wall of stone and covered with capstones. No artifacts.¹⁵

Burial 50-18 (CP537): N20E20, level 3, lot 607. Primary burial of a 1-2-year-old child in midden deposit. Extremely disturbed with only the skull and a few teeth remaining. No artifacts.

Burial 50-19 (CP484): N22E20, level 5, lot 612. Primary burial of an old adult, sex undetermined. The burial (Fig. 8-44) lay flexed on its right side with the head to the north in a square pit cut through the midden and down into the empedrada fill along the rear (east) wall of Str. 66N. No artifacts.

Burial 50-20 (CP530): N10E6-8, level 3, lot 615. Also called Feature 34. Poorly preserved burial of a two- to four-year-old child, sex undetermined. Found in a cist beneath a stone capping, dug down into plaza fill about 2 m to the west of the front stairway of Str. 66C. The cist seems to predate the latest empedrada. Nearby, but not directly associated, was the complex cache described above as Feature 36. No artifacts.

Burial 50-21 (CP538): N20E20, level 5, lot 628. Found in burial trench at the corner of the intersection of the rear walls of Strs. 66N and 66C. Poorly preserved primary flexed burial of one- or two-year-old child, sex undetermined. The burial lay on its right side with the head to south and legs splayed as if sitting (Fig. 8-45). It was below the

¹⁵ As noted in Chapter 3 this context might be part of the substructure of Str. 67.

FEATURES AND BURIALS

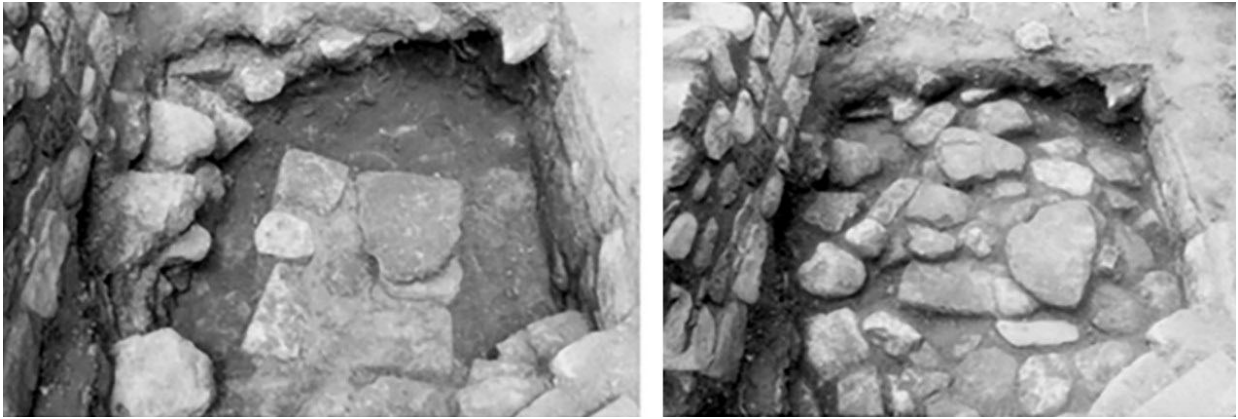


Figure 8-42. Burial 16. Burial was below the capstones on the right and above the box-like construction on the left.



Figure 8-43. Burial 17 (Feature 33) left, and the flexed burial.



Figure 8-44. Burial 19.

Figure 8-45. Burial 21.

level of the latest empedrada, which in turn was covered by a shallow midden deposit. An amethyst crystal was in association, as were shells suggestive of a bead necklace.

Burial 50-22 (CP479): N22E12, level f lot 666. Also called Feature 42. Middle to old age female flexed primary burial in stone cist in front of the Str. 66N stairway, partly under the first riser. No artifacts.

Burial 50-23 (CP527): N22E12, level 3, lot 673, in front of Str. 66N stairway. Also called Feature 40. Primary flexed burial of an old adult woman lying on its right side with the head to the south. The burial was in a cist with a cobble



Figure 8-46. Surlo bottle found with Burial 21.

stone capping. A small Surlo bottle (Fig. 8-46) was found at the base of the skull.¹⁶ Traces of red pigment were near the feet and several shells might have been part of an armband.

Burial 50-24 (CP485): N24/E12, level 3, lot 677. Also called Feature 43. Found in a stone crypt with capstones in front of the Str. 66N stairway. Old adult, sex indeterminate. No artifacts. Kathrine Miller (2014: 265) lists this individual as potentially non-local.

Burial 50-25 (CP486): N2E10. Level 3, lot 688. Found just in front of the first riser of the Str. 66S stairway and about 2 m to the north of its centerline. Infant burial at elevation of 592.00 m below a slumped segment of the earliest empedrada. No artifacts.

Burial 63-1: Neonate found in Burial Trench 15, lots 79 and 82 (see Chapter 7 for illustration and details of this and the following burial). Part of Feature 7, a trashy pit dug down behind Str. 57. The burial (Burial Field

number 63-1) was just above the intact base of a large, charred Casaca Striated vessel, but no obvious pit for the burial itself. The burial, primary and probably flexed, was so fragmentary that it was moved in its matrix to the lab. CP number missing.

Burial 63-2: Neonate found in Trench 18, lot 99; also labeled Feature 8 in field notes. Found just to the west of the Str. 59 rear wall in an ashy-clay deposit. Depth was about 27 cm below the wall-base in a midden that ran beneath the wall and so predated it. No obvious pit or artifacts in direct association, although Coner sherds were found in the lot, as were many charcoal flecks. It was a primary, flexed position on its left side with its head to the west. Because of the very sticky clay we removed it in its matrix. CP number missing.

Burial Summary, Comparisons, and Interpretations

Like most burials in the general database, our 8N-11 sample comes from a high-rank group in Copan's urban core and reflects reasonably well Zeleznik's general overview of Copán burials as laid out above. With one exception (#14-1) all individuals come from Coner contexts that post-date AD 600-650.¹⁷ Detecting strong spatial patterns at 8N-11 is difficult because we had neither the time nor the resources to test all likely burial contexts, but there do seem to be two hotspots. Almost all the ancillary building burials are near Str. 50 (Fig. 8-29). None were found in the other most likely contexts such as the midden deposits along the rear of the Str. 51 complex or in the burial trenches dug beneath the plaza surfaces there. Str. 50 is the most formal of the ancillary buildings and plausibly one of the latest, or at least a building that was used and renovated over a long interval. Quite possibly the structure had some sort of special significance as a mortuary locale and/or it was used as a burial place long after Group 8N-11 ceased to have major elite functions.

Unexpectedly, we found no burials either in the fill or in the superstructures of the two elaborately decorated final phase buildings in the Str. 66 complex, although in fairness structure fill was less well-tested than structure peripheries. Widmer and Storey found no burials behind Str. 66S and only one (Burial 50-20) in or near Str. 66C. It was beneath the plaza about 2 m west of the front stairway, so perhaps it should not be counted as associated with the building.¹⁸ Str. 66S had a cluster of five burials just to the west of its stairway. The masons found no burials when restoring walls and floors, as they sometimes did when reconstructing Group 9N-8.

¹⁶ Widmer called this a "perfume bottle" in his notes, but tobacco was often carried in similar containers. Such bottles, some very ornate, were regarded as ootoots, a term normally reserved for dwellings but also for other kinds of objects that inherently contained things (see Chapter 12).

¹⁷ That is, the context is late but the secondary Burial 14-1 is early, presumably re-interred from another location. This might also be the case with some of the other undated burials we found.

¹⁸ Burial 50-13 is beneath Str. 66N but predates it and can be classified either as in and beneath a structure, or as a sub-plaza floor burial.

FEATURES AND BURIALS

Almost half the individuals in our entire 8N-11 sample come from the heavy concentration in and around Str. 66N. This building, or at least its superstructure, is clearly a late addition to the Str. 66 complex, perhaps even post-dating the dynastic collapse, so patterns there might not be representative of earlier mortuary practices. Conceivably Str. 66N became an attractive burial locale after the main buildings had lost their traditional functions. In any case, if burial location indicates some sort of social connection to a building, then Str. 66N, for all its simplicity and shoddiness, was an important place. My suspicion is that if we carbon-dated all the Op. 50 burials, especially those around Str. 66N, many would be from the 9th century and later.

The architecture and sculpture of the Skyband group, along with Rattray's 1982 findings, led us to expect impressive tombs, but tomb is a tricky term. Tikal archaeologists defined tombs partly by the "dirt in the face" test – i.e., burials placed in them initially had no earth directly covering the body, which was protected in a roofed cavity or chamber much larger and more well-built than necessary to contain the corpse and the mortuary offerings (Haviland 2015: 2). Group 8N-11 yielded only one such tomb (14-1) found by Rattray under the front stairway of Str. 70.¹⁹ Grave forms from Ops. 50 and 63 were otherwise quite simple as shown in Table 8-1.

Burials were commonly placed in very superficial contexts such as in middens that had accumulated around the margins of buildings or beneath plaza floors. A good example is Burial 50-1, found in a midden near the north (rear) wall of Str. 50, and plausibly among the very latest at the site. The general lack of sharply demarcated living surfaces around the ancillary buildings made it difficult to determine whether burials like this were intruded into a shallow midden that accumulated on the plaza floor, or slightly down into a floor that contained midden material as fill. For Burial 50-1 the former explanation is most likely. Some superficial burials were clearly made during the final phases of use of 8N-11 when debris was no longer being routinely cleared away. Such burials, along with others intruded into plaza floors or under walls, might therefore not tell us much about activity patterns at 8N-11 when it was a thriving 8th century elite establishment. Quite possibly some of these burials, especially those around Str. 66N, are much later, a situation reflected by some radiocarbon-dated interments at Copán rural residences (Webster, Freter, and Storey 2004). Primary, flexed positions were by far the most common (Table 8-2).

Preliminary sexing was done in the field, followed up by Storey's much more reliable laboratory assessments. Sex could be estimated with some confidence for 11 adults and showed a rough parity between males (five) and females (six), proportions closely mirroring those in the larger Copán database. There were eleven young individuals, two preadolescent children, four infants, and five neonates. This mix is generally what we would expect in a residential context, but caution must be exercised because the sample is so small.²⁰ In samples we recovered from six Group 9N-8 plazas some 50-60% of burials were of sub-adults, a somewhat higher proportion than at 8N-11.

Rattray's formal tomb aside, obvious grave goods were rare, typically a single vessel or some vessel fragments. Only eight burials from the combined 8N-11 operations had any discernable offerings at all.²¹ Infant Burial 50-9 was near two ear flares, but these were also in close juxtaposition with the adult Burial 11a, so association is unclear. Nor do supposed indicators of elite status pattern out well against mortuary treatment. Burials 50-7 and 17 had cranial deformation and the former had dental inlays, but neither had any grave goods.

Most of the burials from 8N-11 come from the eastern courtyard buildings, a direction preferred by the Maya for interments (Fitzsimmons 2009: 65). Because we did less work elsewhere this spatial concentration is currently meaningless. The Chinese project turned up rich burials in and near Str. 70C, but whether their research found

Table 8-1. 8N-11 grave types.

Pit	Cist	Crypt	Complex tomb	Unknown
14	9	1	1	6

Table 8-2. 8N-11 burial positions.

Primary flexed	Primary extended	Secondary/disarticulated	Unknown
19	1	4	6

¹⁹ Richard Leventhal found impressive elite tombs furnished with whole vessels and abundant jade at the Type 3 Group 9M-18 (Wiley, Leventhal and Fash 1978: 40). That our more elaborate and imposing Group 8N-11 buildings produced fewer complex burials puzzled us, but the Chinese have since found rich burials in and near Str. 70C.

²⁰ Andrew Scherer (2018: 357) states that in a good mortuary sample about 33% of individuals should be children and adolescents.

²¹ When excavating burials we commonly found a few sherds or pieces of obsidian in the general lot contexts, but these were almost never clearly associated with the skeleton proper, and in the interests of caution they are omitted.

comparable numbers remains to be seen.²² My guess is that the burial population at 8N-11 as a whole is around 100-150 individuals, so no doubt the new excavations will inflate our number considerably. However many there are, it is incautious to think that if we recovered all the burials at 8N-11 they would adequately represent people who lived and died there. The ancient Maya sometimes used detached cemeteries, but usually buried their dead in and around residential facilities (the exceptions being royalty and some nobles). Having dug many such contexts I am struck by the paucity of burials we usually find in them, even though we know generally where to look. As an example, during our extensive exposures of seven rural residential sites at Copán we recovered only a few burials at two sites.²³

A little exercise makes the paucity of burials clearer. Imagine for the sake of argument that each of our rural residential groups was occupied for a century by a mean annual population at three different scales: 10 people, 5 people, and 3 people, and that there were three different mortality regimes. The calculated mortality outputs shown in Tables 8-3 and 8-4 are substantial.

Table 8-3. Simulated mortality outputs, long occupation.

Mean group population during long occupation interval of 100 years	Low death rate (25 per 1000)	Medium death rate (40 per 1000)	High death rate (60 per 1000)
Expected deaths in all seven sites, each with a mean annual population of 10.	175	280	420
Expected deaths in all seven sites, each with a mean annual population of 5.	87.5	140	210
Expected deaths in all seven sites, each with a mean annual population of 3.	52.5	84	126

Table 8-4. Simulated mortality outputs, short occupation.

Mean group population during short occupation interval of 25 years	Low death rate (25 per 1000)	Medium death rate (40 per 1000)	High death rate (60 per 1000)
Expected deaths in all seven sites, each with a mean annual population of 10. s	43.8	70	105
Expected deaths in all seven sites, each with a mean annual population of 5, over 25 years.	21.88	35	52.5
Expected deaths in all seven sites, each with a mean annual population of 3, over 25 years.	13.13	21	31.5

The medium and high mortality regimes are most likely to coincide with ancient Maya ones.²⁴ At these rates the burials recovered from our seven sites represent between 2% and 10% of the expected deaths. But suppose that I have severely overestimated the occupation spans. If we recalculate them at only 25 years instead of a century, the recovery prognosis is better, some 7% and 38% of the expected deaths.

Several explanations account for low recovery, including poorly preserved or otherwise inconspicuous burials (especially infants and children), incomplete sampling of probable burial contexts, absence of individuals who died at a distance (e.g., long-distant merchants or warriors killed in battle), or people who died in their residential groups but were taken elsewhere for burial, which I think is the most likely factor for the small rural sites.²⁵

It is tempting to imagine that people were usually buried where they lived, but our little exercise suggests otherwise. I suspect that Copán farming families sometimes maintained dual residences, a permanent one in or

²² I don't know the details, but these are interpreted as "elite" burials and were associated with the "western building" (L1 2019; Chen *et al.* 2021). "Western" might refer to the low west extension of Str. 70C, or to some other building along the west side of the compound. In any case, the burials seem to predate the final phase architecture and the reign of Copán's 16th ruler.

²³ We dug eight small sites, but one was probably a field hut where no burials might be expected. Five graves with eight individuals were found at site 34A-12-2. Three individuals were very fragmentary and only identified in the lab). Site 99A-18-2 also had five graves; five individuals were identified in the field and fragments of three others in the lab (see Gonlin 1993 for details).

²⁴ Medical studies carried out by the Carnegie Institution in six districts of northern Yucatán between 1929 and 1931 recorded annual death rates ranging between 30 and 43 people per thousand (Shattuck 1933: 387).

²⁵ For a similar calculation of "missing dead" at Piedras Negras see Houston *et al.* (2003: 217).

near the urban core and another one elsewhere in the valley that was only occupied during the agricultural season. If so, secondary residences might not have been used for burials and we should not be surprised at their paucity at outlying rural sites. For whatever reasons, our sample of rural burials is very small and not representative of the actual deaths that occurred in these little places (a different issue than how well it represents the living population that generated it -- see Wood *et al.* 1992). Nor can we consequently assume that the more abundant burials found in Copán elite compounds such as 8N-11 or 9N-8 represent people who died there. People who died in small, outlying sites might have had social, ideological, or political attachments to elite groups and brought there for burial. Such displacement might have occurred even after the big residences were abandoned. Such complex processes of burial depletion and augmentation at sites of different ranks would confuse us. We might be incorrect to regard the 30 burials described above as necessarily residents of 8N-11 or even contemporary with its 8th century mature phase.

Biophysical Characteristics

Biophysical analyses of Copán burials focusing on health, demography, trauma, and diet are found in the many works by Reed, Storey, and Whittington cited in the bibliography.²⁶ Unfortunately our Operation 50 and 63 burials were unearthed after these studies were completed so we lack isotopic data on diet, although we do have a reading on Rattray's tomb burial 14-1.

David Reed's analysis of a large sample of Copán burials elsewhere concluded that male/female maize intake apart, most sub-group dietary differences were statistically insignificant (Reed 1998, 2006; Reed and Zeleznik 2002; Gerry and Krueger 1997).²⁷ Reed determined that the Burial 14-1 individual had a stable carbon (C) isotope value of -9.8 permil(‰) and a stable nitrogen (N) isotope value of 8.0‰. These are typical values for the average adult (C: -9.7‰, N: 7.4‰) at Copán, but not for middle-aged males, who show isotopic values of C: -8.9‰ and N: 7.5‰. Judging from the carbon values, the average adult male had an approximately 74% maize-based diet, while the Burial 14-1 individual's 69% indicates a lifetime of access to a somewhat wider array of foods. More recent trace element analysis done in the PSU lab of Prof. Douglas Kennett in 2014 reinforces Reed's earlier findings. It shows that Copán people had heavily vegetable (presumably maize) diets, and lower terrestrial meat and/or marine resource intake than some populations in Belize and northern Yucatán. It seems safe, pending future analysis, to assume that dietary patterns of the other burials from 8N-11 would broadly reflect these same patterns (Whittington and Reed 1997).

Katherine Miller's (2015) analyses based on radiogenic strontium isotopes and dental morphology add an additional dimension. Her burial sample of 141 individuals, mostly young adults, derived heavily from urban core residences including 8N-11 and 9N-8, which supplied more than half the burials. Some 55 individuals in her sample had potentially non-local isotopic signatures, although this proportion varied depending upon the kind of statistical analysis applied and might have been considerably lower. Four individuals from 8N-11 (as listed above), including Rattray's elaborate Burial 14-1, were potentially non-local.²⁸ Miller's biodistance dental studies concluded that variation within residential groups was less than across them, and that samples from the urban core diverge from those in the foothills or hinterlands. Miller compared specific patio groups and found that the 8N-11 samples grouped most closely with those from Patio B at 9N-8.

Various osteological markers, including deliberate physical modifications (Table 8-4), are often used to assess Maya social differentiation, rank, status, conflict, or other variables. When Zeleznik first began to construct the burial database he hoped to include such markers but found that the necessary information was neither as abundant nor as systematically reported as he had hoped, so he did not include it in the statistical mortuary rankings shown below. Nevertheless, we present his raw data for what they are worth.²⁹ The raw data in Table 8-4 suggest that various forms of cranial modification are less prevalent in the small Type 1 sites. There is a bias because these sites have been less-well tested, but it might not be as serious as it seems. People of very ordinary circumstances lived

²⁶ While often well-studied and published, numbers were low so Zeleznik and Reed did not include them in their statistical mortuary scoring.

²⁷ This study does not include the royal-level burials from the Main Group.

²⁸ "Non-local" here often refers to people from several geologically distinct parts of the Copán valley, not necessarily from more distant regions.

²⁹ During our surveys we devised two other labels for sites that were of Type 1 scale but that lacked mounds arranged around courtyards as the Harvard classification described. These sites either had single mounds or loosely arranged multiple mounds. For purposes of convenience I lump them with Type 1 in the display. Table 8-5 lacks data on stature. I know of no large-scale systematic study of this metric at Copán. Storey and Whittington report instances of trauma, but my impression from their publications and our discussions is that obvious trauma is quite rare.

Table 8-5. Occurrences of skeletal alterations recorded in the database.

Location	Tooth inlay	Filed teeth	Cranial deformation	Trauma	Missing bones
Location					
Urban core	34	21	12	8	29
Copán pocket	5	12	8	5	3
Rural	0	3	1	0	2
Sex					
Male	21	4	7	1	23
Female	9	16	9	8	4
Site rank					
Type 4	21	4	7	1	23
Type 3	5	5	3	0	5
Type 2	10	14	7	6	4
Type 1	3	11	3	5	2
Total	108	90	57	34	95

in some parts of the elite-rank groups or were taken there for burial.³⁰ “Missing bones” in Table 8-5 means that skeletal elements seem to have been omitted when burials were made or removed from them later.

Mortuary Scoring Patterns in the Overall Database

Zelevnik’s and Reed’s statistical scoring of 51 variables enabled them to construct the distributions shown in Figs. 8-47 and 8-48. They concluded that

“The most striking feature of the mortuary data analysis is the continuous nature of the distribution and the great range of mortuary programs across space and site type in the valley. The plot of mortuary scores does not show a punctuated or grouped distribution, but a smooth, continuous slope, lacking a clearly defined assemblage associated with certain social strata...” (Zelevnik and Reed 2016:19).

Real or social jade, if we include small pieces, is present throughout the continuum but is concentrated in the middle to top ranges. What to conclude about sociopolitical organization from the overall mortuary distributions is complicated by considerations of time. If the short chronology reviewed in Chapter 10 is correct, most of the burials date from the mid-7th through the 8th century, and especially from the generation or two before the dynastic collapse, although a few might be as late as AD 900-950. Most interments were thus made when the polity was mature, and so might collectively represent some well-established set of mortuary programs or practices (although we might expect some significant changes even over 150 years). On the other hand, if the long chronology reviewed in Chapter 11 is correct, many of the burials long post-date the disappearance of the kings and the great nobles (see discussion of temporal displacement in Chapters 9 and 12). Overall patterns in this case become more problematical and subject to noise. Noise aside, the conclusions of Reed and Zelevnik agree well with isotopic studies of Copán diet and are also consistent with the comparatively gradual energetic ranking of 45 residences of all ranks as determined by Abrams (1994).

Reed and Zelevnik (2001: 6) sum up this variation this way:

“.....we infer from the great range of mortuary scores at Type 2 and larger sites that these sites and plaza groups at Copán should best be thought of as extended households. Elites, retainers and slaves may have maintained fictive kin ties, as was the case in Maya households at the time of contact, but we believe since both the lowest and the highest status individuals are found at these larger sites that they are composed of both kin groups and non-related retainers.”

³⁰ The purported relationship between permanent cosmetic alterations and social rank has always confused me. One can assume or discard many visible attributes of status or rank, such as clothing, ear spools, etc. Cranial deformation and dental inlays, on the other hand, are irreversible features and so do not well accommodate situations of upward or downward mobility. Maybe the Maya could sort out their signals, but the archaeologist cannot.



Figure 8-47. Rank ordered mortuary scores.



Figure 8-48. Distribution of jade in the mortuary scoring.

Such a wide range of mortuary scores is also consistent with “house-type” political organization centered on the big elite residences, but see more about sociopolitical patterns and the implications of the Group 8N-11 burials in Chapter 12.

Finally, Reed and Zelesnik emphasize that burial context and content are only parts of any mortuary programs. Such rituals were undertaken by living social groups and so do not necessarily reflect the social status or rank of the interred individuals. Interment instead reflects most directly the character, attitudes, and resources of those making the burial, and so might obfuscate the distinction and status of the dead individual. Complicating the whole idea of a coherent “mortuary program” is evidence, reviewed in later chapters, that the Copán population was an ethnically and linguistically diverse one overlaid by thin veneer of “Mayaness”.

This is not the place to discuss burial patterns at other Maya sites, but one comparison briefly mentioned in Chapter 1 deserves revisiting. During the mid-1960s Marshall Becker and William Haviland excavated much of Group 7F-1, located about a kilometer southeast of Tikal’s Central Acropolis. Originally called a “minor ceremonial center”, it turned out to be an impressive elite residence and is one of the first big non-royal palaces to be excavated in the southern Maya Lowlands (see Haviland 2015 for a summary). Although it dates earlier in the Classic period than 8N-11 and has a longer occupational history, 7F-1 is reasonably similar in scale, character, and quality of architecture, especially if we compare the main plaza buildings. A conspicuous difference is that the Tikal structures were not

heavily embellished with façade sculpture, nor did they contain carved thrones.³¹ The 16 burials recovered by Haviland are, however, notable for their collective high quality and their abundance of grave offerings. He says that “...those responsible for the Gp. 7F-1 burials were of relatively higher social status than those responsible for most other known residential burials, and probably lower in status than none” (Haviland 2015: 63). No such clear status inference derives from our much poorer 8N-11 burials, taken by themselves, as opposed to their locations in an impressive elite setting. The Chinese project has recovered other elaborate burials so this situation might change markedly.

³¹ According to Haviland Group 7F-1 originated as a minor set of structures and then in the sixth century became the residence of a demoted royal line during a time of dynastic upheaval. Thereafter it underwent many renovations. If he is correct, the politically marginalized inhabitants of the group might have been forbidden to make ostentatious displays of façade sculpture or monuments.

Chapter Nine

Artifacts

David Webster, W. Scott Zeleznik, and David Reed

Project members analyzed and catalogued ceramic, lithic, and miscellaneous artifacts from Operations 50 and 63 immediately after their respective field seasons. In this chapter we provide condensed overviews that have general behavioral and chronological implications for Group 8N-11 and its relationships with other Copán sites. We first summarize the character of our collections and the analytical challenges they pose. Next we review demographic implications of the Copán ceramic sequence and related issues about population dynamics as background context. Artifact data from 8N-11 are then presented and compared with those from our eight Penn State rural residential excavations. In the final section we use a large computer database to explore comparisons with other PAC II or related sites and with those dug by the Harvard project. Special artifacts such as figurines, worked shell or bone, pendants, beads, spindle whorls, bark beaters, or painted plaster, are not discussed here, nor are raw faunal or other organic materials. Some of these distinctive individual artifacts associated with features, burials, and buildings have been described in earlier chapters, and a sample of others is illustrated and discussed in Appendix B.

Character of the Sample, Analytical Challenges, and Procedures

Before our work began at 8N-11 William Sanders supervised the creation of a computerized artifact catalogue for PAC II and related Penn State projects. Melissa Diamanti, whose 1991 dissertation is an important resource, was largely responsible for assembling and entering all these data. In 1992 Scott Zeleznik added a provisional 8N-11 artifact catalogue to our Op. 50 site report. Still later, he and David Reed created a much larger computer database for 27 PAC II and related Copán sites or operations, along with three of Harvard's (Table 9-28 at the end of this chapter gives a full list).¹ The database includes elite-scale Las Sepulturas residences such as the Type 3 Group 9M-22A/B, the several courtyards of Group-9N-8, the lower-rank Type 1 Group 9M-24, and the eight small rural sites we dug outside the urban core (Webster and Gonlin 1988; Gonlin 1993). All the urban core sites are described by Sanders (1986-1990) and by Willey *et al.* (1994). Many test-pitted sites elsewhere in the valley are also in the database, which is accompanied by a GIS that provides spatial augmentation.² The descriptions that follow mainly derive from these massive data compilations. We do not discuss artifacts from non-Penn State residential excavations carried out since 1997, including those by the Chinese at 8N-11, because we have seen no detailed inventories of these materials.³

Zeleznik's and Reed's main analytical goals were:

1. To detect chronological patterns of occupation of Group 8N-11.
2. To identify both general functions of the fully excavated structures or ambient spaces, or specific locales, and any specialized activities associated with them.
3. To compare artifact patterns from 8N-11 as a whole, and individual structures within it, with other operations excavated by Harvard, PAC II and Penn State related projects.

¹ Six of the 27 were separate courtyard operations within Group 9N-8, and another came from test-trenching for burials at multiple sites throughout the valley. Three Harvard operations are also listed in the database but are useful only in calculations of lithic artifacts because the ceramics were not partitioned in the same way as our PSU samples. Zeleznik (2002), Zeleznik and Reed (2006), and Reed and Zeleznik (2016) succinctly summarize and interpret their statistical analyses and results. Statistical methods applied to artifacts and burials include locational analysis, principal component analysis, factor analysis, reliability analysis, and diversity and richness analysis. The computer files are in the Copán archives in the Dept. of Anthropology, Penn State University and also in David Reed's files.

² The GIS contains 1,013 sites coded for UTM coordinates, site type, number of structures or mounds, number of plaza groups, site area, distance to the royal site core, distance to other site types in the settlement hierarchy, distance to nearest water source, elevation above sea level, general topographic location and soil type, and region within the valley (urban, rural Copán pocket, or rural valley).

³ The artifact report of the Harvard project (Willey *et al.* 1994) remains one of the best overviews, especially for its numerous ceramic illustrations.

4. To document and analyze social distinctions and statuses among individuals and groups associated with 8N-11 and other sites. Zeleznik (2002; n.d.) provided particularly concise overviews along with his conclusions.⁴

Zeleznik first analyzed the ceramic and non-ceramic artifacts from both the main Op. 50 season at 8N-11 (Phase 1, lots 1-465), then the follow-up Phase 2 work by Widmer, Storey, and Larios (Phase 2, lots 466-717) and finally our Op. 63 excavations. He then compared these data sets with rim sherds and lithics from the other sites in the database. When he did his analysis Zeleznik had no summaries of the non-ceramic artifacts recovered during the Phase 2 excavations, so these do not figure in the results reported below.

Spatial Analytical Units

One analytical challenge results from the spatial layout of Group 8N-11. Although there are coherent sets of buildings such as the Str. 50-51 complex, the site lacks the many well-defined courtyard arrangements found at Group 9N-8 and at some other elite sites in the Copán urban core. Such formal courtyard modules, even though components of single big residences, can be treated analytically as separate “sites”. We dug six of them as independent operations during PAC II and they are so listed in the database. This kind of compartmentalization enabled us to discern the diverse character of intra-site artifact assemblages and the presence of people of different social ranks and (possibly) identities.⁵ Julia Hendon (1987: 549), for example, studied the 9N-8 courtyards as separate behavioral locales and concluded that there was little evidence for centralized organization above the level of the individual courtyards (but see the problem of temporal displacement discussed below and in Chapter 12). Melissa Diamanti (1991) similarly partitioned artifact distributions at 9N-8 by courtyard groups.

In the absence of multiple courtyards, Zeleznik analyzed our 8N-11 artifacts as two separate assemblages (Ops. 50 and 63) and then determined their rough spatial associations with buildings or sets of buildings. Particularly important was the contrast between the main and ancillary buildings. These divisions and associations were necessarily much less spatially and behaviorally tight than those derived from Hendon’s and Diamante’s coherent courtyard units. He then compared these 8N-11 data with other sites in the database, although we touch only briefly on some of his conclusions here.

Zeleznik, like Hendon and Diamanti, discerned distinctive artifact patterns among courtyards in various elite Copán residences such as 9N-8, and similarities and differences with our smaller rural sites. One bias in such comparisons is the different excavation strategies utilized. Las Sepulturas sites such as 9N-8 were subjected to wide and intensive horizontal exposures, as were the eight little rural ones we excavated in 1985 and 1986. Others, such as the Ostuman sites described in Chapter 11, were instead heavily test pitted. Group 8N-11 falls between these extremes. There was excellent horizontal exposure, but only of part of the site. Zeleznik (n.d.) accordingly recognized that for almost all sites or operations in the database

“Proportions and ratios of particular classes of artifacts are the only viable means for comparison, mainly because of the great differences in the size and scale of excavations and sites. Proportions are useful in distinguishing the ubiquity of artifact classes. Ratios, such as the ratio of fine to utilitarian ceramic wares, and percentages, such as the percent of ritual ceramics of the total number of ceramics, are the basis for comparison and analysis.”

Although we give many actual artifact numbers below, we agree with Zeleznik that proportions and ratios provide the most secure and revealing comparisons.

⁴ In his 2002 analysis Zeleznik focused on ceramics from midden contexts. He defined status as ranking among individuals, as opposed to practices that simply distinguish among individuals, not all of which might be relevant to status.

⁵ This partitioning creates a problem. The 9N-8 courtyards all are technically of Type 4 rank because they are part of the larger site 9N-8. They are listed this way in Table 9-28 below and its associated database data. Taken individually, however, most would rank lower in the Willey/Harvard classification. Treating them as conceptually independent sites thus raises comparative issues. Here we retain the original inclusive Type 4 classification.

Sherd Analysis

A bias relates to the use of body sherds in Zeleznik's various statistical manipulations. He correctly noted the skewing effects of the comparatively abundant body sherds from large, narrow-necked jars, such as Casaca Striated, and also from differences in vessel use-life. Large jar forms appear much more dominant than basins or cylinders simply because of the many body fragments they leave behind. If only rims are analyzed these biases are much reduced. Some tabulations below list both body and rim sherds, while others show only rims, which Zeleznik regarded as more statistically reliable. Some operations in the database, unlike ours at 8N-11, in any case reported only rim sherd data. We did no minimum-number-of-individual-vessel calculations.

Lot contexts: Thirty percent of the 8N-11 lots excavated during the main 1990 field season consisted of pure collapse and another 33% were collapse debris mixed with superficial deposits, including those on the floors of rooms, ambient spaces, and middens. Some other lots, including most of those later recovered by Widmer and Storey, came from sealed building or plaza fill deposits such as from the tunnel driven into Str. 66C (see Chapter 3). A typical example is a midden found by Widmer below an old empedrada surface associated with Str. 66C-2nd. This dense deposit was 20 cm thick and had many sherds lying on their edges, suggesting that they were swept up for use as fill and immediately covered before they were trampled flat. Most of our primary midden or other deposits (especially in their upper layers) were not similarly sealed and protected in this manner, and so were subject to mixing with artifacts from collapse. Direct and detailed behavioral interpretations based on such contexts are problematic. Rooms, especially in the big buildings, seem to have been cleaned out before abandonment, so we have nothing like the sets of behaviorally coherent floor assemblages found at Cerén or Aguatega, and sporadically at Group 9N-8 (Widmer 2009).

A related issue is whether discarded or otherwise redeposited materials at 8N-11 (from structure or plaza fill, etc.) originated there.⁶ This scenario appears reasonable for artifacts recovered from the eight small, comparatively isolated rural sites that we excavated prior to our work at 8N-11. Platform fill of these little buildings was usually quite clean, suggesting that people either did not scrape up their trash to build structures, or more probably that there was not much trash available locally when the platforms were made. If the much more abundant material from fill and collapse at 8N-11 is intra-site detritus collected and re-deposited locally, it represents in a crude, messy, and chronologically noisy fashion a very generalized measure of behaviors that took place there prior to building construction. Alternatively, the lords of 8N-11 might have required people living at some distance to bring in const

204ruction material, including fill, for their building projects, thus introducing behaviorally or chronologically extraneous artifacts.⁷ We shall see below that sherds predating the Acbi/Coner transition are very rare. Some such early material might have been introduced from elsewhere as fill, but on the other hand vessels of some earlier types such as Cementerio, Hastalgorro, Melano, and Didero might represent curated and heirloom vessels still in use long after that time. Although some of our lithics and ceramics derive from better contexts such as shallow middens, these middens themselves are usually complex palimpsests. Just as problematical (and for many of the same reasons) is whether particular buildings or sets of buildings at the site yield reasonably discrete and behaviorally coherent artifact collections.

Temporal Displacement

The alternative short and long chronologies reviewed later in Chapters 10 and 11 present a serious analytical problem (see comments below on "frozen" settlement configurations at Copán). If the collapse were swift and complete, a conservative way of discerning activities at 8N-11 would be to make middens, superficial burials, artifact distributions, or other late features the only units of analysis, bearing in mind that even these were usually mixed with some extraneous materials. Almost all such deposits (a few burials and caches apart) come from the latest phases of activity at the site, so this approach minimizes temporal displacement if the collapse were swift. It also, however, severely restricts the size of the artifact sample, and if the long chronology is valid it reflects

⁶ Culbert *et al.* (1990: 105) faced this same problem for large and small structures at Tikal.

⁷ The reverse process – disposal of refuse at a distance – might also have systematically removed artifacts from 8N-11. In the congested Las Sepulturas residential landscape it was probably impractical to simply heap up refuse at a short but convenient distance from the living spaces, one reason why much of it might have been continually recycled. At 8N-11 the nearby river was the obvious disposal locale.

behaviors not necessarily characteristic of 8N-11 during its peak in the late 8th century, or changes in behaviors there through time (see Chapter 12 for Shannon Plank's critiques about lack of continuity between such artifacts and architecture). We thus have two opposed poles of temporal displacement in our overall artifact assemblage. Materials from fill, the early pole, were made and used before the buildings were constructed, or as they and the surfaces around them were renovated, while middens, many burials, and other superficial deposits represent palimpsests of behaviors that post-date the main building episodes, possibly by a century or more. Each set provides important information, but whether either one represents behaviors around AD 800 is not only unclear but unlikely. The appeal of the short chronology, especially Viel's original one, is that it squeezes these two poles together, makes behavioral continuity more plausible, and appears to simplify interpretations. This seductive perspective is what Binford (1981: 206) called the "...pesky problem of the Pompeii Premise".

Copán Ceramics and Population Dynamics: Background Considerations

A summary of basic features of the Copán ceramic sequence and sherd inventories is necessary to understand the 8N-11 artifact assemblage and the region's demographic history and to set up the later chronological discussions.⁸ Ceramics (see sequence charts in the Preface and in Chapter 10) are the most numerous artifact class at 8N-11 and in a gross sense stand in as proxies for population dynamics. Ceramic entities of most concern are Acbi and Coner, terms that denote both ceramic complexes and phases. Our overview ends with Coner, which we call a phase with the proviso that phase duration is much debated and that important elements of it might have long survived Viel's original concepts of its termination date. Discussion of Terminal Classic and Postclassic ceramic entities is mainly deferred until Chapters 10 and 11.⁹ Chapter 11 and Appendix A provide some pertinent chronometric displays and commentary.

Many successive publications present Copán ceramic overviews, most importantly John Longyear's pioneering 1952 Carnegie monograph and the later Harvard research in the urban core (Willey *et al.* 1994).¹⁰ These studies have demographic, cultural, and chronological implications that were reinforced by our own research during PAC II, and more specifically at Group 8N-11. They particularly bear on what we think are the two most puzzling (and often ignored) features of Copán's culture history: the long period of the valley's very low population scale and overall density, and the extraordinary expansion of Copán's Coner phase population (see Bishop *et al.* 1986; Diamanti 1991; Freter 1988; Webster and Freter 1990b; Webster, Sanders, and van Rossum 1992; Wingard 1992, 1996, 2013, 2016; Paine 1996; Paine, Freter, and Webster 1996; and Freter and Abrams 2016 for demographic reconstructions). Data compilations used below derive from the Harvard research, from the later PAC I surveys, from test-pitting done in the 24 sq km Copán pocket (Fash 1983a,b,c; Fash and Long 1983), and from our PAC II and related programs. Most of the background discussion comes from these sources and from concise overviews by William Fash (1986; 2005); Freter (1988); Henderson and Beaudry-Corbett (1993); Willey *et al.* (1994); Bill (1997); Dull *et al.* (2001, 2019); Hall and Viel (2004); Maca (2002); Canuto (2004); Sharer and Traxler (2006); Manahan (2003); and Katherine Miller (2015).

Preclassic

Sediment coring of the Petapilla swamp indicates that preceramic farmers were present in the Copán valley at least by 2300 BC and probably several centuries earlier (Rue, Webster, and Traverse 2005).¹¹ The valley's first ceramics are represented by the Early Preclassic Rayo complex, known only from a few fugitive traces that appeared around 1500-1000 years later. The most important Rayo context was found deep beneath Plaza A of Group 9N-8, where William Fash exposed remnants of a living floor dating to about 1400 BC (Fash 1991: 63-71; Hall and Viel 2004: 37;

⁸ I exclude from the regional overview the sparse occupations detected by Carson Murdy (2009) in the Guatemalan section of the drainage.

⁹ Deep test-pitting on the floor of the Copán pocket led Viel to refine his ceramic sequence (Bell, Canuto, and Sharer 2004: Preface). He began Rayo at 1500-1400 BC and added new subdivisions (Plata, Bosque, and Sebito) to the Preclassic part of the sequence. He also for the first time adopted a "Protoclassic" interval which simply incorporates his previous Chabij and Bijac phases. For the sake of simplicity, I emphasize both here and in Chapters 10 and 11 his 1983 and 1993 versions, which are published in greatest detail, and which have received the most commentary.

¹⁰ So little was known about Copán's ceramic sequence prior to the Harvard research that it was not even included among the regional sequences shown in the SAR volume on Maya origins (Adams 1977: Fig. 3-1).

¹¹ This is not surprising. Recent Penn State research documented very early maize macrofossils at El Gigante Cave in west-central Honduras (see Kennett *et al.* 2017).

Fig. 7-41 shows his deep trench).¹² Recent research in the San Lucas residential enclave by Kristen Landau (2021: 10) suggests an occupation there as early as 1500 BC.

Not until the Middle Preclassic Uir phase was there substantial settlement of the Copán pocket. Uir materials have been found on the valley floor and in the northern terraces and foothills, both as occupational debris and associated with cemeteries. Prior to 1993 the total Uir collection was about 1500 sherds, most from a single deposit near the causeway (Henderson and Beaudry-Corbett 1993: 14). Gordon sub-phase mortuary material associated with Uir came from a burial cave in the Sesesmil drainage and from the deep Plaza A sounding. Fash (1986b: 76) believed that several Uir phase settlements stretched out along the low northern terrace of the river, and that settlement was denser on the bottomlands (on the high alluvial terraces, or *vegas*) than in the foothills. People probably avoided living on the river's active alluvium because it was prone to flooding at this time when the river was shallower (Hall and Viel 2004).

We are only beginning to have good proxies for Preclassic climate and two recent ones have implications for Copán. Nooren *et al.* (2018: 1253) suggest that increasingly wet conditions in the central Maya lowlands at about 850 BC were “.....unfavorable for agricultural intensification”. The onset of drier conditions during the Late Preclassic resulted in “...rapid agricultural intensification in the region and the establishment of major cities”.¹³ Ebert *et al.* (2017: 229) report that “One of the most prolonged and severe droughts in recorded paleoclimate proxies from throughout the Maya Lowlands occurred at the end of the Late Preclassic period (cal 100-300 AC)”. Such shifts might have affected the central and southern lowlands, but not early developments at Copán unless dry conditions of the Late Preclassic depressed population levels rather than increased them.

Wherever people lived, the succeeding Late Preclassic Chabij complex inventory was very sparse. Total sherds were estimated at only 1700 by Henderson and Beaudry-Corbett (1993:14). Viel (1993b) listed the same number, mainly from a deposit south of the Acropolis. This small Chabij sample surprised Fash, who remarked:

“The number and distribution of excavations realized seems to preclude sampling as an explanation for the paucity of Late Preclassic material in the valley. Rather, there seems to have been a drastic reduction in the size of the population occupying the valley, which stands in contrast to developments taking place at many sites in the Petén and northern Belize during this time” (Fash 1986b: 79).¹⁴

His conclusion has been confirmed by many subsequent surveys and excavations as reviewed below. Known Late Preclassic sites (or sites with Chabij components) excavated since Viel's 1993 overview include Cerro Chino and Cerro de las Mesas, both located in defensible positions above the floodplain, and Los Achiotes (Sharer and Traxler 2006: 33; Canuto 2004).

Sharer, Canuto, and Bell (2011) give the most comprehensive overview of Copán's Late Preclassic and especially of what they call (following Viel 2004) the Protoclassic, from AD 100 to 400. They echo Fash in saying there was little in the way of political complexity in the valley and describe a pattern of communities dispersed on the valley floor or on small, defensible hilltop centers. In general, “.....there is still little reason to suggest that the Copán Valley was host to a large Preclassic center or population” (Sharer, Canuto, and Bell 2011: 325).

The ethnic/linguistic identity of Copán's Preclassic inhabitants is unknown but it is commonly believed that they were non-Maya speakers (McNeil 2009: 51). Sharer (2009: 131) thought that around AD 100 there was an influx of proto-Ch'orti migrants into the valley, where they established a new capital and politically displaced the previous proto-Lenca speakers.¹⁵ Another possibility, signaled in part by the appearance of griddles (*comales*), is an influx of Ch'olan-speaking peoples at this time (Sharer, Canuto, and Bell 2011: 339). Whatever the mix of Preclassic ethnic or linguistic identities, two sediment cores from the Petapilla swamp (McNeil 2009; Webster, Rue, and Traverse 2005)

¹² These burials found in 1983 were all secondary deposits of bone in a level of cobbles and red sandy clay. Poor preservation made identification of individuals difficult, but skull counts indicated at least 14 people.

¹³ The authors use the phrase “agricultural intensification” here in a confusing manner. What they apparently mean is that during the wet interval the early Maya had maize but could not depend on it as a staple. This is an unusual definition of intensification (see Webster 2018: Appendix C for an overview). An early wet interval in the Preclassic might have discouraged settlement on the valley floor, but on the other hand Late Preclassic drying, if it occurred at Copán, does not seem to have stimulated much settlement there unless it is deeply buried.

¹⁴ In this article Fash tends to use the term “valley” for the 24 sq km Copán pocket; the latter zone is the subject of his overview.

¹⁵ In this he follows Fahsen (2002) who thought elites from Kaminaljuyú settled in the Copán valley at the end of the Preclassic.

indicate that Preclassic farmers had considerable impact on the valley's environment despite their apparently small numbers.

Estrada-Belli (2011: 61) calls the end of the Late Preclassic a transformational "conjunction" episode in central and southern Maya culture history – a time of reorganization related to several crises. Some Maya polities such as Tikal and Becán thrived, but others like Nakbé and El Mirador rapidly declined, as did the Mirador uplands generally. For whatever reasons, Late Preclassic Copán seems comparatively quiescent during this interval, although the preference for defensive locations hints at internal troubles.

Early Classic

The Early Classic Bijac phase seemingly had a population somewhat larger than that of Uir and Chabij times, and the first clear remains of architecture appeared. People settled in all zones of the Copán pocket apart from the active floodplain, including mountain, foothill, and bottom-land locales. Excavations by Kristin Landau (2016, 2021) show that Group 11M-12 in the San Lucas neighborhood, just across the river from 9N-8, experienced a Bijac population upsurge. To the southeast of the modern town is another bottom-land site, Group 10J-45, where salvage operations between 1999 and 2002 found impressive Early Classic remains (Nakamura 2000; Price *et al.* 2014). The most important finds were tombs dating to about AD 400-525 that might have belonged to an Early Classic ruler and his consort.¹⁶ Bell, Canuto, and Sharer (2004) give the best overview of Early Classic developments, although population scale is not their main concern.

Before about AD 500 the bottomlands of the Copán pocket were subject to "... frequent episodes of aggradation and lateral movements of the river channel, a process which widened the inundation plain" (Hall and Viel 2004: 19). Such riverine dynamism, while not incompatible with occupation, made the active alluvium and its margins less attractive and washed away or buried traces of early settlements. Several Bijac hillside or hilltop sites are known. There was an important settlement (Group 9) beneath the high ground of the modern town of Copán Ruinas, and occupation continued at Cerro Chino, Los Achiotés, and Cerro de las Mesas. William Fash (2005: 91) claimed that all Type 4 bottomland sites had evidence of Early Classic occupation, if not construction, but this is not reflected in our Op. 50 and 63 data.

Only at the end of the Early Classic was there significant aggregation of people on the valley floor, presumably reflecting more centralized and peaceful conditions. Sharer, Canuto, and Bell (2011: 330) say, however, that surveys might have failed to detect many more hilltop centers in the Copán region. Following earlier suggestions of William Fash, Kazuo Aoyama (2005: 298) thinks that Yax K'uk Mo' and his followers might have initially established themselves at Cerro de las Mesas because unusually large amounts of imported Pachuca obsidian and bifacial points were found both there and at the contemporary Yax structure at the Copán Acropolis, where the first architecture appears to be of Bijac date. According to Aoyama Ixtepeque obsidian was first procured, and blade production begun, during the Protoclassic (AD 50-400). We shall see in Chapter 11 that some prismatic blade production and use might long predate this threshold, as it does in other parts of Mesoamerica.

Middle Classic

Acbi complex materials date roughly to the first two centuries of dynastic rule, which began about AD 426 or 427 and introduced Classic Maya conventions of construction and display (but not a Petén-related ceramic tradition).¹⁷ Acbi is contemporary with Teotihuacan's apogee and David Stuart (2000, 2004) reviews Teotihuacan involvement with the founding of the Copán dynasty, arguably the most transformative political event (*huli*) in the history of the polity. Acbi ceramics represent what Henderson and Beaudry-Corbett (1993: 15-16) call "...a Middle Classic complex, clearly set in a Teotihuacan horizon". The period saw the first substantial occupation of the valley, contemporary with one or more major mid-6th century volcanic eruptions that affected parts of Mesoamerica (see below).¹⁸

¹⁶ But see Maca 2015 for comments about the simplicity of this tomb.

¹⁷ The first ruler K'inich Yax K'uk Mo' apparently assumed kingship somewhere in the Petén or Belize in AD 426 and then arrived in Copán the following year. Price *et al.* 2010 detected his Petén origins using trace element analysis. Much earlier Claude Baudéz (1986:18) anticipated their findings by identifying Petén-derived elements in Copán monuments.

¹⁸ See Webster n.d. for more on 6th century crises.

The demographic scale of the Middle Classic is unclear. Copán archaeologists seem to agree that population grew significantly in proportion to the Bijac one, and was more widely distributed, but the evidence is spotty. For example, the San Lucas population seems not to have increased much above that of the Early Classic (Landau 2021:10-11). Overall population in the valley was probably at least double that of any preceding period as reflected by the scale of the ceramic sample that Henderson and Beaudry-Corbett reported – some 500,000 sherds – large enough to make Acbi the first full-blown ceramic complex at Copán in Viel's 1993 sequence. We argued on the basis of our PAC II research that the Acbi population was quite modest in absolute numbers (Webster and Freter 1990b). Fash and Sharer (1991: 180) retorted that our estimate under-represented the Acbi population as reflected by the imposing proxy scale of early constructions in the Copán Acropolis (see Paine, Freter, and Webster 1996 for a response).¹⁹ McNeil (2009: 55) detected increased deforestation of the valley just before and after the dynastic founding event, but similar deforestation also had occurred earlier when populations were very small.

Acbi settlement is particularly evident in the northern foothills and on the high terraces of the eastern bottomlands that were densely occupied for the first time, and occupation at Cerro de Las Mesas continued. Fash detected much land modification on the valley floor and noted that all tested Type 4 sites produced Acbi remains, including of a large compound and an impressive burial he found beneath the plaza of Group 9N-8 (W. Fash 1991: 92). His “*El Brujo*” burial, as it is nicknamed, is impressive though probably non-royal. At some point, and certainly by AD 700, “... the Maya themselves diverted the river channel and no doubt undertook other civil engineering projects to mitigate the undesirable effects of an active river system” (Hall and Viel 2004: 19). Such modifications presumably opened up Las Sepulturas and the other bottomlands to more secure habitation, although we saw in Chapter 7 that erosion, flooding, and deposition continued through Coner times at Las Sepulturas.²⁰ Andrews V and Fash (1992: 67) report substantial Acbi materials just above sterile soil exposed by probes beneath the Late Classic royal residential compound 10L-2, where there were probably also Acbi elite buildings. Other dense Acbi deposits are no doubt buried elsewhere in the Main Group, and the early kings famously left structures and burials of this interval beneath the Acropolis. Leaving aside the issue of absolute numbers, Acbi people were clearly more numerous and widespread than earlier inhabitants, but far fewer than their Coner successors and sometimes not very visible where we would expect to find them.²¹

Late Classic: The Coner Expansion

Early Carnegie excavations in small groups near the Acropolis produced only what Longyear (1952: 70) labeled “pottery of Full Late Classic type”. Virtually all large-scale Copán projects have similarly encountered massive amounts of what have since been called Coner complex materials (see Chapter 10 for discussion of the Acbi-Coner transition). So too did the 1977 program of test-pitting by William Fash (1985) and our own PAC II test-pitting. A rough measure of Coner preponderance is reflected by the raw sherd samples that Viel (1993a, b) used to devise the second version of his ceramic sequence.²²

Rayo/Gordon: 384 sherds (and 28 whole vessels).

Uir: 1500 sherds

Chabij: 1700 sherds

Bijac: 10,000 sherds

Acbi: more than 500,000 sherds

Coner: more than 5,000,000 sherd and 500 complete vessels

(see Henderson and Baudry-Corbett 1993: 16-17).²³

¹⁹ A later and much more informed simulation (Webster, Freter, and Gonlin 2000: 162) put the late Acbi population (AD 600-650) at 5661 people in all parts of the valley.

²⁰ This hydraulic engineering might have opened up for occupation the low swale where I investigated Str. 9M-101, which was shortly thereafter buried by slope-wash (see Chapter 7).

²¹ Traces of Acbi occupation are sparse at 8N-11, elite or otherwise, as in most of our database sites. A very labored explanation for this pattern is that Acbi settlement and population were abundant, but that users of Coner assemblages generally avoided building their own residences on the sites of Acbi ones. That Acbi populations were instead comparatively small seems much more likely.

²² Viel gives slightly different sample summaries in his two 1993 publications. The ones here are from 1993b: 14-17.

²³ Even this number minimizes the preponderance of Coner in the valley because Viel included far larger percentages of recovered pre-Coner materials in his analyses. By 1993 excavated Coner samples from all projects were vastly larger than those listed – those from our Penn State excavations alone were counted in the hundreds of thousands of sherds and were not part of Viel's sample.

Table 9-1. Proportions of Coner complex rims vs. pre-Coner rims.¹

Site	Coner complex	Pre-or non-Coner complex rims ²	Total # rims
Group 9N-8			
Patio A	82%	18%	2950
Patio B	94%	6%	18,790
Patio C	86%	14%	3500
Patio D	95%	5%	34,454
Patio E	83%	17%	26,745
Patio H	96%	4%	13,571
Group 9M-22			
Patio A	87%	13%	18,043
Patio B	87%	13%	15,843
Group 9M-24	94%	6%	8,628
Total			142,524

¹ We dug all these PAC II operations at 9N-8 using the same field and analytical methods but found great variation in the rims recovered. Courtyard groups B, D, and E have much higher rim frequencies than the more formal groups A and C. Either A and C were used for fewer standard domestic purposes, or they were cleaned more assiduously. People continued to use some courtyards after the dynastic collapse, including Plaza A.

² The non-Coner sample includes imports but these are extremely rare, so for all practical purposes non-Coner really is a measure of pre-Coner rims.

his students extensively excavated three urban core sites, including one Type 3 group of considerable size and complexity, 9NM-18, with a carved bench (see Chapter 4). Of some 276,290 sherds from these operations only 159 were pre-Acchi, and no pre-Acchi primary architectural contexts were encountered (Willey *et al.* 1994: 12-16). All the early sherds came from structure fill, presumably scraped up from the immediate locales for building material. About 29,800 sherds fall into Willey's Acchi and Cueva phases (AD 400-700).²⁵ Only some 11% of all their reported sherds thus predate the full Coner phase, a very close fit with Diamanti's percentages. We shall see in Chapter 11 that our large sample of obsidian hydration dates tells much the same story.

The Harvard archaeologists repeatedly remarked on the widespread presence of Copador Polychrome, the principal Coner diagnostic, saying that "The great abundance of Copador Polychrome in residential contexts in the later Coner phase certainly suggests its daily use as a serving ware" (Willey *et al.* 1994:51). "Great abundance" is a puzzling overstatement, as we shall see later.²⁶

Several explanations might account for the paucity of pre-Coner ceramics:

1. The pre-Coner population of the urban core (and probably the whole valley) was very small compared to the Late Classic Coner phase population, particularly before the Middle Classic.
2. There was a respectable pre-Coner population, but it was concentrated in locales far from the urban core groups dug by Harvard, PAC I, and PAC II.

²⁴ Even though most visible Copán architecture is heavily Coner one would expect to find considerable pre-Acchi material mixed in fill, etc., had earlier occupations been extensive and heavy. This was not the case with the Harvard excavations, nor with our own during Phase II or at Group 8N-11. I have not adjusted these sherd numbers to correct for the different temporal lengths of the complexes. In any case, the pre-Acchi intervals as originally conceived by Viel are as long or longer than the later ones.

²⁵ Willey *et al.* (1994) followed Viel (1993b: 15) and Henderson and Beaudry-Corbett (1993) by inserting a funerary Cueva sub-phase (AD 600-700) between Acchi and Coner. Essentially Cueva marks the transition between the two phases. Henderson and Beaudry-Corbett say everything pre-AD 700 is pre-Coner. See Chapter 10 for further discussion.

²⁶ Ronald Bishop informed me (personal communication 2019) that all the Copador Polychrome sherds from Copán that he has examined appear to be imported. In this he departs from his earlier opinion that Copador was probably produced in the valley (Bishop *et al.* 1986: 166). If Bishop is correct, the signature "fine" ware of the Coner complex should be counted as an exotic, so the percentage of imports would rise accordingly; ordinary Copañecos had access to imports, suggesting that they were reasonably cheap and not subject to restrictions of access or use. Copador's low percentages in the Harvard collections and in our own might thus reflect non-local production, and hence comparative scarcity. Copador also appears sparsely at Quirguá. As for "fineness", one remembers Longyear's (1952) rather disparaging remarks about the quality of Copador.

Contrasting raw counts in this manner is obviously deceiving because Coner phase sites or contexts are more accessible than earlier ones and have been more intensively excavated. If we had Bijac and Acchi sites as big and accessible as the Coner ones and stripped them off as we did 8N-11 or 9N-8, the Bijac sherd totals would be much higher. Nevertheless, the temporal disparities in the sample available to Viel are striking.²⁴

Melissa Diamanti used the computerized artifact catalogue to tabulate Coner and non-Coner rim proportions for three Las Sepulturas residences we excavated during PAC II and broke them down by specific patios (Diamanti 1991: 77). Her figures, summarized in Table 9-1, show the extraordinary preponderance of Coner material. Diamanti's results strongly accord with those from the Harvard excavations published three years later (Willey *et al.* 1994). During the first concerted burst of residential research outside the Copán Main Group Willey and

3. Pre-Coner populations were respectable but early remains, especially of Preclassic settlement, are deeply buried on the valley floor (and perhaps in some parts of the foothills). They were thus not adequately sampled, although as discussed in previous chapters even our deepest soundings at 8N-11 produced Coner sherds.²⁷

What about the landscape outside the urban core and the earlier ceramic phases there? Just before the Harvard figures were published Blair Habig (1994) used our PAC II data to explore artifact patterns from five of our urban core elite-rank operations, as well as eight low-rank residences from outlying parts of the valley.²⁸ His rim sherd sample (Table 9-2) yielded very similar results to those reported by Harvard. Revealingly, the little rural sites have even smaller collective percentages of pre-Coner types than the elite-rank ones.

Table 9-2. Rim sherd percentages from Habig (1994: 35).

	Total sherds	% Coner types	% Pre-Coner types
Elite sites	68,788	91.7	8.30
Small sites	15,595	98.51	1.49

The great Late Classic Coner expansion saw the infilling of many parts of the drainage, especially the foothills and bottomlands of the Copán pocket:

“The Coner occupation associated with Copador pottery is truly the apogee of Copán’s size and power, and appears to me to represent a period of, at the very least, 100 years; there is simply too much construction requiring too much labor for it to have taken less time” (William Fash 1986b: 84).

This dominance of Late Classic sites on the landscape led Fash (1983c: 269) to further conclude that “...the visible archaeological remains in the Copán pocket represent the number of settlements in the late part of the Late Classic occupation; the community has been frozen in time”.²⁹ This “frozen in time” idea echoes the “Pompeii Premise” that was much debated in the 1960s and 1970s (Binford 1981). It is attractive and reassuring because it suggests that we can analyze near-synchronous, or at least functionally coherent, sets of settlement remains and associated artifacts. We will return to its implications, and especially to the issue of the length of Coner, in Chapters 10 and 11, and argue that although its initial expansion marks the beginning of the Late Classic, Coner or Coner-like ceramic assemblages endured long after the mid-9th century, and that Coner activity was scarcely frozen in time. For now, it is important to note that Fash estimated the Late Classic population during the reign of the 16th ruler, assumed to be the demographic peak of the polity, at 15,000-20,000 people.³⁰ Some of these people we now know were clearly non-local in origin (see Katherine Miller 2015; Miller and Freiwald 2018 for biodiversity and evidence of population movements). Whether apparent terraces recently detected by lidar for parts of the valley (Von Schwerin *et al.* 2016a) date to this interval of peak population remains to be seen.

The extensive PAC II test-pitting (Ops. 24 and 40) carried out by AnnCorinne Freter (1988) added another dimension of scale because she worked both inside the Copán pocket and throughout most of the river’s drainage, including the northern Sesesmil tributary valley. She found much the same general ceramic proportions as the Harvard and the PAC I archaeologists. Freter informs me that her operations revealed the spotty occurrence of Acbi sherds (especially in the Copán pocket and Sesesmil drainage) and pre-Acbi ceramics (in Río Amarillo, El Jara, and the middle Sesesmil drainage), but that the general impression of paucity compared to Coner is correct when it comes to raw sherd counts.³¹ Even more revealing is that our intensive excavations at eight rural sites in major sub-areas of the valley turned up *no* pre-Acbi sherds, and only a small collection of Acbi ones (Webster and Gonlin 1988;

²⁷ The Type 3 site of Los Achiotes dug by Marcelo Canuto had prominent Late Preclassic and Early Classic occupations. Los Achiotes is far from the Main Group in the eastern reaches of the valley.

²⁸ Elite rank = Operations 10, 15, 16, 45, and 46; rural = Operations 18, 30, 31, 32, 34, 35, 36, 38.

²⁹ Fash’s original “frozen” comment referred to settlement in the Copán pocket, but he later extended it to settlement throughout the valley. Haviland similarly thought that the Tikal settlement map conveyed such systemic coherence, as did Puleston (1973: 165), who believed that all mapped Tikal groups were occupied by about AD 770. The logic, direct or implied, is that the Late/Terminal Classic saw peak populations at Copán and Tikal followed by rapid and virtually complete depopulation. There was thus no later activity or artifact deposition on any scale that would introduce serious noise into the conveniently “frozen” pattern. This issue is also discussed in the following chapters.

³⁰ This figure refers to the whole kingdom. Willey and Leventhal (1979: 97) earlier estimated that the Late Classic population of the core of the polity, the Copán pocket, was about 10,000 people, a figure very close to that later generated by a complex simulation based on additional PAC II data (see Webster, Sanders, and van Rossum 1992: 190).

³¹ Personal communication, Jan. 12, 2012.

Gonlin 1993). Coner sherds ran into the millions by the time we finished our 1997 work at 8N-11. Many projects since then have enormously increased the sherd collections for virtually all phases, and especially Coner, though it seems there is no overall recent count or synthesis.

Our PAC II sampling so widely augmented that of the Harvard and PAC I projects that we can discount the idea of a striking spatial dislocation between Coner and pre-Coner (especially Acbi) settlements. We favor a combination of explanations 1 and 3 above, with most weight placed on comparatively low pre-Coner populations. The PAC II work enabled us to generate independent settlement and soil models for the whole valley (Webster 2005 and Wingard 1992, 2016), and their demographic results agree very well with each other and with Fash's earlier estimate of Copán's peak population.

Viel originally conceived Coner both as a Late Classic ceramic complex and a temporal phase. It was the peak of Copán's cultural maturity and from the PAC I perspective it preceded an abrupt collapse. As William Fash (1983b: 200) put it:

"The Late Classic (Coner Phase) sees the mushrooming of both population and socio-political complexity, with the valley reaching its greatest density of occupation in all physiographic zones at this point in time.....Thereafter there occurs a demographic and political collapse so complete that the area is virtually abandoned by the Early Postclassic (Ejar Phase)."

Just when Coner began and when and how it ended have been variously dated. When Coner (or some late Coner-derived complex) ended has been particularly contentious. Ejar, which follows Coner (sort of), was originally intended by Viel to be simply a ceramic complex or sub-complex, not a distinct chronological phase like Coner. We still call Coner a phase in what follows, with the proviso that its traditional end-date of AD 850-950 is vigorously debated and probably incorrect.

Pre-Coner Migrations and Dislocations?

Archaeologists have long tried to accommodate the population dynamics implied by their ceramic proxies with several culture-historical scenarios. Sharer and Traxler (2006) thought that Copán lay outside the wider Preclassic developments in the southeast Maya region and that its early population was possibly non-Maya (Lenca).³² Merriwether, Reed, and Ferrell (1997: 208) assayed ancient mitochondrial DNA (mDNA) from nine Copán individuals whose remains were recovered from groups of several ranks. Their samples turned out to lack a genetic deletion (9-bp) frequently found elsewhere, including among the Yucatec Maya. Either the Copán individuals are outliers in the genetic variation characteristic of Mayan speakers, or they relate to some other non-Maya (or highland Maya?) linguistic group. An extensive literature debates the ethnic/linguistic mix and ethnogenesis (Ch'orti, Ch'olan, Lenca, Cave?) of Copán's ancient population, a subject we touch on only lightly. For summaries and interpretations see Alan Maca (2009, 2015). Robert Sharer (2009), Price *et al.* (2010, 2018), Katherine Miller (2015), and Miller and Freiwald (2018).

Canuto (2004) provides an overview of Copán's pre-dynastic (i.e., pre-Acbi) settlement, but oddly gives no numbers for the population scale of the polity. Large early Copán sites such as Cerro de Las Mesas, Cerro Chino, Los Achiotes, and El Guayabal tend to be located above the floodplain on defensible hilltops or along communication routes, although settlements are found on the valley floor as well. Sharer and Traxler envisioned two influxes of Mayan speakers, one about AD 100 when Los Achiotes was abandoned, and the second coinciding with the "founding era" at ca. AD 400 when there was a major Acbi phase occupation of the valley floor. They have little to say about the rather fugitive Early Classic except to note that Bijac sherds mark the beginning of activity at the Main Group. Landau (2016) suggests that populations from highland Guatemala moved into the Copán valley during the interval between AD 100 and 200 as the Kaminaljuyu lake and canal systems declined. She thinks such migration might be related to the shadowy events around AD 159 and the individual nicknamed Foliated Jaguar hinted at in Copán's

³² Leventhal, Demarest, and Willey (1982:16) speculated that Copán's elite culture was imposed from the Petén on a different Maya ethno-linguistic group, probably C'horti. William Fash (1983b) followed up this idea in his dissertation. In this model Copán's elite Maya elite culture is a thin veneer covering a C'horti population. Maca (2009) thinks the Classic population of the valley was a complex mix of people with C'horti, Lenca, and other languages and identities.

inscriptions (Stuart 2004; Martin 2016: 531).³³ Years earlier, Rene Viel (1983) observed that the ceramic griddles common in Bijac times might reflect a possible highland migration. Although we know where some of the early residential hot spots were, we cannot generate anything like the maps of rural site distribution available for Coner sites, and the impression is one of very low pre-dynastic population levels.

For many years archaeologists have related Copán's population history to supposed migrations caused by the eruption of the Ilopango volcano in western El Salvador, an event originally dated by Payson Sheets (1983: 1-13) as early as the mid-third century, but now apparently much later.³⁴ Dull *et al.* (2001) linked Middle Classic developments at Copán to the devastation caused by this eruption, which they placed at ca. AD 425, a date nicely matching the founding of the Copán dynasty and the beginning of the Acbi phase. They say that before the eruption the Chalchuapa region “.... produced prodigious amounts of Usulután ceramics that were circulated throughout the highlands and Pacific Lowlands of Guatemala, and even exported into the Maya Lowlands....” (Dull *et al.* 2001: 34). This interaction zone was disrupted by Ilopango, which stimulated long-distance movements of people into the Copán Valley that resulted in a “... remarkable ascent of the burgeoning polity beginning in the 5th century A.D.” (Dull *et al.* 2001: 36). More recently Cameron McNeil (2009: 56) championed this interpretation, claiming influxes of people associated with the migration of the founder and his retinue, followed by displaced Ilopango refugees. Sharer, Canuto, and Bell (2011: 336) similarly said that “...this catastrophic event triggered a region-wide reorganization of exchange routes that transformed former peripheral areas, including the Copán Valley, into new hubs of commerce”.³⁵

More recent dates for Ilopango call these interpretations into question. Some scholars equated the eruption with the famous “mystery cloud” event of AD 536, the first of a series of volcanic eruptions that affected climate in many parts of the world around that time (Payson Sheets, personal communication 2012; see also Dahlin and Chase 2014).³⁶ Other paleo-climatologists located this eruption in Iceland (Gibbons 2018). To further complicate matters, there now appear to have been at least two big volcanic events in the mid-sixth century. Dull *et al.* (2019) thought that Ilopango was the second one and dated it to AD 539-540, too late to account for the AD 536 upheavals recorded historically in many parts of the world, or for 5th century events at Copán.³⁷ It was one of the biggest eruptions of the Holocene, ejecting an estimated 37-83 km³ of material into the atmosphere and causing a 14-year cold spell, disruption of harvests, and widespread starvation, death, and social upheaval in much of the northern hemisphere.³⁸ Yet another re-dating claims the eruption happened in AD 429-433 (Smith *et al.* 2020). When I asked Sheets in September of 2020 about all this confusion, he replied that we will simply have to wait until more ice-core data are available and properly analyzed.

Whatever its exact date, the Ilopango eruption devastated a very large region, especially to the southeast of Copán. It undoubtedly killed thousands of people in El Salvador, eastern Guatemala, and western Honduras, and dislocated many others by rendering landscapes temporarily uninhabitable over some 20,000 sq km. If the early 5th century date proves to be correct, the original migration scenarios for Copán remain plausible. If we accept instead the mid-6th century dates, the issue of migrations remains valid but is pushed later in time. If Ilopango exploded in AD 539-40, the lack of an earlier 5th century demographic pulse at Copán is irrelevant. Our own population models show a distinct increase for Copán beginning at about AD 600, but this only makes sense if agricultural production in the valley was not severely affected by the eruption. If Copán somehow escaped the worst, refugees might have played a part in this upswing, although the immediate effects were not felt for two or three generations later and the number of people absorbed by the valley seems quite low in proportion to those who must have been dislocated. That the Acbi-Coner ceramic transition occurs between AD 600 and 650 is

³³ The events are retrospectively dated to AD 160 (8.6.0.10 8 10 Lamat 16 Pop) on Copán Stelae 1 and 4, both erected during the reign of Waxaklajuun Ubaah K'awiil.

³⁴ Sheets attributes his early dating to the still relatively crude radiocarbon method, to inferior samples, and to the lack of independent proxies for the eruption (personal communication to Webster, May 12, 2020).

³⁵ In our Petapilla core 2 (Rue, Webster and Traverse 2005) we detected a small lens of material that we thought might be of volcanic origin. We sent this to our Earth and Mineral's Science Department for analysis and it turned out not to be volcanic.

³⁶ Re-dating makes several other things more comprehensible, particularly the apparent troubles and decline at Teotihuacan in the middle of the 6th century. Things went badly elsewhere too. During the reign of the eastern Roman emperor Justinian the first stage of an extremely damaging plague broke out in Alexandria in AD 541.

³⁷ Lachniet and Bernal-Uruchurtu (2017) describe speleothem evidence for an extended Central Mexican “megadrought” that lasted from about AD 550 to AD 750. Its onset is closely correlated with destruction and decline at Teotihuacan and is suspiciously coeval with the new dates for the Ilopango volcanic event.

³⁸ See Price (2020: 64-106) for the effects of what is now widely called “the 6th century crisis” on northern Europe agriculture and demography.

probably no coincidence.³⁹ Sharer (2004) documented evidence for destruction of Copán monuments, and perhaps structures and tombs, during the decade AD 553-564, roughly coeval with all this volcanism and the first great hegemonic conflicts between Tikal and Calakmul.

I am skeptical of any sudden and substantial immigrations into the Copán valley, for whatever reasons, because I detect no impressive pre-Coner demographic pulse. We reconstruct a population of only a few thousand people for the valley between AD 400 and 500 from settlement data (see Paine, Freter, and Webster 1996: 57). John Wingard's (1992, 2016) independent agricultural simulations give a figure in the 3000-4000 range for this interval. This is not to deny that movements of people took occasionally took place. The old male in a vaulted tomb in the El Bosque enclave was a foreigner, as were most of his mortuary offerings, which hint at connections to Teotihuacan (Maca 2015). Price *et al.* (2010) detected several individuals from distant regions among the ten commoner burials they assayed for oxygen and strontium isotope values.⁴⁰ Later Price *et al.* (2014) and Suzuki, Tiesler, and Price (2018) reported surprisingly diverse origins among 101 individuals buried from Late Preclassic through Late Classic times at Nakamura's sites 9L-23 and 10J-45.⁴¹ Miller and Freiwald (2018) documented multiple origins among individuals we retrieved from Plaza E burials in Group 9N-8 in 1981.⁴² Whether such diversity was common at Copán in pre-Coner times and reflects large, sudden, long-distance movements of people remains to be seen, but so far as migration/mobility are concerned "...Copán is outstandingly the case with the highest frequencies" (Suzuki, Tiesler, and Price 2018: 212) compared with samples from other centers such as Tikal.

Effects of Climate Change

Another possible factor is climate change. The Yok-I speleothem from southern Belize (Kennett *et al.* 2012; Prufer and Kennett 2020; see also Fig. 11-11) is the most detailed paleoclimatic proxy record from reasonably close to Copán. After a period of volatile swings and low rainfall between about AD 370-430, there is an upturn in wetness until about AD 700 that persists, with fewer large swings, until about AD 600. Kennett *et al.* (2012) see this interval as one of population expansion and political vigor in the Maya Lowlands. I see no pronounced signs of a big population pulse at Copán until about AD 600, slightly earlier than a drying interval that Kennett *et al.* (2012: 791) identify as beginning around AD 640. Copán's population dynamics thus appear a bit out of sync with the Yok-I climatic record (but see Chapter 11 for later intervals and more discussion of climate).

Insufficient data notwithstanding, the Middle Classic Acbi population is commonly asserted to be both numerous and widely settled in the valley. Compared to earlier phases the Middle Classic does seem generally robust, a perspective strengthened by the presence of abundant inscriptions, both contemporary and retrospective (see Sharer 2004). If the comparison is with Coner, however, it seems less so. There should be much more Acbi material on or near the surface or in Coner period structure fill if there were a strong Acbi presence on the valley floor and in the foothills. I put the population of the whole valley, not just the Copán pocket, at 8000 to 10,000 people at AD 700. Wingard (1996) calculated 9000.⁴³ This still-low population is why the Harvard collections consisted overwhelmingly of Coner ceramics (including here types that are predominantly Late Coner but span the Acbi-Coner transition). Of these, fully 93,759 of the Harvard sherds derive from utilitarian Casaca Striated and Raul jars. I think the massive expansion of Copán's population, which essentially doubled during early Coner, is mainly a product of the 8th century. Why this happened remains unexplained, but it seems too late to have much to do with migrations triggered by the volcanic events cited by Dull and his colleagues and Sheets, or with the diversity detected for earlier times at Group 10J-45.⁴⁴

³⁹ Payson Sheets now dates the Loma Caldera volcanic event that buried Cerén to about AD 630, thus nicely coinciding with the Acbi-Coner transition, but of course this eruption was much more localized than that of Ilopango a century before.

⁴⁰ The 11 commoner burials used in this study heavily derived from urban core sites excavated by PAC II. Three individuals were from Plaza B of Group 9M-22, and one of them was non-local. There is no question that people from distant places moved about the region and into the Copán Valley, but whether such movements were on a sufficient scale to characterize them as migrations is another matter.

⁴¹ This site was originally mapped as a single platform but later turned out to be a large conglomeration of 17 structures.

⁴² Although the different origin locales were often not very distant from one another.

⁴³ See mathematical population projection charts in Paine, Freter, and Webster (1996: 55-56). These projections used the comparatively non-controversial 8th-9th century population to estimate earlier levels.

⁴⁴ Copán shows the apparent rapid population increase beginning about 550-600 AD typical of other Maya Lowland sites and regions (see Webster 1918, Webster n.d.). Elsewhere there were similar pulses during the Late Preclassic but not at Copán. Long ago Rice and Culbert (1990:23) noted that no Lowland sites seem to have peaked during Early Classic times.

In summary, many events might have caused dislocations and migrations of people on the southeastern Maya frontier, but a mathematical simulation of Copán's population history (Paine, Freter, and Webster 1996: 87) found the overall growth pattern consistent with internal demographic dynamics, although allowing for some minor influxes of people. Paine's (1996) analysis, based heavily on population estimates derived from the obsidian hydration chronology, suggests that increments of absolute population at Copán resulted from a more or less constant growth rate for the interval of rapid increase. This demographic modeling is to some degree counterintuitive. If we based our impressions on the shifts in ceramic proxies reviewed above, we would probably conclude that there had been an unprecedented population increase after about AD 600. Anticipating the detailed discussion of Copán chronology in Chapters 10 and 11, it is worth considering here a larger implication of the extraordinary pre-Coner vs. Coner ceramic imbalance reported by all projects: *we should expect other artifact classes, at least those that relate to ordinary residential functions, to be similarly weighted in abundance toward the Coner interval of Copán's demographic history.* We shall see in Chapter 11 that this prediction is abundantly borne out by dated obsidian artifacts.⁴⁵

The Group 8N-11 Ceramic Assemblage

We commissioned Guillermo Murcia to sort the identifiable Op. 50 sherds according to the traditional Copán sequence as devised by Rene Viel (1983, 1993a, b), who had earlier trained Murcia.⁴⁶ Murcia quickly and efficiently provided a lot-by-lot summary. He could not take into account later revisions of the Copán sequence (see Chapter 10), particularly Cassandra Bill's (1997) chronological subdivisions of the Coner assemblage at Group 10L-2 or Alan Maca's (2002) Terminal/Postclassic Coaj forms. Such revisions have since changed many ceramic groupings and type/variety names and fine-tuned some periods into shorter facets. Similar refinements will no doubt result from more recent excavations in outlying parts of the valley, especially at Río Amarillo, but I have not yet seen them. Murcia's categorizations are thus somewhat antiquated, and apart from Zeleznick's computer analysis and database our collections have not been subjected to the kind of intense scrutiny that Bill devoted to ceramics from Group 10L-2. Nevertheless, the general character of the ceramic material from 8N-11 is clear and informative. Much of our ceramic collection from fill or collapse contexts was too small or weathered to be useful. Zeleznick identified a sub-set of 112,268 Op. 50 sherds as useful for various analytical purposes and entered them in his database, later adding the Op. 63 collection.⁴⁷ He then partitioned the database information into various smaller sub-sets as displayed in the following tables, focusing particularly on rims and the most reliable contexts.

Ceramic Types

Tables 9-3 and 9-4 show types/wares of all time periods that could be reasonably identified, separated into the two phases of the Op. 50 excavations. For clarity we separate out some of the more dominant types from their larger ceramic groups. For example, Casaca Striated and Lorenzo are part of the Zico group, while Raul and Titichon belong to the Sepulturas group. When clearly identifiable, we list these distinctive types separately from more general Zico or Sepulturas group sherds.

Ceramic Forms

Zeleznick identified eight basic vessel forms for all the database sites. He also recognized shape and decoration variants within these forms, such as wide-necked jars, narrow-necked jars, flaring-rim vases, etc. We do not discriminate among these below, nor do we separate out varieties or minor types of Chilanga, Surlo, Melano, etc. Zeleznick reserved a special "other" category for miscellaneous ceramic objects such as figurines, pendants,

⁴⁵ Aoyama (1999) says that importation of Ixtepeque obsidian into Copán began in "Proto-Classic" times, or between about AD 50 and 400. If this is true, there is an obvious bias in Freter's raw distribution of hydration dates because early samples were difficult to find. A second possible bias is that during the Proto-Classic the per-capita importation and use rates of obsidian was lower than in Acbi and Coner times, and so is similarly under-represented. In any case the raw distribution of Freter's dates falling prior to AD 950 closely mimics the general population dynamics reviewed here, and some of her Ixtepeque dates are much earlier than Aoyama would allow. More about this in Chapter 11.

⁴⁶ Murcia was trained in Viel's original analytical conception of the sequence (Viel 1983), which as we shall in Chapter 10 is somewhat different from his later 1993 version. He also served as a consultant for other projects, such as Wendy Ashmore's at the imposing North Group sites (Ashmore 1991; see Chapter 12).

⁴⁷ Note the large number of sherds used at 8N-11 and at Copán in general for ceramic sequencing and analysis. Robert E. Smith (1955: 11-185) listed his total sherd sample at 37,164 and he constructed the Uaxactún ur-sequence mainly using 17,011 sherds from the A-V complex, a very restricted collection compared to those available for Copán.

Table 9-3. Op. 50 Phase 1 identifiable types/wares from all ceramic phases (body sherds include handles and supports).

Type	Rim	Body	Total	Percent
Aquino café	8	28	36	0.06%
Arroyo	88	816	904	1.51%
Berdalu	6	14	20	0.33%
Calamar	3	13	16	0.027%
Casaca	1450	27306	28756	47.99%
Cementerio	42	445	487	0.81%
Chilanga	197	580	777	1.3%
Cicero rojo	0	3	3	0.005%
Cocorico	6	11	17	0.028%
Copador	336	804	1140	1.9%
Cruz incised	59	1292	1351	2.25%
Didero	1	4	5	0.008%
Dos Arroyos	2	25	27	0.045%
Favela	1	1	2	0.003%
Gualpopa	193	644	837	1.4%
Hastalgorro	185	2396	2581	4.31%
Hijole	9	41	50	0.08%
Lorenzo	579	1745	2324	3.88%
Mapache	4	49	53	0.09%
Melano	9	42	51	0.09%
Moscova	2	0	2	0.003%
Petén	8	10	18	0.03%
Prospero	37	384	421	0.79%
Raul	441	9273	9714	16.21%
Reina	84	647	731	1.22%
Sepultura group	219	801	1021	1.7%
Sisero	101	396	497	0.83%
Sovedeso	2	19	21	0.04%
Surlo group	507	2173	2680	4.47%
Titichon	541	2378	2919	4.87%
Uir	7	2	9	0.02%
Ulua	56	321	377	0.63%
Usulatan	24	137	161	0.27%
Yotimpoco	0	7	7	0.01%
Zico group	92	110	202	0.34%
Zigoto	2	21	23	0.04%
Total	5413	53227	58640	-----

Table 9-4. Op. 50 Phase 2 identifiable types/wares from all ceramic phases (body sherds include handles and supports).

Type	Rim	Body	Total	Percent
Aquino café	17	15	32	0.18%
Arroyo	33	200	233	1.29%
Berdalu	1	0	1	0.005%
Calamar	2	4	5	0.03%
Casaca	409	4990	5399	29.94%
Caterpillar	134	288	422	2.34%
Cementerio	49	314	363	2.01%
Chilanga	169	521	690	3.83%
Cocorico	0	5	5	0.028%
Copador	283	474	757	4.2%
Cruz incised	17	314	331	1.84%
Didero	2	1	3	0.016%
Dos Arroyos	4	18	22	0.12%
Favela	2	0	2	0.01%
Gualpopa	170	356	526	2.92%
Hastalgorro	78	1040	1118	6.2%
Hijole	5	14	19	0.11%
Lorenzo	114	456	570	3.16%
Mapache	5	29	34	0.19%
Melano	18	34	52	0.29%
Moscova	1	0	1	0.005%
Petén	9	9	18	0.1%
Prospero	26	132	158	0.88%
Raul	147	3168	3315	18.38%
Reina	47	311	358	1.98%
Sepultura group	75	228	303	1.68%
Sisero	54	155	209	1.16%
Sovedeso	2	32	32	0.18%
Surlo group	279	814	1093	6.06%
Titichon	256	659	913	5.07%
Uir	3	0	3	0.016%
Ulua	25	122	147	0.82%
Usulatan	20	73	93	0.52%
Zico group	141	621	762	4.23%
Zigoto	0	6	6	0.03%
Total	2597	15395	17992	-----

whistles, spindle whorls, that are not discussed in this chapter, although a few are illustrated in Appendix B. He assigned four general functions to his basic vessel forms:

1. **Food preparation forms:** comals (griddles), tecomates, large basins, and some plates (depending upon ceramic type designation). Some of these were used for water transport and possibly for water storage.
2. **Storage vessels:** tecomates and restricted-neck jars.
3. **Serving vessels:** bowls, cylinders, and some forms of plates.
4. **Ritual forms:** incense burners (*incensarios*), *candeleros*, special braziers, miniature jars and bottles, and lidded vessels found in caches and graves.

ARTIFACTS

Table 9-5. Identifiable ceramic forms from all phases, Operation 50 Phase 1.

Ceramic forms	Rims	Body	Handles	Supports	Total
Bottle	1	3			4
Bowl	1038	2536	6	15	3595
Basin	1015	3896	1		4912
Censer	62	131		14	207
Cylinder/vase	221	1061	1	23	1306
Griddle	160	101	26		287
Jar	2382	42751	1060		46192
Lid	77	74	4		155
Plate	113	194		6	313
Ring base	33	58			91
Effigy/figurine		2	1		3
Total	5102	50807	1099	58	57065

Table 9-6. Identifiable ceramic forms from all phases, Operation 50 Phase 2.

Ceramic forms	Rims	Body	Handles	Supports	Total
Bottle	1	1			2
Bowl	1552	3382	1	3	4938
Basin	555	1780	3		2338
Censer	160	341	1	3	505
Cylinder/vase	266	1298	2	34	1600
Griddle	155	122	26		303
Jar	1883	22836	716		25435
Lid	69	42	2		113
Plate	359	729	4	33	1125
Ring base	39	55			94
Effigy/figurine	1	4			5
Total	5040	30590	755	73	36458

Tables 9-5 and 9-6 list numbers of identifiable vessel forms for all ceramic phases lumped together and separates the main excavation sample (Phase 1) from that retrieved by Widmer and Storey (Phase 2).

Dominant forms such as jars, basins, and bowls account for approximately 93% of identifiable sherds. This pattern closely resembles collections from other extensively excavated groups at Copán, including elite sites such as 9N-8 (see Hendon 1987 and Diamanti 1991), the sites dug by Harvard (Willey *et al.* 1994), our eight small rural sites, and the Causeway Building locale (Chapter 7).⁴⁸

Table 9-7. Common utilitarian, fine, and imported types or wares from all ceramic phases used by Zeleznik in his computations.¹

Utilitarian ceramic types - all Late Classic unless otherwise indicated	Fine ware ceramic types - all Late Classic unless otherwise indicated
Casaca Striated (AC)	Surlo (all forms)
Zico group	Caterpillar
Sepultura group	Copador Polychrome
Cruz Incised	Chilanga (AC)
Lorenzo	Gualpopa (AC)
Sisero	Babilonia-Ulua
Titichon	Burdalu, Sovedeso (MC)
Arroyo	Red-on Cream (MC)
Cementario (EM)	Usulután (EM)
Aquino Café	Melano (MC)
Mapache (EM)	Petén (AC)
Hastalgorro (EM)	Zigoto (MC)
Hijole (EM)	Didero (EC)
Yotampoco (PC)	Uir (PC)

¹ AC = Acbi/Coner transitional; EM = Early/Middle Classic transitional; MC = Middle Classic; EC = Early Classic PC = Preclassic.

Utilitarian vs. Fine Ware Types

Zeleznik distinguished between utilitarian and fine ware types as shown in Tables 9-7 and 9-8. The Op. 50 Coner assemblage is predictably dominated by utilitarian types as is the Causeway Building subset (Table 7-4).

Casaca Striated alone accounts for 33% of all identifiable sherds of all phases, and other related jar forms are numerous as well.⁴⁹ Varieties of Surlo comprise 4% of the Coner assemblage and Coner's most diagnostic type, Copador Polychrome, only 2%, a proportion at odds with the "great abundance" claimed by the Harvard project. Imports are represented by tiny amounts of Petén polychromes and more abundantly by Ulua (Babilonia) polychromes, but these together total less than 1% of the sample.⁵⁰ We did not identify a single Plumbate sherd, central to Viel's definition of his post-Coner Ejar phase, although these

⁴⁸ Given the contexts of most sherds described above, the 8N-11 assemblage does not lend itself well to whole-vessel estimates and to the kind of use-discard-replacement modeling possible for Cerén and Aguateca (see Straight 2017 for an overview).

⁴⁹ Freter observed paste distinctions among utilitarian wares such as Sepultura and Zico. These appear to reflect stylistic preference and/or proximity to multiple production centers in the valley rather than function.

⁵⁰ Painted and especially polychrome pottery appear to be much more abundant at rural Tikal residences we sampled during our later Penn State project (Straight 2012) than they are at 8N-11. Although we often envision certain vessel types such as Petén polychromes as circulating widely via processes of Maya elite interaction, such movement is often circumscribed in unexpected ways. For example, Petén polychromes are vanishingly rare in Palenque assemblages dating between AD 600 and 800 (Kirk Straight, personal communication).

were found in other PAC II operations.⁵¹ One might ascribe such ceramic parochialism to Copán's comparative isolation on the southeastern periphery of the Classic Maya Lowlands, but much the same pattern is seen elsewhere. Foias and Bishop (2007:217) found that 97% of the Pasi6n and Petexbat6n ceramic assemblages consisted of wares produced intra-regionally.

Chronology

The most obvious chronological pattern (Tables 9-9 and 9-10) is the enormous preponderance of Coner complex material, just as found by the Harvard archaeologists and by our own excavations at other Las Sepulturas and rural sites.

Only about 10% of identifiable sherds are pre-Coner, with Acbi types predictably the most numerous among these.⁵² Some characteristic Coner types such as Casaca Striated, Gualpopa, and Caterpillar originated in Acbi times but proliferated hugely during Coner, and some predominantly Acbi types such as Chilanga survived in small numbers into Coner times. Even given such overlap, the impression is one of an overwhelmingly Coner presence. Most pre-Coner sherds consist of Acbi or transitional Acbi/Coner types, which together make up about 7.3% of the whole collection. Sixteen early sherds date to the Middle Preclassic Uir phase, and 113 to the Early Classic Bijac phase. The whole pre-Acbi sample is so small and so heavily derived from secondary contexts that no patterns are evident in it.

Zelevnik calculated the lot-by-lot distribution of sherds and found that only two lots failed to produce Coner material. Such ubiquity mirrors that of Rattray's 1982 excavations where all pre-Coner sherds were mixed with those of the Coner complex. Perhaps most striking is the low pre-Coner frequency (14%) in Widmer's and Storey's Phase 2 excavations, even though part of their work was probing plaza and structure fill where early ceramics might be expected. Only 0.7% of their sherds, including both Bijac and Uir traces, predate the Acbi phase. So slight is the pre-Acbi sherd collection from Op. 50 that it might simply represent re-deposited noise. Alternatively, Zelevnik found that the pre-Acbi collection from 8N-11 mainly consists of fine wares, ritual vessels, and plates that might have been curated into Coner times as heirlooms.

Associations with Op. 50 structures

Zelevnik calculated rough associations of artifacts with particular buildings, but caution is necessary before jumping to behavioral conclusions because such patterns depend heavily on spatial judgement and on the displacement problem.⁵³ Many sherds and lithics are from collapse and fill, so such collections are also chronologically mixed. Assemblages from sets of buildings vary considerably in other ways even when contexts are good (Zelevnik 2002). For example, the small ancillary buildings and Str. 66N might have remained functional after Strs. 66C and 66S were largely abandoned, so distinctive patterns might reflect temporal rather than behavioral differences (see Chapters 10 and 11).

Table 9-8. Gross Op. 50 sherd frequencies of identifiable Coner phase utilitarian, fine, and imported wares.

	Utilitarian	Fine	Pet6n	Ulua	Total
Phase 1	48573	6212	18	387	55190
Phase 2	25309	7565	69	308	33251
Total	73882 (83.4%)	13777 (16%)	87 (0.001%)	695 (0.08%)	88441

Table 9-9. Identifiable sherds per ceramic phase, Op. 50 Phase 1.

Phase	Rims	Body	Handles	Supports	Totals
All pre-Acbi	56	175	---	6	237
Acbi	395	4301	77	---	4773
Coner*	4966	48709	1034	76	54785

Table 9-10. Identifiable sherds per ceramic phase, Op. 50 Phase 2.

Phase	Rims	Body	Handles	Supports	Totals
All pre-Acbi	36	198	0	6	240
Acbi	458	3992	52	5	4507
Coner*	5417	27400	707	84	33608

*includes types that originated in Acbi times but that proliferated in Coner.

⁵¹ James Sheehy (1991) excavated a few Plumbate sherds at the nearby Type 3 site 9M-22A/B, and Whittington and Zelevnik found Plumbate at elite sites in the western end of the valley (see Chapter 11).

⁵² In constructing the tables we list sherd counts for wares or types occurring in both the Acbi and Coner phases as Coner. This somewhat inflates the apparent dominance of Coner, but in the absence of sizable pure Acbi lots most such sherds probably represent Coner activity. Inclusion of Rattray's Op. 14 early sherds would slightly inflate the Acbi percentage, but we don't have the numbers.

⁵³ For example, should Feature 9 be associated with the rear of Str. 66S or with the slightly more distant 50-51 complex, which seems more likely in behavioral terms?

ARTIFACTS

Table 9-11. Percentages of Op. 50 utilitarian and fine ware rims roughly associated with specific structures.

Structure	Utilitarian	Fine	Total
50	75.2%	24.8%	1204
51S	80.5%	19.5%	1115
51C	84.1%	15.9%	967
66S	65%	35%	1847
66C	52.1%	47.9%	3337
66N	60.6%	39.4%	1643
Total			10113

Table 9-12. Proportions of ceramic rim forms related to structures.

Structure	Bowl	Basin	Censer	Cylinder	Griddle	Jar	Plate	Total
50	17.7%	21.1%	0.5%	4.3%	2.3%	51.9%	2.2%	1105
51S	12%	25.6%	2.3%	4.9%	1.8%	51.8%	1.4%	1038
51C	11.7%	24.8%	2.1%	3.9%	3.8%	52.9%	0.9%	905
66S	29%	15.3%	2.9%	5%	3.2%	41%	3.6%	1712
66C	35.4%	9.2%	2.4%	5.7%	3.8%	35%	7.5%	3167
66N	30.8%	14.5%	3.3%	5.2%	2.2%	37.5%	6.6%	1532
Total	-----	-----	-----	-----	-----	-----	-----	9459

Table 9-13. Gross Op. 50 chronological rim breakdown.

Structure	Pre-Coner	Coner	Total
50	4.9%	95.1%	1266
51S	3.5%	96.5%	1156
51 C	4.4%	95.6%	1011
66S	9.5%	90.5%	2041
66C	12.7%	78.3%	3824
66N	6.9%	93.1%	1765
Total			11063

Table 9-11 shows Zeleznik's associations of utilitarian and fine ware rims with structures. Inventories from the Str. 50-51 ancillary buildings have consistently higher plain ware proportions than those from the Str. 66 complex. Table 9-12 shows the more even distribution of dominant plain ware forms. Basins and jars cluster most heavily around the ancillary buildings (Table 9-13) while bowls and plates cluster around the Str. 66 set. Whether these associations are statistically revealing depends not only on Zeleznik's spatial judgement, but more importantly on how many were brought in as fill from elsewhere and so are simply noise. The latter is clearly much more of a problem for the Str. 66 complex than it is for the

ancillary buildings, where fill was largely unsampled. Bowl, plate, and cylinder forms cluster more abundantly around the big buildings, while jars and basins cluster more frequently around the ancillary ones.

Table 9-13 shows the pre-Coner vs. Coner rim sherd breakdown that Zeleznik loosely assigned to individual buildings using a subset of particularly good contexts. Str. 66C predictably has a somewhat larger proportion of pre-Coner sherds because Widmer and Storey probed early architecture and plaza fill there.

The Op. 63 Ceramic Assemblage

The 101 lots from our 1997 clearing and test-pitting produced far fewer ceramics than the main excavations. Many sherds were heavily weathered because they came from shallow surface clearing of architecture and collapse rubble. Zeleznik accordingly used for analytical purposes a subset of sherds recovered from reliable contexts such as middens, features, burials, etc. Table 9-14 shows the proportions of 13,292 identifiable wares/types for the entire operation (the ceramics associated with the Causeway Building listed in Chapter 7 are subsumed in the following tables).

Interpreting the Op. 63 sherd assemblage is much more difficult than that from Op. 50 for several reasons:

1. Collections are smaller because they come from surface clearing or test pits rather than large exposures.
2. Much less material comes from collapse, which often has early sherds.
3. Except for the Causeway Building, tests of individual structures were very localized and might change markedly if larger probes were made.
4. Because we could not trench into buildings, far fewer sherds come from early contexts, especially structure fill; samples are thus weighted toward late deposits.

Although Zeleznik recognized all these limitations, he nevertheless generated many spatial associations and distributions, including building-by-building comparisons and inferences. In the interest of caution we do not include these analyses here, although we summarize some of his general conclusions below.

Table 9-14. Proportions of Op. 63 identifiable type/ware sherds from reliable contexts and all periods (body sherds include handles and supports).

Ceramic type/ware	Rim	Body	Total	Total %
Aquino café	15	57	72	0.5%
Arroyo	17	82	99	0.7%
Burdalu	1	2	3	0.002%
Casaca Striated	398	5701	6099	45.9%
Caterpillar	42	83	125	0.94%
Cementerio	9	64	73	0.5%
Chilanga	39	90	129	0.97%
Cocorico		3	3	0.002%
Copador	87	250	337	2.5%
Gualpopa	32	60	92	0.7%
Hastalgorro	19	226	245	1.8%
Izalco Usulután	7	31	38	0.28%
Lorenzo	83	209	292	2.2%
Mapache	5	20	25	0.2%
Masica	4	199	203	1.5%
Melano	5	17	22	0.16%
Petén import	10	16	26	0.19%
Prospero	5	35	40	0.3%
Raul	106	1650	1756	13.42
Reina	20	87	107	0.8%
Sepultura group	82	468	550	4.1%
Sisero Rojo	48	179	227	1.7%
Sovedeso	5	5	10	0.08%
Surlo (all varieties)	92	402	494	3.7%
Titichon	241	828	1069	8%
Ulua	16	76	92	0.7%
Zico group	90	973	1063	8%
Zigoto	1		1	0.007%
Total	1479	11813	13292	-----

Table 9-15. Identifiable Op. 63 sherds broken down by phase.

Phase	Rim	Body	Total
Chabij	7	31	38 (0.28%)
Bijac	3	10	13 (0.9%)
Bijac/Acbi	24	262	286 (2.15%)
Acbi	42	193	235 (1.77%)
Late Acbi/Coner	71	150	220 (1.66%)
Coner	1331	11169	12500 (94%)
Total	1478	11815	13292

Ceramic Comparisons with Small Rural Sites

The collection from our eight rural sites, almost 122,00 sherds, was larger than that recovered from all our 8N-11 operations (Table 9-18).⁵⁴ It was also more behaviorally suggestive because fewer sherds came from collapse or from

Table 9-16. Functional Op. 63 proportions based on body forms (sherds of all phases).

Inferred use	Rims	Body	Total
Food	314	844	1159 (10%)
Preparation			
Ritual	92	191	283 (2.5%)
Serving	223	334	557 (5%)
Storage	639	8631	9270 (82%)
Total	1268	10,000	11268

Table 9-17. Imported types/wares.

	Rim	Body	Total
Petén imports	10	16	26
Ulua imports	16	76	92

Chronology

Only 4.3% of all Op. 63 sherds predate the Acbi/Coner transition (Table 9-15) and the Coner sample alone accounts for 94% of the collection. Early Acbi types, none from primary contexts, are only slightly more numerous than those that bridge the transition with Coner. Many of the latter were still made and used in Coner times, so Coner dominance is underestimated.

Function, Use, and Imports

As in Op. 50, common utilitarian forms make up the largest proportion of the Op. 63 ceramic inventory if transitional Acbi/Coner forms are lumped with Coner ones. Food preparation and storage vessels together comprise 93% of the collection (Table 9-16), with fine wares of any phase, but mostly Coner, making up the rest of the datable sherds.

We expected the Causeway Building to have unusual concentrations of ritual or fine ware ceramics, but they closely mirror the generally undistinguished Op. 63 pattern. The exception is the rear of Str. 46 where there were greater than expected proportions of ritual/ceremonial sherds in shallow middens. We also thought the building might produce unusual amounts of imported ceramics. As it turned out, the bulk of our Op. 63 Ulua and Petén sherds came from midden deposits around the other buildings and constitute less than 1% of the collection (Table 9-17). Once again we identified no Plumbate and Fine Orange Ejar diagnostics.

⁵⁴ Gonlin was kind enough to send me excel files for her sherd totals. The following figures come from these files and from the tables in Gonlin (1993), although I have in some cases condensed or slightly rearranged her displays.

ARTIFACTS

Table 9-18. Sherd totals from all eight rural operations
(does not include figurines, beads, etc.)

Operation	Body	Rim	Handles	Supports
30	17251	1233	374	72
31	23619	1131	639	65
32	3377	285	137	4
33	218	10	3	0
34	7290	443	30	12
35	4978	371	162	9
36	39119	2822	279	269
38	16597	867	233	57
Total	112449	7162	1857	488

building fill or floors, or were brought in as fill from neighboring sites. Nancy Gonlin (1993) was accordingly able to construct spatial distributions (not discussed here) that more reliably reflect various activities. Comparison with 8N-11 is facilitated because her ceramic classifications were basically the same as Zeleznik's. A downside is that a large proportion of the rural sherd sample was highly weathered. The tables in this section, with some slight modifications, were taken from the database and from Gonlin's (1993) dissertation.

Chronology of Rural Sites

Some 98.9% of the identifiable rim sherds from all rural operations were Coner, and the rest were Acbi (Table 9-19). Chronological distribution thus closely resembles that of 8N-11 except for the lack of pre-Acbi sherds, unless some lurk among the weathered sample. The rural sites are decidedly single component (Coner) in that we found no features nor architectural traces of pure Acbi origin such as reported by Langley for Op. 14 (see Chapter 3). This pattern is abundantly reflected in the associated hydration dates determined by AnnCorinne Freter. Of some 238 dates four are 6th century and most of the rest are post-AD 650.

Because our rural operations were designed to investigate small, presumably residential sites, we had definite expectations about their ceramic inventories. All but one, Op. 33, which we interpret as a field hut (note its tiny sample) conformed to these expectations (Tables 9-20 and 9-21). Utilitarian wares predominate, especially

Table 9-19. Phasing of identifiable rural site rim sherds.

Operation	Coner Phase	Acbi Phase	Total rims
30	99.7%	0.3%	1230
31	99.9%	0.1%	1129
32	100%	-----	285
33	100%	-----	10
34	96.4%	3.6%	443
35	99.7%	0.3%	370
36	98.2%	1.8%	2817
39	99.8%	0.2%	867
Total	-----	-----	7151

Table 9-20. Rural site rims from fine and utilitarian ware vessels.

Operation	Fine ware	Utilitarian ware	Undetermined	# rims
30	24.6%	65.7%	9.7%	1221
31	12.4%	71.7%	15.9%	1128
32	12.6%	81.8%	5.6%	285
33	10%	90%	00.0%	10
34	28.6%	69.6%	1.8%	427
35	8.9%	90.5%	0.6%	369
36	30.8%	56.3%	12.9%	2766
38	19.3%	75.7%	5.0%	865
Total	----	-----	-----	7071

Table 9-21. Proportions of rims by general functions (from Gonlin 1993: 381).

Operation	Cooking and storage	Eating and serving	Ritual or ceremonial	Other	Indeterminate
30	55.7%	32.7%	0.2%	.5%	10.9%
31	63%	17.9%	0.7%	1.3%	16.6%
32	73.4%	19.7%	0.7%	-----	6.3%
33	60%	30%	-----	10%	-----
34	65%	30.8%		-----	3.3%
35	84.7%	11.6%	0.5%	.5%	3.0%
36	49.7%	33.1%	1.3%	1.3%	14.8%
38	69.7%	21.1%	1.7%	2.4%	7.6%
Mean %	58.9%	27%	0.9%	1.3%	11.9%

Table 9-22. Proportions of fine ware rims.

Operation	Chilanga	Copador	Gualpopa	Eroded fine	Caterpillar	Surlo all types	Babilonia	# rims
30	3%	6.3%	9%	59.5%	2.3%	21.6%	.1%	301
31	-----	7.1%	6.4%	62.1%	-----	22%	2.1%	140
32	-----	8.3%	-----	50%	8.3%	33.3%	-----	36
33	-----	-----	-----	100%	-----	-----	-----	1
34	36.9%	-----	2.5%	52.5%	1.6%	6.6%	-----	122
35	-----	9.1%	-----	60.6%	24.2%	6.1%	-----	33
36	2.6%	2.1%	1.4%	78.5%	1.1%	13%	1.3%	852
38	1.8%	4.8%	4.2%	70.7%	-----	18%	.6%	167
Average % rims	4.3%	3.7%	3.5%	70%	1.8%	15.7%	1.1%	
# Rims	71	61	58	1156	29	259	18	1652

cooking and storage vessels, followed by eating and serving vessels, a general pattern observed for Las Sepulturas residences (Hendon 1987) and for 8N-11.

Most of the 1652 fine ware rims (Table 9-22) were heavily eroded. Once again the diagnostic Coner type Copador Polychrome is present in reasonable quantities but does not dominate the fine ware component. It certainly should not be considered abundant, and it is outnumbered by Surlo forms. Copador Polychrome, along with Ulua imports, was nevertheless clearly available to modest rural residences and was apparently commodified, not subject to sumptuary constraints. Zeleznik's later comparative analysis of Copán groups showed that the Str. 50-51 complex had special ceramic form affinity with assemblages from our small rural sites.

Lithic Artifacts

Chipped Stone

Our Phase 1 Op. 50 and Op. 63 operations collectively produced 5507 artifacts of obsidian and 539 of chert (those recovered by Widmer and Storey or by the masons during reconstruction are not included in these totals). This is a large sample compared to those found by some other Maya projects. Zachary Hruby (2006: vi) reported only 10,000 chipped stone artifacts (obsidian and chert) from the multi-year operations of the Piedras Negras project, a collection familiar to me because of my own four seasons of residential archaeology there between 1997 and 2000.⁵⁵ Hruby's more recent research at El Zotz, in the Petén's Buenavista valley yielded only 1059 obsidian artifacts from all Middle Preclassic through Postclassic contexts (Hruby 2018: Table 9.2). He points out that good chert deposits (albeit of varying quality) are common throughout the Maya Lowlands and that chert obtained either locally or via regional exchange is suitable for all basic domestic tasks. He regards El Zotz obsidian as an imported "quasi-prestige" material, something good to have and available to people of all social ranks, but not a necessity, hence its comparative scarcity. At Copán the situation is reversed; good chert is rare, and imported obsidian is abundant and spatially ubiquitous. Copán is to be sure known for some of the most impressive chert artifacts ever found in the Maya Lowlands, most notably the extraordinary eccentrics recovered as offerings in the Main Group (Agurcia and Fash, 1991: 103). These large objects were made from a fine-grained, dark brown, imported chert. Such material and lithic sophistication are not evident in assemblages from residential sites that I have dug at Copán, and certainly not at Group 8N-11. Also rare are the small chert or obsidian eccentrics common at Piedras Negras. See Appendix B for lithic illustrations, contexts, and brief comments on tools.

Obsidian: As usual in Copán residential excavations the Op. 50 chipped stone assemblage is heavily dominated by obsidian (Table 9-23). Eighty-one percent of our lots excavated during the main field season produced obsidian -- some 4854 artifacts in all. Twenty percent (963) of these artifacts were recovered from features as shown in

⁵⁵ Later excavations at nearby Budsilha led by Charles Golden and Andrew Sherer turned up very large concentrations of obsidian in a workshop context -- over 23,000 pieces (Golden, personal communication). As always, wider sampling yields surprises. My point is that Hruby's sample is very small compared to that from similar contexts at Copán. Interestingly, although Budsilha is close to Piedras Negras, its economic exchanges seem to be heavily oriented toward the Palenque region.

ARTIFACTS

Table 9-23. Basic obsidian breakdown, Op. 50 Phase 1.

Med	Prox.	Dist	Perc	Core	Flake	Chunk*	Retouched tool	Green	Util. flake	Other	Total
2828	896	173	43	6	625	176	39	1	65	2	4854

*These are small fragments with generally chunky shapes. Other Maya archaeologists sometimes call these “blocky fragments” (e.g., Stempe, Helmke, and Awe 2010: 229)

Table 9-24; all the rest came from lots that were essentially collapse or fill. An additional 652 obsidian artifacts came from Op. 63 test-pitting, bringing the total for both operations to 5507. Zeleznik’s distributional analysis concluded that obsidian blades were found in higher than anticipated proportions around Str. 66N and the 50/51 complex.

No systematic study of our collection has been done to analyze the *chaîne opératoire* of blade production or patterns of use-wear. Here we give only a short overview of forms and frequencies as shown in the following tables.

Blade fragments outnumber the combined categories of un-retouched obsidian flakes, core fragments, and chunks (21%) by about five to one. Eliminating the 292 flakes and chunks found in Feature 12 reduces the ratio to about 13%. Assuming that all non-blade obsidian is some by-product of manufacture (though perhaps used expediently), there is not enough to indicate much core reduction from rough blanks or much core or artifact rejuvenation. The proportions initially seemed to us so imbalanced in favor of blades as to indicate little on-site production even from already prepared cores.

Of the 963 pieces of obsidian recovered from features (Table 9-25), the biggest concentration of flakes (46%) came from Feature 12, the dense scatter of artifacts found on the floor of the corridor between Strs. 66S and 67 (see Chapter 8), most from a single lot. Few other non-flake lithic artifacts are from this feature so it might be a production locale. Without further scrutiny of the detritus it is difficult to be sure, but Ken Hirth, our resident Penn State lithics expert, says that well-prepared cores produce little detritus. Our blade fragments appear to be well-made and uniform, which argues for just such efficiency. We recovered only 11 whole or partial polyhedral cores (Fig. 9-1), none from features. Either most blades were brought in ready-made from elsewhere or they were pressed off polyhedral cores on-site by knappers who made few mistakes, a conclusion similar to that of Aoyama (1999),

Table 9-24. Basic obsidian breakdown, Op. 63.

Med	Prox	Dist	Perc	Core	Flake	Chunk	Retouched tool	Green	Util. flake	Other	Total
413	148	9	7	5	41	21	6	1	2	0	653

Table 9-25. Obsidian artifacts in Op. 50 features as opposed to general contexts

Feature #	Med	Prox	Dist	Perc	Core	Flake	Chunk	Retouched tool	Green	Util. flake	Total
2	5	1									6
4	2	1									3
9	183	144	10	2		13	8	2		4	366
10	6	2	2								10
11	23	15	1	1						1	41
12	27	9	3	3		287	5			3	337
13	4	3				4					11
14	16	1	1			1				1	20
16	22	4				5					31
19	2	2									4
20	82	25	3	2		14	5	1		2	134
Total	372	207	20	8		324	18	3	0	11	963

who studied a much larger sample of Copán obsidian. During my residential excavations at Piedras Negras I was struck by how small both obsidian cores and blades were compared to those at Copán. This makes sense because Piedras Negras is much farther from a major source, so its inhabitants had to make the most efficient use of this exotic material. At Copán obsidian was abundant in residences of all ranks and seems to have been a cheap “commodified” import available to all.



Figure 9-1. Obsidian core.

Sourcing of the Harvard and PAC I collections (Willey *et al.* 1994, Appendix C; Aoyama 1999) indicated that a huge proportion of their material derived from the Ixtepeque source. Freter (1988) came to the same conclusion during her PAC II obsidian analysis on the basis of visual inspection. Recent application of portable x-ray fluorescence (pXRF) to 574 obsidian samples from the San Lucas neighborhood shows proportions of 92.3% to 99% Ixtepeque across all sub-phases, and highest during the Late Classic (Landau 2021: 7). Only one fragment in the whole Op. 63 assemblage is the green-gold variety from the Central Mexican Pachuca source. This surprised us because trace amounts of Pachuca green-gold obsidian are found even in small rural sites (20 pieces at site 7D-6-2).

Whether obsidian blades were routinely produced on-site from prepared cores is complicated by several other factors aside from incomplete sampling. During the occupation of Group 8N-11 the character of obsidian working might have changed markedly. For example, if the long chronology presented in Chapter 11 is correct the 287 obsidian flakes in Feature 12 (see Chapters 6 and 8 for details) might represent local production at the very end of the site's occupation. If so, they tell us nothing about earlier Classic -- especially 8th century -- patterns. Because we did not screen most deposits we obviously also missed very small fragments, thus affecting the ratios given above. Either obsidian was being worked at the Feature 12 locale south of Str. 66S, or the deposit was swept out into the corridor from some nearby space. Hirth detected obsidian production in external corridors where good light was available at Xochicalco, and he does not think the Feature 12 concentration is especially unusual despite the apparent inconvenience of such a messy concentration in an inconvenient location (personal communication to Webster 2010).⁵⁶

Obsidian blades were multi-function tools at Copán. Most show obvious signs of use, but without formal edge-wear analysis it is unknown whether it was more specialized or diverse at 8N-11 than at lower status sites. Obsidian is, however, found more abundantly at 8N-11 than at the small rural groups discussed below. One crude measure is the number of blade fragments recovered per square meter of horizontal exposure.⁵⁷ Nancy Gonlin determined

Table 9-26. Obsidian from eight rural sites compared with that from 8N-11.

Site	Blade	Flake	Chunk	Core	Other*	Total
All rural sites	4255 (74%)	607(10.6%)	801(14%)	13 (0.02%)	37 (0.06%)	5713
8N-11	4517 (82%)	666 (12%)	197 3%)	11(0.019%)	116 (.021%)	5507

*Includes projectile points, bifacial tools, and eccentrics.

⁵⁶ What is different, of course, is that the Xochicalco material was left on the floor surfaces because of the very sudden abandonment of the site. Copán was abandoned much more gradually.

⁵⁷ This is admittedly a very crude measure. Ideally one would use cubic meter comparisons, but this is difficult to do and dubiously meaningful for 8N-11 because so many of the deposits are collapse, including actual stone building material. Whether artifacts from collapse contexts tell us anything directly about lithic behavior at 8N-11 depends upon the unresolvable issue of whether fill material was brought in from other locales. If so, many of the tabulated artifacts do not reflect on-site behavior and the comparisons between concentrations at 8N-11 and small rural sites are exaggerated. They are useful in monitoring the presence and scale of earlier occupations, either on-site or nearby, from which cultural debris was

ARTIFACTS

Table 9-27. Chert from Ops. 50 and 63.

OP.	Blade	Flake	Chunk	Core	Retouched tool	Other	Total
50	7	305	124	3	11	6	456
63	1	45	36	1	1	-----	83

this density at her heavily excavated rural residential groups to be 1.5 fragments per sq. m (averaged for all sites). By contrast, the average density from Op. 50 trenches is 5.7 per sq m. Variation on this scale, if not intrusive noise, probably reflects greater access to obsidian by the inhabitants of elite groups, the use of blades for a wider range of functions, deposition over longer periods of occupation, or some combination of these factors. On the other hand, if the unusually dense concentrations of obsidian from Features 9, 12, 20, and construction fill are eliminated from the calculation the differences between 8N-11 and the rural sites are diminished.

The Op. 50 obsidian inventory includes only 45 retouched tools, mostly fragments of unifacial or bifacial points or knives; some of these are described and illustrated in Appendix B. Paucity of retouched tools is typical of the Copán chipped stone inventories in our experience anywhere outside of royal/elite ritual or mortuary contexts such as those in the Main Group.

Comparison between obsidian from 8N-11 and Gonlin's sites is revealing. Row 1 in Table 9-26 (from Gonlin 1993: 411) summarizes all the obsidian artifacts recovered from the excavation of our eight little rural Copán sites, a sample almost identical in size to that recovered from 8N-11.⁵⁸

Row 2 shows the 8N-11 obsidian broken down into Gonlin's categories. About the only notable differences are the higher proportion of chunks at 8N-11 and the larger number of "other" artifacts from the rural sites. The latter difference probably reflects the wider range of rural functions. For example, projectile points are more common in our rural sites, as is green-gold obsidian from Central Mexico.

Chert: Chipped stone implements other than obsidian are few and generally nondescript in Copán residential assemblages that I have seen. This reverses the pattern seen in most southern Lowland regions in which chert typically predominates. Raw chert (*pedernal*) typically occurs in the valley in a honey-colored form that is somewhat tabular, but that tends to break into chunks and appears unsuitable for knapping. During the many weeks I spent walking across most parts of the valley I saw outcroppings of such material in several places, but never any of the dark brown chert from which Copán's celebrated eccentrics were made, nor is such material evident in our assemblages.⁵⁹ We recovered 539 non-obsidian chipped stone fragments from both operations, mainly made from chert, as shown in Table 9-27. Some 510 fragments (95%) were flakes or chunks, including an unknown, but significant number that were probably not produced by purposeful human manufacture. Many of these amorphous angular fragments instead appear to be general shatter or the products of fire cracking. We found seven chert percussion blades and only twelve retouched chert tool fragments, mostly bifaces or points. Conspicuously absent, as noted long ago by the Harvard archaeologists, are the large bifaces so commonly found in Classic Maya assemblages elsewhere (Leventhal, Demarest, and Willey 1982: 10). I found many such tools associated with Piedras Negras residential remains.

Ground Stone

Fragments of broken or exhausted manos and metates are the most abundant ground stone artifacts (see Spink 1983 for an overview of PAC II ground stone). We found 123 such fragments during the 1990 main excavations and nine more in 1997.⁶⁰ Of this total only nine fragments came from obvious features in both operations combined; all the rest were from fill, collapse, or middens. Raw material for grinding stones at Copán includes the ubiquitous

redeposited as fill. The conclusion from the 8N-11 collection is that there was a small Acbi presence, but almost nothing pre-Acbi.

⁵⁸ For comparison, William Haviland's excavations of 24 "small" Tikal structures (some of palace scale), produced just 230 obsidian artifacts, mostly "flake blades", and apparently only one prismatic blade (Haviland 1963: 435-441).

⁵⁹ So far as I know the source of this fine tabular chert, the raw material for so many elaborate Maya objects, remains unclear but is probably somewhere in Belize.

⁶⁰ This is a surprisingly low total. Whittington (1991a) found 113 pieces in test-pitting the Ostuman groups that group so closely with 8N-11 in Zeleznik's database comparisons. Our sample pales by comparison with the very large numbers from the royal compound 10L-2 (see Doonan 2010).

green tuff as well as rhyolite, basalt, and miscellaneous local conglomerates. Some 102 fragments in our sample were made from rhyolite, followed by basalt (4), tuff (4), and miscellaneous rock types (13). Tuff apparently was rarely used because it is inconveniently soft.⁶¹ Deposits of basalt, an attractively hard stone, are rare on the Copán landscape so this raw material is also poorly represented. We found only three fragments of full-sized, footed metates.

We recorded 32 other ground stone artifacts, some of which are illustrated in Appendix B. Many were simply pebbles or other pieces of stone that showed signs of polishing. Other objects included part of a miniature metate, the broken fragment of a little basalt mortar, the base of a jade perforator, and a fragment of an unfinished stone slab or palette (all from Feature 9). Small greenstone axes or celts are commonly recovered from Copán residences of all ranks. Sometimes they were purposefully cached, but even then they usually show signs of wear. Widmer (2009) also found them in his workshop context at Group 9N-8 Patio H. The three celts from Op. 50 were all heavily used or broken. None came from Op. 63. During reconstruction in 1990 Widmer's workmen brought him what he called a "mace-head", and he and Storey retrieved three jade ear flares from Burials 9 and 11 (see Chapter 8 for illustrations). Jade (real or "social") is rare in domestic contexts at Copán but common (in a presence-absence sense) in burials and caches as discussed in Chapter 8. It is most abundant at large, urban sites but is found at sites of all ranks everywhere in the valley. Zeleznik (2002: 10) concluded that "The distribution of jade, both worked and unworked, demonstrates that it was not an exclusive item of the presumed elite or powerful, however valuable it may have been in the society".

Non-lithic Artifacts: Miscellaneous artifacts made from bone, teeth, shell, daub, and other materials were retrieved from many contexts. A few are illustrated in Appendix B or discussed in previous chapters. Some are very rare and are only significant in a presence/absence sense. An example is artifacts inscribed or painted with glyphs.⁶² Others, such as the innumerable shells of land snails (*jutes*), might not be of human origin.

Database Artifact Comparisons

Zeleznik applied various analytical methods to the artifact/burial database and the associated GIS to tease apart subtle social differentiations among all levels of Copán society, but particularly among Coner phase elites (see burial database comparisons in Chapter 8). A major thrust of his analyses and interpretations was descriptive and we emphasize this dimension here. The database provided models of mean or expected distributions of artifacts, and these in turn formed the basis for comparisons, expressed in comparative ratios or percentages among 8N-11 and the other database sites/operations. Presumably he would eventually have explored the confidence levels of many of the patterns he discovered, but he left this task unfinished. Zeleznik created many visual displays of such site/operation comparisons. The example in Fig. 9-2 shows how sites cluster by rim percentages of ritual ceramic forms. In this display Ops. 50 and 63 show close affinities with collections from Plaza B of Group 9N-8, Ostuman site 11E-2, and Type 3 site 9M-22A/B (Sheehy 1991). Much of the variation he detected has obvious implications for elite display, power relations, identity construction, and political negotiations that other authors have associated with plaza configurations (e.g., see Inomata 2014), but these are not our concern in this chapter.

Except for a few special artifacts from a several caches and burials, the 8N-11 artifact sample is qualitatively undistinguished and not very different in character or abundance from the combined assemblages we unearthed in modest Copán residential contexts. This general character is also reflected in almost all the other sites/operations in the database, although we shall see below that there is a distinct dichotomy between urban core and rural sites generally. Put another way, with a few exceptions any artifact assemblage, considered separately, conforms well to our general expectations about what the domestic inventory of ancient Maya Copán residences should be, taking into account the location and character of sites.

Wider comparisons would show some obvious, although usually continuously distributed differences like the proportions of ritual wares in Fig. 9-2. Variations also appear in occupation phasing, and very occasionally in

⁶¹ Contrary to the opinions of some archaeologists, the Classic Maya sometimes made grinding implements out of very soft and inferior stone. During residential excavations at Piedras Negras in 1999 and 2000 we recovered many that had the consistency of gritty plaster.

⁶² Although there are problems even with these apparently esoteric "elite" items. Occasional rare glyphs make sense, but what about the pseudo-glyphs found on Copador Polychrome vessels? They were not scribal products, they were not created by the people who used them, and their wide distribution and possible foreign origins obfuscate any status attributions.

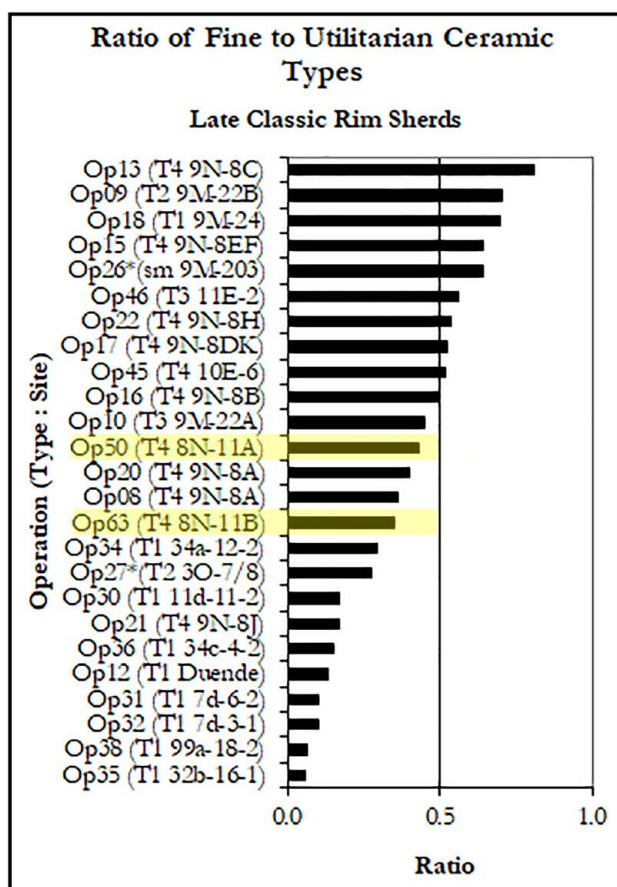


Figure 9-2. Ratio of Fine to Utilitarian Ceramic Types.

Str. 66 complex, (3) data associated with the Str. 50-51 complex, and (4-9) data associated with each individual, fully excavated structure in the above groups. His analyses focused heavily on large, aggregate samples. Significant differences among compared proportions tend to be accentuated with larger numbers, making sites with smaller numbers of artifacts appear more similar. Unique or rare artifacts complicate database comparisons. They contribute to richness analysis, but do not otherwise heavily discriminate among sites.⁶³

General PAC II Site Comparisons

The following summary is extracted, often word for word, from Zeleznik's much longer analysis of 8N-11's ceramic and lithic inventories. We have re-written and condensed his data and interpretations and interjected comments and refinements where necessary. These apart, what follows substantially reflects his findings:

1. Large urban core sites have higher proportions of serving and ritual vessels than small rural sites. Taken separately, the ancillary structures at 8N-11 more closely resemble the small rural sites in this respect.
2. Casaca, Cementerio, and Sepulturas utilitarian wares are universally distributed.
3. Surlo and Copador Polychrome fine wares are ubiquitous, although they comprise larger percentages at the big urban core sites than at the small rural ones.
4. Richness analysis of non-ceramic artifact assemblages shows that large and/or urban core sites have richer assemblages than rural sites, although low-ranked plazas in elite sites such as 9N-8 cluster with some small rural sites.

⁶³ Two examples are the 20 Pachuca obsidian blades from rural site 7D-6-2 and a manopla from site 34C-4-2. Manoplas are rare, handled spheres apparently used in competitive athletic contests. They are found widely throughout the Maya Lowlands and also at Teotihuacan, where the spherical part is sometimes represented as a skull. Many manoplas are highly decorated. Ours, though plain, is one of the most curious objects we found in any rural site. They often show up in elite Maya art, as on Panel N of the Hieroglyphic Bench in Copán's House of the Bacabs (Webster 1989: 29).

big anomalous patterns such as the evidence for craft production Widmer found in Patio H of 9N-8 or the ball game gear in Patio A. Nevertheless, the overwhelming database impression would be of sets of domestic remains, albeit from sites of different architectural, symbolic, and economic ranks, and with some internal and spatial variation. Zeleznik's unrealized goal was to detect many additional fine groupings that would signal fundamental social and political distinctions among individuals and groups (see McAnany 2013 for an overview of royal/elite economic behavior).

Zeleznik made seven types of comparisons based on ceramic rim sherds and lithic artifacts. In the order performed, these comparisons were (1) the proportions of pre-Coner to Coner sherds, (2) the distributions of general ceramic vessel forms (bowls, calderas, censers, cylinders, griddles, jars, and plates), (3) distributions according to general use (cooking/food preparation, serving, storage, and ritual), (4) distributions of major Sepulturas and Zico/Casaca plain wares. 5) distributions of major types of fine wares (Surlo wares, Cream wares, Caterpillar, and Ulua), (6) proportions of total fine wares to plain wares, and (7) proportions of obsidian to chert.

He further broke down the 8N-11 collections into nine different data subsets for further comparisons: (1) total 8N-11 site data, (2) data associated with the

5. Zico group and Sepultura group wares, along with Surlo fine ware, are universally distributed and were essential to basic domestic functions. Copador Polychrome is widely distributed but in lower numbers and percentages than Surlo types, and nowhere is it abundant as the Harvard archaeologists maintained.
6. Imported ceramics of any kind are rare. Petén imports are restricted to high rank/urban core residences, while Ulua types (Babilonia) from eastern Honduras occur in small numbers in sites of all ranks.

Intra-site Comparisons between the Str. 50/51 and Str. 66 complexes

Zeleznik's intra-site observations should be read bearing in mind the previous caveats about the reliability of structure/artifact spatial associations at 8N-11.

Ceramics: Collections from the Str. 50/51 ancillary buildings differ markedly from those of Strs. 66C and 66N in almost all dimensions of artifact distribution. The 50/51 complex shows more affinity with the rural Type 1 sites, particularly in terms of ceramic phasing, ceramic forms, and inferred uses. Spatial distributions strongly suggest that the ancillary buildings were used for daily domestic activities. All three buildings have significantly greater than expected proportions of plain wares and food preparation and storage vessels, especially jars and calderas. Jar sherds were particularly abundant to the rear of the Str. 66 complex and around the Str. 50-51 buildings. Special facilities for domestic food storage or processing might account for their abundance, though no other evidence for such activities is obvious. Alternatively, ceremonial feasting might have been important at 8N-11, an elite group of the highest sub-royal rank that plausibly required an unusual number of jars and basins for such purposes (see Chen *et. al* 2021 for evidence of alcoholic beverages found by the Chinese project). Equally notable is the low frequency of fine wares and serving vessels around the ancillary buildings, which tend to occur in collapse and midden deposits along the rear and side walls of structures. They should be *more* numerous around the 50/51 complex where middens are common, but they are not. The only exception to this pattern is the Feature 9 midden between Str. 66S and Strs. 50 and 51S, a terminal deposit buried by collapse from Str. 66S (see Chapter 8).

The three Op. 50 ancillary buildings show minor variations among themselves. Str. 50 storage vessels (primarily jars) exhibit more than expected proportions in midden contexts and, in particular, superstructure surface contexts. Possibly one of the small interior subdivisions of Str. 50 functioned to store food. Food preparation ceramics deviate most from expected proportions on the north end of the building, suggesting a kitchen at or near the unexcavated Str. 51N.

As expected, the impressive Str. 66 complex seems to have accommodated more elite activity. Strs. 66C and 66N have significantly greater than expected proportions of fine wares and serving vessels, specifically bowls and plates. Str. 66S shares general features with both complexes, although its strongest affinities are with the other big Str. 66 complex buildings. The inverse relationship among bowls and plates in the main buildings, and jars and calderas in the ancillary buildings, is particularly striking. Fine wares and serving vessels are found in greater than expected proportions in front of the Str. 66 complex structures and are also associated with the substructures -- primarily in substructure and plaza fill.

One context that strongly separates the entire Str. 66 complex from the Str. 50/51 locale is ceramic sherds directly associated with superstructure surfaces. The big buildings have fewer such deposits than expected and the latter have more, implying that the larger elite buildings either were the loci of fewer debris-producing domestic activities or that more effort was invested in keeping them clean. This idea is supported by the fact that the substructure and plaza surfaces of Strs. 66C and 66S have significantly more than expected serving vessels, while superstructure surfaces have fewer than expected. An unusually large proportion of Coner serving vessel sherds is associated with the superstructure of 66N.

Str. 66S is unique because it shares the Feature 9 midden context to its rear with Strs. 50 and 51, and the large substructure and front plaza area with Str. 66C. The building as a whole thus resembles both of these complexes, and by many measures conforms to the average for the entire site. Generally speaking, however, Str. 66S has more affinity with neighboring Str. 66C than with the smaller ancillary buildings. Midden contexts associated with Str. 66C contain significantly greater than expected proportions of both serving vessels (primarily bowls) and storage vessels (primarily jars), but serving vessels are conspicuous in other contexts such as substructure surfaces. Moreover, fine wares in the Str. 66S middens contrast with the predominant plain wares in the Str. 50/51 middens.

Burials and features do not stand out as special contexts in the ceramic data base. Neither set contained significantly greater proportions of fine wares or imported wares than the proportions for 8N-11 as a whole. Ritual ceramics (primarily censer fragments) were found in significantly larger than expected proportions in burials, but the numbers are so small that the pattern is suspect. Non-burial features had significantly greater proportions of pre-Coner phase material, but this might indicate that they were often closely associated with substructure and plaza fill. Ritual vessels are fairly evenly distributed throughout all structures and contexts at Group 8N-11.

Lithic artifacts: Substructure fill, a deranging factor in the analysis of ceramic distributions, has less effect on lithics. Obsidian blades are by far the most dominant lithic category.⁶⁴ They are found in greater than expected proportions with all of the buildings in the Str. 50/51 complex and Str. 66N. Four principal areas of lithic concentration are the plaza area shared by Strs. 50, 66S, and 51S; the midden on the terrace between Strs. 66C and 66N, the main plaza in front of Str. 66C, and the interior surfaces of Str. 51C. Obsidian blades are particularly associated with superstructures, middens, and burials from Strs. 50 and 51S. Distribution of obsidian debitage, by contrast, is completely dominated by the Feature 12 midden on the terrace between Strs. 66S and 67 (see Chapter 8). If this midden is excluded, obsidian debitage and chert show a spatial pattern similar to that of obsidian blades.

Manos and metates roughly follow the same spatial pattern as chipped stone, but their far smaller numbers make patterns less obvious. The most distinctive locations are 66N's substructure, the Str. 66S's rear midden, and the interior spaces of Str. 51C. Metates and manos are associated more frequently than expected with superstructures and substructures. This distribution supports the idea that manos and metates tend not to migrate as far from their primary use locations as do other kinds of artifacts, and that they were often incorporated into the fill of buildings.

Ceramic phasing: Group 8N-11's assemblage is heavily dominated by Coner complex sherds. We say complex rather than phase because the end of Coner, or some Coner-derived ceramic entity, is sharply disputed as discussed later. There are vanishingly few pre-Acbi phase ceramics (less than 1%) from Ops. 50 and 63 combined.⁶⁵ This pre-Acbi collection is dominated by fine wares, ritual vessels, and plates that possibly survived into Coner phase contexts because they were heirlooms. There is a larger, but still-low proportion (10%) of Acbi material. Only two of the 717 ceramic-bearing lots lacked Coner sherds, and these two lots (66 and 511) contained only one sherd and seven sherds, respectively. The general paucity of pre-Coner ceramics holds true even if transitional Late Acbi/Coner types are considered as part of the Acbi phase instead of the Coner phase. Although preponderance of Coner material is commonplace at Copán, the proportion of pre-Coner phase sherds recovered from 8N-11 is somewhat higher than we found at the impressive Ostuman groups (10E-2, 11E-6), at the urban core Type 1 site 9M-24, at all of the small rural sites, and at Patios B, H, and D at Group 9N-8. Pre-Acbi phase sherds heavily derive from fine wares, ritual vessels, and plates.

The Acbi ceramic assemblage at 8N-11 contains significantly greater than expected proportions of plain ware jars. The largest percentage of Acbi sherds (13%) was the collection recovered from Widmer's and Storey's Phase 2 excavations (Table 9-10). The biggest concentrations were found in the substructure of Str. 66C, the main plaza fill, and in a domestic Acbi midden that was associated with an earlier building of modest social rank. It was probably recycled when the latest phase of Str. 66C was built.

Str. 66N and the Str. 50/51 complex have greater than expected proportions of Coner complex material. Coner ceramics dominate all contexts and locations but they are found in greater than expected proportions in middens and along the sides and rears of structures. Two-thirds of the excavation lots with exclusively Coner ceramics come from Strs. 66N, 50, and 51. Late activity at the site shifts, as one would predict, away from lots associated with fill in front of substructures to lots associated with the superstructures. Late deposits are also found to the rear of Str. 66S.

⁶⁴ Zeleznik could have omitted structure fill collections from his spatial analysis but this might have created another deranging problem, apart from diminishing artifact sample size. If much of the fill of Strs. 66C and 66N were recycled from earlier structures on the same locations, the fill character might yield dependable, if messy, implications about structure use and chronology.

⁶⁵ We saw earlier that William Fash believed that all excavated bottomland Type 4 sites had Early Classic buildings or at least occupations. Evidence for any sort of Bijac presence at 8N-11 from Operations 50 and 63 is so slight that this appears doubtful. This is also true of other sites such as those at Ostuman excavated by Whittington and Zeleznik. Perhaps the Chinese project will provide more data.

Inter-site Database Comparisons

Inter-site database comparisons are more solid than intra-site ones because their internal spatial associations are not an issue.⁶⁶ Artifacts recovered from the Str. 66 complex as a whole exhibit a noticeable affinity with rural site 34A-12-2 and the Ostuman groups in the western Copán pocket (see Whittington 1991a and Chapter 11). Patio C at 9N-8 can also be placed in this grouping. The high proportion of pre-Coner material at Str. 66 aligns it more closely with Patio C of 9N-8 and Group 9M-22A/B than with the Ostuman groups. The distribution of ceramic forms, fine and plain wares, and inferred ceramic uses at Str. 66 are most similar to Patio C at 9N-8, with the Ostuman groups close behind. The large ratio of obsidian to chert associated with the Str. 66 complex and the site as a whole is most similar to Patios C, D, E and H at 9N-8. The Str. 50/51 complex exhibits a markedly different pattern, showing more affinity with the rural Type 1 sites, particularly in terms of ceramic phase, and ceramic forms and uses.

Ceramic forms show most similarity with the Ostuman groups and 34A-12-2, but inferred ceramic use is more varied and more difficult to interpret. Our excavations at 8N-11 retrieved a lower-than-expected proportion of food preparation and ritual vessels, a higher-than-expected proportion of serving vessels, and an average proportion of storage vessels. The overall distribution is best replicated by 9M-22A/B, the big urban core Type 3. Site 34A-12-2 has a similarly lower than expected proportion of food preparation vessels. Patio C at 9N-8 and site 7D-3-1 are most similar with respect to ritual vessels. Probably the most significant similarity is the proportion of storage vessels (jars) at Patio D at 9N-8. The Ostuman sites also display the greatest similarity to 8N-11 in ceramic use proportions as reflected in storage and ritual vessels.

Group 8N-11 has a higher proportion of pre-Coner material than all database sites except Patios A, C, and E, at 9N-8 and Group 9M-22A/B. The Ostuman groups also resemble 8N-11 in this respect. All these locales probably had some limited activity in the Acbi phase and then experienced major growth in the early part of the Coner phase.

Comparisons based on the distribution of plain wares and fine wares exhibit an interesting dichotomy. The distribution of plain wares at 8N-11 is most similar to the Ostuman groups and site 34A-12-2. Addition of fine wares to the equation (the distribution of fine wares and the proportion of fine wares to plain wares) increases the group's affinity with Patios C and E at 9N-8. At Patio C the proportions of Surlo and Caterpillar are most similar, while at Patio E it is the proportion of Caterpillar and Ulua. At 8N-11 the proportion of fine ware Ulua imports is not much different than at the other sites and resembles that recovered from the Ostuman groups.

The elites residing in the Str. 66 complex seem to have had a similar socio-economic position to those individuals residing in Patio C at 9N-8. Their artifact inventories indicate, however, that they were clearly not on the same level as 9N-8 Patio A individuals, nor was economic activity in their compound as specialized as that of the inhabitants of Patios D or H at 9N-8. On the other hand, the ceramic evidence from the Str. 50/51 complex suggests that its inhabitants performed similar tasks and had access to similar proportions of fine wares as people in Gonlin's small rural sites. Group 8N-11 shows much more affinity with the 9N-8 Patios B, D, E, and H in terms of lithics than with the Ostuman groups. All these groups share very high percentages of obsidian, unlike Group 10E-6, where we recovered inordinate amounts of chert in several middens.

Overall Urban Core and Rural Database Artifact Comparisons

Zeleznik's data indicate many differences in degree, but seldom in kind, between the artifact assemblages from the urban core and from those "rural" ones outside it. To quote from his dissertation:

"Urban sites yielded greater than average proportions of fine wares, serving vessels (particularly bowls and flaring-walled bowls), ritual ceramic forms, pre-Coner phase ceramics, the Surlo fine ware ceramic type, and the Titichon utilitarian ceramic type. They also had more Petén wares and decorative, rare ceramic items such as effigies, stamps, whistles, and miniature vessels. Utilitarian spindle whorls were also found in greater proportions in the urban core. They typically had the most diverse ceramic form assemblages which I translate to a diversity in household functions more than diversity in style or economic specialization. In

⁶⁶ Variable sherd numbers are a bias in inter-site comparisons, as is preservation. Sherd preservation in the Río Amarillo pocket was generally poor.

terms of non-ceramic artifacts, they generally had greater proportions of ornamental items such as jade, stone ornaments, and modified bone and shell. There are two ways to look at the urban artifact assemblage. One possibility is that it was geared toward provisioning the resident elites, with urbanites maintaining larger proportions of serving vessels and fine wares than their rural counterparts. The other possibility is that urban residents from both small and large sites had greater access to these fine wares and ornamental items through their proximal associations. Urban sites undeniably had longer occupation histories on average which accounts for the larger proportions of pre-Coner phase ceramics. They also may have been centers of extra domestic ritual as is evidenced by the larger than average proportions of ritual ceramic forms. I also [suggest] that urban residents may have had closer ties to the Central Maya Lowlands than the rest of the population as is evidenced by the Petén ceramic types.

Rural sites had greater proportions of tecomates, Casaca utilitarian wares, locally produced ceramics, chert debitage, pigment, and ceramic ornaments, adornos, discs, and worked sherds. One possible explanation for this pattern is that rural households were not as well tied into the foreign exchange network as urban households. More obsidian, ground stone, and imported ceramics were moving into the urban core. The rural inhabitants relied more heavily on locally produced ceramics, chert, and ceramic ornamental items to meet the same everyday needs. The distribution of Casaca (primarily large jars) and tecomates shows that food storage and water transport were important in the rural economy."

In identifying this dichotomy Zeleznik was careful to point out the much larger artifact samples from the more numerous urban core sites, and that they probably had longer occupation spans and hence greater numbers of early sherds, both of which contribute to the comparative richness of their inventories.

Comparisons with Group 10L-2

Zeleznik omitted the royal residence 10L-2 from his calculations because his research focused on sub-royal elites (Cassandra Bill's analyses of ceramic vessels and their implications are briefly discussed above and in Chapter 10). William Doonan (2010) published descriptions of various finds from 10L-2. He restricted his analysis to lithic and miscellaneous artifacts selected from a subset of 93 middens of various contexts and periods. The middens he describes (Doonan 2010: 6-7) are much more numerous and voluminous than those we found at 8N-11. Here are some quick comparisons that, however superficially, illustrate the distinctive character of the site:

Obsidian artifacts: Doonan (2010: 57) lists some 24,000 obsidian artifacts from the Tulane excavations, although they were not part of his study. Obsidian is much more abundant than at 8N-11, even allowing for the greater areal extent of the 10L-2 operations.

Chert artifacts: Chert is also more abundant, but as at 8N-II it is only a minor component in the chipped stone inventory. Doonan examined some 6472 pieces of debitage, and as at 8N-11 only a very small proportion (n=160) were retouched/formal tools.

Grinding stones: Whole or fragmentary manos (n=459) and metates (651) occurred much more frequently than at Group 8N-11 (total of both =132) and there are many more footed metates.

Miscellaneous objects: Miscellaneous objects (stone, bone, polished stone, etc.) from 10L-2 are more abundant and varied than at 8N-11. Special objects include a complete stone yoke and several yoke fragments, a small two-headed jaguar throne, bark beaters, ear flares, celts, plaques, pendants, beads, and a varied selection of ceramic figurines, adornos, and small ceramic vessels.

My impression is that the 10L-2 material is just what we would expect from a royal household context – much richer, more abundant, and more impressive than anything we found at 8N-11. Had Zeleznik included it in his comparative analysis it would have stood out emphatically as a residence, but an exceptional one of very high rank. On the other hand, we shall see in Chapter 12 that we might be comparing apples and oranges here in terms of respective site functions.

Summary

Basic artifact inventories from the Skyband Group, judged on their own and disregarding temporal displacement, conform to our expectations of what we should find at sub-royal elite residences dating to the late 8th century. Throwing in all the special artifacts such as those found in features and burials, and the few good contexts indicating specialized production, helps little to make firm comparative distinctions among residences except when coupled with site size, location, and character.

The 8N-11 locale was first occupied on an appreciable scale around AD 600-650. If the Coner phase ended around AD 900-950, 8N-11 was short-lived compared to Group 9N-8. Despite its impressive size it was marginal to larger currents of elite exchange in the southern Lowlands. Long ago I noted the small proportion of imported elite objects or materials found during our general PAC II excavations (Webster 1992: 151). Collections from all our Skyband operations abundantly reinforce this view. Obsidian was an import but scarcely an elite one and was not subject to obvious sumptuary limitations, despite Aoyama's (1999) claim that its distribution was a royal prerogative. Imported ceramics are also surprisingly rare unless we count Copador Polychrome as an import, but once again there seem to be few constraints on distribution and use. Zeleznik's artifact analyses place Group 8N-11 and the Ostuman sites in a socio/economic "second tier" of sub-royal elites in the Copán valley – second, that is, to Group 9N-8. All these elites were contemporaries of the 16th king for several decades, whose residence was much richer in material culture. When dynastic rule failed, either the Skyband lords collapsed as well or feebly persisted for a century or more, still using some late variant of the Coner complex. All this assumes the group was a residence like 9N-8 as opposed to something else (see Chapter 12).

The scale or quality of architecture and sculpture at the Skyband Group make this standard residential interpretation both surprising and problematical, as discussed later. Imagine that we had all the ceramic and lithic assemblages from the database sites but knew nothing about architectural scale, construction details, or sculpture at their contexts. We could probably conclude little about status and political differences apart from vague hints, such as the proportionate ratios of ritual and fine wares, and of Petén imports.

Abrams (1994) found a reasonably continuous distribution of labor investment in Copán architecture, and similar continuity shows up in Copán database burials (see Chapter 8). The most obvious clues about social, political, and economic differentiation come not from sharp breaks in such distributions, but rather from comparisons of their extremes. A few special artifacts and contexts aside, this is also true of the artifact continuum reviewed here. Zeleznik (2002) concluded that

"While there were many markers of distinction in Copán society, I find that very few of these items seem to have been exclusively limited to a particular group. Exclusive items are very rare items dealing with cultural and ritual knowledge such as ball game paraphernalia, scribal references, written texts, and ornamental façade sculpture. Artifacts dealing with food and personal ornamentation such as fine ware serving Vessels and jade and shell jewelry were widely distributed, although certainly not in comparable quantities. Among other things, I demonstrate that spatial location and context were important elements in social distinction, not merely material objects."

This is a sobering and disquieting conclusion about how we reconstruct Copan's basic institutions. Imagine that artifact assemblages from *all* the residences we dug during PAC II had to be examined without reference to their contexts. Scale of the collections aside, it would be very difficult to discern the impressive socio-political differentiation otherwise evident in architectural and sculptural data.

To end up we must return briefly to the subject of biases. Zeleznik's core intra-site comparisons emphasize artifacts associated with Op. 50. Inclusion of the Op. 63 assemblage, which strongly resembles that of the 50-51 complex, does not much change his conclusions. Much of 8N-11 remained unexcavated when we finished our work in 1997, so the patterns reported here might not be representative of the whole group. The Chinese data will doubtless help resolve this issue. Spatial associations of artifacts with buildings are always a bit sloppy, as we saw in the case of Feature 9, which could be assigned to either the main or ancillary structures, or both. And lumping

ARTIFACTS

artifacts from all contexts for comparative purposes obviously raises the problems discussed at the beginning of this chapter – did they all originate at the site or were many of them introduced as fill from outside? Even though 8N-11 has a fairly short history, our insights into its mature 8th century character might be confused by inclusion of so many artifacts from fill and collapse or from late contexts that might post-date the 8th century, as Features 9 and 12 clearly did. These same problems of context and chronology also characterize assemblages from most of the other operations with which Group 8N-11 is compared. The exception is our set of eight little rural sites, whose assemblages are highly coherent.

Table 9-28. Database sites or operations used in this chapter and associated hydration dates.

Op.	Site	Type	Location	Range of Hydration Dates	Number of dates
08, 20	9N-8 Plaza A	4	Urban, Sepulturas	890 BC.– AD 1126	99
09	9M-22B	2	Urban, Sepulturas	AD 464 – 1050	67
10	9M-22A	3	Urban, Sepulturas	AD 614 – 1120	68
12	5M-1 (El Duende)	1	Rural, Copán Pocket	AD 684 – 938	56
13	9N-8 Plaza C	4	Urban, Sepulturas	AD 612 – 953	26
15	9N-8 Plazas E&F	4	Urban, Sepulturas	AD 564 – 1050	106
16	9N-8 Plaza B	4	Urban, Sepulturas	AD 669 – 1074	55
17	9N-8 Plazas D&K	4	Urban, Sepulturas	AD 573 – 1165	95
18	9M-24	1	Urban, Sepulturas	AD 695 – 1037	16
19	Burial Trenching	N.A.	Various	N.A.	
21	9N-8 Plaza J	4	Urban, Sepulturas	AD 631 – 824	23
22	9N-8 Plaza H	4	Urban, Sepulturas	AD 669 – 1172	70
26	9M-203	Single mound	Urban, Sepulturas	none	
27	30-8	2	Rural, Copán pocket	AD 644 – 859	20
	30-7	1	Rural, Copán pocket	A. 574 – 1125	25
30	11D-11-2	1	Rural, Upper Río Amarillo	AD 686 – 1020	44
31	7D-6-2	1	Rural, Lower Río Amarillo	AD 845 – 1058	33
32	7D-3-1	1	Rural, Lower Río Amarillo	AD 687 – 889	36
33	34A-12-1	Single mound	Rural, Lower \Sesesmil	AD 624 – 694	5
34	34A-12-2	1	Rural, \Lower Sesesmil	AD 614 – 723	19
35	32B-16-1	1	Rural, Upper Sesesmil	AD 535 – 791	27
36	34C-4-2	1	Rural, Lower Sesesmil	AD 582 – 1013	47
38	99A-18-2	1	Rural, Río Gila	AD 861– 1025	27
45	10E-6	4	Rural, Copán pocket	AD 759 – 901	18

Chapter Ten

Group 8N-11: The Short Chronology

David Webster

For over 30 years two chronological scenarios have dominated the Copán literature, with divergent implications for elite-rank sites such as the Skyband Group, the collapse of the kingdom, and the disappearance of its population. Most widely accepted is what I call the *short chronology*, which has evolved over time and in one form or another is favored by most archaeologists. Variants of it are the oldest traditional perspectives for the southern Maya generally, and it is firmly established in the literature. At Copán the corollary conception of an emic settlement system “frozen in time” vastly facilitates analysis of the relationship between architecture and artifacts, the reconstruction of the mature polity, and its demise (W. Fash 1983b, c; Freter 2004; see also Chapter 9). Another attraction of the short chronology is that sudden political, societal, and demographic collapse makes a dramatic and compelling story.

Five questions are central to debates about Copan’s chronology:

1. How did Copán’s elites engage with the last ruler?
2. How were they affected by the dynastic collapse?
3. How rapidly did population decline after the collapse?
4. How long were Coner or Coner-like ceramic assemblages used in the valley?
5. How do we understand the temporal displacement inherent in the alternative *long chronology*, which complicates analysis of settlement remains and associated behaviors?

We will return to these questions in Chapters 11 and 12 after discussing the Skyband Group from the perspective of the short chronology.

Some archaeologists once believed that Copán’s decline began after the demise of the 13th ruler, but based on his PAC I findings William Fash properly rejected this perspective. Although he was uncertain how much time intervened between the last (16th) ruler and the abandonment of the valley, he concluded that “What is clear is that when the collapse came it was complete and devastating....” (Fash 1986: 84). By the end of PAC I the consensus was that a sudden dynastic collapse occurred sometime between AD 800 and 822, followed shortly by the disappearance of Copán’s nobles and commoners.¹ Gordon Willey (1986: 25) thought that “....it is likely that there was some scattered occupation or use of the main site; nevertheless, it is fair to say that the Old Maya Classic culture, and most of the population that went with it, had been dissipated by the beginning of the Terminal Classic Period.”² Thus by AD 800 or 850 the Copán valley was largely or wholly depopulated and Coner complex ceramics were no longer made. Thomas Manahan’s later discovery of a small community using neo-Ejar ceramics near the old abandoned Main Group slightly altered this view, but even these people disappeared by about AD 1000 or shortly thereafter (see Manahan 2003); Fash *et al.* 2000; Manahan and Canuto 2009 for overviews and interpretations of these finds).

The long chronology retains the timing of the dynastic collapse but extends activity, elite or not, at some sub-royal elite precincts, to about AD 1000. Some commoner residential/neighborhood occupation persists for one or two centuries longer. The overall population peaks at roughly AD 900, followed by a slow but episodic wind-down until

¹ Engaging in wrangles about the political correctness of the collapse label, or other related terms such as decline, degeneration, or transition, seems fruitless to me. These discussions are often self-righteous, self-referential, boring, and intent on making a moral issue where there is none. Nor are our accounts of the collapse demeaning to the living Maya; see Chapter 1 in Storey and Storey (2017) for a good summary and discussion.

² Willey began the Terminal Classic for the southern Maya generally at AD 800. He envisioned some continuity of population for the Maya Central Zone following the collapse, although he observed that the scale of Terminal Classic population was unknown (Willey 1986: 22).

about AD 1200-1250 at which point the valley seems almost, but not quite, deserted (see Freter 2004 for settlement maps of the post-AD 700 intervals). According to the long chronology some semblance of the Late Classic Coner ceramic tradition (remember that Coner is both a ceramic complex and a chronological phase) survived until very late (see Freter 1988; Webster and Freter 1990a,b; Webster *et al.* 2004; Webster 2005; Freter and Abrams 2016). Dispute over these two perspectives has been sharp, particularly because much of the evidence supporting the long chronology derives from obsidian hydration dating, a method that many archaeologists find suspect.³

Because of this disagreement I break the chronological presentation into two chapters. Here I review the data and issues central to the short chronology, especially the Copán ceramic sequence and its implications. Then I reconstruct the relative sequence of events that we detected at Group 8N-11 and discuss how it fits (or not) the short chronology. Chapter 11 presents data supporting the long chronology and its implications for both Group 8N-11 and the polity as a whole. Conclusions assume that data collected by Rattray in 1982 and by us in 1990 and 1997 are representative of the history of the group. Both the chronology chapters were written before the Chinese project got underway, so their new insights might require changes to our chronological perspectives.

Chronology of the Copán Collapse

Before turning to the details of the short chronology, it is worth remembering what earlier scholars had to say about the persistence of Maya regional populations into the Postclassic at Copán and elsewhere. Sylvanus Morley (1920: 442), famously influenced by calendrical dates, envisioned “...a sudden cessation of the monuments in the individual cities when each was at its cultural and aesthetic apogee, but a *gradual* abandonment of the regions as a whole, covering a period of about a century” (emphasis in the original). His perspective was echoed almost two decades later by Linton Satterthwaite who also left open the pace of depopulation, saying that “...abandonment of the religious centers does not imply that the people left their country immediately”.⁴ Whatever the pace of events, both these archaeologists decoupled political collapse from population collapse and landscape abandonment.⁵

John Longyear (1952: 68-73) was clearly influenced by his distinguished predecessors, but he developed a more refined and flexible set of conclusions concerning the collapse at Copán based on his ceramic analyses there. He agreed with Morley and Satterthwaite that there was a sudden abandonment of the Main Group (the “Acropolis”) at the end of the “Full Classic” around 9.19.0.0.0 (AD 810), at that time the latest inscribed date at the site. He thought that ordinary people abandoned the valley floor and moved to existing residential sites throughout the uplands. Such folk, he imagined, had since Early Classic times been only loosely integrated into what he called the “Classic Maya cult”, so they easily reverted to an Archaic (what we would today call “Preclassic”) way of life. Whether such lack of integration is plausible is less important than Longyear’s recognition of continuing Postclassic activity. He recognized Tohil Plumbate and other late imports in his artifact collections and listed six certain or probable Postclassic burials.⁶ He allowed considerable time for late occupation: “How long the post-Classic period lasted cannot be determined. It may, indeed, have dragged on right up until conquest times” (Longyear 1952: 34). Curiously, he did not speculate about what kinds of residential ceramic assemblages the valley’s post-dynastic inhabitants used, nor did he seem to entertain the idea that some kinds of “Full Classic” quotidian pottery might simply have persisted.⁷

Decoupling the political and population declines is clearly an old idea, and Morley’s and Satterthwaite’s conceptions of the process are vague enough to be congruent with either of the chronologies reviewed here. Longyear’s

³ By the late 1970s the growing corpus of radiocarbon dates from many Maya sites hinted at protracted collapse. Raymond Sidrys and Rainer Berger (1979) thought that available dates showed that while kings and dynasties disappeared quickly, some nobles seemed to hang on a bit longer. They also lamented the paucity of good radiocarbon dates from commoner sites, and our consequent ignorance of their histories. Our PAC II hydration research, reviewed in Chapter 11, was partly designed to remedy such deficiencies.

⁴ Quoted from “Maya’s Fall Now is Laid to Revolt”, *New York Times*, Nov. 14, 1937.

⁵ Because most scholars during these times did not yet think of Maya in terms of kings and royal dynasties, I perhaps unfairly put the word “political” into their mouths. The cessation of monuments to which Morley refers implied to him, and to most others of the time, the disappearance of some sort of dominant guiding apparatus of Maya society – call them priests, theocrats, whatever – who suddenly were unable to carry on in the old ritual manner. Whatever they were, they were seldom thought to be dynastic rulers as found elsewhere in the world.

⁶ This is a sizable proportion of his total sample of 26 burials (Longyear 1952: 41); interestingly, Longyear lists no Preclassic burials at all.

⁷ For example, what domestic ceramics were used by the people who placed a child in Tomb 10, which also included late exotic imports? Longyear identified no “rubbish dumps” (middens) in the Main Group post-dating the “Full Classic”, but then described a mysterious superficial ceramic deposit found on Temple 22 that he could not link to his typology. As Maca and Manahan discovered, the late ceramic situation at Copán is more complicated than we thought.

position, on the other hand, accommodates a very protracted population decline. All these archaeologists did agree that there were abrupt and pervasive political collapses at Copan and other major centers throughout the central and southern Maya Lowlands during the 8th and early 9th centuries. Only during PAC II did we begin to suspect that some elite (but not royal) residences at Copán were occupied for generations after the royal debacle by people carrying on in some attenuated “elite” fashion.⁸

Absolute chronological assessments of Copán’s culture history were originally derived from inscriptions (e.g., Morley 1920), a method with three inherent shortcomings:

1. Dated inscriptions are few and mainly found in Copán’s Main Group and a handful of other sites.
2. Non-retrospective dates are confined to an interval of roughly four centuries from the early 5th to the early 9th centuries, thus rendering the valley’s long developmental sequence (beginning at least around 1400 BC and probably long before) and Terminal/Postclassic periods (after about AD 810-820) effectively “non-historic”.⁹
3. Inscriptions directly inform us about vanishingly few individual sites, residential or otherwise, among the more than 1425 that have been recorded in the valley by various survey projects (Fash 1983a, b; Fash and Long 1983; Freter 1988; Webster, Freter, and Gonlin 2000).¹⁰ 8N-11 is a case in point; we expected dated monuments or artifacts but found none, nor apparently did the Chinese.

Group 8N-11 and the Short Chronology

Chronological assessment of Group 8N-11 involves two specific questions. First, what can we say about the overall duration of occupation and/or other kinds of activity there? Second, can we pinpoint specific events or sequences of events within that interval? Six major lines of evidence bear on these questions. One is our expectations derived from the general chronology of the Copán regional polity as assembled by many projects since the 1880s, most importantly based on its dated inscriptions. The others are stratigraphy, ceramics, architecture, sculpture, and chronometric dates from 8N-11 itself and from other elite-rank sites. We have already seen in Chapter 4 how several different lines of evidence home in on the timing of events such as the installation of the Skyband bench.

Specific issues in terms of either the short or long chronology are:

1. What was the time span of pre-Coner and Coner phase activity in or around 8N-11?
2. When were the early Str. 66 complex buildings erected?
3. When were the final phase Str. 66 complex buildings erected and how long did they continue in use?
4. When were the smaller ancillary structures built, and how long were they used?
5. How does the mature phase of 8N-11 relate chronologically to occupation of other palatial residences at Copán, especially those in the urban core?
6. When did elite (or other) activity cease at 8N-11?
7. Are there any signs of post-Coner (or non-Coner) ceramics at the site?
8. How do various lines of chronological evidence agree or disagree?

The Evolving Copán Ceramic Sequence

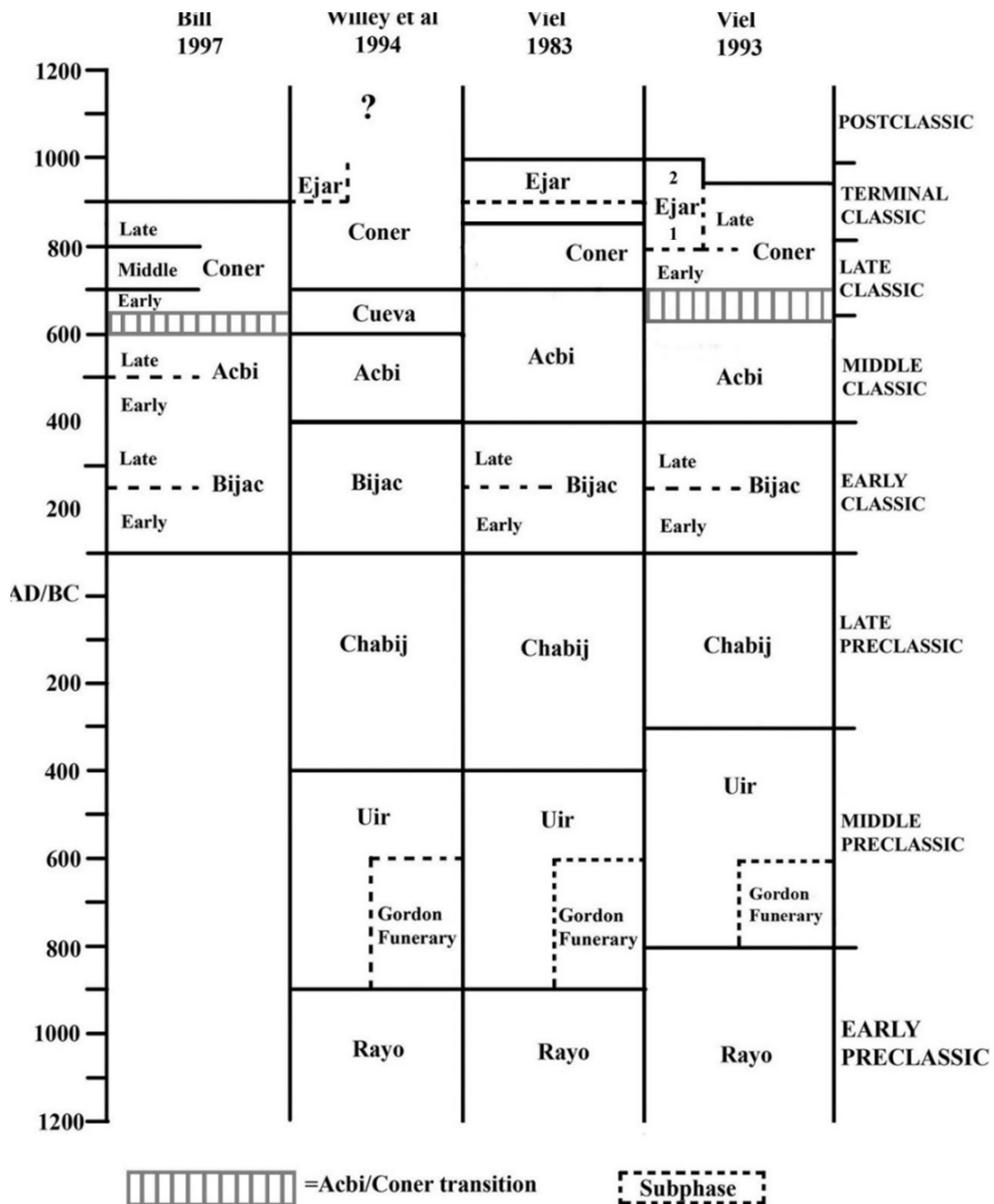
Supplementing Copán’s inscriptions is Longyear’s (1952) original ceramic sequence, which has been refined by several Mayanists as discussed in the previous chapter. Rene Viel (1983 and 1993a, b) devised two successive versions (Table 10-1) as new information became available from several Copán projects. He later made other adjustments,

⁸ None of these archaeologists imagined a well-established tier of non-royal nobles with their own palatial residences, titles, political constituents, and resources, so we can’t be too hard on them for thinking political collapse was abrupt.

⁹ Data from sediment cores suggest that farmers inhabited the valley long before the first direct evidence of human presence is found in the form of artifacts, structures, etc. (see Rue, Webster, and Traverse 2005). That these sediment proxies are plausible is supported by many recent radiocarbon dates from El Gigante Cave, in west-central Honduras, where maize macrofossils show up by about 2400 BC and cultivation of some plants is still earlier (Webster, Hirth, and Newsom 2013; Kennett *et al.* 2017). There is an error in Viel’s ceramic chart (1983: 541) – the important date of AD 800 is incorrectly shown as AD 300; I fixed this in Table 10-1.

¹⁰ At the end of our projects the number was 1425 sites. I have no idea how many have been added in the last 20 years or so, but surely the site total now must exceed 1500.

Table 10-1. Various versions of the Copán ceramic sequence (modified by Webster from an original chart by S. Zeleznik).



as we shall see.¹¹ His early conception of the ceramic sequence necessarily derived from Longyear, who of course had no radiocarbon dates, but it was augmented by the results of the Harvard project. No radiocarbon dates are listed in the long Harvard report (Willey *et al.* 1994), but it is still one of the best presentations of Copán ceramics, especially for its illustrations. The chronological roots of Viel's sequences thus depended on the cross-dating, stratigraphy, and inscribed monuments used by Longyear.

¹¹ See Webster *et al.* (2004) for a review; some of what follows is a revised version of that publication. Remember also Viel's 2004 refinement of his original sequence that allowed for occupation until about AD 1400.

Viel's 1983 preliminary ceramic overview integrated information from the PAC I project and from the first part of PAC II, including a suite of non-AMS radiocarbon and archaeomagnetic dates.¹² This 1983 overview was generally accepted, although slightly altered, by subsequent analyses including his own in 1993, and others (see Henderson and Beaudry-Corbett 1993; Bill 1997; Maca 2002; but see Freter 1988 for important comments and alterations). We have already discussed some implications of ceramic distributions and samples in Chapter 9. The most critical issues here and in Chapter 11 are the timing of the Coner/Acbi transition and the character of post-dynastic ceramic complexes.¹³

According to the short chronology, Coner is roughly the temporal equivalent of the Late/Terminal Classic Tepeu 2-3 complexes of the northeastern Petén and is followed by Early Postclassic Ejar. Cassandra Bill (1997) studied ceramic production at Copán and created a detailed subdivision of the Coner complex, mainly using ceramics from the royal residential compound 10L-2 just south of the Acropolis. Later revisions resulted from the excavations of Alan Maca (2002) at Group 9J-5 and by Thomas Manahan's (2003) in El Bosque as discussed in Chapter 11. There have since been many other projects in the Copán Valley and adjacent zones and several associated minor revisions. An example is one by Katherine Miller (2014: Fig. 1) that pushes the Bijac phase back into the Preclassic and classifies all of Acbi proper as Early Classic.¹⁴ She begins the Late Classic with the Acbi/Coner transition (AD 600-650) and ends what she calls "Late Coner II" at some unspecified time after AD 820. She then inserts an undated Terminal Classic period called Coaj, presumably reflecting earlier finds by Alan Maca. Viel's old Ejar phase ends her sequence, but she assigns no dates to it. The logic behind such changes is unclear to me because I have not seen abundantly published descriptions of ceramic assemblages that have appeared since 2005, and in any case Miller leaves the late end of the sequence chronologically unspecified.

What little I do know about recent Copán projects suggests that there is more variety in the late parts of the ceramic sequence than Viel detected and more Terminal Classic and Postclassic activity than most archaeologists imagined before our PAC II and 8N-11 projects. Accordingly I stick closely to Viel's traditional ceramic formulations and some minor, later revisions such as Bill's. These, not the latest revisions, have been central to the chronological debates reviewed here. For now, three basic issues have major relevance for 8N-11: the date of the Acbi-Coner transition, the possibility that Coner or Coner-like ceramics continued to be used at 8N-11 and elsewhere long after AD 820-900, and how Coner relates to Viel's Postclassic Ejar complex.

Viel's two successive ceramic sequences shown in Table 10-1 were almost entirely based on data from the Copán Main Group and urban core sites and from wider testing-pitting during PAC I. Freter's (1988:131-132) more far-flung surveys during PAC II showed that ceramic materials retrieved from test-pitting in outlying parts of the valley differed somewhat from those described by Viel, and since the early 1990s other independent projects have also retrieved ceramic assemblages from a wider variety of contexts than Viel originally utilized.¹⁵ Recognizing that some synthesis of all this new material is needed, I begin with Viel's 1983 sequence and its major ceramic groups and associated types.

The 1983 Ceramic Sequence

Viel (1983: 541) placed the Acbi-Coner transition around AD 700 and we initially accepted this date when we began PAC II.¹⁶ The Late Classic Coner complex thereafter dominated valley assemblages until it disappeared. His conception of the end of Coner, like Longyear's, was heavily based on the last monument date then known, which he put at AD 800.¹⁷ He says, "If we admit that human activity might have continued for a half-century after

¹² Radiocarbon determinations made following the Harvard project were initially not calibrated. Examples are the dates reported by David Rue (1987) for his first Petapilla sediment core, which calibration showed to be much later.

¹³ Much of the following discussion is an update of ones presented earlier (Freter 1988; Webster, Freter, and Storey 2004).

¹⁴ Here she seems to be following the Protoclassic designation of the period AD 100-400 used by some researchers as discussed in Chapter 9.

¹⁵ For example, Freter's test-pitting showed that the ubiquitous utilitarian Zico and Sepultura wares had different pastes in the Sesesmil and upper main valley than those described by Viel for the Copán pocket.

¹⁶ Willey's project (following Henderson and Beaudry-Corbett 1993: 16) inserted a late Acbi/Coner funerary sub-phase called Cueva and begin Coner proper at AD 700. Richard Leventhal (1986) suggested that Copador Polychrome pottery, the most obtrusive marker of the Coner phase, was not introduced into the Copán Valley until about AD 730 around the time of the 13th ruler. No one now accepts such a late date for Coner/Copador.

¹⁷ No one of course believes that ceramic transitions usually represent events. Although Viel's 1983 chart shows Coner beginning at AD 700, there was always the possibility that it began sometime in the mid-7th century and that the transition was completed by AD 700 (see also Beaudry 1984).

this inscription, then the end of Coner can be placed at about AD 850” (Viel 1983: 538; my translation). Here he leaves even less time for population decline than Morley did. Coner was succeeded by a Postclassic Ejar complex that began around AD 900, characterized by a fugitive set of offerings, especially of Tohil Plumbate vessels that were deposited in and around the Main Group (Viel 1983: 538-539). Viel regarded Ejar largely as a funerary sub-assembly with Tohil Plumbate as a distinctive diagnostic (Longyear had earlier noted such material in Tomb 10 and elsewhere). He thought that Ejar ceramics post-dated his Coner phase, or at most overlapped briefly with its final years. As such, Ejar represented neither an abundant and widely distributed ceramic entity nor a coherent residential ceramic inventory. It was certainly not a sub-complex of Coner, although Ejar materials were often mixed with Coner assemblages.

Viel’s justifiable conclusion, following the arguments of earlier scholars, was that the Copán political system collapsed very early in the 9th century and that the population, estimated by PAC I archaeologists at about 15,000-20,000 people, disappeared soon thereafter.¹⁸ Coner complex ceramics were no longer used by AD 850-900, and the valley was abandoned after that time except for occasional visitors who brought in the Ejar vessels found in tombs and in superficial deposits in Ball Court B. Neither this abandonment nor the deposition of Ejar vessels could be precisely dated in 1983, although Tohil Plumbate was transported from the Pacific coasts of Guatemala and Mexico and widely used in the Maya lowlands between AD 900 and 1200. Viel did not address what kinds of ceramic assemblages might have been used in post-Coner (i.e., post-AD 850/900) residences in the Copán valley because he believed there were no such surviving habitations, much less palaces like 9N-8 or 8N-11. Coner and Ejar were thus envisioned as complexes of very different character with little chronological overlap. The protracted population collapse envisioned by Longyear and others was downplayed or disregarded.

The inception of the Coner complex appears to be closely associated with major architectural activity at 8N-11 and elsewhere in Las Sepulturas, and Coner material is dominant there until the final abandonment. Its presence is most conspicuously signaled by Copador Polychrome and various Surlo group types, along with Cruz Incised, Casaca Striated, and some minor diagnostic forms, although some of these also occur as minor components in Acbi assemblages (Bill 1997 gives the best overview). Population peaked during Coner times and most sites, including 8N-11, were occupied during this mature phase of the kingdom’s history. According to the short chronology some late variant of the Coner ceramic complex probably accompanied the dissolution of the polity and the disappearance of the population over one or two generations during the mid-to late 9th century. When the idea of an abrupt Maya collapse was current during the late 1970s and early 1980s, few archaeologists were much interested in what might have happened in the 50 years or so between the demise of the dynasty and the complete abandonment of the valley, or the actual processes by which the kingdom unraveled. Little was then known about sub-royal elites at Copán or anywhere else, so how the great nobles of the kingdom fared at groups such as 9N-8 or 8N-11 was scarcely an issue.

The 1993 Ceramic Sequence

A decade after his preliminary formulation Viel (1993a, b) refined his ceramic sequence based on information from the PAC II project and others, and a much larger sample of almost a half-million sherds.¹⁹ He began Coner earlier, at AD 625-650, an adjustment that Webster and Freter (1990:79) had previously suggested was more in line with our hydration dates.²⁰ This transition date was subsequently used by the Tulane project (Andrews V

¹⁸ My current estimate is 18,000-20,000 for the valley as a whole, a range strikingly similar to the earlier estimates given by William Fash (1983; 1986). Freter’s (1988: 159) somewhat later simulation gave a range of 21,032 to 26,290 for AD 700-850. Several independently generated reconstructions converge on a Late Classic population of 20,000 people give or take a few (Webster, Sanders, and Van Rossum 1993; Wingard 1992; 1996; Webster 2005). Whatever else Copán archaeologists argue about, there seems to be agreement concerning order-of-magnitude population scale.

¹⁹ Viel (personal communication 1997) informed me that he revised the chronology in 1984 but did not publish it until 1993, so it might not include data from post-1984 projects.

²⁰ Viel’s chronological chart (1993: Fig. 4) shows the Acbi-Coner transition at AD 625. His discussion (p. 139-140) places it between AD 600 and 700. In a 1997 personal communication to Sanders and me he suggested that a convenient start date was AD 630, with the accession of the 12th ruler. I have shown it at AD 650, but in essence the first half of the 7th century constitutes the Acbi/Coner transition. There has been much discussion in the literature about the source and the antiquity of Copador Polychrome. Discovery of Copador pottery at Cerén in excellent contexts dating to about AD 630 is consistent with its appearance at Copán (Sheets 2006: 45). Sheets believes that Copador in his little structures was imported from elsewhere – probably Copán. If this is true, the Copador tradition must have been established there at least as early as AD 550-600. I know of no good evidence for such an early, obtrusive Copador presence in the valley, and we saw in the previous chapter Ronald Bishop thinks all the Copán Copador he has examined is imported.

and Bill: 2005: 245) and now seems standard.²¹ The most striking thing about the refined 1993 sequence is the extraordinary dominance of the Coner sherd sample compared to those of all earlier periods (see Chapter 9 and Viel 1993b: 157-161). Such dominance is partly, but only partly, a product of the samples Viel used to assemble the sequence. Any Copán archaeologist knows that finding pre-Coner materials poses a real challenge because the whole valley is blanketed with Coner-period sites. Some ceramic groups or types, such as Copador Polychrome and various Reina ceramics, occur only in Coner. Others have their roots in Bijac or Acbi times, but even these usually enormously increased in abundance during Coner. A good example is Zico group vessels (especially the ubiquitous Casaca Striated jars) that constitute 35% of Viel's entire sample. Only 148 of the 160,833 Zico sherds he lists come from pre-Coner (specifically Acbi) contexts. The larger chronological point is that even most of the groups/types that span the Acbi/Coner transition have overwhelmingly Coner ceramic signatures both in their abundance and chronological implication (see Chapter 9 for some actual counts). Exactly what demographic or social processes caused this immense numerical preponderance and distribution is unknown; this is perhaps the most interesting and significant culture-historical issue we face at Copán. In Chapter 11 we will examine the connection between Coner dominance and population growth.²²

With respect to the end of his 1993 sequence, Viel adopted Longyear's old surmise of extended post-dynastic occupation by declaring that "The fall of the centralized order does not necessarily mean the end of life at Copán. A progressive decline is a more likely model than a sudden death" (Viel 1993a:17).²³ He accordingly identified an epi-Classic sub-complex called Ejar 1 in which Coner types were mixed with Tohil Plumbate and associated fine ware ceramics. Ejar 1 is roughly equivalent to what is elsewhere called the Terminal Classic. It lasted from AD 800 to about AD 950 and overlapped a bit with Coner. Ejar in general remained an intrusive complex and Viel divided it into "Pre-Tohil" and "Tohil" intervals. Coner ceramics disappeared by AD 950 and only Ejar 2 complex pottery remained. Viel emphasized again that Ejar is primarily a funerary complex and "...a heterogeneous assemblage including *anything obviously post-AD 800 and non-Coner*" (Viel 1993a: 17, emphasis mine). Viel agreed with Sanders and me that Ejar I types were contemporary with the latest Coner assemblages (personal communication 1997).

Viel (1993b: 121) defined Ejar based on an extremely small collection (441 sherds) of imported or rare types that were not part of any larger Coner or Coner-like complex, although some might co-occur with Coner types before AD 950. In his refined sequence there are no Coner ceramics after AD 950 and the Plumbate (or "Tohil" Ejar 2) facet of Ejar extends as late as AD 1000 (or possibly as late as AD 1100).²⁴ Postclassic Ejar 2 is thus a kind of grab-bag association of chronologically late types that had no implications for whatever kind of late residential assemblages might have been used in the valley. If such assemblages existed they had no ceramic visibility in the 1993 scheme and by definition did not include Coner types after AD 950.²⁵ The implication of Viel's revised 1993 sequence is that the valley was essentially depopulated by that time. It lengthens the duration of Coner by a century beyond his 1983 end-date of AD 850, better accommodating his idea of a "progressive decline" rather than an abrupt collapse. His extension of Coner leaves open the possibility of continued post-dynastic activity at elite-rank sites, and perhaps the survival of some noble residences for 100 years or so after the dynastic collapse.²⁶ It also provides more time for Coner sites and materials to accumulate, which William Fash had previously identified as a problem (see Chapter 9). Maca later dated terminal middens he unearthed at the Type 4 site 9J-5 to about AD 925, noting that at this time the utilitarian ceramics recovered remained overwhelmingly Coner in character (Maca 2002: 270).²⁷

²¹ In her dissertation Bill (1997: 13-14) considered AD 600 a possibility for the inception of Coner because of newly-determined early dates for Copador Polychrome in El Salvador. The interval of transition would then be AD 600-650.

²² At Piedras Negras, where I and my students also did rural residential archaeology between 1997 and 2000, there is a similar late burst of population after about AD 625 (see Nelson 2005 for a review of the sequence).

²³ By 1993 he knew that there was at least one inscribed date in the mid-9th century – in AD 842 (see Ashmore 1991 and Chapter 12) – so elite activity apparently extended much later than previously thought.

²⁴ Tohil Plumbate persisted in some parts of Mesoamerica until AD 1200 but Viel (1993: 143; 1997) nevertheless he thought that AD 1000 or maybe AD 1100 marked its disappearance at Copán.

²⁵ Viel (1997) also wrote a version that to my knowledge has never been published.

²⁶ He said (1997: 4) that "The presence of an Ejar 2 in the Valley is not an argument against the continuation of a Coner 2 in the mountains, provided there were very few people left in the mountains" (Viel 1997: 4). According to this comment, the issue is not the duration of Coner, which could continue as late as AD 1100, but rather the number of rural people using it. Here Viel appears to echo Longyear's old idea that rural parts of the valley were occupied long after the main population on the valley floor disappeared. Why they should retreat to "the mountains" is unexplained.

²⁷ It is not clear to me whether Maca's estimate reflects Viel's concept of the end of Coner, the lack of Ejar sherds, or radiocarbon dates from these middens. If the latter, then it is important to remember that terminal middens and other superficial deposits at Copán frequently produce radiocarbon determinations that are much earlier than their contexts suggest; (see Fash *et al.* 2004: 273). Maca's concept of the end of

Implications of diagnostics: The peril of making chronological assessments based on distinctive but rare ceramic types is obvious.²⁸ Viel could be sure, through cross-dating, of the temporal implications of the exotic wares he used to define the Ejar complex. Wherever a few of these wares were mixed with Coner types he could also reasonably assign a late date to the whole context. The problems are the restricted spatial concentrations (tombs, caches, Ball Court B, etc.) and the numbers of these diagnostics. While the *presence* of Viel's Epi-classic and Postclassic markers is revealing, their *absence* at a particular site or in a particular Coner assemblage tells us precisely nothing. Scarce diagnostics might have been used or discarded at some contemporary sites but not others. Alternatively, such sites might be so poorly sampled that diagnostics present in very small numbers are not recovered. The faulty reasoning that if a ceramic assemblage lacks an Ejar marker it must be pre-AD 900 or 950 is surprisingly common among Copán archaeologists (see for example Canuto 2004: 37 and Braswell 1996: 537). Many contemporary, localized assemblages might obviously lack ceramic markers that entered the valley in small amounts, especially if they were deposited in ritual or funerary caches, a point that will become significant later. Suffice it to say for now that no Plumbate or other Ejar diagnostics as described by Viel were recovered by our excavations at 8N-11 (unless Rattray's spiked censers are lumped into this category), but that their absence has no necessary chronological significance.²⁹ Viel himself recognized that such absence is not conclusive, and he voiced no objection to the idea that Coner or Coner-like ceramic assemblages might persist until AD 1200-1250.³⁰ In a refinement of his ceramic chart Viel extended Ejar (however constituted) up through AD 1400 and even later (see Bell, Canuto, and Sharer 2004: Preface).

Harvard revisions: Shortly after Viel's 1993 reformulation Willey *et al.* (1994: 12) published a slightly altered sequence based on the Harvard University excavations in the "Copán residential zone", basically the Main Group and the surrounding urban core. They placed the Acbi phase at AD 400-600 and interpolated an early Late Classic Cueva burial sub-phase at AD 600-700 (one could also interpret Cueva as signaling the Acbi-Coner transition). They basically retained Viel's original (1983) date for the inception of Coner – AD 700 -- but remained open-minded about the end of the Copán ceramic sequence given the PAC II obsidian hydration dates that we were beginning to publish. In their view the Postclassic Ejar phase, whether defined on the basis of new diagnostic types and/or on the retention of many Coner forms, might have lasted from AD 900 to as late as AD 1000-1200 (Willey *et al.* 1994: 52). It will become clear in Chapter 11 that Willey saw no problem in extending the Coner phase until AD 1200 – one possible reason for the longer chronology in Viel's 1993 scheme.

Neo-Ejar revisions: After Viel published his 1993 sequence Thomas Manahan (2003; Fash, Andrews V, and Manahan 2004) excavated nine little Early Postclassic platforms near the El Bosque ball court, including Str. 11L-77. Their Postclassic inhabitants robbed fill (and sometimes sculpture) for the substructures of their mainly bajareque houses. Manahan found some of the fine Ejar wares previously identified by Viel, including Tohil Plumbate, Fine Orange, and Las Vegas Polychrome, along with some new plain wares and the largest (percentage-wise) deposit of imported Pachuca obsidian known from any site in the Copán valley (Aoyama 199:187).³¹ All this material, what I call the "neo-Ejar complex", was associated with a general domestic assemblage that is distinctly non-Coner, although Manahan thought the population was local, not foreign.

Exact dating of Manahan's occupation is variably given; Andrews V and Bill (2005: 306) put it between AD 950/975 and 1050/1075.³² Manahan's version of Ejar is thus an entirely post- Coner and non-Coner phenomenon. For the

Coner apparently derives from Bill, who thinks Group 10L-2 was abandoned at about AD 900; she puts the end of Coner around AD 850 -900, but some Tulane researchers such as Doonan (2010: 70) leave it open-ended.

²⁸ The logic of diagnostic chronological markers is that they should appear suddenly, be widespread, and ideally abundant. Freter and I noted extremely rare traces of Ulua Polychromes in some of our apparently late Coner-like assemblages. Viel, in his communication to Sanders and me in 1997, objected that such polychromes were not used after AD 950, and so their presence was incompatible with later dates. But of course we did not claim that these imports were actually still used, only that sherds turned up in late contexts, just as a Preclassic sherd might find its way into a much later Classic deposit.

²⁹ Our excellent ceramic sample from eight small rural Copán sites (Gonlin 1993) consists almost entirely of Coner material, but these collections have some associated late chronometric dates. One archaeologist insisted to Gonlin that these late dates had to be wrong because we identified no Plumbate sherds, and that her assemblages accordingly would have to be restudied. This kind of erroneous thinking about the significance of absence is commonplace.

³⁰ Conversation with Webster at Copán on July 30, 1997.

³¹ The 20 green-gold (probably Pachuca) blades we found at the little rural site 7D-6-2, along with entirely Coner ceramics, show they don't constitute a good chronological marker.

³² And if it did not survive later than AD 1075, why is Ejar shown extending much later in the sequence published by Bell, Canuto, and Sharer (2004)?

first time some of Viel's diagnostic Ejar sherds had residential contexts, and Manahan thought his little Ejar group was the only one in the valley. Assuming that the middens found by Maca at Group 9J-5 are terminal ones and are properly dated, the Andrews/Bill inception of Ejar is late enough so that there might be no contemporary users of Ejar pottery elsewhere in the valley. Manahan's findings illustrate another peril of extrapolation: fine wares apart, it is tempting to conclude that any sites lacking his other neo-Ejar diagnostics must also predate AD 950-975. For example, Maca found none at 9J-5, so the site must have been abandoned by that time following this logic. It is unclear to me whether Viel's 2004 conception of very late Ejar is an extension of the complex defined by Manahan, a nod to the increasing evidence of late occupation in the valley, or both.

Fine-tuning Coner: Cassandra Bill (1997) used ceramics and stratified middens from the Tulane excavations at Group 10L-2 (along with comparative material from 16 nearby residential groups in the Copán pocket) to investigate patterns of ceramic production and to further partition Coner. Only her chronological reconstructions are pertinent here. Bill (1997: 15) put the Acbi/Coner transition at AD 600-650 and divided the Coner/Acbi ceramic tradition into several finer sub-phases or sub-traditions, ending with an impoverished Late Coner 2 complex at AD 950.³³ Her impressive analysis provides a model for intensive scrutiny of ceramic assemblages from other Copán sites, but as she herself points out it has few implications for how late Coner-type ceramics (or any others) were present elsewhere in the valley.³⁴ Not surprisingly Group 10L-2, the royal domestic compound, seems to have been abandoned within a century of the dynastic collapse, and certainly by AD 910, based on published radiocarbon dates from the Tulane excavations (Bill 1997:15; see also Andrews V and Fash 1992). Bill's extension of Late Coner to AD 950 points up the "frozen in time" problem reviewed in the previous chapter. If most of the big Las Sepulturas buildings assumed their basic forms late in the 8th century, later activity over the succeeding 150 years might leave superficial deposits that did not necessarily reflect behaviors characteristic of the immediate pre-collapse interval. The long chronology reviewed in the following chapter exacerbates this displacement problem.³⁵

A revised short chronology consensus: What emerges from all these various ceramic projects and revisions is reasonable consensus about the beginning of Acbi around AD 400, roughly coincident with the advent of dynastic rule at Copán, and about the Acbi/Coner transition, now placed in the interval from AD 600-650. Intense disagreement and some degree of confusion persist concerning the post-dynastic sequence, and especially the Early Postclassic (post-AD 900 or 950). Before turning specifically to the data from 8N-11, it is worth pointing out that the post-dynastic ceramic patterns detected by Viel support the idea that some elite-rank residences remained in use long after the royal collapse. Deposition of imported ceramics and other valuable exotic objects in burial or ritual contexts in the Copán Main Group and urban core strongly suggests the presence of highly ranked individuals or groups who maintained contacts with distant trading partners, and who retained ancestral associations with the great monuments and buildings of dynastic times. This scenario is much more convincing than one involving only "foreign" visitors bringing Tohil, Fine Orange, or other exotics to an otherwise empty valley, and it also accommodates the presence of Manahan's little settlement. We shall see just such evidence from the outlying Ostuman locale in Chapter 11.

Chronological Implications of Pre-1990 Operations at Group 8N-11

During PAC I William Fash excavated beneath the plaza of 8N-11 and recovered very early ceramics, though it is unclear to me whether this was a pure deposit. None of it, however, was more than about 1.25 m below the surface. Just southeast of the group, and closer to the river, Ricardo Agurcia encountered Preclassic materials at a depth of 65-70 cm, so sterile soil seems close to the surface in the general area, particularly below the eastern part of 8N-11. Fash also found Early and Middle Preclassic deposits at Plaza A in Group 9N-8 buried several meters beneath the final courtyard level and fine-grained sterile or largely sterile deposits. Just before we commenced Op. 50 René Viel unearthed a small, pure Late Preclassic deposit in a shallow test pit behind Str. 66C. Viel's find is unmixed

³³ Bill (1997: 13-14) says that some Coner diagnostics such as Copador Polychrome might have been present as early as AD 600 because they occur that about that time at Ceren, El Salvador. Most recently Sheets and his colleagues have pushed up the date of the eruption that buried Ceren to AD 630 (Sheets and Dixon 2011). But remember Bishop's opinion that Copador is an import at Copán.

³⁴ What Bill calls Late Coner 2 is also called Terminal Coner by some Tulane researchers. For example, Doonan (2010: 70) uses this term to refer to an interval beginning at AD 820 but "....extending for an unknown span of years afterward." I'm a bit confused about such an open-ended definition.

³⁵ Plank (2004: 152) emphasizes this problem in her discussion of Group 9M-22A and other Las Sepulturas elite residences. Bill was cautious about extending her concept of the end of Coner 2 to other sites in the valley that were not in her sample. Plank thinks that such extension is justified and that it supports her own model of centralized royal reconfiguration of Copan's "cityscape" by Yax Pasaj (see Chapter 12).

with later sherds, unlike early materials we later recovered. What seems clear is that if there are Middle Preclassic deposits at 8N-11 they are deeply buried like those Fash found at 9N-8. The finds of Fash and Viel and our own probes discussed in Chapter 7 imply much terraforming in later times as envisioned by Hall (2001) and Hall and Viel (2004). Maybe we would have detected early activity at 8N-11 had we dug more deeply there.

None of Evelyn Rattray's sounding trenches in the 8N-11 plaza went deeper than 1.5-2 m. She identified a series of superimposed layers including two plaster floors (nearest the surface) and two, or maybe three, earthen floors. Rattray believed that the earliest traces of occupation in her excavations probably dated to late Acbi times. One of her students analyzed a large ceramic sample from the plaza trenches and found not only a great preponderance of Coner material, but Coner sherds in every level (along with small admixtures of pre-Coner sherds, including Preclassic ones). All the occupational traces in Rattray's trenches thus apparently date back no further than the Acbi/Coner transition (ca. AD 600-650 according to Viel's 1993b sequence), with most being firmly Coner. Fash's earlier deep sounding in the middle of the 8N-11 plaza accords with Rattray's findings. He struck heavy sterile clay at about 1.25 m below the surface, above which were mixed pre-Coner and Coner deposits. There thus seems to be less pre-Coner activity at 8N-11 than at some other urban core groups such as 9N-8.

Except for Viel's (and possibly Fash's) Preclassic deposit, all known contexts (but not all known materials) at 8N-11 postdate the beginning of the Acbi-Coner transition at about AD 600-650.³⁶ About 90% of all identified sherds recovered during Op. 50 are Coner (including types that began in Acbi but that proliferated in Coner). Widmer and Storey, who generally probed the earliest contexts, recovered more than twice the proportions of Coner polychrome types as found in our more superficial deposits. If this is not sampling error it suggests that the proportion of polychrome vessels decreased through time, consistent with the cultural impoverishment of the whole Copán system and with extended occupation at 8N-11 after the dynastic collapse. Bill describes the late Coner assemblages at her sites as pauperized, with especially drastic declines in Cream Paste Fine Wares in general and Copador Polychrome in particular. She associates this decline with problems of production, but if Copador is an import (see Chapter 9) there were other causes.

Chronological Evidence from the House of the Bacabs and Operations 50 and 63

Preceding chapters included several asides concerning the relative and absolute chronology of 8N-11 and other structures in Las Sepulturas. To recapitulate briefly, prior to 1990 we entertained a rather wide range of options about the dating of the final phase architecture at 8N-11 and especially Str. 66C. Most generally, if 8N-11 were integrally related to the causeway, then major construction began during or after the reign of Waxaklajuun Ub'aah K'awiil (i.e., after AD 695) and possibly after AD 738. Widespread use of mosaic sculpture at Las Sepulturas appears to date no earlier than the beginning of his ascendancy. Based on the sculptural iconography of Str. 66C and the Skyband bench, Barbara Fash (1992, Appendix B: 37) speculated that it might have been the pre-inaugural residence of the 15th ruler, who prior to his short reign served as a war captain (her interpretation only applied to the late-phase architecture, not to any earlier buildings). Alternatively, the Skyband bench and Str. 66C were near contemporaries of the other dated Las Sepulturas benches (ca. AD 770-790) as discussed in Chapters 1, 4, and 5.

In a summary article (Webster *et al.* 1998) we raised possibility that the final large buildings of the Str. 66 complex were constructed at the very end of dynastic times or even sometime well into the 9th century, at or after the collapse of the royal dynasty when sub-royal elites briefly grew unusually powerful.³⁷ Hints at such late construction at Sepulturas came from the architectural phasing of Plaza A at Group 9N-8 and from the nearby Type 3 group 9M-22A (see discussion and Figs. 17-21 in Webster 1989b; Webster, Abrams, and Fash 1986; Sheehy: 1991).

The House of the Bacabs was built sometime during the interval AD 780-787 and was originally a free-standing building, visible from all sides. I have often wondered why there was no sculpture on its side walls because we found this pattern on both the heavily embellished buildings at 8N-11. For some reason the planners projected the symbolic presentations of the Bacab House only to the north and south. One reason might be that they anticipated soon adding the flanking buildings, which would have obscured sculpture on the end walls. In any case, there followed three stages of substantial renovations resulting in the final configuration of Plaza A (Webster 1989). If

³⁶ Except, perhaps, some trace of pure Acbi occupation as detected by Langley as described in Chapter 2.

³⁷ Wendy Ashmore (1991) earlier concluded there was post-dynastic major construction at Groups 8L-10 and 8L-12 – see Chapter 12).

all these additions occurred while Yax Pasaj Chan Yopaat was still on the throne (before ca. AD 800), they were squeezed into an interval of at most 20 or perhaps as little as 13 years, depending on which bench date is preferred. I know such rapid construction is possible because I have long championed Abram's demonstration of the inherent "cheapness" of Maya architecture and the speed with which large structures could be built. On the other hand, rapid renovation bespeaks a correspondingly rapid increase in the social or administrative units housed in Plaza A and rather poor and episodic planning to accommodate them. And of course the other 9N-8 courtyard groups changed and grew as well during this interval. All this suggested to me a more protracted occupation at 9N-8 that lasted well into the early 9th century. James Sheehey's (1991) insights about architectural phasing at the nearby elite Group 9M-22A support just such extended elite activity (see also Freter and Abrams 2016: 109).

Whatever the case elsewhere, the astronomical alignments detected by the Brickers revealed that Str. 66C and the bench were probably dedicated shortly before or during the interval of AD 784-785 in anticipation or commemoration of ideologically potent celestial events.³⁸ Our old post-collapse speculations can accordingly be eliminated for Str. 66C and probably for 66S, although the 66N superstructure might be quite late. Barbara Fash's suggestion that Str. 66C was built during the reign of the 15th ruler seems much less likely for the same reason (although the buildings buried beneath Str. 66C and 66N could conceivably be this early). If the Brickers' astronomical insights are correct, construction during K'ak Yipyaj Chan K'awiil's reign would have required anticipation (and precise calculation) of solar events 20-30 years in advance of their occurrence, which seems a bit of a stretch. If the short chronology is correct, the final phase architecture at both 8N-11 and 9N-8 was constructed over very short intervals in the late 8th century.

Late construction and use of 8N-11 are also strongly indicated by our main Op. 50 ceramic inventories. Even though Widmer and Storey tested the earliest architectural contexts, their collections are similar to those of the main excavations: only 13.4% are Acbi and 0.7% are pre-Acbi (see Table 9-10). The Op. 63 collections present basically the same picture. Given these proportions, it is extremely doubtful that there was any sort of intensive pre-Coner occupation or use of the immediate locale. Had there been, we should see much larger frequencies of early ceramics in the fill of the later buildings and our deep soundings and in those of Rattray and William Fash. Nor did we find Plumbate or other fine late wares that defined Viel's original conception of Ejar. All our ceramic analysis was done before Manahan published his ceramic data, so a few sherds of his neo-Ejar domestic wares might lurk in our collection (but not the well-known imports such as Tohil). If so, they were not recognized as anomalous during our analyses. As matters now stand there are no post-Coner sherds from our operations at 8N-11, but remember there is no agreement about how long Coner or Coner-like complexes endured. The Chinese collections might tell another story.

In one sense, then, there remains no serious chronological issue about the parts of Group 8N-11 that we explored. Although there is a bit of pre-Coner material, all traces of architecture or other built features date at the earliest to the Acbi-Coner transition and more probably to the full Coner phase.³⁹ This reinforces conclusions from the PAC I test-pitting of Type 4 palatial residences on the valley floor, all of which yielded Acbi deposits (Fash 1986: 82). Group 8N-11 experienced its heyday somewhat late during the reign of the 16th king Yax Pasaj. Str. 66C, the core building of the eastern complex, was built (or more properly its last phase was added) about AD 785. Flanking buildings are clearly later. Judging from its shoddy appearance and anomalous plan, Str. 66N's superstructure was the latest addition, possibly made well after AD 800 when the kingdom and its elites were already in disarray. Both 66N and some of the ancillary structures, along (perhaps) with Str. 67, experienced significant late use and remodeling. In short, the final phase architecture of Str. 66 was built, used, and reconfigured sometime during the interval from about AD 780 until the time of the dynastic upheaval at AD 800-820. What remains at issue is the whole cycle of use and abandonment of 8N-11 and its locale. Because all ceramic lots had Coner complex materials (with several minor exceptions), the basic question becomes the duration of this ceramic phase, which the most recent version of the short chronology ends at about AD 950.

³⁸ Of course they might be even later if they commemorated an event that had already occurred.

³⁹ Except perhaps Langley's faint structure traces that might be Acbi.

General Chronological Implications for Group 8N-11

To recapitulate, our Op. 50 excavations revealed shallow culture-bearing deposits. In all trenches we encountered sterile soil at depths of roughly 65-75 cm below the general level of the main courtyard. Our deep plaza-sounding trench (see Chapter 3 and Fig. 3-8) penetrated an empedrada layer buried about 12-15 cm below a layer of humus and black sandy loam with *cascajo* (probably the remains of grouting for the eroded plaster capping). Beneath this empedrada, down to a depth of about 65 cm below the surface, there were no signs of other buried floors, but plenty of artifacts in a red-brown soil. At the base of this level was a hard, sterile, chocolate brown clay, and beneath the clay there was no cultural material down to a depth of 2.75 m. The stratigraphy above the clay layer is very simple, with just a single plaza floor.

The situation elsewhere in the plaza is more complex according to Rattray and Fash and the cultural deposits deeper, indicating that the original ground surface sloped down toward the west and north. Widmer's probes of Str. 66C and 66S showed a more complex situation along the eastern edge of the plaza. Three separate architectural phases there had used what was essentially a single main plaza surface that was razed and rebuilt at a higher level to accommodate new building episodes.

We excavated multiple trenches to depths of 75 cm to 1 m behind the Str. 66 complex while looking for burials, particularly around Strs. 50 and 51. None of these trenches, including one right up against the rear wall of Str. 66S, revealed any signs of buried floors, and several bottomed out in sterile deposits. Although we took these to be sterile river sediments dating at least back to Late Preclassic times, they are more likely the result of Maya leveling and in-filling. Whatever the origin and sequence of deposits in the plaza to the west, they appear different from those that extend eastward beyond the rear wall of 66S.

The Relative Sequence at Group 8N-11

The best information for the relative sequence of activities in the eastern part of 8N-11 comes from Widmer's and Storey's probes in and around 66C and 66N. They exposed a series of successive construction episodes and features leading up to the eventual collapse of the buildings as described in Chapter 3:

Episode 1: Feature 38, the fired clay basin or "funnel", is the earliest formal construction and probably dates to the Acbi-Coner transition or to very early Coner. The only building it might be associated with is the extremely fragmentary Str. 66C 2nd-sub, the earliest architectural trace we found beneath the Str. 66 complex.

Episode 2: A layer of fine soil about 10-20 cm thick was laid down above the level of Feature 38. It was detected in several probes and had very few artifacts. Whatever its source, and however extensive it is, this layer of clean soil yielded the intact Copador Polychrome vessel (Fig. 8-11) from just above the funnel. Widmer is certain the vessel was not intrusive, and if he is correct the layer dates to the Coner phase.

Episode 3: A big bell-shaped pit (Feature 21; Fig. 8-4) was dug near the funnel and predates any known masonry architecture. It lacked the fine soil of the Episode 2 layer but instead had trashy soil with abundant and exclusively Coner pottery. Feature 21 is probably slightly later than the funnel and the Episode 2 soil deposit.

Episode 4: A layer of midden-like trash resembling that in Feature 21 extended over a large area under both Strs. 66N and 66C. It contained abundant Coner material including Copador Polychrome and Casaca Striated sherds. How this layer formed is unknown. It might be a large sheet midden, but if so it is unusual in that it contained little other than pottery. More probably it was brought in to fill the borrow pit and level minor depressions in the ground surface.

Episode 5: The first formal empedrada surface was laid down beneath and in front of the area later occupied by the Str. 66 complex, and dense midden-like concentrations of Coner sherds were recovered from beneath it. This pavement must originally have been extensive because Widmer found segments of it in his tunnel trenches into Str. 66C (Fig. 3-56). Presumably it relates to some structure(s) for which we have only the faintest evidence. Widmer found a linear scar in the empedrada that appeared to mark the line of a torn-out stairway or other linear feature. He concluded that the building we call 66C-2nd-sub existed there, and that its external masonry had been

removed for recycling, leaving only a mound of loose, powdery, loam fill very different from the fill of the later structures. Faint traces of an irregular and rustic stone alignment might be remains of the back (east) wall of this earliest building, later incorporated into Str. 66C-2nd. Judging from associated deposits and stratigraphy this first building was a Coner phase construction.

Episode 6: The masonry constructions 66N-2nd and 66C-2nd were erected above the level of Empedrada 1, covering fragments of it, destroying others, and utilizing the western portion as a patio surface. The linear scar in the pavement shown in Fig. 3-7 probably is the edge of a low platform associated with the Episode 6 architecture. The final Empedrada 2 was laid down. The new structures aligned with each other much as the final phase structures did, but at an angle shifted farther to the east of magnetic north. Both were substantial buildings (or at least substructures). Only a small remnant of the Str. 66N-2nd platform wall remains. Fragments of its front terrace were intact, but its projecting front stairway had been completely torn out, leaving a scar 2.2 m wide. Beneath the fill of the Skyband bench Widmer found a fragment of the standing rear wall of 66C-2nd, which appears to be unterraced. 66C-2nd had mainly roughly faced or unmodified tuff masonry chinked with cascajo fragments in mud mortar. There might have been a third early building because we encountered faint traces of construction under Str. 66S, but little is known about it.⁴⁰ More or less complete destruction of the early structures suggests a non-reverential attitude to them and little concern with social memory. Some or all the “elite” burials found during the Chinese project appear to be roughly contemporary with the Episode 6 buildings.

Episode 7: The final-phase structures of the Str. 66 complex were built over the partly razed remains of 66N-2nd and 66C-2nd, presumably using recycled material from the earlier buildings. Although the western portion of Empedrada 2 was left intact, other parts of it underlying the new additions were destroyed. It remained the main plaza surface to the west of the final structures although it was re-plastered more than once. The ancillary Str. 50-51 complex originated during Episode 7 and might have been used for a very long time. Str. 66N might date late in Episode 7, its shoddy superstructure construction indicative of decline in the fortunes of the resident elite group. The incensarios recovered by Rattray from the main plaza, and later by us around Str. 46, could date to Episode 7 or even later. According to the short chronology all these superficial deposits must date no later than AD 900 or 950.

Episode 8: We once suggested (Webster *et al.* 1998: 366) that Strs. 66C and 66S collapsed at the same time. More recently, Freter and Abrams (2016: 108) argue that activity continued at Str. 66S longer than at 66C as indicated by late hydration dates from associated middens, and that this building fell sometime after AD 1050. Collapse of such big masonry buildings has important implications for Maya site formation processes. Sometimes they deteriorate gradually but at other times their roofs, vaults, and superstructure walls fail suddenly, which seems to be the case for both of our structures. Whether our two buildings fell together or separately, their collapse rubble effectively sealed plaza floors immediately around their peripheries and buried any deposits on them such as Features 9, 12 and the cascajo debris described in Chapter 6.

Wall collapse also sealed peripheral burials around Str. 66N. Pit and cist burials found beneath floors near their walls seem to have been made before collapse occurred – at least we found no signs that people dug down through fallen debris to make the graves. If Str. 66N collapsed around the time of the dynastic debacle, its peripheral burials probably all date to AD 750-80 or thereabouts. If the big vaulted buildings collapsed two centuries or so later as Freter and Abrams suggest, people could have buried their dead along the rears of Strs. 66C and 66S but they did not do so. Either the buildings collapsed earlier and these potential burial contexts were unavailable, or for some reason the peripheries of Str. 66N became more attractive mortuary locales.

The overall relative sequence is straightforward. The earliest features -- the borrow-pit and clay funnel-- might predate the full Coner phase, but not by much. Both constructions are probably transitional Acbi/Coner features from the early to mid-7th century. The funnel was still in good condition when it was covered over by the clean soil layer and the grey loam trashy layer. The former is certainly of early Coner date if its associated Copador vessel is not intrusive. The trashy layer underlies the empedrada fragments found by Widmer beneath the Str. 66 complex, and whatever buildings went with them. These are also early Coner, so Strs. 66N-2nd and 66C-2nd are solidly

⁴⁰ Destruction of the early buildings seems to reflect a non-reverential attitude toward them, with no emphasis on the importance of social memory that is obvious elsewhere in the valley.

Coner. Both buildings were then almost demolished and replaced with the latest construction visible in the Str. 66 complex. This probably happened around AD 785 or thereabouts.

Implications for the Short Chronology

All lines of evidence, including architectural stratigraphy, iconography, and ceramics, indicate that the several formal building phases detected at Str. 66C and 66N, along with the ancillary structures, date to the Coner phase and that none are earlier than about AD 650. More probably all phases of the main buildings, except for the 66N superstructure date to between AD 700 and 790 according to the short chronology, with the greatest construction efforts made during the last decade of that interval. We cannot be sure that all parts of the final Str. 66 complex were envisioned as components of a single plan (e.g., the substructure of 66N was adapted to the preexisting substructure of 66C and slightly misaligned with it). The last phase of 66S was built as a new addition to the complex shortly after the completion of 66C as indicated by the shared rear substructure wall. The 50-51 complex was probably built concurrently with the main final phase architecture, with which it is well-aligned. Minor modifications were thereafter made to several substructures and superstructures in both complexes. According to the short chronology all such activity must have occurred before AD 950.

Because we could only superficially expose architecture during the Op. 63 excavations we have no information about relative construction episodes or renovations comparable to that from Op. 50. Nevertheless, ceramic collections are overwhelmingly Coner. Another clue is the alignments of the small buildings we tested. Most of them seem oriented in a concentric fashion facing toward the main courtyard structures. Although some could have been arranged this way around an earlier set of buildings, most likely they, like the Str. 50-51 complex, were built to complement the final phase Str. 66 architecture. If so, they were in place no earlier than AD 780-790. Remember, though, the generally good construction of the 50-51 complex. Several of the Op. 63 buildings appear much shoddier and might possibly have been erected during the first decades of the 9th century, maybe even after the dynastic collapse. The Causeway Building itself is so decidedly odd that all we can say for sure is that it dates to late Coner, which ends around AD 925-950 if the short chronology is correct.

Comparisons with Architecture and Sculpture Elsewhere at Copán

Current data from Copán strongly suggest that large masonry structures with cut stone superstructures, vaulted roofs, and sculpture, were rare outside the Main Group before the conventional beginning of the Coner phase, and that only after AD 740-750 do buildings with fine masonry, vaults, and sculpture become common in Las Sepulturas. This pattern possibly reflects the upgraded status of the Copán nobility vis-a-vis the royal establishment after the demise of the 13th king Waxaklahun Ubah K'awil as suggested by the Fashes (see Chapter 12).

Maca begins the occupation of his Type 4 foothill site 9J-5 at AD 450, and its florescence around AD 600 (Maca 2002: 100-101). This group seems to have had cobble surfaces and small platforms that fall firmly into the Acbi phase (probably slightly earlier than the first preserved buildings at 8N-11) followed by a peak of elite activity during the 8th century. Viel (1993b: 141) recognized the marked break between Middle Classic Acbi ceramics and those of the following Coner phase, and the enormous increase in abundance of Coner types compared to earlier complexes. Remember that the urban core excavations of Willey and his students turned up only tiny percentages of pre-Acbi-material. If vault stones in the fill of 66C came from 66C-2nd, then the latter building, and presumably its northern neighbor, most probably post-date the mid-eighth century. The final phase architecture must obviously be later still. In its superb construction, general configuration, and sculptural embellishment, the final Str. 66 complex (the 66N superstructure excepted) clearly resembles other late buildings such as 9N-82C and those excavated by the Tulane project at Group 10L-2. The buildings along the east and north sides of the 8N-11 plaza exposed by the Chinese project are also very impressive, with large, masonry structures and appreciable amounts of cut stone.

A similar conclusion can be drawn from the 8N-11 façade sculpture, which is of the extremely high quality exhibited on many late buildings at Copán. It is difficult to make direct chronological inferences from the sculptural themes. If Barbara Fash is correct in her identification of the eccentric flints on Str. 66C as symbols of militarism or warfare, a late date seems indicated. Such symbols became obtrusive at Copán after the accession of the 15th king K'ak'Yipyaj Chan K'awiil (AD 749) and seem to have peaked during the reign of Yax Pasaj, just before the collapse of

the royal line.⁴¹ Three of the repeated deity masks on the Skyband bench resemble in design and execution those carved on the reconstructed bench of Str. 18 on the Acropolis, built in the very late 8th century.

Summary

Answers to most questions about Group 8N-11 from the perspective of the short chronology are clear:

1. The sequence of early features and major architecture along the eastern edge of 8N-11 (barring minor renovations) was compressed into a short interval bracketed by the beginning of the Coner phase at ca. AD 650 and the royal collapse at about AD 800-810. The beginning of this interval coincides with the end of Acbi times and the enormous shift in ceramic forms, abundance, and distributions associated with the coalescence of the Coner ceramic complex.
2. Successive activities included the construction of the clay funnel and borrow pit, the deposit of the overlying Coner pottery, the construction of the stone empedrada and whatever original buildings went with it, the replacement of the early buildings by the final phase architecture, and the construction of the Str. 50-51 complex. Strs. 66C-2nd and 66N-2nd were probably built sometime in the first half of the 8th century and then razed after mid-century. Str. 66C was built about AD 785. Str. 66S might be contemporary with it, or at most very slightly later. Life-histories of both these final phase buildings prior to the dynastic collapse were short – probably 20-30 years.
3. Str. 66N is obviously later than the central building (as is 66S), but probably not by much, except possibly its superstructure. It was used long enough to undergo some modifications, possibly well into the 9th century.
4. All the ancillary buildings were initially built at the same time as the final phase buildings.
5. Strs. 66C and 66S or bit later, although some of the small, shoddy ones we investigated in 1997 could significantly post-date the dynastic collapse. Middens and other superficial deposits found around the main and ancillary buildings must date to roughly AD 790-950 because they all have Coner pottery and Coner ends by the latter date according to the short chronology.
6. There are no obvious signs of post-Coner ceramics at 8N-11, so all activity ceased by AD 900 or so during Episode 7 or early during Episode 8 according to the short chronology.

Big construction at all well-excavated elite residential groups in the Copán pocket appears to peak around the reign of the final king (or kings, if we include the shadowy Ukit Took'). Group 8N-11 fits this pattern according to the short chronology. Although its temporal roots are shallower than some of its neighbors, its rapid growth reflects the power of Copán's elites prior to the dynastic collapse and during the time when royal projects seem to slacken off. This sub-royal elite florescence was short-lived and disappeared when the last king fell or very shortly thereafter. The final phase architecture of the main and ancillary buildings at 8N-11 thus functioned vigorously for barely a single generation, or about 30 to 40 years, although later additions and modifications were made. If the impressive tombs found by the Chinese project are contemporary with Episode 6, then some level of elite assertion began at the Skyband Group around AD 650 or 700, and an early version of the Las Sepulturas causeway probably existed at that time.

The final phase architecture at Group 9N-8 is similarly attenuated. Chapter 1 lists the various dates for the House of the Bacabs and its associated bench. Despite some disagreement about the bench date, much of the development of the impressive architecture in Plaza A (Webster 1989: 32-33) must be squeezed into an interval of about 25 years at most, and perhaps as little as 13 years. According to the short chronology much of the associated architecture in other plazas of 9N-8 also was built and abandoned during this time. Post-elite domestic activities continued at 8N-11 but even these, according to the short chronology, must all be squeezed into an interval of a century or probably less.

⁴¹ Stanley Guenter (2015) suggests that the inscription on Copán Stela 11, a curious cylindrical monument that probably stood in Temple 18, the tomb of Yax Pasaj Chan Yopaat, prefigured the collapse of the dynasty with a reference to the sinister date of 8 Ahau. Stela 11 portrays Yax Pasaj Chan Yopaat as dead. Guenter ingeniously shows how the Maya assembled their view of the baleful implications of 8 Ahau by relating it to earlier events at Copán (e.g., as mentioned on Stela I) and at El Mirador and Teotihuacan. The last expression of such catastrophic prophecy (partly promulgated by the Spaniards) notoriously afflicted the Itzá kingdom in 1697. Interesting as all this is, dire anticipation of the demise of kings or dynasties tells us little about what happened to lesser nobles and to ordinary people.

GROUP 8N-11: THE SHORT CHRONOLOGY

Some Copán archaeologists think the royal demise was associated with considerable violence. Andrews V and Bill (2005: 302-303) believe that destruction at the royal compound 10L-2

“... is likely to have included the entire center of Copán....”. Group 8N-11 appears to have escaped such destruction (if it did occur on an extensive scale, which I doubt), so elites might have maintained themselves there for considerably longer. Some renovations to Str. 66N and the ancillary buildings, along with some burials, might have been made at 8N-11 for a century or so after the kings disappeared.⁴²

Activity (elite or not) continued at some other Copán Type 3 and 4 groups until AD 950 according to the short chronology. Terminal middens such as Features 9 and 12 at 8N-11 cannot be later unless they were produced by people from Manahan’s small, Postclassic Ejar community poking about in the ruins of 8N-11, but if so they left no other traces of themselves.

According to Sharer and Traxler (2006: 35) the Copán valley retained only a sparse Early Postclassic population whose communities had a “... ‘plaza-centric’ settlement pattern that probably reflects a reoccupation by Lenca peoples after it was abandoned by its Classic period occupants....”. By AD 1075 *at the latest* even these few Lenca/Ejar settlers had disappeared and the Skyband Group was a long- abandoned ruin, as were all other palatial residences in the Copán valley.⁴³ Such is the short chronology which, despite its several modifications, retains the central proposition that no Coner or Coner-like domestic assemblages survived after AD 950. Sites with such assemblages and the people who lived in them did not exist after that time, so for all practical purposes the valley was abandoned.

⁴² Just such post-royal survival seems to have occurred elsewhere in the Maya Lowlands. Stuart and Stuart (2008: 324) remark that “...for a time, Palenque’s nobility continued to occupy the prime area of the city, even when royal history itself remains strangely quiet in the final decades of the 8th century”.

⁴³ Many archaeologists such as Sharer and Traxler believe that the early occupants of the Copán Valley were Lencan speakers, and that beginning about AD 100 multiple intrusions of Mayan speakers gradually assumed dominance over these original Copañecos.

Chapter Eleven

The Long Chronology

David Webster

Copán has long been something of a wild card in our perspectives on the Classic Maya collapse. Many years ago the historian Arnold Toynbee, famously sensitive to environmental variation, wondered “Why was Copán abandoned at the same date as its jungle-encircled sisters? At Copán the mystery of the collapse reaches its climax, for the Copán River has never ceased to flow, and the volcanic soil of the valley has never ceased to produce crops” (Toynbee 1962: 73). The abandonment of Copán continues to be controversial to this day, in part because of the contending short and long chronologies. Below I first review the origins and development of the long chronology and its associated methodological considerations.¹ Chronologies of other elite-level residences with large numbers of chronometric dates are then related to Group 8N-11. The final section examines the implications of the long chronology for collapse and abandonment at the Skyband Group, at Copán generally, and throughout the Maya Lowlands.²

To recapitulate, the original short chronology that emerged in the early 1980s envisioned a rapid disappearance of about 15,000-20,000 people from the Copán valley within the half-century or so following the dynastic collapse, and a correspondingly abrupt decline in the use of Coner complex ceramics. A more refined short version based on newer data and the interpretations of Viel, Bill, Macca, Manahan, and others later posited a dwindling away of the population associated with Coner ceramics over about 125 years, or by about AD 925 or 950. By AD 1075 (if not long before) even Manahan’s little community of neo-Ejar villagers was gone. If we had to choose between the original and refined short versions the latter seems more believable because it allows a longer and more varied collapse process. In neither case, however, did elites function for very long after the demise of the royal dynasty, nor were there many surviving farmers to support them. No neo-Ejar ceramics were found at Group 8N-11, which was either totally abandoned by roughly AD 850 or perhaps occupied by a few (probably non-elite) people until no later than AD 950. But what if Coner or Coner-like ceramic assemblages did not disappear from the Copán valley by the latter date? In this case some elites, however down-at-heel, might have persisted at 8N-11 until, say, AD 1000.³ Ordinary people might still have lived there and elsewhere in the valley even longer. Such are the implications of the long chronology.⁴

Evidence for the Long Chronology: Methodological Considerations

Overviews of Copán’s long chronology have been widely published, so only the basic points are discussed here (see Freter 1988, 1992; Webster and Freter 1990a, b; Webster, Freter, and Rue 1993; Webster, Freter and Gonlin 2000; Webster, Freter, and Storey 2004; Freter and Abrams 2016; Wingard 2016; Storey and Storey 2017). Beginning in the 1980s hints at extended occupation of the valley emerged from several projects. Sediment core analysis (Rue 1987; Webster, Rue, and Traverse 2005) found that broad-leaf tropical forest did not significantly revive at Copán until the mid-13th century or later, long after farmers should have been absent. Cameron McNeil (2009: 58) later cited maize pollen from the lowest levels of a sediment core from the Sesesmil valley dating to 1018-1150 cal yr AD.⁵ Between 1978 and 1984 Daniel Wolfman acquired 21 archaeomagnetic dates from Copán as part of a larger

¹ Some of this section was taken in modified form from Webster, Freter, and Storey (2004) and from Webster (2018).

² See Storey and Storey (2017) for a recent comparative summary of slow collapses, including that of Copán and other Maya polities.

³ Worth remembering is that in some cultural traditions principles of elite ranking, titles, and prestige long survive transformations into more egalitarian social conditions. The New Zealand Maori are a case in point.

⁴ The Vaillant correlation between our Gregorian calendar and the Classic Long Count would shift dates 256 years later (see Sharer 1994: 575) but this is too late for our hydration dates. The Goodman-Martinez-Thompson is accepted here as the default correlation and has been reaffirmed by Kennett *et al.* (2013).

⁵ She concludes from this deposit that farmers retreated to the hillsides – i.e., the less desirable portions of the landscape – after the protection of the kings was gone. In this she harks back to Longyear’s perspective as reviewed in Chapter 10, but her conclusion is confusing for two reasons. First, there is desirable (non-marginal) land high above the alluvium in many parts of the Copán valley, including the Sesesmil

chronometric sampling of Mesoamerican sites. Sadly, he did not analyze all of them or publish his data in detail before his untimely death in 1994 (see a brief summary in Appendix A). Most pertinent is his date of AD 1100 $\pm$ 34 for a hearth associated with the large, low platform Str. 9M-203, located in the Las Sepulturas zone about 120 m to the west of Group 9N-8. Statistical analysis by Scott Zeleznik later revealed an unexpected abundance of Coner serving and ritual vessels there (see Fig. 9-2).⁶ Excavations at other nearby Las Sepulturas elite groups also suggested construction and other activity after the dynastic collapse (e.g., see Sheehy 1991). Farther afield, William Saturno (2000: 183-185) thought that the big up-valley center of Río Amarillo feebly asserted itself for a short time after the collapse but did not give dates for its longevity. These independent lines of evidence were tantalizing but needed wider support.

The short chronology is heavily rooted in inscriptions, stratigraphy, and ceramic seriation and cross-dating. When we began PAC II we inherited very few chronometric dates from the Harvard or PAC 1 projects.⁷ Initial evidence for the late chronology accordingly heavily derives from obsidian hydration analyses carried out by AnnCorinne Freter (1988, 1992).⁸ Freter turned to this comparatively untested method because PAC I and PAC II radiocarbon determinations showed frequent disagreements with contextual expectations. Many of these dates were uncalibrated, but this did not explain a consistent early bias that continued to show up during our first PAC II seasons as we amassed a new suite of dates.⁹ An example is a series of calibrated radiocarbon dates we retrieved from Plaza A at Group 9N-8 that turned out to be much older, by 1000 to 1800 years, than their contexts suggested, and the “old wood” error could not be blamed for this pattern.¹⁰ Many later determinations using the AMS method were obtained by various Copán projects, but even these often failed to meet expectations.¹¹ Even when dates appeared reasonable they frequently exhibited multiple intercepts with the radiocarbon curve, adding another dimension of uncertainty. Fortunately the situation has improved; Appendix A lists 110 recent radiocarbon dates from human bone, which I regard as far the most trustworthy material for samples.

Obsidian Hydration Dates

William Sanders advocated the application of obsidian hydration during PAC II because he was deeply interested in Copán’s population history. It was clear to all of us that the key to that history must emerge from residential and settlement archaeology, and not be directly derived from ceramic entities unless these themselves were very tightly dated (which Coner, for example, was not; see the temporal adjustments in Chapter 10). We somehow had to assign plausible *occupation intervals* to remains of all ranks because contemporaneity of residences, even within a well-controlled ceramic phase, could not be assumed. Even had radiocarbon dates been working well at Copán in the early 1980s they still would have been of minimal use in determining such intervals. Radiocarbon dates are usually used to estimate events within certain degrees of probability rather than to define durations. Even if some extremely refined radiocarbon method were available that virtually eliminated the statistical uncertainty of events, good samples from any Copán site were few, usually from a range of dissimilar events, and expensive to process. We needed a method that could be applied to settlement data on a scale large enough so that sheer sample

drainage, and so no need for such a retreat. Second, our PAC II surveys and excavations (among others) documented settlement in these upland zones, marginal and otherwise, while the dynasty was at its height. See Paine 1992 for an analysis (uncited by McNeil) of the process by which various zones of the valley were colonized and utilized. McNeil’s publication also curiously fails to cite our 2005 analysis of Petapilla Core 2 (Webster, Rue, and Traverse 2005), which differs significantly from our Core 1.

⁶ Zeleznik (2002: 12) thought that this platform, which lacked signs of a superstructure, “...might have served some special purpose function such as a ritual performance and feasting area”. It had the largest proportion of ritual ceramic forms of any site (see Fig. 9-2). Wolfman’s archaeomagnetic date suggests that another possible reason for its distinctiveness is very late post-dynastic use. Intensive restudy of 9M-203 would be extremely interesting because the ceramics are Coner, and more dates (of any kind) would possibly confirm late ritual activity in the urban core.

⁷ Viel (1983: 545-46) used some 13 radiocarbon dates and several archaeometric dates for his ceramic analysis. Most of the former proved unreliable.

⁸ An early Penn State application of hydration dating to settlement in the Valley of Guatemala (Michels 1979) produced questionable results because some fundamental variables affecting hydration processes were not well-understood. Freter used a refined method and also from the outset assessed its efficacy by comparing her results to all other available chronological information for Copán.

⁹ Andrews V and Fash (1992: 84) estimate that half of all the radiocarbon dates processed by PAC I and PAC II were unacceptable – usually too early. See Diamanti (1991: 56) for a revealing list of such dates. Even when calibrated AMS dates began to be used they were often unreliable. In 1991 E. W. Andrews V sent Sanders and me a list of his radiocarbon dates from Group 10L-2, noting that many were far from what he expected.

¹⁰ Letter from the SMU radiocarbon lab to W. T. Sanders, on file in the Copán archives at the PSU Anthropology Dept.

¹¹ In 1990 E. W. Andrews V acquired nine Group 10L-2 charcoal dates from Beta Analytic Inc. (personal communication to Webster 1991). Of these, five were too early or problematic. All these dates were calibrated, but were not determined by the AMS method, then in its infancy. Bill (1997: 14) later referred to a total of 22 radiocarbon dates from Group 10L-2 but published only 10 of them. If 12 of these dates were unacceptable, it speaks volumes about application of this method, either in technical or sampling terms.

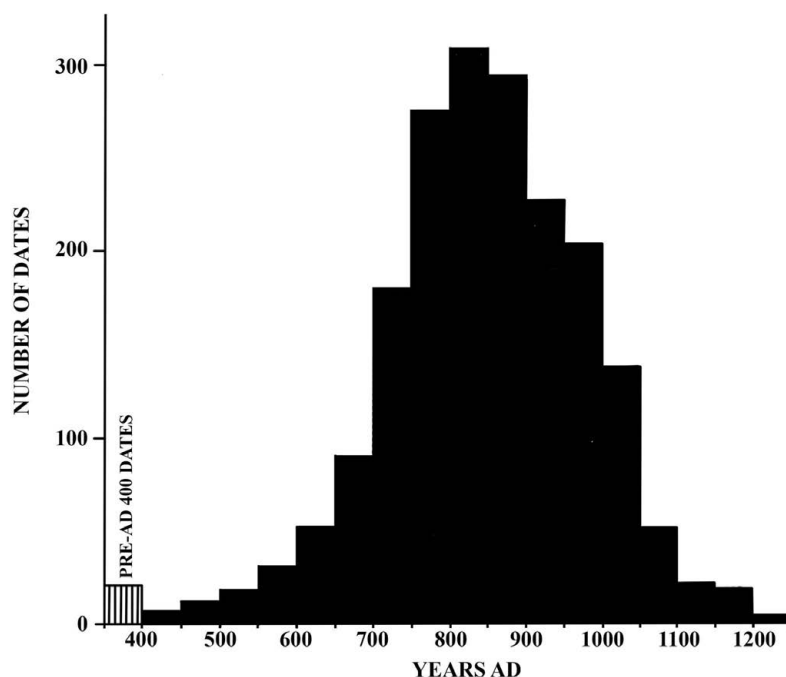


Figure 11-1. Histogram of all hydration dates.

numbers could reasonably define occupation ranges and overwhelm unavoidable noise. Obsidian hydration was the only method that might work.

Lest what follows be misunderstood, we did not propose a long chronology model for the Copán polity and then set out to test it with obsidian hydration. Instead we accepted the then-current short chronology and we were surprised at the initial indications, such as Rue's and Wolfman's dates, of a protracted "crumble" of the kingdom. In this we were precociously but unwittingly fashionable because it has since become commonplace to question the whole notion of large-scale, rapid societal collapses (see Lawler 2010; Faulstich 2016; Storey and Storey 2017 for overviews). Nor was the long chronology entirely welcome because it raised the displacement problem discussed in Chapters 9 and 12 that complicated interpretations.

Freter eventually amassed a total of 2664 hydration dates from 241 sites. Many dates are from fully excavated sites, while others derive from the 701 test excavations she completed throughout the valley. She processed still more dates for other projects such as the Tulane effort at Group 10L-2. Her total hydration sample derives from sites ranging from royal and elite residences to tiny rural house clusters and field huts (Fig. 11-1).¹² For ease of display I show each central date in its appropriate 50-year interval, disregarding its one sigma (± 70 year) estimated laboratory error (see Freter 1992: 124 for a discussion of the error calculation). If the collective date errors are generally random within the one sigma range it is likely that they often cancel each other out in large date arrays, and so the patterns shown are generally reliable. Any given hydration date might be wrong, as can happen with any dating method, and some dates do not conform with their contexts, as is frequently the case with radiocarbon dates at Copán (but see below for a caveat about such disagreement). A date-by-date analysis is obviously impossible here, hence the aggregate displays.

It quickly became clear that Freter's dates were in excellent agreement with the known ceramic sequence and dynastic history of Copán between AD 550 and 950. Virtually all projects that have extensively tested residences or other structures have encountered massive amounts of Coner ceramics, both in the Copán urban core and in outlying zones of the valley. If we put the Acbi-Coner transition at AD 600-650 and the end of Coner at 900-950 to conform with the refined short chronology (or at least the current version of it), then the dates in Fig. 11-1 heavily

¹² There is no problem of multiple-observer error because Freter did all of the dates herself. In this and other histograms I lump all pre-AD 400 dates together because they are so rare.

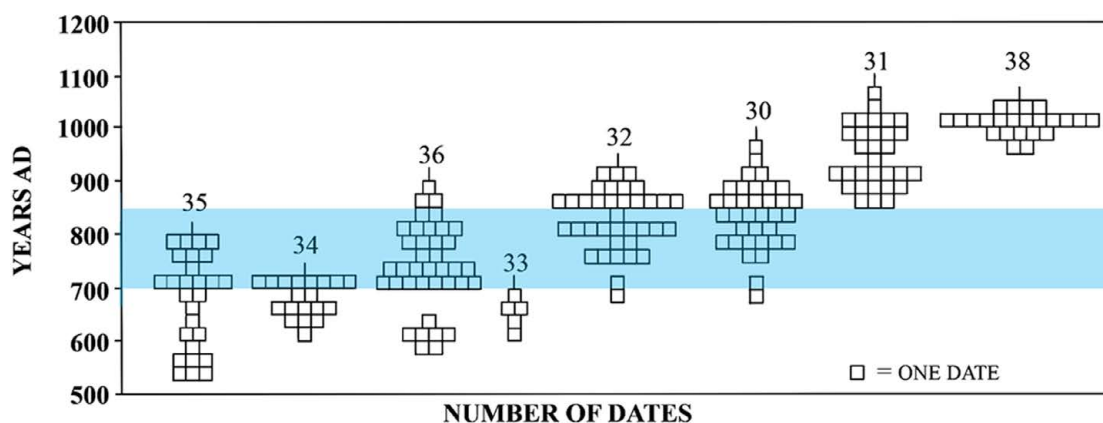


Figure 11-2. Date distribution for rural sites. Each date is shown as a square within its appropriate 25 year interval, disregarding its error range. The blue bar indicates the original conception of the duration of Coner.

fall into this interval. Furthermore, the few dates before AD 600-650 mirror the comparative paucity of ceramics in the urban core prior to late Acbi times as documented by Willey's Harvard project (see the prediction in Chapter 9) and by later ones, including ours at 8N-11.¹³ Freter's dates also exhibited another expected pattern; sites with multiple dates within a particular ceramic phase (and most conspicuously the Coner phase) did not always overlap, either at all or in terms of the intensity of their occupations.¹⁴ Fig. 11-2 presents the raw hydration dates for eight small rural operations we excavated in 1985 and 1986 arranged to show distributions approximating battleship-shaped curves. Several of them conform to this seriation expectation even though sample sizes are comparatively small.¹⁵ All sites have well-documented Coner assemblages but no neo-Ejar ceramics, imported or otherwise (see Gonlin 1993 for details). Individual occupation spans, moreover, are highly consistent with other site characteristics (scale, quality of construction, location, etc.). Fig. 11-2 graphically illustrates the contemporaneity problem. If in the mid-1980s we had assumed that all these sites fell into the then-imagined short interval of Coner there would be much more overlap among them, which in turn would inflate demographic simulations.

Tempting as it is to regard the distributions shown in Fig. 11-1 as a crude reflection of population dynamics, the display is distorted by the nature of our samples, especially as measured in amplitude along the Y-axis. Just two sites, Groups 9N-8 and 8N-11, contributed 24% of the dates shown in the histogram, and an especially high percentage of those were in the critical interval of AD 700-900.¹⁶ If each of the sampled sites had instead contributed the same number of dates, the display would look considerably different. It would probably show a less striking but still pronounced concentration of obsidian events between AD 700 and 900. The prolonged temporal duration of obsidian events on the X-axis is the most reliable and significant dimension of the display. The date displays for individual sites shown in Fig. 11-2 and below provide much better approximations of intensity of use/occupation, duration, and contemporaneity.¹⁷

¹³ The paucity of dates before the Early Classic reflects the difficulty of retrieving early samples, but more importantly low population and very sparse obsidian blade production in the valley during the Preclassic. Although a few obsidian blades were imported, local obsidian use was confined to expedient tools made from spalls and nodules (Aoyama 1999: 54-77). Freter dated only blades.

¹⁴ Varying domestic fortunes are exactly what we would expect, and an important conclusion is that without control over varying occupation spans within the interval of a ceramic complex archaeologists are very likely to overestimate population.

¹⁵ Reasonable approximations of such curves are especially evident in Operations 30, 31, 32, and 36. Op. 34 shows a developing curve, then sudden truncation. This is a plausible signature of a residence that was founded by a few people, grew and prospered for a time, and then was suddenly abandoned. Many of our dated sites have overall patterns that show complex or truncated patterns that reflect equally complex processes of foundation, use, and abandonment. This is just what we would expect to see in a large sample of hundreds of ancient residences. All of these sites had predominantly Coner ceramic assemblages, so if we counted them as all contemporaries for purpose of population reconstruction our estimates would be too high.

¹⁶ On the other hand, if one had to rely on dates from a particular site to address the issue of Copán's general population history, one could do no better than to choose a big one such as 9N-8 (18% of the array), where many lines of evidence indicate long occupation. Dates from most small sites, however numerous, would capture a smaller and temporally-condensed set of hydration events.

¹⁷ Archaeologists frequently assume that at some point during the apogee of a site's history all of the residential structures were simultaneously occupied – the "frozen in time" perspective. If these Copán hydration dates are generally correct, the lesson is that small sites with the same basic ceramic signatures are not contemporaneous.

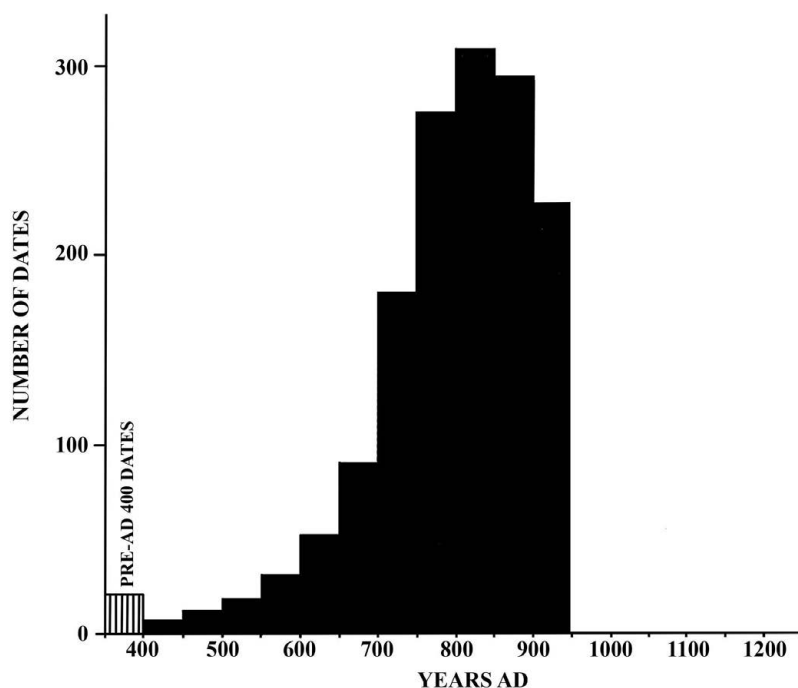


Figure 11-3. Dates before AD 950.

All this aside, imagine that in 1988 we had only published those dates predating AD 950 as shown in Fig. 11-3. The pattern would have been generally acceptable to our colleagues given the perspectives of the Harvard, PAC I, and related projects in the 1980s, as well as our then-current grasp of Copán's population history as discussed in Chapters 9 and 10.¹⁸ Most of these dates, moreover, agreed well with their general or specific contexts, and several examples of such fit with other lines of evidence for pre-AD 950 elite sites are discussed below. In short, they are an excellent fit for the expectations of the revised short chronology.¹⁹

Unexpectedly, however, we found evidence for obsidian use extending well after the dynastic collapse and the supposed abandonment of the valley, and all these late obsidian events were associated with Coner or Coner-like assemblages. The array in Fig. 11-1, read as a very crude proxy for population dynamics, suggests low numbers of obsidian events/people before AD 600, then a steady climb until a peak is reached between AD 750 and 900, then a long tail-off, with a sharp drop after AD 1050 (see Freter 2004 for settlement maps showing post-AD 700 site distributions). Although the displays in Figs. 11-1 and 11-2 are unacceptable to many Copán researchers, who would prefer something like the pattern in Fig. 11-3, the former seems more plausibly to reflect how we expect large human populations to behave and how complex political systems unravel. It also helps explain the low proportions of pre-Acbi sherds recovered generally in the valley – there simply were comparatively few people before AD 600-650.²⁰

Some archaeologists familiar with chronological issues at Copán saw no problems with our first intimations of a long chronology. Gordon Willey commented on an early draft this way:

“As to the Webster-Freter paper, I am quite content to extend the duration of Coner until *ca.* AD 1200. I think it the best working solution for the present. If we had some good deep refuse stratigraphy I think we would be able to split Coner ceramically --- but deep, undisturbed refuse has always been hard to come by in the Maya area.”²¹

¹⁸ According to Ayoama (1999) obsidian from Ixtepeque, the principal source, was not imported into the valley until AD 50-400 (see Chapter 9). If so, the paucity of early hydration dates is unsurprising. The half-dozen or so dates we detected that are earlier than AD 50 suggest that some Ixtepeque obsidian did trickle in before Ayoama envisioned, but his general point is still valid.

¹⁹ Which of course is wildly improbable if there are major problems with the hydration method as Freter applied it at Copán.

²⁰ See Webster, Sanders, and van Rossum (1992) and Wingard (1992, 2013, 2016) for more detailed simulations of Copán's population history.

²¹ Letter to Webster dated April 11, 1989. The paper to which Willey refers is Webster and Freter (1990a). See also the comments of Willey et al. (1994: 12, 393) on an extended Coner phase that might have lasted until AD 1000 or beyond. Obviously Willey was no longer wedded to the

One reason for Willey's receptiveness to a long Copán chronology might relate back to his pioneering work in the Belize valley (Willey *et al.* 1965: 567-571). The Spanish Lookout Phase there had the most dated occupations and the vast bulk of the architectural mass. It was placed at AD 700-1000 (Willey *et al.* 1965: 26) so it was not only lengthy, but it spanned the presumed collapse interval (and incidentally the "mega-drought" episode as more recently discovered – see below). But Willey and his colleagues initially did not perceive the following New Town ceramic phase which, once recognized, proved to have almost as many occupations as that of its predecessor and carried the sequence on for some unknown but probably long interval well after AD 1000, perhaps even as late as the 17th century.²²

William Fash, as we shall see below, quickly agreed with Willey. He accepted the results of the PAC II hydration data, the long chronology, the extended political and collapse, and its implications for internal elite competition and status rivalry (Fash 1991: 175-176). By implication he also implicitly acknowledged that Coner or Coner-like ceramics might have survived as late as AD 1200.

Critiques

Other archaeologists were more skeptical than Willey and Fash, so our many late hydration dates stimulated considerable criticism and debate (Braswell 1992; 1996). Critics objected that our whole date array was collectively biased in an absolute sense (too young) and should be shoved backward in time by several hundred years. Such realignment solves nothing because it would do great violence to the earlier part of the Copán sequence (pre-AD 950), with which our dates agree (see discussion at the end of the chapter). It would inflate the Acbi presence as signaled by obsidian events to a level inconsistent with ceramic and architectural evidence. A second critique was that the late dates came from contexts that were systematically biased (e.g., from sites with cooler temperatures, different soils, etc.) but these explanations were easily dismissed (Webster, Freter and Rue 1993). The simplest explanation was that although the royal line at Copán collapsed about AD 810-822, many sites outside the Main Group remained occupied or were even founded long after that time. These included residences of sub-royal elites, some of whom carried on, however feebly, until about AD 1000. Ceramics of the general Coner tradition continued to be used long after AD 850-950.

Critics voiced several other standard objections: 1) the hydration method is too untried and error-prone to be trustworthy; 2) it has often not worked when applied elsewhere; 3) the Coner ceramic tradition cannot possibly have lasted for 500-600 years.²³ More pointedly, Geoffrey Braswell (1996: 537) objected that at Copán "...there are no radiocarbon or archaeomagnetic dates after AD 950".²⁴ We responded to these objections in several publications, but Braswell's statement was incorrect even as he wrote it because he ignored Wolfman's AD 1100 archaeomagnetic date, and David Rue (1987) had long before dated signs of environmental disturbance and maize utilization to about AD 1000 (these shifted considerably later when calibrated).²⁵ As a test we carried out a concordance experiment comparing Freter's hydration dates with a suite of 16 AMS radiocarbon dates on burials from small rural Copán sites (Webster, Freter, and Storey 2004). Agreement was very strong, and there were (contra-Braswell) post-AD 950 dates. One radiocarbon determination indicated occupation at a rural site with Coner-tradition ceramics (Op. 38 in Fig. 11-2) as late as the 13th or 14th century. Whether the hydration method should "theoretically" work or not, or whether it works convincingly elsewhere, are not relevant to its demonstrable, empirical usefulness at Copán. Most recently Douglas Kennett conducted a new and much more sophisticated radiocarbon dating project using Copán materials. Initial results are discussed below and illustrated in Appendix A.

abrupt loss of the valley's population as stated in his earlier opinion quoted in Chapter 9. Cassandra Bill later split Coner up in just the way Willey anticipated, but using ceramics from sites, especially 10L-2, where the hydration dates themselves predicted little or no post-AD 900 occupation. Similar refinement of assemblages at sites with much later apparent occupations is yet to be done.

²² Prof. Julie Hoggarth informs me that her recent surveys and excavations at Baking pot show very considerable Postclassic, and particularly Late Postclassic, occupation.

²³ We have taken pains to insist that we do not conceive of some monolithic Coner ceramic complex enduring for this long, but rather various elements of the general Coner tradition, which was of course subject to change (as Bill has documented for 10L-2). Late manifestations can be renamed if necessary. In any case, there are other ceramic complexes or phases in Mesoamerica that last this long including, revealingly enough, the Middle Preclassic Uir phase at Copán itself (Viel 1993).

²⁴ Some dates remain unpublished, so whether this statement was correct in 1996 is unclear. Braswell goes on to hedge his bet here, saying that "...it seems unlikely that a substantial Postclassic occupation will be accepted" on the basis of the hydration dates. Whether our reconstructed populations are "substantial" is a separate issue discussed at the end of the chapter. A bit later (p. 314) Braswell says: "Examination of the dating method has invalidated the results..." of the Penn State efforts. Others, (sometimes grudgingly) have different opinions.

²⁵ One sigma calibrated dates for Rue's sediment core samples are AD 1303 (1397) 1414, and AD 1022 (1046, 1097, 1115, 1144, 1153) 1177.

Some critics pointed to inconsistencies between their own data and Freter's. For example, Freter obtained late hydration dates from her test-pitting of the large mid-valley site Los Achiotés. Canuto (2002) claimed her dates did not agree with his later excavations, which showed the main occupation to be Late Preclassic. Belated realization that there was also a small, late reoccupation at Los Achiotés made Freter's dates perfectly acceptable, as later admitted by Sharer, Canuto, and Bell (2011: 34).

Advantages and Disadvantages of Hydration Dating

Reliance on obsidian hydration has several advantages and disadvantages, discounting for the sake of argument the contention that it does not work at all.²⁶ Two great advantages, at least at Copán, are the availability of very large numbers of potential samples and the low per-sample processing cost. The sheer abundance of Copán chronometric dates is unprecedented, particularly for small sites, and care must be used in analyzing their implications. Chronometric dates (of any kind) are generally used by archaeologists doing settlement or residential research for four main purposes: 1) to determine the total span of activity at a particular site; 2) to detect variations in intensity or scale of site occupation within that span; 3) to date specific events or processes that occurred during that occupation; and 4) to sort out chronological relationships among different sites. Small samples often make such interpretations difficult – especially the first two which are most essential for reconstructing settlement or site chronology. For example, one overview of the perennial issue of the chronology of Mayapán was based on only 38 radiocarbon dates (Peraza *et al.* 2006).²⁷

Usefulness of any kind of chronometric data depends upon which purpose is being pursued. Archaeologists reflexively evaluate chronometric dates in terms of their immediate contexts, particularly when they want to pinpoint an activity or event (When was this hearth used? When did this house burn down?). Dates that conspicuously fail to conform to other expectations (pottery, stratigraphy, etc.) are properly judged to be “bad” dates and often are rejected or even unreported.²⁸ But if we are concerned with total span of occupation of a site such dates might be perfectly acceptable despite their contextual non-conformity.²⁹ Imagine that someone picked up an old obsidian blade once made at a site and then discarded it in a much later nearby midden at the same site. The obsidian confuses analysis of midden formation but is perfectly relevant to detecting on-site activity and hence occupation span – the duration of site use -- when incorporated into a larger sample. Because the basic issue here is occupation span, I rely mainly on large date arrays rather than analysis of the contextual “goodness” of dates. The assumption is that each dated event (exposure of a new obsidian surface) occurred either at the specific site where it was found, or elsewhere during the occupation of that site, and is hence relevant to its occupation history.³⁰ A big sample of chronometric dates of *any* kind increases the likelihood of detecting an event that occurred at or near either end of the actual occupation. During PAC II we tried to sample obsidian from the earliest and latest contexts at the sites we excavated, but early samples were most difficult to obtain. If our date arrays are biased, it is probably by disproportionate inclusion of obsidian that was produced and/or discarded in the later intervals of occupations. Any such bias, particularly in large, complex residential sites with long histories, inflates the scale of the late occupation. It does not, however, alter the total length of occupation nor detection of the latest occupation, which are the most pertinent measures when evaluating Copán's long chronology.³¹

²⁶ One disadvantage derives from our practice of mainly dating obsidian prismatic blade fragments. Such blade technology (as opposed to expedient flake use) seems only to begin in the Maya Lowlands at roughly 900-800 BC (Ken Hirth, personal communication). We thus could not detect any activity in the valley prior to about that time using the hydration method, although our oldest date (890 BC from Group 9N-8) is in the appropriate range. All this has no significance with regard to the issue here, the late end of the Maya occupation at Copán.

²⁷ Sophisticated radiocarbon methods are now being applied to large samples from Classic Maya centers such as Uxbenka (Culleton, Prufer, and Kennett 2012), greatly refining chronological control. Many of the Copán dates shown in Appendix A were done this way.

²⁸ Obviously a chronometric date of any kind might be bad or wrong in the strict sense because of lab or human errors, and so is at best useless and at worst misleading. A correctly-determined date might not be a good contextual match but is still valid for other uses. For example, there is no reason to believe that the early radiocarbon date for Burial 14-1 (see Chapter 8) is incorrect because it does not match its later context. Archaeologists unfortunately often conflate these two kinds of badness, and in fairness it is often difficult to distinguish them.

²⁹ An obvious exception is archaeomagnetic samples, which must retain the original contexts of their heating.

³⁰ Imagine that an obsidian knapper in some distant part of the Copán valley or even in highland Guatemala made blades that were shortly thereafter acquired by residents of 8N-11. Although the obsidian events took place at a distance the artifacts are still relevant to 8N-11's occupation, and most of their hydration histories took place there. Spatial displacement of the obsidian event is much less important than temporal displacement, the introduction of obsidian events older or younger than the site occupation span. If the site where the redeposition occurred were completely abandoned some confusion would result, but on the other hand someone did something that introduced the obsidian, and this activity is properly dated.

³¹ With the possible exception of site 10L-18.

Other advantages are that creation of a new obsidian blade cutting edge can with certainty be attributed to human agency and, in the case of multiple samples, to essentially similar events.³² This is not true of radiocarbon or archaeomagnetic samples, which might derive from many kinds of events or processes – burning fuel in a hearth, placement of a beam in a building, etc.³³ Sometimes humans are directly and intentionally involved in radiocarbon events, sometimes not. Although creation of a new obsidian blade surface is a behaviorally specific and intentional event, we detect it as a range of statistical possibilities. Such “events”, considered in terms of their probability ranges, have the potential to incorrectly lengthen the actual occupation interval (i.e., the ends of the interval might be incorrectly imagined to reflect the early or late ends of the date ranges). On the other hand, any kind of dating method produces occasional outliers or dates not commensurate with all other information about the site (for reasons of contamination, laboratory error, etc.). A potential source of error is deposition of extraneous obsidian predating or postdating occupation that enters our samples. Big samples make such outliers more conspicuous.

A disadvantage is that obsidian artifacts look pretty much alike, especially at Copán where almost all come from the Ixtepeque source. This uniformity makes sampling decisions more difficult. If one wished to date a sealed patio floor or tomb using pottery, one would visually choose the stylistically latest sherds and ignore the earlier ones as noise. One cannot do this with obsidian: one might pick the earliest or the latest pieces from beneath the floor, there being no way to visually distinguish among them. This problem, however, has the corollary advantage of helping to avoid the bias that often occurs when known diagnostics are visually privileged during sampling. The point here is that each kind of datable material has its own advantages and disadvantages quite apart from the strict “science” of the analytical method.

Hydration Dates from Elite-rank Copán sites

Before assessing data from 8N-11 I review the collective hydration chronologies of all elite-rank Copán sites to see if they might have been occupied, or at least used, after the kings disappeared (i.e., after AD 800-822) and to assess how closely the hydration dates match their occupation histories as known from other evidence.³⁴ Freter processed samples from 21 sites of Type 3 and 4 rank as shown in the Fig. 11-4 scattergram of all the associated dates.³⁵ The implications are immediately apparent. Most sites post-date AD 600, just as predicted by the ceramic samples of the Harvard project. There were many obsidian events at these sites before the dynastic collapse, but many others occurred much later. Most of these dates were generated before 1993 when the standard ceramic chronology was still Viel’s 1983 version, according to which there should be few or no dates after AD 850. Our many late dates conflicted with this original conception of the end of both the Coner ceramic phase and the demise of the polity and its population (but not with Longyear’s or Willey’s), and they also are at odds with the refined short chronology.

Fig. 11-5 shows a histogram of all the hydration dates from elite-rank sites (Type 3 = 12; Type 4 = 8).³⁶ Group 10L-2 is omitted from this display because it represents the royal residence attached to the south end of Copán’s Acropolis and so cannot be presumed to reflect broader elite residential or abandonment trends. 10L-2’s abandonment is discussed below, however, because it has been so well-documented by Tulane archaeologists.

Care must be taken in evaluating Fig. 11-5 because 48% of all the elite site dates come from Group 9N-8. Nevertheless, the distributions of both Type 3 and Type 4 groups both climb quickly after AD 650-700.³⁷ They peak in the AD

³² The dated event is exposure of the ventral surface of a newly-struck obsidian blade. Freter did not date surfaces that resulted from retouching or other later modification. Hydration dates also lack the multiple intercepts that frequently make interpretation of radiocarbon dates problematical.

³³ Although strictly speaking, radiocarbon determinations are estimates of death events, either of an organism or of part of an organism (as in the “old wood” effect). Radiocarbon dates based on aggregate samples (as from midden charcoal, core sediments, etc.) can conflate multiple events of diverse age. This is not a problem with bone samples from burials, and the context of burials is often comparatively straightforward.

³⁴ It is important to distinguish between occupation and use. People might have lived at 8N-11 long after the dynastic collapse, or they might have returned to an abandoned site for several reasons, such as placement of offerings or burials, scavenging for sculpture or building materials, etc.

³⁵ Fig. 11-4 shows Coner beginning around AD 650 and ending later than AD 850, in line with changes made by Viel in later versions of his sequence.

³⁶ In this and other histograms I show the central reading of each hydration date in its appropriate 50 year time interval, ignoring the ± 70 year error range.

³⁷ The drop for the interval of AD 600-650 might just be sampling bias; if so, the whole distribution looks pretty normal.

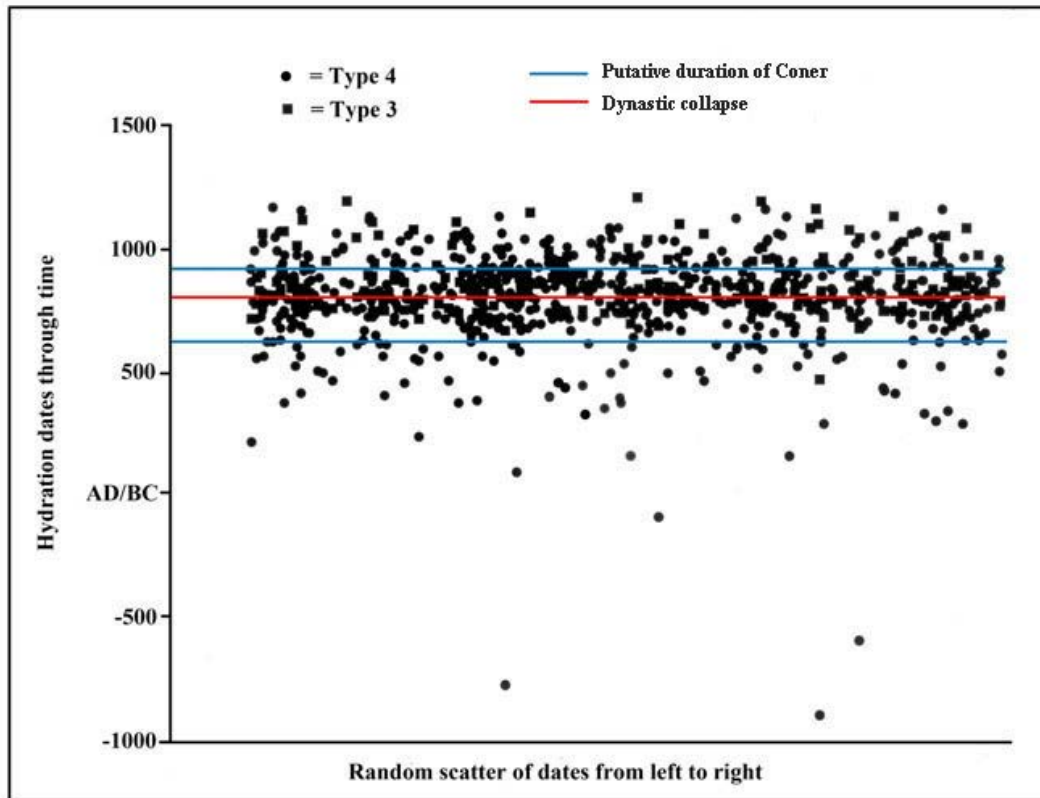


Figure 11-4. Random scatter of dates.

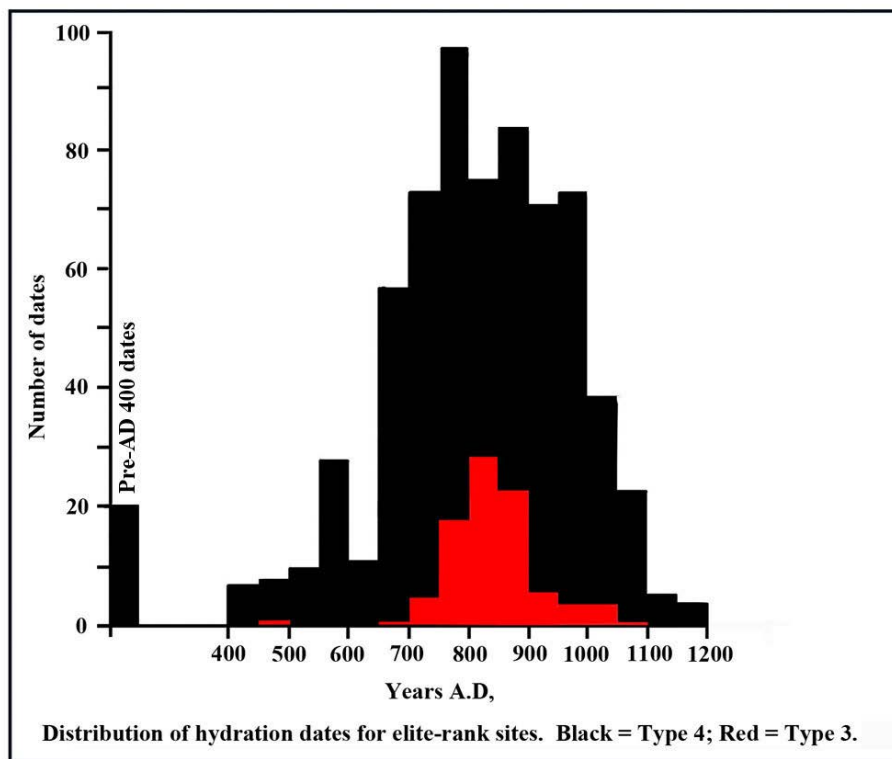


Figure 11-5. Dates from elite-rank sites.

750-850 interval as predicted by the short chronology, but then unexpectedly persist even though all the sites are dominated by Coner ceramic assemblages. The other obvious pattern is the attenuated temporal distribution of the Type 3 dates, both early and late, compared to those from Type 4 sites. Surprisingly, there are no pre-AD 400 dates in our Type 3 sample. While the Type 4 sites (and especially 9N-8 with its deep Plaza A stratigraphy) produced early dates, I anticipated more from the Type 3 sites. Part of the contrast might simply reflect much bigger and better-controlled samples from the former. In any case, had there been a big pre-Acbi (pre-AD 400) obsidian-using population at Copán we should have picked up good indications of them just by chance in sites of either elite rank.

Elite-rank Sites with Many Dates

An important subset of the overall Copán hydration array is some 14 elite-rank sites and one royal residence that have at least 10 dates each. Such large arrays are most likely to capture whole occupation spans and to reveal outliers. About 37% (n = 963) of all hydration dates from Copán come from these 14 residences, so they represent a particularly good data set.³⁸ Raw data for each site are listed in Table 11-1 and in Fig. 11-6.

One might quibble about the interpretation of any particular date if its context were scrutinized, but my concern instead is with the general implications of the arrays. I mostly ignore the one and two sigma laboratory error ranges for each date as determined by Freter, which would serve to lengthen each array, but not much affect its central tendency. Fig. 11-6 does, however, illustrate the 70-year one sigma ranges at either end of the occupation intervals and they should be borne in mind. Arrays for each elite-rank group are illustrated as histograms and discussed in more detail below.

Even when one-sigma errors are taken into account only three of the sites show plausible evidence for activity before AD 500. One of these (10L-2) is the royal compound attached to the southern end of the Main Group, known for its deep stratigraphy and lengthy activity. Another is 9N-8, where William Fash unearthed traces of Early Preclassic activity and a Middle Preclassic cemetery, as well as Early Classic remains. There are hints at early activity at 8N-11 as well, but it must have been very modest judging by the ceramic inventories discussed in Chapter 9. Eleven other sites have initial occupations ranging between AD 544 and 700 if their one-sigma error ranges are counted. Even when these error ranges are added in, however, only four sites show activity before Acbi times. Most sites appear to be initially occupied beginning in the 7th or early-mid 8th centuries, around or

Table 11-1. Hydration date spans for all elite-rank sites with more than 10 samples.

Site number	Site type	No. of dates	Earliest date	Latest date	Mean date	Median date
9N-8*		476	890 BC	1172	813	806
10L-2		63	272	897	742	756
8N-11		167	524	1115	816	863
9M-22A		68	614	1120	854	824
14F-1		14	678	849	775	778/787
8L-10		39	703	960	756	840
9J-5		27	722	977	844	840
10L-18		24	724	984	817	779/787
50-1		31	731	979	848	859
10F-1		22	731	901	845	849/857
8L-12		15	740	935	832	822
10E-6		18	759	901	854	822/831
12F-3		12	770	909	841	829/832
6A-4-1		21	1007	1212	1095	1089

* I calculated means and medians for 9N-8 by excluding the few pre-AD 400 dates, which would otherwise seriously skew the distribution. When all dates are included the median is 550 AD, shown as a dashed line in Fig. 11-6

³⁸ Each date was calculated using the 1985 baseline (see discussion in Webster, Freter, and Storey 2004: 147-151).

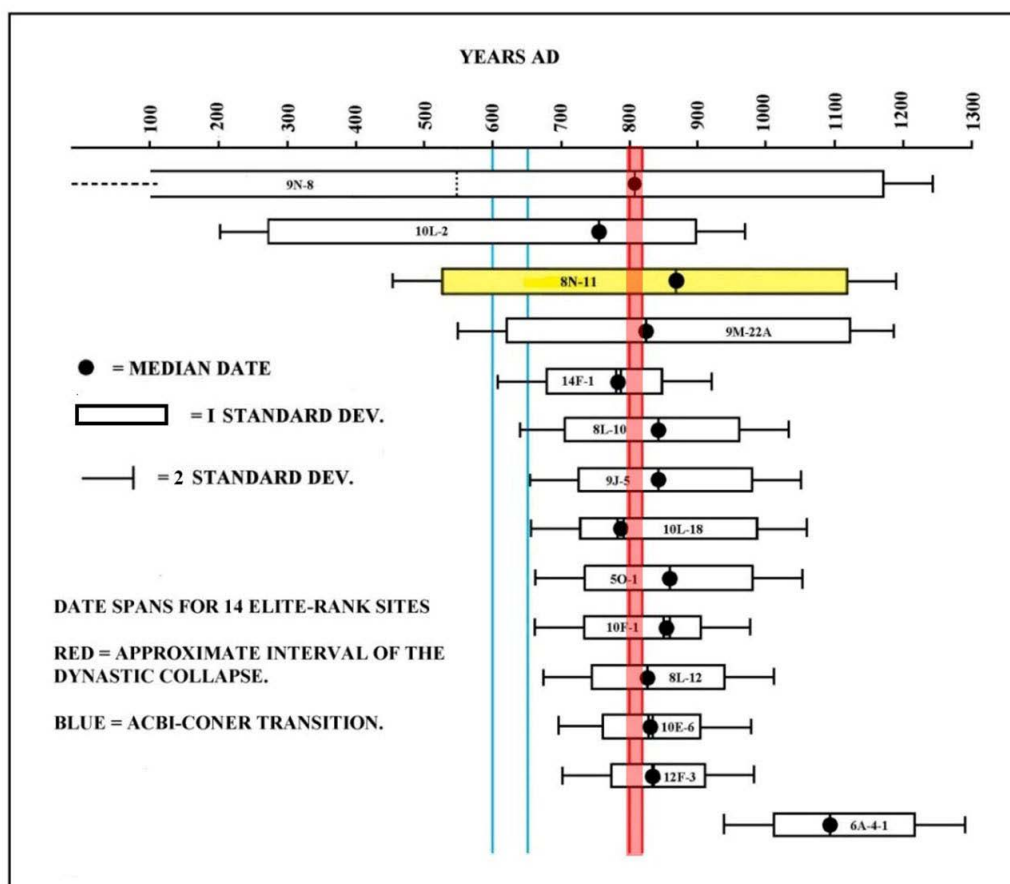


Figure 11-6. Date spans for elite-rank sites.

well after the Acbi/Coner transition. Ceramic assemblages from virtually all well-tested residences in the valley have overwhelmingly Coner assemblages and there is general agreement that activity at elite residences peaked no earlier than the reigns of the last kings (AD 763 to ca. AD 822).³⁹ Most sites in Table 11-1 show the substantial 8th century occupational overlap that is expected given all existing information from Copán. With one exception, median dates fall squarely into the Coner range as defined by Viel in 1993 and as modified by later researchers (i.e., with a short chronology terminus of roughly 925-950). Disregarding the error-spans, six sites have occupations that dwindle or disappear 100 to 200 years after the royal collapse. Such survival was controversial in the early 1980s but is unremarkable now, given the independent research of Bill, Maca, and others. Three sites, 9N-8, 8N-11, and 9M-22A, have considerably later terminal dates (see the histograms and discussion below for more details).

The estimated occupation spans shown in Fig. 11-6 must be read carefully. They signal activity at a site but not the kind of activity represented, apart from blade production, utilization, and discard, or whether the activity was in any sense elite. Major final phase construction at most sites probably took place between AD 700-800 and particularly after AD 750, as is certainly the case at Group 8N-11. Later dates indicate continued occupation and use of sites, and sometimes minor architectural alterations (although at 9M-22A substantial buildings were probably erected in the 9th century). In nine cases the median dates fall shortly after the reigns of the last two kings (Yax Pasaj Chan Yopaat and his shadowy successor), suggesting that people still made and discarded obsidian tools in these residences for another generation or two, and that some kind of watered-down elite activity persisted. As I and my colleagues have long argued, the decline and eventual disappearance of some elite occupations was thus decoupled from Copán's abrupt dynastic collapse and was much protracted, as envisioned by Morley and Longyear

³⁹ Meaning Yax Pasaj Chan Yopaat and his shadowy successor or pretender Ukit Took'.

and as acceptable to Willey. According to the date spans and other evidence, some such residences expanded and even thrived after the dynasty disappeared.

Group 9N-8

Much has been said in previous chapters about this imposing elite residential compound, a near neighbor of 8N-11 in the Las Sepulturas enclave. It was extensively excavated by the PAC II project between 1980 and 1984 and has the most chronometric dates ($n=476$) of any site in Mesoamerica (Fig. 11-7).⁴⁰ Of these, only 19 predate AD 400. The earliest of this subset is 890 BC and the latest is AD 393. Such early dates are not surprising given that 9N-8 has a long occupational history, as shown by the deeply buried Early-Middle Preclassic finds of Fash mentioned above. Twelve of the early dates cluster between AD 288 and AD 393 before the appearance of the Copán dynastic “founder”, but during an interval for which there is abundant evidence of occupation on or near the valley floor, and hints (in retrospective glyphs) at the presence of pre-founder individuals of high rank and title.

The post-AD 400 date array shows a steady climb and a peak at AD 700-800, just when we know the group reached its mature stage from many other lines of evidence (see Webster 1989). Thereafter dates remain abundant until AD 1000, followed by a steady decline for the next century and a half. It is unlikely that the nine dates in the AD 1100-1150 interval are all accidental outliers given the general trend in the display. Substantial numbers of people appear to have made obsidian artifacts at 9N-8 until about AD 1000, then production gradually declined over the next several generations. Early on during PAC II we detected just such late activity in the dominant Plaza A, where superficial debris and middens produced dates well after the royal collapse (Webster 1989: Table 1). We shall see below that a specific workshop context in another courtyard of 9N-8 makes it very likely that production of elite shell and other artifacts continued at least until AD 900-1000.⁴¹ The ceramic assemblage is fundamentally Coner and so far no neo-Ejar ceramics have been identified, even though the latest part of its occupation span completely overlaps with that of Manahan’s neo-Ejar site located less than a kilometer away in El Bosque.⁴² The simplest conclusion is that some Coner tradition ceramic forms survived until at least the mid-11th century. A more perverse reading is that all the late hydration dates must be wrong precisely because no neo-Ejar sherds showed up at 9N-8.

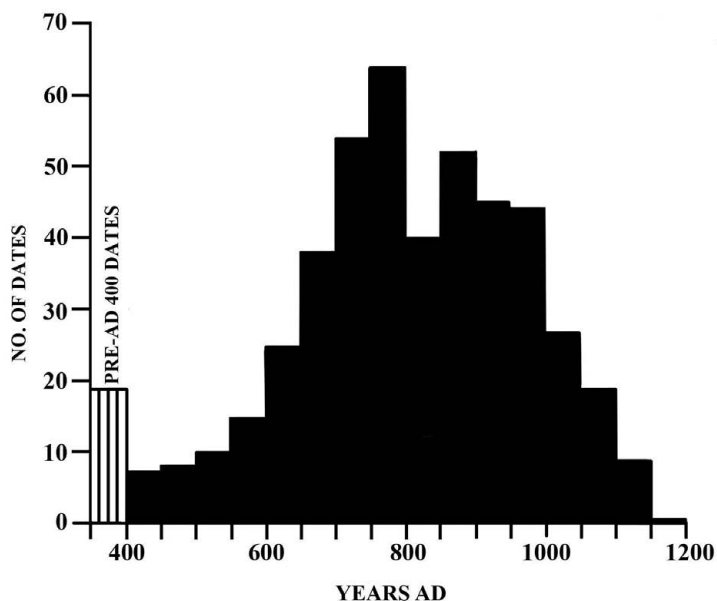


Figure 11-7. Dates from Group 9N-8.

⁴⁰ This number does not include the early (non-AMS) radiocarbon dates that are often so problematical, Wolfman’s archaeomagnetic dates, or recent dates from Douglas Kennett’s lab.

⁴¹ If the royal caliber Altar W” was appropriated from some earlier context it might have been moved to 9N-8 during this interval.

⁴² See Diamanti (1991: 61-62) for the distribution of hydration dates among the patios of Group 9N-8.

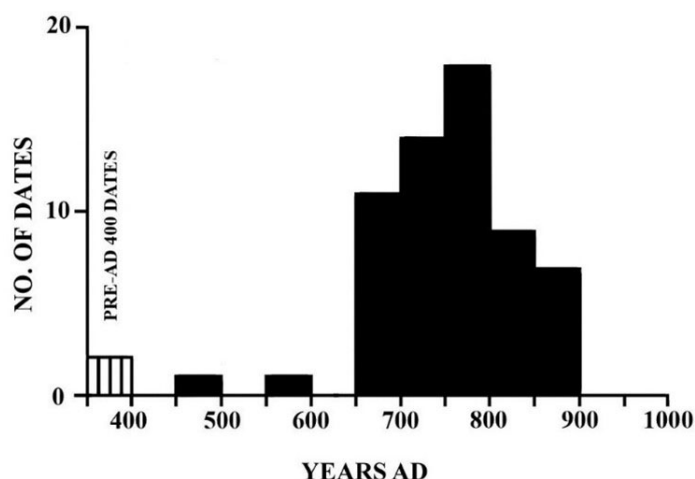


Figure 11-8. Dates from Group 10L-2.

Group 10L-2

Group 10L-2 lies just south of the Copán Acropolis, and apart from 9N-8 is the most extensively excavated elite/royal residence in the valley. Originally recorded as a Type 4 site, the Tulane excavations revealed it to be the residence-cum-ritual facility of Late Classic kings of Copán, and especially the 16th ruler Yax Pasaj Chan Yopaat (Andrews V and Fash 1992; Andrews V and Bill 2004).⁴³ We would consequently expect abandonment at or shortly after the demise of the royal dynasty, or around AD 820. This appears to be the case for the dominant structure 10L-32, while other parts of the group retained residents for a century or so. Cassandra Bill (1997) thinks that 10L-2 was abandoned by AD 900 or a bit later the basis of 10 of the associated late radiocarbon dates.⁴⁴

Freter analyzed 21 hydration samples from many widely spaced test pits she dug at 10L-2 before the Tulane excavations began. She later produced 42 more hydration dates at the request of E. W. Andrews V. His blades were from only two structures, so they constitute a narrow spatial sample.⁴⁵ The total array of 63 hydration dates (Fig. 11-8) shows major occupation beginning in transitional Acbi/Coner times, a peak during Yax Pasaj Chan Yopaat's reign, and then abandonment by about AD 900. One could not ask for a better fit with the findings of Andrews V, Bill, and their colleagues. That four dates fall before AD 600 is unsurprising. The general locale of the Main Group has a very deep history going back well into the Preclassic, and it would be odd if some early obsidian did not show up. The large number of dates in the display makes these early dates stand out as potential outliers.

10L-2 is exceptional among elite residences because of its royal connections. As Bill herself notes, her subdivisions of the site's Coner ceramic collection (along with a few from other sites), cannot inform us about how long Copán elite residences elsewhere were occupied, nor how long Coner tradition ceramics were used in other parts of the valley. This is an important point: *the cessation of activity at any single residential locale has no necessary implications for what happened elsewhere*. Put another way, one must reason from large settlement samples, and this is just what thousands of hydration dates allows.⁴⁶

Groups 8L-10 and 8L-12

In 1988 and 1989 Wendy Ashmore's North Group Project excavated 49 test pits at several sites in Copán's northern foothills (Ashmore 1989, 1991). The most important of these were the paired Groups 8L-10 and 8L-12, which had layouts much more like 8N-11 than like 9N-8 (see Fig. 2-3). The Harvard project had previously tested these impressive sites, and just before Ashmore's project Ann Freter dug twelve test trenches at 8L-10. Ashmore's two

²⁶³⁴³ There was initial uncertainty about where the royal residence was. Andrews V and Fash (1992: 76-78) once associated several high nobles, including half-brothers of Yax Pasaj Chan Yopaat, with various parts of 10L-2 and raised the issue that the king himself actually lived somewhere on the Acropolis. The putative relatives are now understood as minor deities somehow attached to the person of the king.

⁴⁴ The Tulane archaeologists detected signs of widespread intentional destruction at 10L-2 probably around AD 820 (Andrews V. and Fash 199), although it might have happened somewhat later (Andrews V and Bill 2005).

⁴⁵ I include these in the displays here with the permission of E. W. Andrews V.

⁴⁶ See Paine (1992) for a hazards analysis of the episodic founding and abandonment of Copán households.

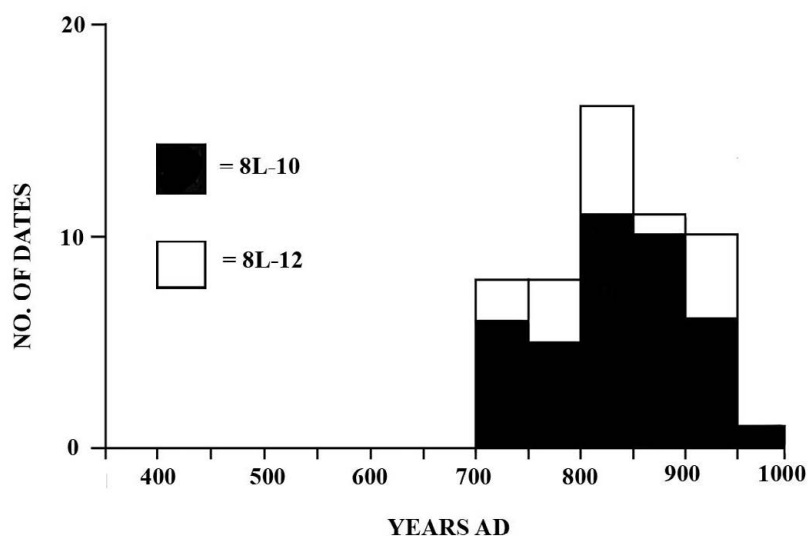


Figure 11-9. Dates from Groups 8L-10 and 8L-12.

sites are among the best-known elite groups near the Copán urban core based on test-pitting alone.⁴⁷ Both yielded impressive amounts of façade sculpture and some elaborate burials and caches. Freter produced 39 dates for 8L-12 and 15 for 8L-10. Because the sites have very similar ranges (see Table 1) I lump them into a single histogram (Fig. 11-9).

The absence of pre-Coner dates at these sites is striking and suggests that early populations were sparse even this close to the urban core. I have not seen the ceramic breakdown from Ashmore's excavations, but Freter's predominantly Coner sample included a few pre-Coner sherds (Calamar and Arroyo types) from several trenches.⁴⁸ Excavation into architecture might have revealed more early material in fill. Both Ashmore's and Freter's projects found abundant evidence of residential functions. Ashmore recovered a Pabellon Modeled-carved vessel from a tomb at 8L-10 that almost certainly was imported into the Copán valley sometime after AD 830 (Ashmore 1991: 21-24; see also Zalka and Hermes 2012: 166 for a discussion of the distribution and variation of this ceramic marker). Shortly after completing her excavations Ashmore (1989) concluded that elite activity, including construction and procurement of exotic goods, continued at 8L-10 until the final decades of the 9th century.⁴⁹ She writes that "These findings accord well with recent discussions by David Webster, AnnCorinne Freter, and Nancy Gonlin, concerning the persistence of the Copánec nobility (and use of Coner ceramics) long after the dynastic collapse" (Ashmore 1989: 7).⁵⁰

Group 9J-5

I have already referred to this imposing group located in the northern foothills of the Copán pocket. Alan Maca's excavations there extended over about 5% of its surface area (Maca 2002: 4) so exposures are much less extensive than at 9N-8, 10L-2 or 8N-11. Freter placed 13 test trenches in 9J-5 before Maca's project began and produced 27 hydration dates ranging from AD 722 to 997 (Fig. 11-10). The array exhibits a very tight cluster showing major occupation between AD 750-850, with continued use for another century or perhaps a little longer.

Maca (2002: 101) subsequently estimated the occupation of the site on ceramic grounds to be between AD 450 and 925. He found evidence that 9J-5 was destroyed or abandoned for a time at the end of the Classic period, by which he meant the end traditional end of Coner according to the revised short chronology. This initial abandonment particularly affected the group's dominant building 9K-88. There followed an interval of shoddy rebuilding and religious activity lasting as late as the mid-10th century (Maca 2002: 98-99). Maca thought occupation ended about

⁴⁷ Neither Ashmore's nor Freter's permits allowed them to penetrate structures, so all contexts are from plazas and other ambient spaces.

⁴⁸ Personal communication from Freter 10/26/2011.

⁴⁹ She discovered a series of inscribed dates, the latest one falling into AD 842, presumably roughly contemporary from the elite-rank building from which it fell.

⁵⁰ See Chapter 12 for some larger implications of Ashmore's project.

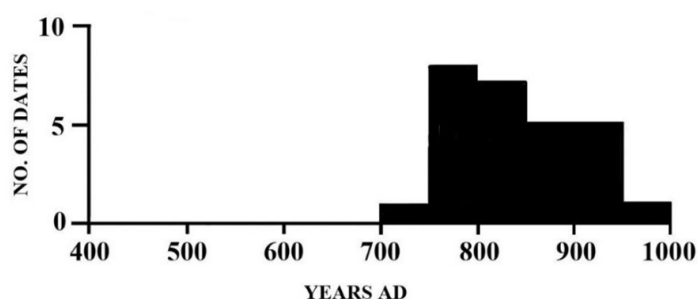


Figure 11-10. Dates from Group 9J-5.

that time, probably because he analyzed his ceramics according to the Coner sub-phase model developed for Group 10L-2 by Cassandra Bill that, as already noted, has no implications for intervals later than the early 10th century. Following Bill, Maca remarks that the 10L-2 assemblage “...provide a standard measure for the end of the Coner ceramic phase valley-wide” (Maca 2002: 121). Notice the strong similarity in the occupational histories of 9J-5 and Ashmore’s sites that are a short distance to the east in the same foothills.

Maca identified some late ceramics not previously encountered elsewhere at Copán and defined a Terminal Classic/Early Postclassic phase he calls *Coaj* (ca. AD 900-1000). I have no idea if the distinctive *Coaj* ceramics reported by Maca occur widely at other sites. Unless they do, it seems unwarranted to interject such a *Coaj* phase into the standard ceramic Copán sequence as some recent researchers have done (see for example Miller 2015). I found no indication in his dissertation that Maca identified any of Manahan’s neo-Ejar ceramics at 9J-5, so the post-dynastic ceramic situation at Copán is more complicated than earlier imagined. At one time all our post-850 hydration dates were heavily criticized. Maca’s findings, along with Ashmore’s, render more plausible those shown in Figs. 11-1 that fall between AD 850 and 950.

Maca lists six AMS radiocarbon dates for 9J-5 and they show some internal non-conformity. He remarks that “In general, I find that many OH dates from 9J-5 are perfectly in agreement with the 14C data. There are enough discrepancies, however, to prevent me at this time from using OH data as a primary chronometric source” (Maca 2002: 59). This last remark is ungenerous to say the least. The only discrepancy in Freter’s display, given Maca’s later interpretations, is the lack of any dates falling before the 8th century, but we know little about the intensity or distribution of Acbi features at 9J-5. If the Acbi population were small and spatially circumscribed, then the chances of early obsidian turning up in either Freter’s samples or Maca’s are low. He lists all Freter’s dates but does not identify the suspect ones, and he goes on to refer briefly to only one date that he regards as too late (would we be surprised if one of a suite of 27 radiocarbon dates was too late for its context?). In any case, disagreements with specific contexts are less important than implications for total occupation span, which just about perfectly match Maca’s interpretations using all classes of data. Even Freter’s latest date of AD 997 is consistent with Maca’s estimated occupation interval considering its error ranges.

Maca (2002: 246) says of 9J-5 that “To date there is no other area of the Copán pocket that has been found to express community activity so late in the post-dynastic sequence”. This is a peculiar remark because we had much earlier published just such evidence for many sites, including elite residences in the Copán pocket and Wolfman’s date of AD 1100 for 9M-203. Maca’s statement only makes sense if he dismisses as evidence *all* hydration dates (which he apparently does not) or if he discounts all *other* hydration dates except those for his own site of 9J-5. The latter is a convoluted, self-serving, and unconvincing line of reasoning.

Group 10L-18

Group 10L-18 is a huge Type 4 complex with 11 plazas and 59 mounds located about 100 m due west of the Copán Main Group in the El Bosque residential enclave.⁵¹ Freter’s goal there was to test-pit near all the mounds associated with each plaza group. She focused her work on the plaza that includes Structures 185-189. Old pits dug by PAC I archaeologists were still visible, but all Freter’s dates (Fig. 11-11) came from her own excavations, which usually

⁵¹ Its multi-plaza layout is more similar to 9N-8 than to 8N-11 or to Ashmore’s groups.

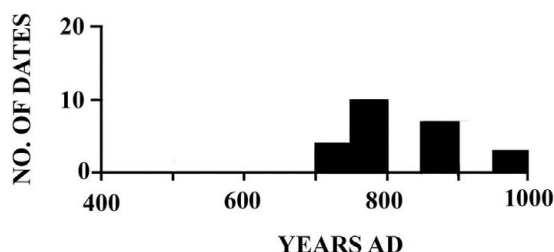


Figure 11-11. Dates from Group 10L-18.

penetrated deeper than one meter. Freter analyzed many samples from this site because she encountered contexts associated with unusually deep, dense, middens and stratified floors. Although 10L-18 has never been subjected to extensive lateral exploration in the manner of 9N-8 or 10L-2, Freter's sample of 24 dates is nevertheless one of the largest available for a Type 4-rank Copán site known only from test-pitting.

The array, very similar to that of 9J-5, shows a concentration in the interval from AD 700-800, just when all other lines of evidence suggest that major occupation and construction of Las Sepulturas elite groups should be most intense. Production of obsidian plausibly continued until at least AD 900-1000. My prediction is that more intense excavation of 10L-18 would yield samples dating to before AD 700 – probably back to Acbi times and possibly even to the Preclassic -- as well as others that post-AD 1000.

Groups 10E-6 and 11E-2

In 1989 Stephen Whittington (1991) and Scott Zeleznik investigated the Type 4 site 10E-6 (Op. 45), previously tested by PAC I archaeologists and by Freter.⁵² 10E-6 is located at the west end of the Copán alluvial pocket about 3 km from the Main Group and is locally nicknamed Ostuman. They also tested the Type 3 site 11E-2 (Op. 46) nicknamed Los Mangos, about 160 m southeast of 10E-6 and separated from it by a small *barranca* because they believed the two were functionally paired.⁵³ Some 53 trenches probed around the main and ancillary buildings without penetrating structures themselves. Although visually imposing (two conjoined plazas with 14 structures) 10E-6 had only low-quality construction materials and only small amounts of mosaic façade sculpture, so is a bit of an anomaly among Type 4 sites. Whittington (1991: 17) remarks that "Architectural remains recovered in test pits on both plazas were not typical of Late Classic elite architecture in the urban zone of Copán". Well-cut tuff wall and vault stones were rare, and many components of even the large structures were probably made of wattle and daub. Whittington and Zeleznik found remains of three lime kilns, probably located in the locale because nearby limestone deposits are the biggest in the Copán valley.

Architecture aside, Scott Zeleznik's artifact-based comparative analysis of elite-rank sites assigned the Ostuman groups to a secondary tier of such residences (see Chapter 9). Unexpectedly, given its much more imposing scale and symbolic load, Zeleznik found that Group 8N-11 links most closely with Whittington's sites. In the absence of good chronological clues from architecture and sculpture we must fall back on ceramic data. Freter's and Whittington's tests found Acbi sherds at both groups, but always mixed with Coner material, so both were apparently founded no earlier than the Acbi-Coner transition. Thereafter the sites were dominated by Coner phase ceramics. Whittington concluded that the few pre-Acbi sherds recovered were intrusive and predated the founding of the two Ostuman groups. Eighteen hydration dates from 10L-6 (Fig. 11-12) form a tight cluster from AD 750-900, with one extending a bit later. In 1989 the SMU Radiocarbon Laboratory reported a calibrated AMS date (ETH-4499) of AD 740±40 for a carbon sample from 10E-6. Because standard radiocarbon dates had earlier proved erratic at Copán, and this is an early-generation AMS example, it is best to regard it as only suggestive, although it obviously agrees well with the hydration dates.

Despite superficial sampling and the group's sub-par construction, occupation of 10E-6 fits with the general proliferation of elite residences in the 8th century, although the reasons for site placement might be different from those of the urban core groups. In her study of regional biodistance in elite residences Katherine Miller

⁵² Their permit, like Ashmore's, did not allow delving into intact architecture.

⁵³ Ashmore (1991) noted a similar possible pairing for structures at Groups 8L-10 and 8L-12 in the northern foothills of the Copán pocket.

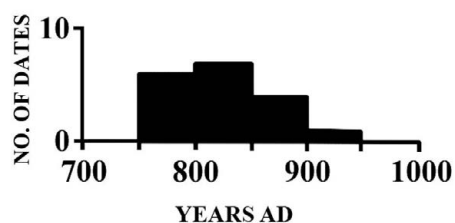


Figure 11-12. Dates from Group 10E-6

(2015: 261) found the Ostuman skeletal samples to be the most divergent from those in the polity core.

Whittington and Zeleznik exposed an elite burial at 11E-2 (Fig. 11-13) accompanied by stone mirrors, a jade pectoral, a Pabellon Modeled-carved vase (like that found by Ashmore at Group 8L-10) and a Plumbate vessel. Both are late ceramic forms. The Plumbate vessel, one of Viel's original Ejar I (or "Pre-Tohil") markers, is clearly an import but is associated with the site's larger Coner assemblage. The two hydration dates from 11E-2 are AD 768 and 866, the latter a good match for the Pabellon Modeled-carved cylinder. Such vessels are imports from the western Maya

Lowlands and were probably not widely traded until after about AD 830. At Tikal Pabellon is a principal marker of the Early Postclassic Caban phase beginning at AD 1000 (Valdes and Fahsen (2004: 153). Ashmore (1991: 211) found a rich tomb with a similar vessel at Group 8L-10, and concluded that elites there survived the collapse and undertook late ritual activities designed to negate its consequences (see Chapter 12). The Plumbate vase was probably brought in a century or so after the Pabellon one. Plumbate ceramics found in ritual contexts in the Main Group have since Longyear's time been seen as offerings made by occasional visitors to the valley after the dynastic and population collapse. A far more likely explanation is that there were still local Copán elites who acquired such vessels, some of which they placed as offerings, and the Ostuman finds support this explanation.⁵⁴



Figure 11-13. Burial and Pabellon vessel from Group 11E-2 (courtesy of Stephen Whittington).

⁵⁴ Whittington (1991a) lists a rather surprising number of imported or costly objects, more than I would have expected from test-pitting of this kind, and more than we got from much larger exposures at 8N-11.

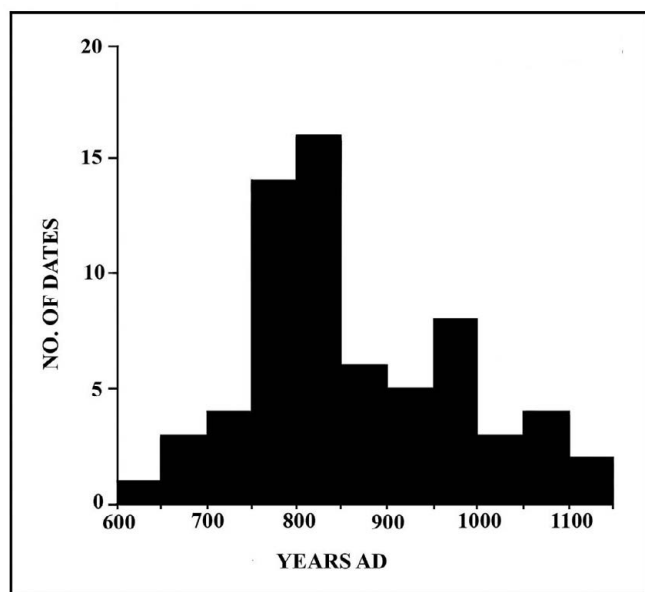


Figure 11-14. Dates from Group 9M-22A.

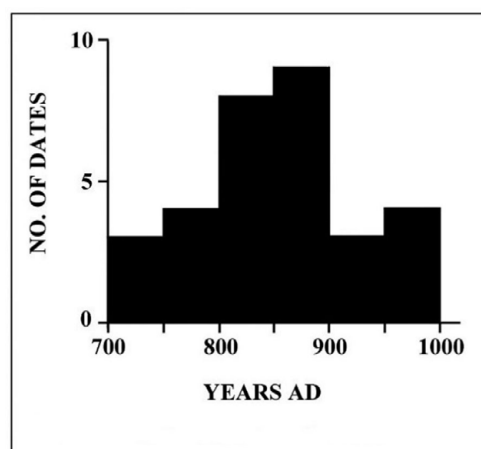


Figure 11-15. Dates from Group 50-1.

Assuming that 11E-2 was paired with 10E-6, “... both sites maintained their power without support from the royal lineage after Copán’s political collapse at around A.D. 820” (Whittington 1991: 35).

Group 9M-22A

In 1981 James Sheehy (1991; 2017) excavated this sprawling Type 3 residence located about 150 m west of 9N-8 and just south of the causeway. There were traces of late Acbi activity, but all the masonry structures are firmly Coner. The dominant structure 195B was heavily decorated with sculpture, and Abrams (1994: 135) calculated that it absorbed 5058 person-days of labor, an elite-scale level of investment. Following Sheehy’s earlier surmise, Houston and Taube (Houston 2000: 150) suggested that Str. 195B’s sculptural motifs identify it as a “house of sculpture”. Its façade sculpture shows what are apparently sculpting tools, and Sheehy found a blank stela (Fig. 5-15) associated with the nearby Str. 195A. Either the stela was meant to be set up in Group 99M-22A or (more likely) it was being carved there for installation elsewhere.

Sheehy’s 1991 overview article provides the most complete analysis of an occupational cycle available for any Copán elite residence excavated during PAC II. Using features and architectural stratigraphy, he partitioned the growth and decline of 9M-22A into 11 successive time spans and suggested how these spans related to four or five generations of resident lords. The whole occupation traces an arc from non-architectural deposits of Acbi pottery (Time Spans 11 and 10) through the emergence of the major architectural complexes (especially during Time Spans 5-3) and the eventual decline and cessation of architectural activity (Time Spans 2 and 1). When he devised this phasing Sheehy accepted the original AD 700 date for the Acbi-Coner transition and believed that architectural activity began only about AD 750. If the original short chronology for the collapse is followed, all the successive construction activities had to take place in a century or less.⁵⁵

Sheehy did a detailed correlation analysis of the 68 hydration dates from the site. Fig. 11-14 shows a distribution highly consistent with his architectural chronology. He found no pre-Acbi contexts and the earliest dates nicely span the Acbi/Coner transition. The height of activity is in the late 8th and early 9th century, after which people continued to use 9M-22A until AD 1100 or 1150. There are multiple dates from some 18 lots or stratigraphic positions, and in all cases they fall within their mutual one-sigma ranges. These convincing stratigraphic associations allow a much more plausible interval of about 250 years for the whole architectural cycle of 9M-22A, plus a bit longer for a terminal, lingering occupation during which some structures were dismantled in the late 10th or early 11th

⁵⁵ Sheehy would probably alter his interpretations if he used the current Acbi/Coner transition at AD 600-650.

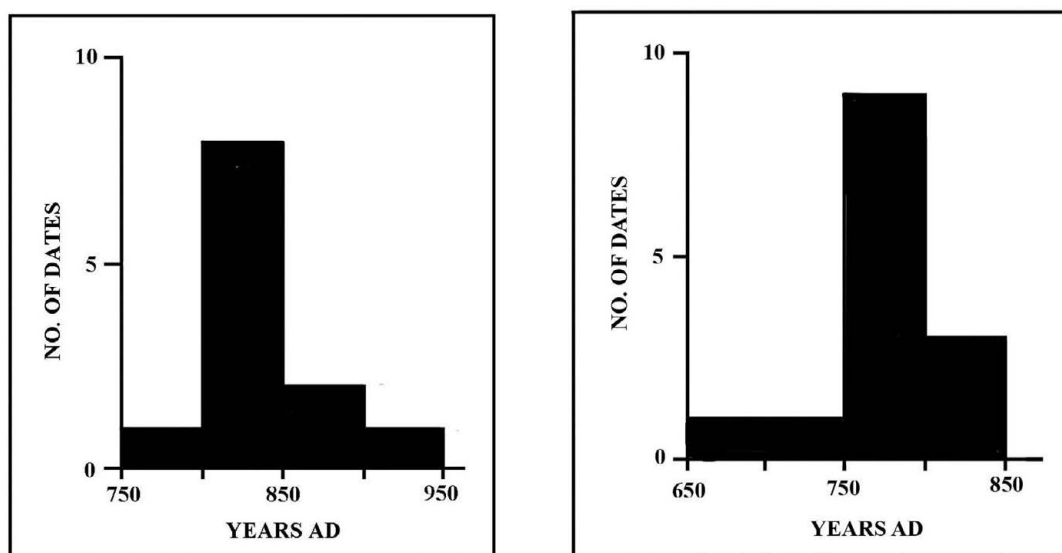


Figure 11-16. Dates from Groups 14F-1 and 12F-3.

centuries. Particularly significant are structures 9M-194B and 9M-195B, roughly contemporary with Str. 8N-66C, both identified as ootoots by Plank (2004; see Chapter 12). Both have vaulted roofs and well-cut masonry walls and their superstructure layouts are very similar to Str. 8N-66C. Str. 195B had more than 350 pieces of associated sculpture, including elements later identified as boar's teeth sculpting tools. Plumbate sherds are rare at Las Sepulturas but occurred in the western sections of 9M-22A, apparently as part of a general Coner assemblage, as at found at 10E-2. Hydration dates associated with these imported sherd contexts are AD 1018 and 1074 (Sheehy 1991: 14; Freter and Abrams 2016: 109).

Group 50-1

This 28-mound Type 3 group is in the west end of the Petapilla intermontane pocket, a flat area in the foothills just to the northeast of the Main Group. PAC II research identified probable production of manos and metates in this general locale.⁵⁶ Obsidian dates shown in Fig. 11-15 come from test pits. Their distribution suggests a solid Coner-phase occupation with a peak in the 9th century, followed by continued activity until AD 950-1000.

Groups 12F-3 and 14F-1

Both these Type 3 groups lie to the southwest of the Main Group. 12F-3 is a cluster of 12 mounds in the lowest section of the foothills about 300 m to the east of the Copán river. Its hydration array accords perfectly with Viel's original conception of the short chronology. 14F-1 is in a similar foothill position some 400 m south of the river. Obsidian events peak between AD 800-850 and continue for another century (Fig. 11-16).

Group 6A-4-1

The impressive Type 3 site 6A-4-1, nicknamed Piedras Negras, is in the Río Amarillo (northeast) section of the valley. It has at least 15 structures and a Coner ceramic assemblage found by Freter in her test pits. Its hydration array of 21 dates is notable for its extremely late occupation span (Fig. 11-17).⁵⁷ Were our hydration sample larger, one would be more certain to conclude that occupation began as late as around AD 1000. It then declined over the next 250 years.⁵⁸

⁵⁶ See the Out of the Past video program *Artisans and Traders* and also Mary Spink (1983).

⁵⁷ Freter originally test-pitted this site. It was later retested by other projects, especially in connection with the new airfield built there (see McNiel et al. 2022). I am told that some recent radiocarbon dates from the region date to the 11th or 12th centuries but I have not seen them in print. If true, it strongly supports Freter's much earlier detection of late occupation in the Río Amarillo sections of the valley.

⁵⁸ Some nine well-dated (five or more dates) sites of lesser rank in various parts of the valley have occupations that wholly or largely post-date AD 1150.

We think that a small local community was somehow established in Río Amarillo long after elite activity generally ceased elsewhere (see Webster, Freter and Gonlin 2000: 167). Piedras Negras might clear up many chronological issues if numerous radiocarbon dates could be obtained from its burials, or from other secure nearby contexts. After our own work at 6A-4-1 the site was re-tested by Harvard archaeologists, but I have no detailed information about their chronological conclusions. More recently, large-scale excavations were carried out at Piedras Negras and its vicinity by Cameron McNeil and her colleagues (Barrios *et al.* 2017; McNeil *et al.* 2022) in conjunction with the recent airstrip built in Río Amarillo. They report occupation well into the Postclassic (see Chapter 12). Revealingly, they ignore the late obsidian dates and their implications for population persistence and resilience that we had published years earlier.⁵⁹

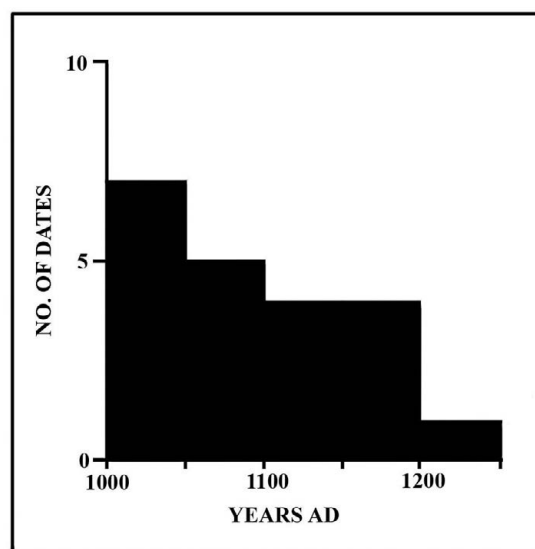


Figure 11-17. Dates from Group 6A-4-1.

Elite Residence Summary

The 14 elite rank residences reviewed above collectively demonstrate several important things. First, each date array except that of 6A-4-1 shows the anticipated pattern of main occupation in the 8th and/or early 9th centuries (Fig. 11-18). Second, there is expected variety in their occupation spans and abandonments – what we might call their social histories. Group 10L-2 predictably shared the fate of its royal residents. People managed to hang on there, perhaps in reduced circumstances, for only about 80 years after the last king disappeared, just as Andrews V, Bill, and the other Tulane archaeologists believed. All the other sub-royal elite groups except 12F-3 were apparently still used until at least AD 900-925 and probably later, and some might even have expanded just after the dynastic collapse. Maca's Group 9J-5 went through a rough patch after the dynasty fell, but then experienced a modest recovery that carried it through at least for another century, and its hydration array nicely captures this overall history. 10E-6, although minimally tested, has a short, mainly Late Classic, florescence. Group 9N-8, by far the biggest, seems to have the longest history of all, reaching back to at Early/Middle Preclassic times. As the residential compound of one of Copán's most powerful sub-royal elite families, its early origin is matched by its unusual durability. Like 9J-5 it survived the dynastic collapse and retained a plausibly elite occupation until as late as AD 1000 (see below), with at least minimal activity continuing for another two centuries or so.

Each of the elite groups considered here has overwhelmingly Coner complex ceramics, and apart from the Coaj material identified by Maca and trace amounts of Plumbate found by Sheehy, Whittington, and Zeleznik, none seems to have non-Coner or neo-Ejar ceramics. Although the arrays in Fig. 11-1 and 11-5 would align better with the short collapse chronology if they were collectively shoved back 200 years, remember that we would then have to begin the Coner phase at around AD 400-450, just when the dynasty was founded. This would please no one. René Viel (1997) suggested a more modest revision of the hydration sequence. He saw no problems with its pre-AD 900 segment, but he thought there might be a late bias in the hydration dates after AD 950. Shifting this late part of the array back 70 years would align it much more closely with his own conceptions of the ceramic sequence and the timing of population decline. This is an interesting alternative to pushing back the entire array, but it is not clear what could have distorted only the late dates. Making the late dates all 70 years older would also mean our population estimates for the 8th and 9th centuries would have to be increased. And of course such tinkering can make the array say whatever one wishes and should not be done without very sound reasons.

One last implication relates back to the findings of the Harvard project reviewed in Chapter 8. Remember that despite intensive testing, Willey and his students recovered only a small proportion of pre-Coner sherds. A similarly small proportion of the obsidian they found presumably predated AD 600-650 as well, but little of the Harvard obsidian has been dated. The overall array (Fig. 11-1) of all Copán dates, however, mirrors the pre-AD

⁵⁹ Another instance of a common practice; everyone knows the hydration rates are wrong, so when they agree with your findings just ignore them.

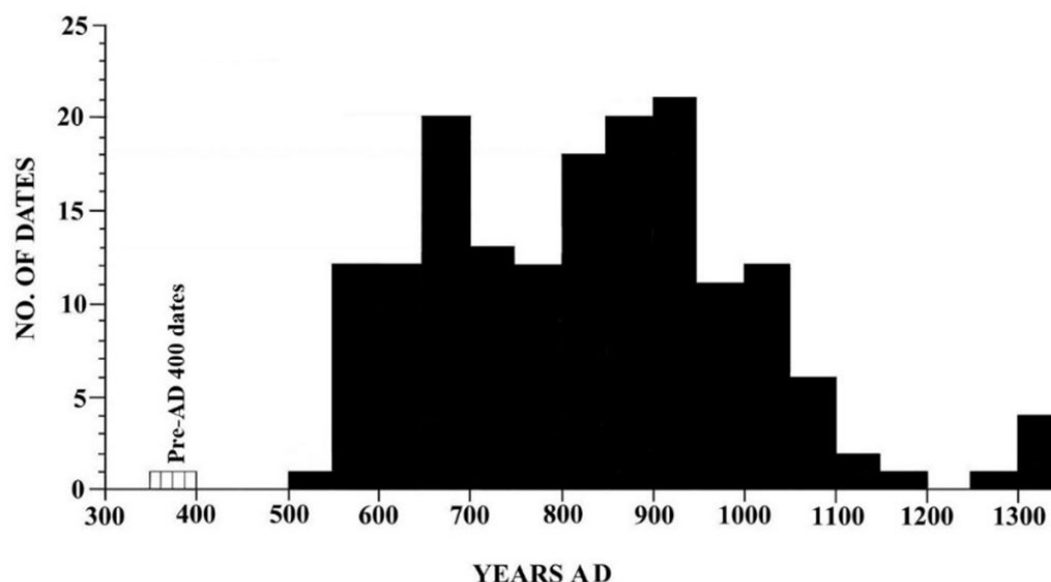


Figure 11-18. Histogram of dates shown in Fig. 11-6.

950 temporal distribution of predicted by the Harvard project ceramics and by the subsequent surveys and test-pitting of PAC I, as does the array for each site. None of the specific elite residences except 9N-8 appears to have had intensive early (pre-Acbi) occupation, at least by obsidian users. All of them, at least in terms of their large and easily accessible architecture, began to thrive no earlier than mid-Acbi times.⁶⁰ Most had their florescence even later as part of the great Coner expansion. The collective array nicely captures the predicted dominance of Coner materials at virtually all sites that have been adequately tested. It also shows how long obsidian events continued at these residences after the dynastic collapse and the conventional end of Coner. But how does Group 8N-11 fit into the mix of elite residential occupations?

Group 8N-11 and the Long Chronology

When we began Op. 50 we knew that standard radiocarbon methods often yielded anomalous results at Copán, as they had done for several earlier projects. At that time, the AMS method was just coming into common use and its advantages were not as evident as they are today. We collected many carbon samples during Op. 50, but none came from particularly good contexts, and this was even more of a problem during the later Op. 63 test-pitting. In retrospect, we should have taken numerous samples from human remains (as we did in our 2004 comparative test at small rural sites), but many burials at 8N-11 were from superficial middens, intruded through plaza floors, or dug beneath the bases of walls, so their stratigraphic implications were vague. We currently have only two burial dates from 8N-11 as listed in Chapter 8. One (Burial 14-2) clearly predates AD 700, and the second (Burial 14-2) is considerably later. If a large array of 8N-11 burials were dated using the latest methods, many chronological issues, particularly abandonment, might be sorted out, but any single burial might yield ambiguous conclusions. Most chronometric evidence for the occupational history of the group thus comes from the obsidian hydration dates.

The 167 dates from 8N-11 shown in Fig. 11-18 (details listed in Table 11-2 at the end of the chapter), constitute the largest set of chronometric dates of any kind associated with any single architectural complex in the Maya Lowlands except for nearby Group 9N-8. When dates are numerous it is tempting to infer intensity of occupation from their overall distribution, much the same way that archaeologists traditionally infer it from the relative numbers of chronologically sensitive ceramic vessels or sherds. The assumption is that the intensity of obsidian “events” (seen as probability ranges) closely mirrors the numbers of people present. Such inferences might be possible for some sites, particularly small ones with short occupations (Fig. 11-2).

⁶⁰ The Ixtepeque source locale was probably heavily affected by the big eruption (Ilopongo? – see Chapter 9). One might expect an interruption of obsidian availability at Copán after this event, but if so it does not show up obtrusively in our date displays.

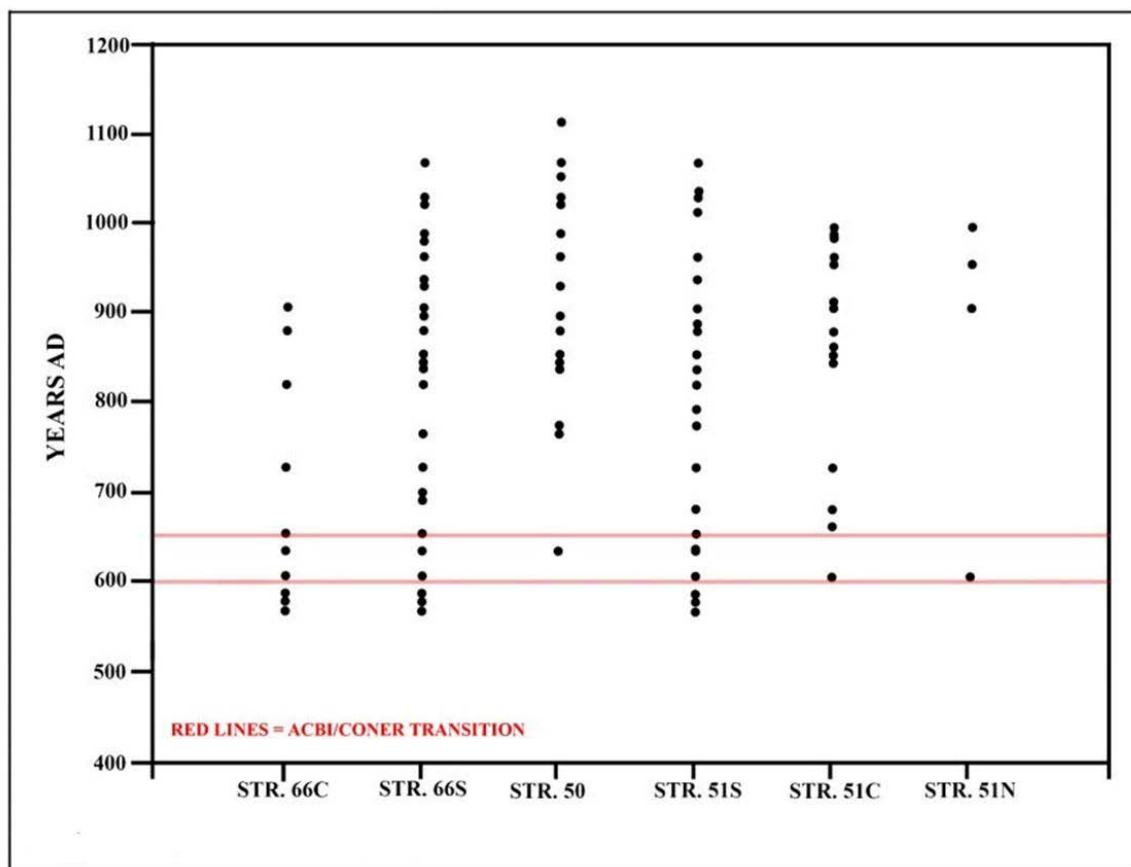


Figure 11-19. Dates associated with Op. 50 buildings.

Zelevnik made a distribution map (Fig. 11-19) showing the general associations between hydration dates and the main Operation 50 buildings.⁶¹ I say “general” because some associations were very tight (as in caches or middens up against walls) and others looser, in that dates are simply attributed to the building by proximity. Whether the associations are meaningful is debatable, but they do show that collections made in the several locales seem broadly similar. Freter’s and Abrams’s (2016) more recent examination of the hydration dates from individual patio and buildings in various elite sites led them to conclude that Str. 66C was abandoned about AD 1000.

The arrays in Figs. 11-18 and 11-19 show few incidents of obsidian use prior to AD 550. Were it not for the spike of 20 dates during the interval AD 650-700 one could posit a sustained series of events thereafter until the beginning of the 9th century. The distributions indicate a late Acbi presence (between roughly AD 550-650), a spurt of activity around the Acbi-Coner transition, lowered intensity of obsidian events during the 8th century, then another burst of activity beginning at AD 800 or a little later that continues until about AD 950. Activity remained respectable for another century, then tailed off until a minor spurt in the early 14th century. Obsidian events appear to have peaked (or maybe are just over-represented from late contexts) over the 150 years or so following the dynastic collapse, then gradually declined until at least AD 1200 and maybe later.

The overall hydration array contradicts two expectations from other data classes: why are early Acbi sherds (pre-AD 550) so few, and why is the 8th century, when we expect heavy occupation, comparatively underrepresented? One answer is that each time interval within the total occupation span of 8N-11 has not been, and probably cannot be, comparably sampled. To address the issue of total span of occupation we made a concerted effort to choose obsidian samples from the earliest and latest identifiable contexts, so these are disproportionately represented in the array. Especially abundant are dates from later behavioral contexts because these are most accessible and

⁶¹ Dates from Str. 66N are not shown here; they came mainly from the excavations of Widmer and Storey along the rear of the building and contexts are less secure.

intact (13% of all our dates come from two very late features that will be discussed shortly). That only about 15% of all dates fall in the mature Late Classic interval of AD 700-800 is therefore partly a product of the deliberate, disproportionate sampling of the early and late contents of the occupational continuum. For this reason, the overall date array shown in Fig. 11-18 is undoubtedly skewed somewhat too late, not in a presence/absence sense, but in a proportionate one. If we had proportional samples from contexts representing each 50-year interval from AD 600-AD 1100 there would be more overlap with the critical late 8th and early 9th centuries.

Another reason for the low number of 8th century dates has to do with site formation processes. In sites with large architecture and long occupation intervals, discarded material was probably routinely cleared away for reasons of livability, maintenance, and recycling. Room floors, terraces, and plaza surfaces were repeatedly swept clean, middens were periodically recycled into construction fill, and older buildings were razed to provide materials for later ones. All such activities were most intense during the interval of heaviest occupation and building activity. It is thus very difficult to adequately identify good primary contexts for such intervals (see Chapters 8 and 9). By contrast, it is comparatively easy to sample buried early contexts not highly vulnerable to later disturbance and the very latest primary contexts formed when occupational activity slackened or abruptly ceased.

Noise

Dynamism of site formation processes introduces obsidian from the main phase of occupation into many contexts, especially late ones, so a good deal might be recovered even when purposeful sampling was aimed at only early and late contexts. This brings us back to the problem of “noise”, or the contamination by materials that are markedly earlier or later than the behavior that produced the context. The urban core of Copán consists of many large, closely juxtaposed, Classic groups at which domestic and building activity was heavy for at least 150 years. These sites, moreover, occupy a part of the landscape with remains of earlier occupations extending back 2000 years or more as discussed in Chapter 2. Under these circumstances, both whole sites and behavioral contexts within each site are subject to contamination by artifact noise not related directly to primary occupations or specific contexts. Trash could easily be brought in from nearby sites with different occupation histories and used as construction fill.⁶² Very old artifacts could be confusingly re-deposited, as when wall fill collapses on top of much later living surfaces or features. Artifacts could be situationally dropped by casual visitors on sites that have been long abandoned or removed from such sites. The single most important and commonplace thing to bear in mind is that *the date of the context or formation of a deposit does not necessarily equate with the dates of all artifacts within it*. Even AMS radiocarbon dates often disappoint in this fashion.

By far the most frequent lot contexts from Ops. 50 and 63 were collapse and fill. Although these contained obsidian we avoided them whenever possible. The samples listed in Table 11-1 were mainly selected from three other kinds of deposits: 1) middens, 2) features, burials, and caches, and 3) above-floor accumulations. Despite our best efforts, these deposits (except for caches) were still prone to the introduction of noise. Middens, for example, were almost invariably shallow and were buried by collapse debris, with some resulting intermixture. In her dissertation Freter (1988) discussed why middens often fail to conform to our stratigraphic expectations because of mixing, and because the horizontal excavation units we commonly use crosscut the sloping lenses of midden accumulations. The most common kind of contamination is migration of early materials into later contexts, but the opposite occurs as well. Obsidian is particularly prone to such migration because blades or flakes can be picked up and reused long after they were originally made, and visual inspection of blades, unlike sherds, cannot eliminate this noise. Data displays such as Fig. 11-18 tend to reflect context most accurately. Despite the noise, the hydration dates cluster surprisingly well within specific contexts. Some 45 lot contexts in Table 11-2 (see below) contain two or more dates. In 25 of these clusters the earliest and latest dates overlap in their respective one sigma error ranges, and in twelve others they overlap in their two sigma ranges. If we eliminate plausible outliers (noise?) from two other lots (16 and 78) there also is acceptable agreement. Only six clusters out of 45 thus remain problematical if we accept these adjustments. Where context is very specific and reasonably sealed (e.g., materials from caches such as the one beneath the Str. 51C bench discussed below) clusters are very tight. A specific example of how the noise distortion works will be discussed shortly.

⁶² Such contamination is much less likely at more our widely-spaced small rural sites.

Noise is especially troublesome when only small numbers of dates are available because there is no larger distribution pattern that helps us identify outliers. Fortunately, the larger the sample of dates, the easier it is to factor out the noise effect. For example, the four pre-AD 600 dates in the array from Group 10L-2 might be the result of desultory early activity at the site. On the other hand, materials from the immediately adjacent Acropolis, where we know activity extended back this far, might have been re-deposited there. Whichever is the case, if our concern is the major interval of occupation, the introduced noise does not obscure the general pattern (itself consistent with many other lines of evidence): 10L-2 was mainly occupied between AD 600-800, with a probable decline between AD 800-875, and effective abandonment sometime around AD 900 or a bit later. Similar noise exists in the 8N-11 array but is less immediately evident.

Noise has positive effects as well because it adds a random dimension to sampling that might be beneficial. Archaeologists typically try to recover samples for chronometric dating from very specific contexts -- i.e., sampling is purposeful, not random. Purposeful sampling can lead to problems when suitable contexts are not available for all time periods. Assuming that they are not extraneous to the occupation span, artifacts that creep into specific contexts as noise still say something about overall occupation, as already noted. Many of the dates in Fig. 11-7 might be noise in the strict sense but they still serve to flesh out the occupation span at 8N-11. This beneficial effect of noise is greatest when samples are large. Another advantage is that with several dates from particular contexts it might be possible to detect details concerning the site formation process itself. For example, a few early dates in a generally late midden accumulation suggest that early materials were re-deposited, even if this is not obvious from other artifacts such as ceramics.

After all these caveats what do the hydration dates from 8N-11 imply in terms of the chronological issues listed at the beginning of this chapter? The earliest dates - those before AD 650 - nicely capture the undoubted late Acbi (AD 500-600) presence detected by Rattray's project and by us in our ceramic collections and stratigraphy. The impression that this presence was large is a result both of our intensive sampling of early contexts and the tendency for some Acbi obsidian to creep into later deposits. Equally informative is what is practically non-existent: pre-Acbi dates -- there is only one prior to AD 500. It is thus very unlikely that many obsidian-using, pre-Acbi people utilized the site. If they had, we would probably have recovered more early obsidian, either through purposeful sampling or as noise contamination. The paucity of early dates nicely mirrors the paucity of pre-Acbi ceramics. Apart from some incidental activity, occupation of 8N-11 seems to begin around AD 500-650.⁶³ Occupation became reasonably intense during the Acbi/Coner transition, or around AD 600-650. Thereafter, up until AD 900, the array meets the expectations of Viel's original short chronology.

That occupation extended long after the elite collapse is also clear. Many of the late dates came from quite secure behavioral contexts indicative not merely of desultory use of the group, but of residential activities. Clearly we cannot reject all the dates after AD 900 (35% of the total), because the issue here is precisely their plausibility. Nor, tempting as it might be, can we reflexively reject even the eight post-AD 1100 dates as bad outliers. Activity of some sort at 8N-11 might have extended well into the 14th century. A conservative span of occupation for 8N-11 is AD 550-1100, with the most intense occupation falling after the inception of the Coner phase, judging from both the obsidian dates and ceramic frequencies. The median date for the total array is AD 863, although given the sampling problems discussed above it is questionable whether we can draw any firm conclusions from it, and it is probably skewed a bit late. More importantly, only the post-AD 950 dates are controversial, given everything we now know about Copán, including the history of Macca's Group 9J-5. To put this another way, if we published here only the pre-AD 950 dates from 8N-11 (and from the other elite sites), along with their associated contexts and ceramic associations, the conclusion would be that hydration dating works just fine.

Other issues are more difficult. What do the hydration dates say about when major structures were built, and when the group, even if still occupied, ceased to have effective elite functions? Architectural configuration, as well as stratigraphy, clearly indicates that much of the activity on the site took place after the beginning of the Coner phase. Some of it continued after the end of the dynasty as reflected by the surge in dates after AD 800-825. In other words, the preponderance of late dates might be a function of sampling, but also of substantial continued activity at 8N-11.

⁶³ A program of very deep soundings might reveal early occupation, as it did at Group 9N-8.

Dates from Specific Contexts

The first hint we had that hydration dating might be working well at 8N-11 was the close agreement between Rattray's Op. 14 stratigraphic contexts and Freter's associated eight dates (see Chapter 2). One Op. 14 date (AD 927) came from fill of a late plaza floor, suggesting construction at least a century after the dynastic collapse. Below I discuss some other particularly important contexts that relate to the abandonment of the Str. 66 complex. Dated features from nearby elite sites are also germane to the issue of 8N-11's abandonment.

Masons restoring the small, cramped Room 1 in Str. 51C uncovered a cluster of seven obsidian blades (Feature 44) that had been placed in the fill of its bench. Widmer interprets this as a dedicatory cache and thinks that all the blades were freshly struck. Freter believes they might be from the same core. The seven hydration dates from this cache form an extremely tight cluster with a range from AD 828 to 914 (mean date AD 877). Collectively, the dates indicate that Room 1 was most probably added to the earlier Str. 51C rooms during the mid-to-late ninth century. If the Str. 50-51 complex mainly functioned as ancillary facilities for the larger architecture, the implication is that elite activity was ongoing as well. These dates unfortunately cannot tell us when the earlier sections of 51C were built, nor if the complex originally complemented the first or second phase buildings of the Str. 66 complex.

Four dates came from obsidian in a cascajo layer that might be part of a floor adjacent to the east wall of Str. 51C (lot 240). These form a very tight cluster (AD 906-997). If this is ballast for a floor, it was laid down no earlier than 927 (if the latest date is assigned its one-sigma error) and possibly as late as the end of the 10th or early 11th century. There thus seems to have been occupation and construction at 8N-11 for *at least* a generation or two after the last ruler. Late dates from the cached blades and from the cascajo layer are consistent with similar post-dynastic activity detected by Maca at 9J-5. Late ceramic middens there, including one from a room in the dominant structure 9K-88, indicate that at least marginal elite activity continued until about AD 925 (Maca 2002).

Midden dates: Eighteen dates at 8N-11 come from two middens—Features 9 and 12--buried by construction debris when the walls and vault of 66S collapsed (see Chapter 8). Both were thus subject to contamination by earlier noise from the collapse debris but were reasonably well sealed from the introduction of extraneous material post-dating building collapse. There is no doubt that both are very late contexts, although this does not imply that all artifacts associated with them are necessarily late for reasons already discussed. Most crucial to the issue of abandonment are the latest dates in these contexts. Feature 12 (lot 313) was the dense scatter of obsidian, along with a few other artifacts, on the surface of the corridor between Str. 66S and Str. 67. Zeleznik originally thought that obsidian was being worked in this area and Ken Hirth tells me that the great preponderance of flakes (287 as opposed to only 42 blade fragments) supports this interpretation. In fact, almost half of all the obsidian flakes from Op. 50 came from this single deposit. Quite possibly it represents debris swept out of the interior of Str. 67, but knapping is known to occur in corridors and other outdoor spaces elsewhere in Mesoamerica. Whatever its origin, this scatter is obviously very late; it would never otherwise have been left for long in a heavily used corridor. The three dates from this feature (Table 2, lot 313) are AD 889, 1013, and 1030, with a mean of 977.⁶⁴ Their collective implication is not only that late discard of obsidian occurred in this area, but that the collapse of Str. 66S probably occurred no earlier than about AD 1000.

Feature 9 (lots 253, 273, 295), the shallow midden in the corridor between the rear of Str. 66S and the west terrace of Str. 50 was also buried by collapse. It might have been a kitchen area, and we took this midden out in two levels to try to minimize mixture with the collapse debris. The midden contained abundant domestic artifacts, including ceramics, obsidian, and ground stone, but also some broken, special objects of jade, bone, and animal teeth, along with the only footed basalt metate found at 8N-11. Feature 9 provides an excellent object lesson concerning the noise problem discussed earlier. In Bailey's (2007: 204) depositional scheme it represents a *cumulative palimpsest* that is so mixed that its resolution with respect to any original set of activities is extremely coarse. While much of it might be primary kitchen debris swept out of nearby rooms, it also contains re-deposited earlier materials, so it exhibits what some archaeologists call cumulative blurring. Mixed in with the great preponderance of Coner ceramics (95% or more in all lots) are traces of several pre-Coner types, so clearly pre-Coner obsidian might be in the feature as well. Interestingly, there were only four Copador Polychrome sherds among the 2704 recovered from Feature 9. This might indicate a very late facet of Coner in which Copador presence is dwindling. Of all our

⁶⁴ The two extreme dates fall within one year of each other's standard one sigma deviation.

middens, this one comes closest to the desecratory termination ritual model proposed by Stanton, Brown, and Pagliaro (2008: 237-238). That term's implication of intention makes me uncomfortable and I think Feature 9 is a non-problematic lens of refuse, pure and simple.

However it was formed, there is no question that Feature 9, like Feature 12, relates to the latest activity on the floor surfaces around Str. 66S prior to its collapse. In other words, context is undeniably late, but content is not uniformly so. This is typical of many middens and is precisely what is reflected in the obsidian hydration dates. Fifteen dates from Feature 9 average AD 967, with a range of AD 765 to 1115. Except for the one 8th century date, all the others fall well into the 9th century or later. Early dates falling outside the error range of the latest dates are expected; the latest dates, however, are those that most accurately represent the formation process responsible for the midden, which probably accumulated sometime in the 11th or early 12th century.

Both Features 9 and 12 were buried by the collapsed construction material of the Str. 66S. Even if we shift all the Feature 9 dates back 70 years to the earliest margins of their one-sigma error factors and ignore the latest date as noise, this collapse still must have occurred not earlier than the very end of the 10th century. Such a conservative reading of the array of dates is vanishingly improbable, and the collapse might have occurred considerably later, in fact at any time after the deposit of the latest obsidian in the middens.

Another set of middens excavated by Widmer along the rear (east) wall of Str. 66N exhibits a similar pattern of dates. These accumulations were maximally about 30 cm. deep. In addition to being subject to the same sort of noise already discussed, they were disturbed by the insertion of several burials which might also have penetrated to levels that predated the construction of Str. 66N. Fifteen dates from levels that seem to overly the latest living surface (lots 591, 592, 623, 624) have a range of AD 588 to 1013. The latest cluster of dates that falls in the 10th and early 11th centuries most accurately reflects the last depositional activity that took place before the middens were covered by wall collapse. Such activity certainly extended into the mid-10th century and probably later.

A word of caution is necessary before leaving the subject of middens. Archaeologists frequently use dated material from what they call "terminal middens" to assess site abandonment (see Bill 1997; Doonan 2010; and Andrews V and Fash 1992 for Group 10L-2). When sites have been extensively excavated like our small rural ones and the elite residences 10L-2 and 9N-8, one can be pretty sure that most or all the latest middens have been identified. If large sites have only been test-pitted, like Macca's 9J-5, such identification is more suspect. What one thinks is a terminal midden is simply the latest one *found* and might be younger than an undetected one nearby. It is easy, in other words, to find a terminal midden at a specific locale, but hard to know if a later one exists somewhere else. The Feature 9 and 12 middens are clearly the last accumulations around Str. 66S prior to its collapse, but we cannot say for sure that they were the latest at Group 8N-11, even though it has been much more extensively tested than 9J-5.

Whether the latest activity we detected at 8N-11, which might have extended well after AD 1100, was in any sense "elite" is questionable. On the one hand, the floors and benches of the major buildings were well-maintained and clean; there is no indication of neglect or abuse by the convenient "squatters" so often invoked by archaeologists (except possibly at Str. 67).⁶⁵ This is a strong indication that the collapse of the buildings did not long postdate the formation of Features 9 and 12. On the other hand, no attempt was made to rebuild any of the collapsed structures, so no putative resident elite group had the motivation or the energy to undertake renovations. The only post-collapse activity evident at the big buildings, apart from some probable modifications of Str. 67 and the superstructure of Str. 66N, is the removal of sculpture detected by Barbara Fash.

There was probably ongoing elite activity elsewhere in the urban core of Copán long after the collapse of the royal dynasty at AD 800-820. James Sheehy (1991) believes that the most impressive structure in the Type 3 Group 9M-22A was erected in the mid-9th century, just about when the last elites disappeared according to the original short chronology. Similarly, we have evidence of activity, including construction, at Group 9N-8 long after the royal collapse. Only in 1984 did we get good data about how late such activity was there. During that season Widmer uncovered the remains of a shell workshop in one of the western buildings of Courtyard H (Widmer 2009). He found a complete tool kit, along with shell objects in various stages of completion, all buried by the sudden collapse of the beam and mortar roof of the structure. Raw material included imported marine shell, and

⁶⁵ See Stanton, Brown, and Pagliaro (2008) for the much used and abused concept of "squatters", originally popularized by J. Eric S. Thompson.

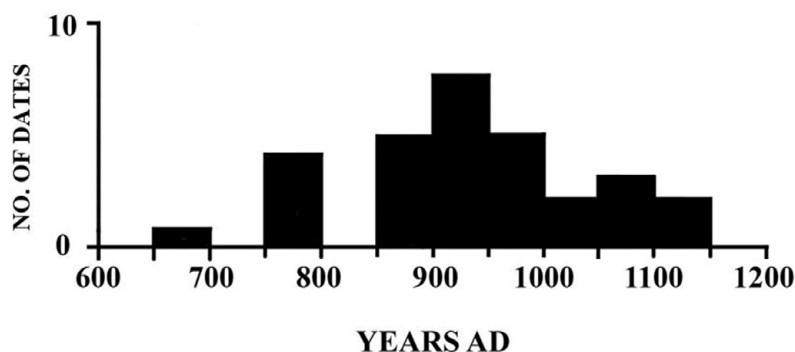


Figure 11-20. Dates from deep midden near Plaza A, Group 9N-8.

one product of the workshop was star-shaped shell pendants of the kind symbolically associated with bakabs. The same kind of pendant is depicted on a figure carved on the hieroglyphic bench in the nearby Patio A of 9N-8, on supports one and four of the Skyband bench at Group 8N-11, and on the Harvard bench (see Chapter 4). Four obsidian dates from cutting implements in Widmer's tool kit (all found inside the same jar) yielded a very tight cluster of late dates (AD 921, 955, 980, and 988), implying that the artisans continued their work well into the tenth century.⁶⁶ A plausible interpretation of this workshop is that the artisans of Patio H made elite objects for some lord who still lived in the House of the Bacabs or at some other nearby elite residence.

Widmer also excavated a large midden between Strs. 76 and 78 at Group 9N-8. Str. 9N-78 is the southernmost building in Courtyard H and Str. 9N-76 is an isolated building near the northeast corner of Courtyard A (see maps in Chapter 1 and in Hendon 1987: 503-505). These buildings are seven to eight meters apart and face away from one another. The midden was in the narrow space between the rear wall of Str. 78 and the adjacent large terrace wall of the huge platform that supports Courtyard A. It is one of the deepest (about 1.4 m) we ever found in our Las Sepulturas excavations, just the kind that Culbert remarked was so rare in the Maya Lowlands. Although its stratigraphy was disturbed by the intrusion of burials and other processes it was extremely rich in artifacts. We interpret Str. 76 to be a kitchen that was conveniently located to serve the highly ranked occupants of Courtyard A. Freter processed 30 hydration dates from various levels in the midden, and the whole array is shown in Fig. 11-20 (see Freter 1988: 315 for details).

Although we thought Str. 76 was a late 8th century kitchen building contemporary with the florescence of Courtyard A, most of the midden appears to have accumulated after AD 850, and deposition continued through the early 11th century. In any case, the dates show considerable late domestic activity in the locale. Few comparably deep middens were found at 10L-2 or other major elite residences dug by other projects. Maca later identified activity at 9J-5 extending at least to AD 925. His comment that no other site in the Copán pocket shows "community activity" so late in post-dynastic times ignores these previously published dates from Widmer's workshop and kitchen midden that suggest elite activity for another generation or perhaps much longer.

A particularly telling set of contexts reinforcing Widmer's Str. 76 midden evidence came from Plaza A, where obsidian samples from superficial debris yielded many post-dynastic dates (see Webster 1989: p. 38). Overlying the second-to-last plaza surface was a cache of seven small, side-notched points made from remodeled obsidian blades. Points like these are found in Terminal and Postclassic contexts at other Maya sites and almost certainly are arrow-points (Meissner 2014). One of them yielded a hydration date of AD 983, and four dates on other blades associated with the overlying (final) plaza surface suggest activity from about AD 795 to 1048. Plaza construction thus plausibly continued after the dynastic collapse, presumably overseen by resident elites who might have still used the Str. 76 kitchen. An elite presence at 8N-11 might well be equally late. It is even possible, given the convergence of late dates at Widmer's collapsed workshop and at 9N-8, that an earthquake caused damage at Las

⁶⁶ There is an interesting sideline to this context. Imagine that the blades in the jar are all properly dated. One conclusion might be that they were all made at about the same time – certainly their error factors allow this interpretation because they all overlap at less than one standard deviation. Imagine further that Widmer had instead found four wooden tools inside the jar and they showed the same spread and overlap using AMS radiocarbon dating. We would not hesitate to assume that they were all more or less contemporaneous. On the other hand, take the hydration spans at face value: now the blades were plausibly made over an interval of at least 60-70 years, yet they all wind up in the same intimate context and part of the same tool kit. If a context as good as this one can show this implied spread, we certainly should not be discouraged when other less-controlled ones, generated by whatever method, have a similar spread of dates.

Sepulturas in the latter part of the 10th century (although the collapse of Str. 66S appears to be a bit later). The close cluster of dates from the four blades in Widmer's workshop vessel – all well within the standard one-sigma error range – makes it likely that they were all made about the same time and perhaps even struck from the same core. Contexts such as this greatly increased our confidence in the hydration method, and they demonstrate the expectable chronological displacement of late artifact deposits vis-à-vis the late 8th century buildings at Plaza A and elsewhere.

The condition of Strs. 66C and 66S also bears on the question of elite occupation. Room interiors in both structures were very well preserved, suggesting that their vaults fell while they were still being maintained or cleaned, or at least not long after they were abandoned. If such a collapse had occurred while resident elites (or anyone else) were still actively using the structures, cultural material should have been buried in primary contexts on the floors, just as in Widmer's workshop, and in several 9N-8 buildings described by Hendon. If the buildings were abandoned and unused long before they collapsed, we would expect much more debris and litter on their room and bench surfaces. Four possibilities suggest themselves: 1) rooms were in active use, but in ways that did not involve the presence of non-perishable materials; 2) the collapse of the buildings was more protracted than we believe, allowing people time to remove belongings; 3) rooms were abandoned and cleaned out shortly before the collapse of the vaults; 4) rooms were disused, but still maintained in a desultory way until just before the vaults fell. Of these possibilities the last two seem most likely. Nowhere did we find much evidence of the deliberate destruction or widespread burning that some archaeologists believe afflicted the larger Copán urban core.

The Long Chronology at Group 8N-11: Implications for the Collapse and Persistence

The various histograms shown above depict the chronological distribution of obsidian blade production events. Taking their error factors into account and assuming adequate sampling, these events are crude proxies for the duration of site occupation assuming reasonably consistent per-capita obsidian availability, production, and use. If early or late occupants instead used other lithic raw materials or very little obsidian (i.e., making obsidian difficult or impossible for us to recover) then the occupation spans are probably abbreviated. Similarly, if during any interval per-capita obsidian consumption increased or decreased markedly, what we take to be intra-site shifts in intensity of occupation might be incorrectly interpreted, although the critical presence/absence implications for occupation are unaffected. Bearing these caveats in mind, the chronological implications for Group 8N-11 can be summarized as follows:

1. 8N-11 yielded very sparse evidence from ceramics or obsidian hydration of activity predating the Acbi-Coner transition, just the pattern that other researchers have routinely found elsewhere at Copán, most notably during the Harvard project. Although there was some early activity in the 8N-11 vicinity, major construction began not earlier than AD 600-650. Some sort of human presence is detectable at 8N-11 until at least AD 1100, and possibly as much as a century or more later.
2. The earliest buildings in the Str. 66 complex (66C-2nd, 66C-2nd -sub, and 66N-2nd) are of Coner date. Although they might have been built as early as AD 650-700, they more likely date to the early-to-mid-8th century.
3. The final phase large buildings (66C, 66N, and 66S) were built no earlier than the late 8th century, probably around AD 785, although the 66N superstructure might be considerably later. They physically collapsed (a different issue than abandonment of the group) around AD 1000 or perhaps later.
4. The smaller Op. 50 ancillary structures might have been built in conjunction with either the early phase or late phase Str. 66 architecture, but given respective alignments the latter is by far the more likely. Some of them were still being used and modified late in the 10th century.
5. Some sort of residual elite activity might have extended to AD 1100. Additional activity, which plausibly lasted for another century or two, was probably non-elite in character. Li and Ramos (2017) reported post-elite presence based on their recent excavations of Str. 70C.

Even the material from the very latest activities, particularly that found to the rear of the Str. 66 complex, predominantly consists of Coner phase sherds, including Copador Polychrome. Rattray's idea of "Epi-classic"

activity at 8N-11 seems acceptable, but her “post-Copador” label is questionable both in light of the extended duration of the Coner phase as revealed by hydration dates from 8N-11 and from elite groups more generally.⁶⁷

Issues and Biases of Hydration Dates and the Long Chronology

An implication regarding sampling scale emerges from analysis of our obsidian hydration dates. It is tempting to assume that accuracy increases with sample size. This might be so when sampling is random, but archaeologists usually choose samples for chronometric assays very carefully. 8N-11 provides insights about sample selection when the issue is the total chronological range of activity at the group. The small sample of eight dates that Freter ran for Rattray’s plaza excavation (see Chapter 2) captures about 67% of the chronological variation shown in the total array of 167 dates at 8N-11. What gain would there be in enlarging the present sample to, say, 500? In all likelihood modification of the current occupation span estimate would be minimal. The lesson is that there might be rapidly diminishing returns in increased sample size, especially when careful, purposeful selection has included the earliest and latest contexts. Such an insight would be difficult to get from arrays of other kinds of chronometric dates because sample numbers are usually tiny.

Another sampling insight shows how different chronometric methods can introduce bias, even if results are good. In our earlier concordance experiment (Webster, Freter, and Storey 2004) we showed that AMS radiocarbon dates from burials agreed well with hydration dates from small Copán sites. We used only burials because they usually provide the most reliable organic remains and contexts. The specific sites were chosen simply to test agreement between the two methods, not to document the duration of occupation of the valley or how long Coner ceramics were used. Concordance between the two methods was very solid, and one burial dated well after AD 1000. The experiments’ results (this single date apart) had no expected direct implications for human occupation of the valley after that time. Burials are very rare at Copán sites compared to obsidian artifacts, even where extremely intensive excavations have been conducted, as at elite Group 9N-8. Small rural sites like those we used in our experiment produce few burials even when excavated thoroughly (Webster and Gonlin 1988). After AD 1000 Copán’s human population was small. Our *maximal* estimate for the interval of 1000-1050 is 3800 people and after AD 1200 just a few hundred (Webster, Sanders and Van Rossum 1992: 189; see also Freter 2004). Also unclear is where these late people lived. Even if we had subjected, say, half of the 736 burials in Zeleznik’s and Reed’s database to AMS analysis, only by good luck would we have encountered any that firmly dated to AD 1050 or later, so even a large suite of radiocarbon dates would probably have an early bias. The spatially more expansive and much larger hydration sampling provided just such evidence. Detecting late human death events is much more difficult than detecting late obsidian events because the former are much less numerous.

The long chronology assumes that hydration determinations can be used as absolute dates. Some archaeologists prefer to interpret our date arrays in a relative as opposed to absolute way. From this perspective the overall pattern of dates is accepted, but the whole array itself “floats” without any absolute link to the Gregorian or Maya calendars and independent data must be used to anchor it in absolute time. For many reasons discussed above and in other publications, we believe that using our obsidian dates in an absolute sense is valid, as our concordance experiments confirm. It is instructive, however, to consider once more the implications of shifting the 8N-11 array to agree more fully with the traditional Copán ceramic sequence if there is, as some critics contend, systematic late bias in the dating method.

The most obvious way to reconcile the 8N-11 array with the traditional Copán chronology is to shift it back in time by about 200 years, so that AD 1000 becomes AD 800, etc. Such an alignment would show a burst of activity between AD 650-800, then a rapid tailing off of dates in the ninth century. This pattern is consistent with Copán’s traditional short chronology -- a rapid growth of elite groups in the 8th century, then a precipitous decline of both elite activity and overall population at, or shortly after, the collapse of the royal dynasty. Unfortunately such a realignment creates very serious problems with the ceramic chronology. The bulk of the dates would fall into Acbi times, yet Acbi ceramics are few and obvious Acbi constructions are absent at 8N-11. More confounding is that the bulk of these Acbi dates would clearly be associated with Coner ceramic indicators and contexts because we would have to shift the beginning of Coner two centuries earlier. Our confidence in the usefulness of the hydration determinations as absolute dates ultimately stems from their close agreement with many other independent lines

⁶⁷ Although one must be cautious here given the unexpected ceramic entities subsequently identified by Manahan and Maca.

of evidence. One of these is their agreement with the traditional dating of the Acbi-Coner transition, the best-known and most critical ceramic benchmark at Copán. We believe that the alignment as shown in Fig. 11-18 yields valid implications for Group 8N-11 and requires no alteration.

Duration of Ceramic Complexes

Gordon Willey and (initially) William Fash both accepted a long duration for Coner, as we already saw. Critics later complained that the long chronology makes the Coner phase and any Coner-like Postclassic extension from the mid-7th to the 13th century much too long. That ceramic entities, including whole ceramic phases, sometimes last much longer than anticipated should be no news to Maya archaeologists. One example was reported by Juan Pedro Laporte (1995), who determined that interpretations of cultural stratigraphy at some sites in the northeastern Petén, especially around Dolores, were distorted by incorrect assumptions about regional ceramic dynamics. An apparent Early Classic hiatus (few or no Tzakol tradition markers) at some centers turned out to reflect instead the unusually long survival of Late Preclassic Chicanel ceramics. Laporte called this entity Chicanel Periferico and related it in part to elite vs. non-elite behavior. Such persistence is surprising because of the proximity of the sites in question to dynamic, emerging Classic centers such as Uaxactún and Tikal. Elsewhere such conservatism seems to characterize the Late Preclassic to Early Classic ceramic transition in the Puuc region, and in the northern Maya Lowlands Middle/Late Preclassic ceramics were “relatively homogeneous” for some 700 years (Glover and Travis 2010: 65-67).

The Copán long chronology supports a similar persistence of the Coner tradition. Copán and other large Classic polities were clearly in decline after AD 800, both on the royal and elite levels, so local ceramic traditions might be expected to show reduced dynamism. At Copán, of course, we are not dealing with a hiatus phenomenon like Laporte’s, but rather a final, if prolonged, abandonment of the valley. The long chronology suggests that the apparent absence of Coner-tradition ceramics after about AD 925 is as much an illusion as was Laporte’s Tzakol hiatus in the northeastern Petén. Because there was no strong revival at Copán we have no stratigraphic information comparable to that available to Laporte and no succeeding ceramic complex providing a *terminus post quem*.⁶⁸ Determining such terminal dates for late Maya complexes has long been a problem for ceramic analysts (e.g., see Munoz 2006: 154 for Piedras Negras, and Zaro and Houk 2012 for La Milpa).

The expanding short chronology: Revealingly, even discounting the hydration dates, the traditional short chronology has become longer since PAC I times. When we began PAC II we all accepted that the dynasty fell about AD 800 and that the valley was effectively deserted by AD 850, so the Coner phase lasted 150 years. Bill later extended what she called Coner 2 to AD 950, and Maca’s work revealed continued occupation of 9J-5 at least until that time. Manahan’s neo-Ejar people might have been there as late as AD 1075, well beyond Braswell’s (1996: 537) estimate of AD 950 for complete abandonment of the valley. When the Acbi/Coner transition was pushed back to around AD 650 the span of Coner became 300 years, twice its original duration. No one now believes that the valley was deserted right after the dynastic collapse, and Viel’s 2004 chronology makes provision for some sort of Postclassic presence until AD 1400 or later, in line with Willey’s commonsense view. Disagreement instead focuses on several related matters, the first being the size of the post-dynastic population, no matter what kinds of ceramics they used.

Our maximum estimate for the interval AD 1000-1050 is about 7700 people for the whole valley (Webster, Sanders and van Rossum 1992; Webster, Freter, and Storey 2000). A population of this size could easily have supported residual elite activity at sites like 8N-11 and 9N-8. Presumably, however, this is many more people than Manahan would countenance for his neo-Ejar interval. After AD 1100 we think the valley population dropped to less than 2000 people, and then tailed off to a few hundred. Our simulation estimates for this late interval are very close to those earlier made by Freter (1988: 178-179) who put the population at 2000-3000 in AD 1150. It is mainly this very late human presence that remains controversial. In any event, we must distinguish between late obsidian dates and late Coner tradition assemblages. If people lived in the valley until AD 1075 we would expect some obsidian dates to be this late, and obsidian might have been deposited in abandoned elite groups where people poked about for sculpture or building material, or where they cultivated crops. Obsidian dates that fall between AD 900-1100 are thus not in themselves unexpected.

⁶⁸ Unless we regard Manahan’s neo-Ejar as such a complex, which I do not.

A second issue is where the late inhabitants of the valley lived and what kind of pottery they used. One unlikely possibility is that they only lived in Manahan's little enclave (for which we have no hydration dates) and that only neo-Ejar ceramics were used there and nowhere else. More probably they also lived in other locales where they retained some Coner-tradition ceramics. This is an empirical question and insisting that Coner (or something like it) disappeared before AD 900 or 950 is merely opinion. Seasoned archaeologists like Gordon Willy saw no reason to reject Coner persistence or the obsidian chronology out of hand, nor at first did William Fash, one of the authors of the 1994 Harvard report that favored an extended Coner-derived complex. Several lines of evidence apart from the hydration dates support the long chronology, which is ultimately a refinement of the short one, with which it agrees in most respects. It would presumably have made sense to Toynbee and Longyear, just as it did to Willey in 1989.⁶⁹

Ceramic Sequences, Transitions, and the Classic Collapse

Mayanists have traditionally based their temporal assessments on ceramic chronologies, beginning with the 'Ur-chronologies' developed at Uaxactún and Mayapán (Smith 1955, 1971). Such ceramic sequencing is anchored in architectural stratigraphy and middens, in monument dates associated with large structures, in cross-dating, and (in the case of Mayapán) in surviving Maya oral histories, very late Precolumbian books, and post-conquest native chronicles. The whole tradition of temporal control by ceramic phases in the southern Lowlands derives heavily from large-structure excavations in central architectural precincts, and it began before any effective use of chronometric dating methods was possible. A good example is Smith's Uaxactún sequence, cobbled together from a small sample of 17,011 sherds mostly extracted from masonry fill and two large middens. Radiocarbon dates have since refined many ceramic sequences, but some are still insufficiently corroborated by large sets of dates (see Glover and Stanton 2010 for examples). Even more surprising is that some major centers prominent in the literature, such as Calakmul and Dzibanché, lack well-developed ceramic sequences (see Webster and Ball 2021).

Just when one ceramic complex or phase ends is still best assessed by when the subsequent one begins. This shift itself requires considerable archaeological judgment, sometimes of a fairly arbitrary kind. Architectural stratigraphy and monument dates at Copán (along with cross-dating) provide reasonable clues about the duration of most ceramic phases because succeeding complexes can be defined. This is not true of Coner because it is not replaced by some other widespread ceramic entity, so it "floats" in terms of its ending. More generally, as Glover and Stanton (2010) point out, archaeologists are not very good at chronological delineation of *transitions*. Their concern was with the Preclassic – Early Classic ceramic transition in northern Yucatán, but the same difficulty afflicts the southern Lowlands regarding the big transition, the Classic Maya "collapse". Mayanists long thought of the 9th and 10th centuries in the south in terms of truncation, not transition in any meaningful sense, hence the abrupt disappearance of both the Copán polity and population over a mere 50 years or so according to Viel's 1983 conception.

Frozen in time?

I remarked earlier that Copán's short chronology makes interpretations of elite activity at Group 8N-11 easier because it compresses events into a narrow slice of time. It preserves the original "frozen in time" perspective of William Fash and others, and their confidence that terminal features found on the surface (and much that is revealed by excavation) reasonably represent the remains of a coherent, emic community system.⁷⁰ Hendon (1987)

⁶⁹ In 1986 Lawrence Feldman, then working on ethnohistoric sources for Guatemala and western Honduras, suggested that many Maya people from the Copán valley decamped for a new center they founded around AD 1200 somewhere between Copán and Chiquimula (personal communication to Webster; see also Freter 1988: 216-217). Feldman noted the distinctly spotty distributions of local populations in western Honduras in the early 16th century. During the 1530s, when the Copán valley was chosen as a production center for tobacco (a monopoly of the Spanish crown), it was so poorly inhabited that labor had to be brought in from Santa Rosa de Copán and from Guatemala. Two things are clear: there were other nearby regions that could absorb out-migration from the Copán valley, and Late Postclassic populations failed to recolonize the valley even after several hundred years. Such an interval is more than sufficient for considerable environmental recovery, especially on the fertile alluvial floor. For outlying sites and locales affiliated in some way with Classic Copán that could have absorbed migrants see Canuto and Bell (2013). Unfortunately, we lack good settlement histories for these distant zones.

⁷⁰ In fairness, Fash disavowed his "frozen" characterization eight years later (Fash 1991:174). By that time it was clear that there were pre-Coner structures on the map, and he accepted Freter's hydration chronology that extended occupation (and by implication the survival of Coner tradition ceramics) in the valley as late as AD 1200. Based on the Tulane research at Group 10L-2 and Manahan's later discoveries, he then shifted his support to the revised short chronology that ended Coner at AD 950, left the valley vacant thereafter except for Manahan's neo-Ejar community, and accepted Braswell's (1992,1996) dismissal of the hydration method. Even the parts of the hydration sequence that

held this heavily synchronic view when she wrote her excellent analysis of the behaviors reflected in architecture and artifacts at three elite sites at Las Sepulturas. Her conclusions at that time were consistent with the original short chronology. The opposite is true of the long chronology. If some variant of the Coner tradition lasted until AD 925 or 950, much less a couple of hundred years longer, the implications of many of her contexts, especially terminal middens and floor deposits, change markedly. Such terminal deposits and features might not have much to do with the functions of buildings and plazas during the late 8th century.⁷¹

Two other examples illustrate the problem. I noted in Chapter 8 that if our 8N-11 burials were all made when the compound was an active elite residence between about AD 650 and 800 (and especially between AD 750-800) we might reasonably expect them to reflect a coherent program of mortuary practices consistent with the social conventions of the mature Copán polity. On the other hand, if they were made over a longer interval of 300-400 years no such coherence can be expected. Similarly, if the materials from Widmer's 9N-8 workshop date to circa AD 950, it might not tell us much about the *ajk'uhuun* who first sat on the bench in the late 8th century or what kinds of crafting took place during his tenure. Archaeologists often use the simile *palimpsest* to refer to overlays of materials from different time periods. Its original meaning, however, refers to the obliteration (or nearly so) of one layer of text on a parchment that is then overwritten with a later one. What happens in archaeological contexts is instead cumulative blurring. The long chronology exacerbates this problem and its implications for noise by allowing a more complicated interval of use and modification. Although Str. 66C and 66S experienced little or no change after their completion about AD 780 or 790, Str. 66N's superstructure, some of the ancillary buildings, and parts of the Causeway Building could be later. It thus helps resolve the larger issue raised by Fash in 1986 (see Chapter 9), namely that the huge scale of Coner phase settlement and construction must represent *at least* a century of activity. The long chronology makes Coner a less "explosive" culture-historical phenomenon, and because residences, especially small ones, had less contemporaneity, it implies lower population for any interval within Coner.

Some Copán researchers who championed a version of the short chronology changed their minds – sometimes more than once. In 1986 William Fash favored a "devastating and complete collapse" but later concluded that the PAC II obsidian hydration research

"... has unequivocally demonstrated a much longer process than the 'rapid devolution' than I and other PAC 1 researchers had posited. Now when one talks of the Copán 'collapse' there are three facets to consider: the decentralization of power during the 8th and early 9th centuries AD; the political collapse of Copán kingship in AD 822; and the demographic decline of the supporting population and ecological deterioration of the Copán Valley (which apparently continued to be occupied until as late as AD 1200 (Fash 1991: 174)."

This view tacitly accepted the long extension of Coner tradition ceramics and undercut his earlier "frozen" Late Classic settlement perspective which minimized behavioral displacement between final phase architecture and deposits of terminal artifacts and features.

Andrews V and Barbara Fash (1992: 84-85) found that Freter's hydration dates agreed well with the architectural and depositional sequence at Group 10L-2, and they used them as evidence for their own chronological reconstructions, as did Maca at 9J-5 and Ashmore at Groups 10L-10 and 10L-12. William Fash and others later backed off this perspective and essentially reverted to the revised short collapse process, apparently because of the seduction of the "frozen in time" perspective and Manahan's discovery of his neo-Ejar community. Jeffrey Braswell (1992, 1996) dismissed both the hydration method in general and our use of it (see Webster, Freter, and Rue 1993 for a response). The hydration dates generally work well at Copán, and Manahan's little late group doesn't change this fact. I believe that Manahan's site and our own extended Coner occupations/ceramics co-existed, and that thinking about them in an "either-or" manner is a mistake.

Plank (2004) was troubled by the displacement problem for reasons discussed in Chapter 12. She accepted Bill's extension of Late Coner 2 to AD 900 and argued that our superficial artifact deposits at 9N-8, 8N-11 and other

demonstrably worked for the pre-AD 950 interval were incorrect, and there were no Coner-like ceramic assemblages after AD 950.

⁷¹ This might be why Hendon detected flexible and multi-faceted use of space in her analyses -- elapsed time had contextually compressed remains of disparate activities that took place over several generations. That Widmer retrieved such convincing evidence of craft production in his 9N-8 excavations probably reflects the sudden collapse of his buildings, which sealed short episodes of behavior.

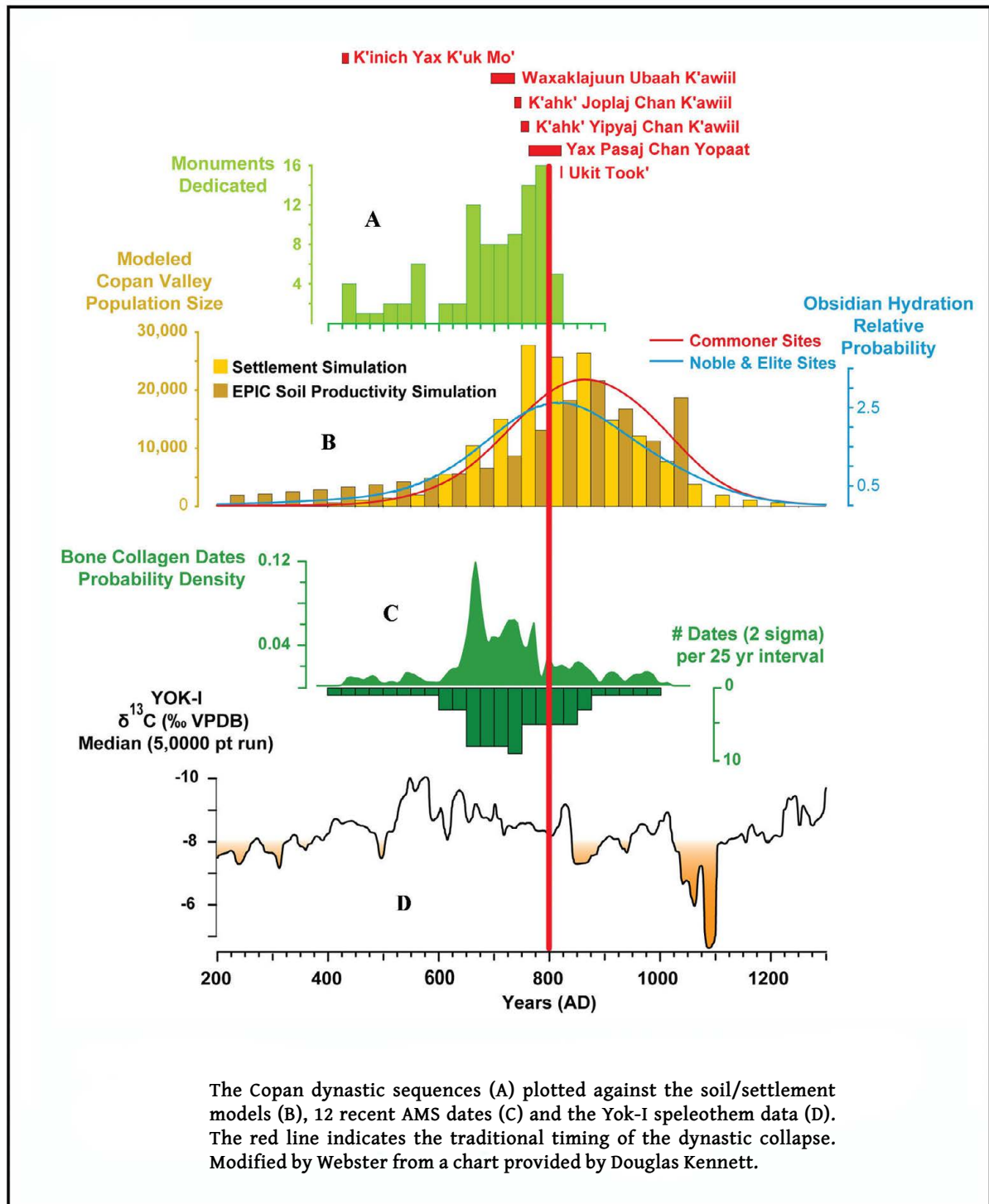


Figure 11-21. Speleothem data and associated Copán dates and dynastic sequence.

high-rank sites were made long after elite activity ceased. Artifact distributions thus tell us little about structure functions, and she says we made no “bridging” arguments to show how the behaviors they implied related to the pre-collapse architecture in locales such as Plaza A. She rejected our hydration dates, and because she accepted Bill’s termination date any Coner assemblage after that time must be incorrectly dated. Once again the issue is the duration of Coner or Coner-like ceramic forms. The long chronology simply assumes that whatever shifts in elite behavior occurred, the use of quotidian Coner-like pottery continued as domestic tasks persisted. If they could persist for 100-150 years after the dynastic collapse, as Bill’s realignment asserts, why not longer, as Willey and Fash (initially) believed? The bridging argument is clear: people continuously used pottery of this tradition, however fitfully or intermittently, at sites like 9N-8 for longer than previously expected, although loci of use often shifted (e.g., as mundane activities spilled over into previously elite spatial contexts).⁷²

Drought and Collapse

Occupation histories of some Maya sites and regions align poorly with the major droughts often envisioned as principal causes of the Classic collapse, and evidence of persistent occupation complicates drought explanations (Webster 2014; 2018). Becan did experience an interval of major abandonment around AD 780-830, roughly when the proposed mega-drought began, but its ninth-century revival aligns poorly with the proposed episodes of multidecadal drought between AD 850 and 1100 (Webster and Ball 2021). Maize pollen from soil profiles at Aguada de Terminos near Tikal indicates cultivation that plausibly continued from the base of the column through the 13th to 14th centuries, and the biggest percentage surge in charcoal is Postclassic (Lentz *et al.* 2014; Webster 2018). Another case in point is Nakum, where florescence occurred during the first 150 years of the drought episodes.⁷³ Zaro and Houk (2012: 153) report radiocarbon dates in the 9th and 10th centuries at La Milpa that indicate significantly longer occupation than previously imagined, and Prufer and Kennett (2020) discuss evidence for late populations in southern Belize. Many more such non-conforming examples could be listed. If major droughts did affect Copán, Toynbee’s question quoted at the beginning of this chapter takes on new pertinence. It is one of the few major Maya polities outside Belize and the western Maya Lowlands situated on the wide floodplain of a river that never failed. Irrigation is used today at Copán and probably was in ancient times as well, and John Wingard built it into his several simulations. We would not expect the Copán population to dwindle away entirely because of insufficient rainfall.⁷⁴

Recent evidence concerning drought derives from the Yok-I speleothem from southern Belize (Kennett *et al.* 2012). Fig. 11-21 juxtaposes the speleothem record with other chronological data from Copán, including our two different population models.⁷⁵ The chart shows 24 radiocarbon dates from Copán skeletons processed by Kennett’s lab. Because we now have many additional such dates as shown in Appendix A, I will only say that this part of the display agrees reasonably well with the other lines of evidence shown given the small size of the sample. Burials are rare or absent at many Copán sites and the post-AD 1000 population was small. This makes it difficult to detect and sample collagen from individuals associated with late occupation, especially if the associated ceramic markers are still Coner or Coner-like, and so not chronologically very sensitive.

Kennett’s speleothem record shows dry conditions between about AD 760 and AD 810 that might have exacerbated agrarian shortfalls and status rivalry during the reign of Copán’s last king. Notice, however, that the moisture curve for the Late Classic is reasonably like that between AD 400 and 500 when the foundations of the Copán polity were established. We have good ceramic evidence for increased Acbi population compared to pre-dynastic times, but overall levels remained low compared to those of the Coner-phase. If rainfall were a strong limiting factor

⁷² Oddly, what seems to bother some critics is not the purported population persistence, which is becoming commonplace in many southern lowland regions, but rather the extended use of Coner-tradition ceramics and that it was detected by non-standard means.

⁷³ Timing of the drought(s) has often shifted. Early estimates put the TCD (Terminal Classic Drought) interval at about AD 800-1000 (Hodell *et al.* 1995). Later the TCD was divided into two phases: AD 770-870 and AD 920-1100 (Hodell *et al.* 2005). Not only were there 50 moister years between these two pulses of drought, but microstratigraphy of gypsum and organic-rich sediment indicated more closely-spaced wet-dry intervals within the main phases. Correlation of the late sediment record from the Yucatecan lakes and the finer-grained seabed deposits off the Venezuelan coast with the historical drought record from Yucatán since the early 16th century (Mendoza *et al.* 2007) might more finely calibrate these proxy deposits with known historical events. Perhaps this has been done, but if so I haven’t seen it. Even more promising are extremely fine-grained reconstructions derived from speleothems, although just how localized their paleoclimatic records are remains to be seen..

⁷⁴ In fairness, Quiriguá, located on the much larger Motagua floodplain, does seem to have an early political collapse, but we unfortunately know little about its settlement or population history compared to Copán.

⁷⁵ See Prufer and Kennett (2020) for good images of speleothem data and other proxies.

we might expect the moist conditions during the 6th century to correspond with a major upswing in population, but the big increases begin about AD 600-650 (the Acbi-Coner transition) during a short dry interval. Growth continued for the next couple of centuries, and even though there was a drying trend rainfall was higher than during the Early and Middle Classic. The major florescence of Copán, both demographically and in terms of its most impressive output of inscriptions, sculpture, and architecture, all occur between AD 700 and 800 during interval of slight moisture decline, but still with respectable levels compared to the Early and Middle Classic. The royal collapse occurred just before a short interval of increased precipitation between AD 800 and 850.⁷⁶ Another big rainfall decline sets in at AD 850-875 but seems not to have much effect on Copán's population. A moister trend then commenced at about AD 875-900 and continued, with some perturbations, until about AD 1025, followed by a severe drought. This stress might have undermined the last surviving elites at Copán. It is consistent with the continued population decline but aligns poorly with the short chronology collapse.⁷⁷ By AD 1100-1125 moister conditions were reestablished, supporting David Rue's detection of late farming activity, and it seems unlikely that the lack of population recovery after AD 1100 was due to deficient rainfall.

In a previous publication (Webster 2018: 56) I remarked that the big unknown in speleothem and other climate proxies is what they mean in terms of absolute rather than relative fluctuations in precipitation. Annual rainfall and its intra-annual patterns are, after all, most critical for farmers in the short term.⁷⁸ Shortly after I raised this issue Evans *et al.* (2018) reported the results of new chemical and sediment analyses at Lake Chinchancanab in northern Yucatán, source of the original evidence for megadrought (Hodell, Curtis, and Brenner 1995). They reconstruct especially high probability of drought between AD 750 and 800, and later between AD 950 and 1050 (2018: 498). Sophisticated modeling (p. 501) suggests annual rainfall declines of 40-50% in a northern region that today gets about 1200 mm per year.⁷⁹ These results are just the kind we need, but they raise two questions. First the old objection (see for example Neiman 1997: 280) -- why were there no catastrophic political or population collapses in northern Yucatán like those of the central and southern Lowlands? Second, farmers in many parts of pre-modern Mesoamerica produced crops on landscapes that received 500-600 mm of annual rainfall, the residual levels modeled for the Lake Chinchancanab region. To the south at Tikal, where precipitation is higher at 1700-1800 mm, droughts of this magnitude should have left adequate moisture. In fact, given the vulnerability of maize to root-rot and other problems, many agrarian landscapes might have benefitted from less rainfall.⁸⁰ Too much rain also enhances erosion, which in the long run reduces productive capacity through soil loss, but locally increases it by redeposition, thus increasing local variance in agrarian well-being (see Webster and Murtha 2015), a factor in slow collapse.

Despite these new paleoclimatic insights, Copán's environmental circumstances, and especially its never-failing river, make it indeed a "wild card" in the comparative perspective of Classic Maya polities as Toynbee recognized. We should not be surprised that its population history is anomalous. One measure of its distinctiveness is seen in an article by Nicholas Dunning and Timothy Beach (2010) who assessed the ecological and cultural histories of a wide range of Maya polities. Revealingly, they did not include Copán, where we know about these things in greater detail than almost anywhere else. See also the telling hydrological contrasts between Tikal and Caracol (Chase and Cesaretti 2018).

Other Slow Maya Collapses

Post-dynastic survival of local Maya populations is now unexceptional.⁸¹ Research by many projects has turned truncation into transition elsewhere in the southern Lowlands (e.g., see Lamoureux-St-Hilaire *et al.* 2016 for

⁷⁶ I think the decline in obsidian events between AD 800-850 shown in Fig. 11-1 is just a sampling error. If it is real, it seems to happen during this time of increased precipitation, not drought.

⁷⁷ The jump in the soil model profile at AD 950-1000 is an artifact of Wingard's assumption about irrigation use made in his simulation; see Webster (2005) for discussion.

⁷⁸ I understand that other factors are involved, such as soil depth, soil texture, slope, and mean temperature during the growing season.

⁷⁹ Ebert *et al.* (2017) analyzed known colonial era droughts and their demographic impacts (see Webster 2018: 56 for a discussion). Interestingly, the gypsum lake precipitates they used as drought proxies do not correlate with these earlier droughts. Evans *et al.* (2018) think this is because colonial droughts were of shorter duration than the ancient ones.

⁸⁰ Few archaeologists have considered that less moisture might be advantageous in many parts of the central and southern Lowlands but see Nooren *et al.* (2018) for the suggestion that excessive rain had various kinds of deleterious effects on agrarian adaptations early in Maya history. In some other tropical regions of the world excessive rainfall prevents adequate burning to clear fields.

⁸¹ See Fauseit (2016) for examples from other parts of the world.

a prolonged transition at Minanha, and Zaro and Houk 2012 for a similar case at La Milpa).⁸² Recently Polish archaeologists have determined that the impressive center of Nakum, in northeastern Guatemala, thrived in the 9th and 10th centuries (Zralka and Koszkuł 2010; Zralka and Hermes 2012). There the local dynasty and its impressive central acropolis seem to have weathered the royal collapses that afflicted Tikal, Calakmul, and other impressive nearby centers. All the Nakum data appear to come from the royal center itself, so how much longer might lesser elites and commoners have survived on this landscape? Prudence Rice (2018) reports Terminal Classic and possibly Postclassic ball-court use at Nixtun-Chich, Petén, a center with impressively long occupational duration, and there are many signs of extended occupation and incipient elite revival in the Petén lake region (Schwartz 2004). Farther to the north Stephen Houston and his colleagues documented post-dynastic and Postclassic activity in the Buenavista valley between AD 850-1250. Kingsley and Gámez (2018) excavated a small Postclassic community near El Zotz whose inhabitants survived the dynastic collapse and retained many of their earlier residential traditions, including considerable ceramic continuity, for several centuries, although fine Late Classic ceramic types were no longer made (Czapiewska-Halliday *et al.* 2018).⁸³ La Corona seems to have a respectable post-dynastic construction history lasting until at least AD 1000 (Canuto and Barrientos 2020), and Edzná experienced considerable construction during Terminal Classic and Postclassic times and was not abandoned until the 15th century. At Piedras Negras the royal court somehow shambled along for a generation or so after its final king, Ruler 7, was captured by Yaxchilan (Houston 2013), and nearby El Porvenir, which I tested over twenty years ago, turns out to have survived for a century or two longer (Kingsley *et al.* 2012). There was vigorous construction activity during Becán's Xcocom occupation (about AD 830-1030), and the associated Río Bec architectural style experienced a larger regional florescence between about AD 830 and 900 (Ball 2014; Webster and Ball 2021).

A sudden and pervasive Classic Maya collapse has been the conventional wisdom purveyed by Maya archaeologists since the explorations of Stephens and Catherwood. I and my colleagues have long envisioned a more nuanced and protracted population decline, not least because of our experience at Copán, where 8N-11 and other elite-rank sites provide substantial support for this conclusion. But is our long chronology really such a radical departure from the conventional wisdom? In one of the first systematic attempts to quantify the decline, Billy L. Turner (1990: Table 7.1) calculated that by AD 1200 population in the central Maya lowlands was reduced by 90-92%. If we apply Turner's percentages to a peak Copán population of 20,000, there would still be 1600-2000 people in the valley at AD 1200, a reasonable fit with Freter's estimate of 2000-3000 people at AD 1150. One might argue that Turner's figures are long out of date, but they show that our own estimates are not drastic revisions of long-standing conceptions of the general Maya population collapse. Something dramatic certainly happened to Copán's kings, nobles, and common people over an interval of about four centuries, but it was a slow and attenuated historical drama. Copán's sub-royal elites and lesser folk in the end lacked the resilience to recreate some semblance of a unified kingdom, but they did exhibit considerable persistence after the kings were gone.⁸⁴

⁸² I've been told that recent radiocarbon dates from the Río Amarillo region of the Copán valley document occupation as late as the 11th and 12th centuries, consistent with our much earlier evidence for such persistence based on obsidian hydration (Freter 1988).

⁸³ Some 15 El Zotz radiocarbon dates listed by Houston and Garrison (2018: Table 1: 1) post-date AD 900. Not only do Kingsley and Gámez report considerable ceramic continuity in pre- and post-dynastic ceramic traditions, but they mention no Plumbate at all, reinforcing the point I made in Chapter 10 about what we conclude from the absence of such diagnostic markers.

⁸⁴ I do not believe that at Copán or elsewhere late Maya populations slipped back into some kind of non-rank mode of social or community organization. When the Maori colonized New Zealand they retained vestigial forms of the more pronounced ranking or stratification characteristic of their original homelands, and something like this no doubt happened with the Maya. In some regions, such as the central Petén, there are increasing signs of incipient Postclassic elite revivals.

DAVID WEBSTER

Table 11-2: Hydration dates from all 8N-11 operations (estimated $\pm$ 70-year error ranges not shown).

Op.	Lot	Unit	Level	Dates (all AD)
50	186	N14E25	2	711, 729, 854, 989
50	212	S8E18	3	939, 981
50	225	N14E32	5	607, 636
50	240	N12E32	2	906, 923, 956, 997
50	246	S6E14	2	683
50	253	S6E20	2	765, 845, 854, 880, 897, 931, 964, 989 (Feature 9)
50	257	N10E32	2	863, 880, 964, 989
50	273	S6E22	2	1030, 1053, 1069, 1115
50	277	N2E24	1	880, 1030, 1069 (Feature 11
50	283	N2E24	4	588 (Feature 11)
50	295	S6E18	2	1021, 1030, 1069 (Feature 9)
50	297	N2E24	5	683
50	313	N8E14	3	889, 1013, 1030
50	316	N12E16	2	711
50	333	S6E21	2	898
50	355	N4E20	4	559, 588, 645
50	356	N2E22	4	636, 701, 629, 738
50	357	N4E22	4	664, 683, 628
50	441	N24E18	1	756, 801 - possibly from same core
50	445	N20E16	2	588
50	458	N18E18	3	729, 828 (Feature 20)
50	459	N0E20	6	588, 573, 683, 701, 729 (Feature 20)
50	470	----	----	828, 845, 863, 889, 897, 906, 914 -bench cache, Room 1, 50C - possibly all from same core
50	591	N20E20	3	906, 948, 964, 1013 - from burial trench
50	592	N18E20	----	683, 819, 854, 906, 923, 948 burial trench
50	608	N22E20	5	655, 701, 720 - burial trench
50	623	N20E20	4	588, 845, 906 - burial trench
50	624	N20E20	5	682, 792 - burial trench
50	632	N20E20	6	568 - burial trench
50	643	N4E10	3	655
50	660	----	----	626, 655 - from midden associated with Str. 66S
63*	9	1	3	787, 1331
63	1	2	1	858, 1277
63	4	2	2	383
63	32	7	4	814, 840
63	4	8	4	875
63	60	9	3	787, 1064
63	57	10	5	696
63	42	11	3	1192, 1331
63	48	19	2	696, 1331

THE LONG CHRONOLOGY

Table 11-2: Hydration dates from all 8N-11 operations (estimated $\pm$ 70-year error ranges not shown).

Op.	Lot	Unit	Level	Dates (all AD)
63	49	12	3	1141, 1331
63	64	13	4	592
63	74	15	3	668, 849
63	78	17	4	926
63	93	18	3	696, 778
63	100	19	5	918, 1008

Chapter Twelve

Final Thoughts

David Webster

Readers who have persevered this far expect a resounding statement that lays out firm conclusions about Copán's Skyband Group. Pending publication of the Chinese research and intensive excavation of the remaining buildings it would be both premature and presumptuous for me to make one. What follows is instead an overview that might have to be changed in the near future. On the other hand, our operations produced solid answers to many questions raised in Chapters I and 2, most of which I will not repeat here. We now have better insights about what happened at the Skyband Group, the urban core, and the Copán polity during the last half of the 8th century and later, and how 8N-11 might relate to the contending chronologies and the Maya collapse. The main conclusions and predictions below are my own, and my contributing authors might not agree with some of them.

The Default Model

Our perspectives about elite-rank Copán residences grew out of the original rough-and-ready Harvard settlement typology that, despite its many deficiencies, generated influential and widely-shared insights about Copán's sociopolitical organization and addressed Tourtellot's questions about identifying "...the elite on the ground...." (see Chapter 1). Harvard's exploration of Group 9M-18 demonstrated that titled elite persons possessed impressive residences centered on dominant buildings. PAC II research later showed that the sprawling House of the Bacabs had a similar structure that was possessed by a named and titled noble. Both excavations occurred when the otoot glyph as it appeared in Classic Maya texts was still unclear. Its later identification confirmed the noble dwelling assumption for both groups.

What I call the *default model* had coalesced by 1989. Its primary component was that most of the impressive Type 3 and 4 sites outside the Main Group are remains of elite residences. Architectural quality, design, scale, stratigraphy, sculpture, inscriptions, burials, artifacts, and chronometric dates all supported this interpretation and indicated an apex of sub-royal power and assertion in the mid-to-late 8th century. Although nobles and/or titled people were present earlier at 9N-8, 11K-6, and elsewhere, sub-royal elites burgeoned after the demise of the 13th ruler in AD 738 and especially after AD 776, when royal construction efforts in the Main Group by the 16th successor Yax Pasaj Chan Yopaat supposedly slackened off, apart from his tomb, Str. 10L-18.¹ Nobles engaged in status rivalry with the king and among themselves, undermining an already weakened dynasty and contributing to sudden political decentralization (Sanders 1989: 102-103; Webster 1989c: 107; Fash and Fash 1990; W. Fash 1991; Andrews V and Fash 1992). This model was much reinforced and elaborated by the identification of a *popol nah* or "Council House", Str. 10L-22A in the Main Group, probably built in AD 746 by the 14th king. Its imagery implies elite power-sharing and competition with the royal establishment and with each other (Barbara Fash *et al.* 1992; see discussion in Chapter 5).² Jeffrey Stomper argued that the iconography of Str. 10L 22A identified the noble who lived at Group 8N-11 as the Classic period equivalent of the 16th century Maya *holpop* (see Chapter 5). William Fash (2005: 96) summarized the late 8th century political situation this way:

"...the abundance of inscribed hieroglyphic thrones, altars, and façade sculptures containing both texts and pictorial imagery in the residential compounds of the Copán valley nobility indicates that status competition was highly visible and very important business."

¹ Alan Maca's vaulted tomb at Group 11K-6 dates to the late Acbi phase (AD 590-610) and might be contemporary with the burials since found by the Chinese at 8N-11. Elites probably became conspicuous on the urban core landscape at least by the Acbi-Coner transition.

² The Council House interpretation has been heavily criticized. Plank (2004: 136-141), for example, following suggestions by Elizabeth Wagner (2000), thinks that Yax Pasaj Chan Yopaat might have constructed the building in honor of a group of nine gods. Also see also Cheek (2003) and Chapter 12 for comments on Maya community buildings.

Grandiose sub-royal residences in the urban core and elsewhere reflected the ability of this social segment to independently deploy impressive architecture, sculpture, and inscriptions. Either they adopted such costly signaling in spite of Yax Pasaj Chan Yopaat, or with his grudging approval because he needed their political support or at least their acquiescence. For complex reasons the dynasty collapsed sometime between AD 800 and 822. Some elites survived the collapse and might have persisted in the valley until AD 900-950 (revised short chronology) or later (long chronology). It is this chronological component of the default model (and the duration of some Coner tradition ceramics) that have been controversial for almost 40 years.

During our two seasons at Group 8N-11 we accepted the default model and conceived our efforts to be normal science, additions to and refinements of our sample of elite residences and how we understood them. Although our old suspicion that the Skyband Group might be something else still nagged, we nevertheless characterized it as a palatial residence in our initial reports and subsequent publications (e.g., Webster *et al.* 1998). I have maintained this perspective, with some faint caveats, throughout the previous chapters. The default model also pervades Zeleznik's unpublished dissertation draft and the presentations of the Chinese project, which was originally designed to investigate Group 8N-11 as a sub-royal elite residence.

The Skyband Group as a Sub-royal Elite Residence

That many large urban core sites are remains of Late Classic elite residences/households remains abundantly clear.³ Groups 9M-18, 9M-22A, and 9N-8 conform to the default model, and so too at first glance does the Skyband Group. Energetic investment and construction quality in the Str. 66 complex and at Str. 70C indicate impressive levels of labor mobilization, management, and expenditure, as do the associated programs of façade sculpture and the carved bench (but see Chapter 3 for analysis of comparatively “cheap” labor costs). Room layouts of all adequately tested buildings at 8N-11 meet our expectations about domiciles, especially in the lavish use of benches. Artifact assemblages are consistent with domestic activities and are not very different from those found in more humble sites in the Copán valley. Small buildings, especially in the Str. 50-51 complex, have domestic facilities suitable for ordinary people. They exhibit minor modifications consistent with expansion and alteration of living spaces, and associated artifacts indicate food storage, preparation and consumption. Modest burials occur in expected contexts throughout Group 8N-11 and many were clearly made before the collapse of the adjacent structures. Rattray retrieved impressive tombs from Str. 70C, and the Chinese later found others. Workshops or other evidence of specialization like those at Groups 9N-8 and 9M-22A have not yet appeared, but much of the site remains untested. The Skyband Group had a shallow occupation beginning in late Acbi times and final phase construction peaked after 770, coinciding with the proposed interval of elite expansion and competition as royal power declined. If elites promoted themselves at the expense of royal power after AD 750 we would expect some of them to survive the crisis of the dynastic collapse, at least briefly, as the both the short and long chronologies show for the Skyband Group and for other elite-rank sites.

Even at Copán, however, our sample of well-excavated palatial residences outside the Main Group is small, especially from the urban core. There are about 25-30 such groups in that zone, depending upon how much of the northern foothills is included. Most have been briefly tested, and several, such as Maca's and Ashmore's sites, have been extensively probed.⁴ All have artifact inventories consistent with Coner phase domestic behavior, but very few buildings at these sites have been adequately cleared, usually because permits did not allow it. This is particularly unfortunate for Wendy Ashmore's sites as will become clear shortly. However much we have learned from all these projects, we have only scratched the surface of elite-rank buildings and their associated smaller structures, just enough to know that they were associated with a range of persons and status positions. More important, it is now clear how unusual the House of the Bacabs group is amongst all these others.

Something Else?

We could have written this overview 25 years ago. The delay, it turns out, has been fortuitous, given newer data and interpretations that enrich what we found, complicate our interpretations, and enable me to better address

³ Whether we can identify the meanings and functions of elite buildings within such groups is another matter.

⁴ Others outside the urban core have been well-tested too, such as La Canteada in the Río Amarillo pocket, the Ostuman sites dug by Whittington and Zeleznik, and Rastrojon by Kristen Landau.

my personal discomfort with three aspects of the default perspective: character of dominant buildings, behavioral mimicry, and elite status rivalry. As I worked on this volume I increasingly suspected that ancient ritual and feasting behaviors left us with archaeological signatures that mimicked ordinary domestic ones and that distorted our identification of both group and structure functions. The Harvard model accounts poorly for such mimicry, or for the presence of special-purpose residences such as young men's houses or priestly dormitories.⁵ Several alternative hypotheses discussed below also complicate the issue of elite/royal rivalry and how we conceive of the core landscape of the Copán polity and its principal buildings. Just maybe Group 8N-11 projects a misleading, residence-like semblance, but functioned in ways that we do not understand. Maybe the default palace/status rivalry model has become what Payson Sheets once called an "unquestioned answer."⁶ In saying this I am uncomfortably aware that I risk reviving the moribund "minor ceremonial center" idea and injecting ambiguities with which my co-authors might disagree.

Several things have long puzzled me about the Skyband Group:

1. The unusual concentration of temple-like structures at a compound that conspicuously anchors the end of the Las Sepulturas causeway.
2. The extravagant load of symbolic information projected by at least three buildings around the main courtyard.
3. The extremely exalted messages projected by the Skyband bench and the façade sculpture, including that discovered by the Chinese, which hint at celestial and royal connections.
4. The alignment of Str. 66C with significant solar events.
5. The generally undistinguished artifact assemblage and burials compared to the exalted architecture and sculpture (see Chapter 9 and Appendix B).

All these relate to ideas of Wendy Ashmore, Shannon Plank, and Alan Maca concerning the character of specific Copán buildings, their locations, the evolution of late settlement in the urban core, the nature of Yax Pasaj Chan Yopaat's reign after AD 776, and how royal authority and worldview were materialized on the landscape of the valley. They all emphasize the following:

1. Continued reverence for Copan's 13th ruler Waxaklajuun Ubaah K'awiil long after his demise on April 29, AD 738.
2. Urban core landscape features imposed by (or associated with) Yax Pasaj Chan Yopaat that embody Maya conceptions of the cosmos, royal power, and social space.
3. Palatial groups or buildings in the Copán urban core that are of exceptional significance.
4. Revivalistic or revitalistic efforts to commemorate and/or centralize the Copán dynastic institution.

Each perspective questions one or both components of the default model, and I examine them below in chronological order to show their interdependent arguments.⁷ Most striking are the extraordinary improvements in understanding inscriptions and iconography that occurred between Ashmore's efforts and Maca's, and which are fundamental to Plank's hypothesis.

Ashmore's Directional Hypothesis

Even as the default model solidified, Wendy Ashmore (1989, 1991, 2015) recovered sculpture, burials, caches, and parts of an inscription from the paired elite-rank sites 8L-10 and 8L-12, which she called collectively the Copán North Group.⁸ The inscription, fallen from the façade of Str. 8L-74, mentions the 13th ruler Waxaklajuun Ubaah K'awiil and records three dates, which she reports as Long Count (Gregorian) equivalents May 3, 738, April 20, 790, and April 7, 842.

⁵ Sanders (1989: 99) noted the tradition in Maya studies to interpret impressive buildings (palaces) on low platforms as permanent or situational dormitories of this kind.

⁶ See his comment in Webster 2011: 97).

⁷ The hypotheses of Maca and Plank appeared in 2002 as parts of their respective dissertations. Plank's presentation is by far the more elaborate and detailed, and in her 2004 BAR volume she closely examines Maca's ideas.

⁸ The associated site 8L-11 is also part of the North Group, but is barely discussed by Ashmore.

FINAL THOUGHTS

Three things immediately stood out about Ashmore's dates, which appear to have some sort of commemorative or anticipatory significance:

1. The earliest (clearly retrospective) date falls four days after Waxaklajuun Ubaah K'awiil's death on April 29, AD 738.
2. The two intervals separating the three dates are both 52 years long -- one-fifth of the 260 day *Tzolkin* ritual calendar.
3. The AD 842 date long postdates Copán's dynastic collapse.

I pointed out the date sequence to Tony Aveni, who using his Julian Day converter calculated the distance number of each interval as exactly 18980 days. This interval is the lowest common denominator of the 260 day *Tzolkin* ritual calendar (260×73) and the 365 day Haab calendar (365×52). The same year-bearer date repeats at the beginning of each 52 year Calendar Round cycle. This suggests to me that the latest date, April 7, 842, had some special meaning for the patron/scribes who created the inscription. They wanted to commemorate the old king's death in AD 738, but also to retain the two identical distance numbers. To do so they had to fudge at one end or the other of the sequence, and they chose to do so at the early end.⁹ What significance the AD April 7, 842 date had is unclear, although it falls just outside the late 8th century solar zenith passages identified by the Brickers at Group 8N-11 (see Chapter 5). Perhaps it refers to some non-astronomically significant date in the *Tzolkin*.

Ashmore thought the North Group sites were elite residences, but the sculpture and inscriptions led her to emphasize their ritual features, especially their north-south axis, which she believed reflected ancient Maya concepts of directionality and centrality. She envisioned her sites to be the northern anchor of a much larger symbolic template that included a complementary east-west axis formed by the causeways and by groups 8N-11, 9J-4, and 9J-5. All these groups were within one kilometer of the conceptual center, which was formed by Waxaklajuun Ubaah K'awiil's Temple 10L-22 and the nearby ball court. The sanctity of Temple 22, dedicated about AD 715, was signaled by its iconography, including sky-bearing bakab sculptures, and by the fact that it was carefully curated and never submerged by later construction.¹⁰ Plank, we shall see shortly, later used Ashmore's inscription to identify Str. 8L-74 as one of several named ootoots, or elite dwellings, including Temple 22.

Ashmore could not identify who presided over her North Group, but she thought that sculptural elements she found at Group 8L-12 projected "...personal references, portraiture, and iconographic focus on an individual..." (Ashmore 1991: 215), just as did façade sculpture at the House of the Bacabs. She speculated that this grandee might be a relative, perhaps a brother, of the 13th king, or alternatively a war leader.¹¹ She accepted Freter's North Group hydration dates, most of which fell after AD 800, with some extending into the late 10th century. Tomb offerings included Coner complex ceramics such as Surlo, and an imported Pabellon Molded Carved vessel similar to the one found by Whittington and Zeleznik at Ostuman (see Chapter 11). Ashmore concluded that major construction and burial activity at the North Group continued after the royal collapse, consistent with her AD 842 inscription and the hydration dates. She interpreted the ritual and ideological features of her North Group as delayed reactions to the political crisis and loss of confidence caused by Waxaklajuun Ubaah K'awiil's inglorious death in AD 738. Displays and rituals celebrated continuity with the dead king or with abstract conceptions of kingship that he embodied. Overarching themes include royal transition, succession, completion, unification, perpetuation, and even perhaps resurrection, all in the service of Waxaklajuun Ubaah K'awiil's memory and Copán's deep tradition of dynastic authority.¹² Together these themes constituted a revitalistic or commemorative effort that was especially critical following the final failure of the dynasty under Yax Pasaj Chan Yopaat, who is not mentioned at the North Group so far as we know.

⁹ They might, of course, have simply mistaken the date of the 13th ruler's demise, but this seems unlikely give its importance in the history of the kingdom.

¹⁰ According to Wagner (2000) Temple 22 was built by the 14th king K'ahk'Jop'aj Chan K'awiil and later rededicated by Yax Pasaj Chan Yopaat. She thinks it was a shrine (wayib) where ancestors were venerated and where mortuary activities possibly took place.

¹¹ Perhaps something this individual did shortly after the death of Waxaklajuun Ubaah K'awiil might be recorded by the first date in the sequence? In this case the scribes did not make a mistake or fudge.

¹² Archaeologists have long singled out the reign of the 12th king, K'ahk' Uti'Witz' K'awiil (Smoke Imix) as the peak of Copán's dynastic power (Fash and Fash 1990). That the North Group inscriptions instead feature the 13th king strengthened Ashmore's idea that its occupants were somehow directly connected to him.

Ashmore was not allowed to clear and probe architecture so she realized that evidence for her claims was weak, especially because of her very limited sample. She laudibly insisted that her interpretations were hypotheses, and that her data allowed only provisional insights into the significance of the North Group and larger symbolic settlement patterns of the urban core landscape. Nevertheless, implications for the Skyband Group are obvious. It closely resembles her North Group sites both in layout and in orientation (see Fig. 2-4), and some subroyal elites survived the collapse. Although she knew little about our 1990 finds, she would have been pleased that her proposed eastern causeway anchor Group 8N-11 had three elaborate buildings with complex, royal-caliber iconography. That it had both elite residential and ritual functions and was occupied well after AD 800 was consistent with her own interpretations. While Ashmore generally accepted the elite residence component of the then-new default model, she recognized that some groups were something else as well -- places of exceptional symbolic and spatial significance (Ashmore 2015). Whether or not her larger conceptions of the monumental landscape are correct, Group 8N-11 is undeniably such a place.

She says little about the elite status rivalry element of the default model, but in some ways it is implicit in her argument. Her North Group nobles seemingly ignored the last king, who presided over the final dynastic shambles, in favor of his more glorious predecessor and their possible relative Waxaklajuun Ubaah K'awiil. Whether or not they played an active part in bringing down Yax Pasaj Chan Yopaat is unknown, but long after he was gone they still had dynastic yearnings for the old 13th king and revered kingship as an institution, contrary to the default model. Brief and tentative though her presentation was, Ashmore's work prepared the way for the hypotheses of Plank and Maca.

Plank's Ootoot Hypothesis

In 2004 Shannon Plank published a comparative study of elite buildings called ootoots, the indigenous Maya term for "dwelling". Such palatial structures are dwellings for humans or supernaturals, a distinction that she calls "blurry." Although ootoots might be variously possessed by living persons, ancestors, deities, or other vital entities, their most important characteristic is that they are inherently inhabited spaces or containers. She believes the ootoot label refers only to buildings and to specific events that occurred in them, and that it is not a reference to lineage or to "house" in the Levi-Strauss sense. She says (2004: 230, 225) that only elite or royal buildings were ever named ootoots, that commoners could not use the glyph for their own domiciles, and that commoners regarded owners of named ootoots as superior people.

Plank stresses that ootoots are best identified by inscriptions, architecture, and location, and that they share a common design template. She seeks to understand how the Maya employed the emic label and "...the role of the inscribed ootoot structures in the social and political environments of their respective sites" (Plank: 2004: 4). Her perspective includes the whole Classic Maya Lowlands, but Copán is arguably the most important of her several case studies and Group 8N-11 figures prominently in her analysis.

Copán ootoots: Plank (2004: 94) identifies eight glyphically named Copán ootoots, five in the Main Group and three in Las Sepulturas or the northern foothills.¹³ She singles out two other Las Sepulturas ootoots even though they are not so named (Fig. 12-2). All are Late Classic (12th through 16th rulers).¹⁴ Eight of these fall during the time of Waxaklajuun Ubaah K'awiil, usually late in his reign between AD 772 and 801. One central ootoot on the Acropolis is Yax Pasaj Chan Yopaat's tomb, Str. 10L-18. Another is the huge Temple 10L-11, a dedicated place of renewal possessed by multiple supernaturals and replete with bakab, maize, and mountain imagery. A third is Temple 10L-22, previously singled out by Ashmore as the central anchor of her own cosmogram. Plank interprets the latter two buildings as dwellings of gods or of living kings impersonating gods. More specifically,

"Str. 22 is the dwelling of Ruler 13 as the maize god, just as it is iconographically identified as a mountain in which the maize god lives and from which he emerges through the *witz* cleft" (Plank 2004: 104).

¹³ Main Group Acropolis named ootoots = Strs. 10L-22, 10L-11, 10L-11-sub, 10L-18, and Str. 10L-2. Las Sepulturas/foothills ootoot groups = Strs. 9N-82, 9M-146, and Ashmore's 8L-174.

¹⁴ She leaves open the possibility that Str. 10L-1-sub might be associated with the 10th ruler between AD 573 and 578.

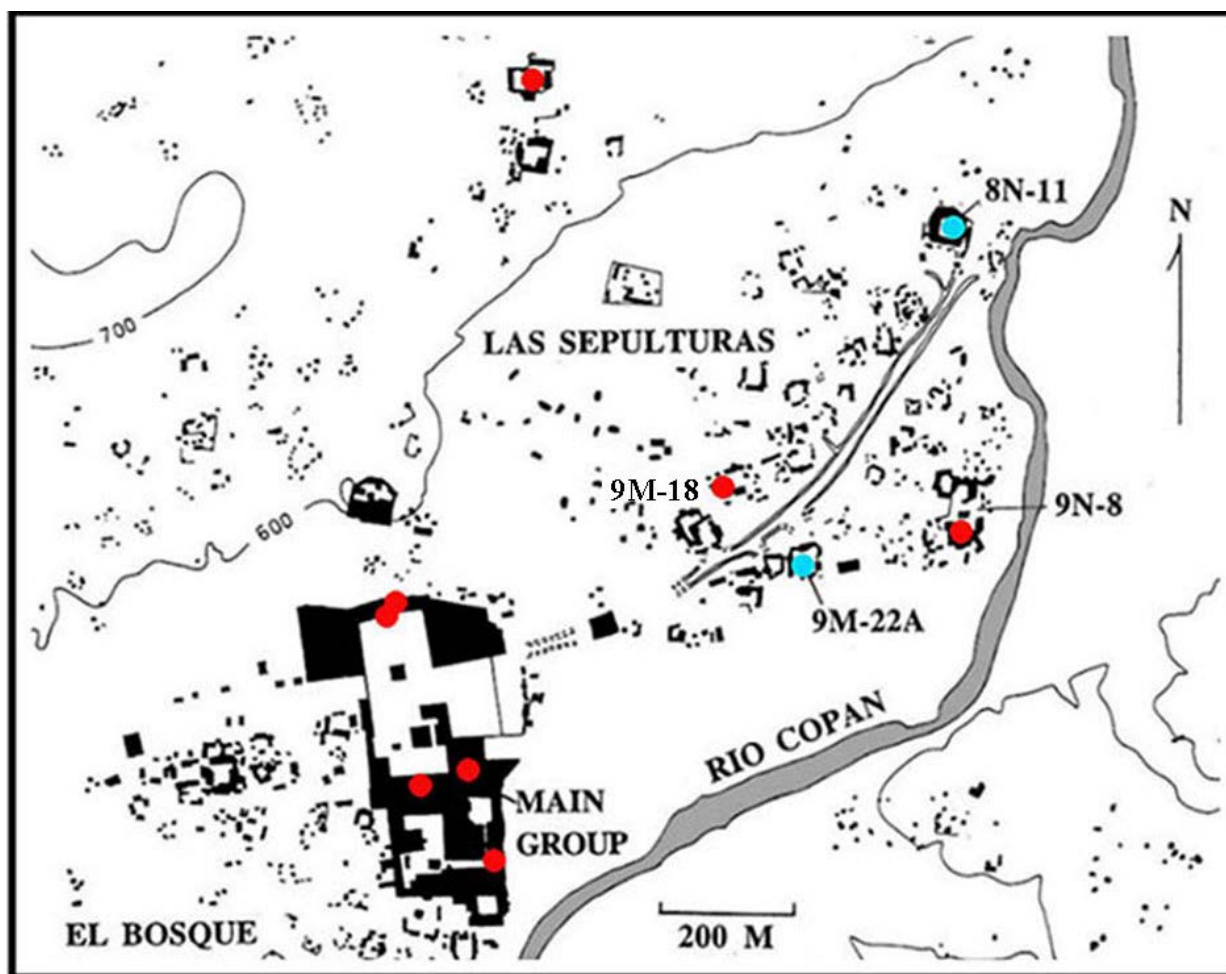


Figure 12-1. Locations of the named ootoots (red) and the two without names (blue).

She goes on (2004:141) to speculate that it might instead have been built by Yax Pasaj Chan Yopaat. Whoever built it and when, she says Str. 22 is not a royal residence or palace in the normal domestic sense as some Mayanists previously thought.

Plank's Las Sepulturas Ootoots in Groups 9N-8, 9M-18, 9M-22A, and 8N-11

Because Temples 22 and 11 lack well-recorded artifact associations, the Las Sepulturas ootoots (along with Group 10L-2 at the southern end of the Acropolis and Ashmore's Str. 8L-74) figure heavily in Plank's analysis. Particularly critical are the relationships of the Las Sepulturas ootoots to the urban core of the kingdom, their implications for both components of the default model, and her contention that their functions are not reflected by their associated artifact assemblages.

We saw in Chapter 4 that Groups 9N-8 and 9M-18 have carved benches that name their buildings as ootoots possessed by nobles holding the *ajk'uhuun* title. Both also produced large artifact inventories consistent with residential activities. Plank believes, however, that elite buildings and their surroundings were routinely cleaned during their use-lives, and that most artifact deposits are too late to reflect the original character, use, and meanings of the late 8th century buildings:

“...with a few exceptions, the excavation of acropolis architecture at Copán, and perhaps other large sites, as well as the excavation of some major buildings of the Sepulturas-area compounds, does not generally

produce the kinds of artifactual remains that are useful in the functional analysis of architecture...” (Plank: 2024: 32).¹⁵

Understanding how structures were used, or what they meant to the Maya, must therefore be based primarily on careful intra-site analysis of architectural formats, iconography, and inscriptions. She claims that standard interpretations of the known bench inscriptions found are flawed, particularly by the attempts of the Fashes and others to fit the data to their Council House model that emphasizes the weakness of Yax Pasaj Chan Yopaat and the decentralization of the polity. Her chronological reassessment suggests an important confluence of events that must have involved the 16th king:

“...these benches may have been dedicated within months of each other, within days of the dedication of Str. 11, and shortly before Altar W’ in 9N-8’s Patio A....” (Plank: 2004: 133).

She states that there is no evidence that sub-royal nobles ever required royal permission to deploy inscriptions (and presumably façade sculpture), so we cannot assume that their sudden appearance indicates status rivalry among nobles and a weakened king.

The ootoot template: Plank’s distinctive architectural template based on Temple 22 enables her to identify ootoots at Groups 9M-22A and 8N-11 even though none of their buildings displayed the glyph.¹⁶ Basic features of the template are:

1. A dominant central building of fine construction raised on a high platform.
2. Two smaller structures flanking the original dominant building that were usually built somewhat later.
3. A tripartite floor plan in each structure featuring a central room and two side chambers.
4. Imposing benches in all rooms, with the central bench sometimes carved with distinctive iconography or serving important ritual purposes.

She says these features are not to be taken as any kind of etic classification, but instead have been generated by painstaking intra-site evaluation of architectural and other details. Plank inveighs strongly against formal classifications of architecture such as the Harvard project’s because they do not reflect emic, cognitive Maya ways of understanding buildings (2004: 129). Jennifer von Schwerin (2011: 27) later summarized this approach: “It is slowly becoming possible to engage in closer analyses of the design, function, and meanings of certain [Copán] buildings within their micro-historical contexts....” Having personally excavated two of the Sepulturas ootoots and spent considerable time at the others, I will only say that Plank’s template is remarkably convenient and opportunistic, and that it often strains unconvincingly to include structures that differ in many important ways presumably of cognitive importance to the Maya.¹⁷

Her re-evaluation of the chronology leads Plank to conclude that all the Las Sepulturas ootoot buildings were built during the reign of Yax Pasaj Chan Yopaat. Instead of royal weakness, this effort represents

“....a massive pull toward centralization and emphasis on central authority in the first part of Yax Pajsaj’s reign, not as a way of propitiating the interests of an elite with growing autonomy, but as a way of bolstering a sagging system and an impoverished elite.....” (Plank 2004: 132).

¹⁵ Exceptions would presumably include floor deposits sealed by sudden collapse, as at the palace at Aguateca, but even similar contexts might be suspect. Thus the workshop debris found by Widmer (2009) in a collapsed building at Group 9N-8 might reflect 10th century activity in 8th century rooms. Acropolis here refers to Main Group ootoots such as Temples 22 and 11, dug long ago when detailed artifact associations were seldom well-recorded or reported.

¹⁶ I don’t understand why she did not identify the imposing Str. 10L-32 in the royal residence as an ootoot. It apparently does not sport the ootoot glyph, but then neither do two of her Las Sepulturas ootoots. She also omits Group 10K-4, which produced a very elaborate bench with a named person or supernatural (see Chapter 4). Presumably 10K-4 is otherwise too poorly-known to fit into her ootoot sample.

¹⁷ For example, the Group 9M-18 ootoot lacks the two flanking buildings, so she explains that the template pattern was “unfulfilled” there. It also apparently had very little façade sculpture. The floor plans of Str. 22 and 9N-82C are not identical as she claims, and both depart in important ways from the plan of Str. 66C. Stairway designs of the various proposed ootoots are also quite varied, as are the orientations of the buildings. Such differences should be accounted for if the cognitive devil is in the details.

Here it is important to distinguish between the dynastic institution and any particular ruler. The reigns of the 12th and 13th kings encompassed the glory days of the dynasty. Von Schwerin (2011) points out that Waxaklajuun Ubaah K'awiil ascended the throne in AD 695, just as Tikal's first great victory over Calakmul unsettled pan-Lowland Maya political arrangements, including those of his father the 12th king. Waxaklajuun Ubaah K'awiil's many transformations of the Main Group, including the construction of Temple 22, were in partly reactions to these wider developments or threats that culminated in the final extinction of the Calakmul dynasty only two years before his own violent death in AD 738. There followed two comparatively weak rulers who might not have been genetically related to the last king Yax Pasaj Chan Yopaat. The latter's great urban core projects were assertions of his legitimacy and compensations for the seeming decline of the dynasty as the kingdom experienced political insecurity, environmental degradation, and economic decline.¹⁸ According to Plank the accompanying Las Sepulturas ootoot projects were aimed not at placating recalcitrant nobles, but rather were attempts to renew and reconfigure a faltering dynastic tradition by enriching or rewarding such people. Just how this strategy was intended to work is unclear, and it begs the question of how labor was recruited to construct these ootoot features if the dynasty and nobles were in decline.¹⁹ In any case, Plank rejects both the elite residence and status rivalry components of the default model.

Maca's U-group Hypothesis

Alan Maca (2002, 2006, 2015) built on earlier ideas of Jeffrey Stomper and William Fash by devising a U-group directional/quincunx model that also resembles Ashmore's, particularly in centering the ruler on the urban core landscape and emphasizing the symbolic significance of the causeways. Stomper (2001) argued that the causeways, along with several elite groups, defined (within the limits of the topography) a quadripartite symbolic division of the urban core settlement (see also Wagner 2006). Maca's central U-group 10L-10 focuses on Str. 4, a radial pyramid oriented to the cardinal directions that was established by the 13th ruler.²⁰ According to Maca (2006: 149), the 13th king Waxaklajuun Ubaah K'awiil deployed the bakab title on the nearby Stela A to declare himself "..... the four-quartered embodiment of the community.....", the great bakab who centered and supported the kingdom (see Chapter 4 for similar bakab analysis by Claude Baudez).²¹

Yax Pasaj Chan Yopaat later reconfigured Str. 4 and created (or appropriated) a formal quincunx plan by establishing four outlying U-groups (Fig. 12-2), thereby imposing his own dynastic and cosmological imprint on the core of the kingdom and harking back to his illustrious predecessor (Maca 2015: 174-175).²² Maca (2009) believes the valley's inhabitants were a complex mix of people with C'horti, Lenca, and other linguistic/ethnic identities, so Yax Pasaj Chan Yopaat's efforts were partly intended to establish a distinctive Petén Maya cosmological plan on a diverse population (see also von Schwerin 2011). Maca's hypothesis was based on direct historical analogy with ritual circuits described by Landa and others for the 16th century Maya, and he admitted that it is difficult to prove.

Maca singled out Plaza A at Group 9N-8 as the easternmost of the five U-groups that collectively reflect late 8th century Maya conceptions of boundedness, landscape integration, and lived space. All these groups were "... formally and functionally related units within a system of fixed spatial reference that established the boundary of the city" (Maca 2006: 149).²³ Due west is U-Group 9J-5, which Maca and Freter had both intensively tested. It is unclear to me from Maca's presentation whether he thinks 9J-5 was primarily an elite residence compound like 9N-8, some kind of ceremonial complex, or both. Inclusion of the poorly known Group 7M-8 in the quincunx pattern is puzzling because it is only of Type 2 scale.²⁴ Apart from its layout, it is spatially significant because

¹⁸ According to McNeil *et al.* (2022) these efforts also extended into the Río Amarillo alluvial pocket far to the northeast of the urban core.

¹⁹ The labor costs of the dominant buildings in Group 8N-11 and other elite residences were modest (see Chapter 3) so investments by Yax Pasaj Chan Yopaat in the establishments of sub-royal nobles might have been less onerous than continued big ones in the Main Group.

²⁰ For some reason Maca glosses over Plank's earlier (2004: 94) identification of another building -- 10L-2-2nd -- as a Main Group ootoot somehow identified with the 12th king.

²¹ Yax Pasaj Chan Yopaat's utilization of bakab imagery is most conspicuously apparent in the huge images found on the north face of Temple 11, one of the last great building projects he completed in the Main Group. Two bakab heads, each almost a meter high, were placed on the northeast and northwest corners of Temple 11. They were originally parts of larger assemblages that included body and arm/hand segments.

²² Some of these groups lie outside the urban core as originally defined, so Maca had to spatially extend it as noted in Chapter 1.

²³ See also Scherer, Golden, and Houston (2018) for discussion of the Classic Maya conception of the body of the ruler as the center of the moral community, and Ashmore (2015) for how the Maya perceived and interacted with natural or constructed features of their landscapes. "City" here might be the kab ch'en that Tokovinine later associated with rulers (see Chapter 1, note 2).

²⁴ Maca borrowed the U-group plan from Petén sites where it was originally recognized, and where such architecture is ".....unequivocally distinct and high status...." (2006: 149).

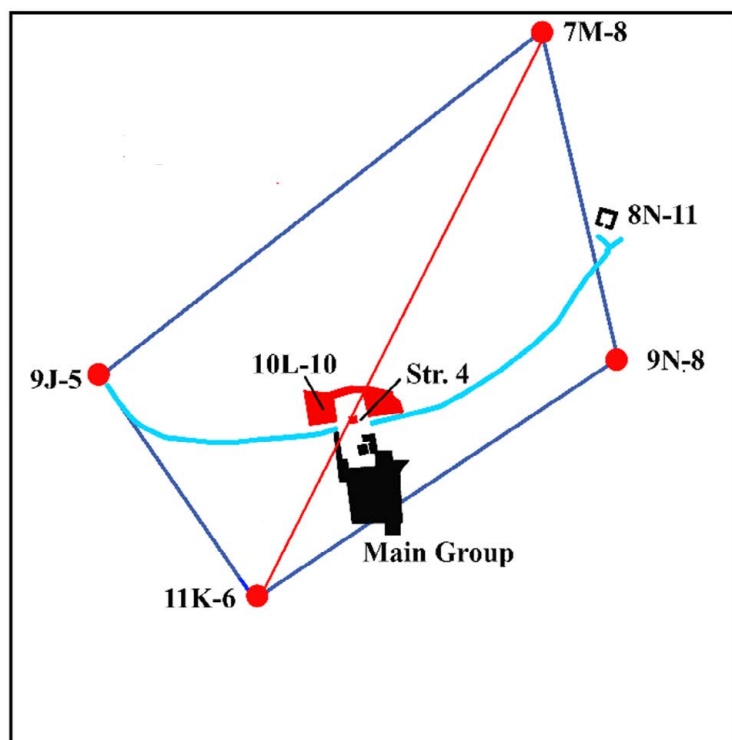


Figure 12-2. Maca's quincunx model (causeways shown in blue). Adapted from Maca 2006, Fig. 4.

an imagined line between it and Group 11K-6 passes through Str. 4 (no such line connecting the east and west U-groups intersects Str. 4). Also unclear is how (or whether) Group 10K-4, some 200 m north of Stela 5, relates to the pattern, although a magnificent carved bench replete with bakab and royal imagery was found there as described in Chapter 4.²⁵

The causeways figure heavily in Maca's spatial conception. At other Classic Maya sites they are linear features, but at Copán they curve up from the Main Group to the northeast and northwest toward the foothill zone of the urban core. The western causeway ends at a small structure near Group 9J-5. Maca speculates that the causeways represent the raised arms of the ruler who embodied and ritually supported the community. One would expect the Skyband Group to loom large in this conception because the eastern causeway ends there, but Maca simply ignores it, although it was a principal component of Ashmore's earlier cosmogram and Plank's exploration of ootoot location and identity.²⁶

Another problem is the respective spatial locations and arrangements of Groups 9N-8 and 8N-11. The Las Sepulturas causeway conspicuously bypasses Group 9N-8, which has much greater time depth than 8N-11, has a named ootoot, and is more impressive in other respects such as its personalized inscription. It ends instead at 8N-11, which is not a U-group, but has celestial and bakab imagery that hint at royal connections.²⁷ Why is 9N-8, despite its heavy and exalted symbolic load, not part of the quincunx?²⁸ How are we to account for the role, if any, of 8N-11 in the ceremonial arrangement that Maca envisions? A GIS analysis by Richards-Rissetto and van der Elst (2007) ranks the Skyband Group highly in terms of visibility and accessibility among elite-rank sites on Copán's urban core landscape.

²⁵ Elisabeth Wagner thought 10K-4 was the western iconographic anchor of a quadripartite system of palatial residences. The problem is that the other structures of the group have not been excavated, so there is no good context.

²⁶ The implication here is either that the causeways were built by the 16th king, or that some earlier ruler also envisioned the bakab symbolism.

²⁷ One could imagine that an earlier version of the causeway, possibly built by the 13th ruler, ended at Group 8N-11 before the final phase big structures around the main courtyard were built, and that the early structures there had a U-group form. But if the architectural symbolism was as important as Maca believes, why later eliminate the early U-group pattern? Maybe the Chinese excavations will help sort this out.

²⁸ Nor is the Causeway Building a U-group, despite its depiction on the PAC I map. Maca might have ignored the Skyband group because Barbara Fash (1992) had originally ascribed it to the reign of the 13th king, so it was too early to fit his bakab model.

Maca (2015: 188) argues that Yax Pasaj Chan Yopaat, not content with his transformations of the Main Group, also made an ambitious, if ultimately unsuccessful, symbolic imprint on the urban core in an attempt to revitalize his authority in the face of increasingly competitive elites. He presumably did much of this after AD 776 when his big Main Group efforts slackened. If Copán's population were as linguistically and ethnically diverse as Maca and other archaeologists believe, one might also see this as a final attempt to impose a Classic Maya veneer, just as the first dynastic rulers did, on a local population that was heavily non-Maya. Neither Maca nor Plank explain how labor was recruited from a troubled kingdom for their ambitious new construction programs, but the implication is that the king accomplished this mobilization.²⁹

Maca and Plank both prefer the revised short chronology because it accommodates a sudden, centrally imposed architectural pattern made by the last king that is consistent with the “frozen” urban core architecture, and which discounts later elite constructions such as detected by Ashmore. But why did Yax Pasaj Chan Yopaat, whose royal body centered the quincunx, not celebrate himself as a *bakab* on any monument? Why is a presumably subordinate *ajk'uhuun* featured at Plaza A instead of the king? The cosmogram apart, how was this effort calculated to facilitate royal revitalization? I think the spatial juxtapositions revealed by the Penn State and Chinese excavations, along with the architectural and symbolic character of the Skyband Group's structures, pose considerable challenges to his hypothesis, and that ignoring Grtoup 8N-11 raises more problems than it solves.

Overview

Each of these hypotheses remains speculative, and despite similarities they disagree with one another in important ways.³⁰ I have presented them in some detail not because I agree with any of them, as my critical comments show, but because they properly caution us that the original default model only partly reflects the character of the kingdom's core settlement and what occurred there after AD 776. Maca's hypothesis conforms most closely to the default model, but they all conclude that something else was going on, especially in terms of status rivalry and royal involvement and raise issues pertinent to understanding form and evolution of the Skyband Group and the nature of the dynastic collapse.

Character of Dominant Buildings: Temples and Dwellings

I remarked in Chapter 1 that Claude Baudéz thought temple and residential structures at Copán should be strictly differentiated.³¹ The Harvard exposures at Group 9M-18 and our own work during PAC II showed that such distinctions were incorrect. Clearly some great lords possessed temple-like structures – Hendon's “dominant buildings” -- as parts of their *otoots* and might have used them at least situationally in quasi-residential ways. When we first turned our attention to Group 8N-11 in 1990 we expected to find a building like the House of the Bacabs that was owned by another titled lord. Instead we found two heavily embellished vaulted structures, and even then we knew that there was a third, as the Chinese project later demonstrated. Surprisingly, none had personalized inscriptions that referred to their functions and meanings or to any human or supernatural sponsors or builders.

Unlike Maca, Plank could not ignore the Skyband Group despite its lack of a glyphic label. Given the size, quality, and prominent location of Str. 66C and its skyband/*bakab*/war imagery, it would have been hard for her *not* to include it in her *otoot* sample. That 8N-11 has shallow time depth and assumed its final form rapidly in the late 8th century is also consistent with her hypothesis. But Str. 66S presents a complication. Despite its plain bench and smaller scale, it holds its own with Str. 66C both visually and symbolically. It is more finely made, its room plan better conforms to the proposed *otoot* template, and it is just as richly embellished, especially with maize/vegetation imagery that recalls the iconography of Temple 22. Str. 66S would surely qualify as an *otoot* if it stood as the dominant building at some other Las Sepulturas group. If I understand the Chinese finds correctly, so too

²⁹ But see Chapter 3 for labor inputs at 8N-11. As Abrams (1994) showed, costs for dominant buildings on the scale of those at Las Sepulturas are modest compared to royal projects in the Main Group. This is perhaps one reason the king switched his construction efforts there if Plank's and Maca's reconstructions are accepted.

³⁰ But see Richards-Rissetto and van der Elst (2007), who think that the Plank and Maca hypotheses can be partly reconciled.

³¹ Karl Taube (2013) treats them as a distinct category of building and has little to say about how they might relate to elite residences in his overview of Classic Maya temples.

would Str. 70. We thus have an unprecedented three ootoot-caliber buildings around a single courtyard, but no formal ootoot glyphic designations.

Despite my skepticism about her ootoot model, Plank's template does suggest a way of understanding the construction history of the Str. 66 complex. From the beginning its builders had tripartite plans in mind, both in the arrangement of dominant buildings and interior room spaces. Ootoots or not, tripartite arrangements are old and widespread at Maya centers, particularly at E-groups. Sometime late in the 8th century the builders established the final template by adding Str. 66S to Str. 66C, which had previously stood alone. The other element, Str. 66N, looks like a feeble and tacked-on addition. Its substructure is of good quality but the superstructure is shabby, unvaulted, and undecorated. Str. 66N finished off the plan, but in a way that suggests its builders lacked the time, resources, and (perhaps) the royal patronage to do the job properly. Plank says that the Harvard ootoot at Group 9M-18 lacked both its lateral buildings because it was simply unfinished, although given what we know about its chronology there was plenty of time to make additions such as those we found at Str. 66.

The Early Skyband Buildings

Chapters 3 and 10 summarized the evidence for earlier structures beneath the 8th century Str. 66 complex and their relative dating. There seem to be three successive architectural stages, but we only have good hints about the penultimate one represented by Strs. 66C-sub and 66N-sub (there was almost certainly a corresponding early building under Str. 66S as well but we found only the faintest traces of it). We know several things about these buildings. First, they firmly date to the Coner phase. Second, judging from their substructure and stairway fragments, they seem to share the general layout of the final phase ones and have reasonably comparable footprint scales, so the tripart arrangement seems to be an old one. Third, their north-south alignment was shifted more to the east than that of the final buildings. Fourth, they were probably of solid cut-stone construction. Finally, they were comprehensively demolished and in all likelihood much of their construction material was recycled into the final Str. 66 complex.

My opinion is that Strs. 66C-sub and 66N-sub were originally built after the demise of the 13th ruler Waxaklajuun Ubaah K'awiil in AD 738.³² If so, they functioned for no more than about 40 years before being decommissioned and replaced. The critical question is their original functions. Their conspicuous location at the end of the La Sepulturas causeway suggests they might have been an early version of the final ritual/ceremonial Str. 66 complex. On the other hand, they might simply have been the dominant buildings in an "ordinary" sub-royal elite residence and had nothing to do with putative revitalization efforts by the 16th king or with the astronomical commemorations detected by the Brickers. If the latter is true, Yax Pasaj Chan Yopaat chose to appropriate and obliterate a noble's residence and reconfigure it for his own purposes. This would also explain why the early buildings were so comprehensively demolished – there were no dimensions of social memory that the king cared to preserve.

The Skyband Bench

Although we predicted discovery of the bench, its royal-caliber skyband/bakab imagery, astronomical orientation, and depersonalized displays were unexpected and puzzling. Why did its noble patron/designer/owner fail to inscribe a name or title on it, or record his presence at a dedication ritual that activated and vitalized the structure? Barbara Fash's reconstructions of the two sculptured façades raised still more questions. Str. 66C has celestial/sun/war imagery and Str. 66S is rich in maize/vegetation, fertility, and moisture themes.³³ Why were two such elaborate buildings erected almost simultaneously, and why is their symbolism so different? During our excavations we toyed with the idea that Str. 66C was the formal ritual/political seat of the Skyband lord and that 66S was his actual domicile.³⁴ This speculation in retrospect seems labored.

³² The Chinese architectural stratigraphy, when published, will help clear up the chronological issue. It is just possible that the early buildings were erected during the reign of Waxaklajuun Ubaah K'awiil, but I doubt they are earlier than this.

³³ Plank (2004) repeatedly remarks on how the Str. 66 complex sculptural themes relate to those at other ootoots, particularly Strs. 22 and 11.

³⁴ We made the same argument about the House of the Bacabs -- Str. 9N-82C was the political/ritual place of the noble who presided over Plaza A, and his actual domicile was one of its flanking buildings, probably the eastern one.

Royal Connections?

That the Skyband Group might have royal connections was apparent during our 1990 operation. Impressed by the quality and character of the bench and façade sculpture, Barbara Fash suggested in our 1992 report (Appendix B: 37) that Str. 66C might be the pre-inaugural residence of the 15th ruler K'ak Yipyaj Chan K'awiil sometime before AD 749. Strs. 66S and 66N presumably were added much later, most likely late in the reign of Yax Pasaj Chan Yopaat given similarities with Str. 10L-32 in his royal compound. Str. 66C now appears too late to support this reconstruction, but Fash's intimation of a royal connection is reinforced by what the Chinese later found. Here are some interpretations I have gleaned from their various presentations and publications:

1. Group 8N-11 was a sub-royal residence or dwelling, but its occupants had some kind of close relationship with the royal family.
2. Str. 70C was probably built during the reign of Yax Pasaj Chan Yopaat and is part of the "political reform" he initiated near the end of his reign. The sculpture reflects the "militarist spirit" of his time.
3. Mexican year signs and crossed torch images on the façade were "exclusively" used by the royal family.
4. The thirteen sets of sculpture on the Str. 70C façade have "sacred meanings" that might label Str. 70C as an ancestral temple.

The Mexican/Teotihuacan elements found on Str. 70C are particularly unexpected, and they signal the royal connections emphasized by the Chinese archaeologists. Such motifs are associated with the dynastic founder K'inich Yax K'uk' Mo' on Altar Q, with the temple that originally stood on top of Str. 26 in the Main Group, and with Str. 10L-33 in the royal residence 10L-2 (B. Fash 1011: 106-109, 156-157). Barbara Fash thinks that the late use of such foreign elements served to reaffirm dynastic relationships with Teotihuacan and with the Central Mexican New Fire ceremony performed there.

How to interpret the Skyband Group's three temple-like buildings and their seeming royal associations is unclear, but obviously something else happened there that makes 8N-11 look very different from 9N-8 or the other Las Sepulturas ootoot groups, despite the overwhelming domestic character of its artifact assemblage. Imagine that Las Sepulturas by itself was a compact settlement somewhere else in the Maya Lowlands. If 8N-11 were excavated under those circumstances many archaeologists would probably identify it as a not only as a palatial residence, but as a royal one. As it is, the identity of the Skyband Lord, royal or otherwise, remains unclear -- and surely there must have been a person or supernatural entity who deserved this nickname.

Displacement Mimicry

We saw earlier that there is displacement between artifact assemblages and their associated architecture at 8N-11 and other high-rank Copán groups. Spatial displacement results when artifacts are introduced from distant sources as construction material, or artifacts are moved about within a site. One kind of temporal displacement occurs when artifacts from earlier on-site contexts wind up in later buildings, middens, burials, etc. At the Skyband Group this process might cause us to conclude incorrectly that late-phase architecture had similar functions to those detected in the older buildings of the Str. 66 complex. This is an important point because late revitalization efforts by Yax Pasaj Chan Yopaat might have superimposed specialized architectural and iconographic elements on an older set of buildings that did have elite domestic functions. If so, it raises the questions of who the original patrons were and why Yax Pasaj Chan Yopaat chose to drastically remodel the whole central courtyard late in the 8th century.

A more serious displacement issue was raised by Shannon Plank (2004), who repeatedly criticizes the PAC II results by insisting that we have not demonstrated behavioral continuity between the Las Sepulturas buildings and their artifact assemblages. Up to a point I agree with her that spatial and temporal displacement can create residential mimicry (see comments in Chapter 9). Use (or reuse) of Maya buildings and spaces was obviously varied, flexible, and sometimes opportunistic. For example, most superficial artifact deposits we found in and around the Plaza A courtyard at 9N-8 accumulated after the ootoot buildings were built and used prior to the dynastic collapse, so they represent possibly unrelated activities and social meanings.³⁵ According to the default model the dominant

³⁵ Such temporal displacement was immediately evident to us when Freter produced the first hydration dates for Plaza A of Group 9N-8; see

buildings at many large urban core sites are remains of elite residences/households. Plank thinks instead that some dominant buildings and their locales acquired domestic signatures only *after* their original elite functions lapsed, and that their late and mundane artifact assemblages mislead us about the original characters and meanings of the structures.³⁶

Plank rejects the hydration method and the long chronology and argues that most of the Harvard project or PAC II collections at 9N-8 and 9M-18 date to Late Coner 2 in Bill's revised chronology (see Chapter 11), which Plank places between AD 820 and AD 850/900.³⁷ If there were a temporal disconnect between abandonment of Plaza A at the end of Yax Pasaj's reign and the purported non-elite reoccupation, the interval might be as little as 20 years or as long as 80 years. She thinks lack of continuity during this interval falsely distorts functional interpretations such as those made by Sanders (1989) for Group 9N-8's buildings, and her own analysis of the Patio A ootoot hinges heavily on this displacement. The same logic applies by extension to Groups 9M-22A, 9M-18, 8N-11, and to the royal compound 10L-2 (which oddly she does not identify as an ootoot, named or otherwise). Plank's critique partly depends on a misreading of Bill, whose own wariness about extending her revised Coner chronology in blanket fashion to other sites she ignores (see Chapter 11). I don't understand why she rejects the hydration dates, which worked well at 10L-2, because displacement is a problem no matter which chronology is used.³⁸ Most of the 8N-11 hydration dates fall before AD 900/950 and the long chronology allows even more time for displacement, which Plank should welcome. In any case, displacement obviously undermines the "frozen in time" behavioral perspective discussed in previous chapters whichever chronology is preferred.³⁹

Plank's displacement claims and her rejection of the hydration dates are problematical in many ways. There is no space here to critique them properly, but I will mention an issue involving Group 9N-8, one of her prime examples because its architecture and artifact inventories have been well published. A big problem is that her displacement claim centers mainly on the buildings and artifacts in Plaza A, the ootoot Str. 82C complex courtyard. It is unclear to me whether she thinks similar displacement also happened at the smaller compounds surrounding Plaza A, most of whose buildings date to the late 8th century. If so, when were they abandoned and why? What happened to all the pre-abandonment artifacts? When were the compounds re-occupied by the people who left all the domestic refuse we recorded, including in Plaza A? Where did these people come from in such numbers if there was a swift depopulation of the valley?

The simplest answer to these questions is that temporal discontinuity between artifact assemblages and buildings is not the same as behavioral discontinuity.⁴⁰ If the abundant domestic debris we found in the smaller 9N-8 courtyards reflects continuous residential activity at Group 9N-8 *as a whole* in the 8th century and later, then her ootoot building and the rest of Plaza A, however frequently tidied up, dominated a distinctly residential elite group presided over by a named and titled sub-royal lord. Str. 9N-82C and Plaza A might indeed have been used for 20 or 30 years before the dynastic collapse for special ritual or political purposes and periodically cleaned before these functions ceased. If activities and refuse from the other continuously occupied residential compounds thereafter spilled over into Plaza A, it introduced a dimension of mimicry that obscured the original character and meaning of the ootoot structure and its courtyard.⁴¹ What was continuous was quotidian residential activity at Group 9N-8 that eventually came to include Plaza A and continued long after the Str. 9N-82 ootoot lost its original functions, meanings and perhaps its resident lord. The same would be true of the other Las Sepulturas ootoots, including the Skyband Group (if it were a residence) and the royal compound 10L-2. What was "frozen" was the basic fabric of the great buildings, although even they underwent some structural modifications and were used differently.

the discussion in Chapter 11 of a cache of small projectile points beneath the final floor.

³⁶ This is a serious criticism, but it tends to be ignored in the Copán literature. For example, Plank's work is not cited in Doonan's (2010) analysis of artifacts from Group 10L-2.

³⁷ What she calls Late Coner 2 is also called Terminal Coner by some of the Tulane researchers; see Doonan (2010: 70).

³⁸ One probable reason is that she had to squeeze the elaborate temporal sequence devised for Group 9M-22 by James Sheehy (1991) into a shorter interval to agree with Bill's revised Coner sequence.

³⁹ Plank thinks what is "frozen" in the late 8th century is elite architecture. Use of elite structures or groups is dynamic and definitely not "frozen."

⁴⁰ See Binford (1981) for trenchant comments on what he called the "Pompeii Premise", a much-debated concept during the 1960s and 1970s.

⁴¹ I do not mean here that people who lived in the smaller compounds neglected to clear away their own domestic refuse. Rather, there was frequent cleaning followed by redeposition of similar quotidian stuff, and this process constitutes functional continuity, although repeated episodes of cleaning and redeposition do not always involve exactly the same kind of artifacts. I have lived in my current house for 50 years. Much has been repeatedly discarded and added over that time, and the additions are different today than they were half a century ago. Nevertheless, my house inventory has retained its distinctive residential character over that interval.

Community Building Mimicry

Imagine that we knew nothing about the elite architecture found during PAC II but were simply presented with the artifact assemblages from each of the ootoot groups in Las Sepulturas. The collections would look pretty much the same, apart from minor differences in proportions and spatial concentrations of ceramic types. Chapter 9 shows how similar the Skyband Group assemblage is even to those from the small rural sites. In the absence of architectural context, they share no emphatic “elite” signature, although there are a few unusually impressive or suggestive objects that reflect privilege, special activities, or “wealth” (whatever that meant to the ancient Copañecos).⁴² This is why Zeleznik’s artifact analyses, even when coupled with architectural context, produced a continuous and fine-grained pattern of status differentiation below the royal level. What are we to make of this misfit between architectural character and quality and mundane material inventories? I think the answer is that people everywhere did pretty much the same things involving food storage, preparation, and consumption, but in different behavioral situations, contexts, and facilities that restructured the meanings of the objects used, however mundane.

Dormitories, Council Houses, and Ritual Sites

That the Maya had special facilities that might mimic normal residences is an old idea in the Maya literature (see Tozzer in Landa 1941: 86). Charles Cheek (2003; Cheek and Spink 1986) gives a good overview of what he calls community buildings at Copán, which include dormitories for priests or elite young men. Str. 10L-223 in the Main Group, which Cheek excavated, is possibly such a dormitory, as are Str. 81 and (maybe) Str. 83 in Plaza A of Group 9N-8.⁴³ Daily activities of people who lived in such dormitories, however permanently or episodically, might leave behind artifacts that generally mimic those found in ordinary residences. The same might be true of community or council houses where people spent considerable time. The architectural layout and artifacts at the eastern 8N-11 ancillary buildings described in Chapter 6 hint at dormitory functions, although their distinctive pattern of growth seems episodic and unplanned. I originally thought these structures were permanently occupied, but now I am not so sure. In any case, community buildings were possible locations of both mundane and ritual eating and drinking, and thus potential mimicry.⁴⁴

Feasting and Offerings: Community, dormitory, or ritual buildings were all venues for both feasting and offerings, as were mortuary facilities, which might leave traces very similar to ordinary consumption of food and drink. Chen *et al.* (2021) examined residues in six ceramic vessels from impressive tombs in or near Str. 70C. All are stratigraphically earlier than the final phase buildings and contain elite objects such as jades. Except for one impressed vessel, the other five fit nicely into the general 8N-11 fine ware assemblage. Also used in their analyses were four mano and metate fragments from what they call “residential contexts.” Starch and phytolith residues (the latter mainly from the grinding stones) indicate the use of fermented beverages based on maize (*chicha*) and manioc (*pulque*), as well as other plants such as chile peppers often used as flavorings. Cacao, interestingly, was not found. Presumably all the vessels were offerings to the individuals in the graves, who might have been ancestors. The important point from the perspective of mimicry is that

“A sacred object can be any object used in a sacred context. The object itself can be mundane in daily life but can move from utilitarian to nonutilitarian when the sacred meaning is obtained from a ritual context” (Chen *et al.* 2021: 2).

The Chinese suggest that Group 8N-11 was in part a place of elite ancestral rituals. My suspicion is that mundane mortuary behavior continued there long after the end of the dynasty. If so, locales like the peripheries of Str. 66N and Str. 50 figured in burial ceremonies of very ordinary people, whether residents of 8N-11 or not, and their activities involved feasting and offerings whose material discards mimic those of residences. If we had well-preserved drinking or eating vessels from our simple burials they might show residues of similar beverages which were surely not confined to elites.

⁴² We saw in Chapter 9 that the royal residence compound 10L-2 has just such an emphatic signature.

⁴³ We interpreted Str. 83 as a set of domestic rooms for relatives of the ajk’uun lord, but it does have a distinctly dormitory-like plan.

⁴⁴ As a comparative example, European manor houses and monasteries might both have had very similar domestic features and implements.

Although our Skyband Group artifact assemblage looks generally residential in character, it remains to be seen how our proportionate counts compare with those from the Chinese project. One thing that strikes me is the scarcity of grinding stones at 8N-11 compared to those from the royal residence 10L-2 (see comments in Chapter 9). One possibility is that feasting and offerings took place at 9N-8, but that some basic food processing was done elsewhere.

An E-Group Conjecture

Prof. Nancy Gonlin, herself a veteran of PAC II Copán research, graciously read this monograph in manuscript form and suggested to me that parts of the central courtyard might be an E-group:

“The more I read about 8N-11, its iconography and layout, I wonder whether the 66 complex is a type of E-group. I’m sure this thought must have occurred to you as well. The case for an E-group is very strong for the 66 complex of 8N-11, based on the material I have read in the Maya E-group volume (Freidel *et al.* 2017). To me, the iconography and architectural arrangement scream E-group. The agricultural symbolism and the Skyband bench tie in directly with what E-groups are all about. The triadic arrangement of the 66 buildings, their location on a raised platform, along with all that gravel beneath, and the offerings bolster this interpretation.”⁴⁵

I had not in fact considered this possibility, so I reacted to Gonlin’s suggestion with considerable skepticism and raised several objections. She responded that “As far as the E-group interpretation goes, many have done far more with far less!” It is precisely because sometimes archaeologists do too much with too little that I was leery (see, for example, comments about E-groups by Ruppert 1940; Aveni and Dowd 2017: 79; Šprajc 2021), but the more I thought about it, the more it seemed necessary to explore her idea because E-groups, which presumably required royal patronage, might have been venues for feasting and offerings, and another source of domestic mimicry.

E-groups are the first standardized and widely shared Maya architectural arrangements, a basic pattern established around 1000 BC just as maize became an important staple (Inomata 2017: 233).⁴⁶ One might say that they are among the earliest community buildings in Cheek’s sense. At first they were spatial and conceptual foci for small Middle Preclassic communities. In Classic times they were erected in more dominant, centralized precincts where they apparently retained many of their original meanings but were associated with kings and other powerful people. E-groups are heavily concentrated in the Petén heartland (see map in Fig. 1-4, Dowd, and Freidel 2017). Confusingly, this map shows an E-group at Copán, although I know of no such complex in the literature. Absence of early E-groups at Copán plausibly reflects the region’s non-Mayan speaking population prior to the elite intrusions and dynastic foundation in the early 5th century.⁴⁷ On the other hand, the first dynasts very deliberately introduced canonical Maya architectural conventions, so if E-groups were important founding complexes why were none built at Copán then or later? Given all the attention devoted to Copán’s astronomical alignments they surely would have been recognized long ago. Neither the Brickers nor Elizabeth Wagner, whose astronomical insights appear in Chapter 5, attributed E-group patterns to Group 8N-11, nor have any other Mayanists.

The final Str. 66 complex is oriented slightly east of north, an alignment consistently found in Mesoamerican structures that must be significant -- hence, perhaps, its slight directional shift from earlier phase constructions. The eastern Str. 66 complex also exhibits the expected E-group tripartite layout. Until the Chinese data are published we will not know whether there is a dedicated observation point on the west, but these are not invariably present at E-groups, nor is any east-west orientation even necessary.⁴⁸ If there is a western viewpoint, the three Str. 66 complex buildings are markers of sunrise or some other astronomical alignments. In contrast, the Brickers reverse the “normal” E-group pattern by making the Skyband bench the eastern viewpoint.

⁴⁵ I edited this quote from a series of e-mail messages Gonlin sent me in September 2021.

⁴⁶ Arlen and Diane Chase (2017: pp. 34-41) provide a useful list of known E-groups from the southeastern Lowlands, including non-conformist ones that lack western structures, and others that have probably been incorrectly identified.

⁴⁷ Of course our sample of pre-Acchi architecture is so feeble that early ones remain undiscovered.

⁴⁸ They can even be oriented north-south (Freidel 2017: 203). Such variation tempts one to play an undisciplined game of “who can find the E-group.” For example, Structure 9N-82 and its northern neighbor 9N-80 at Group 9N-11 together form a more convincing E-group arrangement than 8N-11 if we disregard orientation (see Fig. 1-4).

Orientation aside, the sequence of accretional growth at the Str. 66 complex seems at odds with the idea of an original, purpose-built E-group. Interiors of central E-group buildings characteristically show typical temple plans, with two or more parallel, linear rooms running from front to back (e.g., see Dowd 2017: 530-531), sometimes with an altar against the rear wall. Str. 66C, by contrast, has a deep central room with flanking side chambers or subdivisions. This is a common pattern for big Copán structures and is found in undoubted domiciles of all ranks at Las Sepulturas (see Figs. 1-3 and 4-26) as well as in Plank's ootoots. Str. 66C might qualify as the central focus of a tripartite arrangement, but its flanking buildings are different in scale, symbolism, character, and were constructed at different times. What eastern sky events their positions might mark is unknown. Anyone looking east across the plaza (Fig. 2-8) would see a viewshed of high, rugged hills, not a comparatively flat horizon where sunrise could be easily observed (of course the hill peaks themselves might have served as markers).

As to function, "The longest-lived and influential functional association of E Groups is that they served to mark and commemorate important annual positions of the sun: the solstices, equinoxes, and zeniths" (Awe *et al.* 2017: 435). Ivan Šprajc (2021) has recently heavily criticized this presumption, but that the astronomical alignments at Group 8N-11 do not mark solstice positions is no disqualification because E-groups are associated with many kinds of sky-watching, as well as with katun-endings and ancestor rituals. The 8N-11 buildings do align well with important solar zenith events as discerned by the Brickers, and the sculptured facades project symbols redolent of royalty and fertility: the radiant sun or *k'inich* bench images, the sunrise reference, the regeneration of vegetation (particularly as represented by the young maize god) and the skyband itself.

Gonlin's E-group idea remains a conjecture, but the astronomical alignments discerned by the Brickers do seem to set the Skyband Group apart from its urban core counterparts, hint at royal associations, and help pin down the chronology of the Str. 66 complex.

Chronology

None of the components of the default model is more controversial than chronology. That the locale of Group 8N-11 was first heavily occupied in late Acbi times, that it experienced several episodes of major architectural restructuring, and that its main plaza assumed its final form in the late 8th century are all clear. Also clear is that the dynastic collapse altered the uses and meanings of the dominant buildings. What followed is vociferously debated. Archaeologists agree that there was continued residential activity at the Skyband Group and other elite sites such as Ashmore's after the political collapse but disagree about its duration. I have tried to fairly present the contending short and long chronologies as I understand them. Although I champion the latter, readers can make up their own minds about which they prefer. One omission in our research was failure to obtain radiocarbon samples from the Skyband Group burials we found, particularly those in superficial contexts around Str. 66N and Str. 50. If such samples were processed some would probably turn out to be quite late, well after AD 900 or even AD 1000.

A more general prediction is this: as research continues in the Copán valley a long population decline and extended use of Coner-like ceramics will eventually become default chronological perspectives, irrespective of the hydration date evidence. A recent project in the Río Amarillo pocket (McNiel *et al.* 2022) reports just such persistence. Oddly, but perhaps predictably, they do not cite the obsidian hydration dates we published long before that detected just such extended occupation there (Webster, Freter, and Gonlin 2000). Their 2022 summary mentions a few specific ceramic forms, but for some reason does not say how their mundane household Postclassic assemblages relate to the Coner complex. I specifically predict that when they are fully reported they will turn out to preserve many utilitarian Coner or Coner-like elements, particularly those characteristic of the Zico group (Casaca Striated, Lorenzo), Sepulturas group (Titichon, Raul), and the simpler forms of Surlo. The other obvious possibility is that they will resemble Manahan's neo-Ejar ceramics, although this ceramic complex itself is estimated to extend no later than AD 1075 (see Chapter 10).

Conclusions

Here are my brief answers and opinions to our 1983 working hypotheses as listed in Chapter 2:

1. 8N-11 was founded very late compared to 9N-8 and did not have time to evolve a complex set of courtyard arrangements, even though both were elite household units with essentially similar functions.

Occupation at the Skyband Group did begin much later, but its distinctive configuration never would have developed to resemble that of 9N-8 because it was a different kind of place.

2. 8N-11 might be remains of a household that somehow was more closely linked to the royal line, and so was unable to weather the collapse of the dynasty. 9N-8 apparently did so, growing in complexity in the process.

Royal connections are strongly suggested by the Skyband Bench, the façade sculpture of Strs. 66C, 66S, and 70C, the quality of construction, the astronomical orientation, and the location at the end of the causeway. Despite these associations, 8N-11, like 9N-8, continued to be used and/or occupied long after the dynastic collapse, although it eventually lost its original functions and meanings.

3. 8N-11 was an exception that did not conform to the Harvard residential hypothesis -- i.e., it was a ceremonial group or had some other nonresidential set of functions during its mature phase in the late 8th century.

The late 8th Skyband Group is an exception. In its final iteration it was not the elite residence of a titled noble, but some kind of ritual/ceremonial/ancestral facility built during the reign of the last ruler. Its overwhelmingly residential-looking artifact assemblage is the result of two kinds of mimicry. The first derives from rituals, offerings, and mortuary ceremonies prior to the dynastic collapse that involved mundane objects. The second reflects reoccupation and residential use that continued for about two centuries after the dynastic collapse. The earlier buildings found under the mature Str. 66 complex might have had different functions and might in fact be the remains of a sub-royal residence (perhaps of Stomper's holpop?) that was later co-opted by Yax Pasaj Chan Yopaat. In this case much of its domestic trash also stayed in the locale and constitutes a third dimension of mimicry.

4. Group 8N-11 remained occupied long after the dynastic collapse; many of the smaller buildings were late additions, making our maps deceiving.

Group 8N-11 did remain occupied or used until about AD 1100 or later. Elite activity, however feeble, persisted until the 10th century. Late architectural additions, dynastic or otherwise, include Str. 66N, parts of the Causeway Building, and reconfigurations of the Str. 50-51 complex. Some of the small ancillary buildings tested in 1997 might also be late additions to the group.

I have often wondered how our interpretations would have developed had we excavated the Skyband Group *before* Group 9N-8. Under these circumstances I think we would have identified it as a ceremonial place, not a residence.⁴⁹ Our later finds at 9N-8 would have reinforced this distinction. My own biggest takeaway (and regret) from our work is methodological: *dig everything and leave as few analytical loose ends as possible*. It is never justifiable, of course, to tear apart a group like 8N-11 to get at every context or recover every scrap of material. We did not come close to doing this even at the House of the Bacabs, but had we been able to work with similar intensity at the Skyband Group many things would be clearer, including much since revealed by the Chinese research. One is always haunted by the untouched contexts. Even today western and southern parts of the 8N-11 plaza remain unexcavated, most small buildings are only feebly tested, there are too few stratigraphic deep soundings, and the Causeway Building needs more attention. All these locales probably hold future surprises, as does future dating of the skeletal population.

⁴⁹ In 1990 the Tulane crew had just begun to excavate Group 10-L-2 when one day Sanders and I walked over to see what they were finding. Almost the first thing Will Andrews said to us was that the group was clearly not an elite residence.

FINAL THOUGHTS

So where does this mixed bag of conclusions leave us? I choose the “something else” option, which some readers will see as an evasion. I could easily make fanciful guesses, but it is more honest simply to say I don’t know what that something else is. Nothing in my training or archaeological temperament equips me to evaluate in greater detail the symbolic features of Group 8N-11, the possibility of royal connections, the implications for Maya astronomy or cosmovisions, or the existence of symbolic, embodied, or cognitive spatial boundaries. What I do know about the Skyband Group does not fit easily with the alternative models reviewed above. Both its location and its apparent royal associations, which include the bakab imagery favored by Yax Pasaj Chan Yopaat, suggest a royal patron, but the lack of any personal name or title seem at odds with Plank’s and Maca’s scenarios of his domineering and self-promoting revitalization efforts. I think the default model is fundamentally sound, but I am convinced that the Skyband Group was something other than a sub-royal noble’s residence during the late 8th and early 9th centuries, although mimicry inclines us to think it was. My colleagues and I have laid out here our Skyband Group data, analyses, and conclusions as comprehensively as we can. Scott Zeleznik might have done all this differently, and I suspect he would disagree with some of my conclusions in this chapter. Hopefully the information about our Penn State research presented here, along with the Chinese data, will enable better heads than mine to grapple with how to think about the Skyband Group’s character and meaning on Copán’s Late Classic and post-dynastic landscapes. Knowing my imaginative Maya colleagues, I am confident they will rise to the occasion.

Appendix A

Radiocarbon Dates from Burials and Archaeomagnetic Dates

In Chapter 11 I briefly alluded to the disappointing results of radiocarbon dates generated by various early Copán projects. Many standard (non-calibrated and/or non-AMS) dates run by the PAC I and PAC II projects differed significantly from expectations, particularly as skewed too early. One reason for such inaccuracy is that samples were often aggregated charcoal or other organic materials taken from fill, middens, and features. We collected many such samples during our PAC II excavations, but even as the AMS method came into use in the early 1990s they still often produced anomalous results. I came to distrust most such contexts and concluded that human bone from burials yielded the best samples and the least problematical contexts.

C14 Dates from Burials

Fig. A-1 shows the radiocarbon curves of recent bone dates from all Copán burials available to me at the time of writing.¹ All are from PAC II and related Penn State projects and are broken down into two sets. The first set (red) shows 16 calibrated AMS dates from our small rural site operations as reported by Gonlin (1993) and Webster *et al.* (2004). The second set of 94 dates (black) used newer methods and was generated by the Human Paleoecology Isotope Geochemistry Laboratory at Penn State established by Douglas Kennett. Most of these samples come from the Copán pocket and especially from the urban core excavations that yielded the bulk of our burials as discussed in Chapter 8. Because very ordinary people lived even in the ‘elite’ households of the urban core, the bias toward high-status individuals is not as pronounced as it appears. The “modified end” of Coner refers to the extension to AD 950 as suggested by Cassandra Bill (1997).

The displays in Fig. A-1 must be interpreted with caution. I did not pick the rural burial samples to detect late occupation of the valley, but rather to see if their C14 dates agreed well with the associated hydration dates (they did). I chose almost all the other dates opportunistically from samples that had accumulated in our Penn State lab collections through the efforts of Prof. James Hatch and Dr. David Reed (1998), both of whom were primarily interested in dietary analysis. No dates were thus selected to bear directly on the controversial issues of how long people lived in the valley, where they lived, the size of the late population, or the duration of the Coner complex.

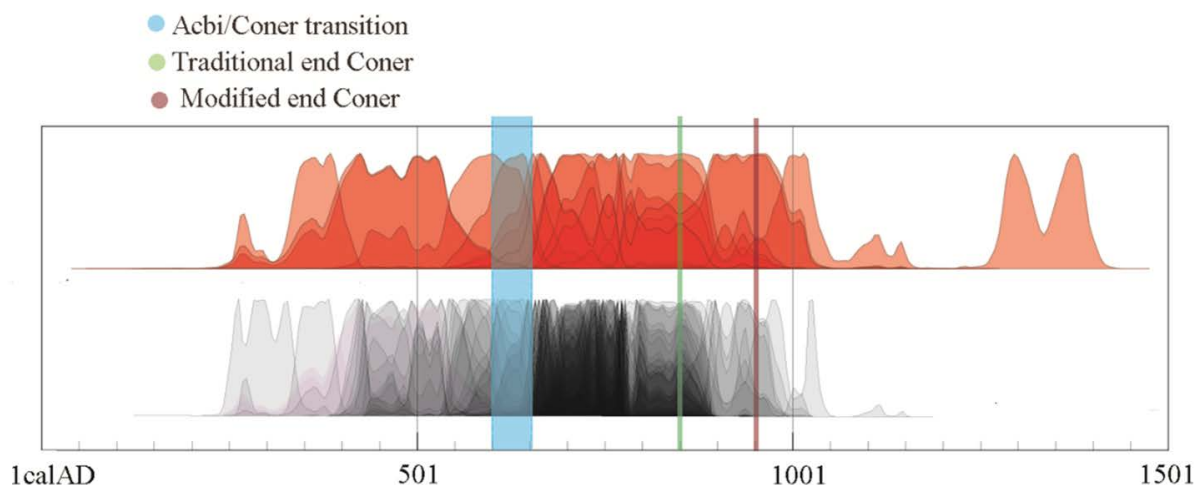


Figure A-1. C14 dates from burials.

¹ Base displays were kindly prepared by Laura Stelson from spreadsheets provided by Douglas Kennett; I have modified them a bit.

Had I been able to choose samples pertinent to these issues I would have used (among others) burials from late contexts at Group 8N-11 now stored in the Copán lab and not available to me. These, I expect, would yield more late dates, particularly post-AD 950.²

Taken at face value, the arrays reflect the paucity of pre-Acbi and especially Preclassic burials from all our operations. Either populations were low and/or there is a sampling problem (as there was in Longyear's Carnegie sample – see Chapter 10). It is tempting to detect a slight uptick around at the beginning of Acbi, around the time of the dynastic intrusion, but the real upswing begins, unsurprisingly, with the Acbi/Coner transition.³ What seems clear is the persistence of occupation after the traditional ends of both the original short chronology (AD 850) and the modified one (AD 950), although without better sampling the scale of persistence remains uncertain. Had I included non-skeletal radiocarbon dates from projects such as Maca's, Manahan's, and those from recent excavations in Sesesmil or Río Amarillo, the display would also show more late dates.

Archaeomagnetic Dates

Between 1978 and 1984 Daniel Wolfman (1987) acquired twenty-one Copán archaeomagnetic (AM) samples, three from PAC I test-pitting and eighteen from later PAC II excavations. The PAC 1 dates (one was deemed unreliable) are listed in Appendix C of Viel's (1983) ceramic report. Most of Wolfman's other dates never appeared in his later publications. In 1987 he prepared a manuscript that related his regional samples, Copán's included, to larger issues of Mesoamerican chronology. As far as I know he never published it (except partly in Wolfman 1990). A copy of this report is in the PSU Copán project archives, along with hand-written notes that are sometimes confused and marginally legible. Wolfman finished analyzing only the 12 Copán samples listed in Table 1 before his premature death in 1994.

Wolfman's sampling was extremely opportunistic and heavily focused on the courtyards of Las Sepulturas Group 9N-8. In the field we only encountered the highly specific contexts he required for AM analysis unexpectedly and infrequently. Whenever a suitable context was recognized, the archaeologist in charge of the excavation predicted the expected time interval. Although Wolfman's samples were necessarily very few and spotty compared to the radiocarbon and hydration dates from Copán, the samples he finished are heavily concentrated in the 6th century, or Late Acbi times (Fig. A-2). Perhaps the residual nine dates he never ran would have yielded a better distribution. Nevertheless, the AM method appears to have worked extremely well because all but one of the results shown in Table 1 agree with field expectations. Most suggestive is the date of AD 1100±34 from a feature in the large Las Sepulturas platform Str. 9M-203 described in Chapters 10 and 11. Even before Wolfman analyzed the 9M-203 sample, Scott Zeleznik predicted a late date there, not from Ejar phase ceramics or hydration dates,

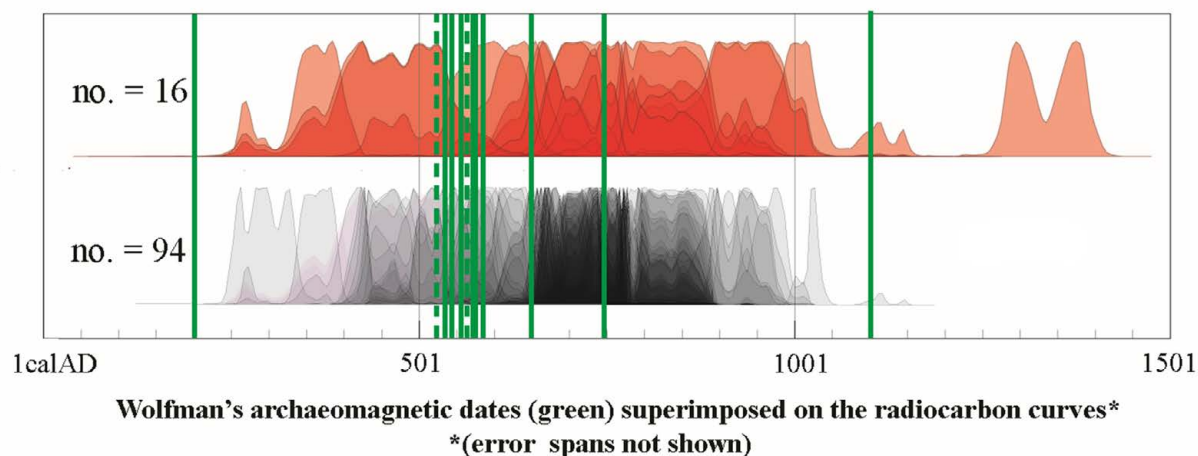


Figure A-2. Archaeomagnetic dates superimposed on C14 dates.

² Only the dates from the two tombs found by Rattray in 1982 as described in Chapters 2 and 8 are included in the display.

³ This increase is partly, but not wholly, based on sampling bias that favors Late Classic contexts.

but from the character of the architecture and the unusual amount of Coner serving and ritual wares. Although unprepossessing, 9M-203 has the largest proportion of ritual ceramic forms in the database, as well as a high ceramic diversity index.

In his 1990 publication Wolfman compared his archaeomagnetic dates with the standard radiocarbon or hydration dates then available and found that they were often in closer agreement with the latter. The consistency of Wolfman's other AM dates as shown in Table 1 increases confidence in the late date for 9M-203. If it is correct, there was Postclassic activity there and extended use of a Coner or Coner-derived ceramic tradition.

The distribution in Fig. A-2 reflects a sampling problem associated with archaeomagnetic dating programs. Ideally we would expect more dates in the AD 700 to 900 range. Suitable fired clay surfaces or objects are rare, however, so it is difficult to select them from a wide range of different contexts. Only two of Wolfman's dates are Late Classic/Coner phase, and both of them fall a generation or two after the dynastic collapse. The early cluster in Fig. A-2 falls just before the Acbi/Coner transition, but no one would interpret the pattern as indicating any kind of population concentration. Similarly, no one would interpret the absence of dates before AD 300 or after AD 1100 as absence of population.

Table A-1. Wolfman's archaeomagnetic dates from Copán.

Context	Nature of sample	Expected date	Archaeomagnetic Date (all AD)
PAC I -- Op. 4, Pit 198	oven	Middle Classic	Between 520 $\pm$ 20. or maybe between 550 and 565.
PAC I --- Op. 4	oven	Early Classic	unreliable
PAC I -- Op. 4, Pit 71	burned post-hole	Early Classic	575 $\pm$ 17
PAC II -- 9N-8 Op. 15, Plaza E, Feature 7	baked clay floor	Late Classic	860 $\pm$ 1
PAC II -- 9N-8 Op.9, Feature 10	oven	Early Classic	300 $\pm$ 24
PAC II -- 9N-8 Op.15, Plaza E, Feature 23	unrecorded	Late Classic	845 $\pm$ 37
PAC II -- 9N-8 Op.9, Plaza E, Feature 11	large hearth	End of Middle Classic	580 $\pm$ 31
PAC II-- 9N-8 Op.15, Plaza E, Feature 103	baked floor	Middle to Late Classic	540 $\pm$ 37
PAC II -- 9N-8 Op.15, Plaza E, Feature 121	oven	Middle Classic	530 $\pm$ 27
PAC II -- 9N-8 Op.15, Plaza ?, Feature 2	baked inverted cone	Middle Classic	570 $\pm$ 36
PAC II -- 9N-8 Op.9, Plaza E, Feature 101	baked floor	Middle to Late Classic	650 $\pm$ 33
PAC II -- 9N-8 Op. 26, Str. 9M-203, Feature 10	hearth	End of Late Classic or Postclassic	1100 $\pm$ 34

Appendix B

Illustrations of Selected Artifacts

I drew most of the special artifacts from Phase I of Op. 50 at the end of the 1990 season. The selection shown here includes only those objects because I did not directly observe Widmer's and Storey's Phase II collections. Special artifacts from Op. 63 were very sparse and representative of those from Op. 50, so they are not included either. Although I drew each artifact at its original size, the following illustrations show them at varying scales in the interests of formatting and space. Each drawing is accordingly accompanied by a red bar that represents one centimeter at the original scale.

The illustrations mainly depict chipped stone artifacts in order to show the range and character of these implements in ways that supplements the general descriptions and statistics given in Chapter 9. Many retouched lithics were broken, but I include them because our sample from Group 8N-11 is small and they still convey information about basic forms and knapping techniques. The miscellaneous objects supplement those already illustrated in previous chapters. A list of contexts and other information is provided in Table B-1.

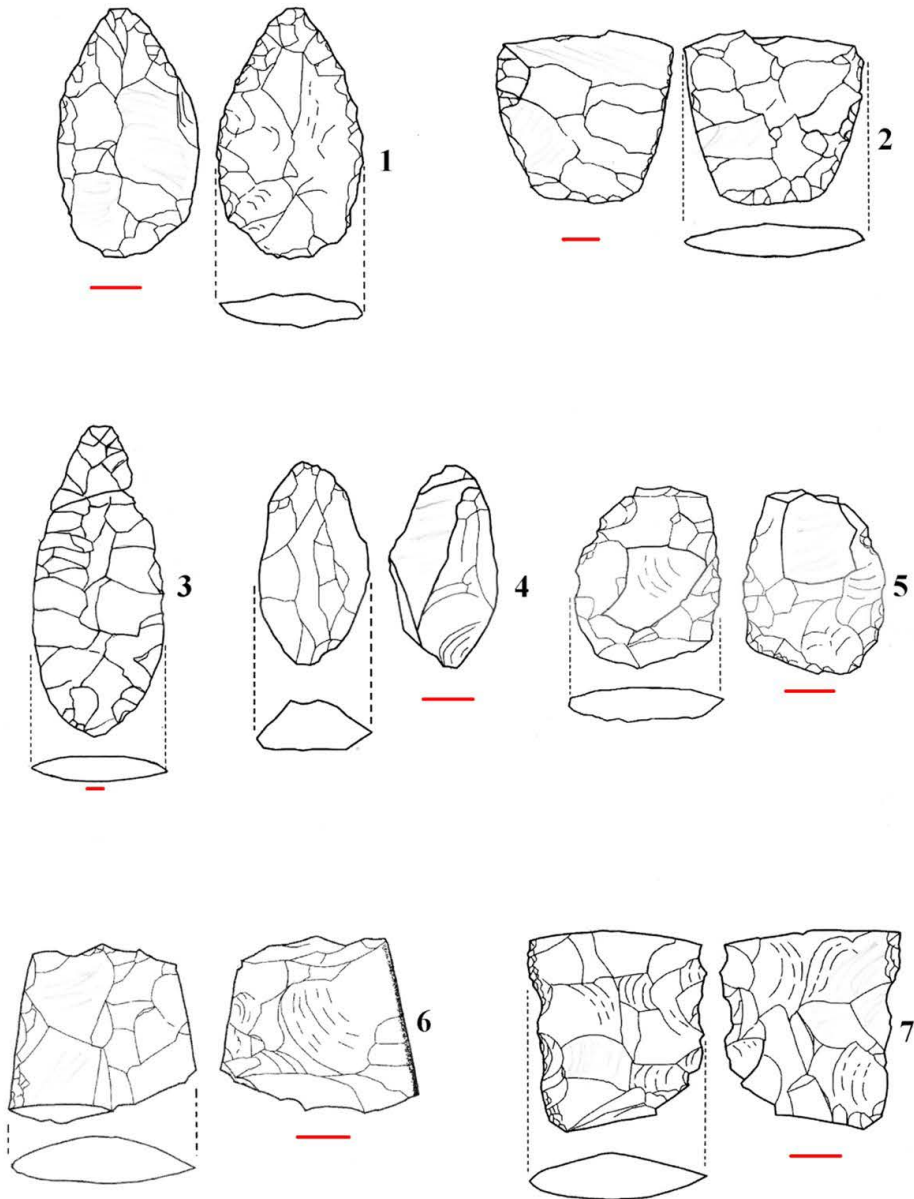
Comments on the Illustrations

Chipped stone: I remarked in Chapter 9 that the chipped stone lithic assemblage from Group 8N-11 was undistinguished, and the illustrations bear this out. Finely-made retouched bifacial tools (1, 3, 9, 18) are scarce, and are made of both obsidian and chert. Many tools are made from large flakes or pressure blades and are essentially unifacial, with minimal retouching on the ventral surface (15, 19, 21, 22, 25). Projectile or spear points (27, 35, 36) are reasonably abundant, but unexpectedly there are very few scrapers (14), at least of the hump-backed kind so common elsewhere. Conspicuously scarce are the big, rough bifacial chopping tools (10 cm or larger) that are so abundant at Piedras Negras and other sites where I have worked. The preponderance of obsidian tools noted in Chapter 9 is also reflected in Table B-1 below.

Miscellaneous objects: Other special artifacts are sparse. Spindle whorls (45, 55, 56, 57) are reasonably abundant (I have not shown them all), but the figurines so common elsewhere in the Maya Lowlands are not.

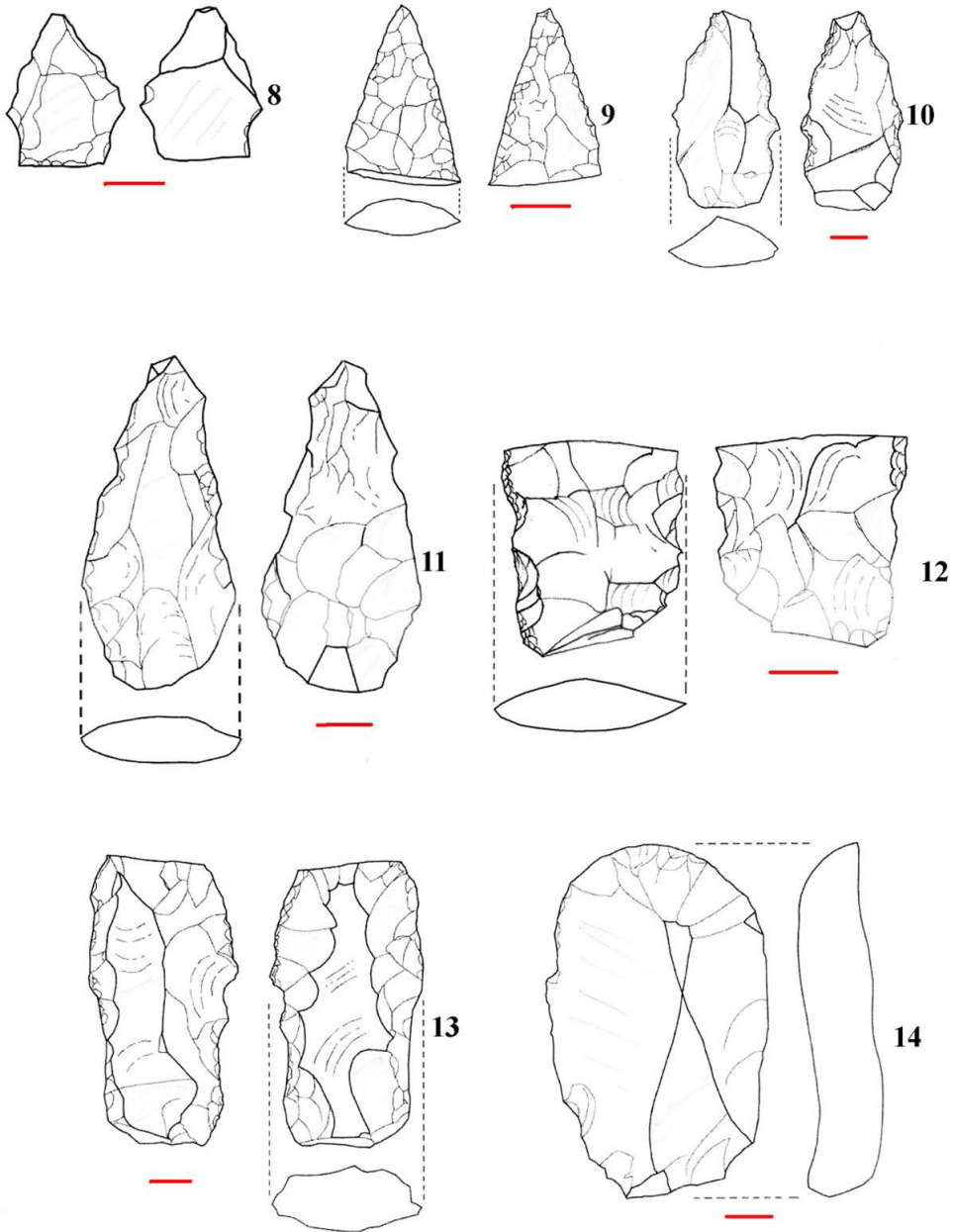
Table B-1 shows the generally poor contexts that yielded special artifacts. Very few came from sealed contexts, and many might either have come from either middens or the collapse debris immediately overlying them. Only one was associated with a burial.

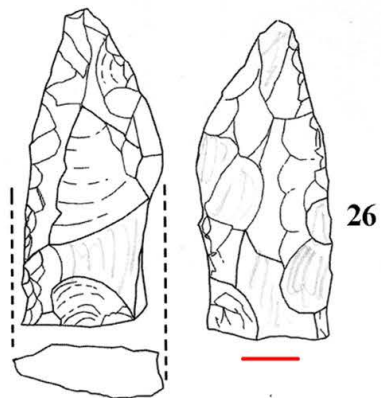
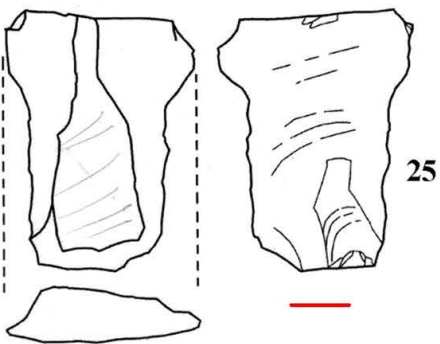
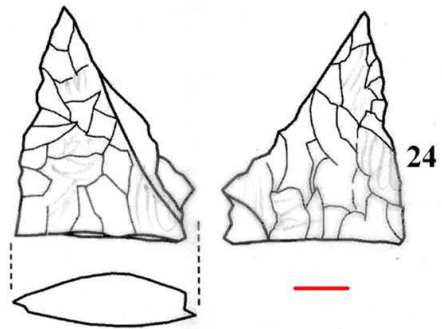
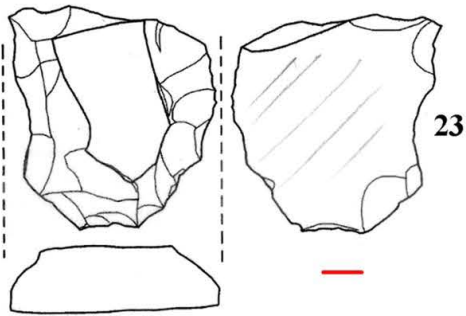
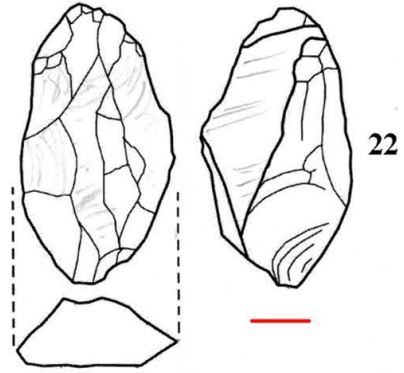
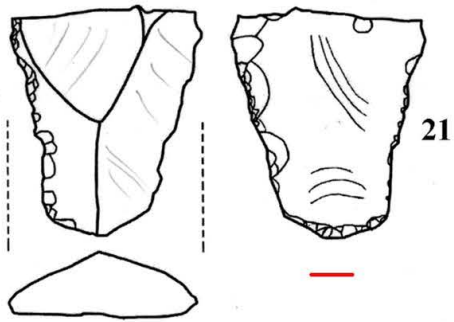
There is no space here to compare special objects from the Skyband Group with those from other elite-rank Copan sites, but it is worth stating once more that the royal residence 10L-2 (Doonan: 2010) exhibits much more richness and complexity.



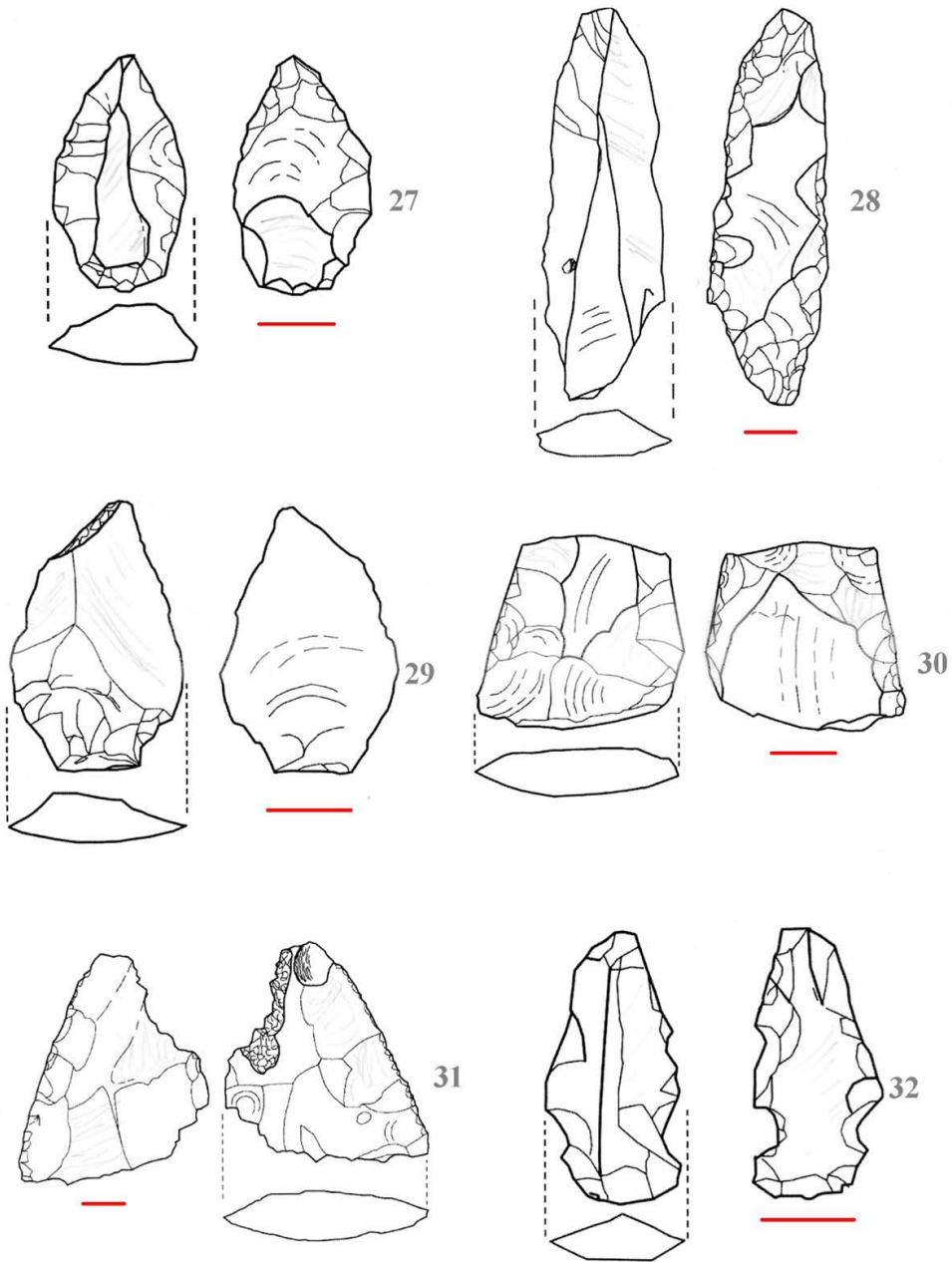
Appendix B Figures 1-59. Special artifacts.

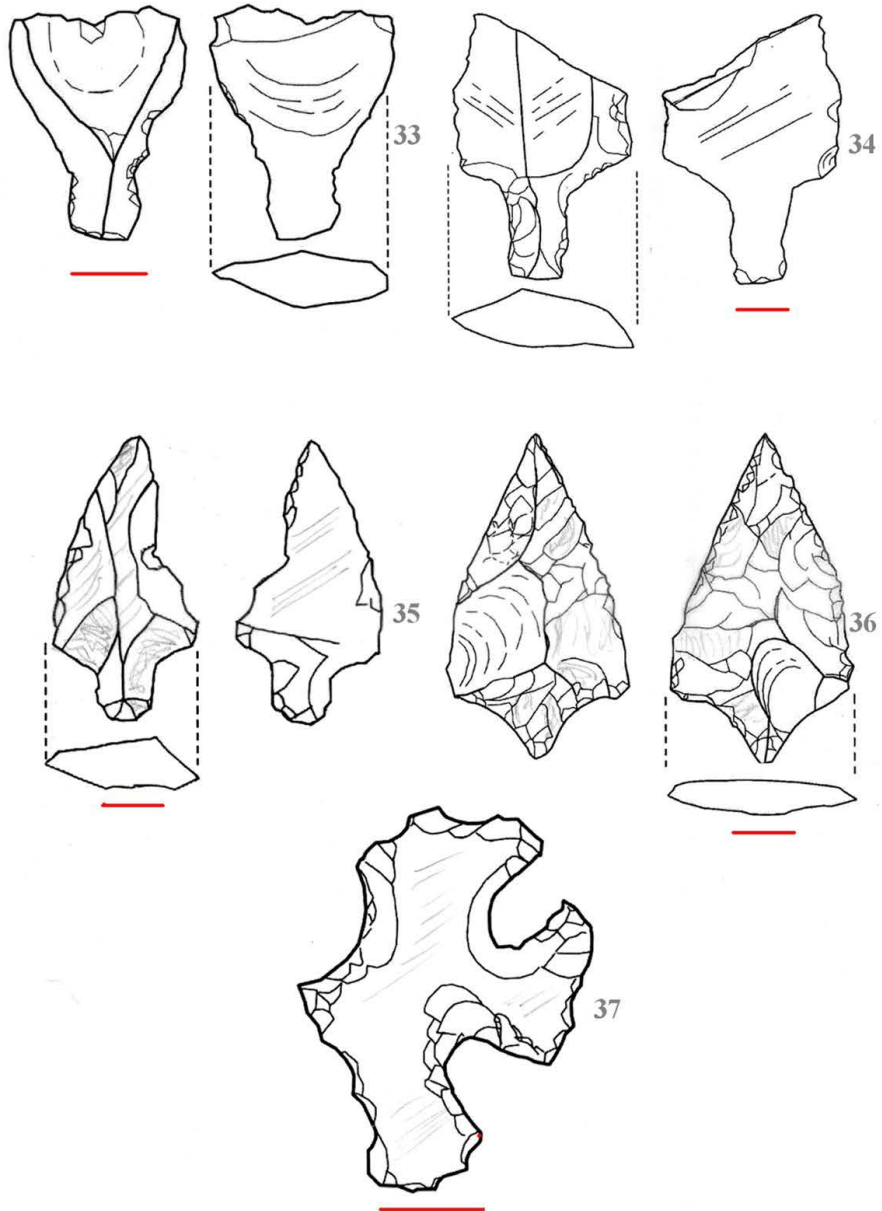
ILLUSTRATIONS OF SELECTED ARTIFACTS

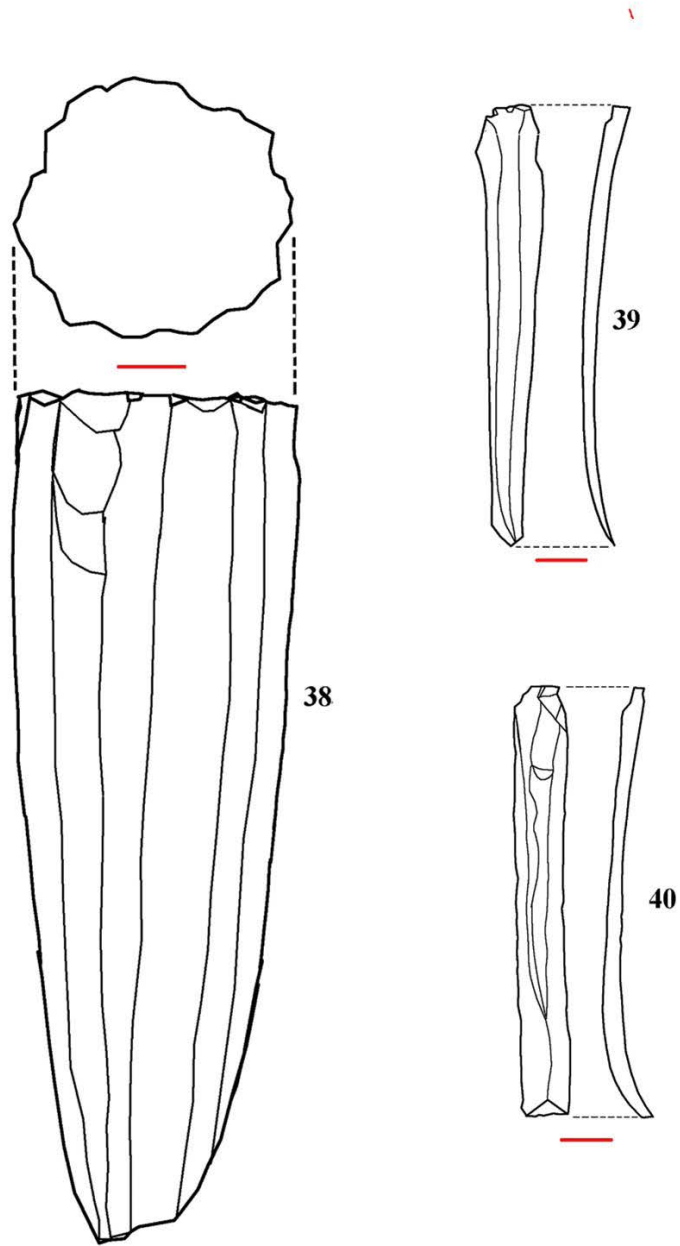


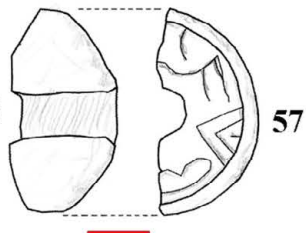
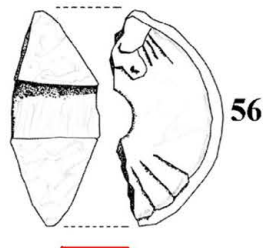
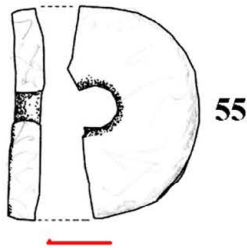
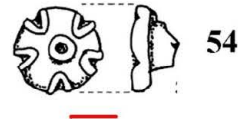
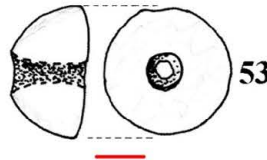
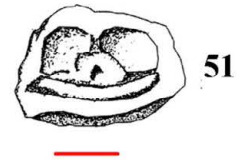
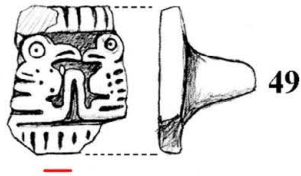


ILLUSTRATIONS OF SELECTED ARTIFACTS

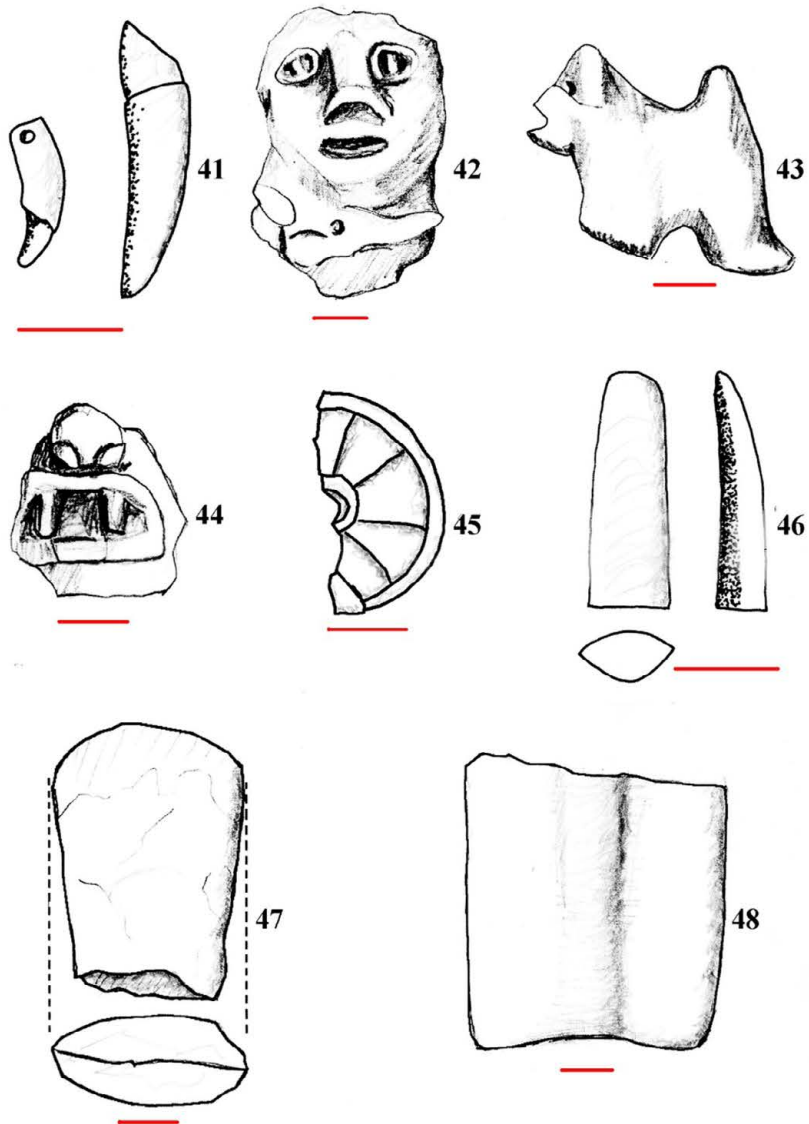








ILLUSTRATIONS OF SELECTED ARTIFACTS



DAVID WEBSTER

Table B-1. Artifact Contexts.

1) Lot 151; obsidian bifacial tool; structure fill; S4/E30-S2/E30	31) Lot 424; large broken biface of brown chert; context lost
2) Broken bifacial tool of brown chert; surface find	32) Lot 122; bifacial obsidian point; superficial collapse; S6/E28
3) Lot 368; Large biface of brown chert; beneath plaza floor; 2/22-S2E24	33) Lot 45; broken obsidian point made on large percussion blade; abovedeck, N2/E28
4) Lot 81; obsidian bifacial tool; collapse above plaza floor; S2/E24	34) Lot 75; broken obsidian unifacial point made on large percussion blade; collapse; S2/E24
5) Lot 81; obsidian bifacial tool; collapse above plaza floor; S2/E24	35) Lot 318; broken bifacial obsidian point made on percussion blade; midden; S4/E30
6) Lot 109; broken obsidian biface; collapse above plaza floor; N22/E22	36) Lot 393; obsidian point; collapse over plaza floor; N20/E10
7) Lot 276; broken obsidian biface; collapse above plaza floor; S8/E16	37) Lot 50; eccentric fragment of dark brown chert; midden; S2/E30
8) Lot 137; small obsidian point; structure fill; N14/E14-N4/E12	38) Lot 152; prismatic core of grey-banded black obsidian' collapse/midden; N4/E20
9) Lot 152; broken bifacial obsidian point; structure fill; N4/E20	39) Lot 441; prismatic obsidian blade; collapse above room floor; N24/E18
10) Lot 273; obsidian biface; midden/collapse; S8/E30	40) Lot 191; prismatic obsidian blade; collapse/midden above floor; N14/E28
11) Lot 46; obsidian biface; collapse; N6/E28	41) Feature 9; animal canines; midden
12) Lot 276; broken obsidian biface; collapse above floor of terrace; S8/E16	42) Lot 307; ceramic figurine fragment; collapse/midden; N8/E32
13) Lot 282; black obsidian biface made on percussion blade; collapse/midden; S8E30	43) Lot 270; ceramic animal figurine (dog?); structure fill; S6/E18-S8/E18
14) Lot 135; unifacial obsidian scraper made on large flake or percussion blade; collapse above bench; N8/E28	44) Lot 433; broken fragment of ceramic figurine face; collapse above room floor; N20/E18
15) Lot 273; broken obsidian unifacial tool made on large flake or percussion blade; collapse/midden; S8/E30	45) Lot 397; broken ceramic spindle whorl; structure fill; N2/E14
16) Lot 273; obsidian biface; collapse/midden S8/E30	46) Lot 253; broken perforator (?) fragment of buff-colored jade-like material; collapse/midden; structure fill; S6/E20
17) Lot 358; broken brown chert biface; below plaza surface; S2/E22-S2/E24	47) Lot 40; broken green-stone celt; on plaza floor; S2/E28
18) Lot 387; bifacial point of brown chert; collapse' below plaza surface; N20/E12	48) Lot 186; broken ground stone object made of tuff; collapse/midden; collapse/midden; N14/E28
19) Lot 182; bifacial obsidian point made on large percussion blade; collapse; N14/E28	49) Lot 279; incised re-orange ceramic stamp; collapse just above Feature 9 midden; probably from midden; N0/E20
Table B-1 continued	
20) Lot 425; broken bifacial obsidian point; below plaza surface; S2/E20-N0/E20	50) Small carved bone object; context lost
21) Lot 459; broken retouched obsidian percussion blade; collapse/midden above terrace floor; N18/E14	51) Lot 431; ceramic effigy face; midden; midden above plaza floor; N18/E9
22) Lot 81; obsidian biface; collapse above plaza floor; S2/E24	52) Lot 52; fragment of ceramic figurine; above bench surface; N0/E28
23) Lot 445; broken unifacial obsidian tool; collapse above room floor; N20/E16	53) Lot 79; spindle whorl made from tuff; floor; N4/E24
24) Lot 361; broken obsidian biface; collapse above room floor; N10/E6	54) Lot 204; clay object, possibly labret or ear flare; structure fill; N6/E14
25) Lot 117; broken unifacial obsidian tool made on large percussion blade; S4/E30	55) Lot 384; broken fragment of perforated ceramic disk; burial; S8/E30-S6/E30
26) Lot 6; obsidian biface; collapse above floor of terrace; N0/E12	56) Lot 457; fragment of perforated ceramic disk; collapse / midden; N18/E16
27) Lot 90; bifacial obsidian point; collapse above room floor; N14/E16	57) Lot 153; fragment of ceramic spindle whorl; collapse; N10/E28

ILLUSTRATIONS OF SELECTED ARTIFACTS

28) Lot 441; obsidian point or knife made on percussion blade; collapse above room floor; N24/E18	58) Lot 253; object carved of grey jade-like mineral; possible labret or ear flare; collapse/midden; S6/E20
29) Lot 188; unifacial obsidian point made on flake or percussion blade; collapse/midden; N2/E20	59) Lot 216; fragment of incised clay object (stamp?); collapse; S2/E22
30) Lot 343; broken obsidian biface; collapse/midden above plaza floor; N0/E20	

Bibliography

- Abrams, Elliot (1977). *Prehistoric Mesoamerica*. Little, Brown and Co., Boston.
- Abrams, Elliot (1984a). *Systems of Labor Organization in Late Classic Copán, Honduras: The Energetics of Construction*. Ph.D. dissertation, Department of Anthropology, Penn State University.
- Abrams, Elliot (1984b). Replicative Experimentation at Copán: Implications for Ancient Economic Specialization. *Journal of New World Archaeology* 6: 2: 39-48.
- Abrams, Elliot (1994). *How the Maya Built their World*. University of Texas Press, Austin.
- Adams, Richard E. W. (1974). Classic Maya Palace Populations at Uaxactún. In *Mesoamerican Archaeology*, Norman Hammond, ed., pp. 285-296. University of Texas Press, Austin.
- Agurcia Fasquelle, Ricardo and William L. Fash (1991). Maya Artistry Unearthed. *National Geographic Magazine* 180: 3: 94-105.
- Andrews, E. Wyllys V. and Cassandra Bill (2005). A Late Classic Royal Residence at Copán. In *Copán: The History of and Ancient Maya Kingdom*. E. Wyllys Andrews V and William Fash eds., pp. 239-314. SAR Press, Santa Fe.
- Andrews E. Wyllys V. and Barbara Fash (1992). Continuity and Change in a Royal Maya Residential Complex at Copán. *Ancient Mesoamerica* 3: 63-88.
- Andrews, George (1975). *Maya Cities and Placemaking*. University of Oklahoma Press, Norman.
- Andrews, George (1980). Palace Complexes and the Maya Elite: Palenque and Tikal. Paper presented at the Fourth Mesa Redonda de Palenque, Chiapas, Mexico.
- Aoyama, Kazuo (1999). *Ancient Maya State, Urbanism, Exchange, and Craft Specialization*. University of Pittsburgh Memoirs in Latin American Archaeology, No. 12. Pittsburgh.
- Aoyama, Kazuo (2005). Classic Maya Warfare and Weapons: Spear, Dart, and Arrow Points of Aguateca and Copán. *Ancient Mesoamerica* 16: 291-304.
- Ardren, Traci (2014). Sacbe Processions and Classic Maya Urban Culture. Paper presented at the *Symposium on Processions in the Ancient Americas: Approaches and Perspectives*. October 10-11, Dumbarton Oaks, Washington, D.C.
- Arnould, Charlotte, Dominique Michelet, and Philippe Nondédéo (2013). Living Together in Río Bec Houses: Co-residence, Rank, and Alliance. *Ancient Mesoamerica* 24: 469-493.
- Ashmore, Wendy ed. (1981). *Lowland Maya Settlement Patterns*. School of American Research, Santa Fe.
- Ashmore, Wendy (1989). Concepts of Directionality among the Ancient Maya. Paper presented at the Seminario de Arqueología Hondureña, Instituto Hondureño de Antropología e Historia, Copán Ruinas.
- Ashmore, Wendy (1991). Site-Planning Principles and Concepts of Directionality Among the Ancient Maya. *Latin American Antiquity* 2: 199-226.
- Ashmore, Wendy (2015). What Were Ancient Maya Landscapes Really like? *Journal of Anthropological Research* 71: 3: 305-326.
- Aveni, Anthony (2012). Mesoamerican Calendars and Archaeoastronomy. In *The Oxford Handbook of Mesoamerican Archaeology*. Deborah Nichols and Chris Pool eds., pp. 777-794. Oxford University Press, New York.
- Aveni, Anthony, and Anne Dowd (2017). E Groups: Astronomy, Alignments, and Maya Cosmology. In *Maya E Groups: Calendars, Astronomy, and Urbanism in the Early Lowlands*. David Freidel, Arlen Chase, Anne Dowd, and Jerry Murdock eds., pp. 75-94. University Press of Florida, Gainesville.
- Awe, Jami, Julie Hoggarth, and James Aimers (2017). The Case of E Groups and the Eastern Triadic Assemblages in the Belize River Valley. In *Maya E Groups: Calendars, Astronomy, and Urbanism in the Early Lowlands*. David Freidel, Arlen Chase, Anne Dowd, and Jerry Murdock eds., pp. 412-449. University Press of Florida, Gainesville.
- Bailey, Geoff (2007). Time Perspectives: Palimpsests and the Archaeology of Time. *Journal of Anthropological Archaeology* 26: 198-223.
- Ball, Joseph (2014) Rethinking the Becan Ceramic Sequence – Disjunctions, Continuities, Segmentation, and Chronology. *Latin American Antiquity* 25: 4: 427-448.
- Ball, Joseph and Jennifer Taschek (2001). The Buenavista-Cahal Pech Court: A Multi-Palace Royal Court from a Petty Lowland Maya Kingdom. In *Royal Courts of the Maya, vol. 1*. Takeshi Inomata and Stephen Houston eds., pp. 165-200. Westview Press, Boulder.
- Barrios, Edy, Cameron McNeil, Mauricio Díaz, Antolín Velásquez and Walter Burgos (2017). Community Resilience in the Río Amarillo East Pocket: Commoner Occupation around Río Amarillo and Quebrada Piedras Negras at the end of Late Classic through Postclassic Periods. Paper presented at the 82nd Annual Meetings of the Society for American Archaeology, Vancouver.

BIBLIOGRAPHY

- Bassie-Sweet, Karen (2019). Classic Maya Gods of Flint and Obsidian. In *Seeking Conflict in Mesoamerica*. Shawn Morton and Meaghan Peuramaki-Brown, eds., pp. 47-76. University of Colorado Press, Louisville.
- Baudez, Claude F. ed. (1983). Introducción a la Arqueología de Copán, Honduras Tomos I, II and III. Proyecto Arqueológico Copán Secretaria de Estado en el Despacho de Cultura y Turismo. Tegucigalpa.
- Baudez, Claude F. ed. (1986) Iconography and Epigraphy at Copán. In *The Southeast Maya Periphery*. Patricia Urban and Edward Schortman eds., pp. 16-26. University of Texas Press, Austin.
- Baudez, Claude F. ed. (1989). The House of the Bacabs: An Iconographic Analysis. In *The House of the Bacabs, Copán, Honduras*. David Webster ed., pp. 73-81. Studies in Precolumbian Art and Archaeology No. 29. Dumbarton Oaks Research Library and Collection, Washington, D.C.
- Baudez, Claude F. ed. (1994). *Maya Sculpture of Copán*. University of Oklahoma Press, Norman.
- Beard, Mary (2008). *The Fires of Vesuvius*. Harvard University Press, Cambridge.
- Beaudry, Marilyn (1984). *Ceramic Production and Distribution in the Southeastern Maya Periphery*. BAR International Series 203. British Archaeological Reports, Oxford.
- Becker, Marshall (1979). Priests, Peasants, and Ceremonial Centers: The Evolution of a Model. In *Maya Archaeology and Ethnohistory*, Norman Hammond and Gordon R. Willey eds., pp. 3-20. University of Texas Press, Austin.
- Bell, Ellen, Marcello Canuto, and Robert Sharer (2004). *Understanding Early Classic Copán*. University of Pennsylvania Museum, Philadelphia.
- Bill, Cassandra (1997). *Patterns of Variation and Change in Dynastic Period Ceramics and Ceramic Production at Copán, Honduras*. Ph.D. dissertation, Department of Anthropology, Tulane University.
- Bill, Cassandra (2017). Material Culture Correlates of Polity Restructuring and Decline: Changes in Ceramic Production and Use at the End of the Late Classic Period in the Copán Valley. Paper presented at the 82nd Annual Meetings of the Society for American Archaeology, Vancouver.
- Binford, Lewis (1981). Behavioral Archaeology and the "Pompeii Premise". *Journal of Anthropological Research* 37: 3: 195-20.
- Bishop, Ronald, Marilyn Beaudry, Richard Leventhal, and Robert Sharer (1986). Compositional Analysis of Copador and Related Pottery in the Southeast Maya Area. In *The Southeast Maya Periphery*. Patricia Urban and Edward Schortman eds., pp. 143-167. University of Texas Press, Austin.
- Black, Stephen (1990). The Carnegie Institution Uaxactún Project and the Development of Maya Archaeology. *Ancient Mesoamerica*: 257-276.
- Brainerd, George (1954). *The Maya Civilization*. Southwest Museum, Los Angeles.
- Braswell, Geoffrey (1992). Obsidian Hydration Dating, the Coner Phase, and Revisionist Chronology at Copán, Honduras. *Latin American Antiquity* 3:2: 130-147.
- Braswell, Geoffrey (1996). Obsidian Hydration Dating. In *The Oxford Encyclopedia of Archaeology*. Brian Fagan ed., p. 537. Oxford University Press, Oxford.
- Bricker, Harvey and Victoria Bricker (1999). Astronomical Orientation of the Skyband Bench at Copán. *Journal of Field Archaeology* 26:4: 435-442.
- Bryson, Bill (2010). *At Home: A Short History of Private Life*. Doubleday, New York.
- Bullard, William (1960). Maya Settlement Pattern in Northeastern Petén, Guatemala. *American Antiquity* 25: 3: 355-372.
- Canuto, Marcello (2004). The Rural Settlement of Copán: Changes Through the Early Classic. In *Understanding Early Classic Copán*. Ellen Bell, Marcello Canuto, and Robert Sharer eds., pp. 29-52. University of Pennsylvania Museum, Philadelphia.
- Canuto, Marcello and Tomas Barrientos (2020). La Corona" Negotiating a Landscape of Power. In *Approaches to Monumental Landscapes of the Ancient Maya*. Brett Houk, Barbara Arroyo, and Terry Powis eds., pp. 170-195. University Press of Florida, Tallahassee.
- Canuto, Marcello, and Ellen Bell (2013). Archaeological Investigations in the El Paraiso Valley: The Role of Secondary Centers in the Multiethnic Landscape of Classic Period Copán. *Ancient Mesoamerica* 24: 1-24.
- Carmack, Robert (1981). *The Quiché Mayas of Uatatlán*. University of Oklahoma Press, Norman.
- Carmack, Robert and John Weeks (1981). The Archaeology and Ethnohistory of Uatatlán: A Conjunctive Approach. *American Antiquity* 46: 323-341.
- Carrelli, Christine (2004). Measures of Power. In *Understanding Early Classic Copán*. Ellen Bell, Marcello Canuto, and Robert Sharer eds., pp. 113-130. University of Pennsylvania Museum, Philadelphia.
- Chance, John K. (2001). The Noble House in Colonial Puebla, Mexico. *American Anthropologist* 102:3: 485-502
- Chase, Adrian and Rudolph Cesaretti (2018). Diversity in Ancient Maya Water Management Strategies and Landscapes at Caracol, Belize and Tikal. Guatemala. WIREs Water.2018;e1332. <https://doi.org/10.1002/wat2.1332>

- Chase, Diane and Arlen Chase (1992). *Mesoamerican Elites*. University of Oklahoma Press, Norman.
- Chase, Arlen and Diane Chase (2017). E Groups and the Rise of Complexity in the Southeastern Maya Lowlands. In *Maya E Groups: Calendars, Astronomy, and Urbanism in the Early Lowlands*. David Freidel, Arlen Chase, Anne Dowd, and Jerry Murdock eds., pp. 31-74. University Press of Florida, Gainesville.
- Chase, Arlen, Anne Dowd, and David Freidel eds. (2017). The Distribution and Significance of E Groups. In *Maya E Groups: Calendars, Astronomy, and Urbanism in the Early Lowlands*. David Freidel, Arlen Chase, Anne Dowd, and Jerry Murdock eds., pp. 3-30. University Press of Florida, Gainesville.
- Cheek, Charles (1986). Construction Activity as a Measurement of Change at Copán, Honduras. In *The Southeast Maya Periphery*. Patricia Urban and Edward Schortman eds., pp. 50-71. University of Texas Press, Austin.
- Cheek, Charles (2003). Maya Community Buildings. *Ancient Mesoamerica*. 14: 131-138.
- Cheek, Charles and Mary Spink (1986). Excavaciones en el Grupo 3, Estructura 223 (Operación VII). In *Proyecto Arqueológico Copán Segunda Fase: Excavaciones en el Area Urbana de Copán Tomos 1-4*, William Sanders ed., pp. 36-92. Instituto Hondureño de Antropología e Historia, Tegucigalpa.
- Chen, Ran, Yahui He, Xinwei Li, Jorge Ramos, Moran Li, and Li Liu (2021). Fermented Maize Beverages as Ritual Offerings: Investigating Elite Drinking during the Classic Maya Period at Copán, Honduras. *Journal of Anthropological Archaeology* 65 101373 1-12. <https://doi.org/10.1016/j.jaa.2021.101373>
- Chinchilla M., Oswaldo (2006). The Stars of the Palenque Sarcophagus. *Res: Anthropology and Aesthetics* March: 40-50.
- Christie, Jessica (2003). *Maya Palaces and Elite Residences: An Interdisciplinary Approach*. University of Texas Press, Austin.
- Christie, Jessica and Patricia Sarro eds. (2006). *Palaces and Power in the Americas*. University of Texas Press, Austin.
- Clark, John, Julia Guernsey, and Barbara Arroyo (2010). Stone Monuments and Preclassic Civilization. In Julia Guernsey, John Clark, and Barbara Arroyo eds., pp. 1-26. *The Place of Stone Monuments*. Dumbarton Oaks, Washington, D.C.
- Clunas, Craig (2009). *Art in China*. Oxford University Press, New York.
- Clunas, Craig (2013). *Screen of Kings: Royal Art and Power in Ming China*. University of Hawai'i Press, Honolulu.
- Coe, Michael (1956). The Funerary Temple Among the Classic Maya. *Southwestern Journal of Anthropology* 12: 387-394.
- Coe, Michael (2003). Another Look at the Maya Ball Game. In *Il sacro e il paesaggio nell'America indigena*, D. Domenici, C. Orsisi, and S. Venturoli eds., pp. 197-204. Clueb, Bologna.
- Coe, Michael and Justin Kerr (1997). *The Art of the Maya Scribe*. Harry Abrams Publishers, New York.
- Coe, Michael and Mark Van Stone (2001). *Reading the Maya Glyphs*. Thames and Hudson, London.
- Coe, William (1962). A Summary of Excavations and Research at Tikal: Guatemala 1956-61. *American Antiquity* 27: 4: 479-507.
- Connelly, Joan (2014). *The Parthenon Enigma*. Alfred A. Knopf, New York.
- Cortés, Hernan (1986). *Letters from Mexico*. Yale University Press, New Haven.
- Cuidad Ruiz, Andreas, M. Josefa Iglesias Ponce de León, and M. Carmen Martinez eds. (2001). *Reconstruyendo la Ciudad Maya: El Urbanismo en Las Sociedades Antiguas*. Sociedad Española de Estudios Mayas, Madrid.
- Culleton, Brendon, Keith Prufer, and Douglas Kennett (2012). A Bayesian AMS 14C Chronology at the Classic Maya Polity of Uxbenka, Belize. *Journal of Archaeological Science* 39: 1572-1586.
- Culbert, T. Patrick (2003). The Ceramics of Tikal. In *Tikal: Dynasties, Foreigners, and Affairs of State*. Jeremy Sabloff ed., pp. 47-81. SAR Press, Santa Fe.
- Cyphers, Ann and Anna Di Castro (2009). Early Olmec Architecture and Imagery. In *The Art of Urbanism*. William Fash and Leonardo Lopez Lujan eds., pp. 22-52. Dumbarton Oaks, Washington, D.C.
- Czapiewska-Halliday, Ewa, Nicholas Carter, Melanie Kingsley, Sara Newman, and Alyce de Carteret (2018). Understanding Social, Economic, and Political Change: The Ceramics of El Zotz. In *An Inconstant Landscape: The Maya Kingdom of El Zotz, Guatemala*. Thomas Garrison and Stephen Houston eds., pp. 189-227. University of Colorado Press, Louisville.
- Dahlin, Bruce, and Arlen Chase (2014). A Tale of Three Cities: Effects of the AD 536 Event in the Lowland Maya Heartland. In *The Great Maya Droughts in Cultural Context*. Gyles Iannone ed., pp. 127-156. University of Colorado Press, Boulder.
- Davis-Salazar, Karla (2006). Late Classic Maya Drainage and Flood Control at Copán, Honduras. *Ancient Mesoamerica* 17: 1: 125-138.
- Delvendahl, Kai (2008). *Calakmul in Sight*. Unas Letras Industria Editorial, Merida, Mexico.
- Delvendahl, Kai (2010). *Las Sedes de Poder*. Ediciones de la Universidad Autonoma de Yucatan, Merida.
- Diamanti, Melissa (1991). *Domestic Organization at Copán: Reconstruction of Maya Elite Households through Ethnographic Analogy*. Ph.D. dissertation, Department of Anthropology, Penn State University, University Park.

BIBLIOGRAPHY

- Doering, Travis and Lori Collins (2010). Revisiting Kaminaljuyú Monument 65 in Three-Dimensional High Definition. In *The Place of Stone Monuments*. Julia Guernsey, John Clark, and Barbara Arroyo eds., pp. 259-282. Dumbarton Oaks, Washington, D.C.
- Doonan, William (2010). *The Artifacts of a Royal Residence: Group 10L-2, Copán, Honduras*. Middle American Research Institute Pub. 70. Tulane University, New Orleans.
- Dowd, Anne (2017). More than Smoke and Mirrors: Maya Temple Precincts and the Emergence of Religious Institutions in Mesoamerica. In *Maya E Groups: Calendars, Astronomy, and Urbanism in the Early Lowlands*. David Freidel, Arlen Chase, Anne Dowd, and Jerry Murdock eds., pp. 517-577. University Press of Florida, Gainesville.
- Dull, Robert, John Southon and Payson Sheets (2001). Volcanism, Ecology, and Culture: A Reassessment of the Volcán Ilopango TBJ Eruption in the Southern Maya Realm. *Latin American Antiquity* 12:1: 25-44.
- Dull, Robert, John Southon and Payson Sheets (2014) Reconsidering the Environmental Impacts of the Early 6th-Century Ilopango Eruption throughout Mesoamerica. Paper presented at the 79th Annual Meetings of the Society for American Archaeology, Austin.
- Dull, Robert, John Southon, Steffen Kutterhoff, Kevin Anchukaitis, Armin Freundt, David Wahl, Payson Sheets, Paul Amaroli, Walter Hernandez, Michael Wiemann, and Clive Oppenheimer (2019). Radiocarbon and Geologic Evidence Reveal Ilopango Volcano as Source of the Colossal 'Mystery' Eruption of 539/40 CE. *Quaternary Science Reviews*, <https://doi.org/10.1016/j.quascirev.2019.07.037>.
- Dunning, Nicholas P. and Timothy Beach (2010). Farms and Forests: Spatial and Temporal Perspectives on Ancient Maya Landscapes. In *Landscapes and Societies*. I. P. Martini and W. Chesworth eds., pp. 369-389. Springer-Verlag, Berlin.
- Eaton, Jack (1974). Chicanná: An Elite Center in the Río Bec Region. In *Preliminary Reports on Archaeological Investigations in the Río Bec Area, Campeche, Mexico*. Compiled by Richard E. W. Adams, pp. 133-138. Middle American Research Institute Pub. 31. Tulane University, New Orleans.
- Ebert, Claire, Nancy May, Brendan Culleton, Jaime Awe, and Douglas Kennett (2017). Regional Responses to Drought during the Formation and Decline of Preclassic Maya Societies. *Quaternary Science Reviews* 173: 211-235.
- Elson, Christina and R. Alan Covey eds. (2006). *Intermediate Elites in Pre-Columbian States and Empires*. University of Arizona Press, Tuscon.
- Estrada-Belli, Francisco (2011). *The First Maya Civilization*. Routledge, London and New York.
- Estrada-Belli, Francisco and Alexandre Tokovinine (2016). A King's Apotheosis: Iconography, Text, and Politics from a Classic Maya Temple at Holmul. *Latin American Antiquity* 27:2: 149-168.
- Estrada-Belli, Francisco, Alexandre Tokovinine, Jennifer Foley, Heather Hurst, Gene Ware, David Stuart, Nikolai Grube (2009). A Maya Palace at Holmul, Petén, Guatemala and the Teotihuacán "Entrada": Evidence from Murals 7 and 9. *Latin American Antiquity* 20: 1: 228-259.
- Evans, Susan Toby (2004). Aztec Palaces and Other Residential Elite Architecture. In *Palaces of the Ancient New World*. Susan Evans and Joanne Pillsbury eds, pp. 7-58. Dumbarton Oaks, Washington, D.C.
- Evans, Susan and Joanne Pillsbury eds. (2004). *Palaces of the Ancient New World*. Dumbarton Oaks Research Library and Collection, Washington, D.C.
- Evans, Nicholas, Thomas K. Bauska, Fernando Gasquez-Sanchez, Mark Brenner, Jason M. Curtis, and David Hodell (2018). Quantification of Drought during the Collapse of The Classic Maya Civilization. *Science* 361: 498-501.
- Fahsen, Federico (2002). From Chieftdom to Statehood in the Highlands of Guatemala. In *Divine Kings of the Rain Forest*. Nikolai Grube, ed., pp. 87-95. Könnemann Verlagsgesellschaft, Cologne.
- Fash, Barbara (2011). *The Copán Sculpture Museum: Ancient Maya Artistry in Stucco and Stone*. Peabody Museum Press, Harvard University, Cambridge.
- Fash, Barbara, William Fash, Sheree Lane, Rudy Larios, Linda Schele, Jeffrey Stomper, and David Stuart (1992). Investigations of a Classic Maya Council House at Copán, Honduras. *Journal of Field Archaeology* 19: 419-442.
- Fash, William (1983a). Reconocimiento y Excavaciones en el Valley. In *Proyecto Arqueológico Copán, Tomo 1*. Claude F. Baudez, ed., pp. 229-470. Secretaria de Estado en el Despacho de Cultura y Turismo, Tegucigalpa.
- Fash, William (1983b). *Maya State Formation, a Case Study and its Implications*. Ph.D. dissertation, Department of Anthropology, Harvard University.
- Fash, William (1983c). Deducing Social Organization from Classic Maya Settlement Patterns. In *Civilization in the Ancient Americas: Essays in Honor of Gordon R. Willey*, Richard Leventhal and Alan Kolata eds., pp. 261-288. Albuquerque, University of New Mexico Press.
- Fash, William (1985). 1977 Test Pits Program: Operations 52-73. Manuscript on file in the Copán Archives, Department of Anthropology, Penn State University.

- Fash, William (1986). History and Characteristics of Settlement in the Copán Valley, and some Comparisons with Quiriguá. In *The Southeast Maya Periphery*, Patricia Urban and Edward Schortman eds., pp. 72-93. University of Texas Press, Austin.
- Fash, William (1991). *Scribes, Warriors and Kings*. Thames and Hudson, New York.
- Fash, William (2005). Toward a Social History of the Copán Valley. In *Copán, the History of and Ancient Maya Kingdom*. E. Wyllys Andrews V and William Fash, eds., pp. 73-102. School of American Research Press, Santa Fe.
- Fash, William, E. Wyllys Andrews V, and Kam Manahan (2004). Political Decentralization, Dynastic Collapse, and the Early Postclassic in the Urban Center of Copán, Honduras. In *The Terminal Classic in the Classic Maya Lowlands*. Arthur Demarest, Prudence Rice, and Don Rice eds., pp. 260-287. University of Colorado Press, Boulder.
- Fash, William, Barbara Fash, and Karla Davis –Salazar (2004). Setting the Stage: Origins of the Hieroglyphic Stairway Plaza on the Great Period Ending. In *Understanding Early Classic Copán*, Ellen Bell, Marcello Canuto, and Robert Sharer eds., pp. 65-84. University of Pennsylvania Museum, Philadelphia.
- Fash, William L. and Kurt Z. Long (1983). Mapa Arqueológico del Valle de Copán. In *Introducción a la Arqueología de Copán*, Claude F. Baudéz ed., Secretaría del Estado en el Despacho de Cultura y Turismo, Tegucigalpa.
- Fash, William, and Robert Sharer (1991). Sociopolitical Developments and Methodological Issues at Copán, Honduras: A Conjunctive Perspective. *Latin American Antiquity* 2: 166-187.
- Fillooy Nadal, Laura, Coordinadora (2010). *Misterios de un Rostro Maya*. Instituto Nacional de Antropología e Historia: Mexico City.
- Fitzsimmons, James (2009). *Death and the Classic Maya Kings*. University of Texas Press, Austin.
- Flannery, Kent (1998). The Ground Plans of Archaic States. In *Archaic States*, Gary Feinman and Joyce Marcus, eds., pp. 15-58. School of American Research, Santa Fe.
- Foias, Antonia and Ronald Bishop (2007). Pots, Sherds, and Glyphs. In *Pottery Economics in Mesoamerica*. Chris Pool and George Bey eds., pp. 212-236. University of Arizona Press, Tucson.
- Freidel, David, Arlen Chase, Anne Dowd, and Jerry Murdock eds. (2017). *Maya E Groups: Calendars, Astronomy, and Urbanism in the Early Lowlands*. University Press of Florida, Gainesville.
- Freter, AnnCorinne (1988). *The Classic Maya Collapse at Copán, Honduras: A Regional Settlement Perspective*. Ph.D. dissertation, Department of Anthropology, Penn State University.
- Freter, AnnCorinne (1992). Chronological Research at Copán: Methods and Implications. *Ancient Mesoamerica* 3: 117-134.
- Freter, AnnCorinne (2004). Multiscalar Model of Rural Households and Communities in Late Classic Copán Maya Society. *Ancient Mesoamerica* 15: 93-106.
- Freter, AnnCorinne and Elliot Abrams (2016). Chronology, Construction, and the Abandonment Process: A Case Study from the Classic Maya Kingdom of Copán, Honduras. In *Human Adaptation in Ancient Mesoamerica*. Nancy Gonlin and Kirk French eds., pp. 97-124. University of Colorado Press, Boulder.
- Gann, Thomas and J. Eric Thompson (1931). *The History of the Maya from the Earliest Times to the Present Day*. Charles Scribner's Sons, New York.
- Gerry, John and Harold Krueger (1997). Regional Diversity in Classic Maya Diets. In *Bones of the Maya*. Stephen Whittington and David Reed, eds., pp. 196-207. Smithsonian Institution Press, Washington, D.C.
- Gerstle, Andrea (1988). *Maya-Lenca Ethnic Relations in Late Classic Copán, Honduras*. Ph.D. dissertation, Department of Anthropology, the University of California, Santa Barbara.
- Gerstle, Andrea and David Webster (1990). Excavaciones in Conjunto 9N8 - Patio D. In *Excavaciones y Arquetectura del Nucleo Urban de Copán*, Tomo III. William T. Sanders ed., Instituto Hondureño de Antropología e Historia, Tegucigalpa.
- Gibbons, Ann (2018). Eruption made 536 'the worst year to be alive'. *Science* <http://science.sciencemag.org/content/362/6416/733>
- Gillespie, Susan (2000). Rethinking Ancient Maya Social Organization: Replacing "Lineage" with "House". *American Anthropologist* 102: 3: 467-484.
- Glover, Jeffrey and Travis Stanton (2010). Assessing the Role of Preclassic Traditions in the Formation of Early Classic Yucatec Cultures, Mexico. *Journal of Field Archaeology* 35: 1: 58-77.
- Gonlin, Nancy (1993). *Rural Household Archaeology at Copán, Honduras*. Ph.D. dissertation, Department of Anthropology, Penn State University.
- Guenter, Stanley (2015). On the Fall of Copán, Teotihuacán, and the Origins of the Fate of 8 Ahau. Paper presented at the Meetings of the Society of American Archaeology, San Francisco.

BIBLIOGRAPHY

- Guernsey, Julia, John Clark, and Barbara Arroyo eds. (2010). *The Place of Stone Monuments*. Dumbarton Oaks, Washington, D.C.
- Habig, Blair (1994). *The Artifact Assemblage as a Measure of Status at Copán*. Senior Honors Thesis, Department of Anthropology, Cornell University.
- Hall, Henry J. (2001). *Archaeological Research into Ancient Cultural Landscapes at Copán (Honduras)*. Report to Centro Frances de Estudios Mexicanos y Centroamericanos (CEMCA).
- Hall, Jay and Rene Viel (2004). The Early Classic Copán Landscape: A View from the Preclassic. In *Understanding Early Classic Copán*. Ellen Bell, Marcello Canuto, and Robert Sharer eds., pp. 17-28. University of Pennsylvania Museum, Philadelphia.
- Hansen, Richard (2016). Cultural and Environmental Components of the First Maya States. In *The Origins of Maya States*. Loa Traxler and Robert Sharer eds. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.
- Harrison, Peter (1970). *The Central Acropolis, Tikal, Guatemala: A Preliminary Study of the Functions of its Central Components during the Late Classic Period*. Ph.D. dissertation, Department of Anthropology, University of Pennsylvania, Philadelphia.
- Harrison, Peter (1999). *The Lords of Tikal*. Thames and Hudson, London.
- Haviland, William (1963). *Excavation of Small Structures in the Northeast Quadrant of Tikal, Guatemala*. Ph.D. dissertation, Department of Anthropology, University of Pennsylvania, Philadelphia.
- Haviland, William (1965). Prehistoric Settlement at Tikal, Guatemala. *Expedition* 7:3:14-23.
- Haviland, William (1981). Dower Houses and Minor Centers at Tikal, Guatemala. In *Lowland Maya Settlement Patterns*. Wendy Ashmore ed., pp. 89-117. School of American Research, Santa Fe.
- Haviland, William (2015). *Tikal Report 22: Excavations in Residential Areas of Tikal: Group 7F-1*. University of Pennsylvania Museum, Philadelphia.
- Haviland, William (2008). Tikal, Guatemala: A Maya Way Toward Urbanism. In *Urbanism in Mesoamerica Vol 2*. A. G. Mastache, Robert H. Cobean, Angel García Cook, and Kenneth Hirth eds. pp. 259-283. Joint publication of the Instituto Nacional de Antropología e Historia de Mexico and The Pennsylvania State University, University Park.
- Hayden, Brian and Aubrey Cannon (1983). Where the Garbage Goes: Refuse disposal in the Maya Highlands. *Journal of Anthropological Archaeology* 2:2:117-163.
- Hearn, Kelly (2007). Ancient Maya Tomb Found. *National Geographic News*. <http://news.nationalgeographic.com/news/2007/05/070517-maya-tomb.html>
- Henige, David (1974). *The Chronology of Oral Tradition*. Oxford University Press, Oxford.
- Henderson, John and Marilyn Beaudry-Corbett (1993). *Pottery of Prehistoric Honduras*. Institute of Archaeology Monograph No. 35. University of California, Los Angeles.
- Hendon, Julia (1987). *The Uses of Maya Structures*. Ph.D. dissertation, Department of Anthropology, Harvard University.
- Hendon, Julia (1991). Status and Power in Classic Maya Society: An Archaeological Study. *American Anthropologist* 93: 894-918.
- Hicks, Frederic (1986). Prehispanic Background of Colonial Political and Economic Organization in Central Mexico. In *Supplement to the Handbook of Middle American Indians* vol. 4; Ronald Spores ed., pp. 35-54. University of Texas Press, Austin.
- Hillier, Bill, and Julienne Hanson (1984). *The Social Logic of Space*. Cambridge University Press, New York.
- Hodell, David, Mark Brenner, and Jason Curtis (2005). Terminal Classic Drought in the Northern Maya Lowlands Inferred from Multiple Sediment Cores in Lake Chichancanab (Mexico). *Quaternary Science Reviews* 24: 1413-1427.
- Hodell, David, Jason Curtis, and Mark Brenner (1995). Possible Role of Climate in the Collapse of Classic Maya Civilization. *Nature* 375: 391-394.
- Hohmann, Hasso (1995). *Die Architektur der Sepulturas-Region von Copán in Honduras*. Academic Publishers, Graz.
- Houk, Brett, Barbara Arroyo, and Terry Powis eds. (2020). *Approaches to Monumental Landscapes of the Ancient Maya*. University Press of Florida, Tallahassee.
- Houk, Brett and Ashley Booher (2020). All the World's a State: The Late Classic Built Environment of Chan, Belize. In *Approaches to Monumental Landscapes of the Ancient Maya*. Brett Houk, Barbara Arroyo, and Terry Powis eds. pp. 152-170. University Press of Florida, Tallahassee.

- Houston, Stephen (2000). Into the Minds of the Ancients: Advances in Maya Glyph Studies. *Journal of World Prehistory* 14: 121-201.
- Houston, Stephen (2013). A Peopled Palace in a Royal City: Acropolis and Dynasty at Piedras Negras. Lecture presented at the workshop Along the River of Ruins: Piedras Negras ReviewedDumbarton Oaks, Washington, D.C.
- Houston, Stephen (2016). Crafting Credit: Authorship among Classic Maya Painters and Sculptors. In *Making Value, Making Meaning: Techné in the Pre-Columbian World*, Cathy Costin ed., pp. 391-432. Dumbarton Oaks Research Library and Collections, Washington, D.C.
- Houston, Stephen, Barbara Fash, and David Stuart (2015). Masterful Hands: Morelli and the Maya on the Hieroglyphic Stairway, Copán, Honduras. *RES* 65/66: 15-36.
- Houston, Stephen, Hector Escobedo, Mark Child, Charles Golden, and Rene Muñoz (2003). The Moral Community: Maya Settlement Transformation at Piedras Negras, Guatemala. In *The Social Construction of Ancient Cities*. Monica Smith ed., pp. 212-253. Smithsonian Books, Washington, D.C.
- Houston, Stephen, David Stuart, and Karl Taube (2011). *The Memory of Bones*. University of Texas Press, Austin.
- Houston, Stephen and Karl Taube (2012). Carved Panel. In *Ancient Maya Art at Dumbarton Oaks*. Joanne Pillsbury, Miriam Doutriaux, Reiko Ishihara-Brito, and Alexander Tokovinine eds., pp. 38-47. Dumbarton Oaks Research Library and Collection, Washington, D.C.
- Houston, Stephen and Thomas Garrison (2018). A Fortress in Heaven: Researching the Long Term at El Zotz, Guatemala. In *An Inconstant Landscape: The Maya Kingdom of El Zotz, Guatemala*. Thomas Garrison and Stephen Houston eds., pp. 3-45. University of Colorado Press, Louisville.
- Houston, Stephen and Takeshi Inomata (2009). *The Classic Maya*. Cambridge University Press, Cambridge.
- Hruby, Zachary (2006). *The Organization of Chipped-Stone Economies at Piedras Negras, Guatemala*. Ph.D. dissertation, Department of Anthropology, University of California, Riverside.
- Hruby, Zachary (2018). Lithic Technology and Economics at El Zotz. In *An Inconstant Landscape: The Maya Kingdom of El Zotz, Guatemala*. Thomas Garrison and Stephen Houston eds., pp. 228-254. University of Colorado Press, Louisville.
- Hutson, Scott (2012). Unavoidable Imperfections. In *Past Presented: Archaeological Illustration and the Ancient Americas*. Joanne Pillsbury ed., pp. 283-316. Dumbarton Oaks, Washington, D.C.
- Inomata, Takeshi (2006) Plazas, Performers, and Spectators: Political Theaters of the Classic Maya. *Current Anthropology* 47:5: 805-842.
- Inomata, Takeshi (2017). The Isthmian Origins of the E Group and its Adoption in the Maya Lowlands. In *Maya E Groups: Calendars, Astronomy, and Urbanism in the Early Lowlands*. David Freidel, Arlen Chase, Anne Dowd, and Jerry Murdock eds., pp. 215-252. University Press of Florida, Gainesville.
- Inomata, Takeshi, and Stephen Houston eds. (2001). *Royal Courts of the Classic Maya*. Westview Press, Boulder.
- Jackson, Sarah (2013a). *Politics in the Court: Hierarchy and Change among the Late Classic Maya*. Harold E. Dickson Memorial Lecture, Department of Art History, Penn State University, Sept. 26, 2012.
- Jackson, Sarah (2013b). *Politics of the Maya Court*. University of Oklahoma Press, Norman.
- Jackson, Sarah (2015). Governing Polities: Royal Courts and the Written Landscape of Late Maya Politics. In *Classic Maya Politics of the Southern Lowlands*. Damien Marken and James Fitzsimmons eds., pp.243-263. University of Colorado Press, Boulder.
- Jackson, Sarah and David Stuart (2001). The Aj K'uhun Title: Deciphering a Classic Maya Term of Rank. *Ancient Mesoamerica* 12: 217-228.
- Jones, Grant (1998). *The Conquest of the Last Itza Kingdom*. Stanford University Press, Stanford.
- Kennett, Douglas. Sebastian Breitenbach, Valorie Aquino, Yemane Asmerom, Jaime Awe, James Baldini, Patrick Bartlein, Brendon Culleton, Claire Ebert, Christopher Jazwa, Martha Macri, Norbert Marwan, Victor Polyak, Keith Prufer, Harriet Ridley, Harald Socemann, Bruce Winderhalder, Gerald Haug (2012). Development and Disintegration of Maya Political Systems in Response to Climate Change. *Science* 338: 778-791.
- Kennett, Douglas, Heather Thakar, Amber Van Derwarker, David Webster, Brendan Culleton, Thomas Harper. Logan Listler, Timothy Scheffler, and Kenneth Hirth (2017). High-precision chronology for Central American maize diversification from El Gigante rockshelter, Honduras. vol. 114 no. 34, 9026-9031, doi: 10.1073/pnas.1705052114
- Kidder, Alfred V. (1950) "Introduction," in *Uaxactún, Guatemala: Excavations of 1931-37*, by A. L. Smith. Carnegie Institution of Washington Pub. 588. Washington, D.C.
- Kidder, J. Edward Jr. (2007). *Himiko and Japan's Elusive Chiefdom of Yamatai*. University of Hawai'i Press, Honolulu.

BIBLIOGRAPHY

- Kingsley, Melanie and Laura Gamez (2018). In the Wake of “Collapse”: The Post-Dynastic or Early Postclassic Period at El Zotz. In *An Inconstant Landscape: The Maya Kingdom of El Zotz, Guatemala*. Thomas Garrison and Stephen Houston eds., pp. 140-159. University of Colorado Press, Louisville.
- Kingsley, Melanie, Charles Golden, Andrew Scherer and Luz Midilia Marroquin de Franco (2012). Parallelism in Occupation: Tracking the Pre-and Post-Dynastic Evolution of Piedras Negras, Guatemala through its Secondary Site, El Porvenir. *Mexicon* 34: 109-117.
- Kowalski, Jeffrey (1987). *The House of the Governor*. University of Oklahoma Press, Norman.
- Kurjack, Edward (1974). *Prehistoric Lowland Maya Community and Social Organization*. Middle American Research Institution Pub. 38, Tulane University, New Orleans.
- Lachniet, Matthew and Juan Pablo Bernal-Uruchurto (2017). AD 550-600 Collapse at Teotihuacán: Testing Climatic Forcing from a 2400-year Mesoamerican Rainfall Reconstruction. In *Megadrought and Collapse: From Early Agriculture to Angkor*. Harvey Weiss ed., pp. 183-204. Oxford University Press, New York.
- Lamoureux-St-Hilaire, Maxime (2020). Comparative Approaches and Analogical Reasoning for Mayanists: Where to Go? *The SAA Archaeological Record* 20:1: 8-13.
- Lamoureux-St-Hilaire, Maxime, Scott Macrae, Carmen McCane, Evan Parker, and Gyles Iannone (2016). The Last Groups Standing: Living Abandonment at the Ancient Maya Center of Minanha, Belize. *Latin American Antiquity* 26:4: 550-569.
- Landa, Diego de (1941). *Landa's Relación de Las Cosas de Yucatán*, edited and annotated by A. M. Tozzer. Papers of the Peabody Museum of Archaeology and Ethnology 18. Harvard University, Cambridge.
- Landau, Kristen (2016). *Maintaining the State: Centralized Power and Ancient Neighborhoods in Copán, Honduras*. Ph.D. dissertation, Department of Anthropology, Northwestern University, Evanston.
- Landau, Kriste (2021). The Dynamics of Maya State Power: An Integrated Perspective from the San Lucas Neighborhood of Copán, Honduras. *American Anthropologist* 123: 1: 1-20.
- Langley, James (1982). Preliminary Report on the Excavation of Stratigraphic Pit 2. On file in the Copán Project Archives. Department of Anthropology, Penn State University.
- Laporte, Juan Pedro (1995). ¿Despoblamiento o problema analítico? El Clásico Temprano en el Sureste de Petén. In *VIII Simposio de Investigaciones Arqueológicas en Guatemala*. Juan Pedro Laporte and Héctor Escobedo eds., pp. 729-62. Ministry of Culture and Sports, Guatemala City.
- Law, Danny, Stephen Houston, Nicholas Carter, Marc Zender, and David Stuart (2013). Reading in Context: The Interpretation of Personal Reverence in Ancient Maya Hieroglyphic Texts. *Journal of Linguistic Anthropology* 23:2, DOI:10.1111/jola.12008
- Lawler, Andrew (2010). Collapse? What Collapse? Societal Change Revisited. *Science* 330: 907-909.
- Leibsohn, Diana (2009). *Script and Glyph*. Studies in Pre-columbian Art and Architecture No. 36. Dumbarton Oaks, Washington, D.C.
- Lentz, David, Nicholas Dunning, Vernon Scarborough, Kevin McGee, Kim Thompson, Eric Weaver, Christopher Car, Richard Terry, Gerald Islebe, Kenneth Tankersley, Liwy Grazioso Sierra, John Jones, Palma Buttles, Fred Valdez, and Carmen E. Ramos Hernandez (2014). Forests, Fields, and the Edge of Sustainability at the Ancient Maya City of Tikal. *PNAS Early Edition*. www.pnas.org/cgi/doi/10.1073/pnas.1408631111.
- Leventhal, Richard (1979). *Settlement Patterns at Copán, Honduras*. Ph.D. dissertation, Department of Anthropology, Harvard University.
- Leventhal, Richard (1986). A Reexamination of Stela Caches at Copán: New Dates for Copador. In *The Southeast Maya Periphery*, Patricia Urban and Edward Schortman eds., pp. 138-142. University of Texas Press, Austin.
- Leventhal, Richard, Arthur Demarest, and Gordon Willey (1982). The Cultural and Social Components of Copán. Unpublished manuscript of a lecture given at the International Congress of Americanists, Manchester, England in September 1982.
- Li, Xin Wei and Jorge Ramos (2017). Reconstructions of 8N-11 and Reforms of Late Classic Copán. Paper presented at the 82nd Annual Meetings of the Society for American Archaeology, Vancouver.
- Li, Xinwei (2018). The Designs of “Mexican Year Signs” and Crossed Torches of Site 8N-11 at Copán Site (洪都拉斯科潘遗址 8N-11 号贵族居址 “墨西哥纪年” 和交叉火炬雕刻). *Kaogu (Archaeology)* 10.
- Li, Xinwei (2019). New Discoveries of the Excavation of the Elite Site 8N-11 at Copán Site, Honduras (洪都拉斯科潘玛雅遗址 8N-11 贵族院落发掘取得新收获). *China Cultural Relics News (Zhongguo wenwu bao)*, 1-2.
- Liendo, Rodrigo S., Javier López Mejía, and Arianna Campiani (2014). The Social Construction of Public Spaces at Palenque. In *Mesoamerican Plazas: Arenas of Community and Power*. Tsukamoto, Kenichiro and Takeshi Inomata eds., pp. 108-120. University of Arizona Press, Tucson.

- Longyear, John (1952). *Copán Ceramics: A Study of Southeastern Maya Pottery*. Carnegie Institution of Washington Pub. 597, Washington, D.C.
- Looper, Matthew (2007). *Quiriguá: A Guide to an Ancient Maya City*. Editorial Antigua, S.A., Guatemala City.
- Lundell, Cyrus (1933). The Agriculture of the Maya. *Southwest Review* 19: 65-77.
- Maca, Allan L. Jr. (2002). *Spatio-temporal Boundaries in Classic Maya Settlement Systems: Copán's Urban Foothills and the Excavations at Group 9J-5*. Ph.D. dissertation, Department of Anthropology, Harvard University.
- Maca, Allan L. Jr. (2006). Body, Boundaries, and "Lived" Urban Space: A Research Model for the Eighth-Century City at Copán, Honduras. In *Space and Spatial Analysis in Archaeology*, Elizabeth Robertson, Jeffrey Seibert, Deeptha Fernandez, and Marc Zender eds., pp. 143-155. University of Calgary Press, Calgary.
- Maca, Allan L. Jr. (2009). Ethnographic Analogy and the Archaeological Construction of Maya Identity at Copán Honduras. In *The Ch'orti Maya Area*. Brent E. Metz, Cameron McNeil, and Kerry Hull eds., pp. 90-107. University of Florida Press, Tallahassee.
- Maca, Allan L. Jr. (2015). Tomb 68-1, Copán: Deducing Polity Dynamics during the Early Classic Period and Beyond. In *Classic Maya Politics of the Southern Maya Lowlands*. Damien Marken and James Fitzsimmons eds., pp. 167-194. University of Colorado Press, Boulder.
- MacKinnon, J. Jefferson (1981). The Nature of Residential Tikal: A Spatial Analysis. *Estudios de Cultura Maya* 12: 223-249.
- McAnany, Patricia (2010). Artisans, Ikats, and Conflict at Classic Maya Courts. Paper presented at the Fall Dumbarton Oaks Symposium on *Merchants, Trade and Exchange in the Pre-Columbian World*.
- McAnany, Patricia (2013). *Artisans, Ikatz, and Statecraft: Provisioning Classic Maya Courts*. In *Merchants, Markets, and Exchange in the Pre-Columbian World*, Kenneth Hirth and Joanne Pillsbury eds., pp. 229-254. Dumbarton Oaks, Washington, D.C.
- McNeil, Cameron (2009). The Environmental Record of Human Population and Migration in the Copán Valley, Honduras. In *The Ch'orti Maya Area*, Brent E. Metz, Cameron McNeil, and Kerry Hull eds., pp. 47-60. University of Florida Press, Tallahassee.
- McNeil, Cameron, Edy Barrio, Zachary X. Hruby, Nathan J. Meissner, Alexandre Tokovinine, Mauricio Díaz García, and Walter Burgos Morakawaf (2022). Control, Collapse, and Resilience at Río Amarillo in the Copán Valley, Honduras. *Ancient Mesoamerica* 33: 62-82.
- Manahan, T. Kam (2003). *The Collapse of Complex Society and its Aftermath: A Case Study from the Classic Maya Site of Copán, Honduras*. Ph.D. dissertation, Department of Anthropology, Vanderbilt University.
- Manahan, T. Kam and Marcello Canuto (2009). Bracketing the Copán Dynasty: Late Classic and Early Postclassic Settlements at Copán, Honduras. *Latin American Antiquity* 20: 553-580.
- Marcus, Joyce (2006). Identifying Elites and their Strategies. In *Intermediate Elites in Pre-Columbian States and Empires*. Christina and R. Alan Covey and Covey eds., pp. 212-246. University of Arizona Press, Tucson.
- Martin, Simon (2016). Ideology and the Early Maya Polity. In *The Origins of Maya States*. Loa Traxler and Robert Sharer eds., pp. 505-544. University Museum, University of Pennsylvania, Philadelphia.
- Martin, Simon (2017). Secrets of the Painted King List: Recovering the Early History of the Snake Dynasty. *Mayablogpost*: <https://decipherment.wordpress.com/2017/05/05>.
- Martin, Simon (2020). *Ancient Maya Politics: A Political Anthropology of the Classic Period 150-900 CE*. Cambridge University Press: New York.
- Martin, Simon, Ramon Carrasco, and Rogelio Valencia (2015). At the Heart of the Serpent: Archaeology, Epigraphy, and Iconography at Calakmul, Campeche. Paper presented at the 81st Annual Meetings of the Society for American Archaeology, Orlando.
- Martin, Simon, and Nikolai Grube (2008). *Chronicle of the Maya Kings and Queens*. Thames and Hudson Ltd., London.
- McConnell, Ivan Sunyé-Puchol, Pablo Dávila Harris, Michael Sigl, Jonathan R. Pilcher, Nathan Chellman, and Eduardo Gutiérrez (2020). The Magnitude and Impact of the 431 CE Tierra Blanca Joven Eruption of Ilopango, El Salvador. *PNAS* <https://doi.org/10.1073/pnas.2003008117>
- Mendoza, Blanca, Virginia García-Acosta, Victor Velasco, Ernesto Jáuregui, and Rosa Díaz-Sandoval (2007). Climatic Frequency and Duration of Historical Droughts from the 16th to the 19th Centuries in the Mexican Maya Lands, Yucatán Peninsula. *Climate Change* 83:151:168. DOI 10.1007/s10584-006-9232-1. Society for American Archaeology Meetings, Austin, TX.
- Merriwether, D. Andrew, David Reed, and Robert Ferrell (1997). Ancient and Contemporary Mitochondrial DNA Variation in the Maya. In *Bones of the Maya*, Stephen Whittington and David Reed eds., pp. 209-217. Smithsonian Institution Press, Washington, D.C.

BIBLIOGRAPHY

- Merwin, Raymond E. (1913). *The Ruins of the Southern Part of the Peninsula of Yucatan, with Special Reference to their Place in the Maya Area*. Description of the Peabody Museum Expedition of 1912. Manuscript on file at Dumbarton Oaks, Washington, D.C.
- Michels, Joseph (1979). *The Kaminaljuyú Chiefdom*. Pennsylvania University Press, University Park.
- Miller, Katherine (2015). *Family, 'Foreigners', and Fictive Kinship: A Biological Approach to Social Organization*. Ph.D. dissertation. Arizona State University, Tempe (see also Wolf, Katherine Miller),
- Miller, Katherine Wolf and Carolyn Freiwald (2018). Re-interpreting Ancient Maya Mobility: a Strontium Isotope Baseline from Western Honduras. *Journal of Anthropological Science Reports* 20: 799-807.
- Miller, Mary and Claudia Brittenham (2013). *The Spectacle of the Late Maya Court*. University of Texas Press, Austin.
- Miller, Mary and Karl Taube (1993). *The Gods and Symbols of Ancient Mexico and the Maya*. Thames and Hudson, London.
- Miller, Virginia (1991). *The Frieze of the Palace of the Stuccoes. Acanceh, Yucatan, Mexico*. Studies in Pre-columbian Art and Archaeology number 31. Dumbarton Oaks, Washington, D.C.
- Mongelluzzo, William (2011). *Experiencing Maya Palaces: Royal Power, Space, and Architecture at Holmul, Guatemala*. Ph.D. dissertation, Department of Anthropology, University of California, Riverside.
- Morley, S. G. (1920). *The Inscriptions at Copán*. Carnegie Institution of Washington Pub. 219, Washington, D.C.
- Morrow, Ann (1986). *Highness*. Grafton Books, London.
- Muñoz, Arturo René (2006). *Power, Production and Prestige: Technological Change in the Late Classic Ceramics of Piedras Negras, Guatemala*. Ph.D. dissertation, University of Arizona.
- Murdy, Carson (2009). Archaeological Investigations in the Camotán Valley. In *The Ch'orti Maya Area*. Brent E. Metz, Cameron McNeil, and Kerry Hull eds., pp. 78-89. University of Florida Press, Tallahassee.
- Nakamura, Seiichi (2000). *Informe Preliminar: Las Excavaciones de Rescate en el Cuadrante 10J, al Sur de Las Estelas 5 y 6, Copán*. Secretaria de Cultura y Turismo, Instituto Hondureño de Antropología e Historia, Tegucigalpa.
- Neely, Paula (2021). Burial Reveals Insights about Maya Nonroyal Elite. *American Archaeology*, Summer, pp. 9-10.
- Neiman, Fraser (1997). Conspicuous Consumption as Wasteful Advertising: A Darwinian Perspective on Spatial Patterns in Classic Maya Terminal Monument Dates. In *Rediscovering Darwin: Evolutionary Theory and Archaeological Explanation*. C. Michael Burton, Geoff Clark and Douglas Bamforth, pp. 267-290. American Anthropological Association, Washington, D.C.
- Nelson, Zachary (2005). *Settlement and Population at Piedras Negras, Guatemala*. Ph.D. dissertation. Department of Anthropology, Penn State University, University Park.
- Noble, Sandra (1999). *Maya Seats and Maya-Seats-of-Authority*. Ph.D. dissertation, University of British Columbia.
- Nondédéo, Philippe, M. Charlotte Arnauld and Dominique Michelet (2013). Río Bec Settlement Patterns and Local Sociopolitical Organization. *Ancient Mesoamerica* 24: 373-396. Cambridge University Press, New York.
- Nooren, Kees, Wim Hock, Brian Dermody, Didier Galop, Sarah Metcalfe, Gerald Islebe, and Hans Middelkoop (2018). Climate Impact on the Development of Pre-Classic Maya Civilisation. *Climate Past* 14: 1253-1273.
- O'Neil, Megan (2012). *Engaging Ancient Maya Sculpture at Piedras Negras, Guatemala*. University of Oklahoma Press, Norman.
- Oudijk, Michel (2000). The Zapotec City-State. In *A Comparative Study of Six City-State Cultures*. Mogen H. Hansen ed., pp. 73-98. The Royal Danish Academy of Sciences and Letters, Copenhagen.
- Paine, Richard (1996). *Model Life Table Fitting by Maximal Likelihood Estimation: A Procedure to Reconstruct Paleodemographic Characteristics in Archaeological Demography*. Ph.D. dissertation. Department of Anthropology, Penn State University.
- Paine, Richard, AnnCorinne Freter, and David Webster (1996). A Mathematical Projection of Population Growth in the Copán Valley, Honduras, A.D. 600-800. *Latin American Antiquity* 7:1:51-60.
- Périgny, Maurice de (1909). *Villes Mortes de l'Amerique Central* 38-40: 445-480, Tomo XV, Nouvelle Serie, Paris.
- Pillsbury, Joanne, Miriam Doutriaux, Reiko Ishihara-Brito and Alexandre Tokovinine eds. (2012). *Ancient Maya Art at Dumbarton Oaks*. Dumbarton Oaks Research Library and Collections, Washington, D.C.
- Plank, Shannon (2004). *Maya Dwellings in Hieroglyphs and Archaeology*. BAR International Series no. 1324. British Archaeological Reports. Oxford.
- Pohl, Mary, and John Pohl (1994). Cycles of Conflict: Political Factionalism in the Maya Lowlands. In *Factional Competition and Political Development in the New World*. Elizabeth Brumfiel and John Fox eds., pp. 138-157. Cambridge University Press, Cambridge.
- Pollock, Harry (1980). *The Puuc: An Architectural Survey of the Hill Country of Yucatan and Northern Campeche, Mexico*. Peabody Museum of Archaeology and Ethnology, Harvard University, Memoir 19, Cambridge.

- Pollock, Harry, Ralph Roys, Tatiana Proskouriakoff, and A. Ledyard Smith (1962). *Mayapán, Yucatan, Mexico*. Carnegie Institution of Washington Pub. 619, Washington, D.C.
- Price, T. Douglas, James Burton, Robert Sharer, Jane Buikstra, Lori Wright, Loa Traxler, and Katherine Miller (2010). Kings and Commoners at Copán: Isotopic Evidence for Origins and Movement in the Classic Maya Period. *Journal of Anthropological Archaeology* 29:1:15-32.
- Price, Neil (2020). *Children of Ash and Elm*. Basic Books, New York.
- Price, T. Douglas, Seichi Nakamura, Shintaro Suzuki, James Burton, and Vera Tiesler (2014). New Isotope Data on Maya Mobility and Enclaves at Classic Copán. *Journal of Anthropological Archaeology* 36: 32-47.
- Prufer, Keith and Peter Dunham (2009). A Shaman's Burial from and Early Classic Cave in the Maya Mountains of Belize, Central America. *World Archaeology* 41: 2: 295-320.
- Prufer, Keith and Douglas Kennett (2020). The Holocene Occupations of Southern Belize. In . *Approaches to Monumental Landscapes of the Ancient Maya*. Brett Huuk, Barbara Arroyo, and Terry Powis eds., pp. 16-38. University Press of Florida, Talahassee.
- Quezada, Sergio (2014). *Maya Lords and Lordships*. University of Oklahoma Press, Norman.
- Rathje, William (1970). Sociopolitical Implications of Classic Maya Burials. *World Archaeology* 13:3: 359-374.
- Rattray, Evelyn (1982). *Informe al Instituto Hondureño de Antropología e Historia, Proyecto U.N.A.M. en el Sitio CV-68, Las Sepulturas, Copán, Honduras*. Report on file in the Copán Project Archives. Department of Anthropology, Penn State University.
- Reed, David (1998). *Ancient Maya Diet at Copán, Honduras*. Ph.D. dissertation. Department of Anthropology, Penn State University
- Reed, David and W. Scott Zeleznik (2001). Critical Analysis and Modeling of Mortuary Remains of the Ancient Maya. Paper presented at the 66th annual Society for American Archaeology meetings, New Orleans.
- Reed, David and W. Scott Zeleznik (2002). Death and Digestion: Relating Paleodiet and Social Differentiation through Mortuary Analysis at Copán, Honduras. Paper presented at the 67th annual Society for American Archaeology meetings, Denver.
- Reed, David and W. Scott Zeleznik (2016). The Maya in the Middle: An Analysis of Sub-Royal Archaeology at Copán, Honduras. In *Human Adaptation in Ancient Mesoamerica*. Nancy Gonlin and Kirk French eds., pp. 175-210. University of Colorado Press, Boulder.
- Restall, Matthew (1997). *The Maya World*. Stanford University Press, Stanford.
- Rice, Don S. and T. Patrick Culbert (1990). Historical Contexts for Population Reconstruction in the Maya Lowlands. In *Precolumbian Population History in the Maya Lowlands*, T. Patrick Culbert and Don S. Rice eds, pp. 1-36. University of New Mexico Press, Albuquerque.
- Rice, Prudence (2004). *Maya Political Science: Time, Astronomy, and the Cosmos*. University of Texas Press, Austin.
- Rice, Prudence (2018). Wanna Bet? Classic Ballcourt 2 at Nixtun-Ch'ich, Petén, Guatemala. *Latin American Antiquity* 29: 3: 610-616.
- Rice, Prudence (2020). Crocodiles, Sharks, and some Speculations on Central Petén Preclassic History. *Ancient Mesoamerica* 31: 2: 231-247.
- Richards-Rissetto, Heather, and Judith van der Elst (2007). Exploring Social Dynamics at the Ancient Site of Copán, Honduras. ESRI 2007 International User Conference in San Diego, CA, June 20, 2007.
- Richards-Rissetto, Heather (2022). Exploring Inequality in Ancient Maya Cities: A 2D and 3D Procedural Model Computational Comparison of Households at Copán, Honduras. Paper presented at the 87th annual meeting of the Society for American Archaeology, Chicago.
- Ricketson, Oliver, and Edith Ricketson (1937). *Uaxactún, Guatemala, Group E, 1926-31*. Carnegie Institution of Washington, No. 477. Carnegie Institution, Washington, D.C.
- Riese, Berthold (1989). The Inscription on the Sculptured Bench of the House of the Bacabs. In *The House of the Bacabs Copán, Honduras*. David Webster ed., pp. 82-88. Dumbarton Oaks Research Library and Collections, Washington, D.C.
- Roman, Edwin, Thomas Garrison and Stephen Houston (2018). Ruling through Defense. In *An Inconstant Landscape: The Maya Kingdom of El Zotz, Guatemala*. Thomas Garrison and Stephen Houston eds., pp. 70-92. University of Colorado Press, Louisville.
- Rue, David (1987). Early Agriculture and Early Postclassic Maya Occupation at Copán, Honduras. *Nature* 326: 285-286.
- Rue, David, David Webster, and Alfred Traverse (2002). Late Holocene Fire and Agriculture in the Copán Valley, Honduras. *Ancient Mesoamerica* 13: 1-6.

BIBLIOGRAPHY

- Ruppert, Karl (1940). A Special Assemblage of Maya Structure. In *The Maya and Their Neighbors*. Clarence Hay, Ralph Linton, Samuel Lothrop, Harry Shapiro, and George Vaillant eds., pp. 222-231. Dover Publications, New York.
- Sanders, William T. (1973). The Cultural Ecology of the Lowland Maya: A Re-evaluation. In *The Classic Maya Collapse*. T. Patrick Culbert ed., pp. 325-366. University of New Mexico Press, Albuquerque.
- Sanders, William T. (1989). Household, Lineage, and State at Eighth-Century Copán, Honduras. In *The House of the Bacabs, Copán, Honduras*, David Webster ed., pp. 89-105. Studies in Precolumbian Art and Archaeology No. 29. Dumbarton Oaks Research Library and Collection, Washington, D.C.
- Sanders, William T. ed. (1986-1990). *Proyecto Arqueológico Copán Segunda Fase: Excavaciones en el Area Urbana de Copán Tomos 1-4*, Instituto Hondureño de Antropología e Historia, Tegucigalpa.
- Sanders, William T., A. Guadalupe Mastache, and Robert Cobean, eds. (2003). *El Urbanismo en Mesoamérica. Urbanism in Mesoamerica*. Mexico City. Instituto Nacional de Antropología e Historia and Penn State University, University Park.
- Sanders, William T. and David Webster (1988). The Mesoamerica Urban Tradition. *American Anthropologist* 90: 3: 521-546.
- Satterthwaite, L. Jr. (1935). *Palace Structures J-2 and J-6, with Notes on Str. J-6-2nd and other Buried Structures in Court 1*. Piedras Negras Preliminary Papers, No. 3. University of Pennsylvania Museum, Philadelphia.
- Satterthwaite, L. Jr. (1937). Thrones of Piedras Negras. *University Museum Bulletin* 7:1: 18-23.
- Saturno, William (2000). *In the Shadow of the Acropolis: Río Amarillo and its Role in the Copán Polity*. Ph.D. dissertation. Department of Anthropology, Harvard University.
- Saturno, William (2009). Centering the Kingdom, Centering the King. In *The Art of Urbanism*, William Fash and Leonardo Lopez Lujan eds., pp.111-134. Dumbarton Oaks, Washington, D.C.
- Saturno, William, Karl Taube, David Stuart, and Heather Hurst (2010). The Murals of San Bartolo, El Petén, Guatemala Part 1: The West Wall. *Ancient America* 10.
- Schele, Linda and MatthewLooper (2005). Seats of Power at Copán. In *Copán, the History of and Ancient Maya Kingdom*. E. Wyllys Andrews V and William Fash, eds., pp. 345-371. School of American Research Press, Santa Fe.
- Scherer, Andrew (2018). Grave Matters: Bioarchaeology and Mortuary Archaeology at El Zotz, Bejuco, and Palmar. In *An Inconstant Landscape: The Maya Kingdom of El Zotz, Guatemala*. Thomas Garrison and Stephen Houston eds., pp. 303-360. University of Colorado Press, Louisville.
- Scherer, Andrew, Charles Golden, and Stephen Houston (2018). True People, Foreigners, and the Framing of Maya Morality. In *Bioarchaeology of Pre-Columbian Mesoamerica*. Cathy Willermet and Andrea Cucina eds., pp. 159-191. University of Florida Press, Gainesville.
- Schmidt, Peter, Mercedes de la Garza, and Enrique Nalda (1998). *Maya*. Rizzoli, New York.
- Schwarz, Kevin R. (2004). *Understanding Classic to Postclassic Household and Community Spatial Transformation: The Rural Maya of the Quexil-Petenxil Basins, Guatemala*. Ph.D. dissertation. Department of Anthropology, Southern Illinois University, Carbondale.
- Sharer, Robert (1994). *The Ancient Maya*. Stanford University Press, Palo Alto.
- Sharer, Robert (2004). External Interaction at Early Classic Copán. In *Understanding Early Classic Copán*, Ellen Bell, Marcello Canuto, and Robert Sharer eds., pp. 297-318. University of Pennsylvania Museum, Philadelphia.
- Sharer, Robert (2009). The C'horti Past: An Archaeological Perspective. In *The Ch'orti Maya Area*, Brent E. Metz, Cameron McNeil, and Kerry Hull eds., pp. 124-133. University of Florida Press, Tallahassee.
- Sharer, Robert, Marcello Canuto, and Ellen Bell (2011). Before the Classic in the Southeastern Area. In *The Southern Maya in the Late Preclassic*, Michael Love and Jonathon Kaplan eds., pp. 317-344. University of Colorado Press, Boulder.
- Sharer, Robert and Loa Traxler (2006). The Foundation of Ethnic Diversity in the Southeastern Maya Area. In *Maya Ethnicity: The Construction of Ethnic Identity from Preclassic to Modern Times*, Frauke Sachse ed., pp. 31-46. Verlag Anton Saurwein, Markt Schwaben.
- Shattuck, George (1933). *The Peninsula of Yucatan: Medical, Biological, Meteorological and Sociological Studies*. Carnegie Institution of Washington Pub. 431, Washington, D.C.
- Sheehy, James (1991). Structure and Change in a Late Classic Maya Domestic Group at Copán, Honduras. *Ancient Mesoamerica* 2: 1-19.
- Sheehy, James (2017). Evidence of Stone Carving at Group 9M-23 in Copán, Honduras. Paper presented at the Meetings of the American Anthropological Association, Washington, D.C.

- Sheets, Payson (1983). Introduction. In *Archaeology and Volcanism in Central America: The Zapotitan Valley of El Salvador*. University of Texas Press, Austin.
- Sheets, Payson (2006). *The Cerén Site*. Thompson Wadsworth, Belmont CA.
- Sheets, Payson, and Christine Dixon, eds. (2011). *Maya Agriculture South of the Cerén Site, El Salvador, 2011*. [http://www.colorado.edu/Anthropology/people/bios/documents/the report/2011 pp1.pdf](http://www.colorado.edu/Anthropology/people/bios/documents/the%20report/2011%20pp1.pdf). accessed 13 Dec. 2011.
- Shintaro, Suzuki, Vera Tiesler, and T. Douglas Price (2018). Human Migration and Ethnic Expression in the Southeastern Borderlands of Mesoamerica: A Bioarchaeological Perspective from Copán, Honduras. In *Bioarchaeology of Pre-Columbian Mesoamerica*, Cathy Willermet and Andrea Cucina eds., pp159-191. University of Florida Press, Gainesville.
- Sidrys, Raymond, and Rainer Berger (1979). Lowland Maya Radiocarbon Dates and the Classic Maya Collapse. *Nature* 277: 269-274.
- Smith, A. L. (1950). *Uaxactn, Guatemala: Excavations of 1931-37*. Carnegie Institution of Washington Pub. 588, Washington, D.C.
- Smith, A. L. (1962). Residential and Associated Structures at Mayapán. In Harry H. E. D. Pollock, Ralph Roys, Tatiana Proskouriakoff, and A. Ledyard Smith eds., pp. 165-320. *Mayapan, Yucatán, Mexico*. Carnegie Institution of Washington Pub. 619. Washington D.C.
- Smith, Robert E. (1955). *Ceramic Sequence at Uaxactún, Guatemala* (2 vols.). MARI Publication 20, Tulane University, New Orleans.
- Smith, Victoria, Antonio Costa, Gerardo Aguirre-Díaz, Dario Pedrazzi, Andrea Scifoe, Gill Plunkett, Mattieu Poret, Pierre-Yves Tournigand, Dan Miles, Michael W. Dee, Joseph R.
- Somerville, Andrew, Mikael Fauvelle, and Andrew Froehle (2013). Applying New Approaches to Modeling Diet and Status: Isotopic Evidence for Commoner Resiliency and Elite Variability in the Classic Maya Lowlands. *Journal of Archaeological Science* 40: 1539-1553.
- Spinden, Herbert (1975; original 1913). *A Study of Maya Art*. Dover Publications Inc., New York.
- Spink, Mary (1983). *Metates as Socioeconomic Indicators during the Classic Period at Copán, Honduras*. Ph.D. dissertation. Department of Anthropology, Penn State University.
- Šprajc Ivan (2014) *Reconocimiento Arqueológico en el Sureste de Campeche: Informe de la Temporada* Centro de Investigaciones Científicas de la Academia Eslovena de Ciencias y Artes: Ljubljana.
- Šprajc Ivan (2021). Equinoctial Sun and Astronomical Alignments in Mesoamerican Architecture: Fact and Fiction. *Ancient Mesoamerica*. doi:10.1017/S0956536121000419.
- Stanton, Travis, Katheryn Brown, and Jonathon Pagliaro (2008). Garbage of the Gods? Squatters, Refuse Disposal, and Termination Rituals among the Classic Maya. *Latin American Antiquity* 19: 3: 227-248.
- Stemp, James, Christophe Helmke, and Jaime Awe (2010). Evidence for Maya Household and Subsistence Activities: Use-Wear Analysis of the Chipped Chert Assemblage from Pook's Hill, Belize. *Journal of Field Archaeology* 35:2: 217-234.
- Stephens, John. L. (1969). *Incidents of Travel in Central America, Chiapas, and Yucatán*, vols. 1 and 2. Dover Press, New York.
- Stomper, Jeffrey (2001). *A Model for Late Classic Community Structure at Copán, Honduras*. In *Landscape and Power in Ancient Mesoamerica*, Rex Koontz, Kathryn Reese-Taylor and Anabeth Hedrick eds., pp. 197-229. Westview Press, Boulder.
- Stone, Andrea and Marc Zender (2011). *Reading Maya Art*. Thames and Hudson, London.
- Storey, Rebecca (1992). The Children of Copán: Issues in Paleopathology and Paleodemography. *Ancient Mesoamerica* 3 (1) 161-167.
- Storey, Rebecca (1997). Individual Frailty, Children of Privilege, and Stress in Late Classic Copán. In *Bones of the Maya: Studies of Ancient Skeletons*, Stephen L. Whittington and David Reed eds., pp. 116-126. Smithsonian Institution, Washington, DC.
- Storey, Rebecc (1999). Late Classic Nutrition and Skeletal Indicators at Copán, Honduras. In *Reconstructing Ancient Maya Diet*, Christine White ed., pp. 215-248. University of Utah Press, Salt Lake City.
- Storey, Rebecca, and Glenn Storey (2017). *Rome and the Classic Maya: Comparing the Slow Collapse of Civilization*. Routledge, New York.
- Straight, Kirk (2017). A Houseful of Pots: Ethnoarchaeological Data to Estimate Annual Ceramic Vessel Consumption Rates of Classic Maya Households. *Ancient Mesoamerica* 28: 1: 95-118.
- Stuart, David (2000) The Arrival of Strangers: Teotihuacán and Tollan in Classic Maya History. In *Mesoamerica's Classic Heritage*, D. Carrasco, L. Jones and S. Session eds., pp. 465-513. University of Colorado Press, Boulder.
- Stuart, David (2003) "On the Paired Variants of TZ'AK." [http://www .mesoweb.com/stuart/notes/tzak .pdf](http://www.mesoweb.com/stuart/notes/tzak.pdf).

BIBLIOGRAPHY

- Stuart, David (2004). The Beginnings of the Copán Dynasty: A Review of the Hieroglyphic and Historical Evidence. In *Understanding Early Classic Copán*. Ellen Bell, Marcello Canuto, and Robert Sharer eds., pp. 17-28. University of Pennsylvania Museum, Philadelphia.
- Stuart, David (2010). Shining Stones: Observations on the Ritual Meaning of Early Maya Stelae. In *The Place of Stone Monuments*. Julia Gurnsey, John Clark and Barbara Arroyo eds., pp. 283-298. Dumbarton Oaks, Washington, D.C.
- Stuart, David, Nikolai Grube, Linda Schele, and Floyd Lounsbury (1987). *A New Alternative for the Date of the Sepulturas Bench, Copán*. Copán Note 6, Austin: Copán Mosaics Project, Instituto Hondureño de Antropología e Historia.
- Stuart David, and George Stuart (2008). *Palenque: Eternal City of the Maya*. Thames and Hudson, New York.
- Sullivan, Timothy (2014). The Spectacular Polity: Formative Ceremonies in the Chiapas Central Depression, Chiapas, Mexico. Paper presented at the *Symposium on Processions in the Ancient Americas: Approaches and Perspectives*. October 10-11, Dumbarton Oaks, Washington, D.C.
- Taladoire, Eric (2014). Towards a Reevaluation of the Tonina Polity. *Estudios de Cultura Maya* 46: 47-70.
- Taube, Karl (1993). *The Major Gods of Yucatán*. Studies in Precolumbian Art and Archaeology No. 32. Dumbarton Oaks Research Library and Collection, Washington, D.C.
- Taube, Karl (2003). Ancient and Contemporary Maya Conceptions about Field and Forest. In *The Lowland Maya Area: Three Millennia at the Human-Wildland Interface*, Arturo-Gomez-Pampa, Michael F. Allen, Scott Fedick, Jan J. Jimenez-Osornio eds., pp.461-494. Food Products Press, New York.
- Taube, Karl (2010). The Womb of the World. In *Maya Archaeology 1*, Charles Golden, Stephen Houston, and Joel Skidmore eds., pp. 87-106. San Francisco, Precolumbian Mesoweb Press.
- Taube, Karl (2013). The Classic Maya Temple. In *Heaven on Earth: Temples, Ritual, and Cosmic Symbolism in the Ancient World*. Deena Ragavan ed., pp. 89-126. Oriental Institute Seminars No. 9, University of Chicago.
- Taube, Karl and Mark Zender (2009). American Gladiators: Ritual Boxing in Ancient Mesoamerica. In *Blood and Beauty*, Heather Orr and Rex Koon eds., pp. 161-220. Cotsen Institute of Archaeology Press, Los Angeles.
- Taube, Karl, William Saturno, David Stuart, and Heather Hurst (2010). The Murals of San Bartolo, El Petén, Guatemala Part 2: The West Wall. *Ancient America* 10.
- Thompson, J. Eric S. (1954a). *A Presumed Residence of the Nobility at Mayapan*. Carnegie Institution of Washington, Current Report No. 19, pp. 71-97, Washington, D.C.
- Thompson, J. Eric S (1954b). *The Rise and Fall of Maya Civilization*. University of Oklahoma Press, Norman.
- Tokovinine, Alexandre (2011). *On Cornfields Caves, and People: Place and Identity in Classic Maya Narratives*. Ph.D. dissertation. Department of Anthropology, Harvard University.
- Tourtellot, Gair (1993). A View of Ancient Maya Settlements in the Eighth Century. In *Lowland Maya Civilization in the Eighth Century AD*, Jeremy Sabloff and John Henderson eds., pp. 219-242. Dumbarton Oaks, Washington, D.C.
- Toynbee, Arnold (1962). The Mayan Mystery. *The Atlantic Monthly*, CCX: 70-74.
- Tozzer, Alfred M., translator and commentator (1941). *Landa's Relacion de las Cosas de Yucatán*. Papers of the Peabody Museum of Archaeology and Ethnology, vol. 18. Harvard University, Cambridge, Mass.
- Traxler, Loa (2001). The Royal Court of Early Classic Copán. In *Royal Courts of the Maya*, vol. 2. Takeshi Inomata and Stephen Houston eds., pp. 46-73. Westview Press, Boulder.
- Tsukamoto, Kenichiro (2014). Multiple Identities on the Plazas: The Classic Maya Center of El Palmar, Mexico. In *Mesoamerican Plazas: Arenas of Community and Power*. Kenichiro Tsukamoto and Takeshi Inomata eds., pp. 50-70. University of Arizona Press, Tucson.
- Tsukamoto, Kenichiro and Takeshi Inomata eds. (2014). *Mesoamerican Plazas: Arenas of Community and Power*. University of Arizona Press, Tucson.
- Turner, Billy Lee II (1990). The Rise and Fall of Population and Agriculture in the Central Maya Lowlands: 300 BC to Present. In *Hunger in History*, edited by Lucile Newman, pp. 178-212. Basil Blackwell Ltd., Oxford.
- Vail, Gabrielle and Christine Hernandez eds. (2013). *Re-creating Primordial Time*. University of Colorado Press, Boulder.
- Valdes, Juan Antonio, and Frederico Fahsen (2004). Disaster in Sight: The Terminal Classic at Tikal and Uaxactún. In *The Terminal Classic in the Maya Lowlands*. Arthur Demarest, Prudence Rice and Don Rice eds., pp. 140-161. University of Colorado Press, Boulder.
- Van Stone, Mark (2005). *Aj-Ts'ib, Aj-Uxul, Itz'aat, & Aj-K'uhu'n: Classic Maya Schools of Carvers and Calligraphers in Palenque After the Reign of Kan-Bahlam*. Ph.D. dissertation. University of Texas, Austin.
- Viel, René (1983). Evolución de la Cerámica en Copán: Resultados Preliminares. In Claude F. Baudez, ed., *Proyecto Arqueológico Copán, Tomo 1*, pp. 471-549. Secretaria de Estado en el Despacho de Cultura y Turismo, Tegucigalpa.
- Viel, René (1993a). Copán Valley. In *Pottery of Prehistoric Honduras*, John Henderson and Marilyn Beaudry-Corbett eds., pp. 12-19. Institute of Archaeology Monograph 35, University of Southern California, Los Angeles.

- Viel, René (1993b). *Evolución de la Cerámica de Copán*. Instituto Hondureño de Anthropología e Historia, Tegucigalpa, Honduras, and Centro de Estudios Mexicanas y Centroamericanos, Mexico, D.F.
- Viel, René (1997). *An Update of the Copán Chronology*. Incomplete manuscript on file in the Copán Archives, Dept. of Anthropology, Penn State University.
- Viel, René (1999). The Pectorals of Altar Q and Structure 11: An Interpretation of the Political Organization at Copán, Honduras. *Latin American Antiquity* 10:4: 377-399.
- Von Schwerin, Jennifer (2011). The Sacred Mountain in Social Context. Symbolism and History in Maya Architecture: Temple 22 at Copán, Honduras. *Ancient Mesoamerica*, 22: 271-300.
- Von Schwerin, Jennifer, Heather Richards-Rissetto, Fabio Remondino, Maria Grazia Spera. Michael Auer, Nicolas Billen, Lukas Loos, Laura Stelson and Markus Reindel (2016). Airborne LiDAR Acquisition, Post-Processing and Accuracy-Checking for a 3D WebGIS of Copán, Honduras. *Journal of Archaeological Science: Reports* 5: 85-104.
- Wagner, Elisabeth (2000). An Alternative View on the Meaning and Function of Structure 10L-22a, Copán, Honduras. In *The Sacred and the Profane: Architecture and Identity in the Maya Lowlands*. Pierre Robert Colas, Kai Delvendahl, Marcus Kuhnert, and Annette Schubert eds., pp. 25-50. *Acta Mesoamerica* 10. Verlag Anton Saurwein, Markt Schwaben.
- Wagner, Elisabeth (2006). Ranked Spaces, Ranked Identities: Local Hierarchies, Community Boundaries and Emic Notion of the Maya Cultural Sphere at Late Classic Copán. In *Maya Ethnicity: The Construction of Ethnic Identity from Preclassic to Modern Times*. Frauke Sachse ed., pp. 143-164. Verlag Anton Saurwein, Markt Schwaben.
- Watanabe, John (2004). Some Models in a Muddle: Lineage and House in Classic Maya Social Organization. *Ancient Mesoamerica* 15: 1: 159-166.
- Webster, David ed. (1989a). *The House of the Bacabs, Copán, Honduras*. Studies in Precolumbian Art and Archaeology No. 29. Dumbarton Oaks Research Library and Collection, Washington, D.C.
- Webster, David ed. (1989b). The House of the Bacabs: Its Social Context. In *The House of the Bacabs, Copán, Honduras*, David Webster ed., pp. 5-40. Studies in Precolumbian Art and Archaeology No. 29. Dumbarton Oaks Research Library and Collection, Washington, D.C.
- Webster, David ed. (1989c). Epilogue. In *The House of the Bacabs, Copán, Honduras*, David Webster ed., pp. 106-107. Studies in Precolumbian Art and Archaeology No. 29. Dumbarton Oaks Research Library and Collection, Washington, D.C.
- Webster, David ed. (1992). *Classic Elites from Copán*. In *Mesoamerican Elites*. Diane Chase and Arlen Chase eds., pp. 135-156. University of Oklahoma Press, Norman.
- Webster, David ed. (1998). Classic Maya Architecture: Implications and Comparisons. In *Function and Meaning in Classic Maya Architecture*. Stephen Houston, ed., pp. 5-47. Dumbarton Oaks, Washington, D.C.
- Webster, David ed. (2001). Spatial Dimensions of Maya Courtly life: Problems and Issues. In *Royal Courts of the Maya*, vol. 1. Takeshi Inomata and Stephen Houston eds., pp. 130-167. Westview Press, Boulder.
- Webster, David ed. (2005). Political Ecology, Political Economy and the Culture History of Resource Management at Copán. In *Copán: The History of an Ancient Maya Kingdom*. E. Wyllys Andrews V and William L. Fash eds., pp. 33-72. School of American Research, Albuquerque.
- Webster, David ed. (2006). The Mystique of the Ancient Maya. In *Archaeological Fantasies: How Pseudoarchaeology Misrepresents the Past and Misleads the Public*. Garrett Fagan ed., pp. 129-153. Routledge, New York.
- Webster, David ed. (2014). Maya Drought and Niche Inheritance, in *The Great Maya Droughts*, Gyles Iannone, ed., pp. 333-358. University of Colorado Press, Boulder.
- Webster, David ed. (2018). *The Population of Tikal: Implications for Maya Demography*. Paris Monographs in American Archaeology 29. Archaeopress Publishing Ltd., Oxford.
- Webster, David ed. (in press). Maya Populations, Proxies, and Puzzles. University of New Mexico Press. Albuquerque
- Webster, David and Elliot Abrams (1983). An Elite Compound at Copán, Honduras. *Journal of Field Archaeology* 10: 285-296.
- Webster, David and Joseph Ball (2021). Rehabilitating Becan. *Ancient Mesoamerica* 32: 3: 371-395.
- Webster, David and AnnCorinne Freter (1990a). The Demography of Late Classic Copán. In *Precolumbian Population History in the Maya Lowlands*. T. Patrick Culbert and Don Rice eds., pp. 37-62, University of New Mexico Press, Albuquerque.
- Webster, David and AnnCorinne Freter (1990b). Settlement History and the Classic Collapse at Copán: A refined Chronological Perspective. *Latin American Antiquity* 1: 66-85.
- Webster, David, AnnCorinne Freter and Nancy Gonlin (2000). *Copán: The Rise and Fall of an Ancient Maya Kingdom*. Harcourt Brace, Fort Worth.

BIBLIOGRAPHY

- Webster, David, AnnCorinne Freter, and David Rue (1993). The Obsidian Hydration Dating Project at Copán: A Regional Approach and Why it Works. *Latin American Antiquity* 4:4: 303-324.
- Webster, David, AnnCorinne Freter, and Rebecca Storey (2004). Dating Copán Culture History: Implications for the Terminal Classic and the Collapse. In *The Terminal Classic in the Maya Lowlands*, Arthur Demarest, Prudence Rice, and Don. Rice, eds., pp. 231-259. University Press of Colorado, Boulder.
- Webster, David, William Fash, and Elliot Abrams (1986). Excavaciones en el Conjunto 9N-8, Patio A (Operación VIII). In *Excavaciones en el Area Urbana de Copán, Tomo 1*, pp. 155-319. Secretaria de Cultura y Turismo, Instituto Hondureño de Antropología e Historia, Tegucigalpa.
- Webster, David, Barbara Fash, Randolph Widmer, and Scott Zeleznik (1998). The Skyband Group: Excavation of a Classic Maya elite Residential Complex at Copán, Honduras. *Journal of Field Archaeology* 25 (3): 319-344.
- Webster, David, and Nancy Gonlin (1988). Household Remains of the Humblest Maya. *Journal of Field Archaeology* 51:3:169-190.
- Webster, David, Kenneth Hirth, and Lee Newsom (2013). Chronology of El Gigante Cave, Honduras. Final report to the National Science Foundation (BCS 10-03431).
- Webster, David and Timothy Murtha (2015). Fractious Farmers at Tikal. In *Tikal: Paleoecology of and Ancient Maya City*. David Lentz, Nicholas Dunning and Vernon Scarborough eds., pp. 212-237. Cambridge University Press, London.
- Webster, David, David Rue, and Alfred Traverse (2005). Early Zea Cultivation in Honduras: Implications for the Itis Hypothesis. *Economic Botany* 22 (2): 166-173.
- Webster, David, and Takeshi Inomata (2004). Identifying Sub-royal Elite Palaces at Copán and Aguateca. In *Palaces of the Ancient New World*. Susan Evans and Joanne Pillsbury eds, pp. 149-180. Dumbarton Oaks, Washington, D.C.
- Webster, David, William Sanders, and Peter van Rossum (1992). A Simulation of Copán Population History. *Ancient Mesoamerica* 3: 185-198.
- Webster, David, Randolph Widmer, Barbara Fash, AnnCorinne Freter, Richard Paine, Scott Zeleznik, and Elliot Abrams (1992). *Final preliminary Report: 1990 Excavations at Group 8N-11 and Group 30-7 at Copán, Honduras*. On file at the Instituto Hondureño de Antropología e Historia.
- Wells, Christian and Karla Davis-Salazar (2008). Worldview and Ritual Economy among the Honduran Lenca. *Research in Economic Anthropology* 27: 189-217.
- Welsh, Bruce (1988). *An Analysis of Lowland Maya Burials*. BAR International Series 409. Archaeopress, Oxford.
- Whittington, Stephen (1989). *Characteristics of Demography and Disease in Low-Status Maya from Classic Period Copán, Honduras*. Ph.D. dissertation, Department of Anthropology, Penn State University.
- Whittington, Stephen (1991a). *The Ostuman Archaeological Project*. Report submitted to the National Science Foundation and the Instituto Hondureño de Antropología e Historia.
- Whittington, Stephen (1991b). Detection of Significant Demographic Differences Between Subpopulations of Prehispanic Maya from Copán, Honduras. *American Journal of Physical Anthropology* 85: 167-184.
- Whittington, Stephen (1992). Enamel Hypoplasias in the Low Status Maya Population of Prehistoric Copán, Honduras. *Journal of Paleopathology* 2: 185-205.
- Whittington, Stephen and David Reed (1997). Commoner Diet from Copán: Insights from Stable Isotopes and Porotic Hyperostosis. In *Bones of the Maya*. Stephen Whittington and David Reed, eds., pp. 157-170. Smithsonian Institution Press, Washington, D.C.
- Widmer, Randolph (2009). Elite Household Multicrafting Specialization at 9N-8, Patio H, Copán. In *Housework: Craft Production and Domestic Economy in Ancient Mesoamerica*, Ken Hirth ed., pp. 174-204. Archaeological Papers of the American Anthropological Association, vol. 19: 1.
- Widmer, Randolph and Rebecca Storey (2016). The Archaeology of Reconstruction at 8N-11: Insights into What is Learned. In *Human Adaptation in Ancient Mesoamerica*. Nancy Gonlin and Kirk French eds., pp. 155-174. University of Colorado Press, Boulder.
- Wiley, Gordon (1986). The Postclassic of the Maya Lowlands: A Preliminary Overview. In *Late Lowland Maya Civilization: Classic to Postclassic*. Jeremy Sabloff and E. Wyllys Andrews V eds., pp. 17-51. School of American Research, Santa Fe.
- Wiley, Gordon R., William R. Bullard Jr., John B. Glass, and James Gifford (1965). *Prehistoric Maya Settlement in the Belize Valley*. Peabody Museum, Harvard University, Cambridge.
- Wiley, Gordon R. and Richard Leventhal (1979). Prehistoric Settlement at Copán. In *Maya Archaeology and History*, Norman Hammond and Gordon R. Wiley eds., pp. 75-102. Austin, University of Texas Press.
- Wiley, Gordon R., Richard M. Leventhal and William Fash, Jr. (1978). Maya Settlement in the Copán Valley. *Archaeology* 31:4: 32-43.

- Willey, Gordon R., Richard M. Leventhal, Arthur Demarest, and William L. Fash Jr. (1994). *Ceramics and Artifacts from Excavations in the Copán Residential Zone*. Papers of the Peabody Museum of Archaeology and Ethnology, Vol. 80. Harvard University.
- Wingard, John (1992). The Role of Soils in the Development and Collapse of Classic Maya Civilization at Copán, Honduras. Ph.D. dissertation. Department of Anthropology, Penn State University.
- Wingard, John (1996). Interactions Between Demographic Processes and Soil Resources in the Copán Valley of Honduras. In *The Managed Mosaic: Ancient Maya Agriculture and Resource Use*. Scott Fedick ed., pp. 207-235. University of Utah Press, Salt Lake City.
- Wingard, John (2013). Tilling the Fields and Building the Temples. In *Soils, Climate, and Society*. John Wingard and Sue Eileen Hayes eds., pp. 131-156. University of Colorado Press, Boulder.
- Wingard, John (2016). Complementarity and Synergy: Stones, Bones and Toil in the Copán Valley, Honduras. In *Human Adaptation in Ancient Mesoamerica*. Nancy Gonlin and Kirk French eds., pp. 73-96. University of Colorado Press, Boulder.
- Wolf, Katherine Miller (2019). Curating Large Skeletal Collections: An Example from the Ancient Maya Site of Copán, Honduras. *Advances in Archaeological Practice* 7:1:30-39.
- Wolfman, Daniel (1987). *Mesoamerican Chronology and Archaeomagnetic Dating: A.D. 1-1200*. Manuscript on file in the Copán Project Archives. Department of Anthropology, Penn State University.
- Wolfman, Daniel (1990). Mesoamerican Chronology and Archaeomagnetic Dating: A.D. 1-1200. In *Archaeomagnetic Dating*, Jeffrey Eighmy and Robert Sternberg eds., pp. 261-310. Tucson, University of Arizona Press.
- Wood, James, George Milner, Henry Harpending, and Kenneth M. Weis (1992). The Osteological Paradox: Problems of Inferring Prehistoric Health from Skeletal Samples. *Current Anthropology* 33: 4: 343-370.
- Yang, Jianxiang and Qu Ting (2017). Time Travelers. *China Daily*, Nov. 7, 2011.
- Zaro, Gregory and Brett Houk (2012). The Growth and Decline of the Ancient City of La Milpa, Belize: New Data and Perspectives from the Southern Plazas. *Ancient Mesoamerica* 23: 143-159.
- Zelevnik, W. Scott (n.d.). Preliminary Ph.D. dissertation manuscript on file in the Copán Archives. Department of Anthropology, Penn State University.
- Zelevnik, W. Scott (2002) The Varied Contexts of Social Distinction in Classic Maya Society from the Copán Valley, Honduras. Paper presented at the 67th Annual Meeting of the Society for American Archaeology, Denver.
- Zelevnik, W. Scott and David Reed (2006). Mortuary Analysis and Social Complexity in Prehistoric Mesoamerica and Beyond. Paper presented at the 71st Annual Meeting of the Society for American Archaeology, Puerto Rico.
- Zender, Marc and Joel Skidmore (2012). Unearthing the Heavens: Classic Maya Murals and Astronomical Tables at Xultun, Guatemala. www.mesopweb.com/reports/Xultun.pdf.
- Zralka, Jaroslav, and Weislaw Koszkuł (2010). New Discoveries about the Ancient Maya: Excavations at Nakum, Guatemala. *Expedition* 52:2 21-32.
- Zralka, Jaroslav and Bernard Hermes (2012). Great Development in Troubled Times: The Terminal Classic at the Maya Site of Nakum, Guatemala. *Ancient Mesoamerica* 23:1: 161-187).