

EXCAVATIONS AT THE CAPPADOCIA GATE

KERKENES FINAL REPORTS 1

EXCAVATIONS AT THE
CAPPADOCIA GATE

by

GEOFFREY D. SUMMERS

with contributions by

SUSANNE BERNDT, YILMAZ SELİM ERDAL, EVANGELIA PİŞKİN,
YASEMİN ÖZARSLAN, NOËL SIVER, FRANÇOISE SUMMERS,
ROBERT TATE, AND NİLÜFER BATURAYOĞLU YÖNEY

Introduction by

DAVID STRONACH

Summary translated into Turkish by

GÜZİN EREN

ORIENTAL INSTITUTE PUBLICATIONS • VOLUME 145
THE ORIENTAL INSTITUTE OF THE UNIVERSITY OF CHICAGO
CHICAGO • ILLINOIS

ISBN (hardcover): 978-1-61491-059-6
ISBN (eBook): 978-1-61491-060-2
Library of Congress Control Number: 2021934736
ISSN: 0069-3367

The Oriental Institute, Chicago

©2021 by the University of Chicago.
All rights reserved. Published 2021.
Printed in the United States of America.
Oriental Institute Publications 145

Series Editors

Charissa Johnson *and* Steven Townshend

with the assistance of

Emily Smith

Layout

Emily Smith

Cover Design

Charissa Johnson

Cover Illustration

Gold and electrum openwork ornament (K11.251).
See p. 96 and pl. 158

Spine Illustration

Semi-iconic idol (K07.223) and step (K07.224).
See pp. 72–73 and pls. 138–140a.

Printed by M&G Graphics

Chicago, IL, USA

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

Dedicated to the memory of Crawford Hallock Greenewalt Jr.

TABLE OF CONTENTS

LIST OF TABLES	xiii
LIST OF FIGURES	xv
LIST OF PLATES	xvii
PREFACE	xxiii
ACKNOWLEDGMENTS	xxvii
INTRODUCTION (<i>David Stronach</i>)	xxxiii
BIOLOGICAL NOTES ON KERKENES PROJECT PUBLICATIONS	xxxvii
BIBLIOGRAPHY	xxxix
CHAPTER 1. Background: Excavation Strategies, Methods, and Notation (<i>Geoffrey D. Summers and Françoise Summers</i>)	3
A New Foundation	4
Chronology	5
Identification with Pteria	7
The Name “Cappadocia Gate”	8
Reasons for Excavation at the Cappadocia Gate	9
Strategies and Progress of the Excavations	9
The Cappadocia Gate at the Start of Clearance	11
Notation	13
Numbering of Trenches	13
Excavation Units, Recording, and Numbering of Finds	14
CHAPTER 2. GIS Analysis of the Cappadocia Gate Location (<i>Yasemin Özarслан and Geoffrey D. Summers</i>)	15
Observations on the Road	16
Geographic Information Systems	16
Viewshed Analysis	16
Slope Analysis	17
Least-Cost Path Analysis	17
Conclusions	17
CHAPTER 3. Excavation of the Cappadocia Gate (<i>Geoffrey D. Summers and Françoise Summers</i>)	19
The Location of the Cappadocia Gate	19
The Plan of the Cappadocia Gate	21
Stratigraphy and Phases of Construction	23
The Original Construction	24
Materials	25
Methods of Building and Stages of Construction	27
Stone-Working Tools and Techniques	27
Walling	28
Design of the Defenses	29
Construction of the Middle and North Towers	31
The TR13 Sondage against the Northern Corner of the Middle Tower	31

The TR23 Sondage against the Southwestern Face of the North Tower and the Rear Façade	31
Detailed Descriptions of Elements of the Cappadocia Gate	32
The Drain	32
The Glacis	33
The Entrance Passage	35
The Court	35
Pavements, Surfaces, and Drain in the Court and Entrance Passage	35
The Façades and Doors in the Rear Section of the Gate	37
The Pavement in the Rear Section of the Gate	38
Room 2	39
Room 1	39
Room 3	39
Cultic Installations	39
The Limestone Statue and Sandstone Plinth	40
The Stepped Monument and Semi-iconic Idol	40
Evidence for a Built Wooden Niche	41
The Aniconic Granite Stela	41
The Buttress	41
The Structure in Front of the East Tower	41
Destruction of the Cappadocia Gate	42
Postdestruction at the Cappadocia Gate	44
CHAPTER 4. Cappadocia Gate: Architectural Documentation, Conservation, and Environmental Control (<i>Nilüfer Baturayoğlu Yöney</i>)	45
Documentation History	45
Conservation and Environmental Control Project	47
Summary of Architectural and Structural Characteristics	48
Intervention Principles	48
The 2010 Intervention	50
The 2011 Intervention	51
Conclusions and Future Research	52
CHAPTER 5. Sculpture, Idol, and Stelae (<i>Geoffrey D. Summers, with contributions by Noël Siver</i>)	55
Excavation, Recording, Conservation, and Display	55
Circumstances of Burial	55
Excavation of the Sphinx Base and Statue	56
Recording and Lifting of the Base and Statue	56
Lifting and Restoration of the Semi-iconic Idol	57
Removal of the Aniconic Stela	57
Relief Sculpture: The Sandstone Base with a Pair of Crouching Sphinxes	57
Description	58
Position and Pose	58
Face and Hair Fragments	59
Wings, Mane, and Fur Fringes	59
Legs, Claws, and Tails	59
Gender	59
Discussion	60

Conservation of the Sandstone Base (<i>Noël Siver</i>)	61
Sculpture in the Round: The Life-sized Statue	61
Description	61
Catalog of Statue Fragments	63
Discussion	68
Surface Treatments	69
The Limestone	69
The Fibulae	69
Fragments with “Scales”	70
General Remarks on the Sculpture in Room 3	71
Conservation of the Limestone Statue (<i>Noël Siver</i>)	72
The Semi-ionic Idol and Its Step	72
Conservation of the Semi-ionic Idol and Its Step (<i>Noël Siver</i>)	74
A Possible Second Idol	74
The Aniconic Granite Stela	75
CHAPTER 6. Blocks with Graffiti (<i>Susanne Berndt</i>)	77
Introduction	77
The Stone	77
Location	77
The Blocks	77
The Incised Figures	79
Graffiti on the Upper Block	79
Upper Register of the Left Part	79
Middle Register of the Left Part	80
Bottom Register of the Left Part	80
Right Part of the Upper Block	81
Graffiti on the Lower Block	81
The Entrance Passage Face	81
The Glacis Face	82
Interpretation	83
Identification of the Images	83
Parallels in Other Phrygian Contexts	84
CHAPTER 7. Human Skeletal Remains from the Iron Age Destruction at the Cappadocia Gate (<i>Yılmaz Selim Erdal</i>)	87
The Burial Process	87
Skeleton SK2	88
Skeleton SK3	88
Preservation, Sex, and Age of the Individuals	88
Skeleton SK2	88
Skeleton SK3	89
Color, Burning, and Condition of the Bones	89
Skeleton SK2	89
Skeleton SK3	91
Conclusion	91
CHAPTER 8. The Finds (<i>Geoffrey D. Summers</i>)	93
Arrowheads	93

TABLE OF CONTENTS

Copper Alloy Socketed Arrowheads	94
Tanged Iron Arrowheads	96
Personal Ornaments	96
Fibulae	97
Hairgrips	98
Pins	100
Ring	101
Bead	101
Tweezers	101
Miscellaneous Copper Alloy Objects and Scraps	101
Copper Alloy Fragments Not Illustrated	103
Tools	103
Whorls	104
Architectural Iron	104
Conservation of the Iron Bands (<i>Noël Siver</i>)	105
Iron Bands	105
Dome-headed Nails	107
Nails	109
Point	110
Miscellaneous Iron	110
Iron Tacks	111
Lead	111
Wood	112
CHAPTER 9. The Iron Age Pottery (<i>Geoffrey D. Summers</i>)	113
Pottery from the Construction of the Cappadocia Gate	114
Pottery from Adaptations to the Cappadocia Gate	116
Pottery from the Destruction of the Cappadocia Gate	117
Three Miniature Pots	117
Sherds Not Illustrated	118
Two Sherds with Nonalphabetic Graffiti	118
Juglet with Incised Decoration	119
Sherd with Faceted Decoration	119
Miscellaneous Pottery from the Cappadocia Gate	120
Sherds Not Illustrated	120
CHAPTER 10. Animal Bones from Iron Age Levels (<i>Evangelia Pişkin</i>)	121
Research Questions	121
Provenance of the Materials: Recovery	121
Methods	122
Species Proportions	123
Skeletal Elements	124
Assessment of Age	125
Tooth Wear	125
Epiphyseal Fusion	125
Special Aging	126
Spatial Position of Finds	126
Conclusions	129

CHAPTER 11. Early Byzantine Period Remains (<i>Robert Tate and Geoffrey D. Summers</i>)	131
The Early Byzantine Building Complex	131
The Curvilinear Animal Pen.	132
Early Byzantine Ceramics and Glass	133
CHAPTER 12. Interpretations (<i>Geoffrey D. Summers</i>)	135
Conceptual Considerations	135
Functions	136
Design, Rapidity of Construction, and Maintenance	136
Parallels	137
Boğazköy.	137
Gordion	138
Midas City.	139
Delikli Taş	140
Neo-Hittite Gates	140
Sardis	141
Statuary, Idol, and Stela	141
Statuary	141
Semi-iconic Idol.	142
Aniconic Stela	142
Concluding Remarks	143
CHAPTER 13. Türkçe Özet / Turkish Summary (<i>İngilizceden çeviren Güzin Eren</i>)	145
APPENDIX 1. Concordance of Site Inventory and Identification Numbers	153
APPENDIX 2. Concordance of Identification Numbers ordered by Trench, then by Unit	155
APPENDIX 3. Concordance of Trenches	159
APPENDIX 4. Lists of Units of Excavation by Trench	163
APPENDIX 5. Place Names	167
APPENDIX 6. Technical Abbreviations	169
PLATES.	171

LIST OF TABLES

1.	Measurements along the front of the gate	21
2.	Dimensions of the Cappadocia Gate towers	23
3.	Dimensions of the entrance passage and court	35
4.	Dimensions of the rear section of the gate	37
5.	Species proportions	123
6.	Skeletal representation	124
7.	Epiphyseal fusion in ovicaprid bones	126
8.	Neonatal and young animals	127
9.	Distribution of elements within trench TR23	128
10.	Distribution of elements within trench TR24	129
11.	Distribution of elements within trench TR25	130
12.	Byzantine complex room sizes	132

LIST OF FIGURES

1. Upper graffiti block with recognizable individual figures 80
2. Lower graffiti block entrance passage face with recognizable individual figures 81
3. Lower graffiti block glacis face with recognizable individual figures 82

LIST OF PLATES

1. Location map and aerial view
2. Plan of the Iron Age city
3. Simulations of the Iron Age city
4. Views of the site
5. Views of the site
6. Views of the Site
7. Views of the Site
8. Views of the animal pens
9. Recording the glacis and regional map
10. The road leading to the Cappadocia Gate
11. The front of the Cappadocia Gate in winter
12. Viewshed of the three towers
13. Viewshed of the city wall
14. Viewshed of the kale
15. Slope map of the area around the city walls
16. Least-cost path analysis
17. Southeastern section of the sondage against the Middle Tower
18. Base of the trench and glacis face
19. Views of the Cappadocia Gate
20. Views of the court and entrance passage
21. Granite and sandstone used for building the gate
22. Sandstone blocks fallen from the northeastern corner of the Middle Tower
23. Junction of the East Tower and the city wall in TR25
24. Evidence of the use of mudbrick and mud plaster
25. Pecking marks on cut stone
26. The Middle Tower with the stela in position
27. Views of the court
28. Displacement of face stones in the North Tower
29. Displacement of face stones in the West Tower
30. The West Tower and passage wall
31. The Glacis and the city wall
32. The external face of the walling
33. Room 1
34. Room 3
35. The front façade
36. Excavations in the North Tower
37. The drain
38. The glacis
39. The glacis
40. The glacis face
41. The glacis face

42. The glacis face
43. The entrance passage and glacis
44. The glacis
45. The phases of glacis construction
46. Excavation of the glacis and wall
47. The East Tower and city wall
48. The entrance passage
49. The entrance passage and court
50. The court
51. The front and rear façades
52. The front façade
53. Views from the North and West Towers
54. The stone thresholds
55. Looking across the rear part of the gate from the West Tower
56. Collapsed stone against the glacis and in the entrance passage
57. Sections in Rooms 2 and 3
58. Block plan of the Cappadocia Gate
59. Locations of architectural profiles and wall elevations
60. Plan of trenches at the Cappadocia Gate
61. Location of archaeological sections at the Cappadocia Gate
62. The Cappadocia Gate showing all features
63. The Cappadocia Gate entrance passage
64. The Cappadocia Gate court
65. The rear section of the Cappadocia Gate
66. The first phase of the Cappadocia Gate
67. Additions to the Cappadocia Gate
68. The Cappadocia Gate at the time of destruction
69. The court and entrance passage with the location of the two skeletons
70. Structure in front of the East Tower
71. Profile across the court
72. Profile through the rear section and the court
73. Profile across the rear section
74. Profile through the rear central passage and court
75. Profile through the entrance passage and across the court
76. Elevation of the gate and South Tower
77. The front of the Middle and East Towers
78. Elevation of the city wall and buttress front to the west of the gate
79. Elevations of the South Tower and buttress
80. The glacis surface drawn flat
81. Elevations of the entrance passage and Middle Tower walls
82. Elevations of the court and North Tower walls
83. Elevations of the North and West Towers
84. Elevations of the entrance passage and Room 3 walls
85. Strata below the burned surface
86. Sections across the entrance passage
87. Sections through the rear part of the gate
88. Sections through the court

89. Sections across the buttress
90. Plan of Kerkenes
91. The defensive system
92. Cappadocia Gate block plans
93. Architectural restoration
94. Architectural restoration
95. Architectural restoration
96. Architectural restoration
97. Architectural restoration
98. Architectural restoration
99. Architectural restoration
100. Architectural restoration
101. Architectural restoration
102. Architectural restoration
103. Architectural restoration
104. Oblique views of sphinx block K11.249 during excavation
105. Sphinx block K11.249 during excavation
106. Sphinx block K11.249 and tenon of statue K11.250
107. The left-hand end and angled corners of sphinx block K11.249
108. The right-hand end and mortise of sphinx block K11.249
109. The front and top of sphinx block K11.249
110. The claws of sphinx block K11.249
111. Sphinx block K11.249 mended
112. Details of sphinx block K11.249
113. Details of sphinx block K11.249
114. Detail of fragments of sphinx block K11.249
115. Fragments of sphinx block K11.249
116. Fragments of sphinx block K11.249
117. Fragment of sphinx block K11.249
118. Fragments of sphinx block K11.249
119. Sphinx block K11.249
120. Statue K11.250, pieces A–B
121. Statue K11.250, Piece C
122. Statue K11.250, Piece D
123. Statue K11.250, pieces E–I
124. Statue K11.250, Piece J
125. Statue K11.250, Piece J
126. Statue K11.250, Piece K, front and left sides
127. Statue K11.250, Piece K, right side
128. Statue K11.250, Piece L
129. Statue K11.250, Piece L
130. Statue K11.250, Piece L, the finished side
131. Statue K11.250, Piece L, the finished side
132. Statue K11.250, Piece L, the broken side
133. Statue K11.250, Piece L, the broken side
134. Statue K11.250, Piece M
135. Statue K11.250, Piece M, front and side views

136. Statue K11.250, pieces N–P
137. Statue K11.250, piece Q
138. Semi-iconic idol K07.223
139. Semi-iconic idol K07.223 and top step K07.224
140. Top step of the stepped monument and possible idol
141. Granite stela K11.278 in situ (*a–c*) and excavated (*d–e*)
142. The two sandstone blocks with graffiti, K07.224 and K07.225
143. Upper block K07.225 with graffiti on the entrance passage face
144. Toolmarks on the upper block K07.225
145. Upper block K07.225
146. Lower block K07.226 with graffiti on the entrance passage face
147. Lower block K07.226 with graffiti on the glacis face
148. Lower block K07.226
149. Skeleton SK2 in the entrance passage
150. Skeleton SK2
151. Skeleton SK2
152. Skeleton SK2
153. Skeleton SK2
154. Skeleton SK2
155. Skeleton SK3 in the gate court
156. Bilobate arrowheads
157. Trilobate (*a–c*) and tanged (*d–f*) arrowheads
158. Gold and electrum ornament K11.251
159. Fibulae (*a–b*) and hairgrips (*c–i*)
160. Assorted metal objects
161. Assorted metal objects
162. Pottery and baked-clay whorls
163. Fenestrated iron band K11.254
164. Iron band K11.254
165. Iron bands K11.252 and K11.253
166. Iron band K11.252
167. Iron band K11.252
168. Iron band 11TR24U07met03
169. Dome-headed iron nails
170. Iron nails
171. Assorted iron objects
172. Assorted iron objects
173. Assorted metal pieces
174. Pottery from construction of the gate
175. Pottery vessels from the glacis core
176. Paneled crater 11TR24U04pot02 from below the floor of Room 1
177. Sherds from below the floor of Room 1
178. Miniature pots, nonalphabetic graffiti on vessel sherds
179. Juglet with incised pattern K02.144
180. Pottery sherds
181. The Early Byzantine complex
182. Plan of the Early Byzantine structures behind the Cappadocia Gate

183. Early Byzantine plain ware jars and jugs
184. Early Byzantine plain ware
185. Bronze follis, Iron Age street surface

PREFACE

The Iron Age capital on the Kerkenes Dağ is situated in the center of Asiatic Turkey on the rolling Cappadocia plain, midway between Sinop on the Black Sea and Kayseri, ancient Caesarea Mazaka (pl. 1a).ⁱ As this volume goes to press, the future of archaeological research at this extraordinary and very difficult site is, after a period of uncertainty, in the secure and capable hands of Scott A. Branting.

In 2011 it was possible to complete excavation of the Cappadocia Gate, as we have called it, and in the following spring a sufficient number of the sculpted pieces from the rear section of the gate were cataloged for us to be reasonably confident that no significant additions or improvements to our understanding will be made by further work. This conclusion was strengthened in the summer of 2012 when conservator Noël Siver was able to do no more than join two small fragments with incised scales.

In essence the monumental Cappadocia Gate is a single-period structure to which there were a number of relatively minor additions, principally the addition of three rooms inside the rear section, extensions to stone paving, and the setting up of three cultic monuments. When the city was destroyed by fire in the 540s BC, the gate too was engulfed in flames. Voids created in the walling as the timbers burned caused most of the structure to collapse. It has not, therefore, been a particularly difficult task to organize this report. It is intended to be a final report, inasmuch as any archaeological report can be said to be final, in that it brings together within a single volume all the evidence available. Interpretations offered here will not be the last word, but the documentation is as full and complete as it has been possible to make it. A combination of destructive procedures of archaeological excavation, demolition of dangerously leaning burned wall faces and the collapse of others, and extensive architectural restoration have resulted in a situation whereby the field records constitute the only extant evidence for

much of what was uncovered and for all of the collapse and fill that was removed. Because excavation of the gate has resulted in the destruction of parts of the structure, and will cause the destruction of much more if a major program of architectural preservation is not implemented soon, it is not unreasonable for us to ask ourselves whether the enterprise was justified. The next generation will doubtless be critical, as it should be; we can only hope that criticism is tempered by an appreciation of what was done under the conditions that prevailed and with the limited resources available at the time.

While we were always conscious of expectations at the local and national level, not least with regard to tourist potential, our thrust has been the pursuit of academic investigation for the furtherance of knowledge, rather than exploitation of tourist potential. We were not oblivious to the latter, and indeed our choice of the Cappadocia Gate as a pivot of our research was interwoven with our research design for this very reason. When, in 1999, we began clearance at the gate, we were still under the mistaken impression that the entire city on the Kerkenes Dağ was never completed. The rubble ramparts that snaked around the crest of the hilltop were thought to have been the base for a massive mudbrick wall that was never built. This error in interpretation of the physical remains led to mistaken ideas about chronology and historical background that are not necessary to reiterate here. Had we known that we would be dealing with stone wall and stone glacis preserved to a height in excess of five meters in some places, we might have been more cautious in our approach. Once started, however, there was a need to finish. The information that has been gained as a result of these excavations exceeded all expectations and has thrown much light not only on Kerkenes itself, surely ancient Pteria, but more broadly on central and western Turkey. Understanding of the later seventh and the first half of the sixth centuries BC, for which—a handful of

ⁱ Przeworski 1929; G. Summers 2013.

cultic inscriptions in Paleo-Phrygian notwithstanding — contemporaneous written sources are almost entirely lacking, has been moved forward significantly. It will be for others to judge whether these gains in knowledge justify the irrevocable damage that was done to the remains.

Some words about our research design and the methods employed might not here be out of place.ⁱⁱ In 1993 the aim was to map features visible on the ground with the aid of aerial photographs taken by remote control from a camera suspended from a helium-filled blimp. In the same season Lewis Somers made experiments with methods of geophysical survey in order to ascertain their potential for future research design. By good fortune it was also possible in the first season to take photographs from a single flight in a manned hot-air balloon (pls. 1b, 4b, 5a). Thus began a long program of remote sensing exploration at Kerkenes. Ambitions did not stretch beyond survey, perhaps to be supplemented by discrete test trenches to ascertain the function of different types of structures identified on remote sensing imagery. This approach was driven by a belief that nonintrusive, and therefore nondestructive, remote sensing and surface survey would provide an unprecedented overview of this huge, single-period site, and that only minimal excavation would be needed in order to address specific questions. This approach was consciously different from the more normal and then-prevailing use of remote sensing, and especially of most geophysical survey, whereby the underlying aim was to identify profitable places to dig. Our research design was able to evolve along these lines because the blimp-borne photograph survey was paralleled by hardware and software developments that made geophysical survey of large areas a realistic possibility. Balloon photography, geophysical survey, and close-contour Global Positioning System (GPS) survey are the three platforms of remote sensing that have been employed at Kerkenes.ⁱⁱⁱ Results from combinations of these methods include simulations of the city such as those shown on plates 2–3.

Interpretations of the evidence visible on the ground and as revealed by remote sensing, and to some extent resulting from test trenches excavated

in 1996 and 1998, led to suggestions that the city was unfinished at the time of its destruction and abandonment. This, as it was to turn out, erroneous interpretation prompted further speculations concerning the very short life of the city and the circumstances of its foundation.^{iv} Pressure to excavate on a larger scale became overwhelming with a proposal from David Stronach for a five-year period of collaboration that would include money for the construction of a conservation field laboratory and depot together with sufficient funds for excavation on a suitable scale, neither of which had been previously possible. Two monuments were selected for initial investigation. Reasons for this selection were their proximity to one another, which had logistical advantages; their obvious monumentality, which went some way toward meeting expectations of officialdom with respect to tourist potential; and the fact that none of the geophysical methods that were being used could reveal plans of these structures, which were clearly buried beneath stone rubble. One of the monuments selected was the Monumental Entrance to the Palatial Complex; the other was the Cappadocia Gate. The immediate result was abandonment of the idea that the city, and particularly its defenses, were unfinished. The extent to which the entire city was Phrygian, including its language, cult, urban design, architecture, and material culture, took longer to emerge.

This volume is the first in a series of final reports. A second volume, devoted to the Palatial Complex, is at an advanced stage of preparation, and other volumes will follow in due course. The first of a supplementary series of Kerkenes Special Studies was published in 2008,^v and further volumes are planned. Most of what is contained in this present volume has already been presented in preliminary form in issues of the *Kerkenes News*, in the annual proceedings of the *Uluslararası Kazı, Araştırma ve Arkeometri Sempozyum* (International Excavation, Survey and Archaeometry Symposium), and in annual reports made available on the Kerkenes website. In addition, numerous articles and conference papers have been published.^{vi} It is, nevertheless, incumbent upon us to pull together as much of the evidence as

ⁱⁱ G. Summers and F. Summers 2010.

ⁱⁱⁱ Branting and G. Summers 2002.

^{iv} For example, G. Summers 1997 and 2000.

^v Draycott and G. Summers 2008.

^{vi} The most recent overview is G. Summers and F. Summers 2012.

possible into a single volume that attempts to present the results in a coherent fashion as well as to offer carefully considered interpretations. It is anticipated that this printed work will be available to the future generations of scholars and students for whom it is intended long after current digital forms of dissemination have become obsolete.

Acknowledgments form a separate section that follows this preface, so it is not necessary to repeat here the names of individuals and institutions. But it is necessary to stress that the entire enterprise

at Kerkenes has been one of teamwork. Team members include colleagues, students, and technicians, but they also include the local workmen, who in most instances have taken to their employment with enthusiasm and good will that extends beyond the day-to-day tasks of collecting geophysical data and excavation. To all who have taken part or contributed in some other way, we offer our thanks.

GEOFFREY D. SUMMERS
ANKARA, MAY 2016

ACKNOWLEDGMENTS

Twenty years of fieldwork, research, and publication at Kerkenes have involved a huge number of people. While not everyone can be mentioned in this volume, which is devoted to one aspect of the project, all contributions and support have been appreciated. Three people deserve particular mention. Scott A. Branting, a member of the team since 1995, wrote his doctoral dissertation on Kerkenes and has been codirector for the last ten years. Musa Özcan was director of the Yozgat Museum when we began in 1993. It was under his authority that test trenches were excavated in 1996 and 1998 and that larger-scale work began in 1999. Finally, David Stronach and his team joined us in 1999 for a five-year collaboration that made it possible to construct facilities necessary for obtaining a full excavation permit.

Publication

First and foremost we would like to thank the authors of each of the chapters contained in this volume. All participated in fieldwork at Kerkenes in addition to undertaking specialist studies. Ben Claasz Coockson and Ahmet Çinici have been responsible for the majority of the final illustrations, while Dominique Langis-Barsetti assisted with the documentation of finds and much else. Among the students and research assistants working in the Kerkenes Office at the Middle East Technical University (METU), Ankara, Güzin Eren deserves special mention. Noël Siver has assiduously read the manuscript, much of it several times, and in addition we are deeply indebted to her for assistance with many aspects of this publication. Thomas Urban, Leslie Schramer, Charissa Johnson, Emily Smith, and Rebecca Cain at the Oriental Institute Publications Office oversaw the production with great care and attention. We also thank the anonymous referee for helpful comments. Responsibility for faults and shortcomings remains with the authors.

Colleagues

Among the many friends and colleagues who have shown interest in our work we would particularly like to thank Susanne Berndt, Claude Brixhe, Nicholas D. Cahill, Gareth Darbyshire, Keith DeVries, Catherine Draycott, Mehmet Ekmekci, Burcu Erciyas, David H. French, Crawford H. Greenewalt Jr., John Haigh, Kenneth W. Harl, Catherine Kuzucuoğlu, Oscar White Muscarella, Brian C. Rose, Antonio Sagona, G. Kenneth Sams, R. R. R. Smith, David Stronach, Vedat Toprak, Lutgarde Vandeput, Mary M. Voigt, and Henry T. Wright.

General Directorate of Museums and Cultural Resources

Successive general directors, assistant directors, and many other staff at the Directorate in Ankara have always offered strong support and sound advice on all aspects of the project. We have especially valued the advice and support of Melik Ayaz from the very start of the project. Representatives of the General Directorate during seasons of work at the Cappadocia Gate were Dursun Çağlar, Çiğdem Demiroğlu, Resul İbis, Mehmet Katkat, Şaban Kök, Serpil Ölmez, İsmail Sarıpınar, Kenan Sürül, Uğur Terzioğlu, Mevlut Üyümez, and Ertan Yılmaz, all of whom aided the work in many ways above and beyond their official duties.

Yozgat Museum

We are pleased to acknowledge the participation of staff at the Yozgat Museum: Museum Directors Musa Özcan, who was also Director of Excavations in the early seasons, Erol Özen, Mustafa Akkaya, Mehmet Ayar, and Hasan Şenyurt.

Regional and District Officials

Among the very many local officials who have provided hospitality, advice, and support, we would particularly mention Yozgat Provincial Governors Amir Çiçek, Mahmut Kılıçdoğan, Hüseyin Önal, Gökhan Sözer, and Necati Şentürk; Sorgun District Governors Mustafa Dünder, Meftun Dalli, Ertuğrul Kılıç, and Levent Kılıç; Mayors of Yozgat Mehmet Erdemir and Yusuf Başer; Mayors of Sorgun Yılmaz Kılıçarslan and Ahmet Şimşek; Mayor of Dedefakılı Mustafa Özyalçın; Yozgat Director of Culture Selime Doğan Uyar; Yozgat Directors of Culture and Tourism Bahri Akbulut, Lütfi İbiş, and Mustafa Sarıkaya; and Directors of the Department of Rural Services Vahap Özkul and Muharrem Şengül. Heavy machinery was loaned by the Municipalities of Belencumafakılı, Çekerek, Dedefakılı, Karakız, and Sorgun.

Şahmuratlı Village

The excavation house, field laboratory, and depot are located in the village of Şahmuratlı, which nestles at the eastern foot of the Kerkenes Dağ. Villagers tend vineyards and orchards on the southeast-facing slopes of the mountain, while their flocks and herds are grazed within the walls of the ancient city. Wheat, chickpeas, and lentils are the chief crops grown on the level fields, in addition to which many families have small gardens. We have always received the traditional hospitality for which Anatolia is justly famed, and in some cases this has extended to deeper levels of friendship. We would like to thank the Headmen, Turan Baştürk, Ali Erciyes, and particularly Osman Muratdağı, whose assistance since the first campaign in 1993 has been invaluable, together with the village's inhabitants, from among whom come the excavation workmen and house staff. A special word of thanks is due to Mehmet Erciyes, who, in addition to performing his duties as site guard, assiduously maintains the excavation house, garden, and facilities.

Postfieldwork

Based in office space provided by METU, the Kerkenes Project collaborated with the Faculty of Architecture, the Faculty of Engineering Research, and the Faculty of Geological Engineering. Between

seasons, the project received funding for research from METU (BAP) and from AKG Gazbeton, the Erdoğan Akdağ Foundation, Lafarge Sağlık Eğitim ve Kültür Vakfı, MESA, Yenigun, Yibitaş Yozgat Çimento Fabrikası with Yibitaş Lafarge, Çimpor Yibitaş, and Votorantim, whose generous grants were channeled through the METU Development Foundation.

Sponsors

Major sponsors of the work at the Cappadocia Gate were the British Institute of Archaeology at Ankara, the Oriental Institute of the University of Chicago, the University of California, Berkeley and the Stahl fund, the National Geographic Society, the Rolex Award for Enterprise, the Binks Trust, Raymond and Beverly Sackler, the Joukowsky Family Foundation, and an anonymous donor. Contributions toward this study were also received from the Anatolian Archaeology Research Foundation, the Archaeocommunity Foundation, Bell Helicopter, the Anglo-Turkish Society — Bernard and Innes Burrows Award, the Charlotte Bonham Carter Trust, John Kelly Consulting Inc., Mrs. Linda Noe Laine, Dr. Norman Solhkhah, and other donors. The last two seasons and most of the preparation of this volume were principally supported by the Loeb Classical Library Foundation. Restoration of the glaxis in 2010 was made possible by an award from the United States government's Ambassadors Fund for Cultural Preservation. A Senior Fellowship awarded to Geoffrey Summers at Koç University's Research Center for Anatolian Civilizations in 2012/13 permitted completion of this volume.

Architectural Restoration

Nilüfer Baturayoğlu Yöney, from the Architectural Restoration Department of Istanbul Technical University, has contributed to this volume a chapter on the program of restoration up to 2011. Here it is appropriate to thank restoration architect Erkan Kambek and his team of stonemasons from Manisa for restoring the glaxis in 2010. METU structural engineer Ahmet Türer reported on structural stability. Permission for the restoration was granted by the Sivas Regional Commission on the Conservation of Cultural and Natural Property, under whose jurisdiction Kerkenes falls. Rekare Restoration and Architecture

Company, Istanbul, was commissioned to conduct the architectural survey. Architectural documentation, restoration, and structural strengthening project was prepared by Çingü Salman, Nazlı Mavuşoğlu, and Erdoğan Cambaz, with Nilüfer Baturayoğlu Yöney as consultant. Ahmet Çinici prepared the final publication drawings. Nilüfer Baturayoğlu Yöney was the consultant. The cost of the 2010 restoration was very largely covered by the grant from the United States government's Ambassadors Fund for Cultural Preservation. We are most grateful to Ambassador James Jeffrey and, at the Embassy of the United States of America, to Elizabeth McKay.

Collaboration

The contents of this volume have especially benefited from collaboration with the Middle East Technical University, Ankara, where the Office of the Rector provides office space and there is productive collaboration with the departments of Engineering, Geological Engineering, and Metallurgical Engineering; the Photogrammetry Center of the Department of Architecture; the Graduate Program in Settlement Archaeology; the Archaeometry Program; TAÇDAM (Center for Research and Assessment of the Historic Environment); and the METU Museum. Farther afield we are pleased to collaborate with the British Institute at Ankara; the Center for Ancient Middle Eastern Landscapes (CAMEL) at the Oriental Institute of the University of Chicago; Geoscan Research; the Department of Anthropology, Hacettepe University, Ankara; the Department of Near Eastern Studies at the University of California, Berkeley; the Cotsen Institute of Archaeology at the University of California, Los Angeles; the Faculty of Architecture at Istanbul Technical University; the Laboratory for Archaeological Chemistry at the University of Wisconsin, Madison; the Malcolm and Carolyn Wiener Laboratory for Aegean and Near Eastern Dendrochronology at Cornell University; the School of Art History, Cinema, Classics and Archaeology at the University of Melbourne; the Social Systems GIS Laboratory at the University of Buffalo (SUNY); and the Anatolian Iron Age Ceramics Project at the University of New England (NSW Australia).

The Team

A very large number of people are involved in a project such as this one. The team includes students and others who help with the office work, accounts, archiving of records and correspondence, running of the excavation house and kitchen, and many other arduous and often thankless tasks. Some have been involved over several field seasons as well as at Ankara between seasons. Additionally, in seasons during which work at the Cappadocia Gate was in progress, there have been members of the field team who were engaged in other areas of research, including the remote sensing survey and excavation at other locations within the city. In the list that follows, only those individuals whose contributions are directly related to this report are acknowledged by name. A full list of participants, including students from Turkey and elsewhere who participated both during and between seasons each year, can be found on the project's website. We trust no one has been omitted and offer our sincerest apologies if they have. Names appear in alphabetical order according to surname.

Excavation Directors

SCOTT BRANTING
MUSA ÖZCAN
DAVID STRONACH
GEOFFREY D. SUMMERS

Coordination of Recording

ISABELLE RUBEN
FRANÇOISE SUMMERS

Trench Supervisors

PELİN AYTER
SCOTT BRANTING
GARRY BURNS
FERHAT CAN
KIM CODELLA
BEN CLAASZ COOCKSON
GÜZİN EREN
DOMINIQUE LANGIS-BARSETTI
JAMES OSBORNE
YASEMİN ÖZARSLAN
ERTAN ÖZCAN
JENNIFER ROSS
LEE ULLMAN

Conservation of Finds, Sculpture, and Stela

ERIK LINDAHL
NOËL SIVER
E. TIFFIN THOMPSON
ALISON WHYTE

Topographic Survey

HANS P. BIRK
SCOTT BRANTING
NURDAN ATALAN ÇAYIREZMEZ
KÖKSAL SANLI
HENNING SCHRIEVER
LEVENT TOPAKTAŞ
NİLÜFER BATURAYOĞLU YÖNEY

Architectural Survey

SCOTT BRANTING
NURDAN ATALAN ÇAYIREZMEZ
AHMET ÇINICI
BEN CLAASZ COOCKSON
ÖMÜR HARMANŞAH
TUNA KALAYCI
COŞKU KOCABIYIK
S. GÖKÇEN KUNTER
JOSEPH LEHNER
FRANÇOISE SUMMERS
ROBERT TATE
G. BİKE YAZICIOĞLU
NİLÜFER BATURAYOĞLU YÖNEY

Geophysical Survey

NAHİDE AYDIN
SCOTT BRANTING
GABRIELLA CARPENTIERO
GÜZİN EREN
MARK FRANCIS
TUNA KALAYCI
JOSEPH LEHNER
CHRISTINE MARKUSSEN
HAROLD VON DER OSTEN WOLDENBURG
YASEMİN ÖZARSLAN
KATIE SIMON
LEWIS SOMERS
SEAN SOMERS
ALEXANDRA WITSELL

GIS

SCOTT BRANTING
NURDAN ATALAN ÇAYIREZMEZ
YASEMİN ÖZARSLAN

Structural Engineer

AHMET TÜRER

Principal Photographers

Gate

BEN CLAASZ COOCKSON
DAVID STRONACH
FRANÇOISE SUMMERS
GEOFFREY D. SUMMERS

Stela, Sculpture, Graffiti, and Finds

MURAT AKAR
JOSEPH LEHNER
NOËL SIVER
GEOFFREY D. SUMMERS

Photogrammetry

KEMAL GÜLCEN

Principal Illustrators

AHMET ÇINICI
BEN CLAASZ COOCKSON
DOMINIQUE LANGIS-BARSETTI
ISABELLE RUBEN
JUDITH SELLERS
E. TIFFIN THOMPSON

Graphics

FIRAT ANT
AHMET ÇINICI
ALİ ÇINKI
BEN CLAASZ COOCKSON
GÜZİN EREN
REFİK TOKSÖZ

Geology and Hydrology

MEHMET EKMEKÇI
NURETDİN KAYMAKÇI
CATHERINE KUZUCUOĞLU
BEN MARSH
VEDAT TOPRAK

DENDROCHRONOLOGY

PETER I. KUNIHOLM

Human Bones

YILMAZ SELİM ERDAL
MELİZ KORUYUCU
BURCU YILDIZ

Animal Bones

METE GÖKSARAN
EVANGELIA PIŞKİN

Architectural Restoration

ERDOĞAN CAMBAZ
ERKAN KAMBEK
NAZLI MAVUŞOĞLU
ÇINGI SALMAN
NILÜFER BATURAYOĞLU YÖNEY

INTRODUCTION

DAVID STRONACH

This present volume constitutes the final report on the excavation of the Cappadocia Gate, the imposing main gate of the Iron Age city that occupied the dominant heights of Kerkenes Dağ in central Anatolia during a good part of the latter half of the seventh century BC and the whole of the first half of the succeeding century. The report is based on the work of up to thirteen seasons, stretching from 1999 to 2011, during which time the excavations at the gate were conducted by Geoffrey D. Summers.

From the outset it was realized that the proposed work at the gate would be a substantial project. The projected scale of the enterprise only grew when it was discovered that the city wall had indeed been fully completed and that it did not subscribe too closely to an initial evaluation of its character. Whereas Geoffrey Summers had originally thought of the wall as a possibly unfinished mudbrick construction that rose from a comparatively modest stone glacis, it quickly became apparent during the 1999 season that the city's outer wall (and the fabric of the associated Cappadocia Gate) subscribed to a stone and wood design that was in fact in a finished condition.^{vii} The fact that this stone and wood construction rose to a height of not just two or three meters but sometimes more than five meters also suggested that the depth of fallen stone inside the Cappadocia Gate was going to be substantially greater than anything that had been originally anticipated. In addition, the sheer mass of displaced stone in the vicinity of the gate would clearly pose difficulties—and even dangers—for those involved in its excavation.

As it happens, however, the whole of the gate was excavated without any physical mishaps. Moreover, the careful and complete recovery of the plan of the internal courtyard of the gate went on to reveal distinctive elements that were to play a major role in helping to define the main cultural connections of this long-enigmatic, mountaintop city.

Late in the 2003 season, as the workers continued to remove a deep overburden of fallen stone toward the rear of the gate's internal appointments, they began to expose a stepped stone monument that led up to a semi-iconic idol of a well-known Phrygian type (pls. 136–138). At this point, as fragments of inscriptions in Phrygian also began to be found in the vicinity of the not-far-distant Monumental Entrance to the Palatial Complex,^{viii} there was suddenly little serious doubt that the principal cultural ties of Kerkenes lay in the direction of the Phrygian homeland, in the broad vicinity of Gordion, rather than anywhere else.

Prior to this development, Geoffrey Summers had inclined to a view that the creation of this prominent hilltop site could be associated, partly on the basis of the “difficult and conflated testimony of Herodotus,”^{ix} with a westward expansion of the Medes in the early sixth century BC.^x It had of course been this hypothesis that had first encouraged me to join the Kerkenes Expedition, together with a number of my graduate students from UC Berkeley, for a period of five years from 1999 onward.^{xi}

With the dramatic discovery of these Phrygian-related finds in the 2003 season, entirely new perspectives came into view, and Geoffrey began to look into the possibility that Kerkenes owed its foundation to a hitherto undetected Phrygian initiative.

^{vii} See chapter 1, Reasons for Excavation at the Cappadocia Gate, esp. n. 35.

^{viii} See Draycott and Summers 2008.

^{ix} See chapter 1, Identification with Pteria.

^x Summers 1997.

^{xi} See Acknowledgments.

As the present initial chapter—attributed, most appropriately, to both Geoffrey and Françoise Summers—now argues, the occupants of the new city “came from Phrygia,”^{xii} and further reflection could well suggest that this same elite body of persons journeyed eastward with the intention of founding a new capital within the bend of the Halys River.^{xiii}

Since this initiative could have taken place not too many years before the beginning of the long reign of Alyattes of Lydia (ca. 619–560 BC), the father of Croesus, it is arguable that such an eastward migration represented a direct response to the vigorous expansionist policies of the Lydians. By the same token, when Croesus marched east in order to confront Cyrus of Persia in 547 BC,^{xiv} he could have been more than a little conscious of the possibility that the sympathies of those Phrygians who had only lately settled to the east of the Halys River were likely to lie with the Persians, not the Lydians.^{xv}

Whether or not this was the case, there is no evidence from the Cappadocia Gate to suggest that the city was taken by force. Accordingly, “while evidence from only one gate out of seven in a 7 km circuit is not in itself conclusive,” much of the currently available evidence “is not at variance with the idea that the city surrendered [to Croesus] without a fight and that it was looted before it was torched.”^{xvi}

On a personal note, I must admit that I experienced a certain sense of relief when Kerkenes finally revealed its Phrygian colors. Throughout the years that I was at Kerkenes I had found it impossible to identify any unmistakably Median elements. Naturally enough, Geoffrey knew where I stood in this matter; but, as longstanding friends, we had simply “agreed to disagree” on the Median issue until such time as the testimony of the spade would cast the deciding vote.

As many readers will appreciate, the Phrygian, not Median, identity of Kerkenes is also of relevance, to Iranian as well as to Anatolian studies. As long as Kerkenes could be thought of as a possibly Median site, Herodotus’s claim that the Halys River represented the border between the Lydian and the Median empires could not be totally discarded. Today this is no longer the case. Herodotus’s claim to this effect is not supported by any evidence on the ground that I am aware of—and it now seems possible to assert that Median territory to the west of Iran’s present borders was never more than quite limited in area.^{xvii}

This in turn has reinforced a more minimal—and, in my opinion, a more realistic—view of the Medes’ overall territorial holdings. Not only is it no longer possible to maintain that the independent Medes ruled a continuous swathe of territory from the Halys all the way to the Oxus,^{xviii} but there is also a possibility that the Medes never exerted any overarching control over the southwest Iranian region of Fars, the well-endowed homeland of the Persians.^{xix}

Inasmuch as these new considerations also oblige us to look at developments in Phrygia as a whole, it has to be recognized that Kerkenes and the rolling countryside within the bend of the Halys now stand identified as a major new frontier for late Phrygian studies. Indeed, Geoffrey Summers is surely correct to relate the choice of Kerkenes Dağ as an appropriate location for a new Phrygian capital to many different factors. To begin with, the astonishing physical size of the new city, in which its 7 km circuit almost begins to compare with the 12 km circuit of the walls of Nineveh, would seem to point to a degree of political ambition that was very much more than local in scale.^{xx} Moreover, in terms of geographical location alone, the founders of Kerkenes would seem to have carefully registered the decline

^{xii} See chapter 1, Identification with Pteria.

^{xiii} For recently published observations of a similar character, see also van Dongen 2014, p. 700.

^{xiv} For the now “very probable” correctness of a date in 547 BC (based on the latest available reading of the relevant, damaged portion of the Nabonidus Chronicle by W. G. Lambert in June 2010), see especially Zawadzki 2010, p. 147 n. 27. Note, too, that Oelsner’s prior, variant reading of the late 1990s—and certain speculations that were drawn from that variant reading (for which see especially chapter 1, n. 20, below)—should now be discarded.

^{xv} See chapter 1, Identification with Pteria.

^{xvi} See chapter 1, Identification with Pteria.

^{xvii} Cf. Stronach 2012, pp. 677–78.

^{xviii} With reference to a lack of evidence in the “Oxus Treasure” for any objects of definitely pre-Achaemenid (i.e., Median) date, see especially Stronach 2001, p. 236.

^{xix} Stronach 2012, p. 680.

^{xx} See chapter 1, Chronology.

of a number of formerly significant regional powers, each with a once not negligible interest in inner Anatolia. As Summers has noted, such powers could have included the Neo-Hittite polities of southeastern Anatolia; Urartu, which seems to have lost its initial, literate, centralized royal character in circa 640 BC; and Assyria, which also began to decline at very much the same moment, twenty-eight years before its spacious capital, Nineveh, finally fell to a joint attack by the Medes and the Babylonians in 612 BC.^{xxi}

In this exemplary excavation report on the work that was carried out at the Cappadocia Gate, it is not only appropriate to draw attention to the high quality of the illustrations and to the clarity of the text, but also to the attention that has been paid

to relevant parallels. In this connection the comparisons that are cited from Boğazköy, Gordion, and Sardis (with reference, above all, to the nature of specific gates and certain details of stone construction) are decidedly useful. Such observations remind us, not least, of how essential it is for the study of monumental Iron Age architecture in Turkey to be able to relate major elements of scale, design, and construction across wide distances stretching, in this instance, from Kerkenes and Boğazköy in the east to Sardis in the west.^{xxii} In a word, continuing detailed analyses of this order will unquestionably allow Kerkenes to take its deserved place in the distinguished Anatolian company to which it belongs.

DAVID STRONACH

^{xxi} For notes on the walls of late Assyrian Nineveh, see, for example, Stronach 1997, p. 316 (with pl. 1b).

^{xxii} See Chapter 12, "Parallels."

BIBLIOGRAPHICAL NOTES ON KERKENES PROJECT PUBLICATIONS

Website

The Kerkenes website is currently hosted on the Middle East Technical University (METU) server at www.kerkenes.metu.edu.tr. The home page offers three options: the original custom-built page, a second page for downloadable pdfs, and a third page devoted to the Kerkenes Eco-Center. At some future date this website will be hosted by the Oriental Institute at the University of Chicago.

The Annual *Kerkenes News*

In 1997 we produced a glossy brochure in English and Turkish that summarized the first five years of research. The first *Kerkenes News—Haberler* appeared in 1998. Published by METU Press and distributed free of charge, the *Kerkenes News* has been an important way of disseminating results to a broad public. Important discoveries have usually been reported here in the first instance. All issues up to 2012 can be downloaded from the Kerkenes website.

Uluslararası Kazı, Araştırma ve Arkeometri Sempozyum (International Excavation, Survey, and Archaeometry Symposium)

Reports on the results of each season have been presented at this annual symposium held in Turkey. Until 1998, when the *Kerkenes News* was inaugurated, publication of the symposium in the year after it was held became the vehicle for the first announcement of discoveries. Reports, in Turkish, have appeared in most years:

Kazı Sonuçları Toplantısı 19, 22–26, 28–29, 31 (two reports), 32, 33

Araştırma Sonuçları Toplantısı 12–16, 19

These can be downloaded at:

<http://www.kulturvarliklari.gov.tr/TR,44760/kazi-sonuclari-toplantilari.html>

<http://www.kulturvarliklari.gov.tr/TR,44761/arastirma-sonuclari-toplantilari.html>

Research Reports

British Institute of Archaeology at Ankara (BIAA), recently renamed the British Institute at Ankara, has published short annual reports:

Research Reports 1994

Anatolian Archaeology 1995–2011

Turkey Heritage 2012

Kerkenes Final Reports Monograph Series

The present volume is the first in a series of final reports published by the Oriental Institute of the University of Chicago.

Kerkenes Special Studies Monograph Series

Supplementary special studies on aspects of Kerkenes appear in the Oriental Institute Publications series. One volume, *Sculpture and Inscriptions from the Monumental Entrance to the Palatial Complex at Kerkenes Dağ, Turkey*, by Catherine Draycott, Geoffrey D. Summers, and Claude Brixhe, was published in 2008.

BIBLIOGRAPHY

- Adam, Sheila
1966 *The Technique of Greek Sculpture in the Archaic and Classical Periods*. British School at Athens Supplementary Volume 3. London: Thames & Hudson.
- Akurgal, Ekrem
1949 *Spaethethitische Bildkunst*. Ankara Üniversitesi. Dil ve Tarih-Coğrafya Fakültesi. Yayınları 60. Arkeoloji Enstitüsü 4. Ankara: Archaeologisches Institut der Universitaet Ankara.
1958 "Forschungen in Phrygien." *Anatolia* 3: 145–55.
1961 *Die Kunst Anatoliens von Homer bis Alexander*. Berlin: Walter de Gruyter.
1962 *The Art of the Hittites*. London: Thames & Hudson.
1968 *The Birth of Greek Art: The Mediterranean and the Near East*. Art of the World 26. London: Methuen.
- Arik, Remzi Oğuz
1936 "Göllüdağ Hafriyatı." *Türk Tarih, Arkeologya ve Etnografya Dergisi* 3: 3–48.
- Aro, Sanna
2003 "Art and Architecture." In *The Luwians*, edited by H. Craig Melchert, pp. 281–337. *Handbuch der Orientalistik I/68*. Leiden: Brill.
- Baby, Raymond S.
1954 "Hopwell Cremation Practices." *Ohio Historical Society, Papers in Archaeology* 1: 1–17.
- Barletta, Barbara A.
2006 "Archaic and Classical Magna Graecia." In *Greek Sculpture: Function, Materials, and Techniques in the Archaic and Classical Periods*, edited by Olga Palagia, pp. 77–118. Cambridge: Cambridge University Press.
- Baturayoğlu, Nilüfer
2002 "The Survey and Documentation of the City Walls and Cappadocia Gate of the Iron Age Settlement on Kerkenes Dağ in Central Anatolia." In *Proceedings of the XVIII. International Symposium, CIPA 2001, Potsdam (Germany)*, edited by Jörg Albertz, pp. 100–07. Berlin: CIPA.
- Berndt, Dietrich
2002 *Midasstadt in Phrygien: Eine sagenumwobene Stätte im anatolischen Hochland*. Mainz am Rhein: Philipp von Zabern.
2008 "Midasstadt: Kleine und kleinste phrygische Felsmonumente. Überlegungen zu einer frühen Besiedlung." In *Neue Funde und Forschungen in Phrygien*, edited by Elmar Schwertheim and Engelbert Winter, pp. 1–32. *Asia Minor Studien* 61. Bonn: Rudolf Habelt.
- Berndt, Susanne
2015 "Cutting the Gordian Knot: The Iconography of Megaron 2 at Gordion." *Opuscula, Annual of the Swedish Institutes at Athens and Rome* 8: 99–122.
- Berndt-Ersöz, Susanne
2006a "The Anatolian Origin of Attis." In *Pluralismus und Wandel in den Religionen im vorhellenistischen Anatolien (Akten des religionsgeschichtlichen Symposiums in Bonn (19.–20. Mai 2005))*, edited by Manfred Hutter and Sylvia Hutter-Braunsar, pp. 9–39. *Alter Orient und Altes Testament* 337. Münster: Ugarit.
2006b *Phrygian Rock-cut Shrines: Structure, Function and Cult Practice*. Culture and History of the Ancient Near East 25. Leiden and Boston: Brill.
2007 "Phrygian Rock-cut Step Monuments: An Interpretation." In *Anatolian Iron Ages 6: The Proceedings of the Sixth Anatolian Iron Ages Symposium Held at Eskişehir, 16–20 August 2004*, edited by Altan Çilingiroğlu and Antonio Sagona, pp. 19–39. *Ancient Near Eastern Studies Supplement* 20. Leuven: Peeters.
2008 "The Chronology and Historical Context of Midas." *Historia* 57: 1–37.
- Binford, R. Lewis
1963 "An Analysis of Cremations from Three Michigan Sites." *Wisconsin Archaeology* 44: 98–110.
- Bittel, Kurt
1934 *Die Felsbilder von Yazılıkaya: Neue Aufnahmen der deutschen Boğazköy-Expedition 1931*. *Istanbuler Forschungen* 5. Berlin: n.p.

- 1958 "Untersuchungen auf Büyükkale." *Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin* 91: 57–72.
- 1960/61 "Legenden vom Kerkenes-Dağ (Kappadokien)." *Oriens* 22–24: 29–34.
- 1963 "Phrygisches Kultbild aus Boğazköy." In *Antike Plastik 2*, edited by Walter-Herwig Schuchhardt, pp. 7–22. Berlin: Gebr. Mann.
- 1970 *Hattusha: The Capital of the Hittites*. Oxford: Oxford University Press.
- Bittel, Kurt; Joachim Boessneck; Bernhard Damm; Hans G. Güterbock; Harald Hauptmann; Rudolf Naumann; and Wulf Schirmer
- 1975 *Das Hethitische Felsheiligtum Yazılıkaya. Boğazköy-Hattuša* 9. Berlin: Gebrüder Mann.
- Boardman, John
- 1991 *Greek Sculpture. The Archaic Period: A Handbook*. London: Thames & Hudson.
- 1998 *Early Greek Vase Painting. 11th–6th Centuries B.C.: A Handbook*. London: Thames & Hudson.
- 2000 *Persia and the West: An Archaeological Investigation of the Genesis of Achaemenid Persian Art*. London: Thames & Hudson.
- 2001 *The History of Greek Vases: Potters, Painters, and Pictures*. London: Thames & Hudson.
- Boehmer, Rainer Michael
- 1972 *Die Kleinfunde von Boğazköy aus den Grabungskampagnen 1931–1939 und 1952–1969. Boğazköy-Hattuša* 7. Wissenschaftliche Veröffentlichung der Deutschen Orient-Gesellschaft 87. Berlin: Gebrüder Mann.
- Bossert, Eva-Maria
- 2000 *Die Keramik phrygischer Zeit von Boğazköy: Funde aus den Grabungskampagnen 1906, 1907, 1911, 1912, 1931–1939 und 1952–1960. Boğazköy-Hattuša* 18. Mainz am Rhein: Philipp von Zabern.
- Bouville, Claude; Trinettes S. Constandse-Westermann; and Raymond R. Newell
- 1983 "Les restes humains mésolithiques de l'abri Cornille, Istres (Bouches-du-Rhône)." *Bulletins et Mémoires de la Société d'Anthropologie de Paris* 10: 89–110.
- Branting, Scott
- 2007 "Using an Urban Street Network and a PGIS-T Approach to Analyze Ancient Movement." In *Digital Discovery: Exploring New Frontiers in Human Heritage (CAA 2006: Computer Applications and Quantitative Methods in Archaeology: proceedings of the 34th conference, Fargo, United States, April 2006)*, edited by Jeffrey T. Clark and Emily M. Hagemester, pp. 87–96. Budapest: Archaeolingua.
- 2011 "Agents in Motion." In *Agency and Identity in the Ancient Near East: New Paths Forward*, edited by Sharon R. Steadman and Jennifer C. Ross, pp. 47–59. London: Equinox.
- Branting, Scott, and Geoffrey D. Summers
- 2002 "Modelling Terrain: The Global Positioning System (GPS) Survey at Kerkenes Dağ, Turkey." *Antiquity* 76: 639–40.
- Brixhe, Claude, and Michel Lejeune
- 1984 *Corpus des inscriptions paléo-phrygiennes*. 2 volumes. Mémoire 45. Paris: Éditions Recherche sur les Civilisations.
- Brixhe, Claude, and Geoffrey D. Summers
- 2006 "Les inscriptions phrygiennes de Kerkenes Dağ (Anatolie centrale)." *Kadmos* 45: 93–135.
- Brothwell, Don R.
- 1981 *Digging Up Bones: The Excavation, Treatment, and Study of Human Skeletal Remains*. 3rd edition. Oxford: Oxford University Press.
- Buikstra, Jane E., and Douglas H. Ubelaker
- 1994 *Standards for Data Collection from Human Skeletal Remains*. Arkansas Archeological Survey Research Series 44. Arkansas: Arkansas Archeological Survey.
- Bull, Gail, and Sebastian Payne
- 1982 "Tooth Eruption and Epiphyseal Fusion in Pigs and Wild Boar." In *Ageing and Sexing Animal Bones from Archaeological Sites*, edited by Bob Wilson, Caroline Grigson, and Sebastian Payne, pp. 55–71. British Archaeological Reports British Series 109. Oxford: British Archaeological Reports.
- Burke, Brendan
- 2012 "The Rebuilt Citadel at Gordion: Building A and the Mosaic Building Complex." In *The Archaeology of Phrygian Gordion, Royal City of Midas*, edited by C. Brian Rose, pp. 203–18. Gordion Special Studies 7. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Cahill, Nicholas D., and John H. Kroll
- 2005 "New Archaic Coin Finds at Sardis." *American Journal of Archaeology* 109: 589–617.

- Casson, Stanley
1933 *The Technique of Early Greek Sculpture*. Oxford: Clarendon.
- Çayırezmez, Nurdan Atalan
2006 "Relationships between Topography and Kerkenes (Turkey): A GIS Analysis." Unpublished MSc thesis, Middle East Technical University, Ankara.
- Cholidis, Nadja, and Lutz Martin
2002 *Der Tell Halaf und sein Ausgräber Max Freiherr von Oppenheim: Kopf hoch! Mut hoch! und Humor hoch!* Mainz am Rhein: Philipp von Zabern.
- Christensen, Angi M.
2002 "Experiments in the Combustibility of the Human Body." *Journal of Forensic Science* 47: 466–70.
- Claasz Coockson, Ben
2006 *Arkeolojik İllüstrasyon ve Fotoğrafçılık*. Ankara: Aytaşı.
- D'Alfonso, Lorenzo
2012 "Tabal: An Out-group Definition in the First Millennium B.C." In *Leggo! Studies Presented to Frederick Mario Fales on the Occasion of His 65th Birthday*, edited by Giovanni B. Lanfranchi, Daniele Morandi Bonacossi, Cinzia Pappi, and Simonetta Ponchia, pp. 173–94. *Leipziger altorientalistische Studien* 2. Wiesbaden: Harrassowitz.
- DeVries, Keith
2005 "Greek Pottery and Gordion Chronology." In *The Archaeology of Midas and the Phrygians: Recent Work at Gordion*, edited by Lisa Kealhofer, pp. 36–55. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
2007 "The Date of the Destruction Level at Gordion: Imports and the Local Sequence." In *Anatolian Iron Ages 6: The Proceedings of the Sixth Anatolian Iron Ages Symposium Held at Eskişehir, 16–20 August 2004*, edited by Altan Çilingiroğlu and Antonio Sagona, pp. 79–101. *Ancient Near Eastern Studies Supplement* 20. Leuven: Peeters.
2012 "The Creation of the Old Chronology." In *The New Chronology of Iron Age Gordion*, edited by C. Brian Rose and Gareth Darbyshire, pp. 13–22. *Gordion Special Studies* 6. Museum Monograph 133. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- DeVries, Keith; Peter I. Kuniholm; G. Kenneth Sams; and Mary M. Voigt
2003 "New Dates for Iron Age Gordion." *Antiquity* 77/296. Available online at <http://www.antiquity.ac.uk/projgall/devries296/>.
- Dirik, Kadir, and M. Cemal Göncüoğlu
1996 "Neotectonic Characteristics of Central Anatolia." *International Geological Review* 38: 807–17.
- Dobney, Keith, and Kevin Rielly
1988 "A Method for Recording Archaeological Animal Bones: The Use of Diagnostic Zones." *Circaea* 5/2: 79–96.
- Dönmez, Şevket
2011 "New Evidences on the Existence of Eurasian Horse-riding Nomads in the Black Sea Region, Turkey." In *Karadeniz'den Fırat'a Bilgi Üretimleri: Önder Bilgi'ye Armağan Yazılar / Knowledge Production from the Black Sea to the Euphrates: Studies Presented in Honour of Önder Bilgi*, edited by Aliye Öztan and Şevket Dönmez, pp. 129–46. Ankara: Bilgi Kültür Sanat Yayınları.
- Dörfler, Walter; Reinder Neef; and Rainer Pasternak
2000 "Untersuchungen zur Umweltgeschichte und Agrarökonomie im Einzugsbereich hethitischer Städte." *Mitteilungen der Deutschen Orientgesellschaft* 132: 367–80.
- Draycott, Catherine M., and Geoffrey D. Summers
2008 *Kerkenes Special Studies 1: Sculpture and Inscriptions from the Monumental Entrance to the Palatial Complex at Kerkenes Dağ, Turkey*. Oriental Institute Publications 135. Chicago: The Oriental Institute.
- Dusinberre, Elspeth R. M.
1999 "Satrapal Sardis: Achaemenid Bowls in an Achaemenid Capital." *American Journal of Archaeology* 103: 73–102.
2002 "An Excavated Ivory from Kerkenes Dağ, Turkey: Transcultural Fluidities, Significations of Collective Identity, and the Problem of Median Art." *Ars Orientalis* 32: 17–54.
- Erdoğan, Tamer, ed.
2012 "Hattuşa'da 106 yıl." *Hitit kazılarının fotoğraflarla öyküsü / "106 Years in Hattusha." Photographs Tell the Story of the Excavations in the Hittite Capital*. Istanbul: Yapı Kredi Yayınları.

- Erlar, Ayhan, and M. Cemal Göncüoğlu
1996 "Geologic and Tectonic Setting of the Yozgat Batholith, Northern Anatolian Crystalline Complex, Turkey." *International Geological Review* 38: 714–26.
- Ferembach, Denise; Ilse Schwidetzky; and Milan Stloukal
1980 "Recommendations for Age and Sex Diagnoses of Skeletons." *Journal of Human Evolution* 9: 517–49.
- Frankfort, Henri
1969 *The Art and Architecture of the Ancient Orient*. 4th ed. Harmondsworth: Penguin.
- Freiberger, Viktor, and Kurt Gschwantler
2008 "Goldschmiedetechnische Beobachtungen zu den Löwenkopffibeln aus dem Artemision in Ephesos." In *Die Archäologie der ephesischen Artemis: Gestalt und Ritual eines Heiligtums*, edited by Ulrike Muss, pp. 185–93. Vienna: Phoibos.
- Gabriel, Albert
1965 *La cité de Midas: architecture*. Phrygie, exploration archéologique 4. Paris: Boccard.
- Gates, Marie-Henriette
1995 "Archaeology in Turkey." *American Journal of Archaeology* 99: 207–55.
- Genz, Hermann
2000 "Die Eisenzeit in Zentralanatolien im Lichte der keramischen Funde vom Büyükkaya in Boğazköy/Hattuša." *TÜBA-AR Türkiye Bilimler Akademisi Arkeoloji Dergisi* 3: 35–54.
2001 "Iron Age Pottery from Çadır Höyük." *Anatolica* 27: 159–70.
2003 "The Early Iron Age in Central Anatolia." In *Identifying Changes: The Transition from Bronze to Iron Ages in Anatolia and Its Neighbouring Regions (proceedings of the International Workshop Istanbul, November 8–9, 2002)*, edited by Bettina Fischer, Hermann Genz, Éric Jean, and Kemalettin Köroğlu, pp. 179–91. Istanbul: Türk Eskiçağ Bilimleri Enstitüsü.
2004 *Büyükkaya I. Die Keramik der Eisenzeit: Funde aus den Grabungskampagnen 1993 bis 1998*. Boğazköy-Hattuša 21. Mainz am Rhein: Philipp von Zabern.
2005 "Thoughts on the Origin of the Iron Age Pottery Traditions in Central Anatolia." In *Anatolian Iron Ages 5: Proceedings of the Fifth Anatolian Iron Ages Colloquium Held at Van, 6–10 August 2001*, edited by Altan Çilingiroğlu and Gareth Darbyshire, pp. 75–84. British Institute of Archaeology at Ankara Monograph 31. London: British Institute of Archaeology at Ankara.
- 2006 "Die eisenzeitliche Besiedlung im Bereich der Grabungen an den Ostteichen 1996–1998." In *Ergebnisse der Grabungen an den Ostteichen und am mittleren Büyükkale-Nordwesthang in den Jahren 1996–2000*, edited by Ayşe Baykal-Seeher and Jürgen Seeher, pp. 26–38. Bogazköy-Berichte 8. Mainz am Rhein: Philipp von Zabern.
- 2007a "Kızılırmak Bölgesi'nde Demir Çağı / The Iron Age in the Kızılırmak Region." In *Friglerin Gizemli Uygarlığı / The Mysterious Civilization of the Phrygians*, edited by Hakan Sivas and Taciser Tüfekçi Sivas, pp. 127–40. Istanbul: Yapı Kredi Yayınları.
- 2007b "Late Iron Age Occupation on the Northwest Slope at Boğazköy." In *Anatolian Iron Ages 6: The Proceedings of the Sixth Anatolian Iron Ages Symposium Held at Eskişehir, 16–20 August 2004*, edited by Altan Çilingiroğlu and Antonio Sagona, pp. 135–51. Ancient Near Eastern Studies Supplement 20. Leuven: Peeters.
- 2009 "Thoughts on the Use of Seals in Iron Age Anatolia." In *Studies in Honour of Altan Çilingiroğlu: A Life Dedicated to Urartu on the Shores of the Upper Sea*, edited by Haluk Sağlamtimur, Eşref Abay, Zafer Derin, Aylin Ü. Erdem, Atilla Batmaz, Fulya Dedeoğlu, Mücella Erdalkıran, Mahmut Bilge Baştürk, and Erim Konakçı, pp. 309–17. Istanbul: Arkeoloji ve Sanat.
- Gilibert, Alessandra
2011 *Syro-Hittite Monumental Art and the Archaeology of Performance: The Stone Reliefs at Carchemish and Zincirli in the Earlier First Millennium B.C.E.* TOPOI—Berlin Studies of the Ancient World 2. Berlin: Walter de Gruyter.
- Goodman, Alan H., and Jerome C. Rose
1990 "Assessment of Systemic Physiological Perturbations from Dental Enamel Hypoplasias and Associated Histological Structures." *Yearbook of Physical Anthropology* 33: 59–110.
- Gorny, Ronald L.
1997 "Zippalanda and Ankuwa: The Geography of Central Anatolia in the Second Millennium B.C." *Journal of the American Oriental Society* 117: 549–57.

- 2005 "Çadır Höyük: Zippalanda Reborn?" *Oriental Institute News & Notes* 184: 9–12 and 29–30.
- Grant, Annie
1982 "The Use of Tooth Wear as a Guide to the Age of Domestic Ungulates." In *Ageing and Sexing Animal Bones from Archaeological Sites*, edited by Bob Wilson, Caroline Grigson, and Sebastian Payne, pp. 91–108. British Archaeological Reports British Series 109. Oxford: British Archaeological Reports.
- Grave, Peter; Lisa Kealhofer; and Ben Marsh
2005 "Ceramic Compositional Analysis and the Phrygian Sanctuary at Dümrek." In *The Archaeology of Midas and the Phrygians: Recent Work at Gordion*, edited by Lisa Kealhofer, pp. 149–60. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Greenewalt, Crawford H., Jr.
1989 "Excavations at Sardis, 1978–1988." *Türk Arkeoloji Dergisi* 28: 263–85.
1992 "When a Mighty Empire Was Destroyed: The Common Man at the Fall of Sardis, ca. 546 B.C." *Proceedings of the American Philosophical Society* 136: 247–71.
1997 "Arms and Weapons at Sardis in the Sixth Century B.C." *Arkeoloji ve Sanat* 79: 2–20.
2007 "Machteld Johanna Mellink." *American Journal of Archaeology* 111: 553–58.
- Greenewalt, Crawford H., Jr.; Nicholas D. Cahill; and Marcus L. Rautman
1987 "The Sardis Campaign of 1985." *Bulletin of the American Oriental Society Supplement* 25: 55–92.
- Greenewalt, Crawford H., Jr.; Nicholas D. Cahill; Phillip T. Stinson; and Fikret K. Yegül
2003 *The City of Sardis: Approaches in Graphic Recording*. Cambridge: Harvard University Art Museums.
- Greenewalt, Crawford H., Jr., and Ann M. Heywood
1992 "A Helmet of the Sixth Century B.C. from Sardis." *Bulletin of the American Oriental Society* 285: 1–31.
- Greenewalt, Crawford H., Jr., and Marcus L. Rautman
1998 "The Sardis Campaigns of 1994 and 1995." *American Journal of Archaeology* 102: 469–505.
2000 "The Sardis Campaigns of 1996, 1997, and 1998." *American Journal of Archaeology* 104: 643–81.
- Greene, David, transl.,
1987 *Herodotus: The History*. Chicago: University of Chicago.
- Gurney, Oliver R.
1995 "The Hittite Names of Kerkenes Dağ and Kuşaklı Höyük." *Anatolian Studies* 45: 69–71.
- Hampe, Roland, and Erika Simon
1981 *The Birth of Greek Art, from the Mycenaean to the Archaic Period*. New York: Oxford University Press.
- Harrison, Timothy P.
2012 "Bir Hitit Kralı Suppiluliuma." *Aktüel Arkeoloji* 29: 50–51.
- Haspels, C. H. Emilie
1971 *The Highlands of Phrygia: Sites and Monuments*. 2 volumes. Princeton: Princeton University Press.
- Hass, Volkert
1982 *Hethitische Berggötter und hurritische Steindämonen: Riten, Kulte und Mythen; Eine Einführung in die altkleinasiatischen religiösen Vorstellungen*. Kulturgeschichte der antiken Welt 10. Mainz am Rhein: Philipp von Zabern.
- Hawkins, J. David
2000 *Corpus of Hieroglyphic Luwian Inscriptions, Volume 1: Inscriptions of the Iron Age*. Untersuchungen zur indogermanischen Sprach- und Kulturwissenschaft, n.F., 8. Berlin and New York: Walter de Gruyter.
- Herzog, Ze'ev
1986 *Das Stadttor in Israel und in den Nachbarländern*. Mainz am Rhein: Philipp von Zabern.
- Ioannidou-Pişkin, Evangelia
2013 "An Iron Age Animal Bone Assemblage from Maşat Höyük." *28. Arkeometri Sonuçları Toplantısı 28 Mayıs–1 Haziran 2012, Çorum*, pp. 5–18.
- Kealhofer, Lisa
2005 "The Gordion Regional Survey: Settlement and Land Use." In *The Archaeology of Midas and the Phrygians: Recent Work at Gordion*, edited by Lisa Kealhofer, pp. 137–48. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Kealhofer, Lisa, ed.
2005 *The Archaeology of Midas and the Phrygians: Recent Work at Gordion*. Philadelphia:

- University of Pennsylvania Museum of Archaeology and Anthropology.
- Kealhofer, Lisa; Peter Grave; Ben Marsh, Sharon Steadman; Ronald L. Gorny; and Geoffrey D. Summers
2010 "Patterns of Iron Age Interaction in Central Anatolia: Three Sites in Yozgat Province." *Anatolian Studies* 60: 71–92
- Korfmann, Manfred
1998 "Stelen vor den Toren Troias: Apaliunas-Apollon in Trusi/Wilusa?" In *Light on Top of the Black Hill: Studies Presented to Halet Çambel*, edited by Güven Arsebük, Machteld J. Mellink, and Wulf Schirmer, pp. 471–88. Istanbul: Ege Yayınları.
- Kuniholm, Peter Ian, and Maryanne W. Newton
2011 "Dendrochronology at Gordion." In *The New Chronology of Iron Age Gordion*, edited by C. Brian Rose and Gareth Darbyshire, pp. 79–122. Gordion Special Studies 6. Museum Monograph 133. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Lawrence, Arnold W.
1979 *Greek Aims in Fortification*. Oxford: Clarendon.
- Mallowan, Max E. L.
1966 *Nimrud and Its Remains*. London: Collins.
- Marsh, Ben
2005 "Physical Geography, Land Use, and Human Impact at Gordion." In *The Archaeology of Midas and the Phrygians: Recent Work at Gordion*, edited by Lisa Kealhofer, pp. 161–71. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Matsumura, Kimiyoshi
2008 "A Note on Anatolian Iron Age Ceramic Chronology: Black Lustrous Ware with Diamond Faceting." *Anatolian Archaeological Studies* 17: 175–84.
- Mays, Simon
1998 *The Archaeology of Human Bones*. London: Routledge.
- Mazzoni, Stefania
1997 "The Gate and the City: Change and Continuity in Syro-Hittite Urban Ideology." In *Die orientalische Stadt: Kontinuität, Wandel, Bruch (1. Internationales Colloquium der Deutschen Orient-Gesellschaft, 9.-10. Mai 1996 in Halle/Saale)*, edited by Gernot Wilhelm, pp. 307–38. Colloquien der Deutschen Orient-Gesellschaft 1. Saarbrücken: Saarbrücker Druckerei und Verlag.
- Mazzoni, Stefania; Anacleto D'Agostino; and Valentina Orsi
2010 "Survey of the Archaeological Landscape of Kuşaklı/Uşaklı Höyük (Yozgat)." *Anatolica* 30: 111–63.
- McKinley, Jacqueline
2000 "The Analysis of Cremated Bones." In *Human Osteology*, edited by Margaret Cox and Simon Mays, pp. 403–21. London: Greenwich Medical Media.
- Melchert, Craig H.
2003 *The Luwians*. Handbuch der Orientalistik I/68. Leiden: Brill.
- Mellink, Machteld J.
1981 "Temples and High Places in Phrygia." In *Temples and High Places in Biblical Times (Proceedings of the Colloquium in Honor of the Centennial of Hebrew Union College-Jewish Institute of Religion, Jerusalem, 14-16 March, 1977)*, edited by Avraham Biran. Jerusalem: Hebrew Union College.
- 1991 "The Native Kingdoms of Anatolia." In *The Cambridge Ancient History*, Vol. 3, Pt. 2, pp. 619–65. Edited by John Boardman et al. Cambridge: Cambridge University Press.
- 1993 "Phrygian Traits at Boğazköy and Questions of Phrygian Writing." *Istanbul Mitteilungen* 43: 293–98.
- Michels, Christoph
2011 "Cyrus' II Campaigns Against the Medes and the Lydians." In *Herodot und das Persische Weltreich / Herodotus and the Persian Empire (Akten des 3. Internationalen Kolloquiums zum Thema "Vorderasien im Spannungsfeld klassischer und altorientalischer Überlieferungen," Innsbruck, 24.-28. November 2008)*, edited by Robert Rollinger, Brigitte Truschnegg, and Reinhold Bichler, pp. 690–704. *Classica et orientalia* 3. Wiesbaden: Harrassowitz.
- Miller, Jared L.
2012 "The (City-)Gate and the Projection of Royal Power in Ḫatti." In *Organization, Representation, and Symbols of Power in the Ancient Near East (Proceedings of the 54th Rencontre Assyriologique Internationale at Würzburg 20-25 July 2008)*, edited by Gernot Wilhelm, pp. 675–85. Winona Lake, IN: Eisenbrauns.

- Mora, Clelia, and Silvia Balatti
 2012 "Stelae from Tuwana." In *Leggo! Studies Presented to Frederick Mario Fales on the Occasion of His 65th Birthday*, edited by Giovanni B. Lanfranchi, Daniele Morandi Bonacossi, Cinzia Pappi, and Simonetta Ponchia, pp. 527–38. Wiesbaden: Harrassowitz.
- Munn, Mark H.
 2006 *The Mother of the Gods, Athens, and the Tyranny of Asia: A Study of Sovereignty in Ancient Religion*. Berkeley: University of California Press.
- Muscarella, Oscar White
 1967 *Phrygian Fibulae from Gordion*. Colt Archaeological Institute Monograph Series 4. London: Quaritch.
 1971 "Phrygian or Lydian." *Journal of Near Eastern Studies* 30: 49–63.
 2007 "Frig Fibulae: Phrygian Fibulae." In *Friglerin Gizemli Uygarlığı / The Mysterious Civilization of the Phrygians*, edited by Hakan Sivas and Taciser Tüfekçi Sivas, pp. 173–79. Istanbul: Yapı Kredi Yayınları.
- Naumann, Rudolf
 1955 *Architektur Kleinasiens von ihren Anfängen bis zum Ende der hethitischen Zeit*. Tübingen: Ernst Wasmuth.
- Neve, Peter
 1982 *Büyükkale, die Bauwerke: Grabungen 1954–1966*. Boğazköy-Hattusa 12. Berlin: Gebrüder Mann.
 1993a "Die Ausgrabungen in Boğazköy-Hattuša 1992." *Archäologischen Anzeiger* 1993: 621–52.
 1993b *Hattuša—Stadt der Götter und Temple*. Mainz am Rhein: Philipp von Zabern.
- Oelsner, Joachim
 1999/2000 Review of *Herodots babylonischer Logos: Eine kritische Untersuchung der Glaubwürdigkeitsdiskussion*, by Robert Rollinger. *Archiv für Orientforschung* 46/47: 378–80.
- Olivier, Georges
 1969 *Practical Anthropology*. Springfield, IL: Charles C. Thomas.
- Olivier, Henry, and Ute Kelp, eds.
 2012 *Tumulus as Sema: Space, Politics, Culture and Religion in the First Millennium B.C. Topoi—Berlin Studies of the Ancient World* 27. Berlin: De Gruyter.
- Orthmann, Winfried
 1971 *Untersuchungen zur späthethitischen Kunst*. Saarbrücker Beiträge zur Altertumskunde 8. Bonn: R. Habelt.
- Özenbaş, Macit, and Levent Ercanlı
 1998 "Microstructural Studies on Some Phrygian Metallic Objects." In *Thracians and Phrygians: Problems of Parallelism (Proceedings of an International Symposium on the Archaeology, History and Ancient Languages of Thrace and Phrygia, Ankara, 3–4, June 1995)*, edited by Numan Tuna, Zeynep Aktüre, and Margaret Lynch, pp. 62–73. Ankara: METU Faculty of Architecture Press.
- Palagia, Olga
 2006 "Marble Carving Techniques." In *Greek Sculpture: Function, Materials, and Techniques in the Archaic and Classical Periods*, edited by Olga Palagia, pp. 243–79. Cambridge: Cambridge University Press.
- Payne, Annick
 2004 *Hieroglyphic Luwian*. *Elementa linguarum orientis* 3. Wiesbaden: Harrassowitz.
- Payne, Sebastian
 1973 "Kill-off Patterns in Sheep and Goats: The Mandibles from Asvan Kale." *Anatolian Studies* 23: 281–303.
 1987 "Reference Codes for Wear Stages in the Mandibular Cheek Teeth of Sheep and Goats." *Journal of Archaeological Science* 14: 609–14.
- Pedley, John Griffiths
 1972 *Ancient Literary Sources on Sardis*. Archaeological Exploration of Sardis Monograph 2. Cambridge: Harvard University Press.
- Popko, Maciej
 1994 *Zippalanda: Ein Kultzentrum im hethitischen Kleinasien*. *Texte der Hethiter* 21. Heidelberg: Universitätsverlag C. Winter.
- Prayon, Friedhelm
 1987 *Phrygische Plastik: Die früheisenzeitliche Bildkunst Zentral-Anatoliens und ihre Beziehungen zu Griechenland und zum Alten Orient*. *Tübinger Studien zur Archäologie und Kunstgeschichte* 7. Tübingen: E. Wasmuth.
- Przeworski, Stefan
 1929 "Die Lage von Pteria." *Archiv Orientalní* 1: 312–15.
- Ratté, Christopher
 2011 *Lydian Architecture: Ashlar Masonry Structures at Sardis*. Archaeological

- Exploration of Sardis Report 5. Cambridge: Harvard University Press.
- Richter, Gisela
1944 *Archaic Attic Gravestones*. Martin Classical Lectures 10. Cambridge: Harvard University Press.
- Roller, Lynn E.
1987 *Nonverbal Graffiti, Dipinti, and Stamps*. Gordion Special Studies 1. Philadelphia: University of Pennsylvania Press.
1999 *In Search of God the Mother: The Cult of Anatolian Cybele*. Berkeley: University of California Press.
2009 *Incised Drawings From Early Phrygian Gordion*. Gordion Special Studies 4. Museum Monograph 130. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
2012a “Frig Dini ve Kult Uygulamaları / Phrygian Religion and Cult Practice.” In *Frigler: Midas’ın Ülkesinde, Anıtların Gölgesinde / Phrygians in the Land of Midas, In the Shadow of Monuments*, edited by Taciser Tüfekçi Sivas and Hakan Sivas, pp. 202–31. Istanbul: Yapı Kredi Yayınları.
2012b “Phrygian Semi-iconic Idols from Gordion.” In *Anatolian Iron Ages 7: Proceedings of the Seventh Anatolian Iron Ages Colloquium, Held at Edirne, 19–24 April 2010*, edited by Altan Çilingiroğlu and Antonio Sagona, pp. 221–51. Ancient Near Eastern Studies Supplement 39. Leuven: Peeters.
- Rollinger, Robert
2003 “The Western Expansion of the ‘Median Empire’: A Re-examination.” In *Continuity of Empire(?): Assyria, Media, Persia*, edited by Giovanni B. Lanfranchi, Michael Roaf, and Robert Rollinger, pp. 289–319. History of the Ancient Near East/Monographs 5. Padova: SARGON.
2008 “The Median ‘Empire,’ the End of Urtu and Cyrus’ the Great Campaign in 547 B.C. (Nabonidus Chronicle II 16).” *Ancient West & East* 7: 51–65.
- Rose, C. Brian, and Gareth Darbyshire, eds.
2012 *The New Chronology of Iron Age Gordion*. Gordion Special Studies 6. Museum Monograph 133. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Sams, G. Kenneth
1989 “Sculpted Orthostats at Gordion.” In *Anatolia and the Ancient Near East: Studies in Honor of Tahsin Özgüç*, edited by Kutlu Emre, Barthel Hrouda, Machteld Mellink, and Nimet Özgüç, pp. 447–54. Ankara: Türk Tarih Kurumu.
1994 “Aspects of Early Phrygian Architecture at Gordion.” In *Anatolian Iron Ages 3: Proceedings of the Third Anatolian Iron Ages Colloquium Held at Van, 6–12 August 1990*, edited by Altan Çilingiroğlu and David H. French, pp. 211–20. London: British Institute of Archaeology at Ankara.
1997 “Gordion and the Kingdom of Phrygia.” In *Frigi e Frigio: Atti del 1° simposio internazionale, Roma, 16–17 ottobre 1995*, edited by Roberto Gusmani, Mirjo Salvini, and Pietro Vannicelli, pp. 239–48. Rome: Istituto per gli Studi Micenei ed Egeo-Anatolici.
2005 “Gordion: Explorations over a Century.” In *The Archaeology of Midas and the Phrygians: Recent Work at Gordion*, edited by Lisa Kealhofer, pp. 10–21. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
2012 “Artifacts.” In *The New Chronology of Iron Age Gordion*, edited by C. Brian Rose and Gareth Darbyshire, pp. 59–78. Gordion Special Studies 6, Museum Monograph 133. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Sams, G. Kenneth, and İlhan Temizsoy
2000 *Gordion Museum*. Ankara: Dönmez Offset.
- Sams, G. Kenneth, and Mary M. Voigt
2012 “In Conclusion.” In *The New Chronology of Iron Age Gordion*, edited by C. Brian Rose and Gareth Darbyshire, pp. 155–68. Gordion Special Studies 6. Museum Monograph 133. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Şare, Tuna
2010 “An Archaic Ivory Figurine from a Tumulus near Elmali: Cultural Hybridization and a New Anatolian Style.” *Hesperia* 79: 53–78.
- Schirmer, Wulf
1993 “Die Bauanlagen auf dem Göllüdağ in Kappadokien.” *Architectura* 1993: 121–31.
1996 “Göllüdağ 1993–94.” In *XIII. Araştırma Sonuçları Toplantısı, 29 Mayıs–2 Haziran 1995, Ankara*, pp. 335–43. Ankara: T. C. Kültür Bakanlığı Milli Kütüphane Basımevi.

- 1998 "Göllüdağ 1995–96." In *XV. Araştırma Sonuçları Toplantısı*, vol. 2, pp. 51–61. Ankara: Kültür Bakanlığı Milli Kütüphane Basımevi
- 1999 "Eine richtige Bergstadt? Die Bauanlagen auf dem Göllüdağ und ihre historischen Zugangswege." In *Stadt und Umland: Neue Ergebnisse der archäologischen Bau- und Siedlungsforschung*, edited by Ernst-Ludwig Schwandtner and Klaus Rheidt, pp. 129–42. Diskussionen zur archäologischen Bauforschung 7. Mainz am Rhein: Philipp von Zabern.
- 2002 "Stadt, Palast, Tempel: Charakteristika Hethitischer Architektur im 2. und 1. Jahrtausend v. Chr." In *Die Hethiter und ihr Reich: Das Volk der 1000 Götter*, edited by Tahsin Özgüç, pp. 204–17. Stuttgart: Theiss.
- Schmidt, Erich F.
- 1929 "Test Excavations in the City on Kerkenes Dagh." *American Journal of Semitic Languages and Literatures* 45: 221–74.
- 1931 *Anatolia Through the Ages: Discoveries at the Alishar Mound, 1927–29*. Oriental Institute Communications 11. Chicago: University of Chicago Press.
- 1953 *Persepolis 1. Structures, Reliefs, Inscriptions*. Oriental Institute Publications 68. Chicago: University of Chicago Press.
- Seeher, Jürgen
- 2009 "Die Techniken der Steinbearbeitung in der hethitischen Architektur des 2. Jahrtausends v. Chr." In *Bautechnik im antiken und vorantiken Kleinasien*, edited by Martin Bachmann, pp. 119–56. Byzas 9. Istanbul: Ege Yayınları.
- Seipel, Wilfried, editor
- 2008 *Efes Artemisionu: Bir Tanrıçanın kutsal mekânı*. Vienna: Phoibos.
- Shipman, Pat; Giraud Foster; and Margaret Schoeninger
- 1984 "Burned Bones and Teeth: An Experimental Study of Color, Morphology, Crystal Structure and Shrinkage." *Journal of Archaeological Science* 11: 307–25.
- Silver, I. A.
- 1969 "The Ageing of Domestic Animals." In *Science in Archaeology: A Survey of Progress and Research*, edited by Don R. Brothwell and Eric S. Higgs, pp. 283–302. London: Thames & Hudson.
- Simon, Zsolt
- 2014 "The Northern Border of Tabal." In *L'hittologie aujourd'hui: Études sur l'Anatolie hittite et néo-hittite à l'occasion du centenaire de la naissance d'Emmanuel Laroche*, edited by Alice Mouton. 5^{èmes} Rencontres de l'IFEA.
- Sirel, Ercüment
- 1998 *Foraminiferal Description and Biostratigraphy of the Paleocene-Lower Eocene Shallow-water Limestones and Discussion on the Cretaceous-Tertiary Boundary in Turkey*. Monography Series 2. Ankara: General Directorate of the Mineral Research and Exploration.
- Sivas, Hakan, and Taciser Tüfekçi Sivas
- 2003 "Eskişehir, Kütahya, Afyonkarahisar illeri yüzey araştırması arkeolojik envanter raporu." *TÜBA-TÜKSEK Kültür Envanteri Dergisi / Journal of Cultural Inventory* 1: 2–32.
- 2004 "2002 Yılı Eskişehir, Kütahya, Afyonkarahisar illeri yüzey araştırması." *Araştırma Sonuçları Toplantısı* 21: 155–66.
- Sivas, Hakan, and Taciser Tüfekçi Sivas, eds.
- 2007 *Friglerin Gizemli Uygarlığı / The Mysterious Civilization of the Phrygians*. Istanbul: Yapı Kredi Yayınları.
- Sivas, Taciser Tüfekçi
- 1999 *Eskişehir—Afyonkarahisar—Kütahya İl Sınırları İçindeki Phryg Kaya Anıtları*. Eskişehir: T. C. Anadolu Üniversitesi Sosyal Bilimler Enstitüsü.
- Starke, Frank, and Alexander Schmid
- 2002 "Die hethitischen Nachfolgestaaten um ihre Nachbarn in 12.–8./7. Jh. v. Chr." In *Die Hethiter und ihr Reich: Das Volk der 1000 Götter*, edited by Tahsin Özgüç, pp. 308–09. Stuttgart: Theiss.
- Stronach, David
- 1997 "Notes on the Fall of Nineveh." In *Assyria 1995: Proceedings of the 10th Anniversary Symposium of the Neo-Assyrian Text Corpus Project, Helsinki, September 7–11, 1995*, edited by Simo Parpola and Robert M. Whiting, pp. 307–24. Helsinki: Neo-Assyrian Text Corpus Project.
- 2001 "On the Date of the Oxus Gold Scabbard and Other Achaemenid Matters." *Bulletin of the Asia Institute* 12: 231–48.
- 2007 "The Campaign of Cyrus the Great in 547 B.C., a Hitherto Unrecognized Source for the Early History of Armenia?" *Aramazd: Armenian Journal of Near Eastern Studies* 2: 163–73.
- 2008 "The Building Program of Cyrus the Great at Pasargadae and the Date of the

- Fall of Sardis." In *Ancient Greece and Ancient Iran: Cross-Cultural Encounters*, edited by Seyed Mohammad Reza Darbandi and Antigoni Zournatzi, pp. 149–73. Athens: National Hellenic Research Foundation.
- 2012 "The Territorial Limits of Ancient Media: An Archaeological Perspective." In *Stories of Long Ago: Festschrift für Michael D. Roaf*, edited by Heather D. Baker, Kai Kaniuth, and Adelheid Otto, pp. 667–84. *Alter Orient und Altes Testament* 397. Munster: Ugarit-Verlag.
- Stronach, David, and Geoffrey D. Summers
- 2003 "The Ashlar Building at Kerkenes Dağ: An Interim Report." *Anatolia Antiqua* 11: 111–29.
- Summers, Françoise; Nurdan Atalan; Nahide Aydın; Özge Basağaç; and Gülnur Uçar
- 2003 "Documentation of Archaeological Ruins and Standing Monuments Using Photo-Rectification and 3D Modelling." In *New Perspectives to Save Cultural Heritage (Proceedings of the 19th international symposium CIPA 2003, Antalya, Turkey, 30 September–04 October, 2003)*, edited by M. Orhan Altan, pp. 660–68. Istanbul: CIPA.
- Summers, Geoffrey D.
- 1997 "The Name of the Ancient City on Kerkenes Dağ in Central Anatolia." *Journal of Near Eastern Studies* 56: 1–14.
- 2000 "The Median Empire Reconsidered: A View from Kerkenes Dağ." *Anatolian Studies* 50: 55–73.
- 2001 "Keykavus Kale and Associated Remains on the Kerkenes Dağ in Cappadocia, Central Turkey." *Anatolia Antiqua* 9: 39–60.
- 2006a "Architectural Terracottas in Greater Phrygia: Problems of Chronology and Distribution." In *Hayat Erkanal'a Armağan: Kültürlerin Yansıması: Studies in Honor of Hayat Erkanal; Cultural Reflections*, edited by Betül Avunç, pp. 684–88. Istanbul: Homer Kitabevi.
- 2006b "Aspects of Material Culture at the Iron Age Capital on the Kerkenes Dağ in Central Anatolia." *Ancient Near Eastern Studies* 43: 164–202.
- 2006c "Phrygian Expansion to the East: Evidence of Cult from Kerkenes Dağ." *Baghdader Mitteilungen* 37: 647–58.
- 2007 "Kerkenes 2006." In *29. Kazı Sonuçları Toplantısı, 28 Mayıs–01 Haziran 2007, Kocaeli 2*, pp. 477–88. [Turkish]
- 2009 "The End of Chronology: New Directions in the Archaeology of the Central Anatolian Iron Age." In *Tree-rings, Kings, and Old World Archaeology and Environment: Papers Presented in Honor of Peter Ian Kuniholm*, edited by Sturt W. Manning and Mary J. Bruce, pp. 239–51. Oxford: Oxbow.
- 2011 "The Kerkenes Project 2011." *Heritage Turkey* 1: 27–28.
- 2013 "East of the Halys: Thoughts on Settlement Patterns and Historical Geography in the Late 2nd Millennium and First Half of the First Millennium BC." In *L'Anatolie des peuples, des cités et des cultures. Autour du projet d'Atlas historique et archéologique de l'Asie Mineure antique. Actes du colloque international de Besançon, (26–27 novembre 2010)*, edited by Hadrian Bru and Guy Labarre, pp. 41–51. Besançon: Presses universitaires de Franche-Comté.
- Summers, Geoffrey D.; Musa Özcan; Scott Branting; Elspeth R. Dusinberre; and Françoise Summers
- 1998 "Kerkenes Dağ 1996." *XIX. Kazı Sonuçları Toplantısı I: 26–30 Mayıs 1997 Ankara*. Ankara: Vol. 1: 627–59.
- Summers, Geoffrey D., and Erol Özen
- 2012 "The Hittite Stone and Sculpture Quarry at Karakız Kasabası and Hapis Boğazı in the District of Sorgun, Yozgat, Central Anatolia." *American Journal of Archaeology* 116: 507–19.
- Summers, Geoffrey D., and Françoise Summers
- 1999 "Kerkenes Dağı 1997." *XVI. Araştırma Sonuçları Toplantısı: 25–29 Mayıs 1998 Tarsus*. Ankara: Vol. 2: 121–51.
- 2002 "The Kerkenes Project." *Anatolian Archaeology* 8: 25–27.
- 2008 "The Palatial Complex and Adjacent Compounds at Kerkenes Dağ in Central Anatolia: A Preliminary Report on the Results of a Remote Sensing Survey." *Anatolia Antiqua* 16: 53–76.
- 2010 "From Picks to Pixels: Eighty Years of Development in the Tools of Archaeological Exploration and Interpretation, 1927–2007, at Kerkenes Dağ in Central Turkey." In *Proceedings of the 6th International Congress on the Archaeology of the Ancient Near East 2: Excavations, Surveys and Restorations: Reports on Recent Field Archaeology in the Near East*, edited by Paolo Matthiae, Frances Pinnock, Lorenzo Nigro, and Nicolò Marchetti, pp. 669–83. Wiesbaden: Harrassowitz.

- 2011 “Kerkenes 2009.” 32. *Kazı Sonuçları Toplantısı*, 24–28 Mayıs 2010 İstanbul 1, pp. 381–402. Ankara: T. C. Kültür ve Turizm Bakanlığı. [Turkish and English]
- 2012 “Kerkenes Dağ.” In *Frigler: Midas’ın Ülkesinde, Anıtların Gölgesinde / Phrygians: In the Land of Midas, In the Shadow of Monuments*, edited by Taciser Tüfekçi Sivas and Hakan Sivas, pp. 162–81. Istanbul: Yapı Kredi Yayınları.
- 2013 “The Kale at Kerkenes Dağ: An Iron Age Capital in Central Anatolia.” In *Cities and Citadels in Turkey: From the Iron Age to the Seljuks*, edited by Scott Redford and Nina Ergin, pp. 137–59. Ancient Near Eastern Studies Supplement 40. Leuven: Peeters.
- Summers, Geoffrey D.; Françoise Summers; and Koral Ahmet
- 1995 “The Regional Survey at Kerkenes Dağ: An Interim Report on the Seasons of 1993 and 1994.” *Anatolian Studies* 45: 43–68.
- Summers, Geoffrey D., Françoise Summers; Nilüfer Baturayoğlu; Ömür Harmanşah; and Elspeth R. McIntosh
- 1996 “The Kerkenes Dağ Survey, an Interim Report.” *Anatolian Studies* 46: 201–34.
- Summers, Geoffrey D.; Françoise Summers; and Scott Branting
- 2004 “Megarons and Associated Structures at Kerkenes Dağ: An Interim Report.” *Anatolia Antiqua* 12: 7–41.
- Summers, Geoffrey D.; Françoise Summers; Scott Branting; and Joseph W. Lehner
- 2010 “The Kerkenes Project 2010.” *Anatolian Archaeology* 16: 26–29.
- Summers, Geoffrey D.; Françoise Summers; Musa Özcan; and David Stronach
- 2001a “Kerkenes Dağ Projesi 1999.” In 22. *Kazı Sonuçları Toplantısı*, 22–26 Mayıs 2000 İzmir 1, pp. 337–48. Ankara: T. C. Kültür Bakanlığı.
- 2001b “Kerkenes Dağ 1999.” *Anatolian Archaeology* 5: 19–22.
- Summers, Geoffrey D.; Françoise Summers; and David Stronach
- 2001a “Kerkenes Dağ Projesi 2001.” In 24. *Kazı Sonuçları Toplantısı*, 27–31 Mayıs 2002 Ankara 1, pp. 449–60. Ankara: T. C. Kültür Bakanlığı.
- 2001b “The Kerkenes Project 2001.” *Anatolian Archaeology* 7: 22–23.
- Summers, Geoffrey D.; Françoise Summers; David Stronach; and Musa Özcan
- 2002 “Kerkenes Dağ Projesi 2000.” In 23. *Kazı Sonuçları Toplantısı*, 28 Mayıs–01 Haziran 2001 Ankara 1, pp. 439–48. Ankara: T. C. Kültür Bakanlığı.
- Tezcan, Burhan
- 1982 “1969 Göllüdağ Kazısı.” *Türk Arkeoloji Dergisi* 30: 1–29.
- Ubelaker, Douglas H.
- 1989 *Human Skeletal Remains: Excavation, Analysis, Interpretation*. 2nd ed. Washington: Taraxacum.
- Ussishkin, David
- 1970 “The Syro-Hittite Ritual Burial of Monuments.” *Journal of Near Eastern Studies* 29: 124–28.
- 1989 “The Erection of Royal Monuments in City Gates.” In *Anatolia and the Ancient Near East: Studies in Honor of Tahsin Özgüç*, edited by Kutlu Emre, Barthel Hrouda, Machteld Mellink, and Nimet Özgüç, pp. 485–96. Ankara: Türk Tarih Kurumu.
- van Dongen, Erik
- 2014 “The Extent and Interactions of the Phrygian Kingdom.” In *From Source to History: Studies on Ancient Near Eastern Worlds and Beyond; Dedicated to Giovanni Battista Lanfranchi on the Occasion of His 65th Birthday on June 23, 2014*, edited by Salvatore Gaspa, Alessandro Greco, Daniele Morandi Bonacossi, Simonetta Ponchia, and Robert Rollinger, pp. 697–711. *Alter Orient und Altes Testament* 412. Münster: Ugarit-Verlag.
- Voigt, Mary M.
- 2005 “Old Problems and New Solutions: Recent Excavations at Gordion.” In *The Archaeology of Midas and the Phrygians: Recent Work at Gordion*, edited by Lisa Kealhofer, pp. 22–35. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- 2007 “The Middle Phrygian Occupation at Gordion.” In *Anatolian Iron Ages 6: The Proceedings of the Sixth Anatolian Iron Ages Symposium, Held at Eskişehir, 16–20 August 2004*, edited by Altan Çilingiroğlu and Antonio Sagona, pp. 311–33. Ancient Near Eastern Studies Supplement 20. Leuven: Peeters.
- 2012 “Emerging Problems and Doubts.” In *The New Chronology of Iron Age Gordion*, edited by C. Brian Rose and Gareth Darbyshire,

BIBLIOGRAPHY

- pp. 23–48. *Gordion Special Studies* 6. Museum Monograph 133. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- 2013 “Gordion as Citadel and City.” In *Cities and Citadels in Turkey: From the Iron Age to the Seljuks*, edited by Scott Redford and Nina Ergin, pp. 161–228. Leuven: Peeters.
- Voigt, Mary M.; Keith DeVries; Robert C. Henrickson; Mark Lawall; Ben Marsh; Ayşe Gürsan-Salzman; and T. Cuyler Young Jr.
1997 “Fieldwork at Gordion: 1993–1995.” *Anatolica* 23: 1–59.
- von der Osten, Hans Henning
1928 “An Unnoticed Ancient Metropolis of Asia Minor.” *Geographical Review* 28: 83–92.
1937 *Researches in Anatolia* 9. *The Alishar Hüyük Seasons of 1930–32, Part 3*. Oriental Institute Publications 30. Chicago: University of Chicago Press.
- von der Osten Woldenburg, Harold
2005 “Applications of Ground-penetrating Radar, Magnetic and Electrical Mapping, and Electromagnetic Induction Methods.” In *Aerial Photography and Archaeology 2003: A Century of Information (Papers Presented during the Conference Held at the Ghent University, December 10th–12th, 2003)*, edited by Jean Bourgeois and Marc Meganck, pp. 221–25. *Archaeological Reports Ghent University* 4. Ghent: Academia.
- Walker, Phillip L.; Kevin W. P. Miller; and Rebecca Richman
2008 “Time, Temperature, and Oxygen Availability: An Experimental Study of the Effect of Environmental Conditions on the Color and Organic Content of Cremated Bone.” In *The Analysis of Burned Human Remains*, edited by Christopher W. Schmidt and Steven A. Symes, pp. 129–35. Amsterdam: Elsevier.
- Wescoat, Bonna Daix
2012 *The Temple of Athena at Assos*. Oxford: Oxford University Press.
- Winter, Irene
1976 “Phoenician and North Syrian Ivory Carving in Historical Context: Questions of Style and Distribution.” *Iraq* 38: 1–22.
- Wittenberg, Harmut, and Andreas Schachner
2012 “The Ponds of Hattuša: Early Groundwater Management in the Hittite Kingdom.” In *Third IWA Specialized Conference on Water and Wastewater Technologies in Ancient Civilizations, 22–24 March 2012, Istanbul, Turkey*, pp. 313–39. London: IWA Publishing.
- Yakubovich, Ilya
2014 “From Lower Land to Cappadocia.” In *Extraction and Control: Studies in Honor of Matthew W. Stolper*, edited by Michael Kozuh, Wouter F. M. Henkelman, Charles E. Jones, and Christopher Woods, pp. 347–52. *Studies in Ancient Oriental Civilization* 68. Chicago: The Oriental Institute.
- Young, Rodney S.
1953a “Progress at Gordion, 1951–1952.” *University Museum Bulletin* 17/2: 2–39.
1953b “Making History at Gordion.” *Archaeology* 6: 159–66.
1957 “Gordion 1956: Preliminary Report.” *American Journal of Archaeology* 61: 319–31.
1958 “The Gordion Campaign of 1957: Preliminary Report.” *American Journal of Archaeology* 62: 139–54.
1962 “Gordion: Phrygian Construction and Architecture: II.” *Expedition* 44: 2–12.
1969 “Doodling at Gordion.” *Archaeology* 22: 270–75.
- Zawadzki, Stefan
2010 “The Portrait of Nabonidus and Cyrus in Their (?) Chronicle. When and Why the Present Version was Composed.” In *Who Was King? Who Was Not King? The Rulers and the Ruled in the Ancient Near East*, edited by Petr Charvát and Petra Maříková Vlčková, pp. 142–52. Prague: Institute of Archaeology of the Academy of Sciences of the Czech Republic.

EXCAVATIONS AT THE
CAPPADOCIA GATE

CHAPTER 1

BACKGROUND: EXCAVATION STRATEGIES, METHODS, AND NOTATION

GEOFFREY D. SUMMERS and FRANÇOISE SUMMERS

Kerkenes Dağ, or Mountain, is a granitic batholith located on the northern edge of the Cappadocian plain near the district town of Sorgun in the province of Yozgat (see pl. 1a).¹ The name Kerkenes, now more generally Kerkenez in modern Turkish, means a bird of prey or, more specifically, a lesser kestrel (*Falco naumanni*). Neither the modern name nor the Ottoman version of it has shed light on the identification of the place, while investigation of local legends has been equally unproductive.² By foot from Kerkenes it is 73 km northwest to the earlier Hittite capital of Hattusa.³ The extinct volcano of Erciyes Dağı, the highest peak in central Turkey, lying a little less than 100 km to the southeast, can often be seen, although in recent years bereft of its snow cover by midsummer. Kerkenes itself dominates the surrounding countryside, being plainly visible from several days' march away in almost every direction (pls. 1b–5). Selection of this elevated vantage point for the foundation of a new capital in the Middle Iron Age represented a statement of power and permanence magnified by the strength of its gleaming towered walls of stone. It was not, as Hattusa is, hidden from view. If prominence and elevation were conscious choices, the presence of perennial water forced through joints in the granite would have been a specific attraction. The greatest elevation within the circuit of the walls is on the Kiremitlik, which, at 1,490 m above sea level, is almost 240 m higher than the so-called Water Gate, where the watercourse debouches. The

kale, or acropolis, only slightly lower than the Kiremitlik, affords spectacular views. Its present form was largely created by the construction of a strong castle in Byzantine times, hence its modern name, Keykavus Kale. In the Iron Age this prominent granite tor was devoid of water and offered little space for construction (pls. 4b and 5a).⁴ It should perhaps be envisioned as a place of refuge and last resort in the event of an enemy's breaching the city defenses, and very probably as a cultic high place.

Summers are relatively short and warm, winters long and cold (pl. 5b), but Kerkenes is not sheltered from northerly winds that can blow ice-cold from Siberia, bringing hailstorms that whiten hillsides as late as August. The site is very exposed. In an exceptionally bad year, snow can still lay deep over the ruins as late as mid-April, but not at the foot of the mountain in the more clement village of Şahmuratlı, which hosts the excavation house. Today the weather system of the Mediterranean meets that of Siberia and the Black Sea over the Pontic foothills not far to the north of the Cappadocian plain.

When the city was founded on the Kerkenes Dağ, the hills to the north and west would almost certainly have been wooded with ever-denser forest as the land rises in the Pontic foothills to the north. Today the forested Yozgat National Park contains stands of tall conifers, while the hills to the north of Kerkenes are covered with scrubby oak and, at higher elevations, pine. On the Kerkenes Dağ itself there are oaks, the roots of which seek out water

¹ Erler and Göncüoğlu 1996; Dirik and Göncüoğlu 1996.

² Bittel 1960/61.

³ G. Summers 2013.

⁴ G. Summers and F. Summers 2013.

in the fissured granite (pl. 6a), as well as wild pear and mountain plum. Thus there would have been no shortage of wood for building. It seems to be the case that both the inside and outside stone faces of the city wall were reinforced with horizontal wooden beams at 1 m vertical intervals along the entire 7 km length. Given the height of the wall, perhaps six rows of timber would have been needed in each face. Two faces of six rows for 7 km make for 84 km of timber, without extra requirements for the gates.

Larger trees would doubtless have been split so as to provide two or more beams, but meeting the requirement for the defenses alone would have entailed considerable deforestation. Clearance of forest from the immediate environs of the city would have provided empty space that deterred wild animals, such as bears and wolves, while at the same time providing grazing land for cattle and horses, as well as sheep and goats. If, as seems not improbable, the entire Kerkenes Dağ was itself wooded, felling would have exposed the ridges to the west, where the necropolis of tumuli was to grow.

To the south and west rolling hills provided land for rain-fed agriculture, with grazing on more marginal land. Farming, however, does not seem to have been a significant occupation of the urban population, as demonstrated by the dearth of city gates, especially on the long western side, where there is but one (see pls. 2 and 3a). Furthermore, on the geophysical imagery there is a notable absence of stabling and pounds for flocks and herds within the city.

A NEW FOUNDATION

It has been plausibly argued that the granite tor of the Kerkenes Dağ is to be identified with Hittite Mount Daha, abode of the storm god of Zippalanda (pl. 5b).⁵ Additionally, it has been suggested that the road which leads down the mountainside from the Cappadocia Gate to the rolling plain of Cappadocia was the very same as that taken by the Hittite Great King when, in the course of the spring festival, he proceeded from Mount Daha to Ankuwa, usually identified with modern Alişar Höyük.⁶ Likely though that may be, no pottery or artifacts belonging to the

second millennium BC have so far come to light at Kerkenes.

As to the first millennium BC, no pottery or objects earlier than the foundation of the city have been recovered at Kerkenes. In particular, no sherds of the distinctive animal silhouette style, also known as Alişar IV, have been found. Additionally, neither geophysical survey nor archaeological excavation has revealed any hint of Iron Age occupation that predates the foundation of the city. It is thus clear that this new capital was not founded on a pre-existing urban settlement. Results of the remote-sensing survey, employing a number of different methods, demonstrate that the layout of urban blocks within the defenses respects both the line of the city wall and the location of each of the seven city gates. It may thus be concluded that the Middle Iron Age city was a new foundation marking, presumably, the establishment of a new kingdom with Kerkenes as its capital. Such a new capital would surely have been laid out according to preconceived urban concepts, but precise or even close precedents are elusive. The 7 km of stone defenses follow, for the greater part of their circuit, a natural topographic divide that defines the chosen elevated location. Where on the eastern side the city wall deviates from the strongest possible line, which would have run over the kale itself, the defenses almost certainly followed a course that secured water sources at the foot of the acropolis. Likewise, the distribution of the seven city gates points to the particular direction taken by each of the roads. If the Cappadocia Gate was indeed positioned at the place where an earlier Hittite road reached the top of its ascendance from the south, this would simply confirm the obvious importance of a gate leading down to the rolling Cappadocian plain. Topography provided no more advantageous location for a gate in the southeastern section of the defensive circuit. One way of considering the position of the Cappadocia Gate is, therefore, in the context of an ideal city plan that was laid out so as to include all desirable aspects of a new, purposefully designed capital. Underlying concepts included the bold statement made by the choice of the dominating elevated position on the Kerkenes Dağ, the strength and imposing aspect of the defenses, the restricted number of gates that provided access

⁵ Gurney 1995; Corti in Mazzoni, D'Agostino, and Orsi 2010, pp. 131–32.

⁶ G. Summers and F. Summers 2013; G. Summers 2013.

through those defenses, and the principal destinations of the roads leading out of the city.

CHRONOLOGY

Three interlinked chronological issues require resolution: when the defenses were constructed, the duration of the city's existence, and the date of its deliberate destruction by burning. From a strictly archaeological perspective, it should be possible to provide accurate absolute construction dates by means of dendrochronology. However, despite most valiant attempts, it has not yet been possible to recover charred timbers from the right species of tree with bark still intact. Doubtless such evidence will be found in future excavations, but for the moment we lack precise scientific dating. Radiocarbon dating will never, for statistical reasons, provide dates that either prove or disprove correlation of archaeological evidence at Kerkenes with what very little is known of historical events. Here the intention is to examine the archaeological evidence on its own merits. Evidence is somewhat infirm.

The Iron Age pottery from Kerkenes is closely akin to what is termed Middle Phrygian at Gordion, a term that has no great chronological precision.⁷ Parallels with Boğazköy and Kaman Kalehöyük are compatible with this designation but of little help in establishing a tighter absolute chronology.⁸ Rather than attempting to find closely dated parallels from elsewhere, it is perhaps more useful to consider what is and what is not present in the Kerkenes assemblage. One complication is the poor state of preservation at Kerkenes, where the acidic granitic soils tend to break down fired clays and destroy surfaces of pottery sherds. Thus surface finishes such as slip, burnish, and occasional paint are frequently fugitive. Added to this problem is the deposition of salts on ceramic surfaces that are very difficult to remove. A second factor is that, in the excavations conducted so far, very little pottery has been recovered in situ. The main reason for this dearth has been the concentration of work on public buildings, namely the

Cappadocia Gate and the Palatial Complex, as well as a megaron and associated structures in the lower sector of the city. Excavation of more domestic contexts will doubtless rectify this deficit.

Absent, as noted above, is pottery of the well-known Alişar IV painted style, typified by wild goats and stags with spaces infilled by concentric circles. The term comes from the fourth level from the bottom of Alişar Höyük, excavated by Erich F. Schmidt and Hans Henning von der Osten on behalf of the Oriental Institute before the Second World War.⁹ Alişar Höyük lies just 23 km to the south-southeast of Kerkenes. Exact dating of the Alişar IV style is wanting. Complete imported craters were found in the destruction level on the Citadel Mound at Gordion, which is dated to ca. 800 BC, while earlier versions of the animal silhouette style may be seen in Early Iron Age levels at Boğazköy.¹⁰ Of more concern here, however, is the end of the ceramic style. At Kerkenes there are some examples of a debased continuation of the tradition, in which bichrome paint was used to outline panels of white ground overpainted with concentric circles. The best examples have come from the Cappadocia Gate, as described in chapter nine. Similar pottery was found in the next level at Alişar Höyük, Alişar V. Alişar IV pottery was found farther afield, most importantly, from the point of view of chronology, at the Neo-Hittite mountaintop site of Göllüdağ, where it is probably to be dated as late as somewhere in the earlier part of the seventh century BC.¹¹ Thus the present evidence of ceramics would place the foundation of Kerkenes no earlier than the abandonment of Göllüdağ and, by extension, perhaps following the demise of the Neo-Hittite states on the Central Anatolian plateau.

Archaeological dating of the destruction of Kerkenes is perhaps a little firmer. With regard to the pottery, there are no so-called Achaemenid bowls.¹² Nor are there any western or Greek imports. This negative evidence is consistent with a pre-Achaemenid date for the destruction. A great deal of evidence can be assembled to demonstrate that the destruction and abandonment were not

⁷ Voigt 2007.

⁸ Genz 2005, 2007a, and 2007b.

⁹ Schmidt 1931; von der Osten 1937.

¹⁰ For the chronology of Gordion, see Rose and Darbyshire 2012; for the Alişar pottery at Gordion, see Sams 2012, pp. 72–73, with fig. 4.25 and references. Iron Age pottery at Boğazköy has been extensively studied; see Genz 2004, 2005, 2006, 2007a, and 2007b.

¹¹ Arık 1936; Tezcan 1982.

¹² Dusinberre 1999.

much earlier than the Persian invasion in the mid-sixth century BC. At the Cappadocia Gate this evidence includes the style of the relief sculpture on the sandstone plinth and the gold ornament, described in this volume. From elsewhere at Kerkenes are the ivory furniture inlay,¹³ architectural embellishments at the Monumental Entrance to the Palatial Complex with parallels in the Phrygian Highlands, sculpture and inscription from the same context, and absence of architectural terra-cottas.¹⁴

Thus the evidence of material culture is suggestive of a foundation in the later part of the seventh century and a destruction in the mid-sixth. In this case the length of occupation would not have been very much more than a century, perhaps less. Other lines of archaeological evidence are entirely compatible with this conclusion. Geophysical survey has not shown any evidence for multiple phases of construction, only for the continual addition of structures until, at the time of the destruction, there was hardly an empty space within the city. At the Palatial Complex there were several phases of development, with substantial modifications, not least to the stone glacis, but here too there was no sign of constructions being replaced because they had deteriorated through age. Yet one more argument, albeit not particularly strong, can be adduced: the 2.5 km long defenses on the western side of the city were pierced by only a single gate. Thus access to grazing land and fields, as well as to the many tumuli that are presumably the necropolis of the city, was surprisingly restricted.¹⁵ Had the city been in existence for a greater length of time, additional openings might very well have been made through these western defenses.

It does not seem necessary here to repeat arguments for the dating of Kerkenes based on tentative analysis of very scant and difficult historical evidence. Current thinking is that the city was founded by a large and powerful group coming across the Kızılırmak from somewhere in central or western Phrygia. Kerkenes does not appear to have been a

refuge so much as a new capital for an ambitious dynasty. When might such a movement have taken place? Speculation that it was after the death of King Midas of Phrygia seems reasonable.¹⁶ The geopolitical changes are surely to be associated with the demise of the Neo-Hittite kingdoms that made up the Lands of Tabal, the last reference to which is dated to ca. 640 BC, when, encouraged by the Cimmerian leader Dugdamme (Lygdmis), the son and successor of Mugallu rebelled against Assurbanipal of Assyria.¹⁷ The collapse of Urartu in the 640s under its last king, Rusa II, might also be associated with the activities of Cimmerians and, doubtless, others now invisible to us.¹⁸ An alternative might see such momentous changes accelerated by the collapse of the Neo-Assyrian empire in 612 BC. In any event, the broader background can be seen in the light of expansionist policies pursued by the kings of Lydia and Cilicia.

However shadowy the circumstances of the foundation, events connected with the destruction are a little sharper. Archaeological evidence for a mid-sixth-century date, combined with reconstruction of historical events, leave little room for doubt that the destruction and abandonment of the city are connected with the conflict between Lydia and Persia that culminated in the conquest of Sardis by Cyrus the Great in, traditionally, 547 BC.¹⁹ A new reading of an incomplete cuneiform sign on a broken fragment of the Nabonidus Chronicle has tempted some to suggest a lower date for the sack of Sardis. While this would not be unwelcome, since it allows for a slightly longer period of time between the foundation and the sack of Kerkenes in which to squeeze so much building activity, the evidence for it is thin and has yet to be rigorously tested against the (admittedly later) Greek sources, as well as the archaeological evidence from Sardis itself.²⁰

¹³ Dusinberre 2002.

¹⁴ G. Summers 2006a.

¹⁵ For the tumuli, see Schmidt 1929, pp. 250–58.

¹⁶ For the name Midas and discussion of the chronology, see Berndt-Ersöz 2008.

¹⁷ Hawkins 2000, p. 428.

¹⁸ For Tabal, see Hawkins 2000, pp. 424–31; D'Alfonso 2012; Mora and Balatti 2012.

¹⁹ Cahill and Kroll (2005) discuss the archaeological and numismatic evidence in support of this date.

²⁰ Oelsner 1999/2000; Stronach 2007, 2008; Rollinger 2008; Michels 2011.

IDENTIFICATION WITH PTERIA

There are no historical sources for the region lying within the bend of the Kızılırmak that shed any light on peoples, states, cultures, or languages before the events of the late seventh and first half of the sixth centuries BC. Neither Hieroglyphic Luwian inscriptions nor Neo-Hittite sculpture has been found much to the north of the Kızılırmak valley.²¹ In addition to the examples at Kerkenes,²² there are Old Phrygian inscriptions from Bogazköy, Alaca Höyük, Kalehisar, and Pazarlı—all of which Brixhe and Lejeune (1984) termed “Pteria”.²³ Of this epigraphic material, however, none provides any clues to historical geography. Herodotus (1.72) and other classical sources seem clearly to indicate that the eastern border of the Phrygian state was always considered to be the Halys River (the Kızılırmak).²⁴

The identification of Kerkenes with Pteria, which, according to Herodotus, was “the strongest place in that part of Cappadocia,” was first put forward by Stefan Przeworski the year after H. H. von der Osten’s notice in the *Geographical Review*.²⁵ The same conclusion was independently reached in 1997.²⁶ Although the identification of Kerkenes with Pteria has been vigorously challenged, the arguments put forward in its favor remain robust and have gained wide acceptance.²⁷ On the other hand, the proposal that Pteria was a Median foundation is clearly untenable and has been long abandoned.²⁸ This archaeological report is not the place to once again set out the arguments in detail. From a strictly archaeological perspective, nothing short of epigraphic evidence will convince skeptics. Confirmation of the proposed chronology through the acquisition of an absolute date for construction phases by means of dendrochronology would be of advantage, but tree rings will not date the

destruction. Radiocarbon dates for the middle part of the first millennium BC fall into what is known as the “Hallstatt Plateau” (ca. 750–400 BC), when calibration curves are so flat that all dates have unhelpfully wide margins of error. For the moment, then, there is nothing of substance other than the difficult and conflated testimony of Herodotus. No other candidate for Pteria is readily apparent if it is not Kerkenes, nor is there any obvious name for Kerkenes. While such negative and somewhat circular arguments in no way constitute proof, they do add weight to circumstantial evidence. Assuming now that the identification with Pteria is correct, it might be useful to speculate on the circumstances of its deliberate destruction, not least because of the dramatic and poignant evidence from the Cappadocia Gate.

According to Herodotus, following the famous questioning of the oracles,

Croesus, when he had crossed [the Halys River] with his army, came in Cappadocian territory, to what is called Pteria. Pteria is the strongest part of all that country and lies in a line with the city of Sinope, on the Euxine Sea. There he encamped, destroying the farms of the Syrians, and he captured the city of the Pterians and made slaves of the people, and he captured all the neighboring towns; moreover he drove the Syrians from their homes, though they had done him no manner of harm. Cyrus, on his side, gathered his own army and took on, as well, all the peoples who lived between him and Croesus, and he then confronted Croesus. (Before he set out to march at all, he sent heralds to the Ionians and tried to make them desert Croesus. But the Ionians would not listen to him.) So when Cyrus came and encamped over against Croesus, then and there in that land of Pteria they fought against one another with might and main. The battle was fierce, and many fell on both sides. At last they broke off, at the onset of

²¹ Hawkins 2000; Starke and Schmid 2002, map on pp. 308–9.

²² Brixhe and Summers 2006.

²³ Brixhe and Lejeune 1984; Mellink 1993.

²⁴ Historical sources are usefully collected in Pedley 1972.

²⁵ Przeworski 1929; von der Osten 1928.

²⁶ Summers 1997.

²⁷ Rollinger 2003.

²⁸ The Median identification was based in part on the statement of Stephanos of Byzantium that Pteria was a “city of the Medes” and in part on the mistaken idea that the city defenses, together with the greater portion of the city itself, were unfinished at the time of abandonment. Only with excavations at the Cappadocia Gate in 1999 was it understood that the defenses were indeed completed and constructed entirely of stone; see G. Summers and F. Summers 2010. Another incorrect interpretation was that large halls identified on geophysical imagery and in one instance tested by excavation in 1996 had flat roofs supported by three or more rows of columns (e.g., Summers 1997). It is now known that these halls were provided with double-pitched roofs covered with thatch and supported by two rows of wooden columns in the Phrygian tradition, as exemplified at Gordion.

night, without either having the victory; so hard did the two armies fight.²⁹

Archaeological evidence from Kerkenes now permits some new speculations, together with repetition of some points made previously. The use of the term Cappadocia is of course anachronistic, immediately signaling a need for critical evaluation.³⁰ Secondly, Herodotus appears to make a clear distinction between the Pterians and the Syrians. The Syrians, as Herodotus calls them, would have comprised the local population that included the producers of the Alişar IV style of pottery. Culturally they were perhaps Neo-Hittite or largely so, although Çalaperdi is the only location where Neo-Hittite hieroglyphic inscriptions on stone have been found north of the Kızılırmak valley. Alişar itself was perhaps incorporated into the Lands of Tabal, if the distribution of Alişar IV pottery and a single Luwian hieroglyph on a pottery sherd are sufficient evidence.³¹ On the other hand, material culture at Kerkenes suggests that the Pterians came from Phrygia. Their arrival within the bend of the Halys River, the modern Kızılırmak, was perhaps no earlier than the reign of Croesus's father Alyattes (ca. 619–560 BC). Pterian sympathies might well, therefore, have lain with the Medes and their allies in opposition to expansionist Lydians who had subjugated their western homeland. It might be thought that such a background brings Croesus's actions into sharper focus.

Croesus and his forces would have set out from Sardis once the main harvest was over at the end of June. They may have taken a route by way of Midas City, where the rock-cut façade bears an inscription that very probably commemorates Croesus's son Ates,³² and onward by way of Dorylaion at Şarhöyük in modern Eskişehir, Gordion, and thence via Ankara to cross the Kızılırmak more or less where the modern highway does today. The modern distance by road between Sardis and Kerkenes is approximately 800 km. Thus Croesus and his army are unlikely to have completed the march of perhaps forty days before mid-August. In this case, Cyrus is unlikely to

have reached the central plateau before late autumn even if he started his preparations before Croesus had actually reached Pteria. There is no evidence from the Cappadocia Gate that the city was taken by force. While evidence from only one gate out of seven in a 7 km circuit is not in itself conclusive, current evidence from excavation elsewhere in the city is not at variance with the idea that the city surrendered without a fight and that it was looted before it was torched. If this tentative reconstruction is correct—and future evidence may very well demonstrate otherwise—it is not impossible to imagine that Croesus, knowing he would have to fight and having selected in the plain below Kerkenes the battleground that gave him the most advantage, decided that, whatever the outcome, he would return to Sardis rather than winter on the high plateau. Croesus, then, would have burned the city so that it could not be held against him on a subsequent occasion. This scenario is perhaps more likely than one in which Cyrus destroys what he had come to claim as his own and to rule over. In any event the city would have burned for days, with the column of smoke visible from several days' march away to the south—a deliberate act of terror and intimidation presaging Alexander's torching of Persepolis.

In the new political geography imposed by the Persians, there was no reason to rebuild the destroyed city. The center was now at the more natural crossroads, Mazaca, later Mazaca Caesarea and now modern Kayseri, presumably the seat of the satrap of Katpatuka, which the Greeks called Kappadocia. Katpatuka is seemingly Old Persian.³³

THE NAME “CAPPADOCIA GATE”

On the earliest plan of the visible archaeological remains at Kerkenes, made by H. H. von der Osten and F. H. Blackburn in 1927 (see pl. 90), the gate in the center of the southeastern sector of the city defenses

²⁹ Herodotus 1.76 (Greene 1987).

³⁰ The Roman name Cappadocia was apparently derived from that of the Persian satrapy, Katpatuka. Before the Persian conquest the political geography appears to have been quite different. Usage of the name Cappadocia for Middle Bronze Age cities and trade, as well as for styles of pottery in the Bronze Age, is anachronistic. Today Cappadocia refers to the tourist area containing extraordinary volcanic landscape within the triangle formed by the cities of Kayseri, Niğde, and Nevşehir.

³¹ For the northern border of Tabal, see Simon 2014. I am most grateful to Zsolt Simon for sending me an advance draft of this paper. Maps of Iron Age Luwian inscriptions can be found in Hawkins 2000.

³² Berndt-Ersöz 2006b, p. 130. Also MUNN 2006, pp. 77–79 and 143–45.

³³ For Katpatuka, see Yakubovich 2014. I am most grateful to Ilya Yakubovich for providing an advance copy of this paper.

is tellingly labeled “Large Gate.” During the course of our own surveys it was decided to name the city gates rather than assign numbers to them. This was done for three reasons: first, to avoid confusion with von der Osten’s original identification and numbering of the city gates, which was necessarily in need of revision in the light of new work; second, because it was helpful to be able to refer to particular gates before the survey of the city defenses was completed and thus before it was determined with certainty that there were seven; and third, because names are perhaps less easily confused than numbers. While “Southeast Gate” would be a more neutral or objective name, the idea of a “Cappadocia Gate” leading directly across the rolling plains toward the distant snow-capped volcano of Erciyes Dağı, which frequently appears looming above the horizon, is both descriptive and evocative. The name “Cappadocia Gate” has the clear advantage of emphasizing the direction from which the road approaches and to which the gate leads, toward modern Kayseri.

REASONS FOR EXCAVATION AT THE CAPPADOCIA GATE

The decision to excavate one of the seven city gates at Kerkenes addressed particular research questions in addition to fulfilling a desire to enhance the potential of the site for leisure and tourism. First among these issues was the obvious strength and importance of this particular gate, which appears to be the only one of the seven that was provided with a court. The second factor was the visibility of the topmost surviving course of stones of the city wall, gate towers, and glacis—a circumstance that seemed to indicate an absence of significant later disturbance or recent robbing (pls. 6b and 7a). Several other important questions required addressing in addition to elucidation of the gate plan. These included determining the nature of the glacis; the position of the base of both the city wall and the glacis in relation to subsoil or bedrock; the construction materials used in addition to granite; the extent to which the gate had been completed and whether or not it had been reused in association with later occupation of the kale; and, concomitantly, the date

of construction of the broad road leading gently up the hillside from the south (pl. 10). The plan of the entire circuit of city defenses was completed, together with detailed plans of what could be seen of each of the city gates, by 1998 (pl. 2).³⁴ None of the geophysical survey methods employed—electrical resistivity, fluxgate gradiometry, or electromagnetic conductivity—were capable of penetrating the masses of granite rubble at any one of the city gates, with the result that further understanding of their plans could only be attained through clearance of stone rubble and excavation.

At the time when these matters were being considered, it was deemed useful to test several ideas then current. It had been thought—erroneously, as it turned out—that the extant stone defenses at Kerkenes comprised the stone base for what was intended to have been a very substantial mudbrick wall. It was assumed that the base of the glacis would be found no more than a few tens of centimeters below the lowest exposed stone in the visible masonry, that is, no more than one or two courses of stone would be found buried beneath the collapse. It was therefore anticipated that clearance of the stone rubble would be straightforward and could proceed rapidly. It thus came as a surprise to discover that the defenses were built entirely of stone, that they had been completed, and that in places they were still preserved beneath the collapse to a height in excess of 5 m.³⁵

STRATEGIES AND PROGRESS OF THE EXCAVATIONS

The area immediately inside the gate continues to be used by shepherds in the spring and early summer. Bullocks and, in one spring, water buffalo were raised in years when there was good pasture; more recently these have been replaced by sheep, to which, perhaps as an unconscious reaction to more arid conditions resulting from global warming, goats are now being added. All these animals come from Şahmuratlı village, although shepherds may be engaged from elsewhere. These animals were penned within the angle formed by the northeastern side of the gate structure and the defensive wall.

³⁴ Baturayoglu 2002.

³⁵ G. Summers et al. 1996, pp. 212–14, where the proportions proposed in fig. 4 are perhaps correct, but the defenses are now known to have been constructed entirely of stone (with wooden elements).

Stone-walled pens are often topped with thorny branches (pl. 8a). Since the year 2000, new pens, constructed from stone cleared from the gate passage and court that we provided for this purpose, have been built a short distance away from the gate structure and city wall. All the shepherds' rude walling, which obscured part of the Iron Age gate and the inner face of the city wall, had been removed by the end of 2011 (pl. 8b). Temporary wooden pens are increasingly used to supplement stone ones because they can be moved on tractors or lorries throughout the year as animals are grazed on different pastures. The floors of pens, which become thickly covered with animal dung, are sometimes burned at the end of the summer to get rid of ticks and other vermin. Perhaps for the same reason, pens may not be used in consecutive years. A small hut with a small hearth and crude chimney built into the rear wall, in which shepherds rest, cook, and sleep, is reroofed in most years, with additional facilities sometimes being provided by a wooden tented shelter erected on a tractor trailer.

Besides the semipermanent stone constructions, small shelters, accommodating two or three boys huddled together and comprising stone footings with canvas or plastic covers affixed to crude timber frames, are sometimes erected on top of the remains of the city wall itself just to the northeast of the gate. These are positioned so as to provide shelter from cold northerly winds and yet to catch southerly breezes during hot summer weather. During early campaigns, the shelters were used by village boys bringing cattle up the slopes from the village on a daily basis. This destructive practice, which involved digging terraces into the core of the ancient walling to make small flat platforms, has now ceased. In addition, hooved traffic has now been redirected away from the gate.

It is essential that the goodwill and trust built up between the archaeological team and the shepherds are maintained. Shepherds are, on the one hand, excellent protectors of the site, which they themselves and the village in general regard in some way as their own, while, on the other hand, they would be naturally and rightly antagonized by any attempt to prevent them from grazing their animals.

Work at the Cappadocia Gate was conducted in 1999, 2000, 2004, 2005, and 2007–2011. In general, clearance and excavation proceeded from the front to the rear, with sections being cut and recorded across the entrance passage, through the center of

the court, and along the main axes of the rear portion (see pls. 59–61). The very loose nature of the stone fill, the large size of many of the stones, and the resultant risk of collapse and injury made the cutting and recording of these sections difficult. An additional concern was the very precarious condition of standing wall faces, some as much as 5 m tall, which were found to be leaning dangerously as a result of voids left when horizontal timbers in the face had burned. Because of the intensity of the burning, many of the larger face stones are fire cracked. As a result, it has not been possible to record these stones before taking them down and repositioning them in their original locations. As they are removed, or fall of their own accord, they are seen to be broken into many pieces. Some of the facing was taken down after recording, while other sections collapsed following rain. It is fortunate that excavation and recording were completed without injury.

In 1999, clearance of stone rubble from the front of the gate was begun under the terms of a permit for clearance issued to the then director of the Yozgat Museum, Musa Özcan. In this initial season, day-to-day work was overseen by David Stronach. The stone rubble in front of the glacis was pulled back by hand until it was understood that several meters of stone glacis face were preserved, while the resultant pile of stone debris behind the trench rapidly became difficult to manage. Thus machinery, kindly loaned by the Sorgun Municipality, was employed to move the accumulated stone pile well back from the gate in order to visually enhance the monumentality of the structure. In subsequent seasons, when a full excavation permit had been issued, the same general principle of removing stone by hand and using machinery to remove larger stones an agreeable distance from the monument was employed. Removal of large stones from the fill of the chamber was achieved with a hydraulic winch on the back of a tractor, as well as with the arm and bucket of a mechanical digger. In front of the gate, the huge quantity of fallen stone was pushed out on the slope in a way that extended the small level area in front of the Middle and East Towers, while farther away, where the ancient road comes into view from around the hillside, the stone was piled into terraces.

At the end of 2005, it was decided to halt further excavation at the gate because it was apparent that clearance of the chamber would necessitate removal of leaning face stones. However, an application for permission to restore the stone glacis on the front

of the East and Middle Towers was not considered because the policy at that time was for complete clearance and excavation of archaeological monuments before any restoration could be undertaken. Thus in 2007 a sondage was excavated in the eastern corner of the chamber to ascertain the depth of the collapse, the condition of the walling, and the nature of the surface. An additional aim was to see if there were post bases that might have been connected with structures in the court recesses. In 2008, the junction of the city wall and the East Tower was partially examined, with a view to putting together a new program for restoration. In 2009, a successful application for a grant from the United States government's Ambassadors Fund for Cultural Preservation was submitted. This award permitted restoration of the glacis on the East Tower and the central niche, as well as repair and restoration of the inner side of the Middle Tower and the inside corner of the West Tower in 2011. Finally, again in 2011, the rear section of the gate, which contained huge timber façades at front and back in which the pairs of wooden doors were housed, was completely cleared and the extent of the stone surface inside the gate traced in TR30 (see pl. 60).

In general, the policy of archaeological excavation at Kerkenes has been to stop at floors and surfaces that were burned during the destruction of the city, and only to penetrate into earlier levels where the burning had eroded away or where there was a very specific reason to remove burned surfaces. At the Cappadocia Gate, as described in chapter 3, it was not realized until 2009 that there was a significant amount of silty clay on top of the stone paving in the entrance passage. Thereafter, excavation has removed the burning and silt to completely reveal all the stone paving. However, in the unpaved area of the Gate Court, insofar as was consistent with the recovery of crushed and poorly preserved skeletal remains, excavation was halted at the burned surface. Only in a sondage at the northern corner of the Middle Tower were lower levels examined. In the rear section of the gate, digging did not penetrate surfaces in the central passage, but on the southwestern side the floors of Rooms 1 and 2 were removed to reveal the stone-capped drain that ran beneath. At the northeastern side, in Room 3, advantage was taken of a hole dug in the course of extracting the sculpted plinth to examine the foundations of both the North Tower and the rear façade. At the western corner of the North Tower, a sounding was dug to the bottom

of the cornerstone. Finally, in TR30 a small part of the stone surface was removed and, when found to be resting on natural subsoil, replaced.

Cultic items have been removed from the gate. These include the two pieces of sandstone with graffiti built into a corner of the glacis on the northeastern side of the entrance passage (see chapter 6) and an aniconic granite stela set up by the western corner of the Middle Tower (see chapter 5). The semi-iconic stela that stood on the stepped monument by the southern corner of the North Tower has been restored and is currently on display in the Kerkenes Gallery at the Yozgat Museum. Finally, positioned in the northern corner of the rear section of the gate was a sandstone plinth with a pair of crouching sphinxes carved in relief that once supported a life-sized statue sculpted in soft limestone. The plinth is now in the Yozgat Museum, where it awaits further conservation, while the many fragments of the statue, perhaps constituting less than 10 percent of the original, are in the excavation depot. Both are fully described in chapter 5.

Inside the gate, stone has been dumped to the northeast, and shepherds' pens that were attached to the East and North Towers have been removed. Some of the stone from the fill of the chamber has been incorporated in new animal pens that are now situated sufficiently far from the ancient structure. In 2010 and 2011, some of this stone was used for restoration. It is anticipated that more will be required in future years, if plans for further restoration come to fruition.

THE CAPPADOCIA GATE AT THE START OF CLEARANCE

The main outlines of the gate plan were drawn by Ömür Harmanşah and Nilüfer Baturayoğlu Yöney in 1997 and 1998. This plan was made from photographs taken with a tethered blimp, together with ground observation and survey using a total station (pl. 6b). It was thus known that the entire structure was orientated with the corners of the towers approximately aligned to the cardinal points, and that a 6 m wide entrance passage was flanked by the rectangular South Tower on the southwestern side and the Middle Tower to the northeast (see pl. 58). The East and Middle Towers were linked by a short stretch of broad wall, thereby forming a recess between the projecting towers at the front. To the

west of the South Tower the city wall could be traced running for a short distance to the southeast before making a sharp turn to the south. Some 25 m beyond the corner are the remains of a small buttress. It was also understood from this initial survey that the city wall abutted the towers on either side of the gate and that the external base of the outer towers and wall was encased by a continuous, steeply sloping stone glacis. The general plan of the inner portion of the gate could also be ascertained without difficulty, there being a large internal court with recesses along the northeastern and southeastern sides. However, because the uppermost preserved facing stones of the wall had slipped forward, a precise plan could not be made.³⁶ In particular, the sides of the gate passage could not be accurately traced. In some cases it turned out that tower cornerstones thought to be more or less in position were displaced by as much as 80 cm. Before clearance began, it had been realized that the original gate passage was filled with stone rubble, which included many large facing stones fallen from the passage walls. The modern track did not follow the original passage but, rather, ran obliquely across it before descending over a denuded section of the West Tower and its glacis. The large wild pear tree that still stands immediately in front of the glacis had taken root on the western side of the animal track.

When clearance began, we were mindful of the possibility that the gate might have been reused in later periods, particularly in Byzantine times when the earlier acropolis was crowned by a kale (or castle; pls. 4b–5a). The single gate leading into the kale faces approximately the same direction as the city gate.³⁷ It was also considered possible that the broad road that approaches the gate at a gentle incline along the hillside from the south might have been given its final configuration in later, post-Iron Age times. In the eventuality it was demonstrated that, as described in more detail below, both the gate and the road are of Iron Age date, the only later reuse being as a foot and animal track over the top of the destroyed stone defenses.³⁸

A tumulus comprising stones piled up around a stone-lined burial chamber seems to have been constructed on top of the inner, West Tower.³⁹ While later robbing and the activities of shepherds have largely destroyed its structure, the presence of large slab-like stones and comparison with similar stone tumuli at various locations on top of the Iron Age ruins at Kerkenes suggest that it was built by piling up stone around a slab-built and stone-capped cist. There was almost certainly a similar tumulus on the North Tower, but little was discernible apart from large displaced capping stones. While none of these tumuli, including those investigated by Erich Schmidt in 1928,⁴⁰ have been securely dated, parallels with Boğazköy make it likely that they were constructed in the Hellenistic period.

At the inner end of the gate, a curvilinear setting of stones represents an animal pen constructed against the ruins of the inner corner of the West Tower. This dry-stone wall is undated but was found to have been constructed directly on a level of soil containing Early Byzantine pottery. No trace of any activity between the destruction of the gate and the Early Byzantine period was found.

It is perhaps useful here to mention work that was carried out on conservation of the glacis before 2010. When the glacis was first uncovered, it was found that a vertical trio of large facing stones in the glacis at the center of the East Tower had slipped in antiquity, because it so happened that their southwestern edges lined up, with the result that there was a weak vertical joint in place of the usual bonding of the facing stones. Once uncovered, these three stones collapsed, not, perhaps, without some encouragement. Under the expert supervision of representative Mehmet Katkat, these stones were repositioned in 2003. Later that same year, they were pulled out by vandals. While the stones were being replaced, the vertical wall face of the tower behind the glacis, and particularly the eastern corner, were raised by the addition of new stone in such a way as to make the top of the tower safer while also deterring animals and shepherds from clambering over the defenses at this point, a custom that was causing

³⁶ The difficulty of attaining a plan of the gate before clearance to a level below the partially displaced stones visible on the surface is reflected in a series of interim plans, each slightly different, published in the *Kerkenes News* and elsewhere.

³⁷ G. Summers 2001, pp. 41–53.

³⁸ As noted above, is not impossible that the road was originally constructed in Hittite times.

³⁹ There are numerous such tumuli constructed on the ruins at Kerkenes; see G. Summers and F. Summers 2008, pp. 70–71.

⁴⁰ Schmidt 1929; for excavation of two of these tombs, one of which was double, see pp. 237–40.

erosion of the fill behind the facing stones of the glacis. In front of the glacis on this same eastern side, a layer of geotextile was placed on the ground surface in a trial to see if this material would indeed inhibit the growth of large, deep-rooted plants. The entire area in front of the glacis, including the portion overlaid with geotextile, was then covered with a few centimeters of clean granitic sand dug out from the side of the modern road to the northeast of the city and brought in by tractor. These measures have been entirely successful. Excavation in the gate passage and the Gate Court was hampered by the condition of the extant face stones of the walling, which, as described elsewhere, were pitched forward. Where necessary and practical, this situation was remedied by digging into the core of the walling behind the face stones, which could then be slid back into their original position. An alternative course of action, which was considered and rejected on grounds of both immediate and long-term safety as well as aesthetics and practicality, would have been to prop the stones with timber and eventually metal scaffolding. New courses of stone were added to the tops of the passage walls and the eastern wall of the recess on the northeastern side of the court to prevent the loose rubble in the core of the walls and towers from tumbling out. These procedures were carefully and fully documented so that reference to illustrations presented here, as well as to the project archive, makes it possible to determine which stones are in their original position, which have been slid back, and which are newly added.

In 2005, at the suggestion of representative Mehmet Sevim during the course of preparations in advance of a visit by the Honourable Minister of Arts and Culture, Atilla Koç, the collapsed section which had been cut across the gate passage was ramped down to make a smooth rubble surface that protected the walls of the passage from being undermined as a result of erosion by seeping water. This landscaping greatly enhanced the visual impact of the monument on that occasion. In 2009, yet another program of visual enhancement was carried out for the visit of the Honourable Minister of Culture and Tourism, Ertuğrul Günay. All this took place before the paving in the Gate Court and passage was uncovered. At the time of writing, the entrance passage has been cleaned down to its original surface, which comprises a mixture of paving, cobbles, and bedrock, giving way to edged stone paving from about the halfway point in the passage. On the southwestern side, the lower

portion of the stone-lined drain has been filled with stone to prevent running water from undermining the lower stretch of the passage's wall face.

NOTATION

NUMBERING OF TRENCHES

An initial designation of cleared areas into Clearance Trenches (CTs) and the subsequent use of Trenches (TRs) has already been mentioned. Some TR numbers (TR23 and TR24) assigned in 2009 were not actually excavated until 2011 (see pl. 60). No Test Trenches (TTs) were located at the Cappadoccia Gate.

Clearance Trenches were

CT11 in front of the West Tower, westward toward the buttress, 1999

CT12 at the front of the buttress to the southwest of the gate, 1999

CT48 at the front of the entrance passage, 1999

CT50 in front of the glacis of the Middle and East Towers, 2000

CT51 Gate Court, 2000

CT52 where the inside face of the city wall meets the wall linking the South and West Towers, to look for possible stairs, 2007

Trenches were

TR03 at the front of the entrance passage, 2002

TR04 at the back of the North Tower, 2002

TR12 in the center of the entrance passage, 2009

TR13 on the northeastern side of the court, 2004, 2005, 2007 sondage, 2010, 2011

TR22 at the inner end of the entrance passage and southwestern side of the court, 2009, 2010

TR23 in the northeastern half of the rear section, 2011

TR24 in the southwestern half of the rear section, 2011

TR25 outside, at the junction of the East Tower and the city wall, 2008, 2009

TR26 on the outer northeastern side of the gate and the inner face of the city wall, 2009

TR30 tracing the extent of paving behind the gate, 2011

EXCAVATION UNITS, RECORDING, AND NUMBERING OF FINDS

Within each trench, a set of running numbers is used for units of excavation (U). Finds are given identification numbers (IDs) according to material, for example, pottery, metal, and so on. Thus TR12U01pot01 would be Trench 12, Unit 01, pottery 01. Finds deemed to be of particular importance are given site inventory numbers with the designation K for Kerkenes (following the designation originally given by Erich Schmidt and the authorities in Ankara in 1928). The decision as to whether to assign a K number is based on assessment as to whether or not the particular object has the potential for display in a museum or is of sufficient significance to warrant description and discussion over and above a simple catalog entry. A single object made up and restored from several fragments, perhaps coming from different contexts, would thus be given a single K number even though more than one ID number has been given to its constituent pieces. These K numbers are a single series preceded by the year of registration. Thus K06.123 would be registered object 123 and the year of registration 2006. Many objects were not assigned K numbers until conservation was completed, in some cases several years after initial recovery. An object, such as a pottery vessel, that is restored from joining fragments that were perhaps recovered in different seasons from different trenches might have several ID numbers but only one K number. Concordances of site inventory numbers (K numbers) and identification numbers (IDs) are given in appendices 1 and 2.

At the end of each season, the representative (*temsilci*) of the General Directorate is obliged to select such objects that he or she deems to be of sufficient importance to be taken to the Yozgat Museum and entered into the museum register (*defter*). When the museum staff register these objects they are given museum registration numbers (MRNs).

Where this has been done, the numbers are given in the catalog.

On at least two occasions, representatives have made their own lists of objects and study material (*etudluk*) that have remained in the excavation depot between excavation seasons. In many cases, different numbers were given to joining fragments of one object that was awaiting further conservation, and in one instance, if not more, such a number was given to a fragment of charcoal that had been retained for species identification. These sets of numbers have been ignored in this volume.

Photographs can be identified by their code: “sl” stands for 35mm color slides, “bw” for 35mm black-and-white negatives, and “bn” for large black-and-white negatives. In early years these categories were subdivided into “hb” (hot-air balloon), “bf” (blimp film), and “vf” (view film). Later photography was largely and then entirely digital, indicated by the designation “dp” followed by a two-letter code that indicates the camera used for each batch. The number that precedes the code is the year during which the photograph was taken, and the number that follows is a two-digit batch number followed by a two-digit photo number.

The front of the gate and adjacent glacis were recorded by means of stereo photography (pl. 9a), from which drawings were made. These drawings were the basis from which elevations 1–2 (see pls. 76–78) were made. The glacis and the walls of the passage and internal court were recorded by digital photography, with reference points from which rectified photographs, drawings, and digital images were made.⁴¹

Plans, elevations, and sections were originally drawn at a scale of 1:20 or, in a single instance, 1:10. Finds are normally drawn at actual size, small objects at 2:1. Digital methods, such as scanning pencil drawings and inking reductions, have increased the number of options available to illustrators.⁴²

⁴¹ Baturayoglu 2002.

⁴² Drawing methods and conventions generally follow those given in Claasz Coockson 2006.

CHAPTER 2

GIS ANALYSIS OF THE CAPPADOCIA GATE LOCATION

YASEMİN ÖZARSLAN and GEOFFREY D. SUMMERS

Only seven city gates pierce the 7 km long circuit of Iron Age city defenses on the Kerkenes Dağ (see pl. 2). The locations of each of these gates are clearly related to routes leading out beyond the city rather than to adjacent agricultural land or local features. This observation is best demonstrated by the existence of but a single city gate, the West Gate, in the nearly 2 km long stretch of defenses that form the western side of the city, between the northern tip and what we have named Göz Baba Gate. The rolling terrain to the west of the city lends itself to grazing and the planting of vines and fruit trees, and to a certain extent to cereal cultivation where there is sufficient soil and slopes are manageable for the plow. However, no significant routes appear to traverse this hilly land. The Göz Baba Gate leads out from close to the southern extremity of the city and along the ridge to the very large Göz Baba tumulus, surely the burial mound of one of the kings of Pteria, on the most elevated part of the mountain.⁴³ By contrast there are three gates in the northeastern side: the Karabaş (North), North-East, and East-North-East. Of these, the first leads past the impressive extramural monument—presumably a temple—at Karabaş and thence crosses over the lowest point on the ridge at the northwest toward the impressive mound of Uşaklı Höyük (pl. 5b).⁴⁴ Uşaklı is almost certainly to be identified with the Hittite city of Zippalanda, from which the Hittite Great King ascended the slopes of Mount Daha to celebrate the sacred mountain before descending on

a vehicle to Ankuwa, to be located at Alişar Höyük, in the same day (pl. 9b).⁴⁵ As suggested above, the road descending from the Cappadocia Gate may have its origins in this Hittite festival route. The North-East and East-North-East Gates lead directly in the directions indicated by their names, with routes avoiding the wet valley bottoms and the latter presumably skirting the plain as it passes the elevated and perhaps partially contemporaneous site of Tilkigidiklitepe.⁴⁶ In a similar fashion, the East Gate opens to a ridge that gently descends toward the modern village of Şahmuratlı, where the excavation house is located. Along the entire southeastern side of the city, from the East Gate to the Kiremitlik, the natural slope of the Kerkenes mountain is steep. Along this stretch, as indeed along the entire circuit of the defenses, large towers were constructed at prominent natural points, often where there was also a change in direction. On the portion of the wall that runs southward immediately to the west of the Cappadocia Gate was the buttress described in chapter three. The top of the glacis in front of this buttress was visible before digging began. Without extensive clearance it is not possible to ascertain whether similar buttresses were constructed between the large and obvious towers, or whether this particular buttress owes its singular existence to the vulnerability of the Cappadocia Gate.

⁴³ For the Göz Baba tumulus, see Schmidt 1929, p. 225.

⁴⁴ For Karabaş, see G. Summers et al. 1996, pp. 226–33; for Uşaklı (formerly Kuşaklı), see G. Summers, F. Summers, and Ahmet 1995, pp. 53–61; Mazzoni, D’Agostino, and Orsi 2010.

⁴⁵ G. Summers and F. Summers 2013.

⁴⁶ G. Summers, F. Summers, and Ahmet 1995, pp. 46–53; Kealhofer et al. 2010.

OBSERVATIONS ON THE ROAD

Standing today on the preserved top of the Cappadocia Gate, looking out over the steeply ascending hillside and the rolling cropland that stretches away into the far distance, the observer is immediately struck by how little of the immediate approach along the road or directly up the hillside can be seen. Defenders positioned on the three towers at the front of the gate would not seem to have had much of a view of an approaching hostile force until it was directly before the gate. This observation has implications for how the gate might have been defended in the event of attack and suggests, for instance, that no great role was given to archers. It was not, however, immediately clear whether the view would have been equally restricted from the original tower tops. The ninth-century stone gate to the Old Citadel at Gordion is today preserved to a height of 11 m. At the Cappadocia Gate, the glacis between the Middle and East Towers, described in chapter 3, attains an elevation of 5 m, a distance that was surely not less than half the total wall height. The towers can be presumed to have been yet taller. One question that could be addressed by Geographic Information System (GIS) analysis was whether views over the approaches to the gate would have been significantly greater from vantage points on the original tops of the towers.

Parts of the road leading up the side of the slope to the Cappadocia Gate have been artificially leveled by cutting back into the hillside and, in places, cutting away outcropping rock (pl. 10a–b). Where this road makes a sharp bend, about halfway along, it is crossed by a small perennial watercourse, but placement of a few stones would have been sufficient to make an easy crossing. Access in winter would have been difficult (pl. 11a–b). Thus, a second question to be addressed through the application of GIS tools was whether the road leading down the hillside followed the best possible course for animal-drawn wheeled transport. The location of the Cappadocia Gate would be largely or completely explained if no significantly better route were available in the steeply descending terrain on this southeastern side of the city. Additionally, such a result would add weight to the suggestion that this road was Hittite in origin, thus predating the construction of the Iron Age gate.

GEOGRAPHIC INFORMATION SYSTEMS

VIEWSHED ANALYSIS

Viewshed analysis using ArcGIS was carried out to determine how much of the terrain outside the southeastern stretch of the defenses could be viewed from the three towers at the front of the Cappadocia Gate (pl. 12), from all the towers, and from the city wall along this portion of the circuit (pl. 13), as well as from the kale, or acropolis (pl. 14). Employment of GIS viewshed analysis permitted calculations to be made from the wall and tower tops that were estimated to have stood a minimum of 8 and 12 m, respectively, above the Iron Age ground surface. The parameters were as follows: azimuth (bearing) at 360 degrees, the vertical scan range at plus or minus 90 degrees, and a maximum search radius of ca. 2 km. The base map is an ASTER Global DEM⁴⁷ with a resolution of ca. 30 m that accounts for the straight lines on the images and, although too coarse to reveal minor topographic features, is more than sufficient to reveal the overall situation. In all analyses, the area that falls within the city wall was excluded from calculations.

The results confirm impressions gained from casual observation. While the kale offers superb vistas across the distant landscape, the viewshed from this acropolis demonstrates, as is clear to an observer on the ground, that most of the slopes below the Cappadocia Gate, including the greater part of the road leading up to it, cannot be seen from this vantage point. Thus while a large group, whether friend or foe, could be observed advancing toward the city over the rolling Cappadocian plain long before it reached the foot of the Kerkenes Dağ, the acropolis would not have been a good command point from which to direct defenders in the event of an attack. More surprising, perhaps, is the extent of the approach to the Cappadocia Gate that is invisible from the three towers along its front. On the other hand, the combined view from all towers and the wall top shown on plate 13 does not leave significant blind spots. The viewshed from all the towers along the southeastern stretch of the defenses is not only larger than the viewshed from the restricted area of the defenses at the gate but also, much more

⁴⁷ ASTER = Advanced Spaceborne Thermal Emission and Reflection; DEM = Digital Elevation Model.

significantly, covers almost all of the slopes below the ramparts.

SLOPE ANALYSIS

The slope map of the terrain outside the defensive circuit (pl. 15), in which the dark green areas are the flattest and the orange areas the most steep, shows the extent of the steeply inclined slopes traversed by the road leading up to the Cappadocia Gate. In fact, the line followed by the southeastern stretch of the defensive wall coincides with the crest of the slope. Indeed, along almost the entire circuit of the defenses the line taken is that of the natural topographic divide. Towers were constructed not at regular intervals but, rather, where the granite outcropped. At points where there was an obtuse change in direction in the line, which always coincides with granite outcrops, larger towers were built. It goes without saying that these larger towers afforded the most comprehensive views. The slope map is of the modern landscape, which, at the coarse resolution of the ASTER Global DEM, has not been significantly altered since before the foundation of the city. Contour lines are at 10 m intervals and help with visualizing the direction of the sloping terrain. Leveling of rock outcrops, collapse of the city defenses, agricultural terracing, and erosion of the hillside cannot have been on a scale that would alter the general picture presented on plate 15. The one exception, as discussed in chapter 3, might have been the position of the Cappadocia Gate itself. There is evidence that where the gate is located the crest of the topographic divide was lower and much less pronounced than to either side, and that before construction of the gate there was an area of boggy ground. This feature in the local topography might be part of an explanation as to why the road and the gate through which it passed were at this particular location. Furthermore, it is not inconsistent with, although nor does it prove, the theory that the road may have been significantly older than the city.

LEAST-COST PATH ANALYSIS

ArcGIS least-cost path analysis was used to test the hypothesis that the best line was in fact that taken by the ancient road. The only two costs taken into account in this analysis were the gradient and the

direction of slope. The algorithm calculated a slightly different route from the actual course of the road (pl. 16). This difference does not appear to be significant and is distorted by both the 30 m resolution of the ASTER Global DEM noted above and the unknown extent of outcropping rock that was leveled when the defenses were built.⁴⁸ The alternative line takes into account neither the ease with which the leveled road could be constructed nor the seepage and flow of water that surely provided refreshment during ascent. The maximum degree of slope is ca. 32 degrees, but this was reduced to no more than 15 degrees, or 1 in 6, by gently traversing the hillside.

CONCLUSIONS

The analysis is not inconsistent with the theory that the vehicular road might have been in existence long before the construction of the Cappadocia Gate. The direct line of the road from the base of the Kerkenes Dağ past the large tumulus in the plain and thence directly to Alişar Höyük by way of Çadır Höyük very probably indicates the course of the road taken by the Great Kings of Hatti in the Late Bronze Age (pl. 10a). It is certainly not impossible that this route was in use in the Assyrian trading colony period, that is, in the Middle Bronze Age, and perhaps even earlier. The gradient of no more than 1 in 6, or 15 degrees, taken by the road is sufficiently gentle for solid-wheeled carts driven by teams of oxen to have hauled building stone, timber, grain, and other commodities up the mountainside from the plain below. There are other, much steeper tracks followed by grazing flocks and herds, but no better ways for beasts of burden to ascend. No other route for vehicles exists on this portion of the mountainside. Descent from the ancient city directly to Şahmuratlı village is much more easily made via the East Gate.

Comparison of plates reveals that surveillance of the wider territory to the south and east of Kerkenes was possible from the kale (pl. 14), and a more restricted view could be obtained from the towers at the Cappadocia Gate (pl. 12). The slopes below the southeastern defenses, including the road traversing the hillside up to the gate, were not visible. By contrast, plate 13—the combined viewshed from all the towers and the city wall along the southeastern stretch of the defenses from the Kiremitlik to the

⁴⁸ For the inaccuracy of least-cost path analysis using ASTER DEMs, see Branting 2007, pp. 91–94.

large tower to the east-northeast of the gate—shows that an assault on this sector could have been closely monitored. As the image shows, there is no significant difference in the territory observable from the wall and that seen from the towers. In both cases there is a large blind spot below the road where it makes a sharp turn to the southeast. In this area, however, the slopes are very steep and the terrain difficult to ascend. Plate 13 confirms that approach by caravans or an army from the direction of Çadır Höyük and Alişar Höyük would have been easily seen

long before reaching the foot of the mountain. It can therefore be concluded that in times of danger lookouts would have been posted not only on the front towers of the Cappadocia Gate, but also on the main towers, and perhaps on all the towers, along this portion of the city wall. It can be imagined that the number of lookouts varied with the seasons as well as with perceived levels of threat. There are, of course, implications for the manpower and organization required, but discussion of this matter is perhaps best left for a study of the entire defenses.

CHAPTER 3

EXCAVATION OF THE CAPPADOCIA GATE

GEOFFREY D. SUMMERS and FRANÇOISE SUMMERS

THE LOCATION OF THE CAPPADOCIA GATE

In general at Kerkenes, the line of the city defenses follows the natural topographic divide around the mountain as described in chapter 2. Outside the southeastern side of the city defenses the terrain is rugged, often dropping away steeply.⁴⁹ This restricted the options available for the positioning of the gate. An equally important factor in the location of the gate was the approach from the south. The broad road running at a gentle inclination up the hillside (see pl. 10) can be seen from afar. It is easily followed on foot but is not currently accessible to vehicles, primarily because of trees and bushes. This road, which in places can be seen to have been cut back into the hillside rather than being built up, was passable by wheeled vehicles such as would have been needed to bring sandstone building blocks, timbers, and other heavy materials up to the city. There is no evidence that the road's surface was paved before it reached the entrance passage of the gate, nor would a paved road be expected for use by unshod, cloven-hoofed animals, such as oxen drawing carts. None of the other six city gates is approached by an equally well-preserved and clearly visible road, perhaps in part because no other approach necessitated such extensive clearance of outcropping rock and cutting back into the hillside so as to make a reasonably level surface. When the gate was destroyed in the Iron Age, stone collapse blocked passage by wheeled vehicles. This evidence confirms that the broad vehicular road was used in the Iron Age; it

was not built or enhanced, nor used for vehicles, by occupants of the kale at some later period.⁵⁰

The base of the tower walls was examined at four locations: in the entrance passage; by the northeastern side of the Middle Tower (see sections 1a and 1b on pl. 85); at the inside junction of the rear façade and the North Tower; and at the back of the western corner of the North Tower. Additionally, the base of the external stone glacis was revealed along the sections that were cleared of fallen stones. In the entrance passage it was observed that the walls rest directly on ridges of bedrock that run across the passage's surface (see section 3 on pl. 86). Where subsoil is present between these ridges, no attempt was made to dig foundations to a lower level. As a result, the lower end of the southwestern passage wall had been partially undermined by water that had poured out of the stone-sided drain into the unlined channel in the lower portion of the entrance passage (see pl. 86, at bottom left of section 2). The front of the glacis rests not on bedrock but on subsoil that is damp throughout much of the year. On the southwestern side, brambles (*Rubus* sp.) growing between the face stones of the glacis, as well as mineralization of the soil and ground surface at the base of the glacis, attest to the perpetual seepage of water. A hard black or very dark brown deposit sometimes forms a pan on the surface of the subsoil, as well as within the clean clay that covered the base of the glacis and the lowest few centimeters of its face. As discussed below, this hardpan was very probably derived from eroded mud plaster applied to the glacis and wall face. It also formed on the lowest few centimeters of

⁴⁹ The relationship of topography to the city defenses, including the position of gates and towers, was studied by Nurdan Atalan Çayırezmez (2006).

⁵⁰ A possible Hittite origin for this road is discussed in chapter 2.

the glacis's face stones themselves along this stretch of the defenses. Patches of similar hardpan were found to have formed throughout the predestruction layers in the sondage dug against the inner, northern corner of the Middle Tower. A similar mineral deposit was noted where water seeps between the stones at the base of the glacis at the Palatial Complex. Most or all of this hardpan would have formed slowly over the last 2500 or so years.

In the sondage dug against the northeastern face of the Middle Tower (pls. 17 and 85; see pl. 60 for location), a ridge of bedrock was found on an alignment similar to that of the back wall of the tower (pl. 85, no. 15). However, when the tower was constructed this bedrock was buried beneath a thick, apparently natural layer of hard, dark-brown, clayey material containing rounded stones (pl. 85, no. 13). The foundations of the tower were dug into this deposit, which had every appearance of having accumulated in wet, boggy conditions. Excavation was halted at the base of this dark layer, on the surface of very stiff, orange, clay subsoil. The greater portion of the large stones used for the base of the tower wall sat directly on this hard orange clay. In section 1a on plate 85, the foundation cut, labeled 14, could be clearly seen; but the lower stones of the side of the tower shown in section 1b appear to have been set tightly against the edge of the cut. In the two places where the base of the North Tower was examined, a very similar situation could be observed, although here the natural layer above the orange clay subsoil was lighter in color and more sandy. It would thus seem that the plan of the gate was marked out on the ground in some way, and that a foundation cut was made into subsoil that was more or less level with the top of the bedrock ridges. The lowest course of wall stones was then set in position against the edge of this foundation cut. At the front of the glacis, where the East Tower meets the city wall, there was also a shallow foundation cut (pl. 18a), although the greater part of the glacis appears to rest directly on silty subsoil. Along entire exposed lengths of the glacis, on either side of the entrance, the basal stones of the face were propped at the desired angle by the insertion of small, no more than fist-sized stones under the leading edge (pl. 18b).

At the rear section of the gate, a small sondage was made into the top of the stone rubble beneath the threshold of the front façade. Here it was seen that the very loose rubble fill was more than 1 m deep. Thus, it seems that a considerable portion of the area where the gate was constructed had been leveled with large quantities of rubble thrown into depressions. Because the medium-sized stones were mostly angular, it seems likely that this stone came from the reduction of rock outcrops in the immediate vicinity of the gate. Beneath Rooms 1 and 2, on the western side of the rear section, was a stone-capped drain that was constructed after (the base of) the West Tower was built but before erection of the front and rear façades, both of which it runs beneath.

Taken together, the evidence outlined above might indicate that here there was a natural declivity through the generally abrupt topographic divide along the southern side of the hilltop. It is not difficult to imagine that, to create the large space required for the gate, it would have been easier to drain the boggy area, level rock outcrops, and fill in hollows than to reduce large areas of bedrock elsewhere in this southeastern section of the defenses.

On each side of the gate structure is a shallow pool, surely man made (pls. 4b and 6b). The pool on the southwest is fully visible, holding water through the spring season, while its opposing partner is today obscured by shepherds' walling, rubble, and the accumulated detritus from recent animal penning. These pools seem to be artificial not only because of their symmetric locations with regard to the gate but also because no natural pools with the same characteristics, notably the jagged rocky edges, have been observed elsewhere on the Kerkenes Dağ itself or on nearby granite hills. The extant pool is, however, surprisingly shallow at no more than 50 cm, with very little silt, and its rock-cut edges are very rough, quite unlike the neatly stone-lined Suluklu Göl.⁵¹ An additional reason for suggesting an Iron Age date for these features is the close similarity of the southwestern pool to a more elaborate rock-cut pool surrounded by stone-built walls and structures a short distance to the southwest; these structures seem to form part of a large public complex of some kind.⁵² Today both the pool to the southwest of the gate

⁵¹ For the Suluklu Göl, see G. Summers 2000, p. 62.

⁵² G. Summers 2000, pp. 65 and 62, fig. 6. The suggestion that these "public" features might lay within a military area remains possible but unsubstantiated, while the suggestion that the entire complex was unfinished is almost certainly incorrect.

and its near neighbor a short distance beyond hold water into early summer. While it is possible that the controlled collection of surface runoff might have extended their use, the main source of water at Kerkenes was underground seepage. If, as seems probable, there was considerably more groundwater at Kerkenes in the Iron Age than there is today, these pools might have retained water well into a normal summer.⁵³

THE PLAN OF THE CAPPADOCIA GATE

The major elements of the Cappadocia Gate (see pls. 62–65) comprise the three towers and walling strengthened by a steep external glacis at the front; the slanted entrance passage between the South and Middle Towers, the inclined surface of which leads to the southwestern side of the rectangular gate court; and the West and North Towers at the rear of the structure. The towers and connecting walling were built of granite with horizontal timbers in the wall faces and, at the top of the South and Middle Towers, sandstone embellishment. The glacis was built almost entirely of granite. The rear section was gated at front and back with pairs of large wooden doors housed in substantial timber façades. Between the sets of the doors was a central paved street with secondary rooms to either side. Presumably the wooden façades provided elevated walkways above the doors that would have permitted defenders to fire down from above while allowing movement between the two rear towers. Apart from the three rooms in the rear section, all of which seem to have been covered, the gate was open to the sky. The total depth of the gate structure, including the glacis, is ca. 34 m, the width of the front 38.8 m, and the width of the rear 30 m. Before examining each individual component in detail, it will be helpful to provide a general description.

On approaching the Cappadocia Gate from the inclined road leading up the side of the hill from the south, arrivals would have seen in front of them the tall walls of the city defenses, above which three

still higher, evenly spaced, solid towers projected forward (pl. 19, elevations on pls. 76–77). The lower portion, perhaps no more than one-third, was supported and protected by a steep stone-faced glacis (pls. 76–80, elevations 1–5). In the recess between the Middle and East Towers this glacis was preserved to its full original height of some 5 m. All of this was built of granite with, in the vertical walling, rows of substantial horizontal timbers set into the faces at approximately 1 m intervals (pls. 81–84, elevations 6–15). Thus, while the facing stones of the glacis were laid in a kind of cyclopean manner, the vertical walling was divided into horizontal bands by the strings of timber beams that imposed a rough coursing of the irregular stonework. There is evidence, described below, that all this masonry was covered with thick mud plaster that would have hidden the timbers and denied handholds and footholds. Certainly, the gate passage and court were rendered in this way.⁵⁴ The towers flanking the entrance were topped by an impressive embellishment of sandstone, brought to the hilltop from some distance, combined with wooden elements. The exact arrangement is not known. At first glance the impression given by the front of the gate would have been one of symmetry (table 1). On a second look, however, it would have been seen that the spaces between the three towers were occupied by different features. The road led directly into an entrance passage between the South and Middle Towers, which was matched by a recess between the Middle and East Towers. The passage was 6.6 m in width with a

Table 1. Measurements along the front of the gate

	Width (m)
<i>South Tower</i>	8.4
<i>Entrance Passage</i>	6.6
<i>Middle Tower</i>	8.4
<i>Wall</i>	6.6
<i>East Tower</i>	8.4
Total width	38.4

⁵³ We owe the observation that these pools are filled through subsurface seepage to hydrologist Mehmet Ekmekci. In the later twentieth century AD, regional groundwater has been lowered as a result of extensive pumping for irrigation and urban needs, and is perhaps also a reflection of global warming. For similar water collection in the Hittite period at Hattusa, see Wittenberg and Schachner 2012.

⁵⁴ The entrance passage of the Early Phrygian Gate to the Old Citadel at Gordion was also rendered with thick mud plaster. We are grateful to Kenneth Sams for pointing out to us areas of this plaster that still adhere.

drain running down along the entire length of the left side, the greater part of it stone lined. Looking straight ahead from the center of the gently inclined passage, the southeastern face of the West Tower with, to the right, the edge of the 12.8 m wide timber façade could be seen. Progress up the passage would have brought into view the impressive two-leaved doors in the front façade. If the doors were open, it would have been possible to glimpse the original stone paving of the street leading through the rear section to a second set of double doors in the rear façade with, at the far right corner, the life-sized limestone statue standing on its carved sandstone plinth (pl. 20a). This sculptural installation was walled off toward the end of the gate's life. The entrance passage and court came to be provided with stone paving laid in several stages. Yet more stone paving was laid on the city street behind the gate. At the upper end of the entrance passage where it opens into the Gate Court, immediately to the right against the inner face of the Middle Tower and set into the paving, was an aniconic granite stela, its top worn smooth by passing hands (pl. 20b). Across the court, in the opposite corner, stood a short flight of steps, its treads too narrow to climb, crowned by an uppermost step and semi-iconic idol cut from soft white stone. Sometime before the destruction of the gate, the pavement had been extended eastward so that it ran, with a slight bow, from the innermost corner of the Middle Tower to the southern corner of the North Tower and thus up to the foot of the stepped monument.

With regard to the enclosed rear section of the gate, each of the four doors was 1.7 m wide, the same width as the broad thresholds over which they would have opened. The pairs of doors would have opened inward and been barred from inside the rear part of the gate. When both sets of doors were open, fixed parallel to the towers, a good stone pavement, 3.7 m wide, would have been seen stretching between the two thresholds. In the final stage of development (see pl. 62) there were unpaved strips on either side of this central pavement that ran the length of the rear passage. To the left were two rooms of unequal size, Rooms 1 and 2, each entered from the passage by way of a narrow door adjacent to the front and rear façades, respectively. The northeastern wall of these rooms was constructed of small stones rendered with mud plaster, while a light roof was supported by wooden posts embedded in the walling. Concealed beneath the clean earthen floors of these

rooms ran the same stone-covered drain that debouched at the lower end of the entrance passage. At the far right, set obliquely across the corner formed by the back of the North Tower and the rear façade, stood a large sandstone plinth, on the front of which an opposed pair of crouching sphinxes, carved in splendid deep relief, supported an ornate statue sculpted from soft white limestone. This imposing sculpture and base were intended to impress. Sometime before the destruction, this side of the gate was also walled off to form Room 3. There seems to be no reasonable alternative to the conclusion that the sculpture was purposefully hidden from view by construction of this room, in which the surface was also of clean earth. Behind the rear of the gate, the stone-paved street was found to be ca. 6 m wide, approximately the same width as the entrance passage. A 1 m wide trench (TR30) traced this street surface for 10 m immediately to the northwest of the gate (see pl. 60 for location). Here it was seen that the large pavers immediately inside the gate soon gave way to smaller paving stones, which in turn petered out as the bedrock and hard subsoil rose to the surface. Apart from burned debris lying directly on the paving in the immediate vicinity of the gate, the street surface was clean. A thick deposit of clayey soil, perhaps denuded mudbrick that had washed in from structures some distance to the north, separated the Iron Age surface from the base of a curved animal pen, of which the single course of field stones ran up over the collapsed corner of the West Tower. It was not possible to date precisely the construction of this pen, although, as described in chapter 11, it cannot have been earlier than the abraded Byzantine sherds that occurred with some frequency in the upper deposit.

The plan of the gate and adjacent stretches of city wall should also be considered in relation to the extramural topography. The ground immediately in front of the gate is more or less level, with no visible outcrops of bedrock. Subsoil is sandy clay derived from eroded granite, which is hard when dry and very stiff when wet. Below this is a very stiff, bright-orange clay that fills fissures in the granite. The extent to which the area in front of the gate had been artificially leveled is uncertain because the making of the broad road leading up to the gate, which would have entailed considerable effort, possibly predates the construction of the Iron Age defenses by more than half a millennium. In the lower, front portion of the gate passage, some bedrock

protrudes a few centimeters through the subsoil and was left a little proud, even at a time when the most central portion of the lower end of the passage was leveled with makeup material, a few cobbles, and a spine of small pavers (see pl. 63). Seasonally running water necessitated underpinning of the wall on the northwestern side of the passage where the stone-lined drain debouched (see pl. 86, section 2).

Overall, the gate plan described above gives an impression of intended symmetry. This regularity is somewhat distorted by the angle of the entrance passage in relation to the main axis of the court and rear passage. This sense of symmetry was yet further diluted when stone paving was laid in the entrance passage and the court on an alignment that ignored the built structure. The four corners of the gate are approximately aligned to the cardinal points, with the central axis of both the gate court and rear passage being more or less perpendicular to the stretch of city wall at the northeast—a line that is itself determined principally by the orientation of the natural topographic divide along which the defenses run. The extent to which outcrops of bedrock also affected the orientation of the gate is unknown but hinted at in the base of the sondage excavated against the Middle Tower, as noted elsewhere. In the event of attack, defenders stationed on the tower tops would have control over all activity in the court and passage and be able to rain down missiles on any hostile force.

The sense of symmetry is best demonstrated with reference to the front of the gate (pls. 76–77, elevations 1a–1c). The total length of some 39 m is composed of three towers, each 8.4 m in length, divided by two spaces of 6.6 m each (see table 1). As described above, one space comprises the entrance passage, while the other is the recess between the projecting East and Middle Towers. A conjectural reconstruction showing the towers attaining a greater height than the stretch of wall between the East and Middle Towers would give an enhanced impression of proportionality. On the other hand, as set out in more detail below, original sandstone embellishment, possibly in the form of crenellated corners, was restricted to the Middle and West Towers. Some sense of regularity in the gate plan and alignment can be further discerned when the line of the northeastern face of the West Tower is extended to meet the western corner of the Middle Tower, as well as by the general symmetry of the West and North Towers. Measurements of the architectural elements

that made up the gate, particularly along the front as set out in table 2, suggest that if a standard unit of measurement was used it could have been ca. 40 cm. However, the irregularity of the walling makes precision impossible. As discussed in more detail below, the stepped monument and the semi-iconic idol that surmounted it are aligned with the northeastern side of the gate, so that the idol faced southeast. Thus, unlike the plinth and statue, the semi-iconic idol did not directly face the entrance passage.

STRATIGRAPHY AND PHASES OF CONSTRUCTION

There is very little archaeological stratigraphy at the Cappadocia Gate. It has nevertheless been possible to determine the order in which the original elements were constructed, as well as the sequence of some subsequent additions (pls. 63–65). With regard to the absolute date, however, no evidence was forthcoming that precisely fixes the time of initial construction other than the few pottery sherds described in chapter 9. These sherds are not inconsistent with a date in the middle or toward the end of the seventh century. By the same token, it has been impossible to date closely the different phases of stone paving laid in the gate court and entrance passage, or to determine precisely when the cultic monuments were installed. In the rear portion of the gate, the rooms to either side of the central passage are clearly secondary additions, with marked differences in wall construction which indicate that these rooms were not all built at the same time. Room 2 was built before Room 1, but the chronological relationship with the construction of Room 3 is undetermined. Similarly, the date proposed for the destruction of the city is based on wider historical considerations that, while highly probable, cannot be said to have

Table 2. Dimensions of the Cappadocia Gate towers

	Width (m)	Length (m)	Area (sq. m)
<i>South Tower</i>	8.4	8.0	67.20
<i>Middle Tower</i>	8.4	9.4	78.96
<i>East Tower</i>	8.4	8.8	73.92
<i>West Tower</i>	9.0	11.0	99.00
<i>North Tower</i>	9.0	11.0	99.00

been proven by excavations at the Cappadocia Gate. More positively, there is nothing inconsistent with the proposed dating of Kerkenes (Pteria) between its foundation as a new capital, perhaps no earlier than the second half of the seventh century, and its destruction during the course of the conflict between Croesus, king of Lydia, and Persian forces led by Cyrus the Great in, traditionally, 547 BC. A time span of possibly no more than sixty or seventy years, and in any case little more than a century, is entirely compatible with, but not certainly demonstrated by, evidence at the Cappadocia Gate.

THE ORIGINAL CONSTRUCTION

The core of the gate, comprising five towers, entrance passage, court, and rear passage, was constructed independently of the city wall which was butted up against both the South and East Towers (pls. 62–63). Possible evidence for phasing in the construction is presented in the detailed descriptions that follow. The interval between the building of the gate and erection of the city wall cannot have been great, because the glacis that envelops the entire front of the gate and the adjacent stretches of city wall was of a single build. Evident construction phases in the building of the glacis, described below, do not alter the conclusion that the gate, city wall, and glacis were built as a single scheme over a fairly short period of time. It is not impossible that the way in which the city wall abuts the South and East Towers is a result of conscious structural design whereby butt joints are easier to defend and repair in the event of a breach than bonded ones.⁵⁵

The huge façades, in which great pairs of doors were housed at either end of the wide rear passage, were an integral part of the military architect's original conception. This observation is not negated by the observation that the façades were built after the West and North Towers they abut. These two façades must belong to the original design, for it can hardly be imagined that it was not possible to close the gateway. Broader implications of design and function of the gate are discussed in the concluding chapter. Pertinent here, however, is that prior to the laying of the stone footings of the façades, a stone-capped drain was built through the southwestern side of the rear passage, before it curves around the eastern corner of the West Tower and extends for

the entire length of the slanted entrance passage (see pl. 62). There is no indication of any interval in time between the making of this drain, the laying of the stone footings of the façades, and the leveling of the area with granite rubble and clean sandy fill. The stone paving between the front and rear façades was set directly on top of this same leveling material and appears to have been the primary surface in this section of the gateway.

With regard to the plan (see pls. 62–65), the interior of the gate may usefully be thought of as an extensive rectangular court with large recesses on the southeastern and northeastern sides. The western side of the gate comprises two rectangular towers, the South and West, together with a section of wall linking them. The front of the South Tower measures 8.4 m, slightly more than its depth, while its slanted northeastern side forms the front section of the passage sidewall. The West Tower measures approximately 11 × 9 m, the longer side being parallel with the main axis of the gate. These two towers are joined by a section of wall that varies in width from 4 to 5 m and has a slight kink in its southwestern face. The city wall abuts the southwestern wall of the South Tower, by which point the unusually narrow stretch of curtain wall was reduced, after a kink in the inner face, from a width of 4 to just 3 m. The possibility that stairs leading to the wall top were located here was investigated in CT52 (see pl. 60 for location). No stone steps were found, but the possibility of wooden stairs cannot be completely discounted. Excavation here was quickly discontinued when it was found that face stones had slipped forward and would need to be removed. The eastern side of the gate comprises three towers, the Middle and East at the front and the North Tower at the rear. The southwestern wall of the Middle Tower forms the side of the entrance passage. Walls linking the East Tower with the North and Middle Towers are both 5 m in width. The northeastern side of the East Tower is abutted by the city wall, which is here the usual 4.5–4.8 m in width. No internal structural or other features have been seen within the walling. Thus, while it is clear that on both sides the city wall abutted the gate, stretches of wall linking the gate towers were bonded with the towers.

⁵⁵ Lawrence 1979.

MATERIALS

The Cappadocia Gate and adjacent stretches of city wall, and indeed the entire defensive circuit, are built entirely of granite, with the exception of sandstone blocks used at the top of the West and Middle Towers and occasionally elsewhere (pls. 76–77, elevations 1a–1c). In earlier reports, it was suggested that the visual effect of the freshly cut silver-gray granite gleaming in the sun would have been stunning, resulting in the city's being clearly seen from several days' march away to the south and southeast and from a considerable distance in most other directions. However, as described below, there is now strong evidence for the rendering of wall faces with mud plaster, not only within the gate but also, most probably, on the glacis and outer wall face. While not as bright and gleaming as freshly quarried granite faces, the pale mud plaster would also have reflected the strong sun, thus making the defenses clearly visible from far away.

For the most part, the granite would have been obtained from the immediate neighborhood of the defenses, much of it presumably being split from standing outcrops of jointed bedrock, in such a way that the building of the defenses went hand in hand with the modulation of interior urban space. Granitic rocks at Kerkenes show considerable variation, in layman's terms, from fine-grained to coarse, with some examples of the latter occasionally containing abundant feldspar crystals, sometimes as much as a centimeter in length. There is also considerable variation in the extent to which granite had naturally decayed as a result of exposure to the elements over geological time. Casual observation of the granite stones used in the construction of the gate reveals noticeable variety, with no indication of selective quarrying. No evidence has been found of granite quarries in or around Kerkenes. This last observation is hardly surprising when the pre-city landscape is considered. The high ridge to the northeast of the city, as well as several prominent rock outcrops to the southeast, are characterized by barren tors that allow visualization of how the greater part of the mountaintop must have looked when it was selected for the city (pl. 21a). Natural jointing of granitic rock

is such that the stone tends to fracture along planes, resulting in many blocks having one or more flat surfaces, thereby making them ideal facing for the glacis. Dry-stone walling and glacis facing were skillfully laid by fitting stones together in such a way that the glacis face is constructed in a kind of cyclopean style. Voids were chinked.

The second type of building stone used at the Cappadocia Gate is a local Eocene sandstone that is mostly pale brown or tan, but can be pale green in color.⁵⁶ The sandstone selected for use at the Cappadocia Gate is quite fine grained and contains fossil holes made by boring molluscs. When wet, this sandstone is fairly soft and easy to work, but it hardens as it dries. When burned in oxidizing conditions, it turns a bright pink, providing evidence of the incorporation of timber in construction. Although the precise source of this "Yozgat Taş" (Yozgat Stone) is not known, sandstone outcrops are common in the region around the Kerkenes Dağ.⁵⁷ Sandstone blocks were found lying directly on the ancient ground surface beneath the rest of the collapsed stone in front of the Middle and West Towers, with some pieces in the recess between the Middle and East Towers, evidently in association with wooden beams. Further pieces were found in the lowermost collapse in the gate court, having obviously fallen from the top inner corners of the Middle Tower (pls. 21b–22, 69). With the exception of two pieces cut to fit an awkward space on the corner of the passage and glacis in front of the Middle Tower (on which the graffiti described in chapter 6 were inscribed), sandstone was not selected for use elsewhere in the gate structure, the adjacent stretches of city wall, or at the buttress to the south. However, a very few pieces were casually incorporated into walling, providing important evidence that the use of sandstone for embellishment of tower tops at the front of the gate very probably belongs to the original scheme of construction, with a few blocks that were surplus to requirement finding their way into the walling. The larger and more complete blocks that were found at the front of the gate were measured, and their different surface treatments noted. This study was done in an attempt to discern standard units of measurement or indications as to how the blocks were

⁵⁶ The greenish tinge is derived from the breakdown of serpentines.

⁵⁷ A much wider variety of sandstones, conglomerates, and soft limestones has been found at the Monumental Entrance to the Palatial Complex at Kerkenes. Sandstones and limestones were found in the same beds and were brought from the same unidentified quarry or quarries. Large pieces of sandstone used in Şahmuratlı Köy during the recent past are said to have come from Dişli Köy, a village located some 7.5 km to the north. For the local geology, see Sirel 1998, Erler and Göncüoğlu 1996, and Dirik and Göncüoğlu 1996.

arranged.⁵⁸ It was not possible to recognize standard measurements or find any pattern in the distribution of smoothed surfaces. It does, however, seem to have been the case that the majority of blocks had no more than one smooth face. As noted above, sandstone blocks in the court and the inner portion of the entrance passage had fallen from the inner corners of the Middle Tower. Pulling together these observations, the most plausible reconstruction is that sandstone crenellations were built on the four corners of the Middle Tower and on the two front corners of the South Tower. It is also possible that there was a sandstone coping to a parapet, and perhaps a central crenellation on the front of both towers. Evidence of burning makes it clear that some sandstone blocks were used in combination with wooden elements, and it is not impossible that sandstone and timber projected beyond the granite walling. Absence of sandstone from the East, West, and North Towers might demonstrate some limitation in availability of this material, which it would have been necessary to haul up to the gate from the plain below.

A third type of stone was used for the topmost step of the built stepped monument erected inside the gate, as well as for the semi-iconic stela that stood at the top, as described in chapter 5. This is a distinctive soft, white tuff containing many small voids, so that cut surfaces are full of holes. In terms of weight, it is comparatively light. The stone was presumably selected because of its striking white color, as well as for the ease with which it could be worked.⁵⁹ Stone of this kind is also found in local Eocene deposits, the ash apparently having fallen into shallow water.⁶⁰

The other structural material employed was timber. As described in more detail below, horizontal beams were used in the faces of all the walls of the gate. Additionally, the two façades were also built of wood, with stone rubble filling. Analysis of charcoal by Reinder Neef has shown that conifers, both pine and juniper, together with deciduous oak were used for construction.⁶¹ Charcoal found in or associated with wall faces was commonly black pine (*Pinus nigra*), which is readily identifiable by its broad rings.

No wood from either the door frames or from the doors themselves seems to have been preserved, but it is likely that architraves, lintels, and thresholds, as well as the door posts, would have been made of juniper wood. Today oak trees abound on the rocky slopes of the Kerkenes Dağ, while conifer is found at the Yozgat National Park. Conifers, oaks, and other deciduous trees grow on the wooded ranges of the Pontic foothills to the north. No promising samples of carbonized wood large enough for dendrochronological dating were recovered, although pieces were carefully lifted from the front portion of the gate passage in 2000 and in TR03 during excavation in 2002. Peter Kuniholm and his team examined additional charcoal pieces during excavation of TR12 in the gate passage in 2003.

Examination of the glaxis and the wall face behind it at the junction between the East Tower and city wall was possible where the glaxis was found to have collapsed before or during the destruction. Here, in TR25, clearance confirmed that horizontal timbers had been placed along wall faces below the top of the glaxis in exactly the same manner as in other stretches of walling (pl. 23).

The only evidence for the possible use of mudbrick anywhere in the gate structure came from the base of the collapse behind the Middle Tower in the gate court (pl. 24a; pl. 87, section 4c). In the photograph of a portion of the section, it is possible to discern clean silt immediately above the paving stone, on top of which is a thin dark burned layer. Above this there is a heap of variously colored blocks and lumps, including one that is dark from burning, below lighter mudbrick-like pieces. On further excavation it was found that this deposit was very restricted in extent, and greatly distorted by the heavy fallen stones on top of it, but that it had fallen from the center of the Middle Tower. No similar brick-like collapse was found anywhere else inside the gate or in front of it. It is probable that this fallen material represents some sort of shelter built near the back of the tower's top, perhaps between the sandstone elements. The distance of this collapse from the face of the tower, seen on the section drawing, might suggest that this brick-like material formed the upper

⁵⁸ This exercise was done by Nilüfer Yöney in 2000.

⁵⁹ This stone has superficial, but surely significant, similarities with the white poros used for sculpture and architectural elements at Gordion (Sams 1989, 1994).

⁶⁰ Personal communication from geologist Nuretdin Kaymakçı.

⁶¹ Dörfler, Neef, and Pasternak 2000.

portion of a stone wall. It can well be imagined that such a structure would have caught the first flames, so that part fell into the court as the wall face began to give way.

All wall faces in the entrance passage and court, as well as the tower and façade walls in the rear section, were coated with mud plaster. In many places the lowermost exposed courses of masonry above the burned surfaces were found to have one or two coats of mud plaster still adhering (pl. 17; pl. 85, no. 10). The first coat comprised a very stiff dark-brown-to-orange gritty clay, while the second was made of an untempered light yellow clay. Removal of this plaster revealed voids between the larger stones. Where small stones had been used as chinking, they were often very loose—evidence which confirms that no bonding material was used within the wall itself. It is less clear whether mud plaster was present on the secondary walls built to form Rooms 1, 2, and 3 on either side of the central pavement in the rear section of the gate. Nor is it certain that tower wall faces within these rooms were rendered with a second coat of mud plaster. Evidence that the mud plaster extended all the way up to the tops of the walls in the gate court was found in the form of thick clean silt that had accumulated in the gate court. This gradual accumulation of silt came to cover completely the protruding packing stones around the base of the aniconic granite stela set up by the northwestern corner of the Middle Tower (pl. 24b–c; pl. 87, section 4c). Additionally, the steps of the stepped monument in the court may have been coated with mud plaster, although the fine clayey covering could just as well have been washed from the face of the tower wall.

There are several reasons to think that the entire outer side of the defenses, both glacis and walling, were mud plastered. Such rendering of the surfaces would have covered the cavities and chinked gaps between face stones, as well as hiding the weak points where small stones secured and obscured horizontal wooden beams. Obvious handholds and footholds would have been denied to an enemy attempting to scale the walls. Evidence for mud-plaster rendering was also noted at the base of the glacis, where a layer of fine clay several centimeters deep

was found to lap over the base of the glacis facing. It must, however, be admitted that no rendering was found adhering to the glacis face.

METHODS OF BUILDING AND STAGES OF CONSTRUCTION

The Cappadocia Gate was built to a preconceived and well-thought-out plan. Corners would have been marked in some way and alignments made by eye during the process of removing soil in order to found walls and towers on bedrock. The size and irregularity of the stones used in the construction, particularly for the corners, would have negated any need for great accuracy in the placement of stones, although surfaces of some stones were trimmed with hammers or pointed tools (pl. 25).

In summary, the South and West Towers, together with the stretch of passage wall linking them, were built as a single bonded unit, as were the three towers and linking walls on the opposite side. On both sides of the gate, the city wall is butted against what was built as a freestanding gate. Such abutting of curtain wall against towers and gate, apparently used throughout the defenses at Kerkenes, was in the best traditions of ancient western architecture, the reason supposedly being that if the wall was breached it would not drag the towers down with it.⁶² The stone glacis that clads the front of the gates, towers, buttresses, and city wall was, by contrast, all of a single build, in which stages of construction are sometimes discernible. Reference to the illustrations of the side walls of the passage (pl. 81, elevation 6; pl. 84, elevation 15) reveals that the base of the vertical walling of the tower fronts was founded on bedrock and firm subsoil.⁶³ Similar evidence was found in the sondages dug against the northern corner of the Middle Tower and the inner face of the North Tower.

STONE-WORKING TOOLS AND TECHNIQUES

The two types of stone used for building, granite and soft sandstone, have very different properties. These required different methods of working with different

⁶² Lawrence 1979, p. 85.

⁶³ In some sectors of the city defenses at Kerkenes, particularly on the southeastern and eastern sides, the base of the glacis appears to form a kind of revetted scarp whereby the glacis clads the bedrock below the base of the city wall. It is also relevant here that the base of the northern tower in Structure A, at the eastern end of the Palatial Complex, does not extend as far as the base of the glacis but rather begins within the rubble terrace on which it stands.

sets of stonemason's tools. Stone working and fitting were well accomplished. On the other hand, the generally low quality of finish on faces serves to emphasize the rapidity of construction, with minimal attention paid to detail. The final smooth finish to wall and glacis faces was, as noted above, very probably attained by rendering with mud plaster rather than by any attempt at close fitting. Because the granite is naturally jointed, tending to cleave along smooth planes, attaining reasonably flat faces to the glacis and walling stones does not seem to have required undue exertion.

The extent to which granite stones were roughly trimmed to fit is unclear. Watching stonemasons engaged in reconstruction of the glacis in 2010 showed how relatively easily an experienced craftsman could shape a stone to fit into a predetermined space with no more than a few well-aimed blows with a heavy iron hammer. Such rough shaping does not leave obvious identifiable traces. Faces of some granite blocks in the glacis and elsewhere were, however, flattened by pecking, presumably with iron hammers or points. Pecking marks can be seen in raking light, particularly on unweathered stones in the entrance passage, but also on the impressive basal slab at the southern corner of the glacis in front of the Middle Tower. The same technique was employed to shape the aniconic granite stela set up by the Middle Tower (pls. 24b–c), as described in chapter 5. Complete absence of stone hammers of the kind well known from the Hittite Empire period surely confirms that the tools used to shape granite at Kerkenes were of iron.⁶⁴ At the Cappadocia Gate, there are no traces of the smooth pecked finishes and precise jointing seen at the Monumental Entrance to the Palatial Complex or of the chiseled edges seen in the Ashlar Building.⁶⁵

Softer sandstone was worked with a different set of tools. These included broad-bladed chisels and mallets, as well as a single-pointed tool and perhaps an adze. Some faces also seem to have been smoothed by abrasion. Blocks fallen from the tower tops show very different finishes on faces of the same stone. On many of these blocks a single surface appears to have been smoothed, but there is no indication as to whether it was the top or the front. The entire range of toolmarks visible on sandstone, varying from very coarse pick to smoothing, can be

seen on the plinth with sphinxes carved in relief, as well as on blocks with graffiti, as recounted in chapters 5 and 6. No evidence has been found for the use of saws, or of clawed chisels. In contrast to the Monumental Entrance to the Palatial Complex, there are no clamp cuttings at the Cappadocia Gate, nor are there mason's marks.

WALLING

Drawn elevations of the wall faces inside the gate begin with the northeastern face of the passage (pl. 81, elevation 6) and proceed around the northeastern side of the structure to the southwestern face of the North Tower (pl. 83, elevation 12). Wall faces on the southwestern side of the structure begin with the northeastern face of the West Tower (pl. 83, elevation 13) and end with the southwestern side of the passage (pl. 84, elevation 15). Because wall faces often had to be repaired in the course of exposure, were sometimes dismantled as the rubble was removed, and occasionally collapsed, there was no possibility of making a complete wall-by-wall photographic record that matches the drawings. Almost all areas of wall face were photographed as they were exposed, with measured points marked for photographic rectification. It was from these photographs that the drawings were made using Aerial software. External wall faces—that is, the northeastern face of the North Tower and stretch of connecting wall, and the adjacent corner of the East Tower and its junction with the city wall—were exposed only as far as the general level of the ground surface. These have been recorded with photographs and show a selection of wall faces that progress in the same direction as the drawn elevations. The photographs begin at the western corner of the Middle Tower, with the aniconic granite stela still in situ and before the stones above the first horizontal timber beam fell (pl. 26a–b). The next photographs (pl. 27a–b) show walling in the gate court. Before it was possible to excavate down to the floors and surfaces, it was crucial to remove those upper face stones that had slipped forward far beyond the wall lines of the North and West Towers (pls. 28–29). Plates 29–30 show the face of the West Tower together with parts of both the front and rear façades, as well as the walls of Room 1. The corner that had been formed by

⁶⁴ For Hittite stone hammers, see Seeher 2009, pp. 125, 127–29.

⁶⁵ Draycott and Summers 2008, pls. 8a, 9a; Stronach and G. Summers 2003.

the top of the entrance passage and the West Tower before the tall, precariously preserved walling collapsed is shown on plate 30. As described elsewhere, the glacis was constructed against the vertical faces of the towers and city wall. Nowhere is this better demonstrated than at the front of the entrance passage shown on plate 31a.

With regard to the external wall faces of the gate, there has only been exposure on the northeastern side, along the northeastern face of the North Tower and the wall connecting it to the East Tower, together with a short stretch of city wall that abuts the East Tower (pls. 31b–32). Here wall faces were only cleared of fallen stone as far as the modern ground surface. Shepherds' structures built against the Iron Age walls were removed, but the shepherds' walling on top of the original masonry has been left as it was. The same use of horizontal timbers in wall faces is observable in the photographs, but the uppermost preserved Iron Age facing has not slipped forward, perhaps because the beams here had not burned away. Unless there is a sharp rise in the level of the underlying bedrock, it can be expected that some 2 m or so of walling is still buried.

Walling of the main gate structure was vertical, without battering or the stepping back of courses. The walls were constructed by first laying a course of face stones, then filling the core with a layer of loose stone before raising the face again. Large stones, often more or less rectangular, were selected for the corners, while wall faces, unlike the glacis face, are roughly coursed between horizontal strings of timber beams. In general, the size of face stones varies considerably. As the size of collapsed stones in the sections through the court and entrance passage shows, there was no general diminution in the size of stones used in the upper portions of wall faces (pl. 86, sections 2 and 3). Facing stones, although not cut to shape, were tightly fitted and sparsely chinked where necessary. As to the core of the walls, stones of all sizes were used. Inclusion of a large quantity of stones smaller than a fist might be partially explained by the fracturing of naturally weathered stone as it was quarried, as well as further shattering as it was thrown into the wall core. It was, however, observed that when, in 2010 and 2011, workmen were adding new courses of stone

to the tops of excavated walls, they would fill voids between the larger stones in the core with similar small stones to provide greater stability. No wood seems to have been used within the core of the walling.⁶⁶ A packing of small stones and, where traces of mud plaster were preserved, burned clay was associated with voids created when the beams burned. Thus, it would seem that rounded or partially rounded beams were wedged in place with small stones. Burning had frequently blackened the wall stones on which the timbers lay, as well as the small stones and clay packed around them, and caused many of the face stones to crack. These lines of small stones associated with often intense burning can be seen in all the wall elevations.

Turning now to the façades and the walls of Rooms 1–3, it is convenient at this juncture to illustrate their considerable difference. Walls forming Rooms 1 and 2 were constructed entirely of stone. On plate 33a it can be seen that the wall forming Room 1 butts against the corner of Room 2, while plate 33b shows the dry-stone style. Showing the opposite side of the rear section of the gate, plate 34 documents the poor timber-framed wall in the southeastern half of Room 3, showing the disparity in the sizes of the stones employed, as well as the mudbrick and the burned-out vertical timbers where the wall was built against the front façade. Finally, plate 35 shows two views, one from either side, of the southwestern end of the front façade.

DESIGN OF THE DEFENSES

The line of the city wall generally follows the crest of the topographic divide around the top of the Kerkenes Dağ (see pls. 1b–3a). At the Cappadocia Gate this divide makes a sharp turn, with the result that the north–south stretch of walling and associated buttress turns abruptly to the northeast, where it is pierced by the gate. The location of the gate itself, as already discussed, seems to be related to the approach from the south as well as to the topography of the divide, where there was a natural declivity. To the northeast of the gate, the city wall again follows the topographic divide along a slightly curved stretch to a large tower.

⁶⁶ At Gordion, timbers were used in the core of the Early Phrygian gate and also as a foundation for the later Iron Age defensive walling on the New Citadel. However, these citadel defenses were constructed on several meters of earlier mound formation where timber framing or a broad timber base would have provided the stability needed to prevent subsidence. Subsoil and bedrock at Kerkenes did not require such measures. See Burke 2012; Kuniholm and Newton 2011, pp. 107–08, 112–13.

For much of its 7 km length, the glacis appears to have stood ca. 4 m tall, as indeed does the exposed section to the west and south of the gate. Generally the wall is some 4.2–4.8 m in width, being preserved to approximately the same height as the original top of the glacis. A conservative estimate for the total height of the city wall might be 8 m, an estimation that is not inconsistent with the amount of fallen stone to either side of the wall, and particularly on the outer side, where fallen stone very largely obscures all but the topmost of the preserved glacis stones. Had there been regular crenellations along the wall top, some evidence would surely have been found in the fallen debris, even had they been made of mudbrick. It might therefore be imagined that a granite parapet wall of dimensions that afforded protection, on the one hand, and could be fired over with a bow, on the other, ran around the wall top. The surface of the fighting platform behind the parapet and on top of the wall was, in the absence of evidence for anything else, most probably made of evenly spread granite chips.

The buttress on the stretch of wall to the south of the Cappadocia Gate is ca. 7 m long and projects forward some 3 m. As recorded, it is not quite square to the wall, but it could very well be that the visible cornerstones have slipped out of position (pl. 58; pl. 89, sections 6 and 7). The term “buttress” has been used because of its comparatively small size. Other towers that have been recognized along the defenses are significantly larger, always projecting forward for at least the same distance as their width and sometimes considerably farther, for example, along the northern section of the western wall. It is possible that there are more buttresses of the same general size and proportions as the one described here, but none have so far been recognized. Where details can be discerned without removing rubble, it can be seen that towers are butted against the face of the city wall (not bonded into the wall). It is not clear whether this buttress was built against the wall face or bonded with the wall. Resolution of this question would require the removal of a substantial amount of stone that has been disturbed by

shepherds to make a level platform on the preserved top of the buttress.

With regard to the gate itself, it is not known whether the five gate towers stood higher than the short stretches of wall that link them. In the center of the niche between the Middle and East Towers, the glacis is preserved to its full original height of 5 m. The amount of fallen stone, as well as the general proportions that might be expected of such massive defensive systems, suggests that the walls of the gate would have stood at least as tall again, making for a minimum height of 10 m, and very possibly 12 m or more, with a parapet wall rising yet farther.⁶⁷ Blocks of sandstone found at the foot of the glacis had fallen from the top of the parapet wall of the Middle and South Towers. Evidence of fallen sandstone from the back of the Middle Tower shows that sandstone was only employed at the corners, but, as noted above, it is possible that sandstone was used along the entire front of these two towers, perhaps with crenellated corners. The sandstone blocks are not all of the same size, and they do not conform to any consistent set of measurements that would permit the reconstruction of battlements. Each stone shows evidence of differential treatment on its various faces, with some faces having fairly coarse marks made by a broad blade, some displaying finer tooling, and some being smoothed. However, it has not been possible to use these details to suggest possible arrangements of the stones, and it is not known which face—outer, inner, or top—was smoothed. One of these blocks, a large shattered greenish piece, currently lies at the base of the South Tower, on the eastern side of the tree. Some blocks have been removed to the stone depot at the excavation house, while others have been stacked a little outside the gate structure. None of these sandstone blocks from the parapet wall have clamp cuttings, pry holes, or similar features indicative of quarrying or construction methods. The absence of clamp cuttings may have chronological implications.⁶⁸

It is plausible that there were structures on top of the gate towers that would have provided shelter and shade; possible evidence for some minor

⁶⁷ By way of comparison, the earlier stone-built gate to the citadel mound at Gordion is preserved to a height of 11 m.

⁶⁸ Dovetail or swallowtail clamp cuttings for wooden clamps were used in the masonry of the entrance to the Palatial Complex at Kerkenes. For a preliminary discussion of their chronological and cultural implications, see G. Summers 2006b, to which should be added earlier examples known to the writer: cuttings with holes seemingly to receive an iron clamp set in lead at either end, one indicating a corner and not therefore secondary, of a Neo-Hittite relief orthostat said to be from Harran and now in the Urfa Museum; and dovetail cuttings on either end of the block inscribed with Luwian hieroglyphics from Porsuk that is on display in the Niğde Museum. Farther afield is a lead-filled dovetail clamp found at Khorsabad and on display in the Louvre.

construction on the inner side of the Middle Tower has already been mentioned. Yet another issue is access to the top of the towers and city wall; but, to repeat, while there must have been steps or stairs, very possibly made of wood, to the wall top, no trace of stairs has been found at any point along the defenses.

CONSTRUCTION OF THE MIDDLE AND NORTH TOWERS

There is no reason to doubt that the detailed evidence for the construction of the Middle and North Towers set out below applies to the construction of the entire gate. The five towers and the broad walls that connect them were constructed at the same time and in the same manner. At the front of the gate there seems to have been a deeper buildup of sterile sandy clay with an admixture of field stones that had to be dug away in order to found the structure on rock and hard subsoil, whereas at the more elevated inner end, bedrock and subsoil appear to have been very close to the surface.

The TR13 Sondage against the North Corner of the Middle Tower

At the end of the 2011 season a sondage was excavated at the northern corner of the Middle Tower (see pl. 60 for location) to investigate prepavement surfaces and the wall foundations. Surprisingly, this operation reached a depth of 2.6 m. Nevertheless, there were no finds of any kind, all indications pointing to the court's having been kept clean despite the gradual accumulation of silt. As can be seen in the sections (pls. 17 and 85; the numbers that follow Unit designations here refer to the levels shown on pl. 85), granite bedrock (U35, no. 15) was reached at the base of a natural layer of dark gray silty clay that contained rounded field stones (U32, no. 13). This gray silty clay had been dug away so that the bottommost stones of the tower rested directly on the bedrock (U35, no. 15) or on stiff orange clay (U33) that has formed in fissures in the granite. Pushed up against the edge of the eroding granite (U35, no. 15) was the large basal cornerstone, 1.4 m tall, which had been specially selected. The foundation cut was filled with soft gray sand and packing stones (U37, no. 14). The first horizontal timbers were set in the wall face approximately 2 m above the base of the wall, on top of the second stone. The construction surface (U31, no. 12) was

traced across the entire sondage. On top of this was a deep layer of silty clay fill with inclusions of material that resembled mud plaster. This fill or makeup layer (U30, no. 11) attained a depth of ca. 60 cm in the southeastern section. The top surface of this fill lapped up against the wall face and was demarcated by a hard iron pan (U31, no. 12). That this surface marked the completion of the gate was indicated by the stiff orange mud plaster (U36, no. 5), which was used to render the wall from here upward. A series of striated surfaces (U26 and U27, no. 8) was 30 cm thick at the corner and almost 50 cm in the southeastern section. It appears that the level was then raised again with a mixed deposit of clay and sand containing small stones and patches of plaster (U24, no. 7). Apart from a single small, undiagnostic body sherd, this layer was also devoid of pottery, animal bone, or other finds. Between U24 and U23 (nos. 7 and 4), but not extending to the trench edge, was a clean brown clay, U25, that very probably represents the application of a second coat of mud plaster; but, if so, none was recorded over the orange plaster at the corner. Almost immediately another similar layer, U23, raised the level yet farther. The stone pavement, which here was an addition to the main pavement installed after construction of the stepped monument, appears to have been laid directly on top of this fill, although it is possible that deposits might have been scraped away. Against the edge of the pavement was a striated layer of surfaces and silty wash (U22, no. 2), the top of which was burned. As more of this layer, probably composed of mud plaster, washed from wall faces, it accumulated at the southern end of the slope, so the incline was gradually diminished.

The TR23 Sondage against the Southwestern Face of the North Tower and the Rear Façade

At the northern corner of Room 3, in TR23, advantage was taken of the hole dug beneath the relief-sculpted plinth in the process of its removal to make a sondage against the southwestern face of the North Tower and foundations of the rear façade (pl. 36a–b). Here, too, there was a sterile silty deposit, U49 (above scale on pl. 36a), ca. 50 cm thick, above stiff natural orange clay (U26 and U46, beneath scale on pl. 36b). The silt and the top of the clay were cut by a foundation trench for the tower wall, which was filled with smaller-than-fist-sized granite and a pale-brown-to-yellow sandy clay, the same

composition as the leveling material above (U25). Around the corner, against the northwestern face of the tower, the foundation cut (U45) was seen to have been dug into the orange clay (pl. 36c-d). On top of the sterile silt was a 30–40 cm thick layer of clean, yellowish sandy clay and angular granite stones that were more or less horizontal and generally ca. 40 × 35 × 10 cm in size (U25, seen across the left side of the section on pl. 35a). This leveling material appears to have been put down across the entire rear section of the gate, because on the opposite side of the central pavement it was found to have raised the level to that of the top of the drain capstones. The lowest stones in the tower face were set ca. 5 cm farther forward than the courses above. This is the only occasion that such a projection has been seen in any of the Iron Age masonry at Kerkenes. Where the section was dug against the wall face, the total preserved height was 2.6 m. The projecting bottom course was 50 cm in height; above it were two more stones (pl. 36c), making a total height of 1.8 m from the base of the foundation to the first horizontal beam in the wall face.

In contrast to the built stone walls with regular horizontal beams set in the faces of the towers, the front and back façades appear to have been timber structures supported by substantial stone footings. The stone footings and timbers at this end of the rear façade seem to have been set into a foundation trench dug into the makeup layer. The stone footings of this façade were not built with distinct vertical faces, as the tower walls had been, but were made by tipping stone rubble into the rounded trench and placing the timbers as required in the process. Thus the sequence of construction appears to have been as follows: first, the North Tower was built directly on and partially cut into stiff natural clay and, presumably, bedrock; next, a leveling of sand and granite was laid; finally, the foundation trench for the northeastern end of the rear façade was dug and the timber frame erected as the stone rubble footings were laid. At the junction where the northeastern end of the façade was built against the southwestern face of the North Tower, there appear to have been two squared posts resting on a transverse sleeper beam, the latter placed within the stone footings above the level of the makeup layer (U25). These

wooden elements would seem to have completely burned away. A single coat of brownish mud plaster was found adhering to both the tower and the façade. This plaster did not extend below the hard, partially burned floor surface of Room 3.

DETAILED DESCRIPTIONS OF ELEMENTS OF THE CAPPADOCIA GATE

In the sections that follow, each discrete element of the Cappadocia Gate is described. The drain is dealt with at the start because it was constructed first. Thereafter, the order of treatment is from the front to the back, because the design of the gate structure and the positioning of the cultic installations within it were obviously related to entry into, rather than exit from, the city.

THE DRAIN

Drainage of runoff from behind the gate was a necessary priority in the sequence of construction because it would have prevented the buildup of water behind the structure and consequent downslope pressure on the foundations of the West Tower (see pl. 62). That the drain was not larger reflects the runoff pattern immediately inside the gate, which was situated on or close to a topographic crest.⁶⁹ Furthermore, although the topography behind the gate cannot be reconstructed in detail, the slope directions are such that there would have been no need for a similar drain on the northeastern side. How water was directed into the drain in the area behind the gate is not known, but it would have been essential to ensure that detritus was prevented from entering the covered channel and blocking flow.⁷⁰ The base of that portion of the drain that ran beneath the rear section of the gate must have been at a sufficiently steep incline to prevent the buildup of silt, because should the drain have become blocked it would have been necessary to remove flooring and capstones in Rooms 1 and 2 in order to clear it. There was no indication that such cleaning had ever been necessary.

For most of the length of the drain, its sides were constructed of medium-sized, unshaped, angular

⁶⁹ For drains through gates relieving the pressure of seepage on a slope, see Lawrence 1979, p. 270.

⁷⁰ A drain of similarly small proportions was found at the back of the rear façade of the Monumental Entrance to the Palatial Complex (Draycott and Summers 2008, pl. 4).

stones (pl. 37a–b). Only at the lower end of the passage, where water was perhaps undercutting the passage wall, were substantially larger stones employed, possibly as part of a repair. Beneath Rooms 1 and 2, larger stones, up to 40 × 30 × 20 cm, were used to cap the channel, whereas the upper part of its course in the gate court was covered with somewhat smaller stones that were, at the same time, part of a late stage in the secondary paving in the upper part of the court. There is no stone base to the drain where it runs through the court and passage. Because none of the capstones were removed beneath Rooms 1 and 2, it is not known if this portion was provided with a stone base. Where the drain passes beneath the front and rear façades, large stones were carefully selected to carry the foundations over the channel, indicating that construction of the drain and the façades was done at the same time (pl. 35b).

THE GLACIS

The glacis has been revealed to its base from the center of the buttress to the entrance passage, with only the section behind the wild pear tree in front of the South Tower left buried. To the northeast of the entrance passage, the glacis was exposed along the entire front to the gate, together with a small portion of the city wall beyond the East Tower. A series of photographs documents the face as it was uncovered in the 1999 and 2000 seasons. Three general views, beginning at the buttress and ending at the southeastern corner of the East Tower (pls. 38–39a), are followed by a series of overlapping images (pls. 39b–44). The 2010 clearance of a stretch of the glacis in front of the city wall to the northeast of the gate is shown on plate 46b. Elevations of the glacis drawn from pairs of stereographic photographs are reproduced (pls. 76–79, elevations 1–4), as is a drawing of the short stretch between the South Tower and the turn in the direction of the wall that was made on the same plane as the inclined face. Conservation and restoration are described in chapter 4.

As described above, the basal course of glacis stones was pitched at the desired inclination by means of small setting stones that projected slightly forward from the front of the glacis. In part, these stones were set into a foundation trench. Once one course of facing stones had been set in position, the space between them and the wall face would have been filled with loose stone. Although the front faces of the glacis stones are flat, the inner, hidden side is

often very irregular, a characteristic that would have increased stability. The facing stones were expertly fitted together with chinking where necessary. In one place, at the front of the East Tower, there is a tall vertical joint (pls. 39a; 44b; 77, elevation 1c), which resulted in the preserved stones' slipping forward out of position. These stones collapsed following the season in which they were exposed. Some of the very large and heavy face stones would have been very difficult to position. Stones set up at the corners of the glacis and the passage were carefully chosen and trimmed. Toolmarks, as noted above, can be seen on some of the faces in raking light.

At the gate, masons were presented with the difficulties of building a tall glacis that was not only steeply inclined, usually at an angle of around 60 degrees, but that also turned sharp acute and obtuse corners. On the outer corners of the towers and the buttress, the glacis face was curved round by the selection of ever smaller face stones as the inclined corner rose (pl. 79, elevation 4). To the west of the gate, where the curtain wall makes a sharp turn to the south, facing stones were carefully selected and neatly fitted to make a smooth curve, although one unsatisfactory result was a slight bulge in the center of the slope. Smaller stones were used at the top (pl. 42a–b). At the buttress, where the exposed inside corner of the glacis makes a sharp turn, the solution adopted was to interlock the two joining stretches of glacis rather than attempting to make a curving face (pls. 38a, 39b, 40a).

There is one exception to the otherwise ubiquitous use of granite for the glacis. At the front of the gate, on the northeastern side, two pieces of yellowish-brown sandstone were used. It would seem that these stones were selected for incorporation at this point because they could be easily cut and shaped to fit the geometry of the sloping corner. These stones bear rough toolmarks on the sides that were hidden—evidence of how the mason roughly hacked at stones so that they would fit firmly, but not very snugly, over the granite stones below and behind—while their outer faces were smoothed. As described in detail in chapter 6, these stones bear a number of Iron Age graffiti, demonstrating that there was no mud plaster rendering over the stonework at the time of incision.

In 2009 clearance of the glacis at the junction of the East Tower with the city wall was begun in order to examine the possibility that here the defenses had been breached during an assault on the city (pl.

23). It was quickly discovered that this had not been the case because, although the face of the glacis was not in place, the vertical walling behind it had remained intact. It was possible to demonstrate that the glacis here and on the southeastern corner of the East Tower had collapsed as far down as the basal course during, or very possibly before, the destructive fire. This was shown by the burned debris that lay directly over what was left of the loose rubble core of the glacis and beneath the collapsed stone from the face of the tower and city walls, much of which must have fallen as the beams burned away. In order to prepare proposals for consolidation and partial restoration of the gate, it was necessary to find out whether the walls were founded on bedrock or, as was the case at the Palatial Complex, wall faces were built on rubble leveling, as well as to assess the present stability of the structural elements. The collapsed glacis at the junction of the East Tower and the city wall was examined closely in 2010, when a small portion of the stone rubble core of the glacis was removed. Rubble was not removed to the very base of the vertical wall because of concerns over safety, but a sufficient amount was taken out to make it certain that the wall faces did indeed continue downward, an observation that was verified by inspection of the face stones in large voids within the rubble where it had been roughly heaped against wall faces.

This operation confirmed, not surprisingly, that the city wall was butted up against the East Tower all the way down to the base. Additionally, it was confirmed that horizontal timber beams were incorporated into all wall faces at approximately 1 m intervals behind the glacis, and that the beams in the city wall were not at the same elevation as those in the side of the East Tower (pl. 23). Similar non-alignment of beam lines was noted elsewhere in the gate. Details of how the glacis was constructed were also revealed. The portion of the glacis against the southeastern face of the East Tower was found to contain a temporary termination, and to have been constructed in two stages. This can be seen on plates 45 and 46a, where the top of first stage was marked by a large transverse stone that extended from the glacis face back almost as far as the tower wall. The second stage, immediately above the transverse stone, is noticeably different in character. Around the inner corner, the portion of glacis against the city wall had a similar but much less regular temporary end, as seen on plate 46b, where the only stones

to remain in situ from the glacis in the corner, to the left of the vertical scale, rest against the larger and more expertly laid face stones in front of the city wall.

The corner space thus created between the temporary ends to the glacis appears to have been used for rubbish and perhaps for food preparation before the corner was eventually filled in. Here the lower part of the glacis fill, behind the face stones, contained silty deposits and black midden-like deposits, as seen on plates 45 and 47a, that contained burned material, a small quantity of plain pottery and cooking pot fragments, and animal bones. It is likely that this deposit within the otherwise sterile and very loose rubble fill behind the glacis face stones was a small accumulation of refuse in a sheltered corner and perhaps indicates food preparation connected with sustenance for the builders of these fortifications. Analysis of the pottery is presented in chapter 9, the faunal remains in chapter 10. Continuation of the foundation trench or setting stones from the temporary end of the glacis at the center of the tower side, around the corner, and in front of the city wall provided a clear indication that the glacis, although constructed in stages, was one single scheme.

The inner corner of the glacis, as described above, was found to have slipped and collapsed as far down as the basal stone, as it had also done on the outer, eastern, corner of the tower. In some places along the exposed section of the glacis, and particularly around the front of the East Tower, the tops of some stones in the glacis face had been pushed outward by the weight of the structure behind. It seems highly likely that at both the inner and outer corners one or more of the lower stones had slipped in this way, with the top of the stone being pushed so far forward that portions of the glacis face above slid downward. The nearly vertical temporary ends in the glacis core would have been a major element in the cause of this collapse. Stones in the glacis core are generally small, mostly ranging from fist-sized to around 30 × 20 cm. This fill, which is devoid of soil, is very loose, having a tendency to pour out where a glacis stone has become dislodged. Other contributory factors were doubtless subsidence into the permanently wet subsoil on which this section of the glacis was founded and the instability of soft layers of refuse and silt below the stone rubble glacis fill in the corner. It is unlikely that earthquake damage was a contributory factor, because the tower

fronts would have displayed far greater evidence of damage than this inner corner. It is probable that the top of the glacis was further reduced by later exploitation of the collapsed corner in the creation of a path over the wall for grazing animals that was in use until 2010 (pl. 47b).

THE ENTRANCE PASSAGE

The entrance passage is ca. 6 m wide and 20 m long (table 3; pls. 20b, 63). Its northwestern side extends without interruption from the front of the glacis to the West Tower, while the southeastern side is formed by the edge of the glacis and the Middle Tower (pl. 48; pl. 81, elevations 6 and 7; pl. 84, elevation 15). There are no internal restrictions. One stone in the center of the paving at the top of the slope may have been set purposely lower than the surrounding pavement, but if this was not accidental it can hardly have been structural (pl. 49a).⁷¹ The lower portion of the inclined surface is unpaved, with worn patches of bedrock poking up through the hard subsoil.

At the lower end of the southwestern side, the drain had eroded to become a broad channel, the bottom of which was at a lower elevation than the passage wall. To counter this, large stones were pushed up against the base of the wall and exposed subsoil below the foundation (pl. 48a). It is probable that water flowing through the gate passage, as well as seeping out from under the foundations, had undercut part of the passage wall, and that this portion of the drain is a repair. One fine juglet with incised decoration (K02.144) was found smashed in this section of the drain. Nothing was found that could possibly be interpreted as evidence that the passage was either partially or completely roofed. Horizontal beams in the sidewalls of the passage had burned away, accounting for the extent to which the side walls had collapsed and providing an explanation for the inward tilt of the surviving upper courses.

THE COURT

The maximum width of the court is ca. 21 m, while the distance from the threshold of the front façade to the Middle Tower is some 10.4 m. Adding the area of the southeastern recess, which measures some 8.0 × 2.5 m, gives a total area of ca. 220 sq. m. The surface continues to slope upward from the entrance

Table 3. Dimensions of the entrance passage and court

	Width (m)	Length (m)	Area (sq. m)
<i>Entrance Passage</i>	6.6	20.0	132.0
<i>Court and Passage</i>	ca. 21	10.4 (tower to façade)	>200
<i>Court Central Axis</i>	—	10.4	—
<i>1st Court Pavement</i>	ca. 7.4	ca. 12	ca. 88.8
<i>2nd Court Pavement</i>	ca. 2.8	ca. 10 (to stepped monument)	ca. 28

passage, in which bedrock protrudes, to the front façade (pl. 75, profile 5). Evidence from the sondage excavated against the northern corner of the Middle Tower, described in detail above, suggests that the original slope from the southeastern portion of the court to the front façade was somewhat greater than that of the final phase. It cannot be coincidental that the paved court at the Monumental Entrance to the Palatial Complex is similarly inclined. The court was kept clean at all times. In winter much of the eastern portion would have filled with snow, and the 15 cm or so of silt that accumulated on top of the stone paving against the northwestern wall of the Middle Tower attests to water's running through the gate, where it would have become trapped against the southeastern wall.

There were two cultic installations in the court: a built stepped monument supporting a semi-ionic idol, and an aniconic granite stela. These are described in a separate section below and in chapter 5. It may nevertheless be repeated here that no evidence was found for activities associated with these features, nor for any other kind of activity within the court.

PAVEMENTS, SURFACES, AND DRAIN IN THE COURT AND ENTRANCE PASSAGE

The earliest feature in the court and passage was the drain, the upper section of which, as described above, was built before the two façades. There is no evidence that the portion of drain in the court and entrance passage was lined with stone before the pavements were laid. Plates 49b–50 are three views of the court as it was first fully uncovered in 2010, before removal of fallen sandstone from the Middle

⁷¹ A possible function is considered in chapter 11.

Tower, three exceptionally large granite blocks fallen from the corner of the West Tower, and blocks fallen from the North Tower. When these pictures were taken, both the semi-iconic idol and the aniconic granite stela had already been removed. The face of the Middle Tower was soon to collapse.

The first pavement to be laid in the court was the central strip that runs up from the top of the entrance passage to the front façade (pls. 64, 67). The lower, southern end of this paving was demarcated by a row of particularly large stones that would have acted against pressure down the slope to retain the pavement in position. The maximum width of this pavement is 7.3 m, and the length from the center of the threshold to the corner of the Middle Tower is ca. 12 m. The south corner of this paving is only very slightly west of the central axis of the entrance passage, and the width from this corner to the corner of the Middle Tower is 4 m. If a line is drawn from the center of the threshold in the front façade to the corner of the Middle Tower, it will be seen to run parallel to the western edge of this pavement. At the upper, northern end, the width of the ten pavers laid against the threshold is 5 m, more than 1 m wider than the four large stones on the lower side. To either side of these uppermost stones, the ends of transverse sleeper beams that lay beneath the vertical architraves of the door frame projected into or under the paving, as described below. It is of particular note that the axis of this first (known) pavement in the court is different from the axes of both the main gate structure and the slanted entrance passage. This orientation lessened the amount of labor required but did not reduce it to a minimum, because the paving extended to the center of the Middle Tower. More importantly, the orientation implies that the axes at the gate did not hold any particular significance. This lack of concern for conformity in orientation is also observed at the Monumental Entrance to the Palatial Complex. The pavers in the court are much smaller than those in the rear section, with the exception of the few stones that terminate the lower end of the earliest phase. All the pavers in the court show fewer indications of surface wear than the pavement in the rear section. There are no obvious signs of repair. The aniconic stela at the corner of the Middle Tower was set into the pavement and secured by packing stones removed from the paving immediately behind it. It seems fair to assume that the stepped monument by the North

Tower had not been built when the pavement was laid, but this is not demonstrable.

There were at least three additions to this pavement (pl. 62). First, there was the extension of paving into the entrance passage (pls. 63, 68). This was patchy, not least because in some places bedrock was incorporated into the surface. In other areas, particularly to either side of the spine of stones in the central third of the passage, very stiff decayed granite and clay appear to have been laid in hollows. This material, the top of which was scorched, overlays the sparse paving stones and associated surfaces, with the result that the paving was not uncovered when the lower end of the passage was first excavated. On the eastern side there was a considerable accumulation of silt, which was deepest next to the passage wall. This accumulation appears to have comprised mud plaster washed from the wall face. Two coats of plaster were found adhering to the lowermost stones on the western wall of the passage. On the western side the collapse of walling in the course of the fire destroyed one section of the western side of the drain and displaced the stones higher up the slope. The eastern side of the drain, if this lower section was actually stone lined, together with patches of pavement, was destroyed when large face stones fell from the passage wall. It was here that one of two human victims of the destruction was found (pl. 69). A second extension of the pavement filled the triangular space between the drain, the southwestern wall of the passage, and the front wall of the West Tower (pl. 64). Only at this stage does this section of the drain seem to have been capped with stones, and perhaps it was at this point that the stone sides were first constructed. In the corner formed by the West Tower and the front façade, it was seen that more than 10 cm of clean silt from mud plaster wash had accumulated before the very irregular patch of pavement was laid. In this same corner, and in the triangular area between the West Tower and the western wall of the passage, up to 10 cm of similar silt had been deposited above the pavement. Lastly, although not necessarily last in the sequence, the pavement was extended to the east in such a way that its eastern limit ran in a gentle curve from the northern corner of the Middle Tower to the southern corner of the North Tower (pl. 64). At its northern end this latter extension ran up against the bottommost step of the stepped monument. All these extensions to the pavement are very similar in style and workmanship to the earlier phase.

Wear to the surface of this paving was not at all uniform. The greatest wear could be seen, as expected, in a strip from the central portion of the front façade threshold, running down to the four large stones at the lower end of the earliest pavement and extending into the passage. There was no sign of rutting, probably because of the way in which the granite tends to flake. The pavement to either side of the worn strip showed little if any signs of wear.

THE FAÇADES AND DOORS IN THE REAR SECTION OF THE GATE

The evidence set out above demonstrates that the front and back façades were constructed only after the North and West Towers had been built, and indeed after the upper section of the drain had been made and the rear portion of the gate brought up to a consistent level by the deposition of sand and broken, angular granite (pls. 29b, 35, 37). But these details are no more than the sequence of building within a single scheme. Exactly how the wooden façades were constructed is not clear. No timbers remained, only ash and vitrified stone, indicating both the large quantity of timber in the construction and the intensity of the fire that consumed them (pl. 51a). It is clear, however, that the façades were very similar to one another, and that both were essentially timber structures (pl. 29b). The façades had three functions: both housed double-leaved wooden doors, both may be presumed to have incorporated an elevated passage between the North and West Towers, and both enclosed the rear section of the gate. While it is not possible to reconstruct the timber structure in detail, it can be shown that pairs of squared timber uprights stood against the tower walls at either end of the foundation trench. The bases of these uprights stood on stone footings laid in the trenches, and very probably on beams laid along the length of the footings at about floor height. There would have been other pairs of posts, but because what remained of the stone footings was not removed, the interval between these posts, and thus the total number of posts, is not known. Architraves flanking the thresholds were of a different construction. Here transverse sleeper beams extended some 50 cm inside the rear section. On the southeastern side of the front façade there were four beams slots, each ca. 35 cm wide and more than 1 m in length (pls. 51b–52). The last one abutted the side of the stepped monument. Where the collapsed and

highly burned stone footings were removed, it could be seen that the slots were at 20 cm intervals. Circular burn marks attest to vertical timbers as well as horizontal beams.

The base of the foundations at the back edge of the rear façade on the southwestern side coincided with the limit of the excavation, while the northeastern end was only slightly in advance of the edge of TR23, which was extended to ascertain the line of the wall and the width of the stone pavement behind the gate (pl. 53a). Stones were laid against the outside face of the façade at a slight incline so as to deflect water away from the foundations (pl. 36d). The section of the stone footings revealed above the short transverse beams on either side of the doorway were highly burned, some of the granite being vitrified by the intense heat generated by the fire. Much effort was expended in trying to dismantle these fused and haphazard remains in an attempt to understand the form of the timber structure, but this task proved impossible because the timbers had entirely burned away.

Table 4. Dimensions of the rear section of the gate

	Width (m)	Length (m)	Area (sq. m)
Total	12.8	5.4	69.12
<i>Pavement</i>	3.7	5.4	19.98
<i>Façades</i>	1.7	—	—
<i>Room 1</i>	1.6	2.4	3.84
<i>Room 2</i>	2.6	ca. 2.6	6.76
<i>Room 3</i>	2.6	5.4	14.04
<i>Thresholds</i>	1.7	3.4	—

Along these same portions of the front edge of the front façade (pls. 53b–54a), however, there do appear to have been flat stones positioned at regular intervals, either as bases for upright posts or placed to either side of them. The threshold would also have been made of very substantial timber beams that had either rotted or burned away, or some combination of the two. Stone pavers at either edge of the front threshold were inclined steeply down toward the center. These stones, worn smooth by traffic passing over them, may have been secondary additions where the timbers had already deteriorated. As mentioned above, beneath the threshold was a deep fill of loose granite rubble, the bottom of which

was not reached. This stone leveling, which presumably filled a dip or hole, would have done much to drain water away from the threshold. It is pertinent that the length of the threshold, 3.4 m, was twice its width of 1.7 m.⁷²

This evidence for the façades makes it possible to suggest a reconstruction for the doorway and for the position of the doors. In reaching these conclusions, the evidence for the much larger but otherwise similar construction and arrangement of the two façades at the Monumental Entrance to the Palatial Complex has been taken into consideration. Additional parallels can be found in the architectural rock-cut façades in the Phrygian Highlands, most notably the Arslan Kaya in the Köhnüş Valley, and the so-called Midas Monument at Midas City.⁷³ The wooden door frame would have comprised upright jambs, a massive lintel, and a threshold. The doors themselves would have been made of horizontal boards or planks fitted into doorposts and held together by strakes on the back, and perhaps also by iron bands. The outer sides of the doors may have been sheathed with metal.⁷⁴ Door posts would have been located behind the front jamb, their bottoms located in pivots, possibly of wood, with their tops secured in brackets. Such an arrangement can be seen in the rock-cut depiction of a massive doubled-leaved door at the Arslan Kaya Monument. Located behind massive jambs, the posts would have been protected in the event of attack. In this way the doors could have been bolted when closed and barred from behind. When open they would have been tied back against the architraves. At a width-to-height ratio of 3 to 5, the normal Greek proportions,⁷⁵ the doorway would have been in the order of 5.5 m tall, a size that seems entirely compatible with the general dimensions and proportions.

The threshold in the rear façade was provided with secondary granite paving that stood slightly proud of both the paving in the central passage and the stone paving of the street inside the gate (pl. 54b). These threshold stones, which would have replaced the original wooden threshold, were also

worn smooth by passing traffic. This raised threshold would have presented a slight impediment to heavily laden carts entering the city.

THE PAVEMENT IN THE REAR SECTION OF THE GATE

The central part of the rear section of the gate was paved with granite slabs (pls. 52b, 55, 65). There is no reason to think that this paving was other than part of the original construction, although there are signs of repair, most notably along the ragged edges where stones of a smaller size are seen. In the strip along the northeastern side of the pavement there were many small rounded stones slightly protruding from the silt. The interface between this stony surface and the pavement was more ragged than the southwestern side, where there were few stones and the silt was noticeably thicker. The surface of the pavement is level and the stones worn smooth. There are no signs of wheel ruts, but, as noted above, this is presumed to be a reflection of the way in which the granite tends to flake. There was some accumulation of clean silt between the stones, but this did not bury the greater part of the surface. The surface of the silt and paving stones was heavily burned, the silt deposit having turned black, but there was no clear layer of ash and charcoal above the hard blackened surface.

The pavers in the front third of the passage, as well as those in the northern corner, are more impressive than others, perhaps but not certainly reflecting repairs with smaller stones. The two largest stones measure ca. 110 × 80 cm. The front edge of the pavement seems to have been laid against a wooden threshold. The stones at either side of this front row each have a curved outer side that seems to have had some special function related to the doors, but there was no indication of posts. At the inner end, the pavement was also laid against what was presumably a wooden threshold that was partially replaced with stones that stood proud of the pavement. It can

⁷² These proportions seem to hold for the double-leaved doors in both thresholds at the Monumental Entrance to the Palatial Complex.

⁷³ These and other monuments in the Phrygian Highlands with rock-cut representations of doorways and doors are most usefully described in Haspels 1971 and Berndt-Ersöz 2006b. There is a helpful discussion of Greek evidence for not dissimilar doorways and doors in Lawrence 1979, p. 250.

⁷⁴ Evidence that the doors may possibly have been taken down before the city was torched in order to remove metal sheathing is discussed below.

⁷⁵ Lawrence 1979, p. 303.

be assumed that the pavement was the same width as the double-leaved doors in each of the façades.

ROOM 2

Room 2 is described before Room 1 because it was constructed first (pls. 29b, 37a, 55, 66, 73). Excavation was hampered by the very precarious condition of the West Tower wall, the upper courses of which had to be dismantled and the large face stones removed (pl. 29a). This small square room, measuring 2.6×2.6 m, with a floor area of ca. 6.76 sq. m, was created by the construction of two timber-framed walls infilled with smallish stones on each face. As with all three additional rooms in this rear section of the gate, there were vertical timbers at wall ends against the faces of the towers and façades. It was preserved for almost 1 m above the surfaces. In section, it can be seen that the wall had fallen outward, toward the central passage, as the burning gate collapsed (pl. 88, section 5). Access from the central passage was by means of a 60 cm wide doorway in the northern corner. Because the wall is so narrow, at only 50 cm, this room would presumably have been no more than a single story covered with a light shed roof. The burned surface was of earth. There were no internal features, nor were there any finds to give a clue as to the use of this room.

ROOM 1

Room 1 measured 2.4×1.6 m, with a floor area of only 3.84 sq. m (pls. 20a, 29b, 33, 35a, 55, 65). The eastern wall of this room was built of larger stones than those used for Room 2, which it abutted. A raised stone platform, measuring a maximum of 1.0×0.8 m, was built in the northern corner, to the right of the door. In the 60 cm wide doorway, located in the eastern corner, were found two iron door bands that might have come from the door itself (K11.252, K11.253; pls. 65, 165–67). After construction of the walls, a deposit of soft sandy fill containing many sherds of pottery and a large number of unusually well-preserved animal bones was put down in a single operation to raise the level of the earth floor.

ROOM 3

Room 3 occupies the northern quarter of the rear section. It measures 5.4×2.6 m, with a floor area of

ca. 14.0 sq. m (pls. 34; 55; 65; 73; 88, section 5). The northern corner was occupied by a statue of soft limestone on a carved sandstone base that was set across the corner to face the center of the front façade. The burned earth floor was devoid of features or finds. The room was formed by the addition of a crude wall. It is not known when this wall was built in relation to other secondary features in the gate. This wall comprised vertical timber posts at either end. These posts rested on short, transverse, horizontal beams that were themselves laid on raised stone footings. There seems to have been a doorway with a high threshold at the northwestern end. The 50 cm wide wall was built of small stones up to a height of ca. 0.4 m, with the inner face being battered. Above the tall stone footings were fragments of mudbricks, apparently resting on timber beams. The bricks seem to have been fragments of square bricks, none of which were complete, an observation that suggests they might have been reused from elsewhere. On excavation, it was found that in the southwestern half of the room the mudbrick fell before the walling from the North Tower, as seen in the section across the center of the room (pls. 24a; 88, section 5). A shed roof of thatch seems probable, but no traces of a burned roof were found below the collapse. The southeastern end of this wall was built against the thick mud plaster on the façade wall, and the same relationship surely pertains to the opposite end of the wall, although preservation was not so clear. The very poor quality of the wall is striking. Reasons for hiding the sculpture from view are briefly alluded to in the concluding chapter.

CULTIC INSTALLATIONS

Three cultic installations were set up within the Cappadocia Gate: a statue set into a sculpted plinth (K11.249 and K11.250) set at 45 degrees across the inner, northern corner formed by the western corner of the North Tower and the southeastern side of the rear façade; a semi-iconic idol standing on a flight of steps (K07.223 and K07.224) in the corner formed by the northwestern end of the front façade and the southern corner of the North Tower; and an aniconic granite stela by the northern corner of the Middle Tower. The statue and semi-iconic idol were clearly intended to be seen on arrival rather than departure.

The Limestone Statue and Sandstone Plinth

Description of the location of the relief-sculpted plinth (also called the sphinx block) and the statue it supported (K11.249 and K11.250) is followed by discussion of the date of their installation. Detailed description of the sculpture itself is reserved for chapter 5. There is no stratigraphic evidence that sheds light on the date of the installation. As noted in the account above, there was a single earth surface to Room 3, which was laid at the time of or after the installation of the plinth in the northern corner of the Gate (pls. 20a, 55, 102b–106a). It is certain that the plinth was not cut into earlier surfaces. That there might have been earlier surfaces that were removed, either when the plinth was installed or later, when the wall that enclosed Room 3 was constructed, seems highly unlikely, but it is impossible to be completely certain. The absolute date of the sculpture can only be assessed on art-historical criteria, there being no associated finds. It is certain, however, that the sculpture was installed before the building of Room 3 for three reasons: first, the plinth could not have been put in position after the southwestern wall with its narrow doorway had been built; second, it is obvious that the sculpture faced the center of the doorway in the front façade and that it was intended to be seen from there; and third, all the secondary walling that formed Rooms 1, 2, and 3 was of such inferior workmanship as to be completely out of keeping with the monumentality and artistic quality of the sculpture. Reference to the plan will reveal that, if the doors in the front façade were fully open, the sculpture could have been glimpsed from the center of the first phase of court pavement at the top of the passage, although the incline would have obscured a full view of the carved plinth.

The limestone chosen for the sculpture is so soft and prone to erosion that it must have been provided with a roof to protect it from the elements when first installed. Although no indications of support for a roof were found, it would not have presented a great problem to construct a triangular roof between the façade and the tower wall. The poor

timber-framed wall built on stone footings and infilled with mudbrick would have carried a light roof, perhaps of thatch. Construction of Room 3 marked a radical change in that the statue could no longer be seen without entering the room.

The Stepped Monument and Semi-iconic Idol

A built stepped monument supporting a semi-iconic idol (K11.223 and K11.224) was partially uncovered in the center of the northeastern side of the court, adjacent to the southern corner of the North Tower (pls. 20a, 49b, 53b, 65, 138–140a).⁷⁶ The monument was built against the mud-plastered faces of the tower and façade. The idol faces southeast, into the court, directly facing the center of the southeastern wall rather than being set at an angle toward the top of the entrance passage. Anyone coming through the gate from outside could not have seen the idol before reaching the inner end of the entrance passage. The blank idol face would have stood well above the eye level of a devotee standing at the base of the steps. It is obvious that there was no solar or other astronomical alignment. In fact, when the heights of the towers and walls are taken into consideration, it can be seen that the sun would rarely, if ever, have shone on the front of the idol.

The steps, with the exception of the topmost, are built from angular, unshaped granitic stones. They were constructed against the front of the façade. On the steps, there was some evidence for fine silty clay, which might have been the remnants of mud plaster either applied to the steps or washed from the wall of the North Tower. A narrow gap of less than 10 cm was left between the steps and the face of the tower wall. Blackening of the stones and a certain amount of ash are indicative of the presence of wood. The uppermost of the three rubble steps was 1.55 m wide, the maximum width of the two steps beneath being 1.9 m; the depth of the treads, in descending order, was 36, 30, and 50 cm. Of the two risers exposed, the upper one measured 19 cm, the lower one 14 cm. These small treads and risers, which are typical of rock-cut stepped monuments in the Phrygian Highlands,⁷⁷ were not intended to

⁷⁶ For a preliminary report and discussion, most of which is repeated here, see G. Summers 2006c. Additional head fragments were joined the following year. In the earliest notice of the discovery, in *Kerkenes News* 6 (2003), pp. 12–13 with pls. 16 and 17, the head was incorrectly restored because the curls of hair on the shoulders had not been recognized for what they were.

⁷⁷ Rock-cut stepped monuments in the Phrygian Highlands are discussed in T. Sivas 1999; Berndt-Ersöz 2006b (esp. pp. 172–76), 2007; and also in D. Berndt 2002.

be climbed. If the steps were intended for the placement of offerings, no traces of any kind were detected. The rough, unshaped back of the stela stood against the façade behind. Description of the idol is reserved for chapter 5.

Evidence for a Built Wooden Niche

It is certainly possible that the semi-ionic idol was provided with a built cover, perhaps of wood, resembling Phrygian practice known from relief carving and from Boğazköy.⁷⁸ Several arguments may be adduced in support of this idea. First, with regard to the stela itself, differential preservation of the front surface of the stela is observed, with the face being almost pristine while the torso displays signs of increased deterioration from the shoulders down to the base (see pl. 138d). It is possible that this difference resulted from predestruction weathering beneath a covering that offered greater protection from the elements to the face, rather than from fire damage during the destruction or postdestruction erosion, because the degree of weathering gradually increases from the top down, as might be expected if rain and snow were frequently blown in. Second, provision of a timber niche would explain the very crude rear of the stela, which would have been hidden from view; the gap between the steps and the wall of the North Tower; the poorly built southwestern side of the steps; and the extent of burning on and around the stela and the exposed steps. If there was indeed such a built niche, it would have had a double-pitched roof covered with wood or thatch. The fenestrated iron band found on the surface of the pavement immediately to the left of the steps (pl. 65), together with fragments of a second, smaller band recovered from the stone rubble collapse, might very well have been a component of the niche (K11.254 and 10TR13U14met03; see chapter 8). It is not impossible that such a niche would have been provided with a door to protect the idol from rain and snow.

The Aniconic Granite Stela

Set into the pavement and against the inner face of the Middle Tower at its corner with the entrance

was an aniconic granite stela (K11.278; pls. 20b, 21b, 24b–c, 26, 141). The stone itself is described in chapter 5. Here it is apposite to repeat that stones were taken up from the paving behind the stela and used to wedge the upright stone in position. There are signs of hammer trimming, while the top was polished by the passing of hands.

THE BUTTRESS

To the south of the gate, some 28 m from the sharp turn in the city wall, a small buttress was appended to the city wall (pls. 38a; 39b; 58; 78, elevation 2; 79, elevation 4; 92). This is the only such buttress to have been identified at Kerkenes thus far, very probably because the extent of the collapsed stone obscures other examples. There is no obvious explanation for the position of this feature, which would hardly have provided a platform for effective flanking fire to protect the gate. It is therefore assumed that the buttress, which projected some 3 m forward and is 5 m in width, is essentially an outward extension of the city wall over an outcrop of bedrock. Whether the buttress is bonded in with the city wall or built against its front face could not be established without the removal of a considerable quantity of stone, because the top of the wall and buttress had been leveled for use by shepherds. There is no good reason to suppose that the top of the buttress rose above that of the city wall, with any such reconstruction being improbable if the buttress and wall were built as one. The thick deposit of heavily burned debris on the face of the glacis on the northern side of the buttress might be evidence that some wooden structure stood on top of the buttress (pls. 56a, 92).

THE STRUCTURE IN FRONT OF THE EAST TOWER

The foundations of a rectilinear structure built against the base of the glacis of the East Tower were uncovered beneath the collapse of the defenses (pls. 39a, 44b, 70). When first uncovered, the natural subsoil was very wet, with water seeping from beneath

⁷⁸ The stone statue of “Kybele” with two child attendants found at an Iron Age gateway in Boğazköy, now in the Museum of Anatolian Civilizations at Ankara, was erected in a built niche with her back to the wall and presumably covered with a pitched roof (Bittel 1958, pp. 61–72; 1970, pp. 146–53). The orientation of the Kerkenes idol with respect to the walling is, however, different. For later representations of Matar in a niche beneath a gabled roof, see Akurgal 1961, fig. 22; Roller 1999, pl. 9. Both pieces are conveniently illustrated in Berndt-Ersöz 2006b, pls. 117–18. For a western Anatolian association of (aniconic) stelae with gates, see, e.g., Korfmann 1998. A broader study is Hass 1982, with Phrygia discussed on pp. 184–92.

the glacis, but within two days of summer sun it set hard, after which deep cracks appeared, thus rendering it almost impossible to excavate or clean. The rear, northwestern wall was built against and partially on the base of the glacis. For most of its length the back wall has only one face on the inner side, but toward its northeastern end the line of the wall and the glacis deviate; the wall becomes very irregular, with parts of a back face and a rough buttress-like corner, two largish stones of which extend the northeastern wall almost to the glacis base. Where the rear wall has two faces, it is ca. 50 cm wide, while in the center, small and medium-sized stones were used against and on top of the inclined glacis face. The length of the inner face of the back wall was 5 m. Some 2.5 m of the inner face of the 50 cm wide northeastern wall were preserved, the northwestern and northeastern walls being of the same bonded build, composed of angular field stones forming two faces with small stones filling the gaps. The maximum preserved height was 40 cm. The southwestern wall, if such it was, is represented by a single stone running back into the rear wall. It was clear that the rear wall did not extend farther to the southwest. A number of stones in the northeastern corner seem to have been purposely placed as though to form some kind of raised feature, at least insofar as they were not pitched in the manner of tumbled stone. There did not appear to have been any kind of laid floor or accumulation of occupation deposits within the walled area, although there were localized traces of burning that may have represented some kind of activity rather than destruction. No evidence was found for mudbrick superstructure, or for significant stone walling above that which survived in situ against the glacis.

The location of this structure immediately in front of the strong city gate is unexpected. It seems unlikely that a roofed building would have been erected here, so it is probable that these rough walls belonged to a shelter or pen in front of the glacis. On the other hand, in the description given above, it was suggested that parts of the glacis, including the eastern corner of the East Tower, may have slipped before the fire, in which case the defenses might

already have been dilapidated when the structure was built. There were no associated finds.

DESTRUCTION OF THE CAPPADOCIA GATE

The Cappadocia Gate, along with the rest of the city, was destroyed by fire. There is no evidence that this fire was related to capture of the gate by force, nor is there any indication that the Cappadocia Gate was attacked.⁷⁹ Furthermore, the two individuals who perished in the fire were apparently attempting to run out of the city when they met their deaths trapped inside the burning gate (see chapter 7). Some evidence, noted above, might suggest that the double-leaved doors in the two façades were taken down before the fire. Be that as it may, the timbers in the façades burned to ash, as did the horizontal timbers in the wall faces. Some charcoal was found within the debris, but no piece possessed a sufficient number of preserved rings for dendrochronological analysis. Most of the charcoal from within the court and rear section was black pine (*Pinus nigra*). If, as is not unlikely, architraves, lintels, and thresholds were made of denser woods, such as oak and juniper, remains were not recovered in position.⁸⁰ As described above, the burning of the architraves had vitrified the surfaces of granite in the façade footings. This vitrification indicates that temperatures reached more than 800 degrees Celsius, perhaps more than 1,000 degrees at the front façade.

In the two sections cut across the entrance passage (sections 2 and 3; pls. 43a, 56) and in the section through the court and the rear section of the gate (pls. 87–88, sections 4a–c, 5) it can be seen that the gate collapsed during the course of the fire, with the falling debris filling the structure almost to the preserved tops of the walls before the fire expired. In the southeastern end of the section against the Middle Tower (pl. 87, section 4c) it was seen that timbers in the standing wall face had continued to burn after the collapse of the upper sections of walling, and that this burning was sufficiently strong to redden the collapsed debris immediately adjacent

⁷⁹ While this evidence from the Cappadocia Gate cannot be extrapolated to the other six gates, evidence from excavations inside the city point to systematic looting before the fire.

⁸⁰ Reinder Neef identified pine, juniper, and oak among charcoals from the front of the gate (Dörfler, Neef, and Pasternak 2000). Charcoal lumps in the court and rear section examined during excavation were all found to have the wide rings characteristic of black pine.

to the wall face. The absence of charred timbers and ash directly on the pavements or surfaces in the court suggests that the front façade at the Cappadocia Gate did not collapse before the stone walling. On the other hand, the rear façade, or significant elements from it, did fall directly onto the stone paving of the threshold, as can be seen in sections 4b and 5 (pls. 87, 88). Behind the gate, lying directly on the paving under thick charcoal and burned debris, was an ornate gold ornament (K11.251), perhaps dropped or flung away by one of the two unfortunate victims whose remains are described in chapter 7, or by their luckier companions (pl. 69).

There was some hardening and discoloration of the silty surface in the southern portion of the gate court, and also of surfaces in the rear section of the gate, as a result of the heat. In the rear section, the mudbrick wall that formed Room 3 was reddened, while mud plaster on the inside of the walls at the southeastern end was baked hard, turning shades of orange and red in the process.

At the front of the gate, the timbers in the wall face above the glacis top burned away, causing the wall face to collapse (pl. 56b). Along the front of the Middle and South Towers, sandstone blocks fell first, with the surface areas of some stones having turned pink where they were in direct contact with burning timber elements. Eventually, the entire wall face collapsed down to the level of the first horizontal beam in the wall face above the glacis. In the recess between the Middle and East Towers, this beam was one stone above the glacis top—a circumstance that very probably held for the entire defensive circuit and that explains why today the wall has collapsed to more or less the same level around the entire 7 km. At the Cappadocia Gate there is reason to think that, as proven in the entrance passage and court, wall faces fell completely during the fire. At the buttress it was seen that charcoal from burning beams adhered to the glacis face, thereby demonstrating that it was covered by falling material before there was time for it to have been blown away or washed off by rain. The sections cut through the collapse against the front and the exposed side of the buttress (pls. 56c, 89, sections 6, 7) show that the initial collapse was massive, with only a trickle of stones gradually coming down from the core over a longer period of time as the loose rubble attained a stable angle of repose. Elsewhere against the surviving glacis face, the deep layer of fallen stone was found to be very loose and hazardous to excavate. In order

to work safely, the collapsed stone was removed in stages along broad fronts, with no attempt being made to cut or record a section through the collapse.

From the eastern corner of the East Tower to the junction between the tower and the city wall, the glacis was poorly preserved. This circumstance provided an opportunity to investigate the structure of the tower, city wall, and glacis, as described above, in conjunction with a program of restoration. Another reason for instigating work at this corner was to examine the possibility that this portion of the glacis and part of the vertical walling might have been pulled down in the course of an enemy attack a little while before the fire. It was not difficult to dispel the idea that the destruction occurred during an attack or siege. There were two crucial pieces of evidence. First, neither the vertical faces of the tower nor those of the city wall had collapsed or been torn down before the fire. Rather, the vertical wall faces stood erect regardless of the collapse of the glacis in front of them. There would have been no advantage to an attacker's tearing down the glacis without also collapsing the wall faces behind—something that could easily have been done by levering out timbers or a few stones. Second, a substantial quantity of burned material was found directly against the wall faces, indicating that this part of the glacis had collapsed during or, more probably, before the fire. Observation of the basal facing stones of the glacis around the eastern corner of this East Tower revealed the mechanism by which the glacis had slipped. The upper edge of the basal stones had, in a few instances, been pushed outward by the weight of the stones above, and perhaps also from behind (pls. 44–47). As the top of the stone was forced outward, so the stone above slipped downward. If the two stones in the second course move in such a way that the tops of basal stones are pushed out, then the bottom edge of the stone above moves with it, forming a very acute bulge in the glacis face. If this movement is not checked, the two stones fall, permitting the very loose rubble fill behind to tumble out, thereby encouraging other face stones to slip out of position. There seem to be two factors at play here. One is the angle at which the glacis was built: the steeper the angle, the greater the chance of the stones' being pushed outward. The other is quality of the masonry, as vertical joints are particularly weak. There is no indication of earthquake damage at Kerkenes, and it is unlikely that the granite batholith would shake very much unless the

jolts were exceptionally severe. On the other hand, in our experience the only way to repair a section of the glacis once stones have slipped in this manner is to take it down and rebuild from the base upward. It is probable that the glacis was further reduced, particularly where exposed in front of the city wall, by later exploitation of the collapsed corner to create over the wall the path for grazing animals that was in use until 2010, when restoration of the defenses closed it off.

If the pairs of wooden doors in each of the façades were constructed in the same way as those of equal proportions in the Monumental Entrance to the Palatial Complex—that is, with iron bands, clamps, braces, and many large dome-headed nails—they were no longer in position when the Cappadocia Gate burned. It is certainly possible that these doors at the city gate, the construction of which was somewhat earlier than the final phase of the Monumental Entrance, were constructed without such a prolific use of architectural iron. It is equally possible, however, that the main doors had been taken down to be stripped of their fittings. Had the doors been partially sheathed with copper or bronze, as is perhaps likely, they could very well have been unhinged and the metal removed. Failure to identify the pivots or pivot stones favors this interpretation, and might point toward the existence of metal pivots that were also looted before the city was put to the torch.⁸¹ The iron bands described in chapter 8 did not come from the doors in the façades but from the doorway into Room 1 and perhaps from a timber structure associated with the stepped monument.

It is clear from the section drawings that the upper part of the walling fell during the course of the fire. The lower portions of the wall faces slipped forward as the horizontal timbers burned away but were prevented from falling away completely by the stone fill from the collapsed upper portion. Internal corners were, naturally, more stable and thus better preserved. The level to which the rear portion of the

gate filled with collapsed stone at the time of the fire is indicated by the condition of the southwestern face of the North Tower, shown on plate 28b; the junction of the West Tower with the rear façade, shown on plate 29b; the level to which the stone and mudbrick wall of Room 3 was preserved, shown on plates 34 and 57a; and the condition of the stone wall of Room 2, shown on plate 57b.

POSTDESTRUCTION AT THE CAPPADOCIA GATE

Reuse of the Cappadocia Gate after the destruction, not least associated with later occupation of the kale in Roman and Byzantine times, had been anticipated. Indeed, when the sandstone blocks bearing graffiti, described in chapter 6, were discovered, they were thought to be of Byzantine date. This erroneous conclusion was fueled by the considerable amount of Byzantine pottery recovered in the upper fill of the court and the entrance passage described in chapter 11. We had even gone so far as to postulate a Roman date for the broad road leading up to the gate, but that was at a stage in the exploration when it was still thought that the Iron Age defenses were unfinished.⁸² In short, there is no evidence for any remodeling of the Cappadocia Gate after the destruction so as to facilitate passage through the line of the Iron Age defenses, with the slight exception of piling up rubble on one side of an animal track in Byzantine or more recent times. No pottery sherds of the Achaemenid, Hellenistic, or Roman periods were found, nor any fragments of Seljuk or later date. The only postdestruction activities were the construction of a tumulus on each of the rear towers, perhaps in the Hellenistic period; the construction in Byzantine or later times of a circular animal pen; the robbing of the tumuli at an unknown date; and the construction of recent animal pens and shepherds' huts.

⁸¹ At the Monumental Entrance to the Palatial Complex there is also evidence that the doors had been taken down before the fire.

⁸² *Kerkenes News* 2 (1999), p. 3.

CHAPTER 4

CAPPADOCIA GATE: ARCHITECTURAL DOCUMENTATION, CONSERVATION, AND ENVIRONMENTAL CONTROL

NİLÜFER BATURAYOĞLU YÖNEY

DOCUMENTATION HISTORY

The first scholars to document the surface remains on Kerkenes Dağ were H. H. von der Osten and F. H. Blackburn, in 1927.⁸³ They named the gate located roughly at the center of the southeastern section of the city wall the “Large Gate” (pl. 90). It was one of the more prominent structures visible on the surface when the Summers’s Expedition started in 1993. Following the completion of the excavation and partial rebuilding and consolidation that has been carried out in recent years, this city gate constitutes the largest and most impressive exposed structure of the Iron Age city.

When the survey began in 1993, it was preferred to name the city gates rather than numbering them because identification of Iron Age entrances, and thus their number, could not be ascertained before completion of a detailed survey of the defenses. This prominent gate was christened the “Southeastern Gate” as a result of its location. It acquired the name “Cappadocia Gate” because it faces the Cappadocian plain, on the farther side of which the high peak of Erciyes Dağı stands out when the weather is clear.

The initial architectural documentation of the defensive system of the city, including the walls and the gates, was completed by 1998 (pl. 91). The walls were documented by the author at an architecturally rather small scale of 1:200 during the 1997 season, while the city gate structures were individually documented in greater detail by other members of the

survey team. The purpose of this initial documentation was to complete the documentation in a single season in order to provide general layout plans that were small enough to be handled and would be published at scales no greater than 1:1000 and/or 1:500. The survey followed the wall faces visible on the surface where they protruded through the fallen rubble. External towers were usually somewhat less visible due to the spread of fallen rubble down the external slopes. Smaller buttresses were perhaps overlooked, but apart from the buttress just to the west of the Cappadocia Gate, which was clearly visible at the start, none have been recognized in subsequent research. This first documentation demonstrated that the defenses generally followed the topographic divide and revealed that the towers were neither uniformly spaced nor all of the same plan. In total, seven gates were identified along the wall. An eighth structure, named the “Water Gate,” was chosen as the site for test trench TT13 by Erich F. Schmidt, who had hoped to find sculptures.⁸⁴ In fact, this structure is the strongly defended outlet of the stream that originates within the city and supplies fresh water to the settlement; it was not an Iron Age city gate, even though a more recent vehicular passage has been made through the Iron Age defenses. Later architectural work focused on the Cappadocia Gate.

One reason for selecting the Cappadocia Gate was that the visible parts, including stretches of wall and glacis, together with the five towers that define the structure, suggested that it was perhaps better

⁸³ von der Osten 1928.

⁸⁴ Schmidt 1929, p. 245.

preserved in comparison to the other gates.⁸⁵ The survey and research not only aimed at determining the plan and construction system of the gate, but also at understanding the relationships between the bedrock or subsoil and the walls and glacis, as well as how the glacis was constructed. Additional issues questioned whether any other building materials were used in addition to the local granite, and whether this structure was completed before the destruction of the city. It was thought possible that this gate was used in post-Iron Age periods, when the acropolis was fortified. In Byzantine times a castle was built on the acropolis, and a small complex existed immediately inside the Cappadocia Gate.⁸⁶ Another research topic addressed the road to the south that climbed toward the gate from the plain below; the survey also attempted to determine when this road was constructed and how long it was used.⁸⁷

The geophysical survey techniques used elsewhere at Kerkenes Dağ, including resistivity, gradiometry, and electromagnetism, proved to be unusable at the gate structures, which were covered with large amounts of granite rubble deposits from the collapsed walls. Thus clearance and excavation were the only methods for further investigation of the remains visible on the surface.

Investigations conducted since 1998 have changed some of our ideas concerning the construction system and materials. For instance, it was thought that the approximately 5 m thick stone walls formed the base of a much higher wall that was to be completed in mudbrick but was perhaps never finished. The height of the glacis was also underestimated, the expectation being that its base would be found just below the visible stones. Thus both the depth and the quantity of the stone debris were assumed to be much less than they turned out to be. This conviction was also supported by the steep inclination of the topography below the crest of the slope on which the defenses had been built. As it turns out, the survey, clearance, and excavation work have demonstrated that the city wall and its gates were constructed almost entirely of stone, with no more than the addition of horizontal timber beams in the wall faces. These beams have burned or rotted away completely. The preserved height of the

wall and the surrounding glacis on the outside attains 5 m, and even exceeds this in steeper areas. In addition to the granite building stones, a number of sandstone blocks have also been recovered from the gate passage and court, as described in chapter 3. These had fallen from tower tops, where they could have been used for corners where the construction geometry required more detailed stone cutting, and possibly for the crenellations (or battlements) along the wall tops. The initial idea of an internal chamber with gates in the entrance passage also had to be discarded as more of the plan was revealed. Thus the internal chamber became a court in front of the first of two gated façades that enclosed the rear section of the entire structure. As described above, the presence of cultic monuments in the court indicates ceremonial and religious activities.

The first detailed plan of the Cappadocia Gate was drawn from a survey conducted during the 1997–2001 seasons by Ömür Harmanşah and the author. This survey made use of the initial techniques applied on the Kerkenes Dağ: balloon and blimp photographs were taken to the field for verification on the ground, and points that had been marked with white lime to be visible on the photographs, together with features that could be readily identified on the ground, were plotted with a total station. Photographs rectified from these measured points were used to make drawings, to which further details were added from field survey and documentation.

The initial plan showed the five towers and connecting walls that formed the gate structure. The entrance passage, ca. 6 m in width, was flanked by the South and Middle Towers. Stretches of walling connecting the Middle and East Towers and the East and North Towers formed recesses on two sides of the court. On the western side of the South Tower the city wall continues in a southeasterly direction for ca. 10 m before turning sharply southward. An exterior buttress was identified ca. 25 m to the south of this angle. The city walls on the western and eastern sides of the gate structure abut the towers. However, the glacis on the outside is continuous around the walls, towers, and the wall connecting the East and Middle Towers. The initial block plan (pl. 92a) was completed before the commencement of clearance

⁸⁵ When the decision to work at the Cappadocia Gate was made, it was still thought that the defenses were unfinished.

⁸⁶ G. Summers, F. Summers, and Ahmet 1995; G. Summers and F. Summers 2013 and this volume, chapter 11.

⁸⁷ That the Cappadocia Gate was exclusively Iron Age in date was not in fact determined until the excavation of TR12 in 2003. The road is discussed in chapter 2.

and excavation. On this first plan it can be seen that the face stones were some 50–100 cm off the wall lines as they appear on the final block plan, which was drawn by measuring the walls at ground level in 2010 (pl. 92b). The way in which the lines of facing stones at the preserved tops of the stone walls had slipped out of place can be more clearly understood by reference to the stone plan that was drafted by the author in 2001. It was also difficult to define the exact edges of the gateway and courtyard edges on the inside, not least because the way in which some of the stones had slid from their original locations distorted wall lines. Tumbled rubble from the walls had filled the entire structure. The gate was used for the passage of flocks of sheep and goats until very recently. The hooves of these animals, together with construction of simple shepherds' shelters, had dislocated many face stones from the towers, walls, and glacis.

Following the clearance of the rubble on the outside of the gate structure in 1999, the glacis faces were documented as flat surfaces by Ömür Harmanşah. However, the complexity of the curvatures and inclinations, which differed according to topography, made it impossible to transform these detailed drawings into architectural elevations. In 1999–2000, Kemal Gülcen of the METU Faculty of Architecture Cultural Heritage and Documentation Unit prepared detailed façade drawings under the direction of Emre Madran. Incorporated into the three-dimensional model created in 2009, these drawings still form the exterior architectural elevations. These years also saw the beginning of the simple photogrammetry method based on single-image rectification for the documentation of the wall faces and original surfaces revealed through continuing clearance and excavation.⁸⁸ The drawings obtained in piecemeal fashion with this method, which were mostly rectified and drafted by Ahmet Çinici, were also incorporated into the three-dimensional model in 2009. Earlier, in 2000–2001, various simple three-dimensional models of the gate structure were produced in order to test various reconstruction schemes. Continued clearance and excavation revealed a little additional information each season that could be incorporated into the main corpus, which provided new insights. This body of information contributed to and shaped the decisions made during the intervention phase in 2009 and 2010.

In the 2009 season, architectural fieldwork focused on the documentation of the Cappadocia Gate to form the basis for the design of a project for conservation, strengthening, and enhancement for presentation and visitor security. The survey was carried out by Çingir Salman, Erdoğan Cambaz, and Nazlı Mavuşoğlu of Rekare Restoration and Architecture Co. (Istanbul). The drawings were prepared by the same team, with the author acting as architectural conservation consultant. The documentation was presented to the Sivas Regional Commission on the Conservation of Cultural and Natural Property, under whose jurisdiction Kerkenes Dağ falls, in 2010 and was approved on May 19 of the same year. This new 2009 survey made it possible to draw the plans, sections, and elevations of the gate structure at a scale of 1:50, based on a digital three-dimensional model formed from approximately 2,000 survey points. It was thus possible to integrate all the former drawings of the wall face and ground surface into this system, as well as to produce accurate architectural sections showing the relationship between the various parts of the structure and the surfaces that had been revealed by excavation.

CONSERVATION AND ENVIRONMENTAL CONTROL PROJECT

Following the completion and approval of the architectural survey and documentation project for the Cappadocia Gate by the responsible regional conservation commission in Sivas, architectural conservation aims came into focus. It was clear from the start that this would have to be phased over a number of years, not only due to the difficulties in providing adequate funding, but also because the methodology depended on an experimental approach, the success of which had to be assessed before it was extended to the entire structure. Furthermore, the methodology had to be experimental because we were presented with a unique construction system, the stability and failures of which could hardly be modeled beyond the visible deformations on the structure itself. The two phases of this implementation, carried out in 2010 and 2011, are discussed below, following a summary of the architectural and structural

⁸⁸ F. Summers et al. 2003.

characteristics that made this case so unique and difficult, and the intervention principles that have defined the interventions so far.

SUMMARY OF ARCHITECTURAL AND STRUCTURAL CHARACTERISTICS

The gate structure is made up of two parts: the western wing, comprised of the South and West Towers and the western wall of the gate passage, and the eastern wing, comprised of the North, East, and Middle towers and the walls connecting them around the inner courtyard (pl. 58). The city wall butts against the gate structure on both sides. The glacis surrounding the exterior side of the gate and city walls, towers, and buttresses appears to be continuous. All the main walls are vertical, without steps or recesses between consecutive stone courses. It seems that the wall faces were constructed a course or two in advance of the rubble cores to function like a formwork for the stone infill. Large prismatic building blocks were preferred on the corners, but the wall faces generally show less careful workmanship when compared to the glacis. The building stones differ in size, with larger stones located on the corners and lower courses. The face stones were not cut or shaped but were fitted, leaving relatively minimal gaps or joints, the larger of which were chinked with smaller stones to increase stability.

Timber beams, probably rounded, were located along the wall face; these were leveled, wedged, and partially hidden by smaller stones bonded with mud. No traces of vertical, diagonal, or cross beams perpendicular to the wall faces have so far been found. The timber beams, each probably around 20–25 cm in thickness, were spaced at approximately 1 m intervals. It is interesting to note that the beams along the courtyard niches on the interior side are not quite parallel. The lowest are parallel to the inclined ground surface, but each successive row of beams is slightly less slanted, with the result that the timber line gradually became horizontal as the wall rose. As documented in chapter 3, evidence was revealed at the end of the 2010 season, as the conservation work reached its completion, that beams were employed in the same manner in wall faces behind the glacis.

INTERVENTION PRINCIPLES

The major concern in terms of architectural and archaeological conservation at the Cappadocia Gate was the fragility of the masonry technique. This concern arises not from any material fragility of the granite itself but rather from the technology that utilized dry rubble stone masonry. Only the corner blocks appear to be somewhat shaped, while all the other building stones on the wall and glacis faces were fitted together rather than being shaped and their gaps chinked. The space between the two faces was filled with rubble stone and probably compacted during construction (see pl. 94a).⁸⁹ This was not a very durable technology to start with, and the fire that destroyed the city intensified the level of destruction. The loss of the horizontal timber beams created weak courses along the wall faces, which were pushed forward by the weight of the rubble infill in their core. This situation also dislocated some of the individual face stones or created wall surfaces that inclined outward (see pl. 98a). The aftereffects of severe burning are also observed on the stones, in addition to the loss of the timber beams. In certain areas where high temperatures were attained, the facing stones lost their structural integrity and load-bearing capacity, as a result of which they are fragmented into small pieces. This has led to the loss of entire courses in the wall and the further dislocation of the rubble infill (pl. 93a). The loss of chinking stones from the wall and glacis faces, together with the partial collapse of the glacis, have also resulted in structural destabilization during the past 2500 years. The inclined topography caused the flow of great quantities of water through the dry walls during heavy rainfall, further destabilizing them. Finally, harsh climatic conditions (rain, snow, freeze-thaw cycles, flooding, and wind) acting on the exposed structure endangered its structural stability. Consequently, the walls exposed during the excavation and clearance work in 2008–2010 were only partially stable. Wall faces preserved closer to the modern ground surface, mostly exposed before the 2008 season, were relatively more stable. Excavation and clearance in those areas considered unstable was postponed, primarily because the instability of

⁸⁹ It should be noted that a compartmented walling system observed in Bronze Age city walls (as, for example, at Hattusa) would have made the masonry far more stable. Similarly, cutting the stones of at least the lower courses into prismatic shapes would also have positively affected the stability issues. However, the builders in this case appear to have limited their efforts in order to optimize cost and time, and invested in a fast rate of construction rather than structural stability, solving those issues with practical solutions such as timber beams and chinking stones

the walling had been recognized. However, when a budget became available for conservation and restoration work, it became necessary to complete the excavation and documentation before proceeding with any interventions. Some of the tilted and sliding stones on the top layers were moved backward onto the rubble core as a precaution, although this did not prove adequate. It soon became clear that it was nearly impossible, and in the long run perhaps neither feasible nor necessary, to provide temporary or permanent structural support for those areas of walling that were likely to collapse. Thus some of the wall faces exposed in 2008 and 2009, especially the northern face of the Middle Tower, had to be excavated in sections due to their instability. All the exposed parts were first documented in detail and then taken down so that the excavation could be continued toward the original surface below (pl. 93b). The collapsing sections of the wall faces were to be rebuilt in a way that retained the original character and with the original stones as far as possible. Yet in areas of heavy burning, the fragmented stones were not reusable and had to be replaced with similar stones.

Various proposals were reviewed for the stabilization and strengthening of the walling in situ. However, most of these included the introduction of previously nonexistent materials and technology to the wall system, such as embedding steel rods between the larger blocks on opposite wall faces, or the injection of a hydraulic lime mortar to fill the irregular joints in the lower part of the walls, thus in principle partially upgrading the masonry system into Roman concrete. But such interventions would have at best been only moderately reversible and, in the long run, would have obliterated the historical evidence related to architectural materials and technologies. It was therefore considered better to persist with the original masonry technique, preserving where possible the evidence for the embedded timber beams, and introducing new timber beams at the coursing levels where originals once existed. Reinking of the joints and gaps between existing glacis face stones with smaller stones similar to the original was also proposed as a measure to preserve wall stability. Inside the niches or recesses on the eastern and southern sides of the courtyard, where destabilization was minimal, a few courses

with smaller stones were constructed on the preserved wall tops to increase the weight, retain the rubble core, and deter sheep and goats. These new face stones, clearly distinguishable from originals by their smaller size, were also marked on survey drawings. Once the method was more or less decided, and the detailed three-dimensional documentation was completed following the 2009 season, a phased program of intervention was organized. The availability of funds and the experimental nature of the conservation and structural strengthening methods made the phasing inevitable.

In order to increase wall strength and ensure visitor safety, the walling was dismantled and rebuilt, along with other recently lost structures. This was completed with original wall and glacis facing stones, which had been recovered from earlier excavations and clearance work. Where it was necessary to raise the walls above the existing levels for various reasons, including stability and visitor safety, it was decided that comparatively smaller stones should be used to indicate a period difference in the masonry. It is very probable that the wall and glacis faces were originally covered with mud plaster. However, as the structure is in a completely exposed condition, which would require its regular maintenance, replacement of the plaster was not considered at this stage. It must also be noted that the appearance of the huge stone blocks themselves is far more impressive than a plaster surface and provides visitors with more visual information concerning the original masonry. The sandstone blocks bearing graffiti recovered in 2003, as well as all the sculpture and the stela set up within the gate, have been moved to the depot or the Yozgat Museum. The relocation of these materials to their original positions is not possible because of their heavily damaged state and the severity of the climate. Some pieces, however, could possibly be replicated in new stone.⁹⁰

Ideally, the re-created and completed wall tops should be covered with a soft capping that would enable the movement of rainwater and snowmelt but hinder the topmost stones from rolling around and falling from the wall. Geotextile and granite sand were used in front of the glacis face to hinder the growth of larger plants that could obscure the visual quality of the glacis if not pruned each year.

⁹⁰ The limestone statue could not be replicated because too little has been preserved for its reconstruction, but the carved base, the semi-iconic idol, and the aniconic stela, as well as the graffiti blocks from the corner of the glacis, could be replaced with replicas.

The 2010 Intervention

Following the completion of the survey and documentation project, a structural and architectural conservation, strengthening, and environmental control (enhancement for presentation and visitor security) project based on this work was prepared for the exterior southeastern corner of the gate structure, which was chosen as the first area of intervention (pl. 93c). Rekare Restoration and Architecture Co. was once again the designer, with the author acting as architectural conservation consultant and Ahmet Türer from METU acting as structural consultant for the Kerkenes research team. This project, together with the survey and documentation program, was also approved by the Sivas Regional Commission on the Conservation of Cultural and Natural Property on May 19, 2010. Fieldwork was conducted between September 9 and October 9, 2010, by Erkan Kambek and five master stonemasons who had previous experience in this kind of work and was supervised by the author for the Kerkenes Project team. The embassy of the United States of America at Ankara sponsored the work through the Ambassadors Fund for Cultural Preservation. The Sorgun District governor and the Sorgun mayor helped the progress of work by arranging for the loan of machinery that enabled the moving and raising of the large building blocks, as well as great quantities of rubble stone infill for the wall core.

This first phase of the program to be implemented focused on the southeastern corner of the structure and the exterior face of the East Tower. This area appeared to be more vulnerable for a number of reasons. First, the glacis face in front of the East Tower has a number of vertically continuous joints, which caused the large stones to slide downward. This area had been dismantled and relocated during a previous season (in 2003, under the direction of Ministry representative Mehmet Katkat), but the weight of the stones and the water movement had dislocated them again.⁹¹ Additionally, this corner had become a main route for movement through the city wall for flocks and herds due to its comparatively lower height and its connection with the flat area on the eastern side of the gate behind the city wall, where flocks of sheep are located during the early summer months. The movement of animals caused the dislocation of stones from the top courses and damage to wall faces. The debris in front of the

city wall on the eastern side, which provided animal access, was transformed into a stepped walkway for ease of access during fieldwork, after which it was removed. This comparatively easy connection with the flat ground to the east of the gate also enabled visitors to mount the wall top, creating concerns for their safety as well as the stability of the wall under their feet.

Intervention focused on raising the walls in this area to just above the preserved top of the glacis, thus permitting restoration of the glacis to its original height. This rebuilding of the glacis was considered to be a structural strengthening measure, because the weight of the glacis against the wall increased the stability of the masonry system. Following the original incline of the glacis face, and rebuilding the nonexistent parts with comparatively smaller stones, the wall top attained a height of ca. 6 m above the exterior ground level, as was foreseen in the approved project. As the wall and glacis faces were raised, the wall cores and backing behind the glacis were filled with rubble stone and compacted so as to stabilize them (pl. 94a). No horizontal or otherwise-positioned timber beams were used in this process because at the time this work was undertaken it was not established that timber beams had been employed in the external wall faces. Only toward the end of the work was evidence of such use revealed (pl. 94b). The wall face above the recess and portions of the tower fronts was raised two courses (30–50 cm) above the top of the glacis, and it was mitered on the inside to dissuade visitors from getting too close to the wall edge and glacis top, as well as to prevent willful dislodgment of the uppermost glacis stones (pl. 95a). Where original glacis face stones were dislocated and sliding downward, on the front side and inside the niche between the East and Middle Towers, they were taken down and repositioned (pl. 95b). Both the rubble and facing stones employed in the strengthening and completion of the wall and glacis were recovered from the piles of stone deposited outside at the gate for purposes of rebuilding in the course of earlier excavation and clearance. Stones used for the wall and glacis faces required minimal reshaping for fitting. The reconstructed glacis face on the southeastern corner of the East Tower was made with comparatively smaller stones so that it could be distinguished from the original parts (pl. 96a).

⁹¹ There also was evidence of vandalism.

The character of the terrain and the nature of the work limited the type of machinery that could be utilized to help the masons. A large crane could not be transported to the mountaintop or set up on the wall, and a small manual winch that was rented locally proved inadequate. In the end, a tractor with a hydraulic lift was found to be a very adaptable tool for transporting stones to and from the stockpile. At the same time, a mechanical excavator with backhoe and front bucket, kindly loaned by local authorities, proved to be very efficient. This machine was used to lift large stones, as well as serving as a scaffolding to raise the masons themselves when necessary (pl. 96b). Both the tractor and the mechanical digger had pneumatic rubber tires, which limited damage to original stone pavements and soil levels to an acceptable degree.

The collapsed rubble against the exterior face of the city wall on the eastern side of the gate structure was cleared away from the glacis. This new exposure was surveyed and documented in 2010. Here the wall and glacis were also partially reconstructed for purposes of strengthening, stabilizing, and protecting this area, but rebuilding was restricted to a lower elevation than that of the East Tower (pl. 97a). Cleaning in this area was completed with the removal of the temporary ramp made in 2009, thus limiting erosion caused by human and animal access over the East Tower and eastern wall.

Today this section of the wall, completed to a level that is two stone courses higher than the glacis, is safely accessible to visitors from the north. It has also become one of the more visually impressive and attractive monuments at Kerkenes. Thus the aims of the intervention—strengthening of the structure and limiting animal passage—were achieved at the same time as enhancing the monument visually and making it safe for visitor access (pls. 19a–b, 97b).

The 2011 Intervention

Before the 2011 season, an official permit was obtained from the Sivas Regional Commission on the Conservation of Cultural and Natural Property to rebuild sections of wall faces that had collapsed following the 2008–2010 excavation and clearance work, according to the drawings in the survey and documentation project. There was also an imperative need to reduce danger to visitors, as well as a desire to clear the gate court of stone that had fallen from the inner face of the Middle Tower in the autumn of

2010 following excavation and clearance work in the summer of that year. In some walls, unstable facing stones were either maneuvered back onto the rubble infill or removed altogether. This was done in order to permit the completion of excavation inside the gate court. The more heavily burned areas on the interior face of the Middle Tower (see pl. 93b) and the western side of the front passage had to be entirely removed because the facing stones were fragmented and the wall faces were leaning precariously (pl. 98a). This second wall adjoining the southern face of the West Tower was rebuilt to function as a temporary retaining wall against the infill, which was otherwise likely to have fallen down onto the gate court pavement (pls. 98b and 101b). At the same time, the loose rubble infill was moved backward on the wall top.

This 2011 phase of implementation was also designed to test the relative stability of the masonry technique based on the use of horizontal timber beams. New timber beams were used in the rebuilding of the southern faces of the West and North Towers, while they were omitted from the northern wall of the Middle Tower (pl. 99a). This work was also undertaken by Erkan Kambek, together with four master stonemasons who had previous experience in this kind of work, and was supervised by the author on behalf of the Kerkenes Project team.

The work carried out on the southern faces of the West and North Towers facing the gate court formed one part of the project. Here the face of the North Tower was in imminent danger of collapse, while the face of the West Tower had already collapsed in the previous season. Thus the building blocks from the North Tower were still in situ, whereas those of the West Tower were stacked nearby in the gate court area. Following the dismantling of the North Tower face and leveling of the West Tower face, timber beams were used in the rebuilding. The beams are located at the course levels precisely at the same elevations as the originals. In order to increase stability, short timber beams were introduced perpendicular to the wall face. All the beams are of new wood (late twentieth-century cut timber) obtained from seasoned telephone poles. They were roughly shaped with modern mechanical tools and coated with a lightly tinted preserving varnish to increase their durability in a wet environment. These new timbers are sufficiently different from the original beams to avoid mistaking their identity in the future.

The dismantling and rebuilding work was carried out with the help of a mechanical excavator with rubber wheels, backhoe, and front bucket. This was the most suitable and adaptable machine that it was possible to obtain for this kind of work. Tasks included moving, raising, and positioning large granite blocks. A manual winch proved to be inadequate for these operations, while it would not have been possible for a truck-mounted flatbed crane to access this area of the site. The mechanical digger was supplemented by a tractor with a hydraulic lift on the rear, which was principally employed to transport large stones because it was more maneuverable in restricted spaces.

All but the lowest courses of the northeastern face of the Middle Tower had been dismantled in horizontal sections during the course of excavating the gate court. It was decided to experiment with the stability of a masonry system without horizontal timber beams. The face was rebuilt to a height of 5 m above the court surface. This, however, proved to be unstable, and following a storm that brought the first heavy rain of the late summer, it collapsed. The rubble has since been removed, and the situation is currently stable and the court safe for visitors. Rebuilding of the Middle Tower did have the advantage of making it possible to complete documentation of the entire wall face and the stone pavement of the court.

The southern faces of the West and North Towers (pl. 100b) were first both cleared down to the level of the horizontal timber beams. The timber beams were located ca. 5–10 cm inside the faces, as they were in the original masonry, so that they would not be visible from the surface and be prone to rapid deterioration (pls. 99b and 101a). The beams were afterward hidden behind a thin course of smaller chinking stones. At the North Tower the wall top was raised to the level of the adjoining walls (pl. 100a), while at the West Tower the wall top was raised enough to prevent the infill behind it from sliding (pl. 101b).

CONCLUSIONS AND FUTURE RESEARCH

An overall evaluation of the interventions carried out so far would show that they have been successful in terms of achieving their aims and establishing a set of experimental and reliable data on which future programs may be based and designed. The most

important action after this stage is continuous and meticulous maintenance and monitoring. As the collapse of the rebuilt north wall of the Middle Tower indicates, accidents can occur, and their aftereffects need to be sorted out. Immediate clearing and securing of the area was necessary in this case. There are a number of unresolved issues as well. No protective layer has been arranged on the top of the walls along the East Tower and the side walls connecting with it. Maintaining a soft coping in this area would minimize the effects of snowmelt and rainwater movement through the wall while also helping to keep the top of the dry wall masonry intact. However, such a layer would need annual maintenance to continue functioning as intended.

Another such issue concerns the replastering of the glaxis and wall surfaces with mud. Excavation work uncovered many indications that these surfaces were originally covered with mud plaster. The very fine-textured silty fill found along the wall bases and on the ground are most probably remnants of the plasters that have washed away. However, the surfaces were not replastered with mud following the interventions because of the problems that would be faced in maintaining them. They would require regular maintenance and repair, as indicated by the condition of the traditional houses in the village. As a result, it was decided that the surfaces were visually more impressive in stone. Any experimental implementation work in terms of replastering of the surfaces with mud was postponed to a later phase, when the conditions for maintenance and monitoring would be more suitable.

There are maintenance and monitoring issues involving the stone pavement in the gate court as well. These original surfaces have been left exposed as they are. Although the granite paving stones are quite resistant against weathering and negative environmental conditions, a solution needs to be defined to protect and preserve them in the future. Covering the surface with fine-grained loose sand could be a simple answer, however it is likely that the sand would wash away quickly each winter. Otherwise, the experimental dry-stone masonry rebuilding of the collapsed parts of the walls and glaxis based on the survey drawings and using the stones recovered from the excavation and clearance debris has been successful. The experimental second phase in 2011 has clearly shown that the reintroduction of the horizontal timber beams is necessary. In the future, rebuilding of the walls should be based on

this construction system for better and more reliable results.

If funding is available, the next phases of rebuilding and structural strengthening should be carried out along the northern and western faces of the Middle Tower and the western side of the entrance

passage. These remain the most vulnerable areas as well as those giving the most concern with respect to visitor safety. A later phase could be the completion of the exterior face of the West Tower and its glacia, which would leave the two towers in the back, the North and West Towers, for a third phase.

CHAPTER 5

SCULPTURE, IDOL, AND STELAE

GEOFFREY D. SUMMERS, with contributions by NOËL SIVER

EXCAVATION, RECORDING,
CONSERVATION, AND DISPLAY

Three cultic images, each one very different from the other two, were set up in the Capadocia Gate. All were discovered in their original locations (pl. 61). In order of complexity they are, first, a smashed and enigmatic life-sized statue (K11.250), intricately carved from soft white limestone, set into a large sandstone base on which two sphinxes were carved in deep relief (K11.249). This base was installed diagonally across the northern corner of Room 3 facing the center of the doors in the front façade. Second, a semi-iconic idol of well-known Phrygian type was set up at the top of a built stepped monument in the corner formed by the front façade and the North Tower, on the opposite side of the court to the entrance passage (K07.223 and K07.224). Third, an aniconic granite stela (K11.278) was set against the inner face of the Middle Tower at its western corner. The sphinx block, semi-iconic idol, and stela are now housed at the Yozgat Museum. The statue (which requires further reconstruction and study), nonjoining sculpted fragments of the sphinx base, and several crates of sandstone fragments without worked surfaces that probably belong to the core of the base are housed in the excavation depot. A fourth possible stela or idol piece (07SURFU00stn01), included here for the sake of completeness, was found reused as a seat near the shepherds' hut to the northeast of the gate. This piece, too, is in the excavation depot. Relationships between these images and the graffiti incised into two stones at the front of the entrance passage are discussed by Susanne Berndt in chapter 7 of this volume.

CIRCUMSTANCES OF BURIAL

All three of the in situ pieces were buried beneath collapsed stone and burning timbers when the gate was destroyed. The granite stela remained upright, just as it was when installed (pls. 20b, 21b, 24b-c, 26a-b). The semi-iconic idol, as well as the statue and sandstone base, were, however, damaged when walling from the North Tower fell. Precisely how much of the southwestern face of the North Tower fell at the time of the destruction and how much tumbled down subsequently is not clear. When discovered, the shoulders of the idol were immediately below the modern surface, and the white stone was easily recognized by the workmen as different from the tumbled granite (pl. 138a). The preservation was very largely due to the way in which the timbers of the façade wall, against which the steps and idol were set, had burned with such intensity that the stone and mud infill had vitrified but not fallen. It is not at all impossible that the upper part of the torso was actually exposed to the elements after the fire, only to be buried beneath tumbled rubble as the walls continued to decay. Such a circumstance would perhaps explain why not all the fragments of the broken head were recovered, as well as why the front surface of the idol displays signs of weathering.

Similar problems pertain to the limestone sculpture and sandstone base set diagonally across the northern corner of Room 3 (pl. 28b). The preserved sculpted front and sides of the base were covered during the fire, as were the pieces knocked off the base and the statue in the initial wall collapse. Section 5, across Room 3 (pl. 88), shows that the mudbrick walling, and presumably a burning thatched roof, fell into the southeastern half of the room before much of the tower wall gave way. At the

other end of the room, where the sculpted pieces were set up, the walling of the rear façade was also preserved to a height sufficient to lessen the amount that fell from the face of the tower. A very similar situation pertains to the analogous statue of a goddess, presumably Kybele, attended by two child musicians, found in an Iron Age gate leading into the Büyükkale at Boğazköy.⁹²

Also difficult to assess is the amount of stone that may have been removed in later times. It is almost certain that tumuli containing stone cist graves were constructed on top of the North and West Towers, most probably in the Hellenistic period, as can be seen in the blimp photograph (pl. 6b).⁹³ The stones employed for the sides of these elevated cist graves and their large capping stones, together with the stone rubble used for the tumulus mound, would have been gathered from the immediate vicinity. It is highly likely that the crumbling towers were themselves modulated to enhance the appearance of these burial mounds.

EXCAVATION OF THE SPHINX BASE AND STATUE

Excavation of Room 3 in 2011 began with the southeastern half. After recording the central cross section (section 5, pl. 88), attention was turned to the northwestern portion, the fill of which was found to contain more fallen stone and less of the bright orangey-red burned mudbrick. The top of the sphinx base (K11.249) was soon uncovered and immediately recognized as being a cracked sandstone block associated with an unusually white stone. As with the southeastern half of Room 3, the intention was to fully excavate down to the clean burned floor so that the rather precarious face of the North Tower could be fully recorded before removal of dangerously leaning face stones. Immediately above the sandstone block, however, two large granite stones had slipped so far forward from the face of the tower that their removal was necessary before work could proceed (pl. 102a). Had it been known that the sandstone block was a broken base or plinth with relief carving on the front, still in its original position, and that the fill of this section of the room was to

contain delicate fragments of stone sculpture, the remaining slipped face stones in the tower wall would have been recorded and removed at this time (pl. 102b). As it was, the remainder of the stone wall face was left as it was found, as a result of which later excavation had to be conducted swiftly, with safety as the major consideration (pl. 103a).

Recording and Lifting of the Base and Statue

As the carved face of the sphinx base was uncovered, it became readily apparent that not only was the block split into two large pieces and one smaller fragment, but also that those portions of the relief carving that were still on the front of the block had cracked away and, in many cases, were adhering to the block by nothing more than the hard clayey soil in the cracks (pls. 103b–105). As work progressed, the carved front was uncovered with only minimal fine cleaning undertaken to avoid damage to the soft and friable stone. During this process digital photographs were continually taken. Further photographs were taken once the entire face had been revealed. To assist in eventual restoration, these photographs were printed out and the cracked fragments numbered before removal, with each piece being individually wrapped and labeled.

During uncovering of the front and sides of the statue base, numerous fragments of the base itself and of the limestone statue it supported were uncovered and lifted. Much was in very poor condition with wet, almost soggy, limestone, often in cracked lumps that did not lend themselves to block lifting. A procedure was adopted whereby each piece or group of pieces was lifted, wrapped in aluminium foil, and labeled according to its location in relation to the base. Cracked pieces and groups of joining fragments were photographed before and during lifting. The poor condition of the tower walling encouraged the excavation and lifting to be done with as much haste as was consistent with recording. It was thought imperative to remove the broken fragments and the base itself before taking down the wall stones or, indeed, before they fell of their own accord. Previous experience had taught us that such forward-leaning stones in wall faces at the gate were stable until the

⁹² Erdoğan 2012, p. 103; Bittel 1958, figs. 61–62.

⁹³ Many such tumuli were constructed on the Iron Age ruins at Kerkenes; several of these are in close proximity to the Cappadocia Gate. Not dissimilar tumuli are found at Boğazköy, where they are dated to the Hellenistic period (G. Summers and F. Summers 2008, pp. 70–71, with references).

soil either dried out or was softened by rain. Propping such stones with temporary wooden scaffolding had proved to be unsuccessful in the past because it did not prevent the very loose burned debris from tumbling out of the voids that were created when horizontal timber beams burned away, nor did shoring prevent fire-altered face stones from developing further cracks as they dried.

Once the base had been completely revealed, it was decided to detach the smaller and looser cracked sculpted fragments from the front face, as just described, before removing the two large pieces of the block. In order to remove the block, a trench was first dug down the front of the base through the room floor and the makeup level beneath. After the recording of details of the way in which the base had been leveled (pl. 106a), the front of the stone was undercut to permit the insertion of wooden planks. As the block was eased forward with the aid of screw jacks, the cracked pieces of relief carving became loose and could easily be detached. Each fragment could now be labeled and carefully removed. Removal of the carved fragments had the great advantage of making the task of lifting the two large sections of the block very much easier. As the base was moved farther forward, away from the walling, the two major pieces were easily separated. At this juncture, the limestone tenon set into the top of the base (pls. 105–106, esp. 106b) was removed, with the earth packing around it left in situ. Each large piece of the statue base was wrapped and cushioned as far as was practicable before being dragged up a wooden ramp by a tractor. Once the items were out of the trench, it was comparatively simple to raise the stones onto the spoil heap so that from this elevated position a hydraulic winch on the back of one tractor could be used to lift them into the trailer of another.

LIFTING AND RESTORATION OF THE SEMI-ICONIC IDOL

At the end of the 2003 season it was decided to remove the portion of the semi-iconic idol (K07.223) to ensure its long-term preservation. Both the idol and the topmost step into which it was set (K07.224) were cut from a distinctive white sedimentary stone and, although in situ, were badly cracked (see pl. 138a). The exposed idol, it was thought, would not survive a winter and was in any case vulnerable to vandalism. The idol was taken down piece by piece and laid out in position, face down, on a large

wooden board with handles (Turkish *geç geveri*). In the excavation depot the following year, conservator Noël Siver was able to reassemble all but a few fragments of the core. In the light of this success, in 2004 a similar procedure was followed for the step. It was an easy task, in 2006 and 2007, to join five additional pieces of the idol's head, two of which were found by shepherds (pls. 138–139).

REMOVAL OF THE ANICONIC STELA

In the winter of 2009, much of the wall face of the northern corner of the Middle Tower fell and, in so doing, displaced the aniconic granite stela (K11.278). Thus in the spring of that year it was considered expedient to remove the stela so that it could be stored under cover to protect it from the elements.

RELIEF SCULPTURE: THE SANDSTONE BASE WITH A PAIR OF CROUCHING SPHINXES

The limestone statue described below (K11.250) was set into a large base made from a single block of sandstone measuring ca. 1.80 m long, 0.82 m deep, and 0.72 m tall (K11.249). This block had six sides, with four different dimensions. The rear corners of the block were cut away so that it could be positioned at 45 degrees to the corner of the room, with only a small triangular void left behind it (pls. 65, 102b–103a). The back of the block is 84 cm long, the sides 40 cm, and each angled side 65 cm. In order to remove this base from the trench, it was necessary to excavate down through the floor and the makeup below the floor so as to insert planks beneath the block. In the course of this process a section was cut parallel to and immediately in front of the base, revealing that sandstone pieces had been used to level the block before it was carved and before the final floor surface was made (pl. 106a). Presumably these pieces of sandstone came from the cutting away of the back corners of the base, and perhaps also from the cutting of the socket and other trimming. The top is smooth, with a central rectangular socket measuring ca. 50 × 20 cm and 30 cm deep (pls. 108b–c, 109b–c). A pair of small conical holes 6 cm in diameter and 5 cm deep, reminiscent of so-called “cup marks,” were cut into the top in line with the front of the socket and 120 cm apart; the one on the west is equidistant between the block edge

and the socket, while that on the east is closer to the socket (pls. 109c, 114a). Other depressions in the top, whether made before the destruction or when walling collapsed onto the surface, are very probably accidental. The back, sides, underside, and socket were all rather roughly trimmed, with marks of a broad blade as well as a tool with a single point being prominent (pls. 107–108). The front of the block, carved in deep relief, depicts two antithetical crouching sphinxes, faces turned toward the viewer and inner forelegs raised as though holding up the overhanging ledge above (pls. 109–111, 119b). The central space between their manes was left blank. There is no hint of any additional symbol or attribute between the animals. No attempt was made to finish the front face immediately below the legs of the crouching sphinxes, which was below the floor; this observation confirms that the carving was done only after the block had been positioned (e.g., pl. 106a).

Originally the stone was a dark, drab yellow color, a hue it has generally retained except where reddened by fire—as happened especially at the front right—or lightly coated with off-white salts, probably carbonates. The stone was obtained from local Eocene beds. Similar sandstone was used to embellish the tops of the Middle and South Towers and was also employed at the Monumental Entrance to the Palatial Complex. Locally it is known as Yozgat Taş (“Yozgat Stone”), and it was used for construction of the Çapanoğlu Mosque, the Clock Tower, and other nineteenth-century public buildings in the provincial capital. This stone varies in coarseness according to the sedimentary beds from which it is quarried, but it is generally characterized by being soft and easy to work when wet, and somewhat harder when dry. Carving would have been accomplished with a variety of metal tools with points and blades, most probably made of iron, after which expanses of the surface were rubbed smooth. No trace of paint was observed.⁹⁴

Fragments broken from the front of the plinth have been tentatively placed in their original positions on plate 119b. The relief is deep, with the result that the front two-thirds of each head, as well as three of the five claws, together with tendons, are visible when viewed from above (pl. 110a). The modeling is gently rounded in a developed style. Both

the workmanship and the level of artistic skill are considerably higher than those seen on the more provincial carved orthostats from Ankara, but the piece is not as delicate as the smaller-scale relief sculpture from the Monumental Entrance to the Palatial Complex at Kerkenes.⁹⁵

DESCRIPTION

Position and Pose

The relief depicts two crouching sphinxes, that is, winged lions with human heads. These beasts are carved in profile, crouching antithetically with their forelegs claw-to-claw but their heads turned forward (pl. 119b). The tails of both creatures are curled between the hind legs. Although they were clearly meant to be identical, they are not quite so. The sphinx at left is larger than its opposite partner. At 92 cm from the front claw to the rump, its overall length is greater by some 12 cm, with an obvious difference in the size of the mane-covered chest and a 5 cm difference in the lengths of the forelegs. Plate 119b also shows that the left end of the block is ca. 12 cm taller than the right, although most of this difference is below the carved area and hence was hidden below the floor, and it is likely that the front edge of the top, now missing, would have been more or less level.

The fragment of the top front edge retains indications of what are presumably the claws of the inner front legs (pl. 113), in which case the beasts had their inner forelegs raised and the claws stretched to support the protruding ledge, thereby appearing to be bearing the statue. If the identification of foreleg fragments is correct, and if the full original width of these two fragments is preserved, it would seem that these forelegs were not fringed but bore a greater resemblance to human arms than do the legs on the ground. This impression is strengthened by the fragment of an upper “arm” carrying the representation of a metal band (pl. 118a). While the position of the hair and face fragments has to be more or less correct, nothing indicates to which of the two bodies the pieces belong. Placement of the arm fragments, particularly their angle, has, however, been proposed with less confidence.

⁹⁴ For tools used by sculptors in ancient Greece, see Palagia 2006, p. 246, pl. 78.

⁹⁵ For the Ankara orthostats, see Prayon 1987, with references.

Face and Hair Fragments

The human faces of the sphinxes were turned forward to confront the viewer directly. One fragment (pl. 117) has part of the nose preserved, together with an entire eye and part of the cheek. The remains of the nose are insufficient for its form to be determined, while only a small part of the upper lip indicates the position of the mouth. The eye is framed by the eyelids, which are clearly divided, the upper lid being arched and noticeably larger than the lower. The eye itself is asymmetrical rather than almond-shaped. The entire depiction of these facial features broadly parallels that on the statue from the Palatial Complex entrance, but this relief from the gate is more naturalistic and subtle.

The hair (pls. 114b–116) stands raised off the smooth face. It is indicated by shallow parallel ribs, presumably representing braids, in generous waves. Similar ribbing, although straight with curled ends, was employed to render the hair on the statue from the Monumental Entrance to the Palatial Complex and, in zigzag style, for what was probably the mane of a large lion sculpture from the same area of the city.⁹⁶

Two fragments show the hair apparently flowing around the shoulder, with the ends of alternate braids terminating in a curl (pl. 116a and c). These curls were made by first carving continuous loops and then severing every other braid. These two fragments are not sufficiently large to permit an attempt at placing them on the reconstruction.

Wings, Mane, and Fur Fringes

The wings seem to have originally comprised four overlapping layers of feathers, although parts of only three are extant on the sphinx at right (pl. 112a). The lower edge of the wing is straight, as presumably was the top, although it is not impossible that the outer layer was slightly fanned so as to sweep gently upward. Feathers are depicted as plain ribs with rounded ends. In general, the depiction resembles that of the more stiffly carved four-layered wing of the griffin on an orthostat from the Ankara

region.⁹⁷ The manes and the fringes of fur hanging from the lower edges of the hind legs, forelegs, and wings are depicted in the common way of stylized overlapping scales, each with a central depression (pl. 112b). This same technique can be used to represent feathers, as, for instance, of the small-scale relief of a winged disc and the neck feathers of a griffin from the Palatial Complex entrance.⁹⁸ On this statue base, however, the claws and legs leave no doubt that fur is represented. The mane extends to the knee of the foreleg, while a fur fringe extends the entire length of the foreleg, curving around to continue to the end of the wing. On the hind leg the fringe is restricted to end just behind the knee.

Legs, Claws, and Tails

The front and rear legs are fringed with fur along the bottom edge. The tendons are boldly rendered in relief raised prominently from the limbs. On the forelegs they cross in a stylized, unnaturalistic fashion that makes them at first glance resemble straps (pls. 110–111). The claws are also forcefully carved and shown slightly curled as though gripping. The intended impression is clearly one of strength even while at rest. There are three detached fragments of the inner side of the inner front legs that were raised to support the overhanging ledge at the top of the plinth (pl. 118a–c). One of these fragments, from the upper part of one of the legs, is adorned with a spiral armband (pl. 118a).⁹⁹ None of the inner arm fragments has the feathered fringe preserved. The tails pass between the hind legs, rising steeply in parallel with the taut belly before curling downward to end in a hairy tuft. The posture of alert repose is thereby emphasized.

Gender

The fur manes would immediately suggest lions rather than lionesses and thus that the sphinxes were both male. On the other hand, the rendering of both the hair and the facial features on the extant fragments leaves room for doubt. Beards would clinch the matter, but no fragments were recovered. It is of course possible that the heads were not

⁹⁶ Draycott and Summers 2008.

⁹⁷ Prayon 1987, p. 22 and pl. 7b, reproduced in Draycott and Summers 2008, pl. 80a. The precise date of this series of relief-sculpted orthostats from Ankara is disputed, but the clamp cuttings and stylistic comparison with the Kerkenes plinth lend support to Prayon's arguments.

⁹⁸ Draycott and Summers 2008, pls. 31 and 35.

⁹⁹ Such metal armbands are commonly depicted on the upper arm, just above the elbow, in Assyrian and Neo-Hittite reliefs (see, e.g., Frankfort 1969, pls. 83, 96, and 97).

identical, with one being male and one female. According to Sanna Aro, Neo-Hittite or Luwian portal sphinxes “usually have a winged lion’s body and a distinctively female face.”¹⁰⁰ At Sakçagözü, however, striding male sphinxes are depicted on orthostats, while the column base is protected by a pair of standing females.¹⁰¹ Closer in time and space to the Kerkenes plinth is a Phrygian orthostat from Ankara depicting a human-headed winged sphinx sporting a beard and hat.¹⁰² Thus it is plausible to conclude that relief-carved lions on our plinth most probably had female heads with manes. Perhaps it is not entirely coincidental that the gender of the life-sized statue from the Monumental Entrance to the Palatial Complex is likewise ambiguous.¹⁰³ As noted above, the fragments of the inner forelegs, if such they are, seem to have been devoid of fringes and thus appear more humanoid.

DISCUSSION

The pair of confronting, crouching sphinxes is shown in a state of alert repose. Their inner forearms are raised, with outstretched claws supporting the overhanging ledge and so holding the base on which the statue appeared to stand. No other sculptural representations of sphinxes in exactly this pose are known from either the ancient Near East or the East Greek world. There are, however, two representations of sphinxes *en face* known from the Highlands of Phrygia, at Arslankaya and Burmeç.¹⁰⁴ In both cases the animals are placed antithetically in a pediment on either side of a king post and are standing, not crouching. Their preservation is poor, with no details now visible.

Elsewhere the best known, if not the only, examples are the basalt sphinxes, bulls, and lions adorning the temple at Ain Dara in North Syria.¹⁰⁵ These Neo-Hittite sculptures of standing or striding

beasts belong, however, to very different sculptural and iconographic traditions. This general difference is even more true of Imperial Hittite sphinxes of the second millennium, such as those flanking the monumental gate into the so-called palace-temple complex at Alaca Höyük or the famous Sphinx Gate at Hattusa.

Looking westward, the marble sphinxes from Kerameikos that sit erect on top of an Attic grave stela with their heads turned ninety degrees are, although much closer in time to the Kerkenes sphinx block, equally different in type of stone, portrayal, and function.¹⁰⁶ On the other hand, crouching, standing, or striding sphinxes with their bodies in profile and faces turned forward appear on Iron Age ivory carving from northern Mesopotamia and Syria in both Syrian and Phoenician styles. Bear-headed North Syrian representations have greater similarity with the Kerkenes sphinxes than the Egyptianizing pieces in Phoenician style. While the Assyrian-period ivories from Nimrud and elsewhere are earlier than the much larger stone Kerkenes base, it will be remembered that a stunning, and so far unique, ivory furniture inlay found at Kerkenes hints at what might yet be discovered in Lydian Sardis.¹⁰⁷

No sphinxes with one raised arm supporting something above are known to me; however, griffins and genies are commonly depicted in this pose in both Phrygian and Neo-Hittite relief sculpture, as discussed by Catherine Draycott in drawing comparisons with the relief sculpture from the Monumental Entrance to the Palatial Complex at Kerkenes, where one reconstruction would have two griffin-headed genies supporting a winged disc.¹⁰⁸ Confronted, recumbent sphinxes in profile, their inner forelegs resting on floral motifs, were carved on architraves on the Temple of Athena at Assos.¹⁰⁹ These protectors of a female deity are fittingly portrayed as females themselves, without the fearsome manes of

¹⁰⁰ Aro 2003, pp. 310–11.

¹⁰¹ Akurgal 1949, pls. 38 and 39; Orthmann 1971, pl. 49: Sakçagözü A/4; pl. 50: Sakçagözü A/8; and pl. 51: Sakçagözü A/12.

¹⁰² Akurgal 1949, pl. 48b.

¹⁰³ Draycott in Draycott and Summers 2008, pp. 15–17.

¹⁰⁴ Arslankaya: Haspels 1971, p. 88 with figs. 189, 190, and 523; Berndt-Ersöz 2006b, no. 16, pp. 222–24, with references. Burmeç: Haspels 1971, fig. 175; Berndt-Ersöz 2006b, no. 18, p. 225, and fig. 124.

¹⁰⁵ Orthmann 1971, pl. 1.c–d B/b1–5, pl. 2.a Ba/2, and pl. 2.c Cb/1.

¹⁰⁶ Richter 1944; Boardman 1991, figs. 225–28.

¹⁰⁷ Two examples from Fort Shalmaneser at Nimrud suffice to make the point: Mallowan 1966, figs. 465 and 505. These same pieces are discussed in Winter 1976, with pl. 3a and b. For the Kerkenes inlay, see Dusinberre 2002.

¹⁰⁸ Draycott and Summers 2008.

¹⁰⁹ Wescoat 2012, pp. 133–35.

the lion. Other representations of sphinxes in the Eastern Greek and Greek worlds are usually if not always female and generally associated with protection of the dead.

In conclusion, it is tempting to think that the unique sphinx base found in the Cappadocia Gate represents a distinctively Pterian school of sculpture that ultimately had its roots in western and central Phrygia. The iconography goes back a long way in the ancient Near East and spread westward with other aspects of orientalizing art. The viewer would have seen these guardian sphinxes symbolically protecting the statue they physically supported, which is discussed below.

CONSERVATION OF THE SANDSTONE BASE

Noël Siver

The conservation of the sandstone base was a complicated exercise due to the brittle condition of the sandstone, the logistical difficulties imposed by the size and weight of the larger fragments, the uneven underside of the plinth, and the areas of loss on the sculpted front panel. It involved the collaboration of team members, local workmen, Şahmuratlı villagers, a Sorgun carpenter, and stonemasons from Manisa.

On June 20, 2011, the two largest fragments and one smaller joining fragment of the base were transferred by tractor and trailer from the site to the excavation's stone workshop. Between June 20 and July 15 small fragments were cleaned with tap water and the interior of the socket of the block was excavated. In August the largest fragments were cleaned with tap water. Two trolleys designed by Françoise Summers were made in Sorgun for the largest pieces of the block. On September 7, with the help of the stonemasons, these pieces were positioned on the trolleys in such a way that they met up snugly.

An adhesive consisting of a 50% solution of Paraloid B-72 acrylic resin in 95% acetone : 5% ethanol was applied to the joining faces of a very large fragment and the block. Once this fragment was attached, the entire block was encircled with a strong green nylon strap and a tourniquet was applied to tighten it. Foam was placed between the strap and the stone to prevent color from the strap staining the surfaces. The strap was left in place for

twenty-four hours to give the adhesive time to set. Only then, aided by printouts of copious digital photographs taken in the course of excavation, could the process of join finding of fragments from the sculpted front panel be undertaken. A 15% solution of Paraloid B-72 acrylic resin in 95% acetone : 5% ethanol was used to consolidate the joining edges of the larger fragments and of the various sculptured fragments that needed to be reattached to the front of the plinth. The fragments were then joined using a 50% solution of Paraloid B-72 acrylic resin in 95% acetone : 5% ethanol. Once all the joining fragments had been attached, the plinth was photographed and drawn. A program of final consolidation and restoration to be carried out in 2012, prior to installation in the Yozgat Museum, came to nothing because the General Directorate insisted that the plinth be moved to the Yozgat Museum at the end of the 2011 season.

SCULPTURE IN THE ROUND: THE LIFE-SIZED STATUE

DESCRIPTION

This enigmatic piece of exceptionally elaborate statuary (K11.250) will take very considerable time, patience, and effort if more is to be made of it. Contrary to our initial opinion, it is now certain that the majority of the statue is missing, with, at a rough guess, perhaps approximately one-tenth or less of the sculpted surface extant. Here only a very preliminary assessment can be offered. The chosen stone was a soft white sedimentary limestone, or well-bedded wackestone,¹¹⁰ that was selected from Eocene sedimentary beds common to the region. A feature of the bedding is great variety in the stone's texture, ranging from very fine to coarse with many voids, as can be seen in several of the photographs (e.g., pls. 121 and 124). These differences in bedding have been of help in orienting fragments as well as in join finding. The sculptor chose to set the stone vertically with respect to the bedding planes and would seem to have oriented it so that finer bedding, and hence the denser stone, was at the front. However, within the stone there are considerably coarser beds that rather resemble small balls of polystyrene, described as "bubbly." These coarse beds were not an

¹¹⁰ We are grateful to geologist Nuretdin Kaymakçı for this identification.

obstacle to carving fine detail, as can be seen from the fragment depicting pleated material and three fibulae (piece C, below; pl. 121). To what extent the contrasts between the different sedimentary beds in this single piece of stone were accentuated by the amount and acidity of moisture since the destruction and burial has yet to be ascertained. Originally white, some of the fragments turned pale bluish gray as a result of the fire.

There are several thousand fragments, perhaps more than one thousand of which have a preserved worked surface. Many of these fragments are smaller than a thumbnail in size. In addition, there are very many more undiagnostic fragments of the core. Their state of preservation varies from excellent to extremely poor, evidently dependent on postdeposition deterioration due to acidic groundwater, the degree of burning, and the extent to which fragments were broken and crushed during the collapse. Pieces recovered close to the floor and, particularly, adjacent to the tower wall were the most affected by acidic ground water, which had eaten away at the stone in such a way that, in the case of groups of adjoining broken fragments, the broken edges had sometimes become rounded and powdery (pl. 119a). Fragments found higher up in the collapse, as well as in the void behind the plinth in the northern corner of Room 3, were less eroded. A few pieces exhibit a pale gray surface or a gray zone just below the worked surface that demonstrates that this discoloration was caused by heat during the fire. The fire seems to have also caused pieces to break away from the core in such a manner that they are of constant thickness regardless of the bedding planes in the stone. These and other fractures have a tendency to be curved. Similar phenomena were observed in sculpture and relief carving recovered at the entrance to the Palatial Complex and would seem to be a characteristic of these sedimentary rocks.¹¹¹

The statue was set into a deep rectangular socket rather roughly cut into the center of the sculpted base (K11.249; discussed above). The tenon at the base of the statue, measuring 40 × 18 cm with a preserved height of 40 cm, was found in situ. This was not a tight fit, the tenon being slightly smaller than the socket, and the empty space on all sides was packed with earth. Unless more than a single sculpture is represented by the many fragments, the statue would have been considerably wider and deeper

than the tenon. The base of the socket is quite uneven, and no attempt was made to flatten it. This is in contrast to the four sides, which were trimmed but in no way finished. Whether the statue was completely uncarved, fully sculpted, or somewhere in between before the stone had been located in the socket is not certain. However, the detail and complexity of the sculpture, together with the confined space in the corner of the room in which a sculptor would have had to work if the stone was in its final position, very strongly suggest that the piece was fully finished when it was installed on the plinth. Additionally, no scatter of limestone debitage from sculpting was found. Had the statue been carved where it was found, such waste would have been expected in the triangular void between the back of the plinth and the corner of the wall. The fill of this void, however, contained sculpted chips from the drape and other fragments, as well as, oddly, a biconical baked-clay spindle whorl (K11.273; pl. 162c). If, as discussed below, the sculpture had a plain back or even an unfinished back rather than being carved completely in the round, it would still have been difficult to sculpt in situ.

When the gate was destroyed, the carved base was badly damaged, being split through the socket into two very large fragments, from one of which a smaller third piece had broken away. These three pieces were taken down from the site to the stone workshop by the excavation house. There, the hard-packed brown clayey fill in the base and adhering to the sides was carefully removed. It has to be imagined that when the statue was put into position, loose clayey soil was thrown into the unevenly cut base of the socket. The statue would have been lowered into this and, once it had been maneuvered into the desired position, more clayey soil would have been packed in around the sides to keep it in place. This packing material does not appear to have been in any way special. In the soil filling the bottom of the socket was a piece of cut lead sheet (11TR23U-31met01; pl. 173b), while adhering to one side of the socket, held there by the hard clayey fill, was a shapeless lump of melted lead (11TR23U31met02; pl. 173c). Also in the socket fill was a small iron nail (11TR23U31met03; pl. 170h). There is no reason to think that the lead or the nail were other than pieces of rubbish that were fortuitously thrown in with the clay packing.

¹¹¹ Draycott and Summers 2008.

CATALOG OF STATUE FRAGMENTS

PIECE A

Site Inventory Number: K11.250, Piece A

Plate: 120a–b

Identification Number: 11TR23U22stn01

Photographs: 12dpnd0765, 12dpkc0572

Description:

Three joining fragments, mended. Light gray with pale core; very soft and powdery, fine-grained, burned limestone, badly eroded. Maximum dimensions 10.4 × 6.5 × 2.5 cm. Orientation uncertain.

The curved edge at the top has worn parallel grooves on either face, hardly visible in the photographs on plate 120a–b, that curve very slightly upward to meet along a rounded corner, perhaps indicating a braid or plait. All other edges are breaks. Three biconical bead-like elements, together with the scar of a fourth at the top, are decorated with continuous, narrow, vertical incised lines. To the left are two very abraded spherical bead-like elements, the upper of which is terminal. Between these spherical elements, as well as at the base of the lower bead, there are slight indications of a spacer. No indication of incision can be seen, but the surface may have flaked off as it has over the greater portion of the lowest bead on the right. The original surface to the left of these spheres is not preserved. The bases of the deep hollows that articulate the carved elements are uneven, being deeper where the elements join than at the carinations, and carry the marks of the same fine-pointed tool that was used to make the incised lines.

The bead-like elements might represent strings of beads, perhaps of glass or frit, but this is by no means certain. Indeed, the way in which the incisions are continuous on the three preserved biconical elements does not suggest separate beads and could indicate bunched tresses. It is not clear what the fragment represents; hair or adornment are the most obvious candidates. A combination of both is



another possibility, but it might equally be a representation of some kind of object.¹¹²

PIECE B

Site Inventory Number: K11.250, Piece B

Plates: 120c–f

Identification Number: 11TR23U22stn01

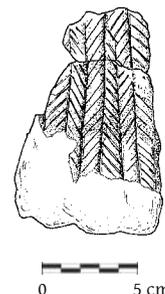
Photographs: 12dpnd0770, 12dpnd0771, 12dpnd0777, 12dpnd0781

Description:

Two joining fragments, mended. There are no other fragments that appear to belong to this very distinctive piece of the sculpture. Light gray throughout with patches of white, soft and powdery burned limestone with slightly “bubbly” bedding planes. A 90-degree corner fragment, triangular in section, tapering from right to left. Three surfaces have preserved carving; the larger has maximum dimensions of 12.0 × 6.4 cm, the smaller 12.0 × 5.5 cm. The top, at left, measures 7.5 × 4.0 cm. The orientation is vertical, as demonstrated by the bedding of the limestone, presumably with the loops hanging downward.

Two surfaces are carved with vertical looped ribs incised in a herringbone design. The larger surface (pl. 120d) has five such ribs, including the shared corner, and indications of a sixth, while the small side (pl. 120e) has four preserved. Both surfaces are undulating. The preserved area of the triangular end (pl. 120f) is very abraded, but there are indications of three ends of the loops.

Loops of braided rope-like material would seem to preclude a representation of braided hair, but the preservation is too poor for it to be certain that the loops are all continuous. Comparison with the hair of the sphinxes on the carved base (pls. 114b–115) provides one possibility. The undulating surfaces are probably a deliberate device to indicate flowing hanks of braided material.



¹¹² Susanne Berndt has suggested to me that it might be part of a polos. This attractive idea carries important implications, but it is difficult to see how it could be placed unless it was from the carved top.

PIECE C

Site Inventory Number: K11.250, Piece C

Plates: 121

Identification Number: 11TR23U22stn01

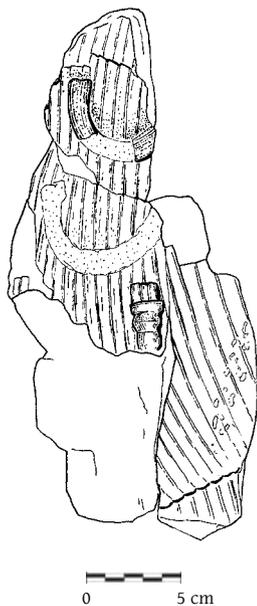
Photographs: 12dpnd0916, 12dpnd0861

Description:

Four joining fragments, mended. See also Piece D, in addition to which there are small uncataloged fragments that do not join but that appear to have broken away from the same element of the overall composition. Gray to pale gray burned limestone with fine and rather coarse, “bubbly” beds. A large rounded fragment with a small preserved part at the wider end, which is at an angle of 90 degrees to the curved plane. There is some white deposit, particularly on the broken surface of the fragment with the projection. Maximum preserved dimensions ca. 28 × 11 cm. Bedding in the stone indicates that the orientation was vertical, while the loops described below demonstrate that the narrow end was uppermost.

Narrow parallel ridges and grooves, width ca. 5 mm, cover the preserved surface. The better-preserved portion is at right on plate 121a, where it can be seen to extend onto the protuberance and slant across the bedding plane of the stone before bending round to run parallel to it. Clearly seen in the drawing are three parallel pendent curves or arcs of raised elements, of which only a single example is sufficiently preserved for its form to be at least partially discerned. The raised feature (pl. 121b) is clearly the clasp of the lowest of three partially preserved fibulae of Phrygian type. The pin attachment at the other end of the arc, which itself is lost, is indicated as shown at left on the drawing to plate 121a. The two fibulae above are indicated by little more than their scars where raised elements have broken away, although portions of the uppermost arc are discernible.

These three representations of Phrygian fibulae show that the ridges and grooves represent a pleated garment or drape. The rounded profile of the piece



is very probably a left breast with the fibulae gathering material as it falls over one side, in which case the composition would have centered on a life-sized female in human form.

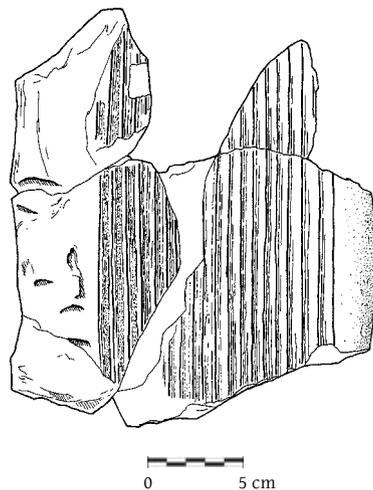
PIECE D

Site Inventory Number: K11.250, Piece D

Plate: 122

Identification Number: 11TR23U22stn01

Photograph: 12dpnd0848

*Description:*

Five joining fragments, mended. This is a continuation of the pleated drape depicted on Piece E. The broader and flatter ridges suggest that it was located below Piece E. There is no indication as to which end was uppermost. On the left side is a raised fillet, on the facing surface of which shallow toolmarks are visible in raking light. Light vertical toolmarks are also visible on the plain strip, which is partially coincidental with a “bubbly” bed in the limestone. Piece E broke along this bedding plane. Maximum height: 22 cm; width of plain strip: 6.2 cm; depth of fillet: 1.3 cm.

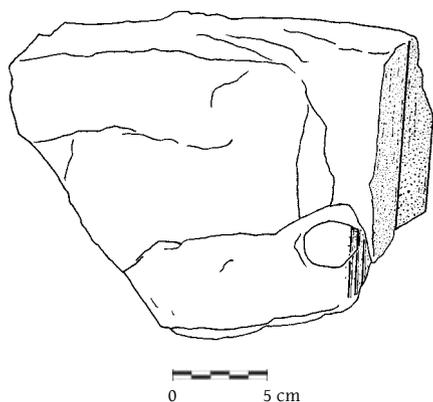
PIECE E

Site Inventory Number: K11.250, Piece E

Plate: 123a

Identification Number: 11TR23U22stn01

Photograph: 12dpnd0919

*Description:*

Five joining fragments, mended. This piece is curved in cross section with a protruding element. Pieces F–I are from the same sculptural element, along with small uncataloged fragments. Cream-colored, fine-grained limestone. Maximum preserved dimensions: ca. 18 × 21 cm; diameter of curve: ca. 18 cm; maximum preserved thickness: 5.5 cm. Oriented by the vertical grooves and ridges, but there is no indication as to which end should be uppermost. The main element consists of a broad, slightly curved, vertical strip, 12 cm in preserved width, together with a small area of parallel but not exactly regular grooves and ridges on the left of the photograph that presumably represent more of the pleated drape. At right on the illustrations is part of a raised plain vertical strip, on the slightly uneven surface of which it is possible to discern toolmarks. The pleats end against a wide plain strip that may represent the edge of the material, although it was not smoothed and might therefore be part of a plain side to the sculpted figure.

PIECE F

Site Inventory Number: K11.250, Piece F

Plate: 123b

Identification Number: 11TR23U22stn01

Photograph: 12dpndo864

Description:

Fragments related to Piece C but not joining. Maximum dimensions: ca. 7 × 7 cm. Grooves and ridges are bigger and perhaps less regular than on the large piece.

**PIECES G, H, AND I**

Site Inventory Number: K11.250, Pieces G, H, I

Plates: 123c–3

Identification Number: 11TR23U22stn01

Photographs: 12dpndo838 (G),
12dpndo840 (H),
12dpndo839 (I)

*Description:*

G: two joining fragments, mended: ca. 13 × 14 cm.

H: ca. 7.8 × 6.0 cm.

I: two joining fragments, mended: 9.5 × 7.5 cm.

Pieces H and I have been altered by the fire to a light gray shade.

PIECE J

Site Inventory Number: K11.250, Piece J

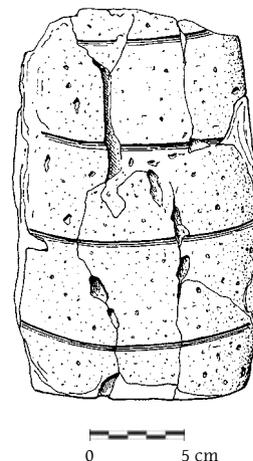
Plates: 124–25

Identification Number: 11TR23U22stn01

Photographs: 12dpndo905,
1227dpndo712

Description:

Numerous joining fragments found together in front of the sphinx block, mended. Maximum preserved height: 20.6 cm; width: 14.5 cm; depth: ca. 26.0 cm. The carved area is very curved, orientation is presumed to be as illustrated. Five horizontal bands are depicted, one above the other, with the lower side of each band stepping out a



little from that above. Horizontal lines are not exactly parallel, and heights of the three preserved bands vary; the band in the middle is the narrowest, while the one below is the tallest. The stone is very “bubbly,” a factor that would have had some influence on the relatively coarse carving. Whether the smoothed surface originally appeared as full of holes as it now does or erosion of the stone has contributed to its present appearance is moot. In any case, it is clear from the quality of the stone in comparison to the tenon that this piece is from the lower portion of the statue.

If this piece represents a leg draped with folds of plain material, which is a plausible interpretation, the leg would presumably have been forward in such a way that the pleated garment hung to either side of it. No large stone sculpture of a female Phrygian deity depicts a draped leg in this fashion, but the ivory figure of a mother with two children from Tomb D at Bayındır shows that such a depiction does not rule out identification with a goddess.¹¹³

PIECE K

Site Inventory Number: K11.250, Piece K

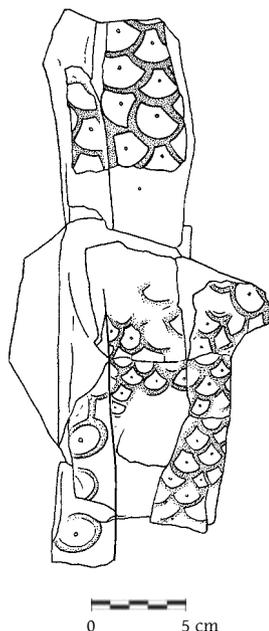
Plates: 126–27

Identification Number: 11TR23U22stn01

Photographs: 12dpnd0715, 12dpnd0737, 12dpnd0730

Description:

Numerous joining fragments mended into two large portions. It has been assumed that on this and all other pieces on which scales are depicted the scales hang downward. Here and on other fragments scales have diameters of 7 or 12 mm, suggesting they were marked out with one of two fixed-radius cutting compasses. The prominent hole made by the point of the compass suggests that the soft stone was deeply incised, if not entirely cut, by the



compass. There are three elements to the decoration on Piece K. At the top is a flat area, maximum 8.2×6.0 cm, with large scales of various completeness, from a half-circle to approximately one-third of a circle, all with a radius of 12 mm. Below this is a curved and rounded limb-like element covered with small scales of radius 7 mm; this element curves upward at top right, where there is preserved a single large scale, radius 12 mm. The area to the left of the limb-like element, which curves very slightly from top to bottom, is covered with larger scales, the wider-than-usual grooves reflecting the difficulty of cutting close to the ninety-degree corner. The profiles on plate 126a show how the element bearing the smaller scales projects farther as it descends the piece until it becomes more than half round. It is probable that this piece represents the upper portion of the leg of a beast and that the areas incised with larger scales are parts of the chest.

PIECE L

Site Inventory Number: K11.250, Piece L

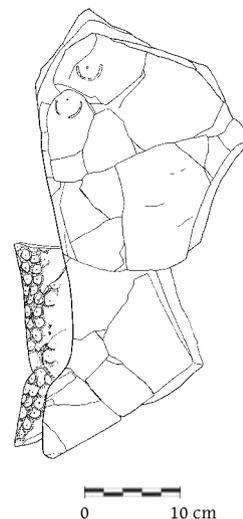
Plates: 128ff31

Identification Number: 11TR23U22stn01

Photographs: 12dpnd0801, 12dpnd0809, 12dpnd0804, 12dpnd0820

Description:

Numerous joining fragments, mended. This piece apparently depicts portions of the lower leg of a beast, with smaller scales, and part of the chest, on which a few larger scales are poorly preserved on an upper area of the side. Fine limestone, pale gray as a result of heat. Maximum height: ca. 48.0 cm; width: ca. 15.4×12.5 cm; depth: ca. 25.5 cm. The lower section of the leg, as best seen on plates 130–131, is curved in profile. Plates 129–131 show the rounded corner and the smoothed right-hand side of the sculpture with, as shown on the drawing, traces of large scales at the front of the side.



¹¹³ Conveniently reproduced in Draycott and Summers 2008, pl. 79b. For recent discussion, see Şare 2010.

PIECE M

Site Inventory Number: K11.250, Piece M

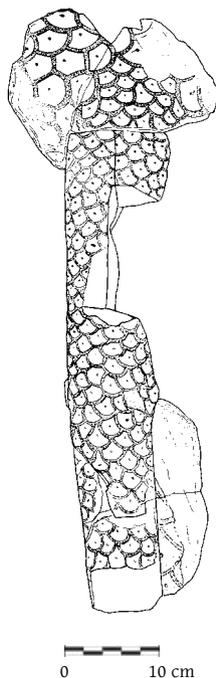
Plates: 134-135

Identification Number: 11TR23U22stn01

Photographs: 12dpnd0747, 12dpkc0531

Description:

Numerous joining fragments, mended. This piece appears to be a twin of piece K, either the second leg of the same animal or, if two beasts were depicted, possibly a leg of the second beast. The area of larger scales at top left and at the right of the lower section of the leg on the illustrations presumably depict the chest. The leg is considerably curved in profile and more than half round, as shown on plate 135. Maximum preserved height: ca. 41 cm.



PIECE O

Site Inventory Number: K11.250, Piece O

Plate: 136b

Identification Number: 11TR23U22stn01

Photograph: 12dpkc0502

Description:

Five joining fragments with preserved surface, mended. If scale size is a guide, these fragments come from an animal leg. Preserved dimensions: 7.6 × 6.0 cm.



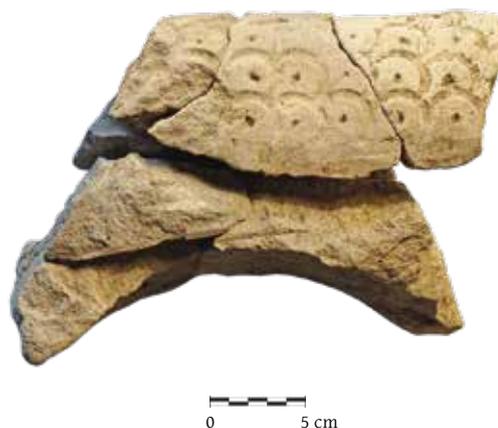
PIECE P

Site Inventory Number: K11.250, Piece P

Plate: 136c-d

Identification Number: 11TR23U22stn01

Photographs: 11dpkc2909, 11dpkc2908



PIECE N

Site Inventory Number: K11.250, Piece N

Plate: 136a

Identification Number: 11TR23U22stn01

Photograph: 12dpkc1494

Description:

Ten joining fragments with preserved surface, mended. Presumably part of the curved chest of a beast. Maximum height: ca. 22.4 cm.

*Description:*

Joining fragments with a drilled hole, mended. The cutting marks made by the drill inside the hole, as well as the depression made by the pointed drill end, are clearly seen on plate 136c-d. The hole was presumably made for a wooden dowel, either to attach a separate part of the sculpted composition or for mending a break. These fragments appear to have come from part of an animal leg like those on pieces K, L, and M. In this case, a mend is perhaps more likely than a join unless, as is possible, an area of poor stone required an insert. Maximum preserved height: 12.3 cm; preserved length of drilled hole: 2.6 cm; diameter of hole: 0.7 cm.

PIECE Q

Site Inventory Number: K11.250, Piece Q

Plate: 137

Identification Number: 11TR23U22stn01

Photographs: 11dpkc3005, 11dpkc3009

Description:

An enigmatic fragment that is presumed to have been a part of the statue because of the similarity of the stone. One side (pl. 137a), probably the front, is rounded and smoothed, with the rounded part recessed. The smaller area of preserved surface on the other side (pl. 137b) is less well finished. Orientation is uncertain, but if it was as shown in the photographs it could possibly have been the paw of an animal. Length: ca. 1.1 cm; height: ca. 1.0 cm.



or early sixth century depicting a figure covered in a pleated drape through which a leg covered with folds of plain material is extended forward. Among the surviving fragments, which perhaps make up less than 10 percent of the entire piece, there are no fragments of belt, tassel, or feet, and no obvious fragments from a face or polos.

The majority of the extant carved fragments are covered with compass-cut scales in two sizes. There seem to be leg and chest fragments, in which case it might be imagined that a standing figure was accompanied by one or perhaps two beasts shown squatting with their forelegs erect. Should the scales represent fur, the animal could have been a lion, as might be expected, but a bird or some composite creature is also possible. There are sufficient fragments to make it likely that there were two beasts, perhaps lions flanking a central standing figure. It is probable that the sculpture was not completely in the round but, rather, that it was three-quarters round with a flat back, in the same manner as the well-known sculpture of, presumably, Kybele with two child musicians from Boğazköy.¹¹⁴ If the sculpture was carved where it was found, such a hidden flat back would have been easier for the artist to achieve and would have provided much-needed strength to the soft stone. If we are correct in identifying piece C as a draped female breast, there can be little doubt that the main subject of the sculpture was a life-sized female. In that case, the most obvious candidate would be a Phrygian deity, presumably Kybele. There are, of course, other possibilities, including a local goddess and protectress of the city or, just possibly, a queen. Without an inscription it is impossible to know.¹¹⁵

The circumstances of the fire and collapse of the gate have already been described in detail. Here, however, it is pertinent to repeat that the southwestern wall face of the North Tower partially collapsed during the fire (pl. 102a). The fire also destroyed the rear wooden façade with such intensity that some stones in the tall footings became partially vitrified. This vitrification was particularly evident in the vicinity of the wooden doors but could also be seen where the stone footings of the façade encased large timber elements set against the face of the North

DISCUSSION

Neither the overall size nor the subject of the sculpture are evident. There are, however, some clues. Depiction of three fibulae of typical Phrygian type confirm the general impression gained from other details that the sculpture was life-sized. Indeed, given the size of the sandstone base and the almost life-sized faces of the sphinxes carved on its front, it is to be expected that the statue they supported would have been of similar or larger proportions. Furthermore, the setting of the sculpture in the northern corner of the rear section of the gate demanded a piece commensurate with the scale of the architecture. As to the subject of the sculpture, it included a draped figure. If it is correct that the pleated drape included a full-length gown or a skirt, then the figure would presumably have been in human form. There are no close parallels. No known statue in the round, or three-quarters round, sports Phrygian-style fibulae. However, the torso of the statue of the goddess with child musicians found at Boğazköy is very largely a modern restoration; thus it is not impossible that she too was wearing brooches of this kind. Nor is there statuary from the later seventh

¹¹⁴ See Draycott and Summers 2008, pl. 83, for a comparison of the Hattusa piece with the sculpture from the Palatial Complex at Kerkenes and other comparanda.

¹¹⁵ It is here worth making the point that this identification of the statue as female on the basis of clear female attributes (breasts) adds to the probability that the statue found at the Monumental Entrance to the Palatial Complex (Draycott and Summers 2008, pp. 10–21) represents a male.

Tower wall. The roof, presumably thatch, and the supporting posts of Room 3, which contained the sphinx base and sculpture, had completely burned, while mudbrick walling of the southwestern wall fell into the room before the tower wall face crumbled. Perhaps the first pieces were broken off the statue when the roof and façade burned. Certainly, the degree of reddening of the front of the base is indicative of direct contact with burning timbers. Most of the statue may well have survived the initial destruction, only to be lost through decay and erosion in the following decades or centuries. In this preliminary account, description is restricted to a selection of the major preserved elements, which in some cases it has been possible to reassemble. There are very many small fragments, some smaller than a thumbnail, carved with scales or parts of scales. Circumstances, the poor condition of the stone, and want of resources precluded the recording of each tiny individual fragment, all of which have been kept. It is not clear at this stage in the processes of reassembly if the investment of time and energy that will be required to make further significant progress in join finding and restoration will be repaid. Current assessment is somewhat pessimistic.

Surface Treatments

No trace of paint or other coating could be found. If the bands of coarser bedding in the stone were originally as prominent as they now appear, some kind of application might have been expected. In the early sixth century, statuary carved from soft stone or “poros” from the Acropolis at Athens was often coated to cover flaws in the stone and to provide an even surface for the application of paint.¹¹⁶ However, the fine carving of this Kerkenes statue would not have lent itself to the overall application of any such coating. While no trace could be found for selective coating over areas where the coarser beds were exposed on the surface, such treatment cannot be entirely ruled out. As noted earlier, it is unclear whether the marked differences in the fineness of the stone apparent today were anywhere near as prominent when the statue was first carved. Absence of preserved paint is paralleled on the pieces from the entrance to the Palatial Complex. That

many areas of the stone surface appear to have been porous strengthens this negative evidence for paint.

The carving of such exceptional detail would seem to preclude any idea that the sculpted image was intended to be clothed. The question of additional elements in materials other than stone is more difficult. One fragment, piece P, has a small dowel hole carefully drilled into it, the precise purpose of which is unclear (pl. 136c–d).

The Limestone

Careful selection of this very soft white stone by the sculptor requires comment. Its surface color and the texture of some of the finer portions bear some resemblance to ivory. Some of the techniques used to carve the stone may also resemble those used in carving ivory. However, this choice of soft limestone is surely a reflection of a tradition of wood carving rather than the sculpting of harder stones such as marble or local granite—a further indication of traditions and influences from the west of Anatolia. At Gordion, not dissimilar soft stone, there termed “poros,” was used for protome sculptures and acroteria no later than the ninth century.¹¹⁷ In the Phrygian Highlands, architectural façades and other rock-cut monuments were generally hewn from soft rocks, although the granite stepped idols at the Phrygian side of Dümrek are one exception.¹¹⁸ By contrast, the great majority of reliefs and sculptures in the Neo-Hittite world of central Anatolia were carved from hard limestones, basalt, and similar rocks, as they had been in the second-millennium world of the Hittite Empire.

The Fibulae

Phrygian fibulae, or fibulae of “Phrygian type,” are common from at least as early as the ninth century, when they occur in number in the predestruction levels at Gordion, to the later sixth century, when they are found, for instance, in the Phrygian tumuli at Ankara and depicted being worn by the “Cappadocians” on the relief sculptures of the Apadana East Stairs at Persepolis.¹¹⁹ The three fibulae carved on piece C (pl. 121) are too poorly preserved for their exact form to be discerned, but both their form and their size are similar to the example

¹¹⁶ Casson 1933.

¹¹⁷ Sams 1989, but using the now-outdated low chronology for the destruction level at Gordion.

¹¹⁸ Berndt-Ersöz 2006a; Grave, Kealhofer, and Marsh 2005.

¹¹⁹ Schmidt 1953, pl. 35B.

found at the Cappadocia Gate and generally to Muscarella Type 12.¹²⁰

Whether these brooches were exclusively Phrygian is not entirely clear. A fibula of this type is prominently sported by King Warpalawas on the İvriz relief, and other Neo-Hittite representations are known on tomb stelae from both Zincirli and Maraş.¹²¹ On both grave stelae the fibulae are worn by women, either above the breasts, at Zincirli, or high on the waist, at Maraş. Farther afield are tribute bearers at the palace of Sargon II (722–705 BC) at Khorsabad and the late sixth-century Cappadocians depicted at Persepolis mentioned above.¹²² No representations of goddesses in Phrygia or Ionia, usually identified with Kybele, wear brooches.

Fragments with “Scales”

The majority of the remaining fragments with preserved worked surfaces are covered with feathers or scales made with a cutting compass.¹²³ Exactly what was depicted is very uncertain; substantial portions of legs and parts of the chests of one or two attendant animals seem to be the most likely candidates (pls. 126–136).

The circles come in two sizes, the smallest, on the putative legs, having a diameter of around 7 mm, while the largest, on the chest, are 12 mm. Each has a prominent compass hole and is cut with a wide bevel. The way in which they overlap, the lower ones being cut first, creates notable variation in both shape and orientation, with some rising to a sharp point while others have the point truncated. Thus a full scale is a semicircle below an apex at the top of the circumference with curved sides. The arc of the smaller scales may be no more than a third of the circumference. In a few instances, where there are changes in plane that were difficult for the craftsman to cope with, all the initial edges were removed when adjacent semicircles were cut, leaving

irregular elements with as many as six concave sides. Because of the breadth of the beveled cutting, the final appearance of widely spaced “scales” is not so very dissimilar to the double lines sometimes used for similar depictions on vase paintings or incised on sculpture. Where the surface of the stone was fine-grained it was carefully smoothed. The question of what these compass-cut semicircles might represent can now be addressed. In Archaic Greek art, from large- and small-scale sculpture, ivory carving, vase painting, and metalwork, this same motif, both incised or painted with a compass and rendered freehand, can be used to depict scales on fish and beasts such as griffins and sphinxes.¹²⁴ This simple device is also employed to depict scale armor, although rendering of this kind of armor is restricted to torsos and never shown covering limbs.¹²⁵ It can also be used to crudely represent lion manes, one striking example being a limestone waterspout from Olympus dated to the mid-seventh century.¹²⁶ In addition, the same motif was commonly employed to depict feathers on sphinxes and griffins, not least on human-headed sphinx-like creatures. Two seventh-century examples are all that is necessary to demonstrate this point in advance of further mending and study of the sculpture under consideration. The first is a small ivory sphinx from Perachora near Corinth on which the “plumage is incised with a compass in the form of semicircles.”¹²⁷ The second example, in metalwork from Salamis on Cyprus, comprises cauldron attachments in the form of human-headed sphinx-like creatures sporting beards and copious hair.¹²⁸ A more distant parallel in both time and space is the colossal basalt sculpture of a griffin from Tell Halaf, ancient Guzana. On this sculpture in the round, feathers are depicted by double lines of semicircles engraved on the chest and leading edges of the folded wings, with flight feathers on the wings being portrayed differently.¹²⁹ The same

¹²⁰ Muscarella 2007, p. 177.

¹²¹ Akurgal 1962: İvriz pl. 140 and color pl. on p. 141; Zincirli pl. 130 and pp. 138–39; Maraş pl. 139 and p. 139.

¹²² For Khorsabad, see Muscarella 2007, pp. 173–74, who argues that the fibulae became “polity-nationality identity markers.”

¹²³ Casson 1933, p. 69; Adam 1966, pp. 82–83; Barletta 2006, p. 116.

¹²⁴ Examples can be found in Boardman 1998 and 2001.

¹²⁵ For example, a late sixth-century Attic red figure cup by the Sosias Painter depicting Achilles and Patroklos from Vulci (Boardman 2001, p. 279 fig. 308).

¹²⁶ Boardman 1991, fig. 265.

¹²⁷ Hampe and Simon 1981, pp. 236, 254–55, and pl. 411.

¹²⁸ Hampe and Simon 1981, pp. 100, 113, and pl. 166.

¹²⁹ Cholidis and Martin 2002, fig. 47, in color. This mythical creature has sphinx-like curls of hair that extend down to the breast, while shorter locks of hair ending in curls flow down the back of the head.

device is used on relief sculptures from the same site. Finally, there is a sixth-century headless sphinx on an Attic stela in the Metropolitan Museum, New York, sculpted from hard limestone, with much more regular scales that are both pendent and with the arc uppermost.¹³⁰

GENERAL REMARKS ON THE SCULPTURE IN ROOM 3

The sphinx base was positioned at 45 degrees to the corner in which it was placed. Thus it directly faced the center of the doors in the front façade of this rear section of the gate. There can be no doubt that the plinth and, more importantly, the elaborate white limestone sculpture that it supported were intended to make an indelible impression on anyone entering the city through the Cappadocia Gate.

Any ceremony that may have been associated with this installation has left no discernible trace in the archaeological evidence. The pair of small, symmetrically placed “cup marks” have no obvious utilitarian purpose, their size and shape making it difficult to see ways they could have effectively supported any kind of cover or how they might have held attributes or cultic paraphernalia. Thus it is tempting, but not necessarily correct, to think of them in relation to the pairs of similar cup marks, but always of two sizes, found in association with Imperial Hittite gates such as those found in front of each of the two protome reliefs at the Lion Gate in Hattusa. At the moment of the fire and collapse there were no objects of any sort on the floor of Room 3, but by this time the sculpture had been hidden from general view by construction of the wall that transformed open space into a room.

It cannot be doubted that the soft limestone and probably also the sandstone plinth would not have stood up well to the inclement weather at Kerkenes. It is reasonable to assume, therefore, that from the time of installation some kind of shelter or cover that kept off snow and rain, yet did not lessen visual impact, was provided. It would not have been problematic to fix such a cover across the corner between the tower wall and the façade, and perhaps even to close it off all together at certain times, but no vestige of a cover was found. When the rather shoddy

wall was constructed to make Room 3, with a door inserted at its northwestern end, the original visual impact from the center of the front doors was utterly lost. Why a wall should have been constructed in this way is a complete mystery and, until such time as the subject of the statue is ascertained, a fruitless subject for speculation. The reasons must, however, have been cultic and political, not merely stemming from a desire to provide shelter.

With regard to the plinth, the artistic skill in the careful depiction of the sphinxes is very impressive and must reflect the existence of a sculptural school. The existence of such a school does not surprise, given the sculptural and architectural pieces discovered at the Monumental Entrance to the Palatial Complex and hinted at elsewhere at Kerkenes. If, as seems probable but is not proven, the plinth and sculpture were made within a few years of the foundation of the city, there would be evidence that skilled artisans were among the first colonists. Alternatively, if the sculpture was installed later, it might be evidence that the rulers of this flourishing city were able to attract Phrygian artists of the highest caliber to their court.¹³¹

The crouching pose is unusual. Most representations of sphinxes, as well as of griffins, lions, and the like, from the Neo-Hittite and Phrygian corpus are striding or standing. The couchant position of these sphinxes with the inner foreleg raised demonstrates that their role was to support the statue which was set into the plinth. A parallel may be seen in the crouching pose of lions supporting images of deities in the Neo-Hittite world at, for instance, Carchemish.¹³² In these earlier images, however, the beasts hold their heads low, in line with the back, whereas the sphinxes on our plinth have their heads raised in a more protective, less subdued, pose.

Turning now to the statue, this would most probably have been made in a workshop, not carved in situ in the cramped corner where it was installed. The plinth, on the other hand, was carved in position. The quality of the workmanship, not only as seen in the carving of the animals but also in the flat and highly smoothed face of the stone between them, is in stark contrast to the rough tool-marked surfaces not only of the sides and back but also of the front beneath the animal's legs. While none of

¹³⁰ Richter 1944, figs. 46–49.

¹³¹ The depiction of three fibulae is surely an indication that the sculptor was Phrygian.

¹³² Hawkins 2000: KARKEMIŠ B33, MALATYA (Arslantepe) 7, and MALATYA (Arslantepe) 13.

these rough surfaces were immediately visible, it might appear to the modern mind that such discrepancy is indicative of a desire for haste.

Finally, in considering what the sculpture represented, some remarks must be addressed to the visual focus intended by the direction in which the sculpture faced and the subsequent walling off. The plinth and the statue it supported were installed so as to face directly toward the center of the double doorway in the front façade. When the wooden doors were fully open, it would hardly have been possible to enter the city without seeing the imposing imagery. The choice would seem to lie between ruler and deity. If the drape fastened with fibulae flows over a substantial breast, as seems highly likely, the figure would have been female, either a goddess or a queen. If it was a goddess, the style of dress is quite unlike the so-called Kybele statue from Boğazköy, or indeed other Phrygian or Ionian sculptures, both large- and small-scale.¹³³ On the other hand, accompaniment by a pair of beasts might not be inconsistent with a goddess. The association of a goddess with both lions and attendant sphinxes is most clearly seen at the Arslankaya monument in the Khönus valley near Afyon. It is therefore very tempting to identify this Kerkenes statue with the Phrygian Mother, Matar, accompanied by a pair of lions and supported by two female sphinxes. While this might be probable, it is far from certain. Should the figure have been a local goddess—protector of the city, for instance—the fibulae would have indicated her Phrygian credentials.

CONSERVATION OF THE LIMESTONE STATUE

Noël Siver

The conservation of the statue was difficult due to the poor condition of the limestone. Most fragments were lacking sharp joining edges. Many fragments were soft and powdery. As join finding proceeded, it became obvious that, when compared with the total number of fragments, there was an insufficient number of fragments with worked surfaces. It also became apparent that worked surface fragments had split off from the core of the statue, probably due initially to the heat of the fire and then subsequently to long-term exposure to water. It was only possible to reconstruct isolated

portions of the statue. Conservation consisted of washing the fragments with tap water and a soft brush, join finding, consolidation of joining edges with a 15% solution of Paraloid B-72 acrylic resin in 95% acetone : 5% ethanol, and mending of joining fragments using a 50% solution of Paraloid B-72 acrylic resin in 95% acetone : 5% ethanol.

THE SEMI-ICONIC IDOL AND ITS STEP

The stone is a distinctive dacitic tuff from local but as yet unlocated Eocene deposits.¹³⁴ This tuff is white when freshly cut, but fire damage has turned the head fragments a very pale pink, while much of the surface of the torso and step has brownish staining as a result of burial.

SEMI-ICONIC IDOL

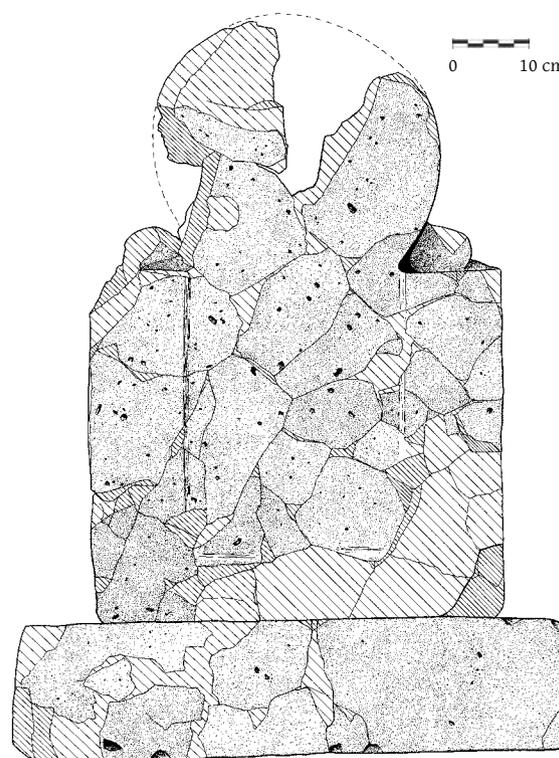
Site Inventory Number: KO7.223

Plates: 138-139

Identification Number: 03TR13U08stn01

Photographs: 03dpjv6173, 05dpnk0116, 10dpkc1715

Yozgat Museum Registration Number: 1685



¹³³ See Draycott's discussion in Draycott and Summers 2008.

¹³⁴ Definitive identification was made by geologist Nuretdin Kaymakçı.

Description:

The idol is now largely complete, with only portions of the head missing. There is no doubt about its original semi-iconic form. The entire front and the sides of the torso are smoothed, as are both ends of the bolster-like curls of hair on the shoulders. In raking light it is just possible to see the angled marks of a fine-pointed tool on the face. There is no trace of paint. The back of the idol is very rude and uneven, while the rounded back of the head was roughly shaped, with no attempt made to smooth the surface. Thus when viewed from the right side—that is, the only side that would have been visible because the left was adjacent to the tower wall—the sides of the torso and the bolster-like curls are seen, while the side to the head is uneven and rounded. The left side is treated in exactly the same way, demonstrating that the carving of the stela was completed before it was set in position. The rectangular torso is 47 cm in height and 54 cm wide, surmounted by a circular head approximately 45 cm in diameter. Arms are represented by raised borders 12.5 cm wide on the same plane as the 10 cm high raised band along the bottom. The body and head are on a second plane, the depth of relief being 8 mm. The triangular space above the shoulder and the front end of the bolster-like curls are, at 1.8 cm, more deeply recessed. The bolsters are half-round, with a diameter of 6.5 cm at the ends and 5.5 at the center. There is no raised rib around the center of the bolster.

The Top Step

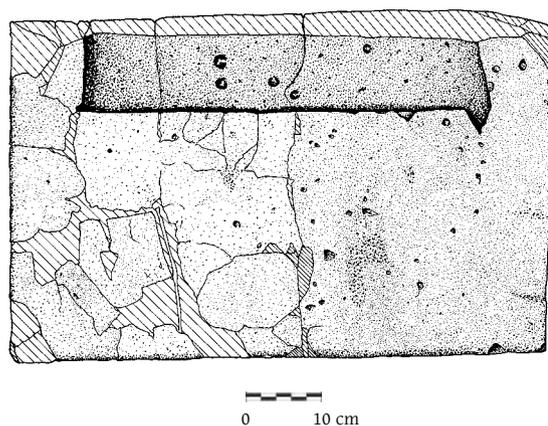
Site Inventory Number: KO7.224

Plate: 140a

Identification Number: O4TR13U08stn02

Photographs: O3dpjv6173, O5dpnk0116,
10dpc1715, O4dpcs1718

Yozgat Museum Registration Number: 1685

*Description:*

The rectangular and recessed topmost step, in contrast to the idol itself, was neatly cut from white tuff, although the corners are not at 90 degrees and the front is slightly wider than the back (pl. 140a). At the front left corner of the recess is an inclined V-shaped groove. It is thought that this was made for a purpose, because a similar cut can be seen on one side of the “bolster slab” found in the Monumental Entrance to the Palatial Complex at Kerkenes.¹³⁵ This special treatment of the top step is paralleled in the Phrygian Highlands, where the topmost step of stepped monuments is often larger and more carefully cut than those below.¹³⁶ It measures 73 × 42 cm, varying in height from 17 to 19 cm. Cut into the back side of the top is a shallow recess, 1.5 cm in depth, measuring 54.0 × 10.5 cm. While the stela fitted snugly into this recess, the back would have overhung by some 5.5 cm.

Discussion:

Rock-cut stepped monuments with semi-iconic idols in anthropomorphic form are well known in the Phrygian Highlands. Similar idols are not uncommon at Phrygian sites to the east of the Highlands, including Gordion and, east of the Kızılırmak, Boğazköy.¹³⁷ They are usually cut from soft volcanic stone, like this Kerkenes example, but the numerous examples at Dümrek are granite. Images of such idols are also cut into rock faces in the Highlands and, as described in the next chapter, into soft stones at the front of the Cappadocia Gate. The Kerkenes example is unique in being set up on a built flight of

¹³⁵ Draycott and Summers 2008, pls. 63a and 64a.

¹³⁶ I thank Susanne Berndt for this observation.

¹³⁷ Berndt-Ersöz 2006b, 2007; for Boğazköy, see Bittel 1970, p. 150; for Gordion, see Roller 2012b. G. Summers 2006c contains further references, while the most recent general discussion is Roller 2012a.

steps rather than one cut from the living rock. It is also unique in being set up within a structure, here a city gate, rather than in what were apparently open spaces. The orientation is that of the North Tower and the perpendicular front façade, which form the corner in which the stepped monument was built. Unlike the sphinx base and statue in the rear of the gate, the stepped monument and idol were not turned to face the entrance passage. Given the confines of the gate court, surrounded by high walls, it must also be the case that celestial bodies, including both the sun and the moon, would rarely if ever have shed direct light on the face of the idol. It is certain that this idol was not associated with solar events, nor indeed can it have had any astronomical associations.

As described in chapter 3, the gate seems to have been kept clean at all times. Thus if offerings were placed on the steps, which is perhaps the most likely explanation of their function, no remnants of any kind could be found. Facing toward the outside, the idol was clearly positioned to deal with entrants to the city, human or otherwise, rather than departees. It is therefore not unlikely that its prime function was guardianship. As to what is represented, there is no clue except that, if the statue in the back of the gate was indeed a female deity, perhaps Kybele, this idol was presumably a cultic representation of lower status. In this regard, it is worth remembering that statuary in human form and semi-iconic idols were found together at the Monumental Entrance to the Palatial Complex. As discussed in chapter 3, it is not unlikely that there was some kind of shelter over the idol, presumably a double-pitched roof, and it is not impossible that there were doors. If this were the case, it would be a further, perhaps major, difference between this stepped monument and idol and those at, for instance, Midas City and Dümrek.

CONSERVATION OF THE SEMI-ICONIC IDOL AND ITS STEP

Noël Siver

Preliminary conservation of the body of the idol and of its step was carried out in 2004. This consisted in cleaning the fragments in tap water, join finding, and mending joining fragments using a 50% solution of Paraloid B-72 acrylic resin in 95% acetone : 5% ethanol. Once the newly found portion of the head had been joined on in 2006, it was decided to add three detachable “feet” to the uneven lower

surface of the step in order to create a more stable base for the stela. A coating of Paraloid B-72 acrylic resin in acetone : ethanol was brushed onto the surface of the areas where the feet were to be attached. Once that had dried, the feet were made in situ using Interior Polyfilla patching plaster (calcium sulphate, hemihydrate) alternated with layers of plaster bandage. Each foot measured ca. 5 × 10 cm and was ca. 1.5 cm in height. In 2010 the idol and step were prepared for display in the Yozgat Museum. Conservator Alison Whyte assisted in the conservation, while exhibits preparator Erik Lindahl made a wooden base. The step was fully restored in the excavation depot. Larger voids that had appeared due to the crumbly nature of the stone were filled with lightweight glass microballoons mixed with a solution of Paraloid B-72 in acetone : ethanol. Smaller voids were filled with Interior Polyfilla. The surfaces of the gapfills were inpainted using acrylic paints. Final restoration of the idol was begun in the excavation depot and completed where the piece was to be displayed in the Yozgat Museum. For the head portion of the idol, it was decided to make detachable gapfills in case more fragments of the head of the stela are found. These gapfills were created using Interior Polyfilla. Again the surfaces of the gapfills were inpainted using acrylic paints.

A POSSIBLE SECOND IDOL

<i>Site Inventory Number:</i>	—
<i>Plate:</i>	140b
<i>Identification Number:</i>	07SURFU00stn01
<i>Photograph:</i>	11dpkc3002



Description:

In 2007 a large piece of white tuff with a deliberately rounded top was being used as a convenient

seat by a shepherd boy in the animal enclosures to the northeast of the gate. It is not known where this stone came from, but there is a strong possibility that it was recovered from the same animal pen walls as the head fragments of the stela on the stepped monument. Maximum dimensions: 60 × 33 cm; maximum thickness 12 cm.

Discussion:

The form of this stela (if such it is) would have been different, the size of the arc suggesting a simple rounded top of a type also depicted in the graffiti described in the following section. If both the identification of this stone as a stela fragment and its original location in the gate court are correct, the fragment would be evidence for the existence of more than one stela.

THE ANICONIC GRANITE STELA

Site Inventory Number: K11.278

Plate: 141

Identification Number: 09TR22U17stn01

Photographs: 09dpcp0702, 09dpcp0712, 09dpcp0710, 10dpkc1610, 10dpkc1616

Yozgat Museum Registration Number:

[taken to the Yozgat Museum]

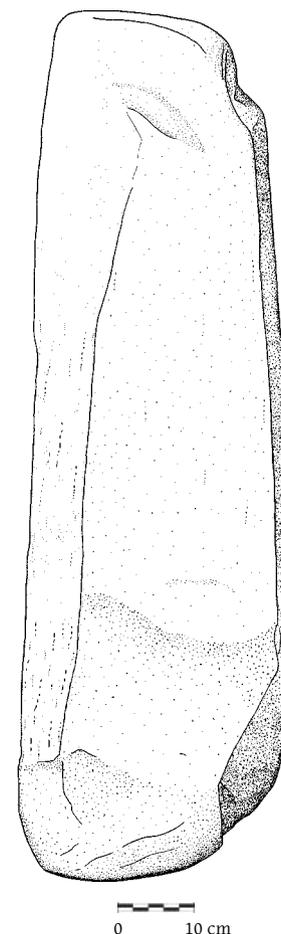
Description:

A largely natural rectangular block, but the back shows signs of trimming and there are areas of pecking, presumably with an iron hammer, on other surfaces. It is likely that a fragment broke off the top on the passage side (pl. 141a, d) when the wall face fell in the course of the fire. The gently rounded top of the stela has been smoothed to a polish by passing hands. Height 1.17 m.

The stone was set upright into the court pavement against the southeastern face of the Middle Tower at the corner with the entrance passage, as described in chapter 3. The back of the stela was flush with the tower wall face and was held in position by packing stones that were raised well above the pavement surface (pl. 141a–c). These packing stones were covered by striated, clean, clayey silt before the burning and collapse of the gate.

Discussion:

Set up against the inner face of the Middle Tower at the corner with the entrance passage, this stela would not have been immediately obvious on entry through the gate. Both the position and the way in which the top has been polished by passing hands perhaps suggests that it was touched more often by people leaving rather than entering. No great care was taken in setting up the stela in the paving; one or two paving stones were extracted to make a shallow hole for the stela, and others were removed from the pavement behind to use for packing. The packing stones were very prominent, as was necessary



given that the bottom of the stela was not lower than the base of the paving. Such casual workmanship is typical of later adaptations to the gate.

Representations of similar aniconic stela may now be recognized in the graffiti at the front of the entrance passage, as described in the following chapter. Another aniconic stela, somewhat smaller and of different proportions, this time with a square depression in front that was presumably associated with offerings of some kind, was found at the Monumental Entrance to the Palatial Complex.¹³⁸ This stela, which does not have the same sheen on the top, would also seem to have been intended for veneration on departure rather than entry.

It is probable that neither this stela set up at the Cappadocia Gate nor the one installed at the Monumental Entrance would have been recognized for what they were had they not been discovered in situ. Even with the knowledge that such stela were set up, it is probably impossible to recognize such stones among collapsed material unless there was smoothing or polishing.

¹³⁸ See for the moment Draycott and Summers 2008, pls. 4 and 7b.

CHAPTER 6

BLOCKS WITH GRAFFITI

SUSANNE BERNDT

INTRODUCTION

Two stone blocks in the Cappadocia Gate have incised drawings or graffiti. These stones, incorporated at the corner where the glacis wall met the entrance passage, are of soft sandstone, while all the other stones of the gate and glacis except the uppermost embellishments on the front towers are of granite (see pls. 61, 142). Probably due to both the soft nature of the sandstone and the convenient location, both blocks received various graffiti in several hands.

THE STONE

Both blocks are of a pale brown, slightly reddish, fine-grained sandstone from Eocene deposits. The stones contain fossil burrows of marine molluscs and very occasional rounded pebbles, up to 1 cm in diameter but usually smaller, which have sometimes left voids on cut surfaces. The stone seems to be of the same kind as that fallen from the uppermost course on the front of the Middle and South Towers of the gate structure.

LOCATION

The two blocks, one on top of the other, were built into the southeastern corner of the entrance passage at a height of 1.2–1.8 m above the ground (pl. 142). The two blocks were part of the second course of the glacis and located in a rather awkward corner where the inclined glacis face met the vertical side of the entrance passage. This may have been the last section of the glacis to have been built, and it was

therefore more difficult to fit and cut the stones required for the corner. This is probably the reason why sandstone was chosen for these two blocks: because it is so much easier to trim. The uppermost stone was found to have slid forward and had broken into two pieces. Much of the original surface of the lower stone had flaked off.

The inner face of the walls of the city gate, and plausibly also the glacis face, were initially plastered with mud. The different types of stone would therefore only have been visible once the mud plaster had washed off. There is therefore no reason to assume that the two sandstone blocks were incorporated into the wall for the specific purpose of being used for graffiti or incised drawings.

THE BLOCKS

THE UPPER BLOCK

Site Inventory Number: KO7.223

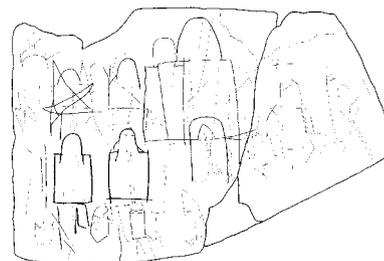
Plate: 142–145

Identification Number: 99CAPPUUostn01

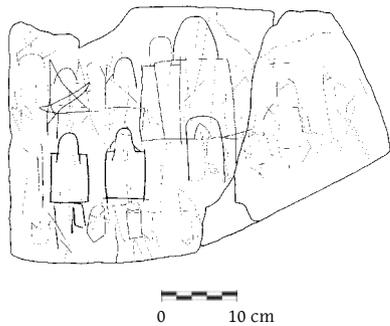
Photographs: o8dpkc1002–1007

Yozgat Museum Registration Number:
[taken to the Yozgat Museum]

Description:



0 10 cm



The upper block was found broken into two parts. The breakage must have occurred in antiquity, but after the graffiti were incised, because the lines continue on either side of the break. This stone is roughly rectangular but has one slanting side, which is the glacis face. The stone was a corner block facing southwest toward the passage and southeast on the glacis face. Only the side facing the passage had incised figures (pl. 143). This surface is finely smoothed and measures 52.0 cm in length and 22.5 cm in height; the maximum height of the stone is 33.5 cm. The only missing parts of the face are at the upper left corner and along the break in the stone where both lower and upper portions are missing. The surface of the left part of the stone is in good condition, while that of the right portion is less well preserved. It is probable that the entire surface was once covered with inscribed figures. The figures are often superimposed one on top of another. The glacis face of the stone measures 42.0 cm in width and 22.5 cm in height. The surface of this glacis face is almost entirely missing, with only a small patch of the surface preserved on which trimming marks are visible, but no inscribed figures (pl. 144a). This side of the block in the glacis face was probably never drawn on because the glacis is sloping and the position of the stone at 1.3–1.9 m of vertical height above the base of the sloping glacis would have made it highly uncomfortable to inscribe. The upper or top face, which was of course hidden from view by the stone above, is finely trimmed and has at one corner two deeply incised parallel lines that are almost perpendicular to the edge of the stone on the passage side (pl. 145a). The preserved length of the outermost line is 4.3 cm, while the extant length of the innermost line is 7.5 cm. The surrounding surface is not entirely preserved. The lines are set 3.4 cm apart, both are 2.0–3.0 mm wide and 1.0–1.5 mm deep. The lines are possibly masons' marks, although they do not parallel any other masons' marks known

from Kerkenes. The underside of the block was roughly trimmed, apart from the edge adjacent to the passage that was more finely finished (pl. 145b). There appear to have been two tools used for the trimming, one adze-like with a 1 cm wide blade and another pointed tool for finer trimming. The edges of the end (northwestern) were neatly finished (pl. 144c), while the center was slightly hollowed out with a pointed tool to accommodate the adjacent granite stone. The inner side (northeastern) face was roughly trimmed (pl. 144b) and has not been recorded in detail because of the difficulty of turning the stone and the risk of damage to the face bearing the graffiti.

THE LOWER BLOCK

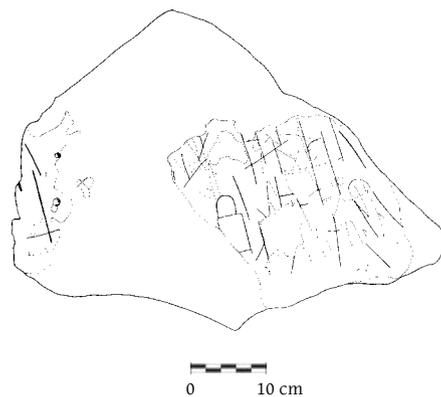
Site Inventory Number: KO7.226

Plates: 142, 146–148

Identification Number: 99CAPP00ostn02

Photographs: O8dpkc1008–1011

Yozgat Museum Registration Number:
[taken to the Yozgat Museum]



Description:

The lower block is roughly triangular in shape, with six faces. The face in the entrance passage measures 56 cm wide, and the side in the glacis face is 34 cm wide, while the opposite end hidden inside the walling is 36 cm wide. The height is 40 cm. The two exposed faces carry graffiti. On the passage side, the surface is preserved in two areas (pl. 146), at the left side and at the lower right corner, the latter measuring 22 cm in height and 30 cm in length. There are in addition small patches of damage within the preserved portions. The undulating surface has been

smoothed and there are no toolmarks visible. Two natural hemispherical voids occur close to the left edge, as well as patches of black mineral staining on the surface. Both preserved patches have been incised. The surface of the glaxis face is largely missing, with only approximately one-third being preserved (pl. 147). The glaxis face measures 36 cm in width and 50 cm in height, while the preserved surface is 25 cm in width and ca. 20 cm in height. The gently undulating surface has been smoothed by rubbing or abrading. There are natural holes and pits in the surface, but no visible toolmarks. The surface bears some faint inscribed lines. The left side of the stone has a more or less vertical face, while the upper face is slanting and adjoins the upper block (pl. 142b). The left face and the upper face form an angle of ca. 135 degrees. Both surfaces have been roughly flattened with a narrow-bladed adze-like tool, the width of the blade being in excess of 0.5 cm. The inner face of the stone is uneven where the protruding areas have been very roughly trimmed, but trimming was slightly more careful along the edges (pl. 148a). Trimming marks indicate the use of a tool with a narrow blade. The underside of the stone was roughly hollowed out, rather like a shallow double-barrel vault, so as to fit the course of granite stones below (pl. 148b). The approximate width of each hollow is 26 cm, and their depth 3.5 cm. Employment of the same adze-like tool used for the left and upper sides has left deep gouges in the concave cuttings.

THE INCISED FIGURES

These two blocks are the only stones in the Cappadocia Gate that carry any kind of inscribed figures, probably because they were the only sandstone blocks that were accessible from the ground, all the others being granite. The sandstone is soft enough to be inscribed without any difficulties and becomes even softer when wet. Each block was trimmed before the graffiti were incised. Traces of trimming are still visible and sometimes blend together with the doodles. In many cases it is difficult to determine whether visible lines belong to trimming or to a poorly preserved graffito, or might be traces of handling, etc. The practice of superimposing one figure on top of another has further contributed to the difficulties of interpretation. It is not always certain, therefore, whether a visible line was deliberately made and intended to form part of a particular

figure or was incidental. It is nevertheless obvious that many figures were intentional graffiti.

Descriptions in the text below that refer to right and left are from the viewer's point of view.

GRAFFITI ON THE UPPER BLOCK

The best-preserved figures are found on the left portion of the passage face, while the surface of the right part is more eroded (fig. 1).

Upper Register of the Left Part

- a In the upper left corner there are several rather faint but clearly intentional lines. Two lines form a cross and, slightly off their crossing point, a vertical line ends just above a semicircular line; above the cross is a horizontal line. The semicircular line may be the top of a stela, in which case the figure would parallel others on this stone (see figures *b*, *d*, *j*, *k*, and *o*, below). Some vertical lines visible below could possibly represent the lower part of the stela. Whether the semicircular line and the straight lines were intended to form part of one and the same figure is uncertain. The lines have, however, the same thickness and depth and may have been drawn by the same hand.
- b Approximately 1 cm to the right of figure *a* is another semicircular line that may similarly have been intended to represent the top of a stela or the head of an idol.
- c Superimposed on this figure is what appears to be a five-pointed star of the type drawn in one continuous action, but the inscriber was possibly inexperienced, because the drawing was corrected.
- d Between figure *c* and figure *e*, and partly superimposed on by both figures, is a rectangle. The two curved lines in the middle of the upper part of this rectangle might indicate a partly preserved head.
- e To the right of figure *d*, and partially overlapping it, is yet another figure, composed of a semicircular line and, below, two straight lines drawn at 90 degrees to one another. It is possible that the semicircular line was intended to imitate either the top of a stela or the head of an idol. It is also possible that the drawing of the lower corner was intended to represent the trunk of the idol, although the two parts do not join.
- f Immediately to the right of figure *e* is a fairly large idol measuring 13.4 cm in height and 5.4 cm in width. This idol has an elongated trunk and a rectangular head with a rounded top. An

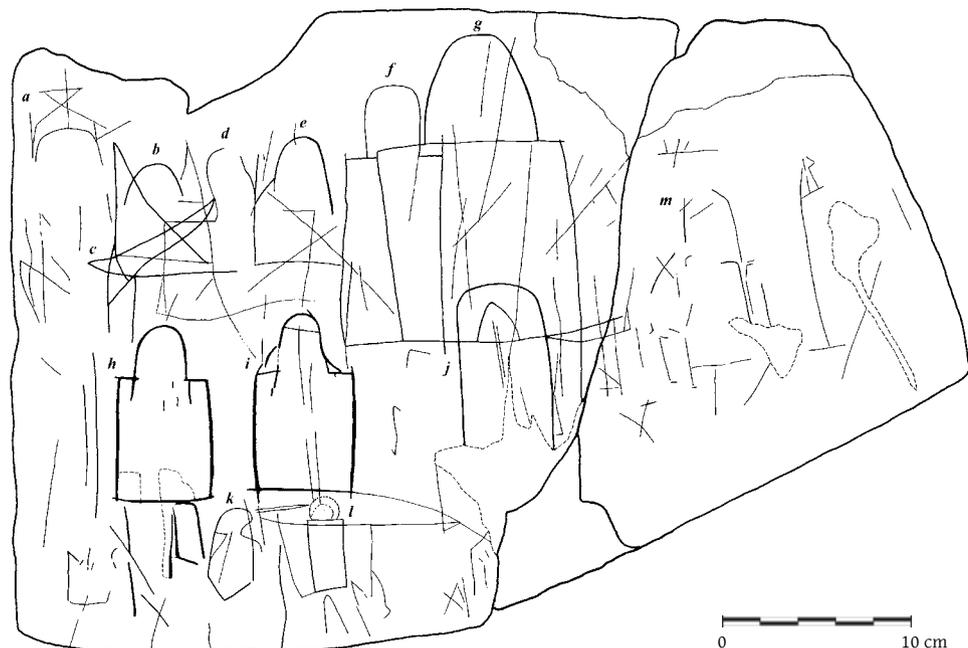


FIGURE 1. Upper graffiti block with recognizable individual figures indicated by letters (drawing by Susanne Berndt)

almost vertical line extends from the top of the right shoulder halfway down the trunk. Imposed over the top of the right half of this idol is another, considerably larger idol, *g*. The vertical line forming the right side of the trunk of idol figure *f* also serves to mark a dividing line along the trunk of idol figure *g*.

- g* The largest idol among these graffiti is partly superimposed on figure *f*. This idol measures 16.1 cm in height and 9.7 cm in width. The trunk is rectangular and the head oval shaped. There is a rather deep line running from the right shoulder down to the bottom line of the trunk that is paralleled on the other side of the trunk by a line that also functions as the right side of the trunk of the figure *f* idol.

Middle Register of the Left Part

- h, i* There are two deeply carved idols positioned next to one another. These two idols are carved considerably deeper than any other image and, consequently, stand out from the rest. They are of almost identical size and appear to have been incised by the same hand. Figure *h* (the idol on the left) is situated below the five-pointed star (figure *c*) and measures 9.3 cm in height and 5.1 cm in width. The head is slightly greater than a semicircle, while the trunk is rectangular with some parts not preserved at the bottom. Outlines of the head continue ca. 1 cm below the shoulder lines on each side. The other idol (figure *i*) is incised ca. 2 cm to the right of figure *h* and

measures 9.3 cm in height and 5.4 cm in width. The trunk is likewise rectangular, but the head is slightly more oblong. The outline of the left side of the head continues for 1 cm below the shoulder.

- j* Figure *j* is situated 5.5 cm to the right of figure *i* and resembles a stela with a curved top. The upper part of this figure is superimposed on the lower part of the large idol (figure *g*). The lower part of this stela is missing, as the surface is broken away here. The outline is deeply cut, ca. 1 mm, as is the upward-pointing “arrow” in the upper half of the stela. Below the arrow are two thin parallel lines. Both the arrow and the parallel lines may not be part of the stela.

Bottom Register of the Left Part

Below the two deeply incised idols (figures *h* and *i*) are several inscribed lines superimposed on one another, and below figure *h* there are some deep cuttings that have partly destroyed the bottom line of the trunk of figure *h*. These coarsely cut lines are probably not graffiti but may be working marks or the result of accidental damage. Farther to the right, below figure *i*, there are possible indications of two idols or stelae.

- k* Immediately below and between figures *h* and *i* is figure *k*, which resembles a stela with a curved top. This figure has two straight vertical lines linked by a semicircular line. The curved lines

seen in the center of this figure may not be part of it, because one line continues outside the trunk on the right side. These curved lines do, however, give the impression of a head with neck and shoulders.

- l Approximately 3.5 cm farther to the right is a rectangle formed by three deeply incised lines on the bottom and the sides and a fainter horizontal line at the top. Above this rectangle, best seen while viewing it from either side, are two very faint, parallel, semicircular lines. In the center of these arcs there is a small dot that is probably a mark made by a compass. The outer curved line certainly appears to have been drawn with the help of a compass. This figure may have represented an idol.

Below these two figures, along the lower edge of the stone, there are several quite sharp vertical lines that are more or less parallel to one another. These marks bear some resemblance to letters, although there is no recognizable alphabetic character.¹³⁹ Since these lines are at the bottom of the stone, it is possible that they stem from tests made by the inscriber to check the tool.

Right Part of the Upper Block

The surface of the right part of the stone is less well preserved. Several lines appear to have been caused by damage rather than being deliberately incised. There are, however, several rather faint lines that are incised, and there is one image that could possibly represent an idol or stela (figure *m*), almost at the same level as the upper register on the left part of the stone. This figure has two partially preserved, vertical, parallel lines. The upper part of the line on the right begins to curve at the upper end; it may have continued but is now lost.

GRAFFITI ON THE LOWER BLOCK

The lower block has preserved graffiti on both the entrance passage face (fig. 2) and the glacis face (fig. 3).

The Entrance Passage Face

The surfaces of both the left end and the lower right half of the face in the passage wall are preserved. Two deeply cut lines at the left end, measuring 10.0 cm and 4.8 cm, respectively, are probably not

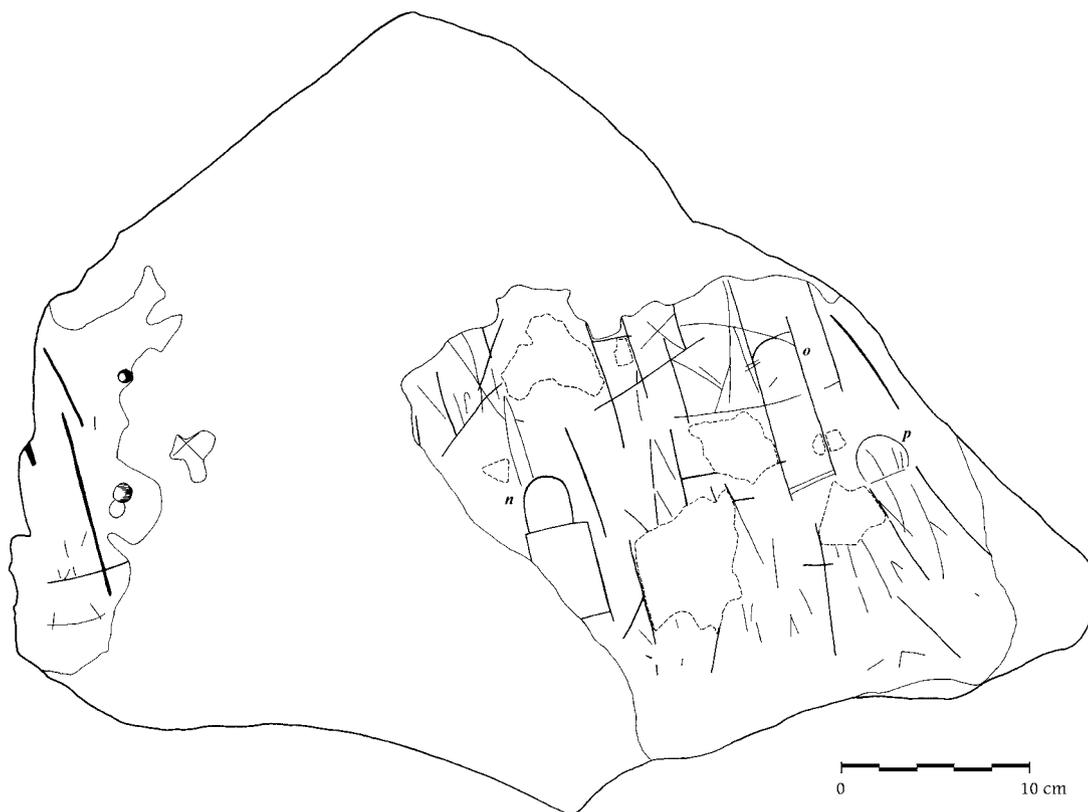


FIGURE 2. Lower graffiti block entrance passage face with recognizable individual figures indicated by letters (drawing by Susanne Berndt)

¹³⁹ Contra G. Summers 2006c, p. 652.

graffiti. The surface of the lower right corner has suffered damage, there being only patches where it is not now lost. This area has many primarily vertical incised lines, several of which probably once formed parts of images that have now become unintelligible.

- n* Figure *n*, at the lower left corner, is the one rather easily recognizable idol. The trunk is rectangular and preserved except for the lower left portion where the surface has broken away. The trunk measures 3.2 cm in width and 5.0 cm in height. The head is rather elongated, with a height of 2.7 cm and a width of 2.5 cm. It is positioned slightly off center, toward the left shoulder.

Above this idol and to the left (the upper left preserved corner of the surface), there are several very faint incised lines, mainly more or less vertical, that resemble lettering, although it is not possible to identify any actual incised alphabetic character. Along the upper half of the preserved surface area are several incised lines that appear to be in pairs, since in several cases two vertical lines are parallel to one another. Perhaps these vertical lines are remains of idols or stelae, although other intended images cannot be excluded.

- o* One such possible stela is figure *o*, which is made up of two long parallel vertical lines that have between them at the top a horizontal semicircular line resembling the curved upper part of a stela; the bottom is formed by two closely spaced parallel lines.
- p* In the lower right corner of the preserved surface area, there is a possible idol with an almost

circular head on top of a rather elongated trunk. The “trunk,” which lacks a bottom line, is incised with sharper lines than the head, as is also the case with figures *f* and *l*. This is probably due to the fact that it’s easier to make a straight line thin and sharp, while curved lines tend to be wider and less sharp. However, we may consider the possibility that these two parallel lines were trimming marks, because above them, with the same orientation but closer to the edge, is a third line that appears to be a trimming mark.

The Glacis Face

The surface of the glacis face is in general rather worn, with only the lower third partially preserved. This face of the stone was incised with faint, rather thin lines extant on the preserved surface (fig. 3).

At the bottom on the left side are some quite deep, more or less parallel incised lines between 1 and 2 cm in preserved length. These may have continued farther below, where the surface is now missing. In addition, there are several straight lines close to the left edge of the block, one of them being rather deep. Yet more preserved lines occur on the left part of the stone, but here the surface is unfortunately less well preserved and large pieces of the surface have flaked off.

- q* Approximately at the center at the upper part is a figure composed of several lines that appear to be radiating from a central point. Unfortunately, the center, where the radiating lines would have joined, is now destroyed. The surface below is also not preserved, except for a short vertical line. The radiating lines appear to have been made in pairs, each resembling a wing, and the area between two radiating lines, that is, the “wing,” appears to have been divided into series of small units organized in double rows. The upper vertical wing is best preserved, but the surface is broken at its upper part, and it cannot be determined whether it continued or not. The upper vertical “wing” measures ca. 1.5 cm in preserved length and 0.5 cm in width at the lower part and 0.8 cm at the top. All these incised lines are very faint and the surface is partially missing, making it extremely difficult to identify the motif.
- r* Below figure *q* and farther to the right is another figure. There is a circle, 0.4 cm in diameter, with possible radiating straight lines. Some of these lines appear to dissect the circle.

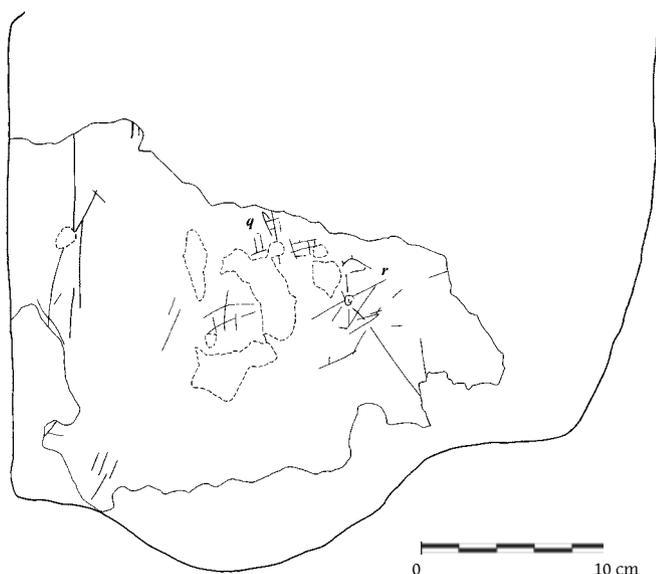


FIGURE 3. Lower graffiti block glacis face with recognizable individual figures indicated by letters (drawing by Susanne Berndt)

INTERPRETATION

These incised figures are best described as graffiti or doodles. As noted above, these two sandstone blocks could not have been incorporated into the walling for the purpose of being used as notice boards, because the walls of the city gate chamber and entrance passage were provided with two coats of mud plaster. Apparently the mud plaster in the lower end of the entrance passage and the glacis wall was not maintained, because the two sandstone blocks at the corner of the glacis were later used for the graffiti. The mud plaster probably washed off in a rather short time, perhaps after a few seasons. Theoretically, the graffiti could have been incised before the mud plaster was applied or before a new layer was applied. However, that is perhaps unlikely, since the majority of figures are more or less imposed one on top of another—a good indication that they were made by different hands, very probably at different times. The vertical wall face in the entrance passage was easier and more comfortable to access. It is here that those images carved with more care, especially figures *h* and *i*, are found. The height of the blocks, 1.2–1.8 m above the ground, is an indication that the drawings were made by teenagers or adults, or at least not by small children.

IDENTIFICATION OF THE IMAGES

The majority of recognizable figures are depictions of idols or aniconic stelae. In addition, there is one possible five-pointed star, figure *c*, and the unidentifiable figure *q*. There are several lines that resemble lettering, although no recognizable letter can be identified with certainty. It is plausible that all the graffiti are pictorial.

The figures that can certainly be identified as idols are *f*, *g*, *h*, *i*, *n*, and plausibly *d*, *l*, and *p* (fig. 4). A stela with a rounded top is probably represented in figure *j* and perhaps also in figures *o* and *k*. Several figures, such as *a*, *b*, *e*, and *m*, appear not to be complete because they either were left unfinished or are incompletely preserved. It is possible that these, too,

should be interpreted as depicting partly preserved or unfinished idols or stelae.

An idol is a simplified image of the human body where only the head and trunk are depicted. Elsewhere in this volume they are described as being semi-iconic. The incised images discussed here are rough sketches of an already simplified model. They lack any kind of adornments, such as hair locks, with which idols are sometimes provided. The only kind of nonessential additions on the graffiti of idols can be seen on figures *f*, *g*, *h*, and *i*, which have additional vertical lines of various lengths extending from the shoulders downward. Figure *g*, the largest idol, has on each side a vertical line extending from the shoulder line down the entire length of the trunk, while the other three idols have shorter vertical lines extending from one or both shoulders. Idols are known from many Phrygian settlements and occur in various forms. It is generally agreed that Phrygian idols depict deities, but the identity of the deity or deities is more uncertain.¹⁴⁰

Located in the one excavated city gate at Kerkenes, the Cappadocia Gate, were both an aniconic stela and a semi-iconic idol above a series of steps. The stela was located right at the northwestern corner of the Middle Tower, where the entrance passage opened into a courtyard (pls. 20b, 21b, 26, 61, 141). Diagonally across the courtyard, next to the North Tower, was the idol, situated on top of a built stepped monument. The idol was facing southeast and visible to visitors once they had entered the courtyard (pls. 138–140a). The presence of both the built step monument and the stela are good indicators that the area also functioned as a shrine, or at least that some religious ceremonies took place there. Parallels are known from several other Phrygian city gates that housed various types of cult monuments.¹⁴¹

The graffiti appear to be intended as images of the idol and stela located in the very same city gate. The idol on top of the stepped monument had on each shoulder a small bolster, and the middle vertical part of the trunk was slightly recessed. The bolsters are not replicated in the graffiti, but the recessed trunk is imitated on the largest idol, *g*, by two

¹⁴⁰ Berndt-Ersöz 2006b, pp. 159–66, with further references.

¹⁴¹ Berndt-Ersöz 2006b, pp. 148–52. For examples, see the rock-cut image of Matar next to the entrance of Delikli Taş (Berndt-Ersöz 2006b, no. 12); the idol next to the entrance at Kirkinler (Berndt-Ersöz 2006, p. 49 n. 146, p. 51; H. Sivas and T. Sivas 2003, p. 9, pl. 12.2; 2004, p. 158, figs. 11–12); step monuments next to the entrances of Midas City, Fındık, and Nallı Kaya (Berndt-Ersöz 2006b, nos. 68, 51, 48); a niche next to the entrance of Pişmiş Kale (Haspels 1971, p. 42, figs. 69 and 496 no. 1) and the statue of the Mother Goddess in the city gate of Boğazköy (Bittel 1963).

vertical lines (cf. pls. 138–139 and fig. 4g). It is also plausible that the vertical lines of various length that extend from the shoulder of figures *f*, *h*, and *i* meant to indicate the recessed trunk. We may therefore suggest that the incised drawings are not of any idol or stela, but rather that they were intended to be images of the idol and stela that were actually set up in the Cappadocia Gate.

PARALLELS IN OTHER PHRYGIAN CONTEXTS

Graffiti or incised casual drawings are known from a few other Phrygian contexts. From Gordion we have incised drawings from the exterior walls of Megaron 2, as well as a few from the Citadel Gateway, all dating to the Early Phrygian period (before ca. 800 BC).¹⁴² Known graffiti from the gate comprise one graffito that had a location similar to the graffito at Kerkenes, being incised on a stone facing the entrance passage.¹⁴³ It consisted merely of straight and zigzag lines. The other graffiti at the Gordion gate were located on a single stone in the courtyard room; they depict animals, among other things.¹⁴⁴ None of these Gordion graffiti, however, depict an idol or stela. The graffiti on Megaron 2 were located on the exterior walls. It has been suggested that this building was a temple, or at least that religious activities were carried out there.¹⁴⁵ There is a great variety of motifs, but at least some of them may be connected with the building itself. Among these motifs are a few images of house façades crowned with an akroterion, which may have been intended as images of Megaron 2.¹⁴⁶ None of these images can definitely be identified as a stela or idol, although one image may be interpreted as the semicircular disc above a stepped monument, that is, as an idol; however, other interpretations are also possible.¹⁴⁷ In addition, there are several curved lines, similar to

those at Kerkenes.¹⁴⁸ There are several five-pointed stars among the Gordion doodles,¹⁴⁹ which may have a parallel with figure *c* at Kerkenes. The parallels with Gordion lie not so much in the specific motifs but more in the location (city gate), method (imposed on each other), and choice of motif (imitating the building/shrine or cult monument it was connected with). The difference in motifs may be partially explained by the considerable time gap, ca. 250 years, between those at Gordion (ninth century BC) and those at Kerkenes (late seventh or first half of sixth century BC).

From Midas City we have another type of graffito that was also connected with a shrine. This graffito is not pictorial but written, and there are three recorded graffiti from the so-called Midas Monument.¹⁵⁰ The niche in the Midas Monument once held an image, most certainly of the Mother Goddess, and on the inner left side-post of the niche there are several incised words, of which one reads *mater*. On the opposite side of the niche, on the right side-post, there is a graffito that mentions both Matar and Midas, and another below the main field, where Matar is again mentioned. Despite the different types of graffiti (written versus pictorial), we may note the similar behavior of inscribing an area in connection with a shrine and that the content of the graffiti is connected with the particular shrine. Both Midas and Matar were mentioned in the graffito, and both were connected with the cult façade, Matar through the statue in the niche and Midas in the official dedicatory inscription above the façade.

Furthermore, one stone block at Midas City, which may be from the city wall, carries a relief of an idol.¹⁵¹ This example is, however, rather neatly carved and should not, perhaps, be described as a graffito. It is nevertheless mentioned here because it depicts an idol that was very possibly carved on a block in the city wall. Reliefs of idols are a common phenomenon in Phrygia. Another example from a

¹⁴² Roller 2009, cat. nos. 104 and 105 are from the Gateway.

¹⁴³ Roller 2009, cat. no. 105.

¹⁴⁴ Roller 2009, cat. no. 104; S. Berndt 2015, p. 105, fig. 5.

¹⁴⁵ Mellink 1981, p. 101; Sams 1997, p. 241; cf. Roller 1999, p. 112; Berndt-Ersöz 2006b, p. 180; S. Berndt 2015, pp. 114–17.

¹⁴⁶ Roller 2009, cat. nos. 9a, 9b, 46.

¹⁴⁷ Roller 2009, cat. no. 51. Roller also suggests nos. 10 and 94 are reminiscent of idols.

¹⁴⁸ See, e.g., Roller 2009, cat. no. 49.

¹⁴⁹ Roller 2009, cat. nos. 1, 11, 31, 60.

¹⁵⁰ Berndt-Ersöz 2006b, no. 30; Haspels 1971, p. 290, fig. 599.4; Brixhe and Lejeune 1984, nos. M-01c–e.

¹⁵¹ D. Berndt 2008, p. 11, no. 3b, pl. 13.1.

city wall is found at Boğazköy, where there is a relief of an idol not too far away from the gate shrine at the Südburg. We may further note that idols carved in the round were also found in that same gate shrine.¹⁵²

A last example should be given, namely, the miniature stela from Boğazköy that, in all probability, originally had two attached idols/stelae, of which today only one is preserved.¹⁵³ Underneath the base is an incised figure that may be termed a graffito. It is mentioned here because it is another example of a graffito made in connection with a cultic monument. This graffito is of a man in a long robe holding a spear. We may note that a horseman with bow and arrow is depicted on the side of the stela, but

whether the graffito of the man was intended to be a reference to the horseman we do not know.

To conclude, Phrygian graffiti are often from contexts that appear to also have been cultic. Whether the gate building at Gordion also functioned as a shrine is unknown, as is whether or not Megaron 2 was a cultic building. However, the graffiti at Midas City and Kerkenes, as well as the small Boğazköy model, are all from cultic contexts. Of further interest is the connection between the content of the graffiti and the cult monuments at Kerkenes. Whether this connection carried any significance or is pure coincidence is a matter that will be addressed on another occasion.¹⁵⁴

¹⁵² Neve 1993a, p. 640, fig. 19; Berndt-Ersöz 2006b, p. 121, fig. 106.

¹⁵³ Boehmer 1972, p. 206, pl. 78, no. 2144A b.

¹⁵⁴ A broader study will take into account the idols and stela discovered at the Monumental Entrance to the Palatial Complex at Kerkenes.

CHAPTER 7

HUMAN SKELETAL REMAINS FROM THE IRON AGE DESTRUCTION AT THE CAPPADOCIA GATE

YILMAZ SELİM ERDAL

In the course of the 2009–2011 excavation seasons at Kerkenes, the remains of two human skeletons were unearthed at the base of the burned collapse in the Cappadocia Gate (see pls. 62, 69 for locations).¹⁵⁵ Both of these individuals appear to have been attempting to flee and died as a result of the fire and destruction.

The first skeleton to be found (SK2, in 2009) lay in the entrance passage.¹⁵⁶ It appears that the burning of horizontal wooden beams set into the face of the stone wall caused the northwestern wall of the passage to collapse. It was evident that timber elements continued to burn after this wall fell. When the skeleton was first uncovered, the ground was very wet, with groundwater seeping into the stone-lined drain in which most of the bones lay. The deposit dried rapidly, with the clayey elements, very possibly derived from mud plaster that had washed from the wall before the fire, becoming very hard. Added to these unfavorable conditions was the poor condition of the bone, which had deteriorated because of the acidity of the Kerkenes soils and the groundwater, which is derived from the granitic bedrock.¹⁵⁷ The soil above and around the skeleton, which was partially burned by the fire, was reddish brown and contained ash.

The second skeleton (SK3) was found at the very end of the 2010 season.¹⁵⁸ Because of bad weather it was only partially uncovered before being covered over to await full excavation and lifting in 2011.¹⁵⁹ This skeleton lay beneath the deep stone collapse in the northeastern side of the gate court, more or less in the middle of the unpaved area. The layer where the skeleton was found contained partially burned black organic remains and ash. Just beneath this layer, the soil was exposed to fire, as a result of which it turned a reddish color. This chapter seeks to explain the burial process of these two Iron Age human skeletons in a dramatic and unusual context, the effects of burning on the condition of the bones, and the probable causes of the individuals' deaths.

THE BURIAL PROCESS

No grave goods or signs of burial pits were found during the excavation of either skeleton, nor did they possess any artifacts or adornments. It is therefore certain that these two people were not interred but were buried beneath collapsed walling.

¹⁵⁵ For a preliminary account, see *Kerkenes News* 12 (2009) and 13 (2010).

¹⁵⁶ SK1 is a skeleton of Byzantine date found at the Monumental Entrance to the Palatial Complex (publication forthcoming). The Kerkenes ID number for SK2 is 09TR22U20skl01.

¹⁵⁷ SK2 was excavated and assiduously recorded by METU student Yasemin Özarıslan, aided by workman Nuri Arslan.

¹⁵⁸ The Kerkenes ID number for SK3 is 10TR13U15skl01.

¹⁵⁹ In 2010, METU student Ferhat Can uncovered as much of SK3 as was possible in difficult conditions. Heavy rain soaked the soil and gave rise to concerns about the stability of the high stone wall on the northeastern side of the court. In 2012, Hacettepe University students Melis Koruyucu and Burcu Yıldız uncovered, recorded, and lifted the remains under the supervision of the author.

SKELETON SK2

Skeleton SK2 was lying face down, with the head toward the front of the gate, more or less parallel to the passage wall (pls. 149–151). Most of the body was lying directly on the silty fill of the drain; the left leg lay on the stone pavement, and the right leg was flexed, with the lower part raised between fallen wall stones. The left humerus was parallel to the body, while the forearm was placed across the abdomen and drawn up at a right angle to the humerus, with the hand lying palm down on the right side of the torso. The right arm lay immediately below the body in a flexed position, with the hand palm up at the right side of the face as though raised to protect it. The right leg was in an extended position, and the surviving upper half of the left femur remained in its original anatomical position, but a few fragments of the left tibia were unearthed from between the fallen stones above the passage pavement.

The surface of the soil on which most of the skeleton lay was brown and generally unaffected by the fire. In contrast to this, the skeleton lay beneath stones collapsed from the western wall. Together with the stones there were small fragments of charcoal, which presumably represent the remains of wooden wall beams. The soil around the skeletal remains was reddish brown and black in color and contained ash (pl. 152a).

SKELETON SK3

Skeleton SK3 was orientated south to north (atlas-sacrum) and was facing east (pls. 154c–155). Because the axial skeleton was poorly preserved, the position in which it lay could not be detected with certainty. However, with the help of fragmented pieces of ribs, it is estimated that the body was lying in a dorsal position. Both legs were flexed into a position that appeared almost semi-flexed. Only fragments of the arm bones were found. Many different-size stones, one of which was quite large, were unearthed, and many small pits were made in the soft soil when these stones fell.

PRESERVATION, SEX, AND AGE OF THE INDIVIDUALS

SKELETON SK2

With regard to SK2, the intact frontal bone, almost all parts of the mandible, the anterior part of the maxilla, and the zygomatic bones are present (pl. 152b). Fragments of the left parietal and the right half of the occipital bones are among the remains of the cranium. Almost all the corpus and arches of the thoracic vertebrae and the proximal half of the ribs are present. Nearly the whole of the left arm and right forearm are preserved. Some pieces of the os coxae and the fourth sacral vertebra are also present. The right leg bones, the upper part of the left femur, and some pieces of the left tibia are also among the remains. Only the metatarsals and phalanges of the right foot are present; the bones of the left foot were lost after death.

Since the skeleton was badly preserved, it is not possible to determine the individual's exact age at death. However, the epiphyses of the long bones were completely obliterated, and some parts of the sutures on the parietal and frontal bones were slightly closed. This evidence suggests that this individual died during mid-adulthood.

The nuchal crest is smooth, and the occipital has some minimal expression of bony projections on the external surface. The supra-orbital margin is sharp, and the frontal tuber is prominent. The mental eminence has little projection.¹⁶⁰ The gonion is turned toward the midline, and the attachment of masticator muscles is slightly developed.¹⁶¹ The structural slenderness of the individual, together with all the morphological characteristics mentioned above, suggests that the skeleton was female. According to Pearson's regression formula, the 24 cm radius length permits the height to be estimated as 161 cm.¹⁶²

All the anterior teeth except for the upper left canine are present. Additionally, all the mandibular teeth were found except for the post-mortem loss of the second molar and right third molar. The individual had no ante-mortem tooth loss or dental caries. While the anterior teeth indicate a middle degree of abrasion (3+ and 4 according to Bouville and colleagues, developed from Brothwell's abrasion

¹⁶⁰ Buikstra and Ubelaker 1994; Ferembach, Schwidetzky, and Stloukal 1980.

¹⁶¹ Ferembach, Schwidetzky, and Stloukal 1980.

¹⁶² Olivier 1969.

scale¹⁶³), 2+ to 3+ is observed on the posterior teeth, with the dentins on the tubers worn slightly. While there are no signs of abscess, slightly developed alveolar resorption is observed on the mandible. Abrasion resulting from nonalimentary causes was not seen on the teeth at hand. Slightly developed linear enamel hypoplasia related to physiological stress was observed on the three preserved canines. Although enamel hypoplasia has no specific causes, hypoplastic defects can be related to many factors, such as nutritional condition and inflectional diseases during childhood.¹⁶⁴

No lesions related to infection, trauma, or metabolic diseases were present among the skeletal remains. Moreover, no sign of perimortem trauma was observed on the poorly preserved skeletal remains.

SKELETON SK3

The skull of SK3 had decomposed significantly, while the clavicle, vertebrae, and ribs are completely destroyed. Moreover, the right arm and phalanges were not found. From the left arm, only the radius, which is quite poorly preserved, is present. The pelvis is present but is not well preserved. From the right leg only the upper half of the femur could be recovered; the right lower leg is not present. On the left side, the femur (without the distal end), fibula, small fragments of tibia, and a few tarsal bones and phalanges were preserved.

Skeleton SK3 was poorly preserved. Almost all the bones were smashed under the huge amount of stone and debris. The mental eminence is prominent.¹⁶⁵ The gonion is turned toward the lateral, and the attachment of masticator muscles is heavily developed.¹⁶⁶ The head of the right femur is large. These data suggest that the individual was male. Like SK2, all the preserved epiphyses were fused; however, there are not any skeletal elements that suggest the age. All that can be said is that the skeleton belongs to an adult.

The dental remains, such as the upper right first molar, first premolar, canine, left lateral incisor, canine, and lower right second, exhibit no dental lesions such as caries, enamel hypoplasia,

pulp exposures, or chipping. However, slightly developed attrition (only the small parts of the dentine were exposed) was observed on all the dental remains (grades 2+ to 4). No lesions related to acute disease were observed on the small pieces of bone fragments.

COLOR, BURNING, AND CONDITION OF THE BONES

SKELETON SK2

It can be said that the individual found lying under the burned plank/timber remains in the passage and unearthed from burned, black, and ashy soil was exposed to fire. It is also known that as a result of being exposed to fire the color of bone changes as temperature increases: from brown to black, dark gray, blue gray, light gray, and finally calcined white.¹⁶⁷ Examining the color of the bones and, therefore, the burning conditions in detail can help to explain how the burning process developed.

The bones located at the front of the skull, such as the maxilla, mandible, and frontal bone, are almost normal in color. However, the preserved posterior part of the left parietal bone and the right half of the occipital bone have turned black (pl. 153a). Arm bones, the carpals, metacarpals, and phalanges are ivory in color. Mid-parts and the acromial ends of the clavicles have turned black.

The bodies of the vertebrae forming the axial skeleton are black. However, this color was observed only on the external surface of the bones. The spongy structure of the vertebrae is brownish and blackish. In contrast, the vertebral arches forming the posterior parts of the vertebrae are dark gray and bluish black (pl. 153b). Slight cracks and warps are observed on these parts of the vertebrae.

The ribs show quite a variation in color. While the heads of the ribs are bluish white and gray, parts of the costal angle and their continuation to the middle of the ribs are smoked. From the middle down to the sternal end the ribs are brown or ivory

¹⁶³ Brothwell 1981; Bouville, Constandse-Westermann, and Newell 1983.

¹⁶⁴ Goodman and Rose 1990.

¹⁶⁵ Buikstra and Ubelaker 1994; Ferembach, Schwidetzky, and Stloukal 1980.

¹⁶⁶ Ferembach, Schwidetzky, and Stloukal 1980.

¹⁶⁷ Mays 1998; Shipman, Foster, and Schoeninger 1984; McKinley 2000; Walker, Miller, and Richman 2008.

in color (pl. 153c). Some cracks have developed on the rib heads.

The ventral surfaces of the coxae are brown or ivory in color, whereas the dorsal surfaces are bluish black or gray. The external ridges of the acetabulum acquired a bluish-gray hue. While the posterior surface of the sacrum was light or dark gray, its ventral surface turned brown, as did the ventral surface of coxae.

Although the femurs turned black, the color did not disperse homogeneously. And, while especially the posterior surface of the left femur is light gray, both proximal ends of the femurs, the left caput femoris, and the trochanter minor are ivory or light brown (pl. 154a). The patellae are black; the posterior part of the left one was affected by the fire and had developed cracks on the surface.

The lower right leg bones are dark brown and black. Again on these bones, while the anterior surface is brown, the posterior surface is black and dark gray in color. The only bone in the skeleton that turned bluish white or white is the left tibia (pl. 154b). The bone fragments, with a length of ca. 3 cm, can be seen to have shrunk, warped, and developed cracks vertical to the axis of the bone. The right tarsal, metatarsal, and phalanges are black in color. All the brown and black bones have a shielded appearance.

Although the temperature of the fire cannot be determined exactly by the colors of the bones, experimental work on corpses demonstrates that the color of bones turns red-orange or white-yellow below 285 degrees Celsius.¹⁶⁸ It has been suggested that bones that burned at temperatures of less than 200 degrees Celsius show a gradual darkening of their color; however, at 300 degrees Celsius all specimens turned from brown to black.¹⁶⁹ It seems that in SK2 the forehead, face, anterior surface of the clavicle, arm bones, and anterior sides of ribs were not affected by the fire, or were affected very little. In

contrast, the ventral surface of the pelvis and the anterior surface of the femur, especially the proximal epiphysis, indicate that the temperature affecting these areas was ca. 300–360 degrees Celsius,¹⁷⁰ and below 525 degrees Celsius.¹⁷¹ However, the posterior surfaces of the femurs, proximal parts of the ribs, posterior surfaces of the pelvis, shafts of the femurs, right lower leg bones, and foot bones had turned dark brown or black. Experimental research has shown that the color of bones turns brown or black between 300 and 525 degrees Celsius. In addition, the posterior surface of the femurs, head of the ribs, arches of the thoracic vertebrae, and posterior surface of the vertebral bodies are dark gray or gray in color. That the bones turned these colors indicates that the temperature might have been higher than 525, 600, or 645 degrees Celsius. Although the fat and muscle quantity of a corpse affect the burning process, the posterior surfaces of the light gray or bluish-gray bones suggest that the temperature reached at least 600 degrees Celsius.¹⁷²

In the process of being exposed to fire, the bones not only change color but also shrink, warp, and crack.¹⁷³ However, this is related to the water, fat, and organic tissues in the bones and the temperature the fire reaches.¹⁷⁴ Although there are some changes in bone colors of Kerkenes individual SK2, shrinking, warping, and cracking were not observed on most of the bones. According to experimental studies,¹⁷⁵ square-shaped cracks appear on the surfaces of dry bones during the burning process.¹⁷⁶ In contrast to this, it is stated that shrinking and warping do not occur. These data suggest that the bones of the Kerkenes individual might have been dry during the burning process. However, signs of cracking, shrinking, and warping on the preserved fragments of the tibia are present (pl. 154b). Furthermore, preserved fragments of the tibia are white and pale gray in color. Likewise, experimental studies show that prominent cracking and warping are

¹⁶⁸ Mays 1998; Shipman, Foster, and Schoeninger 1984.

¹⁶⁹ Walker, Miller, and Richman 2008.

¹⁷⁰ Walker, Miller, and Richman 2008; Mays 1998.

¹⁷¹ Shipman, Foster, and Schoeninger 1984.

¹⁷² Christensen 2002; Mays 1998; McKinley 2000; Walker, Miller, and Richman 2008.

¹⁷³ Mays 1998; McKinley 2000; Shipman, Foster, and Schoeninger 1984.

¹⁷⁴ Ubelaker 1989; Mays 1998; McKinley 2000; Shipman, Foster, and Schoeninger 1984.

¹⁷⁵ Baby 1954; Binford 1963.

¹⁷⁶ Ubelaker 1989.

not observed until 700 degrees Celsius.¹⁷⁷ The colors, cracks, warps, and shrinking of the left tibia indicate that this bone was fleshed while burning, and that the temperature attained was higher than 950 degrees Celsius.¹⁷⁸ The poorly preserved heads of the ribs and shrinking and cracking on arches of vertebrae provide supporting evidence that the individual was fleshed while burning.

All these data show that different parts of the body of SK2 were exposed to different degrees of heat. It is therefore necessary to consider the temperature, the process in which the bones were affected, and the position in which the skeleton lay. As noted above, the skeleton was lying face down on the ground with the arms immediately below the body. Likewise, the anterior surfaces of the ribs were close to the ground. Approached from this point of view, it can be said that the bones close to the ground were only slightly affected by the fire, if at all. Yet the occipital bone, the posterior part of the parietal bone, the vertebrae and rib fragments close to the vertebrae, the posterior surface of the pelvis, and the leg bones were exposed to a higher temperature and turned black, dark gray, gray, and white.

Even though there exists a relation between the severity of the fire and the colors and cracks of the bones, the temperature to which the bones were subjected is dependent on the duration of burning. Studies show that heat does not reach its maximum level in less than two hours' time.¹⁷⁹ If the body burned poorly, as did the Kerkenes individual's, this might be the result of a blaze of short duration. Shielded bone surfaces observed on the individual suggest a less severe degree of burning.¹⁸⁰ It can be said that the temperature reached 900–1000 degrees Celsius on the back of the individual, and the hardening of the soil surface further indicates a high temperature. However, the poorly burned condition of the bones indicates that the duration of the fire might have been short, or that the fire did not reach a high temperature on the body due to the collapse of the western wall.

SKELETON SK3

No sign of fire was observed on the very badly preserved bone fragments of the skeleton in the gate court, SK3. However, this individual was discovered under a great mass of stone and debris that was related to the collapse of the gate walls. Although burned soil, debris, and huge stones were found on the skeleton, there is not any direct effect of the fire on the skeletal remains. The heat on the corpse of this individual might have been below 200 degrees Celsius. It can be said that he might have died from the negative effects of the devastating fire, such as high temperature and poisoning from smoke, and/or from crushing under the huge amount of debris. However, due to the skeleton's poor preservation, no perimortem trauma could be observed on the bones.

When considered together with burned remains related to the fire, the black and ashy layer, and the information gained from SK2, the partially burned female skeleton, it is concluded that the individual SK3 might have died under the collapsed structures during the fire at Kerkenes.

CONCLUSION

Skeletons unearthed in the entrance passage and court of the Cappadocia Gate belong to a female (SK2) and a male (SK3) who had reached adulthood. The skeletal remains that lay on the burned soil, beneath the collapsed stone rubble and plank/timber, are rare examples in archaeological excavations. When all the evidence is examined together, it can be determined that the cause of these individuals' deaths was the fire at the western wall at the entrance of the Cappadocia Gate and the collapse of this wall. However, with fragmentary and missing parts due to the fire, the soil condition, and post-mortem destruction, no sign of perimortem trauma was observed. Furthermore, it is probable that, affected by the fire, the individuals may have died from smoke inhalation, although it is not possible to detect evidence for this cause of death on the bones, especially in badly preserved remains such as those of the Kerkenes individuals.

¹⁷⁷ Ubelaker 1989.

¹⁷⁸ Mays 1998; Ubelaker 1989; Shipman, Foster, and Schoeninger 1984.

¹⁷⁹ Mays 1998.

¹⁸⁰ Buikstra and Ubelaker 1994.

Protecting her face, the individual affected by the fire, SK2, had fallen face down on the ground, her left hand just below the body, the right leg in an extended position, and the left tibia vertical. The burned plank/timber remains that collapsed with the fall of the wall affected the posterior side of the individual. However, the temperature at the anterior surface of the body and at the area where the arms were, just below the body, was less than 300 degrees Celsius. On the other hand, the temperature at the area in which there were remains of stones and planks reached approximately 650 degrees Celsius, turning the bones black or dark or light gray. It is possible that the temperature on the left tibia reached 950 degrees Celsius or more. The

bluish-white color of the tibia, cracks and shrinking of some bones, and hardening of the soil surface indicate that either the burning process was not a long one, perhaps approximately two hours, or that high temperatures could not reach the body beneath the collapsed wall.

Although not reflected in the evidence of the bones, the individual in the gate court, SK3, might have died under the collapsed structure during the devastating fire. The fallen debris from the gate walls that was found above the skeleton might have protected the body from the direct effects of the fire. But the collapse of the burned structures might have resulted in the death of this individual by smoke poisoning and/or by crushing.

CHAPTER 8

THE FINDS

GEOFFREY D. SUMMERS

As might be expected in the excavation of a city gate, there were few small objects and little pottery. Most of the pottery, described in chapter 9, as well as almost all the animal bone reported on in chapter 10, was recovered from deposits associated with construction of the gate rather than with its use. Overall, the impression gained is that the gateway was generally kept clean. Regardless of cultic installations set up in the gate, there was no evidence for activities other than use as a thoroughfare in and out of the city. Furthermore, no indications were found that the destruction by fire was a result of attack from the outside. Disappointingly, no artifacts of any kind were associated with the two victims of the fire and collapse that are described in chapter 7.

Here the description of the finds is ordered first by function and then by type and material. The Iron Age pieces can be safely dated to the occupation of the city, and thus to the late seventh or first half of the sixth century BC. The majority came from the destruction, although a few, such as some of the copper alloy arrowheads, were recovered from pre-destruction surfaces. No attempt has been made to amass comparanda, only a selection of salient parallels being given where they are thought to hold some significance. Parallels for some of the objects are found at Boğazköy, Gordion, Midas City, and a number of other sites that, together with stray finds, emphasize the underlying “Phrygian” nature of the Kerkenes material. While not incompatible with the dating proposed for Kerkenes, few of the parallels

from these other sites were found in securely dated contexts. Where they apparently were found in dated levels, final publication is often wanting.¹⁸¹

ARROWHEADS

The only weaponry found was a total of eleven arrowheads. Nine of these were made of copper alloy, three of iron. Of the copper alloy examples, five were bilobate and four trilobate. Three of the bilobates were barbed, and none had a hole in the side of the socket for attachment to the shaft. None of the three complete trilobates was barbed, one being smaller than any arrowhead seen so far at Kerkenes. Very small fragments of a fourth trilobite, 11TR24U11met04, had traces of wood in the socket but no indication that the nose was lead weighted. Copper alloy arrowheads with barbs and attachment holes are known from other contexts at Kerkenes.¹⁸² At the Cappadocia Gate, two were found outside the defenses, in front of the East Tower; two were in pre-destruction silt or surfacing below the burned surface in the entrance passage; and three were found in the destruction above or resting directly on the passage pavement in the rear section of the gate. Large numbers of trilobate copper alloy arrowheads were found embedded in the mudbrick walls at the Küçük Höyük, Gordion, presumably from the Persian attack in the same year that Kerkenes was destroyed.¹⁸³ All these arrowheads are mold made with traces of cold working, particularly file marks on the

¹⁸¹ Most regrettable is the absence of a full report on the excavations at the Küçük Höyük, Gordion. It is frustrating that, in spite of the very best efforts by Hermann Genz and Jürgen Seeher, the vagaries of archaeology have conspired to ensure that there is no good stratigraphic sequence that spans the later part of the Iron Age at Boğazköy.

¹⁸² Schmidt 1929, K33, 41, 59, 64, 73, and 87, on pp. 269–70 and in fig. 69; G. Summers, F. Summers, and Branting 2004, p. 40 with fig. 41.

¹⁸³ Young 1953b, pp. 164–66 with fig. 10. For affirmation of the Gordion destruction date, see DeVries 2005, p. 51.

shaft and sometimes on the wing blades. One carries three parallel incised marks on the shaft.

The three iron arrowheads, all square in section and tanged, were found in the destruction debris of TR23, that is, above the pavement in the back section of the gate. These iron arrowheads were found in close proximity to each other in the burned destruction fill of Room 3. A few similar iron points have been found elsewhere at Kerkenes and are well known from other sites, particularly Gordion, where they are the common Phrygian type until trilobate copper alloy types become frequent in the sixth century.¹⁸⁴ None rested on the burned surface of the room. No copper alloy or iron arrowheads were in positions indicating that they might have been shot into the gate rather than lost.

COPPER ALLOY SOCKETED ARROWHEADS

BILOBATE ARROWHEAD

Site Inventory Number: K00.099

Plate: 156a

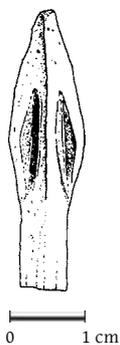
Identification Number: 00CT50U01met01

Photograph: 11dpkc2716

Yozgat Museum Registration Number: 1401

Description:

Bilobate socketed arrowhead with depressions in the wings. No barb. Blunted, perhaps by impact. Length: 3.7 cm; width: 1.0 cm; diameter of socket: 0.6 cm. Found in the rubble in front of the South Tower.



BILOBATE ARROWHEAD

Site Inventory Number: K00.122

Plate: 156b

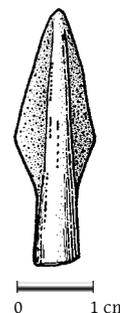
Identification Number: 00CAPPU00met01

Photograph: 05dpnk1011

Yozgat Museum Registration Number: 1559

Description:

Bilobate socketed arrowhead. No barb. Length: 3.4 cm; width: 1.1 cm; diameter of socket: 0.5 cm. Surface find near the front of the East Tower.



BILOBATE ARROWHEAD

Site Inventory Number: K09.236

Plate: 156c

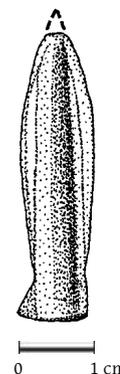
Identification Number: 09TR12U09met01

Photograph: 10dpkc1216

Yozgat Museum Registration Number: 1677

Description:

Bilobate socketed arrowhead with the stub of a barb, tip missing. Length: 3.8 cm; width: 1.0 cm; weight: 3 gr. Surface find outside the gate near the East Tower.



BILOBATE ARROWHEAD

Site Inventory Number: —

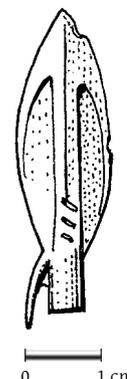
Plate: 156d

Identification Number: 10TR13U16met01

Photograph: 12dpkc1104

Description:

Bilobate socketed arrowhead with barb, chip missing near tip. Three parallel marks incised on one side of the rib just above the barb. Length: 4.0 cm; width: 1.2 cm; weight: 5 gr. From silt on the stone pavement below the burned surface.



¹⁸⁴ Mary M. Voigt, personal communication.

BILOBATE ARROWHEAD

Site Inventory Number: KO9.235

Plate: 156e

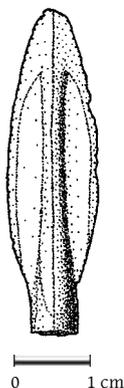
Identification Number: 09TR22U11met01

Photograph: 10dpkc1218

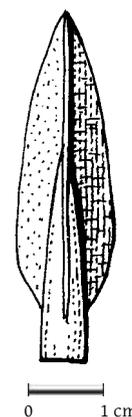
Yozgat Museum Registration Number: 1679

Description:

Bilobate socketed arrowhead with depressions in the wings, tip missing. No barb. Length: 4.3 cm; width: 1.2 cm; diameter of socket: 0.5 cm; weight: 5 gr. Found resting directly on the stone pavement in the upper part of the entrance passage below predestruction silt.

*Description:*

Trilobate socketed arrowhead, no barb. Traces of wooden shaft extant in the socket hole. Length: 4.6 cm; width: 1.0 cm; diameter of socket: 6.5 cm. Found in burned debris associated with the mudbrick wall of Room 3.



TRILOBATE ARROWHEAD

Site Inventory Number: K11.255

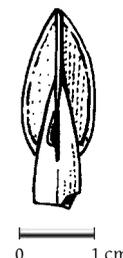
Plate: 157c

Identification Number: 11TR23U33met01

Photograph: 11dpkc2722

Description:

Small trilobate socketed arrowhead. Complete except for a small part of the socket that has broken away. File marks on socket. Two raised lines on the socket may indicate where the two halves of the mold met. Length: 2.5 cm; width: 0.9 cm; diameter of socket: 0.6 cm; weight: 2 gr. Found in burned debris on the pavement behind the gate.



BILOBATE ARROWHEAD

Site Inventory Number: K11.245

Plate: 156f

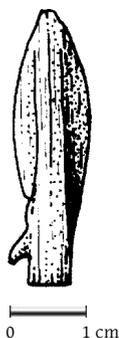
Identification Number: 11TR23U08met01

Photograph: 11dpcc0624

Yozgat Museum Registration Number: 1696

Description:

Bilobate socketed arrowhead with part of barb. File marks are present on the wings, mostly at their junction with the shaft, and across the shaft. Length: 3.7 cm; width: 1.0 cm; diameter of socket: 0.6 cm; weight: 3 gr. Found between paving stones in the burned debris in the rear section of the gate.



TRILOBATE ARROWHEAD

Site Inventory Number: K11.256

Plate: 157b

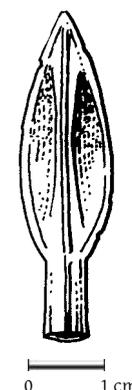
Identification Number: 11TR30U10met02

Photograph: 11dpkc2723

Yozgat Museum Registration Number: 1692

Description:

Trilobate socketed arrowhead, no barb, with a small bit of the tip and of the edge of the socket missing. All three wings abraded, one almost completely gone. Both edges of the wings sharpened using a fine file. Three raised lines descending from the wings along the socket may indicate where the pieces of the mold joined. Length: 4.2 cm; diameter of socket: 0.6 cm.



TRILOBATE ARROWHEAD

Site Inventory Number: K11.244

Plate: 157a

Identification Number: 11TR23U11met01

Photograph: 11dpcc0630

Yozgat Museum Registration Number: 1695

From the burned debris above the pavement in the rear section of the gate, recovered by wet sieving.

TANGED IRON ARROWHEADS

TANGED ARROWHEAD

Site Inventory Number: K11.258

Plate: 157d

Identification Number: 11TR23U09meto2

Photograph: 11dpcc0649

Description:

Tanged arrowhead, square in section, tip of head and part of tang missing. Extant length: 5.0 cm; length of head: 4.3 cm; base of head: 0.4×0.4 cm; tang at break: 0.3×0.3 cm. Found in burning above the surface of the northeastern strip between the paved passage and Room 3 in the rear section of the gate.



TANGED ARROWHEAD

Site Inventory Number: K11.259

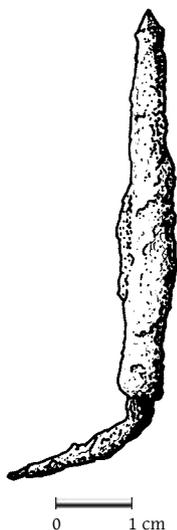
Plate: 157e

Identification Number: 11TR23U09meto4

Photograph: 11dpcc0647

Description:

Tanged arrowhead, square in section, tang bent. Complete. Length of head: 5.0 cm; length of tang: 2.2 cm; total length: 7.2 cm; base of head: 0.4×0.4 cm; tang at maximum: 0.3×0.3 cm. Also found in the burning above the surface of the northeastern strip between the paved passage and Room 3 in the rear section of the gate.



TANGED ARROWHEAD

Site Inventory Number: K11.260

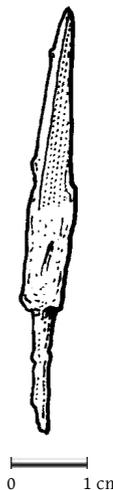
Plate: 157f

Identification Number: 11TR23U11meto2

Photograph: 11dpcc0627

Description:

Tanged arrowhead, square in section. Complete. Length of head: 4.0 cm; length of tang: 1.7 cm; total length: 5.7 cm; base of head: 0.6×0.5 cm; tang at maximum: 0.3×0.3 cm; weight: 4 gr. Found in the burned and badly preserved mudbrick of the Room 3 wall. It was not possible to determine whether the arrowhead was mixed in when the brick was laid or in debris associated with the collapse, but it was most probably in the same context as the two other iron arrowheads.



PERSONAL ORNAMENTS

OPENWORK ORNAMENT

Site Inventory Number: K11.251

Plate: 158

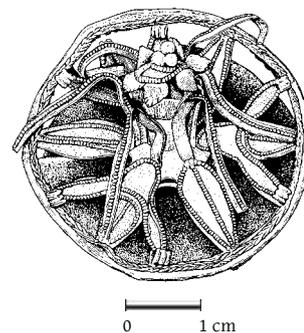
Identification Number: 11TR23U48meto1

Photographs: 11dpkc2612, 11dpkc2614

Yozgat Museum Registration Number: 1691

Description:

Openwork gold and electrum ornament with sheet metal, twisted wire, beaded wire, and granules. Floral design with leaves and buds surmounted by a pyramidal blossom of four small spheres. Complete, squashed but in excellent condition. Diameter: ca. 3.9 cm; weight: 16 gr. The piece was found directly on the pavement behind the rear doors of the gate, beneath charcoal from the destruction (pl. 65). When found, there was almost no soil adhering to the piece. Consequently, the only conservation work that has been carried out was washing in ethanol, as well as a little mechanical



cleaning under magnification. On the last day of the 2011 season, while taking final photographs of the piece before sending it to the Yozgat Museum, the second plate at the back became detached. This occurred because the few small particles of reddish clayey soil, all that was adhering the fragment to the main portion, had dried out. The main conical open-work element comprises a symmetric arrangement of three leaves or petals and three lotus buds, all facing downward and outward, and cut from the same sheet as the rim.¹⁸⁵ The rim itself is folded over to secure the electrum backplate. The six stems of the leaves and buds loop around over the top so as to retain the central flower and are soldered to both the inner ends of the leaves and the base of the buds, as well as to the rim. Beaded wire runs along the center of the stems, the center of the leaves, and around the edges of the floral elements. A braid made of two twisted gold wires side by side, each square in section, was soldered to the top edge of the rim. These twisted wires seem to be slightly different in color, perhaps indicating that they are made of a different gold alloy. At the two extremities of each blossom are triple reels that form hollow loops; that is, the wires go beneath them, not through them. The central pillar is a gold tube topped by a knob of leaves or leaves with serrated edges. Two concentric circles of beaded wire retain three spherical granules topped by a fourth.

The central tube is an entirely separate element that projects through either side of the backplate. It was closed at both ends by folding over the sheet metal. It seems likely that there is a second tubular sleeve fitted over the back of the first, but further detailed examination is called for to elucidate details. Regardless of the exact arrangement of these central structural elements, there is a second electrum plate of which only a part is preserved. The inner edge of this second sheet, which was folded around the inner tube, seen on plate 158, is broken,

as is the edge of the tubular sleeve. As is evident in the photograph, it is not easy to see how the plate could have been a part of the sleeve rather than a second element, but further examination is required. Both the second plate and the beaded wire around its rim are the same color; thus both are probably electrum.

This piece was perhaps inspired by Lydian work or a Lydian import. Parallels for the combination of gold and electrum, the complexity and intricacy of the workmanship, and many of the individual features, such as beaded wire, florets, and granules, are found on pieces from the Artemesion at Ephesus. These include brooches, earrings, and elaborate pins;¹⁸⁶ the most notable is a lion fibula that also has an electrum backplate and many separate components of gold. This lion brooch and related pieces are thought by most scholars to be of Lydian manufacture.¹⁸⁷

FIBULAE

Two copper alloy fibulae, both of well-known Phrygian type, were recovered. Both possess a five-digit, hand-like clasp.¹⁸⁸ Both were made in a mold.¹⁸⁹ Until now (2012), these are the only fibulae from recent exploration, although two not dissimilar pieces were found by Schmidt in his test excavations.¹⁹⁰ The smallish size is not inconsistent with a date in the first half of the sixth century BC.

¹⁸⁵ The description that follows owes much to notes made by Joseph Lehner and Noël Siver. The piece requires further detailed study and metal analysis.

¹⁸⁶ See Seipel 2008, cat. nos. 10, 38, 40, 55, 59, 60, and 66.

¹⁸⁷ Seipel 2008, cat. no. 60; Freiburger and Gschwantler 2008. An unprovenanced gold brooch made of more than 235 individual elements was ascribed to sixth-century Lydia by Muscarella (1971).

¹⁸⁸ I am most grateful to Oscar White Muscarella for comments on these fibulae; for the types, see Muscarella 1967. Similar fibulae have been found, for instance, in the South Cellar and other post-Tumulus MM contexts at Gordion. The most recent discussion is in DeVries 2007, pp. 86–90 with fig. 5, nos. 6–8. Brooches similar to the two described here were found at Midas City (see H. Sivas and T. Sivas 2007, the upper two on p. 258).

¹⁸⁹ On techniques of Phrygian bronze working, see Özenbaş and Ercanlı 1998.

¹⁹⁰ Schmidt 1929, K28 and K88, on pp. 270–71 and in figs. 69 and 70.

FIBULA

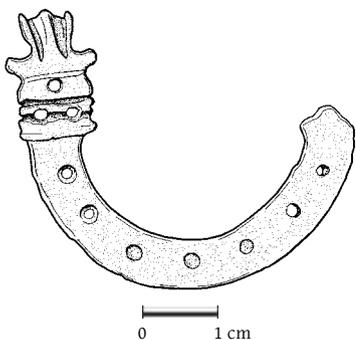
Site Inventory Number: K00.100

Plate: 159a

Identification Number: 00CT51U01met01

Photograph: 05dpnk1010

Yozgat Museum Registration Number: 1402

*Description:*

Fibula of Type aXII, 9. Semicircular bow and hand-like clasp with holes for studs. One end, spring pin, and studs are missing. Diameter of bow: 4.2 cm; width of bow: 0.6 cm; thickness of bow: 0.2 cm. From the upper portion of the stone rubble collapse in the gate court.

FIBULA

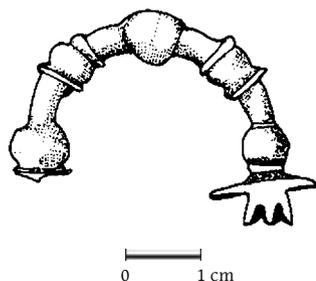
Site Inventory Number: K02.124

Plate: 159b

Identification Number: 02TR03U11met01

Photograph: 08dpkc1138

Yozgat Museum Registration Number: 1520

*Description:*

Fibula of Type aXII, 14. Semicircular arc with a hand-like clasp. The arc shows five beads; the central example on each arm is flanked by reels. The spring pin is missing. Excellent condition, showing file marks from finishing. Diameter of arc: 3.8 cm.

From silty deposit in the lower portion of the drain on the southwestern side of the gate passage, in a predestruction context.

HAIRGRIPS

Seven double-looped hairgrips were found at the Cappadocia Gate. All were copper alloy, although iron examples have also been found elsewhere in the Iron Age level at Kerkenes. They came from a variety of contexts.

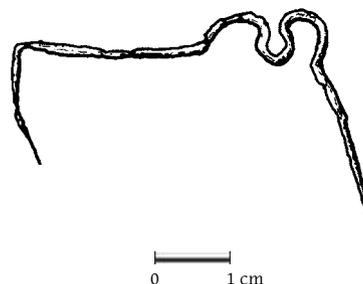
HAIRGRIP

Site Inventory Number: —

Plate: 159c

Identification Number: 09CAPPU00met01

Photograph: 11dpnd3504

*Description:*

Deformed example, one shank incomplete. Maximum dimension: 5.5 cm. Found outside the defenses during clearance and visual enhancement in front of the buttress to the west of the gate.

HAIRGRIP

Site Inventory Number: K11.261

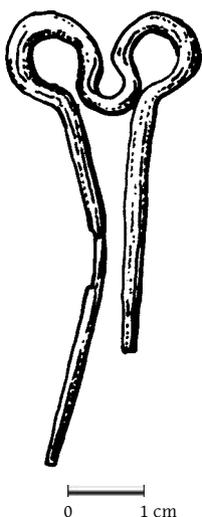
Plate: 159d

Identification Number: 11TR23U22met01

Photograph: 11dpcc0657

Description:

Hairgrip, part of one side missing. Length: 6.0 cm; width of loops: 2.5 cm; diameter of wire: 0.2 cm. Found on or a little above the lightly burned surface of the southeastern half of Room 3.



HAIRGRIP

Site Inventory Number: —

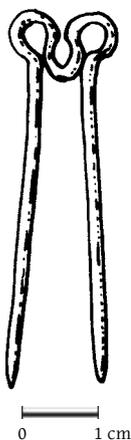
Plate: 159e

Identification Number: 11TR24U15met01

Photograph: 11dpcc0677

Description:

Hairgrip, part only. Preserved length: 4.3 cm; diameter of wire: 0.2 cm. From a poor context in the collapse and destruction in the rear section of the gate.



HAIRGRIP

Site Inventory Number: K11.246

Plate: 159f

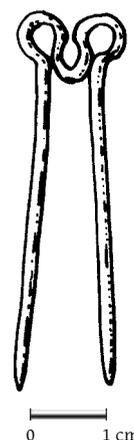
Identification Number: 11TR24U20met01

Photograph: 11dpcc0626

Yozgat Museum Registration Number: 1697

Description:

Hairgrip, complete. Length: 5.0 cm; width of loops: 1.4 cm; diameter of wire: 0.2 cm. From the burned debris and collapse filling Room 2 in the rear section of the gate.



HAIRGRIP

Site Inventory Number: K11.262

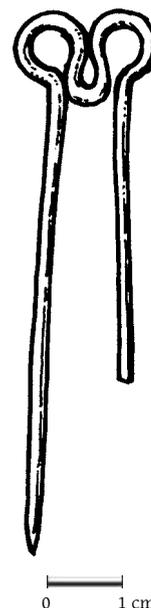
Plate: 159g

Identification Number: 11TR24U21met01

Photograph: 11dpcc0664

Description:

Hairgrip, part of one side missing. Length: 7.2 cm; width of loops: 1.9 cm; diameter of wire: 0.2 cm. Found in the destruction just above or on the surface of Room 2 in the rear section of the gate.



HAIRGRIP

Site Inventory Number: —

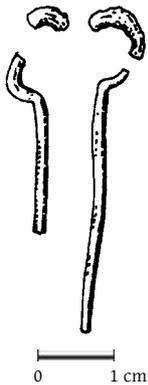
Plate: 159h

Identification Number: 11TR24U22met04

Photograph: 11dpcc0639

Description:

Hairgrip in four fragments. Incomplete. Extant length: 4.3 cm; diameter of wire: 0.2 cm. Found together with three copper alloy pins cataloged below, from the burned soil immediately above the paving in the rear section of the gate.



HAIRGRIP

Site Inventory Number: —

Plate: 159i

Identification Number: 11TR23U36met01

Photograph: 11dpnd3110

Description:

Hairgrip fragment. Extant length: 5.2 cm; diameter of wire: 0.2 cm. Found below collapse.



PINS

In total, four pins were recovered, all of copper alloy. The three tulip-headed pins, together with hairgrip 11TR24U22met04, were found in the burning above the pavement in the rear section of the gate. This group, which was held together by copper corrosion products when originally found, was poorly preserved. Differences in the shape and size of the heads may simply reflect corrosion of three identical pins that were photographed before cleaning and had deteriorated before they were drawn.

ORNAMENTAL PIN

Site Inventory Number: K00.105

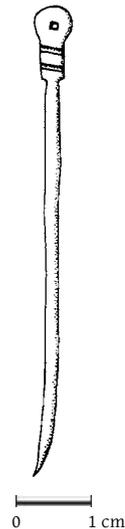
Plate: 160a

Identification Number: 00CT50U01met02

Photograph: 00dpol1408

Description:

Ornamental pin, with embellishment of the head in a different substance missing. There is a square perforation above two diagonal grooves in the lower part of the flat head. The shank is round in cross section. Length: 6.2 cm. Found in the stone rubble outside the gate in front of the South Tower.



TULIP-HEADED PIN

Site Inventory Number: —

Plate: 160b-c

Identification Number: 11TR24U22met08

Photographs: 11dpcc0638, 11dpcc0642

Description:

Tulip-headed pin, corroded and incomplete. Preserved length: 2.9 cm; length of head: 0.45 cm; diameter of shaft: 0.25 cm.



TULIP-HEADED PIN

Site Inventory Number: —

Plate: 160b, d

Identification Number: 11TR24U22met07

Photographs: 11dpcc0638, 11dpcc0641

Description:

Tulip-headed pin, corroded and incomplete. Preserved length: 2.3 cm; length of head: 0.7 cm; diameter of shaft: 0.25 cm.

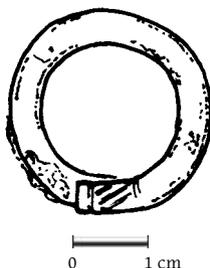


TULIP-HEADED PIN*Site Inventory Number:* —*Plate:* 16ob, e*Identification Number:* 11TR24U22meto1*Photographs:* 11dpcc0638, 11dpcc0640*Description:*

Tulip-headed pin, corroded and incomplete. Preserved length: 1.6 cm; length of head: 0.5 cm; diameter of shaft: 0.25 cm.

**RING****SPIRAL RING***Site Inventory Number:* K11.263*Plate:* 16of*Identification Number:* 11TR24U22meto3*Photographs:* 12dpkc1106, 12dpkc1107*Description:*

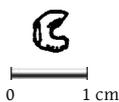
Spiral of copper alloy, three rings thick, with three incised lines decorating each end. Complete. Diameter: 2.7 cm; height: 1.7 cm; diameter of wire: 0.5 cm. Found in the burning immediately above the pavement in the rear section of the gate.

**BEAD**

A single fragmentary glass or frit bead was found. Beads of any size are not at all common at Kerkenes.

BEAD*Site Inventory Number:* —*Plate:* 16og*Identification Number:* 11TR23U10gfa01*Photograph:* 11dpcc0656*Description:*

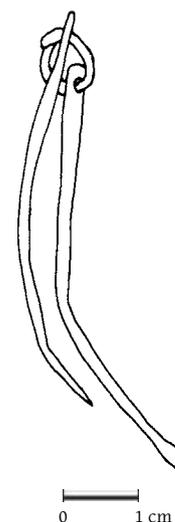
Small pierced pale-blue-to-white glass or frit bead. An irregular flattened sphere, perhaps distorted by heat.



Approximately half is extant. Greatest preserved diameter: 0.65 cm.

TWEEZERS**TWEEZERS***Site Inventory Number:* K00.117*Plate:* 16oh*Identification Number:* 00CT50U02meto1*Photograph:* 05dpnk1009*Description:*

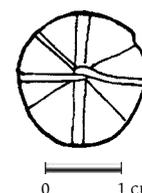
Pair of copper alloy tweezers joined by a circular loop with overlapping ends. The intact prong has a flattened end. Length: 6 cm. Found outside the gate, on the surface to the east of the structure in front of the East Tower.

**MISCELLANEOUS COPPER ALLOY OBJECTS AND SCRAPS**

Recognizable objects and pieces are described and illustrated; scraps have been listed not only for the sake of completeness but also because some have been sampled for metal analysis as part of a wider ongoing study of the Kerkenes metals undertaken by Joseph Lehner.

DOME-HEADED TACK*Site Inventory Number:* K00.102*Plate:* 16oi*Identification Number:* 00CT11U01meto1*Photograph:* 05dpnk1007*Description:*

Decorative dome-headed tack, forming approximately one-third of a sphere, shank missing. Very shallow incised double lines in the form of a cross, with the more closely spaced



lines of the horizontal arms (as drawn) appearing to wrap around the vertical. The upper left quarter is divided by a narrow double line, the other three quarters by single lines. Diameter: 1.8 cm; height: 0.5 cm. From the stone rubble in front of the city wall on the southwestern side of the gate.

DOME-HEADED TACK

Site Inventory Number: K11.265

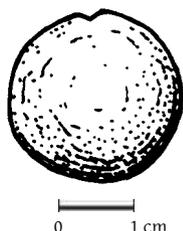
Plate: 160j

Identification Number: 11TR24U17met01

Photograph: 11dpcc0683

Description:

Dome-headed tack with a very small fragment of the shaft attached. Diameter: 2.3 cm; height: 0.6 cm; thickness of metal: 0.1 cm. From destruction and collapse in the rear section of the gate.



TACK

Site Inventory Number: K11.266

Plate: 160k

Identification Number: 11TR24U11met02

Photograph: 11dpcc0634

Description:

Small nail or tack with square head attached at one corner. Shaft round in section. Complete. Bent 90 degrees in center of shaft, with the tip also bent at a right angle. Total length: 3.1 cm; head: 0.80 × 0.95 cm. From just above the pavement in the rear passage.



FERRULE AND NAIL

Site Inventory Number: —

Plate: 160l

Identification Number: 11TR23U12met01

Photograph: 11dpcc0681

Description:

Sheet copper alloy ferrule and small iron nail. Incomplete, poorly preserved, and fragile. Preserved length: 1.4 cm. From burning above the paving in the rear part of the gate.



SHEET FRAGMENT

Site Inventory Number: —

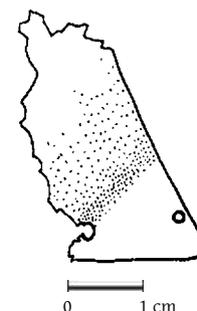
Plate: 161a

Identification Number: 02TRO3U11met02

Photograph: 12dpkc1105

Description:

Small fragment of thin copper or copper alloy sheet with a preserved obtuse corner and two small perforations. Preserved length: 3.3 cm. From silty fill at the lower end of the drain.



SHEET FRAGMENT

Site Inventory Number: —

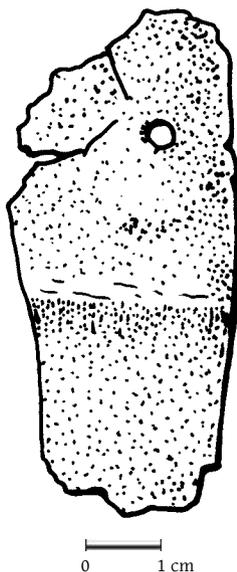
Plate: 161b

Identification Number: 11TR23U21met01

Photograph: 11dpcc0644

Description:

Copper alloy sheet with two preserved edges, one small punched hole, and a fold across the middle. Both ends broken away. Dimensions: 7 × 3 cm; thickness: 0.1 cm. Found on the pavement in the rear section of the gate.



COPPER ALLOY FRAGMENTS NOT ILLUSTRATED

TRILOBATE ARROWHEAD FRAGMENT

11TR24U11met04 Copper alloy trilobate socketed arrowhead fragment. Wooden shaft inside the socket given ID 11TR24U11wdn01

SHEET FRAGMENTS

10TR13U14met02 Copper alloy sheet fragments with wood adhering
 11TR24U11met01 Copper alloy sheet fragments
 11TR24U11met03 Copper alloy sheet fragments
 11TR24U11met05 Copper alloy sheet fragments
 11TR24U15met02 Copper alloy sheet fragments

PIN FRAGMENTS

02TRO4U04met02 Copper alloy pin shaft fragment
 05TR14U03met01 Copper alloy pin shaft fragments
 11TR30U10met01 Copper alloy shank fragment

SHAFT FRAGMENT

11TR24U06met01 Shaft fragment, perhaps from hairgrip

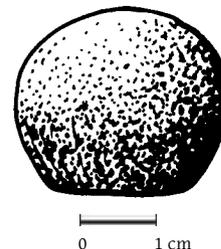
TOOLS

WEIGHT

Site Inventory Number: K11.264
 Plate: 161c
 Identification Number: 11TR24U21met02
 Photographs: 11dpcc0668, 11dpcc0669, 11dpcc0670

Description:

Weight in the form of a truncated sphere. Not exactly spherical: the transition from the curved to the flat face is not very sharp. Appears to have been ground down and carefully polished to a high sheen. There are some slight corrosion products on the surface. Perhaps hematite, but identification of the material awaits analysis. Height: 2.5 cm; diameter: 2.9 cm; weight: 88 gr. Found just above the floor of Room 2 in the northwestern corner of the gate.

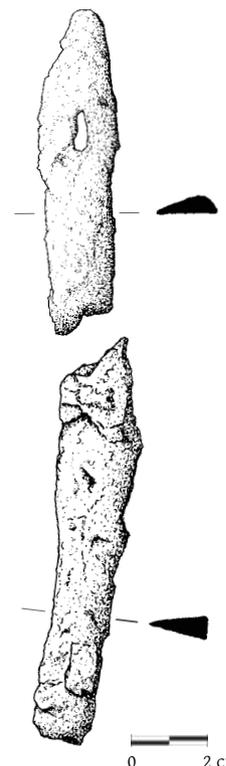


KNIFE BLADE

Site Inventory Number: —
 Plate: 161d
 Identification Numbers: 11TR24U21met03, 11TRO3U24met01
 Photograph: 17dpkc0102

Description:

Two pieces of the same iron knife blade with perforation for handle attachment, curved with triangular section. Length: 18.8 cm; width 2.2 cm. Pieces are incorrectly positioned in the photograph. Highly corroded. Found just above the floor of the northwestern room in the northwestern corner of the gate.



WHORLS

One pottery and three baked-clay whorls or fragments of whorls were found. Two were found together with pottery sherds and a few metal finds in the burning above the surface of the strip between the pavement and the southwestern wall of Room 3. A third was found in the void behind the sculpted plinth in the northeastern corner of Room 3. The last was in a poor context in the collapsed fill of the court and entrance passage. It is not impossible that these items represent individuals spinning yarn in the shade of the gate.

WHORL

Site Inventory Number: —

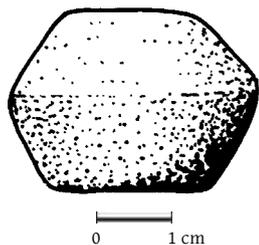
Plate: 162a

Identification Number: 11TR23U09pob01

Photographs: 11dpcc0653, 11dpcc0654

Description:

Baked-clay whorl, roughly biconical with flattened ends. In two pieces, with part of one end missing. Micaceous clay with some fine vegetal inclusions, pale gray. Diameter: 3.3 cm; height: 2.5 cm; diameter of hole: 0.8 cm. From the burned debris above northeastern strip in the rear section of the gate.



WHORL

Site Inventory Number: —

Plate: 162b

Identification Number: 11TR23U09pob02

Photograph: 11dpcc0655

Description:

Baked-clay whorl in the form of a flattened sphere. Approximately one-third is extant. Micaceous clay, burned to a dark gray. Height: 2.5 cm. From the burned debris above the northeastern strip in the rear section of the gate, like the previous, more complete, example.



WHORL

Site Inventory Number: K11.273

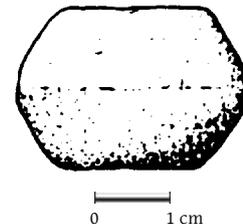
Plate: 162c

Identification Number: 11TR23U22pob01

Photographs: 11dpkc3240, 11dpkc3241

Description:

Baked-clay whorl, biconical with flattened ends and central hole. Complete. Diameter: 3.0 cm; height: 2.0 cm; diameter of hole: 0.8 cm; weight very light at 13 gr. Found in the void behind the sculpted plinth in Room 3.



WHORL

Site Inventory Number: —

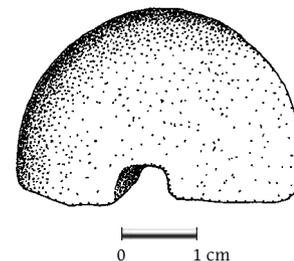
Plate: 162d

Identification Number: 09TR22U01pob01

Photograph: 10dpkc1214

Description:

Biconical baked clay whorl, approximately half, with central hole. Diameter: 4.8 cm; height: 4.1 cm; diameter of hole: 0.6 cm; weight: 21 gr., making for a total weight of ca. 40 gr. Orange-red, soft fabric with no visible temper. Apparently provided with a darker red slip and burnished; small patches remain beneath salts.



ARCHITECTURAL IRON

Architectural iron from the Cappadocia Gate comprises four iron bands and associated dome-headed nails. One of the bands is fenestrated and has no clear function, although the larger and more complete piece appears to have been found where it fell, very close to the top of the inclined paving of the court pavement in front of the northeastern end of the outer façade (see pls. 64–65). It was at first assumed that this band had come from the right-hand door in the façade, but the absence of other similar fenestrated examples makes this uncertain. Another

possibility is that it was in some way associated with the semi-iconic stela at the top of the stepped monument, next to which the band lay. The precise position in which the band was found does not, however, provide clear confirmation of this suggestion, which would carry the likely implication that the stela, and perhaps the entire stepped monument, was protected by some wooden construction. The other three bands, all of which are complete (although one is in several pieces), were discovered inside the front façade at the southwestern end (see pl. 65). The two bands that are each in one piece are very well preserved, with the metal still springy. Both are bent, one doubled as though it was wrapped around a door in such a way as to secure vertical planks. If this is correct, it could be imagined that the southwestern door of the pair at the front was fully open when it burned. It would have comprised a post that pivoted and to which planks, presumably upright, were attached. Three iron bands would have been wrapped around the post and nailed through the planks nearest the post, but the bands are too short for them to have extended across all the planks. Whatever the precise arrangement, the bands would have had to have been forged so as to fit around the post in such a way that the nail holes, all punched from the same side before bending, were precisely lined up so that the large nails could be driven through from one side with, in one case, the protruding end bent over. This particular nail was then secured by the insertion of a much smaller nail from the back. However, this is the only instance of one of the large dome-headed nails being bent in this way, perhaps suggesting a repair.

CONSERVATION OF THE IRON BANDS

Noël Siver

Both the intact and the fragmented iron bands were mechanically cleaned during the season in which they were excavated. Fragmented bands were mended using HMG's B-72 acrylic resin adhesive. Each band was stored on a firm backing support made from insulation foam and placed inside a sealed bag constructed from two types of water vapor- and oxygen-resistant barrier film. (The bag's opaque lower face consists of aluminized polyethylene and polypropylene MarvelSeal 360. The transparent

upper face is made from Escal, which has a transparent polypropylene outer layer with an inner layer composed of a vacuum-deposited ceramic on a PVA substrate.) Three edges of the bag were heated with an iron to bond the two types of barrier film. Silica gel with cobalt chloride indicator (blue gel) and a humidity indicator card were placed inside the bag with the iron band before the fourth edge was sealed (see pl. 165b). Band K11.254 was put into airtight storage in the Kerkenes depot in September 2012; the other three bands were stored in the same way in July 2014. Each year, when the Kerkenes depot is reopened, the condition of the iron band, the color of the silica gel, and the reading on the humidity indicator card are checked.

IRON BANDS

FENESTRATED IRON BAND

Site Inventory Number: K11.254

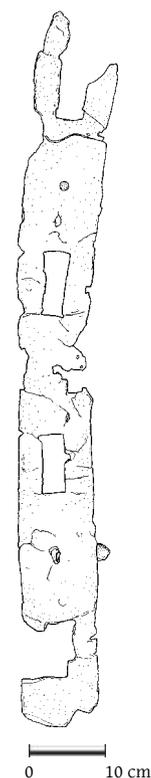
Plate: 163-164

Identification Number: 10TR13U14met01

Photographs: 11dpcc0601, 12dpkc1440,
11dpcc0602

Description:

The greater part of a fenestrated iron band comprising one large piece and three nonjoining fragments.¹⁹¹ There is a minimum of six rectangular fenestrations, three of which are sufficiently preserved for their size to be ascertained. Part of one original end, at bottom on plate 163, seems to be extant. There was a single perforation for a large dome-headed nail punched through approximately midway between each fenestration, with a further hole in the end sections, making a minimum total of seven nail holes. Two of these nail holes contain remains of iron nails, added to which is the corroded head of a third nail. The larger portion is corroded with pits and corrosion blisters, partially mineralized, actively corroding, and slightly deformed. Scant remains of



¹⁹¹ The description and measurements are based on observations made by Noël Siver and Joseph Lehner. Detailed metallurgical study of this and all the other iron bands from Kerkenes is being undertaken by Joseph Lehner.

mineralized wood appear on its surfaces (pl. 164b). The smaller fragments, on the other hand, have completely mineralized. The fenestrations appear to have been cut with a hammer and chisel by a blacksmith. The band, like the plain bands described below, was almost certainly made by forge welding separate elements together. Furthermore, it is probable that the fenestrations were cut before the sections were joined. If this was indeed the case, there could have been as many as seven sections.

Maximum length of the large portion: 94.1 cm; maximum length of fragments: 20.9 cm and 8.3 cm. Thus the minimum total length is 122 cm, while the original complete length would have been in excess of 150 cm. This is compatible with the size of the plain bands described below. Band maximum width: 10.4 cm; thickness (varies due to corrosion): 0.4–1.3 cm. Dimensions of fenestrations from top to bottom on plate 163: 1) width: 3.5 cm; 2) average: 8.7×3.0 cm; 3) average: 7.4×3.0 cm; 4) length: 7.2 cm. Distance between first and second fenestration: 17.3 cm; distance between second and third fenestration: 16.3 cm; distance between third and fourth fenestration: 16.8 cm. Fenestration in the nonjoining fragments: 7.5×3.5 cm. Dome-headed nail between first and second fenestrations: preserved length: 1.2 cm; diameter: 1.9 cm; shank square in section. Dome-headed nail between the third and fourth fenestrations: length: 9.0 cm; height of head: 1.3 cm; diameter of head: 2.6 cm. The head and a 5.8 cm portion of the square shank are bent parallel to the surface of the band. Neither the dimensions of the fenestrations nor the spacing of the fenestrations and nail holes is precisely regular.

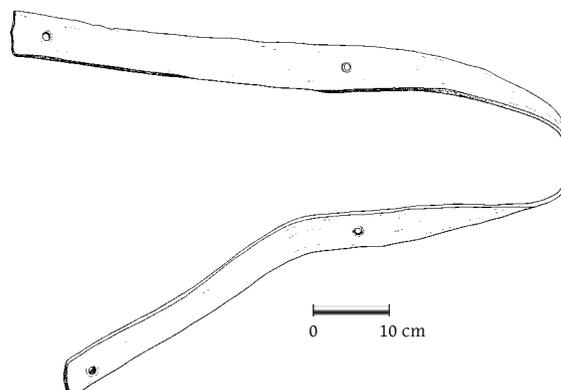
The main portion was found resting directly on the stone pavement; the other fragments were recovered from the stone collapse. Fragments of a similar fenestrated iron band were found on the burned floor of the large hall at the northern end of the city (K96.02, ID TT15U13met04).¹⁹²

IRON BAND

Site Inventory Number: K11.253
Plate: 165
Identification Number: 11TR24U07met02

Photographs:

11dpcc0606, 11dpcc0607,
11dpnd0814, 14dpkc0106

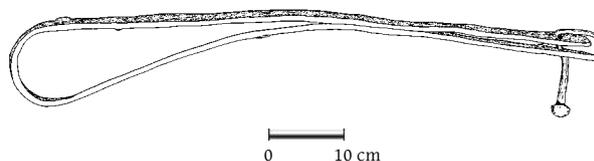


Description:

Large folded iron band with four circular perforations punched from a single direction. There are no immediately visible forge welds of sections, suggesting that this band was forged from a single piece of iron. This is in contrast to not dissimilar bands found at the Monumental Entrance to the Palatial Complex.¹⁹³ The band has been bent, as though fitted around a post in such a way that the burrs that formed when the holes were punched were on the outer face. One end has been hammered and given a rounded shape, whereas the other end has been cut straight from both sides. Total unfolded length: 164.7 cm; width at rounded end: 8.0 cm; width at squared end: 6.9 cm; thickness at rounded end: 0.8 cm; thickness at squared end: 0.6 cm. Distance between perforations: 42.5 cm; diameter of perforations: 0.9–1.0 cm.

IRON BAND

Site Inventory Number: K11.252
Plate: 165a, 166–167
Identification Number: 11TR24U07met01
Photographs: 11dpcc0603, 11dpcc0604,
11dpcc0605, 11dpkc3231,
11dpkc3233, 11dpnd0814



¹⁹² Fragments were published before assembly in G. Summers et al. 1998, fig. 15:3–6.

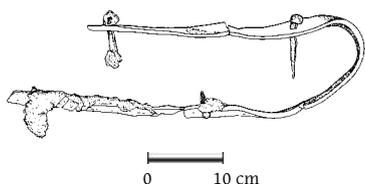
¹⁹³ Joseph Lehner, personal communication.

Description:

Large folded iron band with four circular perforations punched from the same direction and a dome-headed iron nail held in situ by a small nail inserted from the opposite side. There are no immediately visible forge welds of sections, suggesting that this band was forged from a single piece of iron. Both ends are fastened by the dome-headed nail, the lower portion of which is bent at 90 degrees so that it is parallel with the band. The small nail inserted from the other side secured the larger one. The band has been bent, as though fitted around a post in such a way that the burrs that formed when the holes were punched were on the outer face. One end has been hammered and given a rounded shape, whereas the other end has been cut straight from both sides (see pl. 167a). Total unfolded length: 160.2 cm; width at rounded end: 6.8 cm; width at squared end: 5.6 cm; thickness at rounded end: 0.5 cm; thickness at squared end: 0.6 cm. Distance between perforations: 38.1 cm; diameter of perforations: 1.1–1.2 cm. The greatest possible distance between the inside faces of the band at the joined end, and therefore the thickness of the wood between these ends: 9.8 cm. The dome-headed nail is square in section; straight length: 19.0 cm; diameter of head: 2.5 cm. Preserved length of the small nail, which has lost its tip: 2.5 cm.

IRON BAND

Site Inventory Number: —
Plate: 168
Identification Number: 11TR24U07met03
Photographs: 11dpkc3227, 11dpnd0918

*Description:*

Bent iron band with four circular perforations punched from the same direction with four in situ dome-headed iron nails. The metal is nearly completely mineralized and broken into several pieces. Remnant corrosion makes some measurements imprecise. The nails do not go through two perforations, probably suggesting that although the band was purposefully folded it was attached with four

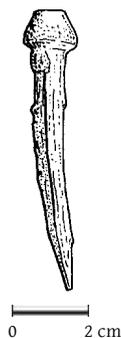
nails rather than two. One end has been hammered and given a rounded shape, whereas the other end has been cut straight. Total unfolded length: 88.0 cm; width at rounded end: 5.4 cm; width at squared end: 5.6 cm; thickness at rounded end: 0.6 cm; thickness at squared end: 0.4 cm. Distance between perforations: ca. 11–13 cm. The dome-headed nails are square in section; measurable lengths: 8.7 and 7.4 cm; diameter of heads: 1.5 and 2.2 cm. There are wooden pseudomorphs preserved in places.

DOME-HEADED NAILS

DOME-HEADED NAIL

Site Inventory Number: K11.271
Plate: 169a
Identification Number: 11TR24U07met08
Photograph: 11dpcc0625
Description:

Dome-headed iron nail with square shank. Complete, in excellent condition. The head bears marks of having been hammered. Length: 7.2 cm; diameter of head: 1.3 cm; shank: 0.6 × 0.6 cm. Associated with the broken iron band 11TR24U07met03.



DOME-HEADED NAIL

Site Inventory Number: K11.270
Plate: 169b
Identification Number: 11TR24U07met07
Photograph: 11dpcc0632
Description:

Dome-headed iron nail with square shank. Complete, in excellent condition. Length: 11.5 cm; diameter of head: 1.5 cm.



DOME-HEADED NAIL

Site Inventory Number: K11.269

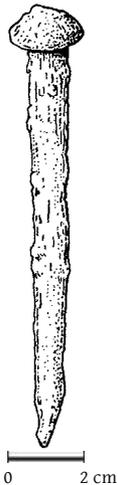
Plate: 169c

Identification Number: 11TR24U07met06

Photograph: 11dpcc0633

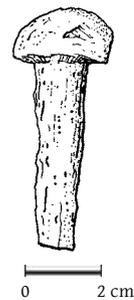
Description:

Dome-headed iron nail with square shank. Complete, in excellent condition. Length: 11.6 cm; diameter of head: 1.3 cm.



Description:

Dome-headed iron nail with square shank. Incomplete. Preserved length: 6.4 cm; diameter of head: 2.2 cm; shank at break: 1.0 × 1.0 cm. Found together with the broken band 11TR24U07met03.



DOME-HEADED NAIL

Site Inventory Number: K11.272

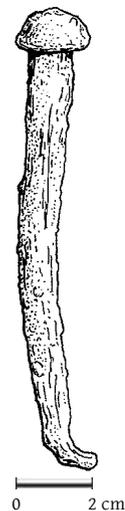
Plate: 170a

Identification Number: 11TR24U04met01

Photograph: 11dpcc0643

Description:

Iron nail with round shank and flattened head. Incomplete. Preserved length: 12.2 cm; diameter of head: 1.9 cm; diameter of shank: 0.8 cm. Found in Room 1 in the rear section of the gate.



DOME-HEADED NAIL

Site Inventory Number: K11.268

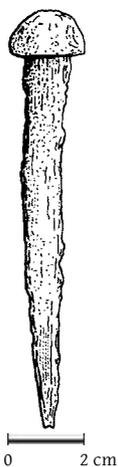
Plate: 169d

Identification Number: 11TR24U07met05

Photograph: 11dpcc0631

Description:

Dome-headed iron nail with square shank. Complete. Length: 11.0 cm; diameter of head: 2.5 cm.



DOME-HEADED NAIL

Site Inventory Number: —

Plate: 170b

Identification Number: 11TR23U24met02

Photograph: 11dpcc0662

Description:

Dome-headed iron nail with round shank below head becoming square in section lower down. Incomplete, but in good state of preservation. Preserved length: 5.4 cm; diameter of head: 1.4 cm; shank at break: 0.6 × 0.6 cm.



DOME-HEADED NAIL

Site Inventory Number: —

Plate: 169e

Identification Number: 11TR24U07met04

Photograph: 11dpcc0648

DOME-HEADED NAIL

Site Inventory Number: —

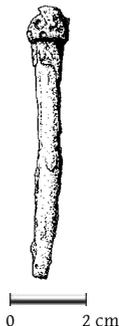
Plate: 170c

Identification Number: 11TR23U24met01

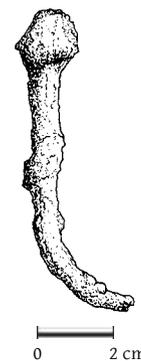
Photograph: 11dpcc0661

Description:

Dome-headed iron nail with round shank below head becoming square in section lower down. Tip possibly missing, but in good state of preservation. Preserved length: 7.2 cm; diameter of head: 1.2 cm; shank: 0.6 × 0.6 cm.

*Description:*

Dome-headed iron nail, shank square in section. Complete, sharply bent two-thirds of the way down the shank. Length: 9.3 cm; diameter of head: 1.8 cm; shank at maximum: 1.0 × 0.8 cm.



SHANK OF DOME-HEADED NAIL

Site Inventory Number: —

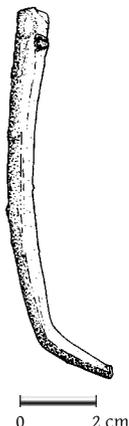
Plate: 170d

Identification Number: 11TR23U12met02

Photograph: 11dpcc0660

Description:

Shank of iron nail, square in section. Almost certainly from a large dome-headed nail. Complete except for the head, tip blunted. Excellent condition. Tip possibly missing, but in good state of preservation. Preserved length: 9.7 cm; shank at center: 0.6 × 0.6 cm.



NAILS

NAIL

Site Inventory Number: —

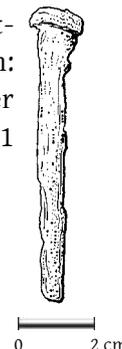
Plate: 170f

Identification Number: 11TR24U04met03

Photograph: 11dpcc0646

Description:

Iron nail with round shank and flattened head. Incomplete. Preserved length: 7.8 cm; diameter of head: 1.4 cm; diameter of shank at break: 1.8 cm. Found in Room 1 in the rear section of the gate.



NAIL

Site Inventory Number: —

Plate: 170h

Identification Number: 11TR23U31met03

Photograph: 11dpkc3239

Description:

Nail, iron, highly corroded portion of shank in two fragments. Preserved length of largest fragment: 4 cm. Found in the hard clayey fill of the mortise hole in the sculpted plinth in Room 3, between the edge of the base and the side of the cutting.



DOME-HEADED NAIL

Site Inventory Number: K11.267

Plate: 170e

Identification Number: 11TR23U09met03

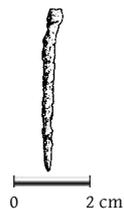
Photograph: 11dpcc0645

NAIL

Site Inventory Number: —
 Plate: 170g
 Identification Number: 11TR23U09met01
 Photograph: 11dpcc0650

Description:

Iron nail shank, square in section. Preserved length of largest fragment: 4.3 cm; shank: 0.4 × 0.4 cm.



POINT

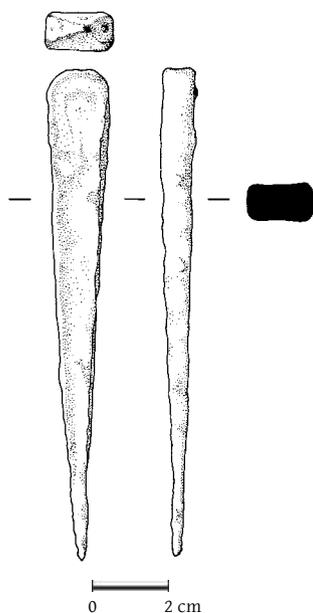
POINT

Site Inventory Number: K99.083
 Plate: 171a
 Identification Number: 99CAPPU00met01
 Photograph: 08dpkc1145

Yozgat Museum Registration Number: 1393

Description:

Iron nail, corroded. Preserved length 12.6 cm; diameter between 3 and 16 mm; thickness between 0.3 and 0.9 cm. Found on the surface.



MISCELLANEOUS IRON

PIERCED IRON PLATE WITH NAILS

Site Inventory Number: —
 Plate: 171b
 Identification Number: 11TR24U22met05
 Photograph: 11dpcc0745

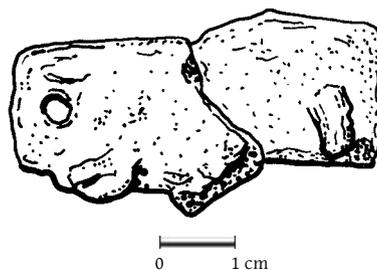
Description:

Pierced iron plate in four pieces with protruding and loose nails and nail fragments. The large central hole was punched through, as were the holes for nails. Nails are square in section. Length: 11.0 cm; width: 10.0 cm; thickness: 0.3 cm; diameter of central hole: 3.0 cm; largest preserved nail fragment: 5.1 cm. A shoe or pad fixed into wood.



SHEET WITH NAILS

Site Inventory Number: —
 Plate: 172a
 Identification Number: 11TR24U04met04
 Photograph: 11dpcc0671



Description:

Fragments of iron sheet pierced by two small holes, one still retaining remains of a nail. Badly corroded. Length: 4.8 cm; width: 1.6 cm; thickness: 0.3 cm.

IRON LOOP

Site Inventory Number: —
 Plate: 172b
 Identification Number: 11TR24U04met02
 Photograph: 11dpcc0672

Description:

Heart-shaped loop or eye, forged iron. Square in section, shaft missing. Preserved length: 2.9 cm; width: 2.0 cm; section: 0.6 × 0.5 cm.



IRON ROD

Site Inventory Number: —

Plate: 172c

Identification Number: 09TR22U08met01

Photograph: 10dpk1252

Description:

Rod of iron, round in section with one end flattened. Incomplete. Length: 21.5 cm.



IRON TACKS

Four iron tacks with amorphous roundish heads were recovered. The first was found on the surface behind the North Tower at the base of TR04. Another, poorly preserved, came from the base of the burned layer in TR03. Only the best example is illustrated.

TACK

Site Inventory Number: KO2.141

Plate: 173a

Identification Number: 02TRO4U04met01

Photograph: 05dpnk0705

Description:

Iron tack with domed head. Almost complete. Length: 2.0 cm; diameter of head: 1.6 cm.



IRON TACKS NOT ILLUSTRATED

02TRO4U02met01 02TRO3U03met01

IRON NAIL NOT ILLUSTRATED

11TR30U02met01

IRON FRAGMENTS NOT ILLUSTRATED

09TR22U20met01 11TR23U33met02

LEAD

SHEET LEAD

Site Inventory Number: —

Plate: 173b

Identification Number: 11TR23U31met01

Photographs: 11dpnd3538, 11dpnd3539

Description:

Lead sheet cut along one side; flat underside bearing marks of the surface onto which the melted lead was poured; upper side smooth with bubble scar. Found in the mortise of the sculpted plinth. Length: 7.7 cm; width: 4.2 cm; thickness 0.2 cm.



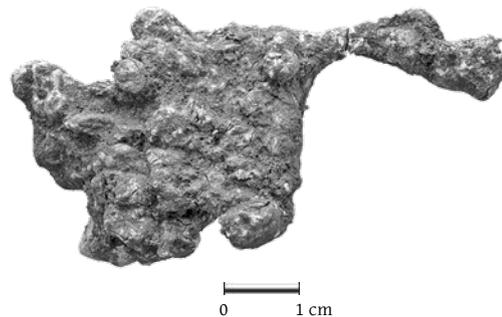
MELTED LEAD

Site Inventory Number: —

Plate: 173c

Identification Number: 11TR23U31met02

Photographs: 11dpkc3242, 11dpkc3243

*Description:*

Formless lump of melted lead. Found in the mortise of the sculpted plinth. Length: 6.6 cm; width: 3.5 cm; maximum thickness: 1.8 cm.

WOOD

WOOD FRAGMENTS NOT ILLUSTRATED

11TR23U11wdn01 Arrow shaft fragment

11TR23U20wdn01 Wood fragment

CHAPTER 9

THE IRON AGE POTTERY

GEOFFREY D. SUMMERS

No pottery earlier than the foundation of the Iron Age city on the Kerkenes Dağ was found at the Cappadocia Gate, or indeed elsewhere within the limits of the city walls. Diagnostic material from the 1928 test trenches was promptly published by Erich Schmidt, in addition to which a representative selection of sherds from the 1996 test excavations has also been published.¹⁹⁴ Other vessels have occasionally been illustrated in interim reports. Of chronological importance is the absence of any painted pottery of the “animal silhouette style,” commonly known as Alişar IV following Hans Henning von der Osten’s stratigraphic sequence at Alişar Höyük, which lies only some 23 km to the southeast of Kerkenes. Pottery of this distinctive style has been found in the destruction level on the old citadel at Gordion, now securely dated to the end of the ninth century BC. The core area of distribution of Alişar IV pottery, characterized by stags and ibex with trees and filling motifs of concentric circles, lies in the middle reaches of the Kızılırmak (the Red River). That the style persisted down to ca. 700 BC is evidenced by its occurrence at Göllüdağ, near the city of Niğde. In the later, poorly defined Alişar V period, it can be seen that panels of light ground containing multiple brush concentric circles in dark paint continued in fashion. Some examples of this kind are found at Kerkenes. More generally, the Kızılırmak basin style of painted pottery that began early in the Iron Age has been shown to have continued well into the Hellenistic period. The majority of sherds found at the Cappadocia Gate are from gray and buff ware vessels, usually slipped and burnished, that is akin to the corpus of Middle Phrygian ceramics at Gordion. There is little red ware, in contrast to

other excavated parts of Kerkenes, which is probably a reflection of the limited range of shapes. Two sherds each bear a single graffito, one incised before the vessel was fired and the other after. The general point here is that the chronology of Iron Age pottery in Central Anatolia is not yet sufficiently well understood to provide secure evidence for the dating of Kerkenes. On the other hand, the single-period occupation of the city, perhaps spanning no more than one hundred years, together with the secure stratigraphic position of the very limited amount of pottery found at the Cappadocia Gate, provides a small but useful corpus.

The pottery presented here was found in three distinct contexts. The earliest context was associated with the construction of the defenses and comprises sherds found in situ in the lower portion of the core of the glacis. These appear to have been associated with provisions for the workforce. Joining sherds of a painted jug, as well as painted sherds from a large paneled krater, had evidently been incorporated into the rubble core of the towers. The former were found among the collapsed stone of the walls at the junction of the East Tower and the city wall, above the sherds found in situ; the latter were found among the collapsed walling in the gate court. Both presumably came from vessels that broke and were discarded during construction of the gate.

The second context comes from an intermediate level, a rapidly deposited fill or makeup beneath the floor of Room 1 in the rear portion of the gate. There were many animal bones from this same fill, which are reported on in chapter 10. The large size of the sherds, a few of which were found to join, together with the unusually (for Kerkenes) well-preserved

¹⁹⁴ Schmidt 1929; G. Summers and F. Summers 1999, figs. 17–20.

condition of the animal bones, suggests that this fill represents the very rapid deposition of rubbish associated in some way with building activities at the gate. In this context, large sherds from a second paneled krater were recovered.

The third context is the destruction, from which very little pottery was recovered.

In general, the pottery found at the Cappadocia Gate, like that from elsewhere at Kerkenes, is poorly preserved, with fugitive surfaces and deposits of salts that are harder than fabrics. Where sherds were subject to burning, which resulted in secondary firing, preservation is better. The poor condition results from low firing temperatures, as well as postdeposition deterioration due to acidic burial conditions. Very few sherds were found to join, and even fewer could be assembled into complete profiles. Small, fine, black-slipped and highly burnished vessels were represented in the assemblage, but the sherds were too small for vessel shapes to be reconstructed. With the exception of TR24U04, from which all sherds have been kept, only diagnostic sherds—that is, rims, bases, handles, and sherds with features—were retained for future study. These diagnostic sherds are representative of the entire assemblage. At the close of the 2011 season, nondiagnostic body sherds were placed in tough plastic bags and buried beneath Room 3, in the hole dug through the floor to extract the sculpted plinth.

In a recent archaeometric study of ceramics from within the bend of the Kızılırmak, it was suggested that a large percentage of the sherds examined from Kerkenes were nonlocal, being imported from a wider region.¹⁹⁵ This interpretation, which has important implications for Kerkenes, should be regarded with caution. Before trade—either in pottery itself or in the contents of pottery containers—is invoked as an explanation for the results of neutron activation analysis, there needs to be full consideration of what is to be understood as local and nonlocal in a sixth-century BC context. An additional issue might be that much of the Kanak Su basin was flooded before the geological survey was made. Only one sherd from the Cappadocia Gate excavations can probably be identified as an import: a fine black-burnished body sherd with faceted lozenges.¹⁹⁶

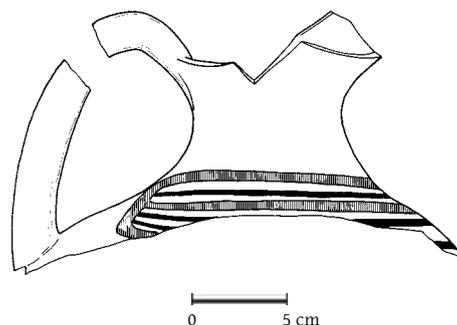
POTTERY FROM THE CONSTRUCTION OF THE CAPPADOCIA GATE

Little pottery was recovered from contexts associated with the construction of the primary phase of the gate. While very few sherds indeed were found in the core of the walling, important finds include sherds from a jug and a krater with polychrome paneled decoration. These represent a development of the Alişar IV style during the succeeding Alişar V period: the animal style of Alişar IV has disappeared, while polychrome patterning with white grounds becomes common among the small percentage of painted vessels. Part of a second krater in this distinctive paneled style was found in the subsequent phase of adaptations to the gate.

Other pottery connected with the construction was found in the core of the glacis, in layers that seem to represent sustenance for the builders. Fragments of cooking pots and gray ware bowls belong firmly within the Middle Phrygian corpus of Central Anatolia.

JUG WITH CUT-AWAY SPOUT AND POLYCHROME, PANELED DECORATION

Site Inventory Number: —
Plate: 174a
Identification Number: 11TR24U03pot01
Photograph: —



Description:

Jug with cut-away spout and round handle attached to the rim and shoulder. Wheelmade. Brownish orange with, where thick, a brownish core; gray and white grit and fine vegetal temper. A single panel, extending around the shoulder from either side

¹⁹⁵ Kealhofer et al. 2010, especially pp. 89–90.

¹⁹⁶ Matsumura 2008.

of the handle, is made of a cream or white ground outlined and divided into two horizontal registers in red paint. Horizontal lines in dark purplish paint divide the upper register into two, the lower into three. The entire external surface is finely bur-nished, and there is some spalling. Maximum diam-eter of neck: 8 cm.

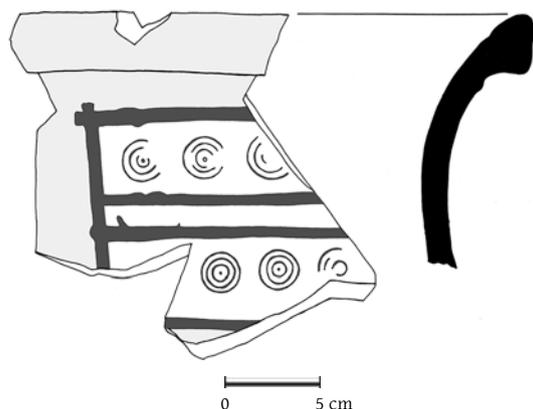
POTTERY KRATER WITH paneled decoration

Site Inventory Number: —

Plate: 174b

Identification Number: 10TR22U01pot01

Photograph: —



Description:

Sherds from the rim, neck, and shoulder of a large krater. Found in the stone collapse from the Middle Tower that filled the gate court. The surface of most sherds was poorly preserved, the patterning only being discernible on three sherds that were burned in the destruction. Large krater, diameter not measurable, with slight seating for a lid inside the rim and an external bead below the rim. Part of one handle is extant. The soft fabric is pale red with a thick buff core containing both grit and vegetal temper. Patterning comprises a panel of white ground outlined with dark-red-to-black paint, two parallel lines of which divide the panel into two horizontal registers. Each register contains compass-drawn concentric circles. The painting is competent but somewhat slapdash.

THREE COOKING POTS:

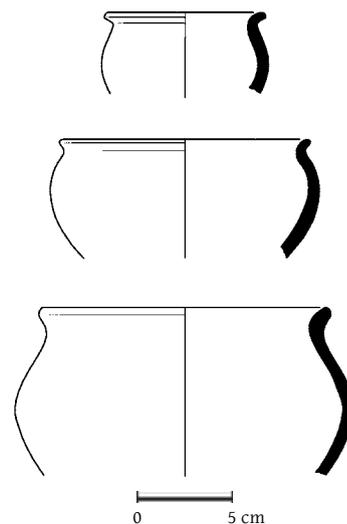
Site Inventory Number: —

Plate: 75a-c

Identification Numbers: 10TR25U12pot03,
10TR25U12pot04,
10TR25U12pot05

Photograph: —

Description:



Large fragments of three cooking pots with simple out-turned rims. Wheelmade, heavily tempered with fine-to-medium-sized grits. The largest example was originally buff; all are burned to shades of gray and black.

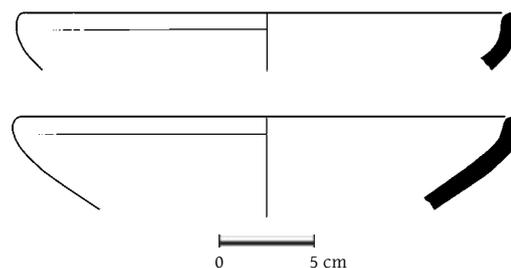
TWO SHALLOW BOWLS

Site Inventory Number: —

Plate: 175d-e

Identification Numbers: 10TR25U12pot01,
10TR25U12pot02

Photograph: —



Description:

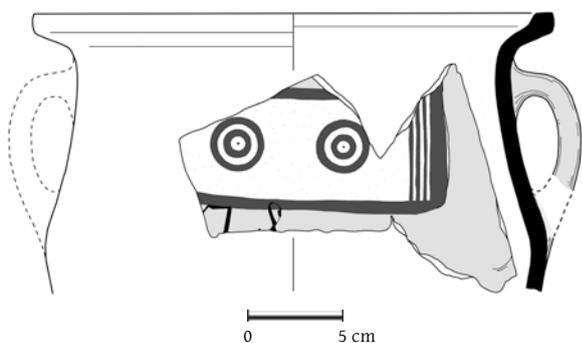
Sherds from two shallow bowls with simple rims. Wheelmade, soft fabric with some grit and vegetal temper. The slightly smaller of the two is buff, the larger is pale red with a buff core, its plain surfaces being pale gray inside and mottled outside.

POTTERY FROM ADAPTATIONS TO THE CAPPADOCIA GATE

Pottery from material thrown down to raise the level of the floors in Rooms 1 and 2 can be ascribed to an intermediate phase in the history of the Cappadocia Gate. The range of shapes, with the exception of sherds from a large painted krater, is suggestive of food preparation and consumption. This interpretation is not incompatible with the abundance of animal bones from the same context. Apart from the krater, there is no patterning on this monochrome pottery. The sherds from this context are not atypical of Kerkenes more generally, although red wares make up a smaller component of the assemblage. This particular group of sherds is, however, unusual in that it was found in soft sandy fill rather than the more usual hard clayey deposits, and also because pottery surfaces were relatively well preserved.

KRATER WITH STRAP HANDLES AND PANELED POLYCHROME DECORATION

Site Inventory Number: —
Plate: 176
Identification Number: 11TR24Uo4pot02
Photograph: 11dpnd3408

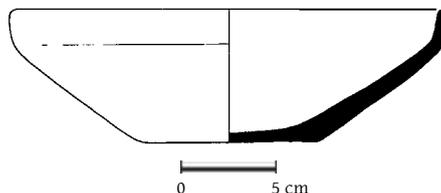


Description:

Krater with seating for a lid inside the rim and strap handles with polychrome paneled decoration on the neck. Wheelmade, pale reddish brown, micaceous clay with some grit and vegetal temper, smoothed to a fine finish. A cream or white ground panel is bordered by plum-red paint. Three vertical stripes at the end of the panel and two compass-drawn concentric circle motifs are in dark brown paint. Diameter: 34 cm.

BOWL

Site Inventory Number: —
Plate: 177a
Identification Number: 11TR24Uo4pot01
Photograph: —

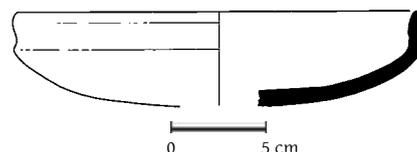


Description:

Simple bowl with flat base, gray ware, grit temper, slipped and burnished. Approximately half the vessel is preserved. Diameter: 22.5 cm.

DISH

Site Inventory Number: —
Plate: 177b
Identification Number: 11TR24U25pot02
Photograph: —

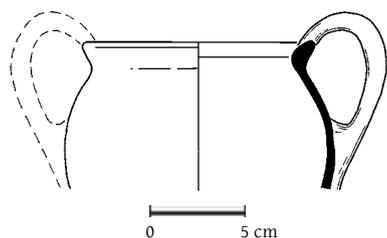


Description:

Dish, wheelmade, pale brown gritty ware; red slipped and burnished apart from the center of the interior, which was left plain. Incomplete. Diameter: 17 cm.

COOKING POT

Site Inventory Number: —
Plate: 177c
Identification Number: 11TR24Uo4pot03
Photograph: —

*Description:*

Cooking pot with strap handles attached to rim and shoulder. Possibly handmade with wheel-finished rim. Heavily tempered with medium-sized grit; exterior smoothed below rim, which has fine striations.

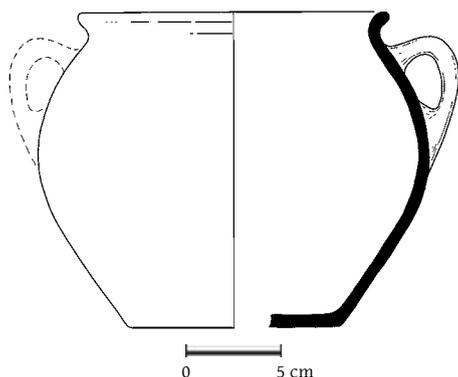
COOKING POT

Site Inventory Number: —

Plate: 177d

Identification Number: 11TR24U03pot02

Photograph: —

*Description:*

Two-handled cooking pot with flat base and strap handles on shoulder. Wheelmade, grit temper, striated rim and neck, mottled buff with gray, exterior smoothed. Some sherds altered by burning after breakage. Complete profile with less than half the rim preserved. Diameter: 20.5 cm.

POTTERY FROM THE DESTRUCTION OF THE CAPPADOCIA GATE

Apart from those recovered from the drain at the front of the entrance passage, no sherds were found on surfaces in the entrance passage or court. In the rear section of the gate, a number of small and usually abraded sherds were recovered from between

paving stones and pressed into the surfaces on either side of the pavement. There were no pots found in situ in any of the three rooms. The burned debris in Room 2 did contain two miniature jars. Very little of the pottery bore traces of paint. There were no pithos sherds, and only a single small sherd from a large krater was found. Two sherds have a graffito. From the destruction debris at the back of the North Tower came a single fragment of black burnished ware with raised lozenges. It is noteworthy that no pottery was found in association with any of the cultic installations set up at the gate, and also that there were no storage vessels, such as might have been used for drinking water, in any of the three rooms.

THREE MINIATURE POTS

Three miniature pots were found in the layer of black burning beneath the collapse in the rear section of the gate. Are all broken and abraded and were probably pressed into the surfaces of the strips to the side of the paving.

NO 1.

Site Inventory Number: —

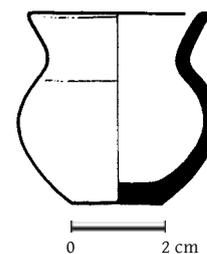
Plate: 178a

Identification Number: 11TR23U20pot01

Photograph: —

Description:

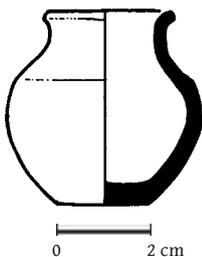
Very small jar with flat base. Wheelmade, fine black polished ware. Incomplete, in many small fragments. Height: 5 cm; diameter: 4.9 cm.



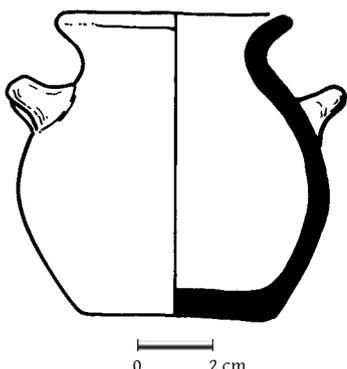
No 2.

Site Inventory Number: K11.277*Plate:* 178b*Identification Number:* 11TR24U19pot02*Photograph:* 11dpcc0674*Description:*

Small jar with flat base. Wheelmade, micaceous buff ware, smoothed exterior. Part of rim missing. Height: 5.2 cm; diameter: 3.95 cm.



No. 3

Site Inventory Number: K11.276*Plate:* 178c*Identification Number:* 11TR24U19pot01*Photographs:* 11dpkc3244, 11dpkc3245*Description:*

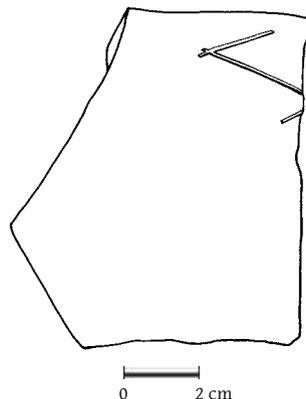
Small jar with flat base and two double-horned lugs. Wheelmade, brown, soft with fine grit and vegetal temper. Interior cracked during manufacture where the lugs are applied; smoothed exterior. Incomplete. Height: 8.2 cm; diameter: 6 cm.

SHERDS NOT ILLUSTRATED

11TR23U20pot02 Two sherds with nonalphabetic graffiti

TWO SHERDS WITH NONALPHABETIC GRAFFITI

No. 1

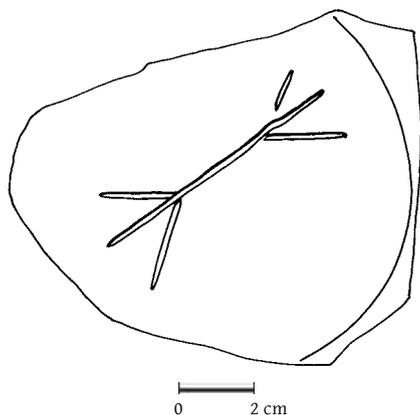
Site Inventory Number: K11.275*Plate:* 178d*Identification Number:* 11TR24U25pot01*Photograph:* 11dpnd3411*Description:*

Sherd from the shoulder of a closed vessel. Wheelmade, burned to a pale brown color from what would probably have been bright red. The fabric contains a little mica and is grit tempered, exterior smoothed and burnished, possibly coated with a thin slip. A symbol was shallowly incised after firing. Several red ware jugs with cut-away spouts found at the Palatial Complex had a similar symbol incised on the shoulder under the loop of the handle.¹⁹⁷ Dimensions: 8.75 × 7.50 cm. From the makeup below the floor of Room 2.

No. 2

Site Inventory Number: K11.274*Plate:* 178e*Identification Number:* 11TR24U17pot01*Photograph:* 11dpnd3419

¹⁹⁷ Kerkenes News 4 (2001), p. 12, fig. 17.

*Description:*

Flat base of a pot, wheelmade, gritty fabric with some vegetal inclusions, pale red with thick pale gray core, surfaces plain. Mark lightly incised before firing. Another example of this mark was found at the Palatial Complex.¹⁹⁸ Dimensions: 11.0 × 8.5 cm. The same symbol is also found incised on pottery at Gordion.¹⁹⁹ Found in the burned debris above the front threshold.

JUGLET WITH INCISED DECORATION

Site Inventory Number: K02.144

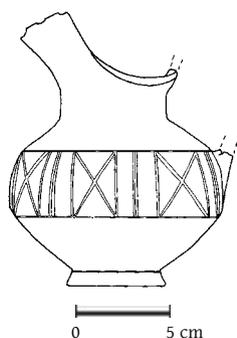
Plate: 179

Identification Number: 02TR03U05pot01

Photograph: 05dpnk1110

Description:

Juglet with cut-away spout, concave disc base, and strap handle from rim to belly. Largely complete but most of handle missing. Restored from many fragments from the erosion gully on the southwestern side of the gate passage in TR03. Wheelmade, with interior marks especially at base. Fine, soft, light gray paste with no visible temper. Gray-to-black slip,



burnished to high polish. Band of lightly incised panels filled with crosses divided by narrower panel with double vertical lines. Vertical panel filled with lattice decoration on handle stub. Diameter of base: 5.2 cm; height: 14.4 cm. A very thin postdeposition sediment is bonded to much of the surface. Several very small sherds from a similar vessel, not illustrated, were recovered in TR04, where they lay on the original surface at the back of the North Tower. A very similar juglet was recovered from the destruction level of the Küçük Höyük at Gordion, which is thought to be associated with the Persian invasion of ca. 546 BC.²⁰⁰

SHERD WITH FACETED DECORATION

Site Inventory Number: —

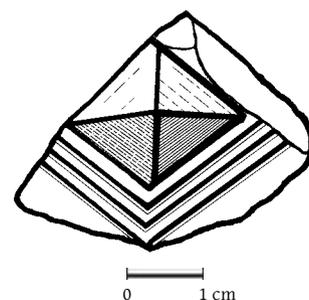
Plate: 180a

Identification Number: 02TR04U03pot01

Photograph: 18dpkc0101

Description:

Trench TR04 also produced a single small sherd from a black slipped and burnished juglet embellished with a panel containing faceted lozenges. A few not dissimilar fragments have been found elsewhere at Kerkenes. Close parallels are known from Gordion.²⁰¹



¹⁹⁸ *Kerkenes News* 4 (2001), p. 12, fig. 17.

¹⁹⁹ Roller 1987, e.g., figs. 7, 2a–34; fig. 21 2A–167. An exhaustive search for parallels has not been made.

²⁰⁰ Young 1953b, pp. 164–66, with fig. 9 bottom. For a color photograph of the same piece, see Sams and Temizsöy 2000, p. 44, fig. 86.

²⁰¹ DeVries 2005, pp. 41–42, with fig. 4.4. It is difficult to reconcile the early date given to this distinctive diamond-faceted decoration from the South Cellar at Gordion with the evidence at Kerkenes. The fibulae, described above, also support a lower date for some or all of the fill of the South Cellar which, it would seem, included residual Greek sherds. A larger jug with applied lozenge-shaped facets from Boğazköy (Bossert 2000, pl. 372), now on display in the museum at Boğazkale, shows that there was more than one way of making this style of decoration. Matsumura (2008) discusses the two sherds found at Kaman in their wider context and reproduces an image of this piece from Kerkenes as fig. 12:317 on p. 181. First published in *Kerkenes News* 4 (2001), p. 11, with fig. 13.

MISCELLANEOUS POTTERY FROM THE CAPPADOCIA GATE

PAINTED SHERD

Site Inventory Number: —

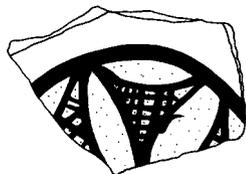
Plate: 180b

Identification Number: 00CT50Uo2pot01

Photograph: 11dpnd3402

Description:

Sherd from a closed vessel with white ground on a plain reddish surface and dark painted patterning.



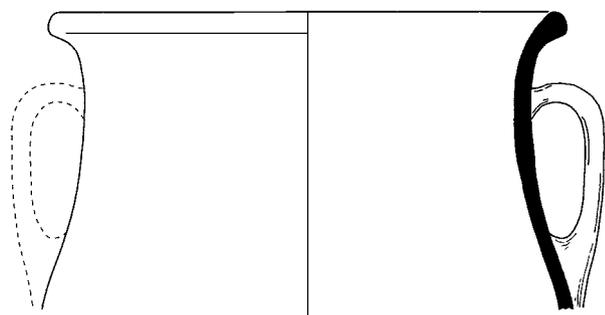
0 2 cm

SHERDS NOT ILLUSTRATED

09TR25Uo2pot01 Sherds from neck of spouted vessel

11TR23U10pot01 Sherds from small closed vessel

LARGE JAR



0 5 cm

Site Inventory Number: —

Plate: 180c

Identification Number: 00CT50Uo2pot02

Photograph: —

Description:

Large jar with strap handles. Buff ware with grit and vegetal temper; the exterior and inside of the rim are red slipped and burnished. Diameter: 16 cm. From a poor context.

CHAPTER 10

ANIMAL BONES FROM IRON AGE LEVELS

EVANGELIA PIŞKIN

RESEARCH QUESTIONS

Kerkenes is a large urban site, of which the trenches discussed in this volume cover only a minute part; therefore, the results of the present study of faunal material cannot be considered as representative of the animal economy as a whole. In addition, the faunal assemblage recovered from these trenches is small overall. These points bring to the fore the question of what might be the value of such an assemblage and why it should be studied. Apart from the obvious and perhaps not quite justified “because they are there,” and the wishful thinking that eventually more and more areas will be excavated at Kerkenes, thereby adding more bones to the study table, there are good reasons why these faunal materials are worth looking at. For one thing, because the city was short lived, destroyed, and never reinhabited, the deposits are sealed without contamination by later activities, and they are tightly and securely dated. As such, these remains represent a fine-grained snapshot of activities at an Iron Age site. Because these animal bones were excavated at the Cappadocia Gate, one of the seven monumental entrances into the city, they come from a clear ideological and socioeconomic context. Thus, although the excavated area was very small, it is possible to define clearly what these bones represent in the above terms. Small-scale urban excavations do not usually permit such precise contextualization of faunal assemblages, because it is hard to define the above-mentioned context.

Because the Cappadocia Gate was both a public area and an entrance to the city, it is not expected that much rubbish was thrown into heaps or that much food consumption took place there. The contexts from which the faunal remains were recovered

indicate that the bones represent food consumed by workmen during the original construction of the gate or during the major structural adaptations. With this in mind, the main aim of this research was to describe the character of the consumption behavior of this particular group of people. A further line of inquiry has to do with what a “gate” may have meant for the ancient inhabitants of Kerkenes, a premise that may include symbolic meaning in which animals may have had a part. Additionally, there is the possibility that some remains might be associated with the destruction of the city by fire. Thus the bones were also looked at with an eye to whether or not any specific unforeseen activities might have taken place at the gate.

PROVENANCE OF THE MATERIALS: RECOVERY

In total, 894 bone, horn, and tooth fragments were recorded from trenches TR03, TR04, TR23, TR24, and TR25. The preservation of the materials is very poor due to the acidic soil and the conflagration of the city. In addition, the very hard soil matrix made recovering and cleaning the bones difficult, and sometimes further damage was unintentionally inflicted on bones during these processes. Bones were cleaned only by brushing with dry toothbrushes. This was not an ideal method of cleaning, and often sediment remained stuck on the bones. They might have been more effectively cleaned with the use of chemicals, but the already very poor condition of the bones argued against such an option. Dry-sieving was not carried out, but large samples of burned deposits from the rear section of the gate were wet-sieved and carefully sorted for small objects and animal

bone; only very small amounts of crushed bone fragments were recovered.

METHODS

The bones excavated at the Cappadocia Gate were very fragile, and on many occasions it was observed that a single bone was broken into many pieces. This was particularly the case for ribs and even more so for skulls. Deciding on a method to measure taxonomic abundance was thus difficult. We chose to employ the traditional methods of number of identified specimens (NISP) and diagnostic zones (DZ),²⁰² and to emphasize the latter when making calculations. Because of the low number of identifiable bones recovered, calculating the minimum number of individuals (MNI) was judged to be unrepresentative. Nevertheless, in certain cases counting MNI was considered useful.

For the diagnostic zones method, only bones preserving 50 percent or more of at least one diagnostic zone were counted. Skull fragments and teeth were excluded from diagnostic zone calculations, but mandibles with teeth as well as isolated deciduous fourth premolars and permanent third molars were counted. Vertebrae, ribs, carpals, and tarsals, save for the astragalus and calcaneum, were also excluded.

In general, all fragments were counted when calculating NISP, though there were certain exceptions. Several skulls found smashed in U03 and U04 of TR04 were calculated with MNI to belong to three cattle and one sheep. Another context where MNI was employed was U10 of TR23, where thirty fragments of an ovicaprid skull were excavated. Teeth, often found shattered into many small pieces, also posed a problem in calculating NISP. A tooth was counted only when at least half of it was preserved. Ribs were also often found shattered into many small pieces, making it very difficult to identify them and record diagnostic zones. The neck portions of the ribs were rarely preserved; only six sheep-sized ribs were found to preserve this neck region. Nevertheless, ribs were abundant, and excluding them would have distorted the overall picture of the assemblage, especially the skeletal representation (see below). Actual counts of the ribs and vertebrae are included in the NISP and skeletal representation. This solution still presents a bias for species proportions, as

bones that tend to be highly fragmented can inflate the calculated presence of a species. To minimize this problem somewhat, ribs and vertebrae are only counted in the “size” categories (see below), not at the species level.

In creating the skeletal representation tables, a rather minimalistic approach was adopted. Because the identifiable bones were few, instead of listing each bone separately, bones were categorized into groups. These include the front leg (scapula, humerus, radius, ulna), the back leg (pelvis, femur, tibia), the metapodia (metacarpal, metatarsal), the compact bones of the extremities (phalanges, carpals, tarsals), the skull, the mandible with teeth, and a final group comprising mandible fragments without teeth, maxillae with teeth, and isolated teeth. Skull fragments identifiable with a species level include those with a portion of the orbit and those with a portion of the occipital condyles; unidentifiable skull fragments were recorded as “skull” within their size category (see below). For these categories, the bones were counted according to the DZ system. For the rest of the materials that are not identifiable at the species level, and where often no exact skeletal element could be defined (ribs, vertebrae, some teeth, long bones, flat bones), the NISP method was followed.

Because of the poor preservation of the materials, a very large portion of the assemblage could not be identified at the species level. The unidentifiable bones were put into categories according to the size of the animal they may represent: cattle-sized, sheep-sized, and pig-sized. In addition to these, three more categories were created to deal with the particular difficulties encountered in the Kerkenes assemblage. There are several small mammal bones and several bones that look as though they are from very young ovicaprids, but these could not be positively identified and so were recorded as “small mammals.” The second additional category, “hare-sized,” includes bones of animals of the size of a hare or a large bird. Finally, a group of eleven ribs that look as if they were dog ribs were recorded as “canid” because, once more, positive identification at the species level was difficult. Each of these categories was further subdivided according to categories of bone type as follows: long bones (including all the leg long bones save for phalanges and tarsals/carpals), flat bones (meant to include fragments of

²⁰² Dobney and Rielly 1988.

scapula and pelvis, but skull, rib, and vertebrae pieces that could not be recognized as such might also have been included), ribs, and vertebrae.

SPECIES PROPORTIONS

Among the bones, a small number of equid remains was found: one first phalange of a donkey, one horse molar, one horse incisor, one piece of proximal metacarpal, and one small piece of a horse femur. Usually, equid remains are considered a “contamination” of the deposit, with materials coming from other sources, since equids are ridden or used as pack animals and are not usually eaten. Nevertheless, during the Iron Age, hippophagy is argued for at several sites.²⁰³ This said, the number of equid bones found at the Cappadocia Gate is so low (0.5% of total assemblage) that it cannot support an argument for the utilization of equids as food animals.

A small fragment of an antler was found in TR23. Although too small to allow identification of the species, this antler is most likely from either a red or fallow deer. A boar canine was found (0.1% of total assemblage), as well as a handful (0.6% of total assemblage) of other “pig” bones that were thought to be on the large side; perhaps these actually belonged to boar, but because measurements could not be taken, this remains unconfirmed.

Hare bones account for up to 0.9% by NISP and 5% by DZ. Other hare-sized remains (which may also include large birds) make up to 1.7% by NISP. Bird bones make up only 0.2% by NISP, and hare-sized bones and bird bones constitute 2% each by DZ. Even if the percentages of these small mammals/birds are low, I consider that these species may have played a more important role in terms of diet, given the poor preservation of the materials that obviously must have affected the more fragile bones of smaller species.

The main food species—cattle, ovicaprids, and pigs—make up the vast majority of the assemblage. Their proportions vary considerably between the two calculation methods. Using NISP, cattle appear to have played a very small role, comprising only 2.4% of the total. Nevertheless, cattle-sized bones make up a further 10.2%. Ovicaprid remains represent 18.4% of the assemblage, with 0.9% and 1.4% coming from sheep and goats, respectively.

Table 5. Species proportions

Species	Number of Identified Specimens		Diagnostic Zones	
	No.	%	No.	%
<i>Cattle/Bos taurus</i>	21	2.4	7	7.2
<i>Sheep/Ovis aries</i>	8	0.9	7	7.2
<i>Goat/Capra hircus</i>	12	1.4	9	9.3
<i>Ovicaprid</i>	161	18.4	51	52.6
<i>Pig/Sus domestica</i>	38	4.3	13	13.4
<i>Cattle-sized</i>	89	10.1	—	—
<i>Pig-sized</i>	27	3.1	—	—
<i>Sheep-sized</i>	463	52.8	—	—
<i>Canid</i>	11	1.3	—	—
<i>Small Mammal</i>	9	1.0	—	—
<i>Hare-sized</i>	15	1.7	—	—
<i>Bird</i>	1	0.1	1	1.0
<i>Boar/Sus scrofa</i>	1	0.1	1	1.0
<i>Hare/Lepus europaeus</i>	8	0.9	5	5.2
<i>Horse/Equus caballus</i>	4	0.5	2	2.1
<i>Deer/Cervid</i>	1	0.1	—	—
<i>Donkey/Equus asinus</i>	1	0.1	1	1.0
<i>Unidentified</i>	6	0.7	—	—
<i>Duck/Anas sp.</i>	1	0.1	—	—
Total	877	100.0	97	100.0

Sheep-sized animals comprise a huge 52.9%. Pig bone is low at 4.3%, and the pig-sized animals do not make the same level of difference that cattle-sized and sheep-sized animals do. This should be explained not as an actual paucity of pig-sized bones, but rather as an expression of the identification methodology. Pig-sized bones are a rather cumbersome category that describes bones that are not as big as those of cattle and not as small as those of sheep. It includes adult pigs and perhaps deer. Nevertheless, if a pig is slaughtered at a young age (as is mostly the case), its unidentifiable bones are rather small and will likely be categorized as sheep sized.

The DZ system presents a different picture. Cattle comprise 7.2% of the assemblage. The percentage of ovicaprids reaches 52.6%, which matches nicely

²⁰³ For example, Dönmez 2011; Ioannidou-Pişkin 2013.

the sheep-sized bone counts using NISP. Sheep comprise 7.2% and goats 9.3%. The pig category has increased now to 13.4%.

A description in general terms, combining the results of the two methods, probably comes closer to the truth: the vast majority of slaughtered animals are ovicaprids. The next most frequently eaten animals are pigs, but in considerably smaller amounts. Last are cattle, in very close order to that of pigs. At this point, one should remember that these proportions are numerical counts of bones; they do not represent absolute facts in terms of consumption, since a cow yields a much larger amount of meat than a sheep. Nevertheless, if these percentages stand true, we have a consumption pattern that is centered on ovicaprid exploitation and to a lesser degree on pigs and cattle (table 5).

SKELETAL ELEMENTS

Skeletal representation tables are constructed to examine whether complete carcasses or only portions of carcasses are represented; the results are shown in table 6. Not included in table 6 are the skulls of three cattle and one sheep and associated flat bones found in TR04, nor the thirty sheep-sized skull

fragments (likely from a single ovicaprid) found in TR23 U10, because these were considered a special concentration and thus a source of bias.

Preferential consumption of cattle is clearly evident. Only certain parts of the carcass are present, mostly portions of the front leg. More specifically, fragments of one ulna, one radius, and a small part of a scapula are represented. One carpal, one calcaneum, and two phalanges make up the rest, plus some jaw remains. In addition to these, there is a good number of ribs and fragments of long and flat bones of cattle-sized animals. The absence of metapodia is curious given that these bones are among the most durable and easily identifiable.

For ovicaprids the opposite is true. All parts of the body are present. Nevertheless, there is some irregularity in the representation of the skeletal elements. The lower limb total scores, represented by metapodia, phalanges, and carpals/tarsals, are low, especially when one takes into account that these are the most durable and readily identifiable bones, as well as that their total number in a complete skeleton is high compared to the front and back leg categories (four metapodia, twenty-four phalanges plus carpals and tarsals, as compared to eight bones for the front leg and six for the back leg). The carpals and tarsals often remain attached to the lower

Table 6. Skeletal representation

Elements	Species											
	Cattle		Ovicaprid		Pig		Cattle-sized		Sheep-sized		Pig-sized	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Front Leg	5	41.6	23	15.5	6	20.7	—	—	—	—	—	—
Back Leg	—	—	37	25.0	3	10.3	—	—	—	—	—	—
Metapodia	—	—	14	9.5	8	27.6	—	—	—	—	—	—
Phalanges, Carpals/Tarsals	4	33.3	27	18.2	2	6.9	—	—	—	—	—	—
Skull	1	8.3	11	7.4	8	27.6	3	4.23	15	4.24	—	—
Mandible with Teeth	—	—	7	4.7	2	6.9	—	—	—	—	—	—
Teeth, Maxilla with Teeth, Mandible Fragments without Teeth	2	16.6	29	19.6	—	—	—	—	—	—	—	—
Vertebrae	—	—	—	—	—	—	2	2.82	16	4.52	—	—
Ribs	—	—	—	—	—	—	20	28.2	62	17.5	10	52.6
Long Bones	—	—	—	—	—	—	35	49.3	217	61.3	7	36.8
Flat Bones	—	—	—	—	—	—	11	15.5	44	12.4	2	10.5
Total*	12	100	148	100	29	100	71	100	354	100	19	100

* Totals of percentages are rounded.

part of the radius and tibia in dressed carcasses. In fact, the majority of bones in this category belong to carpals/tarsals: five astragali, six carpals, three tarsals, and four calcanea. It is highly likely that even if some complete carcasses were deposited here, there is another portion of bones representing only meaty body parts.

Looking at the sheep-sized bones, a range of elements from the whole body is potentially present. Ribs and vertebrae are accounted for, but in smaller numbers. This might be better explained by the fragility of these elements rather than a real lack of them.

Turning to pig remains, it appears that most of the body parts are present. The front leg is more common than the back leg, a trend also observed for cattle. What is more curious in the case of the pig is the low number of mandibles, this bone being among the most durable and most commonly recovered faunal elements of this species. Since pig skulls are represented with eight fragments, compared to two of mandible, the dearth of mandibles might be an accident of recovery. However, the higher degree of fragmentation that a skull usually suffers does not allow for a strong argument here. It is possible, therefore, that pig heads did not make their way into the assemblage in the same proportions as the rest of the body.

ASSESSMENT OF AGE

Information about the age of the animals was derived from mandibles and long bone epiphyseal fusion.²⁰⁴

TOOTH WEAR

Very few mandibles were preserved in a state that yielded information about age. Most of the mandibular and tooth remains were shattered badly. All the mandibles that can give aging information come from TR24. There, a right mandible of a male pig was found with most of the teeth missing, as well as another fragment of a right pig mandible; these could belong to the same animal. The teeth are large, indicating it might be a wild pig. It appears to have been younger than fourteen months. Also recovered

were the left maxilla of a female pig under the age of 12 months and the right maxilla of an even younger pig.²⁰⁵

One ovicaprid mandible was found, and two loose third molars. The mandible and one of the third molars are from animals of 12–24 months of age, and the other third molar is from an animal of 24–36 months of age.

EPIPHYSEAL FUSION

Very few cattle remains preserve epiphyseal plates that can be used to determine age. The only examples are one first phalange with fused proximal epiphysis (13–15 months) and one proximal radius and one distal humerus, both fused (15–18 months). Accordingly, the only thing that can be said is that we found no slaughtered cattle under the age of 13 months.

Similarly, very few pig bones yielded information about age at slaughter. The only fused bones were a distal humerus and a proximal second phalange belonging to animals over 12 months. The rest are unfused, including an ulna (fusing at 36–42 months), a femur (at 42 months), and a calcaneum (at 24–30 months). Accordingly, no animals under 12 months are confirmed to have been slaughtered (but see Special Aging, below); furthermore, no animals above age 42 months have been found. Most of the slaughter appears to have been carried out after the first year and before the middle of the fourth year at maximum.

The most complete mortality profile is that of ovicaprids (table 7). Most of the evidence for the age group 6–10 months, a total of 15 bones out of 16, is from animals that have already passed this age stage (fused). Only one distal humerus was found at the “fusing” stage, meaning that the animal was slaughtered right around age 6–10 months. For the age of 13–16 months, there are eight fused and two unfused bones. Accordingly, approximately 20 percent of animals representing this stage were killed before reaching the age of 13–16 months.

As the age of fusion advances, more and more animals do not reach maturity. At the stage of 18–24 months, five bones are mature and three immature, showing a little more than one-third of the animals to have been killed before this age. For the stage

²⁰⁴ For teeth aging, see Grant 1982, S. Payne 1973 and 1987, Bull and Payne 1982; for epiphyseal fusion, see Silver 1969.

²⁰⁵ Less than stage 1 in Bull and Payne 1982.

Table 7. Epiphyseal fusion in ovicaprid bones

	Age in Months	Fused	Unfused	Fusing
<i>Scapula (distal)</i>	6–10	4	—	—
<i>Pelvis</i>	6–10	4	—	—
<i>Humerus (distal)</i>	10	4	—	1
<i>Radius (proximal)</i>	10	3	—	—
<i>1st Phalange</i>	13–16	4	2	—
<i>2nd Phalange</i>	13–16	4	—	—
<i>Metacarpal (distal)</i>	18–24	3	—	—
<i>Tibia (distal)</i>	18–24	2	3	—
<i>Metatarsal (distal)</i>	20–28	—	1	—
<i>Ulna (proximal)</i>	30	1	—	—
<i>Calcaneum</i>	30–36	1	2	—
<i>Femur (proximal)</i>	30–36	1	1	—
<i>Radius (distal)</i>	36	—	1	—
<i>Humerus (proximal)</i>	36–42	—	—	—
<i>Femur (distal)</i>	36–42	—	—	—
<i>Tibia (proximal)</i>	36–42	1	1	—

20–30 months, only two bones were found, one fused and one unfused. At the next stage of 30–36 months, most of the bones are immature (two bones fused and four unfused), showing that only one-third of the animals reached this age before being slaughtered, a proportion that is the reverse of that found at the stage of 18–24 months. It is clear that the sample of ovicaprid bones at hand represents a typical meat consumption mortality profile, with animals being slaughtered mostly between two and three years old, the age at which they obtain their maximum weight.

SPECIAL AGING

A number of bones of very young animals were found. The epiphyses were not present and the bones were often fragmentary, but their size and surface texture clearly show that the animals were newly born or just a few weeks old. Classifying them at age stages was a rather subjective endeavor, but it could not be neglected. I decided on three classes: neonatal, very young, and young. Being aware that the difference between young and very young is somewhat cumbersome to define and that these

categories probably overlap, the distinction was made on the grounds of size and surface porosity of the bones that were taken to be indicators of different animals at slightly different ages. Table 8 shows the distribution of these finds. The MNI calculation for these bones results in one young pig found in TR23 and three pigs in TR24 (one young, one very young, and one neonatal). For ovicaprids, there are two young animals, one very young, and one neonatal. The calculation for ovicaprids is more robust because it is based on the five femur fragments that were large enough for size and diagnostic zones to be recorded. For pigs, the MNI is based partly on the location of radii (one in TR23 and one in TR24) and then on age, which might be a more subjective criterion.

The remains of neonatal and young animals are rather problematic in relation to their location in the city. It is usually thought that individuals of that age are proof of husbanding within the site. This is attested in many settlements and even within the walls of large cities. Nevertheless, it is expected that such activities should occur in association with houses' backyards or structures that could serve as spaces suitable to be used as pens or sties. Consequently, the presence of neonatal bones at the Cappadocia Gate is curious. It might have been that the people working there were keeping animals in their houses, and in the event of early deaths of these animals they consumed them, sometimes at or near the Gate. It might also be a case of dietary habits that are not usually accounted for in the literature because of the scarcity of such bones. For pigs, if wild, these might have been catches of the workers building the gate. Alternatively, these bones might be intrusive, perhaps brought by other animals. The common suspects, carnivores, do not seem to me to be a good option; the fragile bones would have been totally destroyed by such an animal. Perhaps rodents transported the bones to use for wearing down their incisors. Despite careful inspection, no evidence of rodent gnawing was found on them. A last alternative is that a couple of young animals might have been victims of the conflagration of the city.

SPATIAL POSITION OF FINDS

The spatial distribution of finds was considered important, and here it is discussed separately. Tables 9–11 are constructed in the same manner as

Table 8. Neonatal and young animals

Trench	Unit	Ovicaprid			Pig		
		Neonatal	Very Young	Young	Neonatal	Very Young	Young
TR23	09	—	—	—	—	—	Radius
TR24	04	Tibia, Femur, Metacarpal	Pelvis	Skull and Occipital, Femur	—	Maxilla with Teeth	Abaxial Metapodium, Femur
TR24	11	—	—	—	—	—	Skull
TR24	19	—	—	Femur, Ribs (4)	Mandible	—	—
TR24	25	—	Femur	Femur, Thoracic Vertebra	—	Radius, Scapula	—

described for skeletal representation (table 6), and they show only the main domestic food animals. Other species are also discussed but are not included in the tables.

In total, 129 bone fragments were used for this calculation for TR23. Identifiable cattle remains are absent. There are three pieces of bone that could be classified as cattle sized. The pig and pig-sized remains are also sparse (total = five). All the rest belong to sheep/goats and sheep-sized animals. It is characteristic that identifiable remains are dominated by the front legs of ovicaprids, as well as phalanges and tarsals. Skulls, jaws, and teeth are absent. The back leg and metapodia are surprisingly absent. Also, vertebrae and ribs are very few. Nevertheless, there is an abundance of sheep-sized long bone fragments and some flat bones. This assemblage could be easily classified as “meals” consisting of the remains of the front legs of ovicaprids.

Apart from the bones of food animals, there is a first phalange of a donkey from U17. A concentration of sheep-sized flat bones and skull fragments (too distorted to identify them at species level) were found in U10. These are counted as one. In the same unit, one goat horn core was found, perhaps indicating that the skull fragments might also be of a goat. In this unit there were no other bones apart from one long bone and three ribs of sheep-sized animals. In U20 a sole fragment of antler was found. In U09, a radius of a very young pig also was found.

Trench TR24 had the highest concentration of bones. Also, perhaps unsurprisingly since the sample size is large, it had the highest species diversity. For table 10, a total of 379 bone fragments was used. The richest is U04 (337 fragments out of a total of 488 found in the trench), followed by U19, U11, and U03. All eight hare bones, as well as the duck

bone, were found in U04. A horse femur fragment and an incisor were found in U25, and a horse molar in U19. The canid ribs were found in U03 (four pieces) and U04 (seven pieces). The only boar bone (maxillary canine, male) came from U25. Almost all the very young and neonatal animals came from this trench as well, most from U04 and U25. Located in the rear part of the gate, U11 and U19 were composed of burned debris. These two units are likely to represent fragmentary evidence of consumption/rubbish that accumulated during a length of time and from different sources. Unit 11 contains approximately equal portions of small pieces of cattle-sized and sheep-sized long and flat bones and a few rib fragments. Unit 19 contains only two pieces of cattle-sized animals and one pig skull fragment, the rest being ovicaprid and sheep-sized bones. Units 03 and 09 are stone collapse, among which portions of ceramic vessels, thought to have been used for the sustenance of the working crews, were found. These probably represent activities at the time of the gate construction. The bones found in these two units are few and fragmentary, belonging mostly to ovicaprids, and most of them are classified as long bones or flat bones and ribs. Only one cattle calcaneum fragment was found there. Not much can be said about these subassemblages because of their small size and very fragmentary nature.

Unit 25 was under the floor in Room 2, and U04 was under the floor in Room 1. Both units were laid down during alteration work, and hence are expected to contain food remains of the workmen involved. Unit 25 contains very few bones compared to U04, but they are well preserved (indicating rapid burial) and contain a good number of very young animals (see table 8).

Units 04 and 25, dealt with together here, offer some indication of what these workmen's meals would have been like. The cattle remains consist mostly of fragments of radius and ulna and a couple of small bones. The cattle-sized category has provided a few more fragments of long bones, a few flat bones, and ribs. Portions only of cattle are present in this case too; they mostly consist of ribs and the front lower leg. Among the rib fragments, none had the neck region preserved. If this is not an accident of preservation, it might indicate the consumption of cheap cattle parts, such as the lower belly (represented by the ends of the ribs) and the foreshank (represented by the radius-ulna). With the exception of one small piece of scapula, large meat-bearing bones have not been positively documented, even if their remains might have gone undetected in the unidentifiable bones. Pig bones are also relatively few, but the distribution of bones within the skeleton seems more balanced: the skull and mandibles are there. From the front leg, the radius-ulna and scapula are also found. The back leg has equal representation with the front leg in table 9; nevertheless, only the femur has actually been found from the back leg. Even though this might have been the result of luck or fragmentation, it is still possible that incomplete pig carcasses were being consumed at the gate, especially when taking into account that the denser tibia is much more often found preserved in bone assemblages than the fragile femur.

The ovicaprid remains make up the majority of the finds. The few bones that could be separated

into sheep and goat are approximately the same in proportion for both species. All bones of the skeleton are represented in the assemblage, but there is a marked difference between the front legs and the back legs. While femur and tibia remains are very abundant and pelvis is sufficiently represented given the fragile nature of this bone, the front leg scores quite a lot lower, but all the elements of it are found in approximately equal proportions (save for the radius, which has the lowest occurrence).

For TR25, ninety-two bone fragments were counted; they all come from U12. Obviously, this concentration indicates the dumping of materials in a single action. This small "midden" was recovered in a corner between the gate structure and the city wall in the base of the glacis core. It contained a very low number of very fragmentary cattle remains, the majority being ribs, with a couple of small fragments of radius. As such, they could be considered as meal remains of specific portions of beef. Two fragments of pig ulna were found. The majority of the bones represent remains of sheep-sized animals and ovicaprids. Among them only one bone could be distinguished as sheep (male astragalus); nothing was identified as goat. Additionally, the MNI for the bones countable as ovicaprids is one (if we add the sheep astragalus the count remains the same: MNI = one). It might be the case that these are the remains of (probably) one meal consisting mostly of the complete or almost complete carcass of a youngish sheep (one tibia with the distal epiphysis unfused and one each of the first and second phalanges with their

Table 9. Distribution of elements within trench TR23

	<i>Cattle</i>	<i>Sheep/Goat</i>	<i>Pig</i>	<i>Cattle-sized</i>	<i>Sheep-sized</i>	<i>Pig-sized</i>
<i>Front Leg</i>	—	10	1	—	—	—
<i>Back Leg</i>	—	2	—	—	—	—
<i>Metapodia</i>	—	—	—	—	—	—
<i>Phalanges, Carpals/Tarsals</i>	—	10	1	—	—	—
<i>Skull</i>	—	1	—	1	2	—
<i>Mandible with Teeth</i>	—	—	—	—	—	—
<i>Teeth, Maxilla with Teeth, Mandible Fragments without Teeth</i>	—	—	—	—	—	—
<i>Vertebrae</i>	—	—	—	—	3	—
<i>Ribs</i>	—	—	—	1	8	1
<i>Long bone</i>	—	—	—	1	70	1
<i>Flat bone</i>	—	—	—	—	15	1

proximal ends fused were found, giving an age range of between thirteen and twenty-four months), with some additional bits of pig front leg and beef ribs. It is remarkable that the “meal” consumed on this occasion closely resembles the remains of “meals” found in TR24. The variety introduced by hare, birds, and young pig (boar?) in the table laid out at TR24 was probably detected because of the larger sample size, allowing for the occasional treat to be recorded alongside the staples (lamb and beef).

The bone assemblage from TR04 is dominated by cattle remains, especially skulls. Counting by fragments was clearly biasing the result for this particular trench, so MNI was calculated for the whole deposits of TR04. This gave a minimum number of three cattle skulls and one sheep skull. Apart from the cattle- and sheep-skull fragments, seventeen cattle-sized and twenty-six sheep-sized flat bones were found, which were probably also parts of the shattered skulls. Additional very small fragments of eighteen cattle-sized and five sheep-sized long bone pieces were recovered, as well as one sheep-sized rib. No other species were identified. The majority of skull fragments are concentrated in U03; many were also found in U04, and fewer fragments came from U02. It is difficult to interpret these remains. The trench is located against the back wall of the North Tower, a place that does not seem suitable for rubbish disposal. Furthermore, the lack of any other bone elements of sheep and cattle (save for the very few and fragmentary long bones, which might have entered the deposit accidentally) indicates that the

deposit represents an event in which only skulls were used. These might have been hung on the tower walls or deposited somewhere nearby in a symbolic action.

Trench TR03 yielded eight countable bones. Apart from a fragment of cattle skull, none are identifiable at a species level. They include one rib, four long bones, and two flat bones of sheep-sized animals. The paucity and high degree of fragmentation indicates that they are not from a primary context but washed off from somewhere else. Units 03, 05, and 11 all contain approximately similar amounts of bone fragments. The piece of horse metacarpal comes from U11.

CONCLUSIONS

The analysis of the bones from the Cappadocia Gate offers some insights into the use of animals at Kerkenes and, to some extent, the formation process of some of the deposits. Even though a handful of bone fragments appears to represent some form of “contamination” of the deposits—perhaps from bones that were pre-existing inclusions in the existing soil or in soil brought in from somewhere else for the construction of the Cappadocia Gate, such as the equid remains and the canid ribs—the majority of bones appear to be the remains of meals consumed at the Gate.

The spatial position of the finds, with bones clustered together, reveals several separate actions.

Table 10. Distribution of elements within trench TR24

	<i>Cattle</i>	<i>Sheep/Goat</i>	<i>Pig</i>	<i>Cattle-sized</i>	<i>Sheep-sized</i>	<i>Pig-sized</i>
<i>Front Leg</i>	3	9	3	—	—	—
<i>Back Leg</i>	—	32	3	—	—	—
<i>Metapodia</i>	—	10	8	—	—	—
<i>Phalanges, Carpals/Tarsals</i>	4	14	1	—	—	—
<i>Skull</i>	—	8	8	—	11	—
<i>Mandible with Teeth</i>	—	7	2	—	—	—
<i>Teeth, Maxilla with Teeth, Mandible Fragments without Teeth</i>	1	28	—	—	—	—
<i>Vertebrae</i>	—	—	—	1	9	—
<i>Ribs</i>	—	—	—	5	47	9
<i>Long Bone</i>	—	—	—	12	107	6
<i>Flat Bone</i>	—	—	—	9	21	1

Table 11. Distribution of elements within trench TR25

	<i>Cattle</i>	<i>Sheep/Goat</i>	<i>Pig</i>	<i>Cattle-sized</i>	<i>Sheep-sized</i>	<i>Pig-sized</i>
<i>Front Leg</i>	2	4	2	—	—	—
<i>Back Leg</i>	—	3	—	—	—	—
<i>Metapodia</i>	—	4	—	—	—	—
<i>Phalanges, Carpals/Tarsals</i>	—	3	—	—	—	—
<i>Skull</i>	—	2	—	2	2	—
<i>Mandible with Teeth</i>	—	—	—	—	—	—
<i>Teeth, Maxilla with Teeth, Mandible Fragments without Teeth</i>	1	1	—	—	—	—
<i>Vertebrae</i>	—	—	—	1	4	—
<i>Ribs</i>	—	—	—	14	5	—
<i>Long Bone</i>	—	—	—	4	31	—
<i>Flat Bone</i>	—	—	—	2	5	—

One distinctive group of bones, three skulls of cattle and one of a sheep, was found in trench TR04. One smashed skull, perhaps of a goat, was found in trench TR23. Since no other bones were found in these deposits, these skulls might not have been related to food consumption but rather had some symbolic meaning.

At another location, TR25, the remains of a single meal were found. One more concentration of bones, in TR24, is larger and was accumulated as the waste of perhaps several meals. A close examination of these bones showed that the most commonly consumed species were sheep and goat, in approximately equal proportions and of young age (two to three years old, which is the preferred age for slaughter when the main product sought after is meat). Some pig and cattle were also found, as was some evidence for hare and bird.

What is more interesting is that not all species are represented by complete carcasses. For sheep and goat, elements from the whole body are found, with some slight preference for the back legs. In contrast, cattle are primarily represented by the ribs and the lower forelimbs. Pig remains are few but also reflect some preference for the front legs. The remains of the front legs of cattle are mostly represented by the radius, that is, the lower and less meaty part of the leg. The pig front legs are mostly

represented by the ulna, a bone that is at the same anatomical position as the radius. Therefore, the same low-meat, value portions of the front legs are consumed for both species, cattle and pig. It is very likely that some of the meat consumed at the gate came there as dressed carcasses. This is also indicated by the lack of phalanges, even though there are some carpals/tarsals, skull fragments, and a few metapodia. Although it is hard to specify what a “dressed carcass” in Iron Age Kerkenes was, the overall picture of the finds combined with the age at slaughter indicates animals of the “meat market.”

It would be interesting to know whether the selection of body parts was due to taste and cooking habits or to the economic power of the people who were the consumers. What could perhaps be equally interesting would be to find out whether these meals were bought/brought in by the people working in the gate or offered to them by the palace. Determining this probably involves much guesswork, but if a similar pattern of “preferred” carcass portions is found in other excavated areas of Kerkenes, it could be an argument in favor of the taste-and-cooking interpretation. If, again, the “missing” portions of the carcasses recovered at the Cappadocia Gate were to be found in the waste of the palace, this might be considered a hint pointing to the palace’s redistributing/providing the workers with food.

CHAPTER 11

EARLY BYZANTINE PERIOD REMAINS

ROBERT TATE and GEOFFREY D. SUMMERS

The existence of a substantial castle of the Byzantine period on the acropolis, known as Keykavus Kale, together with a fortified Byzantine settlement on the Kiremitlik, made it seem likely that the Iron Age Cappadocia Gate had been reused in later times.²⁰⁶ The fact that the single gate leading into the castle was approached by a steeply inclined path which ran down in the general direction of the Cappadocia Gate lent weight to these expectations, as did the observation that there was no other breach in the southeastern stretch of defenses that could have accommodated wheeled vehicles in Roman or Byzantine times. In the vicinity of the gate and at the gate itself, Byzantine pottery sherds and the occasional fragment of glass could be collected on the surface. On excavation, pottery sherds were found to be quite abundant in the uppermost portion of the stone collapse that filled the chamber. Excavation of the gate began at the outer end of the entrance passage, where the sides of a deeply eroded animal track were delineated by stones crudely piled up to retain the loose rubble (section 3 on pl. 86, on the right side of 6, with 1 covering the track surface). The fill of this gulley also produced a substantial quantity of Byzantine coarse ware, the original surface of most sherds having been eaten away by acidic groundwater. Assumptions about later, post-Iron Age destruction and reuse of the gate eventually proved to be totally unfounded. There was no evidence whatsoever that the gate had been reused after the destruction. One implication of this result is that we now believe the Byzantine builders and occupants of the castle used pack animals, not wheeled vehicles.

THE EARLY BYZANTINE BUILDING COMPLEX

Behind the Cappadocia Gate, in an open area formed by the broad road leading in through the gate and its junction with the street linking the East Gate with the Göz Baba (Southwest) Gate (see pls. 2 and 3b), a complex of Byzantine-period rooms with an attached chapel was recognized (pls. 6b and 181b). While clearly visible on the ground, they are difficult to make out in the resistivity image (pl. 181a) and even less clear on the magnetometer survey (not published here). This lack of clarity reflects the height to which the walls are preserved, together with the depth of rubble fill of buildings constructed entirely of mortared rubble walls. On the ground these buildings stand out from Iron Age structures because they stand appreciably higher, as was particularly evident where at some point in the not very recent past part of Room 4 had been partially dug out, presumably by someone in search of treasure, as can be seen on the close-contour GPS survey (pl. 181b). The plan of the complex (pl. 182) was drawn from wall edges that could be seen on the surface. Closer inspection revealed that the walls were bonded with white lime mortar, in contrast to the dry-stone building techniques of the Iron Age, although this was not readily apparent because the mortar between the wall stones visible on the surface had dissolved away. A late Roman or Byzantine date was established by the presence of terra-cotta roof tiles and fragments of white marble wall facing, the latter associated with the apsidal chapel. Pottery and fragments of glass picked up on the surface indicated

²⁰⁶ G. Summers 2001; G. Summers and F. Summers 2013.

Byzantine construction of a single-period set of buildings (pls. 183–184).

The building complex appears to consist of four elements: a southwestern building unit, a northeastern building unit, a detached chapel with an apsidal end, and a small square structure standing on its own. Walls are of mortared rubble, between 0.80 and 1.00 m thick. The southwestern unit is made up of three rooms (Rooms 1–3). It was entered from the northern corner of Room 3, with no other doorways being visible. The total length of this unit measures 20 m. The northeastern unit comprises three rectangular rooms (Rooms 4, 6, and 7) with a narrow space (Room 5), presumably for storage and perhaps containing stairs, between Rooms 4 and 6, the total length of the unit being approximately 16 m. Only one doorway, that in Room 3, was recognized in the entire complex. The plan suggests that that rooms were added at different times. There is no evidence for the use to which individual rooms were put. The chapel, with apsidal end, narthex, and porch, is located a little to the northeast of the main buildings. A small square structure on the eastern side, to the south of the chapel, appears to stand in isolation.

Table 12. Byzantine complex room sizes

Room	Floor (m)	Floor Area (sq. m)*
1	5.40 × 4.80	24.70
2	6.00 × 4.70	28.60
3	6.00 × 3.00	18.00
4	9.00 × 3.70	29.50
5	9.00 × 1.00	9.00
6	6.30 × 3.00	19.40
7	9.50 × 3.40	31.50
Square	2.00 × 1.80	3.50
Chapel Nave and Apse	5.30 × 2.80	21.30
Chapel Narthex	2.20 × 1.50	

*The block plan was digitized in AutoCAD. Measurements are averaged, area automatically calculated. It is intended to provide proportions and approximate sizes for comparative purposes

No other associated structures are to be found in the immediate vicinity. It is suggested that this complex represents a farmstead with its own chapel. Excavation would be needed to confirm this interpretation, as well as to determine whether occupation was

year round or restricted to the summer months. The relationship between this complex, the castle, and the Kiremitlik has not been established.

A clue to the date is perhaps provided by a coin of Maurice Tiberius (AD 582–602) picked up from the surface in close proximity to these structures (K09.234; pl. 185a). It was found in 2009 by a judge from Yozgat who gave it to the Kerkenes guard, Mehmet Erciyes, and sent to the Yozgat Museum in 2010. Kenneth Harl kindly made the identification from photographs:

Based on the photos, the follis looks like a portrait of Maurice Tiberius (582–602); the obverse legend is not legible in the photograph. The reverse may be dated to regnal year 15 (596/7); the officina (workshop of the mint) is A or number 1. It is difficult to read the mintmark in the exergue; I would need to see the coin. The number of letters suggests to me Theupolis (“city of God”), the name of Antioch after the earthquake of 526. A follis from Antioch would be consistent with finds from this area.

THE CURVILINEAR ANIMAL PEN

Excavation of the rear portion of the Cappadocia Gate in 2011 established that the curvilinear animal pen that encroached over the northern corner of the West Tower was later than the Early Byzantine complex described above (see pl. 185b). This pen can just be made out in the balloon photograph (pl. 6b) and is more clearly visible in the resistivity survey (pl. 181a), where it runs in an arc from the pool to the tower corner. A small portion of the outer face was revealed in TR30 (pl. 185b). The wall was ca. 50 cm in width, one or two stones wide, and preserved to a height of three or four angular field stones built in a rough, uncoursed style. The three or four preserved stone courses of this pen were set into a thick clayey deposit containing abraded Early Byzantine plain ware sherds of the type described below. Large stones, spanning the width of the wall, were placed on top of the walling built of smaller stones. The exposed, lichen-covered tops of the large stones rise above the modern ground surface. These topmost stones were very possibly a later addition to the original pen, which became partially buried by clayey soil washed down from within the city. No diagnostic material has been found in association with the construction of the pen wall, the precise date of which remains elusive. Similar pens

are found elsewhere on the site, particularly on the Kiremitlik.²⁰⁷

EARLY BYZANTINE CERAMICS AND GLASS

During excavations of the Cappadocia Gate, an assemblage of ceramics was recovered in the upper layers of fill above the gate itself and from the hollow animal passage that leads down through the collapse (pls. 56b–c and 89), as well as from TR30, which extended inward from the rear of the gate toward the Byzantine structures on the crest of the southern ridge above the junction of Iron Age streets (pls. 3b and 60). The pottery recovered from TR30 was associated with clayey soil immediately above the eroded Iron Age destruction debris and below the curvilinear stone animal pen (pl. 185b). At the northeastern end of TR30, this accumulation lay directly on protruding bedrock, while a little to the southwest it was above the Iron Age stone-paved surface. Over the southwestern third of the trench this fill was found to rest on the eroded destruction. No pottery sherds or objects were found in the layers that accumulated from the centuries between the destruction of the gate in the mid-first millennium BC and the Early Byzantine period. The dry-stone wall of the animal pen was, as just described, constructed on top of this accumulated soil.

The pottery assemblage is made up almost entirely of coarse-ware vessels that were highly fragmented. No complete vessels could be reassembled, the largest piece (pl. 183 no. 1, sherd from 00CT12U01) comprising one-third of a vessel rim and handle. Only diagnostic pieces were retained for study, the entire assemblage being rather limited. Generally, handles had become detached, but sufficiently large sherds were recovered for it to be clear that the assemblage is predominated by variations on two forms: two-handled jars (pl. 183, nos. 1–3)

and one-handled jugs (pl. 183, nos. 4–8). There is a single example of a bowl (pl. 184, no. 9) and a variety of flat bases (pl. 184, nos. 10–11), as well as several handles that differ from those associated with the jar and jug forms (pl. 184, nos. 13–14). This majority of plain pottery is made of one ware, an orange to orange-red fabric with grit inclusions of moderate abundance and medium size. A minority of the pottery is of a buff fabric but the same or highly similar ware. All the pottery is wheelmade. There appears to be no correlation between ware and form; each general form has examples from both ware types. Due to the nature of the soil in the Cappadocia Gate, an irremovable dirt patina covered all the ceramics, obscuring surface treatments and further details regarding fabric variations. Only three small body sherds (pl. 184a no. 12 and pl. 184b, sherds from 00CT12U01) have any discernible decoration, consisting of incised lines and angled rectilinear incised decoration banded along the vessel. In TR30, approximately ten small and very abraded sherds of fine sigilata were recovered, the only recognizable shape being a deep bowl. Additionally, a few fragments of pithos rim were found, as were pieces of both imbrices and tegulae roof tile. These tile fragments were presumably associated with the Byzantine building complex described above.

In addition to the pottery, the stem and lower part of the base of a glass goblet was found (pl. 185c, 02TR03U01gfa01). The glass is a translucent green-blue color and has only minor patination and decay.

There is currently no good corpus of comparisons for this pottery. Very similar material is abundant on the Kiremitlik at Kerkenes, while a lesser amount occurs on the kale.²⁰⁸ An early Byzantine date would fit well with the coin of Maurice Tiberius, there being no indication as to the length of the occupation. The predominance of plain-ware jars and jugs might not be inconsistent with an emphasis on milk products, and particularly cheese making.

²⁰⁷ G. Summers, F. Summers, and Ahmet 1995.

²⁰⁸ For the Kiremitlik, see G. Summers, F. Summers, and Ahmet 1995.

CHAPTER 12

INTERPRETATIONS

GEOFFREY D. SUMMERS

CONCEPTUAL CONSIDERATIONS

The plan of the Cappadocia Gate, and more particularly the positioning, construction, and materials of the façades with their double-leaf doors, are of western design, derived from Phrygia. Iron Age city gates in the Neo-Hittite and broader Near Eastern worlds are quite different.²⁰⁹ The significance of these similarities and differences in relation to such topics as warfare, siege tactics, and weaponry, as well as with regard to the choice of construction materials, is a broader subject than can be entered into here. The discussion that follows is a brief attempt to place the Cappadocia Gate at Kerkenes in a wider archaeological context within what is today central and western Turkey. It is not intended to be an exhaustive study of Phrygian city gates, and it will certainly not be the last word on this subject. Worth repeating here is that each of the seven city gates at Kerkenes has a different plan, designed to make the best use of the immediate terrain and, it would seem, reflecting its importance.²¹⁰ This is in marked contrast to Imperial Hittite city gates, where the single-chamber plan was ubiquitous.²¹¹ Neo-Hittite gates of the first millennium BC are the direct heirs of their Late Bronze Age precursors. Although each of the other six city gates at Kerkenes was individually designed, some of the major elements in the design of the Cappadocia Gate can be

recognized in each of the other plans. It now seems likely that the three city gates providing access into the high southern sector of the city—where major public buildings, including a palatial complex and what were in all probability royal stables were located—were each provided with extensive outworks. These are, in addition to the Cappadocia Gate, the East Gate and the Göz Baba (Southwest) Gate. They too would have had an inner component enclosed by façades containing pairs of doors in a very similar fashion to the arrangement in the rear portion the Cappadocia Gate. In both instances, however, the precise plan is unclear as a result of the Iron Age destruction and collapse, compounded by the later activities of tumulus builders and shepherds.²¹² Thus the three strongest of the city gates provided direct access to either end and the center of this public zone. Four city gates—the West, North, North-East, and East-North-East Gates—provided entry to the lower sector of the city. While these gates had only two towers and lacked external courts, they were nevertheless monumental in their proportions and were doubtless provided with an enclosed component between two sets of double doors housed in imposing façades. This difference in defensive strength is doubly surprising given that there are no internal defenses that form a physical barrier between the two parts of the city. Furthermore, the four city gates in the lower area are located on terrain that,

²⁰⁹ Many plans are collected in Herzog 1986. For Greek examples, see Lawrence 1979. Specific parallels are discussed below.

²¹⁰ For instance, the West Gate, the only city gate to pierce the long western stretch of the defenses, leads out to grazing land and vineyards but not to a major route. It is not coincidence that this is the weakest and least elaborate of the seven gates.

²¹¹ This standardization of empire-period Hittite gate chambers refers to the standard single-chambered gate flanked by two strong towers but not, of course, the various outworks that commanded the approach. See Naumann 1955, pp. 250–80, with fig. 350/1.

²¹² The plans of each city gate at Kerkenes, first drawn by Ömür Harmanshah, were based on what could be gleaned from visible remains before the commencement of excavation. It is now desirable to re-examine these monuments and adjust the plans in light of what has been learned about the Cappadocia Gate.

when it comes to defense, does not possess such obvious natural advantages. One possible explanation for this difference might be related to visibility, there being a greater chance of surprise attack under the shadow of the steep slopes, as documented in chapter 2. But even if this could be shown to be true, it cannot be more than but one part of an explanation.

Close similarities between the Cappadocia Gate and the Monumental Entrance to the Palatial Complex make it highly likely that a pair of monumental façades enclosed the rear portion of all seven of the city gates. While this was very probably a standard design element of the Kerkenes city gates, it is not found at Gordion (see below).

No inscriptions were found at the Cappadocia Gate. At least one, and perhaps several, monumental Paleo-Phrygian inscriptions were found at Alaca Höyük, one on a reused Hittite portal lion.²¹³ It is, however, unclear whether these stones were associated with an Iron Age gate or some other monument that partially reused an earlier gateway.

FUNCTIONS

The principle function of the Cappadocia Gate was to provide controlled entry into the city and, to a lesser extent, exit from it. The priority of entry over exit is demonstrated, if demonstration is needed, by the orientation of the cultic installations. That passage through the gate was its chief purpose, overriding all other activities, is shown by the restriction of stone paving to the street, with only limited additions. No evidence was found to suggest other public activities, and indeed the restricted area of wear on the pavement, together with the accumulations of clean silty wash over all but the main corridor of traffic in the entrance passage and court, does not indicate significant communal activity within the large, rectangular gate chamber. Nevertheless, the stepped monument with its semi-iconic idol and the aniconic stela, both set up in the spacious court, as well as the statue in the corner of the enclosed rear part of the gate, demonstrate an importance over and above physical protection. In addition to ritual or cultic aspects of protection, there were doubtless administrative functions connected with the passage of people and goods, for which precise evidence is

elusive. Only the graffiti at the front of the entrance passage provide some hint of everyday cultic activity by common people.

General similarities between the Cappadocia Gate and the Monumental Entrance to the Palatial Complex most obviously include the tall towers and the glacis, all built of stone, and perhaps a general sense of symmetry. Successive improvements can be seen in both cases, with several stages in the extension of stone paving and the installation of cultic imagery being apparent. However, the most impressive and important monument set up in the Cappadocia Gate appears to have been walled off and hidden from view, while in contrast, the Monumental Entrance to the Palatial Complex seems to have been continually embellished with statuary, impressive stone idols, and yet more precious items, of which only scraps have been recovered. At the Monumental Entrance, too, it can be demonstrated that alterations took place in a number of stages and that there was a clear shift from an emphasis on defense to one of grandiose display.²¹⁴ At the Cappadocia Gate, however, the trend seems to have been rather the opposite. The limestone statue of, presumably, a goddess was walled off from public gaze and replaced by more abstract cultic imagery, installed not in the enclosed back section but in the spacious gate court, where, being in advance of the doors, the images were afforded less protection. While it is impossible to know the reasons for such changes, it is tempting to think that there might have been a shift of public activities, including perhaps cultic ritual, from the Cappadocia Gate to the Monumental Entrance of the Palatial Complex.

DESIGN, RAPIDITY OF CONSTRUCTION, AND MAINTENANCE

No precise parallel for the design of the Cappadocia Gate, or indeed for the defenses at Kerkenes in general, can be cited. Nevertheless, as noted at the beginning of this chapter, arguments can be adduced in support of the hypothesis that the underlying concepts were derived from an earlier Phrygian architectural background rather than from Neo-Hittite traditions. On the other hand, it is undeniable that the designers and builders of the capital at Kerkenes succeeded in creating something that was both new

²¹³ Brixhe and Lejeune 1984; Summers and Özen 2012.

²¹⁴ G. Summers and F. Summers 2008 provides a preliminary assessment of these developments.

and impressive and, by the same token, intended to exude a sense of power, if not to inspire awe and wonder. The solidity of the stone walls symbolized not only strength but also permanence. The input of labor and other resources expended on the foundation of the city, and especially on the rapid completion of its impressive defenses, continue to this day to command respect and admiration. Surely, it might be argued, such a visionary scheme as the construction of the entire 7 km of Kerkenes defenses could only have been brought to a successful conclusion if progress was swift and completion seen by those engaged in the gigantic task to be attainable. Undoubtedly intended to impress through the imposing physical representation of unassailable rule that dominated the region, these defenses also demonstrate a perception of insecurity, of external danger.

It has surely to be assumed that the urban population, much or all of it newly arrived, could not have built the city and its defenses by themselves. It is very possible to imagine that manpower, beasts of burden, carts, and equipment were rounded up from the surrounding territory by imposing some kind of *corvée* system. Much of the timber required for the initial construction could have been found on the Kerkenes Dağ itself or brought from nearby hills. Resultant deforestation around the new city would have created open space and grazing land, both of which were doubtless desirable. Food and winter fuel would also have been acquired from a subject population. The first winters on this exposed mountaintop would have been challenging. It is not difficult to imagine tents, covered wagons, and temporary shelters before the first permanent dwellings were completed.

Building seven kilometers of defenses was one thing; maintaining them was another. Timbers in the wall faces seem to have been protected by a rendering of mud plaster, and there is clear evidence that a second coat was applied within the gate court and the entrance passage. Mud plaster, however, requires regular maintenance. The scratching of graffiti at the front of the entrance demonstrates that here the stone was exposed; furthermore, the thick, clean, silty deposits on internal and external surfaces apparently indicate that much of the mud rendering had washed off the wall faces before the fire. The wooden beams, too, would have had a finite life,

but not perhaps as short as that of the city itself. In chapter 3, evidence was presented to suggest that face stones on parts of the glacis around the East Tower may have given way before the destruction of the city. Additionally, it was seen that some kind of structure, perhaps an animal pen, was erected in front of the East Tower. It would seem, then, that the city did not feel the necessity, or perhaps did not have the resources, to maintain the defenses.

When the end came it was apparently a surprise. At the Cappadocia Gate, no trace has been found of emergency strengthening of the defenses, such as narrowing or blocking of the entrance passage. Despite what seems certain to have been extensive looting of the city, followed by deliberate and perhaps systematic torching, there is no evidence from the Cappadocia Gate of an attack. Investigations at other parts of the defenses could alter this interpretation, but there are good reasons to think that the city was set alight only after extensive looting rather than as the immediate result of attack and capture.

PARALLELS

Monumental gates are known in some detail from three major Phrygian sites. The closest in both time and space is the gate into the small fortified settlement on the Büyükkale at Boğazköy. Two successive gates into the Old and New Citadels have been excavated at the Phrygian capital of Gordion, located at modern Yassihöyük in the broad valley of the Sakarya River. Third, in the Highlands of Phrygia farther to the west is the most important of the entrances to Midas City, or Midas Şehir, the ancient name of which is unknown. Entrances to smaller sites in the Phrygian Highlands, that is, the region around the modern cities of Eskişehir and Afyon, are also known. While none attain the status of a city gate, Delikli Taş is notable for an associated relief depicting a goddess.

BOĞAZKÖY

Boğazköy²¹⁵ lies ca. 50 km to the northeast of Kerkenes. It is situated at a similar altitude but is more protected by surrounding hills, with the result that it is almost hidden away. By the mid-first

²¹⁵ The Iron Age name (or names) for the Hittite capital of Hattusa is unknown. The modern village was called Boğazköy, a name which is used in the title of many archaeological publications and, for that reason, for the Iron Age settlements. The village has grown into a town, the official status being recognized by the changing of the name to Boğazkale.

millennium, fortified villages had developed, one of which was located on the Büyükkale, the citadel of the former Hittite capital. Here a monumental gate has been excavated that shares several of the features seen at the Cappadocia Gate.²¹⁶ The plan comprises a large stone-paved court with a drain to one side of the roadway leading up to a gate building. A solid tower to one side of the court measures approximately 8 × 8 m, while the fortification wall is some 5 m thick.²¹⁷ The gate building at the rear measures 10 × nearly 5 m, with doorways, each approximately 5 m wide, in the front and back façades, as well as a central paved road. This gate building was not constructed at the same time as the tower and wall, with no fewer than five building phases recognized, all of which were assigned by Peter Neve (1982) to Büyükkale I. Nevertheless, both the plan and the dimensions are strikingly similar to those of the Cappadocia Gate. Even more striking is that, located in a corner of the forecourt and facing across the court in such a way that it was hidden from view by anyone approaching or leaving the gate until they drew level with it, was a shrine in which was set up the famous, nearly life-sized statue of a goddess accompanied by two young musicians.²¹⁸ As noted in chapter 5, this statue is directly comparable with sculpture from Kerkenes.²¹⁹ A semi-iconic idol was also recovered from this same area of the Büyükkale, although not found in situ.²²⁰

Another fortified Iron Age settlement at Boğazköy is the Südburg, which, although less impressive than the Büyükkale, has a not dissimilar gate building measuring approximately 10 × 6 m, with a court in front flanked by projecting rectilinear towers.²²¹ Here the base of the solid circuit wall

is protected by a stone-faced glacis similar in style to the much larger rampart at Kerkenes. No cultic statue was found in the gate. It is worth noting in this respect that the superbly carved Hittite reliefs of Chamber B were reused in the Iron Age defenses with little regard and no obvious reverence shown for the imagery.²²²

GORDION

At Gordion, new investigations, together with assiduous work in the excavation archives, are beginning to reveal evidence for an extensive outer town in the earlier part of the Middle Phrygian period. Reassessment of the date of the Destruction Level, now put at close to 800 BC,²²³ leads to the conclusion that the clay layer and the postdestruction rebuilding belong to the time of the Midas dynasty.²²⁴ The walled lower town was also in existence by this time. At one corner of this lower town defensive circuit, which perhaps attained a length of some 5 km, lies the Küçük Höyük. Here, burned timber-laced mudbrick walls on stone foundations are preserved beneath what is now thought to be a Persian siege mound. This fort or massive bastion probably housed a Lydian garrison, and it is not unlikely that the fortress itself was a Lydian construction added to the earlier Middle Phrygian Lower Town wall. No gates within Iron Age defenses around the Lower Town have been investigated in detail, although geophysical survey has suggested possible locations. The scale of these defenses of the lower town city at Gordion, which at the Küçük Höyük stood to a height of some 11 m, provides a new perspective on the Phrygian capital. If the reconstruction of events

²¹⁶ I am indebted to Susanne Berndt for bringing the extent of the similarities between the Büyükkale Gate and the Cappadocia Gate to my attention.

²¹⁷ Neve 1982, pp. 152–54, with Beilage 52 and 53.

²¹⁸ Bittel 1958; 1970, pp. 146–51; Neve 1982, pp. 152–54, with fig. 80.

²¹⁹ This is discussed by Draycott with regard to the pieces for the Monumental Entrance in Draycott and Summers 2008.

²²⁰ Neve 1982, p. 153, with fig. 79.

²²¹ Neve 1993b, pp. 68–80. It is worth noting that groups of Iron Age buildings within the Südburg, particularly Komplex 1, 2/3, and 4, contain large two-roomed buildings and associated structures that bear obvious resemblance to buildings within urban blocks at Kerkenes. I am grateful to Andreas Schachner for discussion of this. Similarities with buildings on the Büyükkale are more difficult to discern but are perhaps disguised by the complexity of structural phases.

²²² Neve 1993b, p. 73, fig. 205a; Chamber B is also known as Kammer 2.

²²³ DeVries 2007; DeVries et al. 2003; Voigt 2005 and 2007; Rose and Darbyshire, eds., 2012. For a recent overview of Gordion, see Voigt 2013.

²²⁴ I am grateful to Gareth Darbyshire for sharing some of his recent thoughts on the occasion of my brief visit to Gordion in July 2007. A map showing the current (2012) understanding of the morphology of Gordion can be found in Rose and Darbyshire, eds., 2012, fig. 1 on p. xiv. One striking difference between Gordion and Kerkenes is the setting, the former being on a floodplain (Kealhofer 2005; Marsh 2005), the latter at a mountaintop location.

surrounding the destruction of Kerkenes is correct, the siege would have taken place later in the same year or soon thereafter. The late Rodney Young thought that the Persian destruction of the Küçük Höyük was perpetrated by Cyrus the Great on his march from Pteria, presumably Kerkenes, to Sardis in the mid-sixth century. Hundreds of arrowheads embedded in the mudbrick wall as well as Attic Little Master cups and Lydian pottery are all of the right period.²²⁵ Some members of the Gordion team now think it possible that the destruction represents consolidation of Persian power some little time after the fall of Sardis,²²⁶ but it can be argued that if Croesus, pursued by Cyrus, went from Pteria (Kerkenes) via Ankara and Gordion to Sardis—surely the most likely route—then Young’s original suggestion is perfectly plausible. Indeed, it provides a more plausible context for stiff resistance to Cyrus by the city of Gordion under Lydian rule than hypothetical mopping-up operations following the fall of Sardis. Whatever the date of the construction and destruction of these outer city defenses, they were undoubtedly standing when Kerkenes was founded. This new research at Gordion is beginning to provide a Phrygian background, which has been lacking until now, for the scale and strength of the city at Kerkenes.

The earliest Early Phrygian monumental gate at Gordion, whether already at this date leading into a citadel, was the so-called Polychrome House.²²⁷ This enclosed, presumably roofless gate building in some respects resembles the rear section of the Cappadocia Gate. In the next phase of the Gordion defenses, a massive entrance flanked by towers was constructed in front of the Polychrome House, which

thus became the back portion of this entrance to the citadel. There are certain salient similarities between this ninth-century Phrygian gate at Gordion and the later Cappadocia Gate at Kerkenes.²²⁸ These include construction entirely of stone, the diagonal entrance passage, and the absence of a passage roof.²²⁹ Following a disastrous fire, this gate was filled to the top with some 11 m of stone rubble. A new gate was constructed on top of this fill a few meters forward of the now-buried structure. This less well-preserved eighth-century rebuild was somewhat more symmetrical than its predecessor. There was no equivalent to the Polychrome House; instead, the long passage was divided into two so as to make a rectangular court in front of a gated chamber. The approach to this citadel gate was by way of a steeply inclined ramp rising up from the right. No cultic installations have been reported from either of these citadel gates at Gordion.²³⁰ These observations that the city gates at Kerkenes share general characteristics with the citadel gates at Gordion surely demonstrate a shared tradition. The earlier date of the Gordion gates, together with their location on the citadel rather than in the circuit of a city wall, perhaps provides sufficient explanation for the very obvious differences.²³¹

MIDAS CITY

Construction of the monuments at Midas City, including the rock-cut façades, stepped monuments, and monumental rock-cut entranceway, can be generally attributed to the first half of the sixth century BC, that is, the period of Lydian domination.²³² This hilltop site should probably be regarded as a cultic

²²⁵ Young 1953a, 1953b, 1957, and 1958; also Mellink 1991, pp. 652–53. Recent summaries can be found in DeVries 2005, p. 51; Sams 2005, pp. 19–20; and DeVries 2012, pp. 17–18, with figs 1.3 and 1.4. Greenewalt 2007, p. 554 n. 1, lists the seasons at which excavations on the Küçük Höyük were conducted, all under the supervision Machteld Mellink. For reinterpretation of the “tumulus” on top of the Küçük Höyük, see Voigt et al. 1997, p. 6 n. 8; and DeVries 2012, p. 18.

²²⁶ Gareth Darbyshire, personal communication; DeVries 2012, pp. 17–18, with n. 1.18.

²²⁷ Voigt 2012, p. 26, with fig. 2.1.

²²⁸ Sams and Voigt 2012, figs. 7.5–7.7.

²²⁹ Young 1962, p. 6.

²³⁰ The Early Phrygian Citadel, YHSS 6B, has yielded poros sculpture associated with either the Polychrome Gate House or the Post and Poros structure. If these carved blocks were associated with the gate, and they do indeed display strong Syro-Hittite influence as suggested by Kenneth Sams, the tradition seems not to have persisted at Gordion; see Voigt 2013, pp. 188–89; Sams 1989; and comments by Berndt-Ersöz 2006b, p. 150.

²³¹ Brief interim discussion of other similarities and differences between Kerkenes and Gordion can be found in G. Summers 2006a, 2006b, and 2006c. For Gordion, see Voigt 2013, with references.

²³² This was understood by Ekrem Akurgal, and most fully set out by him in his *Birth of Greek Art* (1968). Arguments have been elaborated on by, among others, Susanne Berndt-Ersöz (2006b), wherein copious references will be found. If it is correct that Ates on the inscription above and contemporaneous with the Midas Monument is to be equated with the son of Croesus, king of Lydia, who was, so legend has it, killed during a boar hunt, the chronological matter is settled. See Berndt-Ersöz 2006b, pp. 126–31, and 2006a, p. 24.

center rather than a metropolis (as with the yet more elevated Neo-Hittite site on the Göllüdağ, discussed below). A broad road, reminiscent of the road that approaches the Cappadocia Gate at Kerkenes, approaches the city between two long flanking extensions of the city wall in a way not dissimilar to the Göz Baba (Southwest) Gate at Kerkenes but lacking the evidence of large rectilinear towers and buttresses seen at the Kerkenes city gates.²³³ Almost nothing now remains of the structures flanking this roadway beyond the rock-cut footing. The defenses at Midas City, if indeed there are defenses datable to the same period as the cultic center, are much weaker than those at Kerkenes, as they lack large towers and a glacis. Where the section of the approach road is cut back into the bedrock, a series of badly worn reliefs was carved into the vertical rock face.²³⁴ The lower reliefs, all facing the entrance, are larger than life-sized. The smaller, much better preserved relief farther up the inclined passage, is shown to have Achaemenid features.²³⁵ Whether the larger reliefs should also be dated to the Achaemenid period is less certain. No trace of sculpted relief has been seen on the approach road to the Cappadocia Gate, or indeed the approaches to other gates at Kerkenes, but their presence might not occasion great surprise.²³⁶

DELIKLI TAŞ

Tucked away in the Phrygian Highlands is the small fortified hilltop site of Delikli Taş. Main access to the site was a narrow rock-cut stairway at the base of which, on the left as one approached and clearly associated with the entrance, a deep rock-cut niche contained the badly eroded image of a goddess wearing a polos. She is presumably to be identified with Matar.²³⁷

NEO-HITTITE GATES

In central Anatolia, there is one elevated site of comparable proportions to Kerkenes, namely, the mountaintop ceremonial center on the Göllüdağ above the modern town of Niğde. It is generally thought, although not proven, that Warpalawas, king of the Neo-Hittite state of Tyana, whose capital lies under modern Kemerhisar, was responsible for the inception of construction on the Göllüdağ.²³⁸ Pottery of Alişar IV type, as well as sculpture, would support a late eighth- or seventh-century date for the foundation. The site appears to have been abandoned sometime in the seventh century, presumably in events associated with the demise of the Anatolian Neo-Hittite states in general. Defenses at Göllüdağ echo those at Kerkenes in that they follow the topographic divide of the mountain rim, thereby enclosing a very large space, and appear to have been constructed entirely of uncut stone. They are slighter than the walls at Kerkenes, and there is no glacis. It could certainly be argued that here at Göllüdağ there is evidence for a style of Central Anatolian defenses that developed from the more standard Imperial Hittite city gate of the late Bronze Age. It is frustrating that almost nothing is known of the Neo-Hittite cities of the Anatolian plateau.

Much, on the other hand, is known of the Syro-Hittite cities of southeastern Turkey, Cilicia, and North Syria. Here, city gates and other monumental entrances continue the Imperial Hittite tradition of sculpted orthostats in such a way that protection and ceremony are combined within one architectural tradition.²³⁹ The differences between these gates and city gates at Kerkenes, in terms of both architectural form and the concept of sculptural embellishment, are so pronounced as to negate the need for further discussion. It has long been apparent that the sculptural embellishment of Neo-Hittite monumental gates is a direct descendent of Imperial Hittite traditions, as seen most notably at Alaca Höyük and Hattusa itself—both sites located in the hills to

²³³ Gabriel 1965, p. 5, fig. 2 Gate J.

²³⁴ Gabriel 1965, pls. 15a–b, 16a–b, 17a–c; D. Berndt 2002, pp. 43–48, with lavish illustrations; Berndt-Ersöz 2006b, pp. 150–51.

²³⁵ Berndt-Ersöz 2006b, p. 151, with n. 56.

²³⁶ Ekrem Akrugal (1958) thought that these reliefs at Midas City show clear signs of Neo-Hittite influence. However, the discovery of relief sculpture in the Monumental Entrance to the Palatial Complex at Kerkenes (Draycott and Summers 2008) that undoubtedly displays Neo-Hittite influences while inscribed in Old Phrygian, removes any need to assume that the reliefs at Midas City were Neo-Hittite products. See also the good discussion with other parallels in Berndt-Ersöz 2006b, p. 151.

²³⁷ Berndt-Ersöz 2006b, p. 221, with references; p. 330, fig. 23; and p. 397, fig. 121.

²³⁸ Arik 1936; Schirmer 1993, 1996, 1998, 1999, and 2002; Gates 1995, pp. 229–30; for further discussion of the date, see Aro 2003.

²³⁹ Discussed in, among other places, Mazzoni 1997 and Gilibert 2011.

the north of Kerkenes rather than in the more arid regions of North Syria.

SARDIS

The colossal sixth-century defenses at the Lydian capital of Sardis, contemporaneous with the less impressive city wall at Kerkenes, provide a prime example of very strong defenses requiring huge input of resources to construct and needing a considerable force of men under arms to defend.²⁴⁰ One Lydian-period city gate has been excavated. It is hard to fully comprehend the plan of this gate before the mid-sixth-century destruction because of post-destruction blocking and later Roman construction.²⁴¹ It is, however, possible to observe an entrance passage measuring more than 5 m in width and 13 m in length. In front of this passage was an external court faced with sandstone blocks, those on the northern side bearing so-called masons marks.²⁴² This Lydian gate construction seems to have been faced entirely with stone, with sandstone being used on the northern side and limestone selected where drafted masonry was required. Like the Early Phrygian gate at Gordion, each course of stone facing was slightly set back from that below, giving a slight batter to the walling and making it difficult to understand how gates could have been installed within the passage. Cobbling and layers of gravel surfacing were found within the passage. No evidence for the presence of orthostats has been found; if there were other kinds of sculptural or epigraphic embellishment, no traces have yet come to light. Because of later remains, the situation on the inside is uncertain, but it is not impossible that an inner section with doors was located at the end of the passage. It is notable that the gate is not symmetrical, the passage being to one side of the court, and that none of the corners are at right angles. Perhaps it is not entirely incorrect to see some Phrygian influence in the design of this Lydian city gate.²⁴³ On the other hand, it could be argued

that many of the characteristics of this gate at Sardis might be seen in the Ionian defenses at Old Smyrna.

STATUARY, IDOL, AND STELA

STATUARY

The carved sandstone plinth bearing the statue of a goddess sculpted from a soft limestone (described in chapter 5) was almost certainly installed when the gate was built. Set in the northern corner, this sculptural assemblage would have been impossible to miss by anyone entering through the double doors in the front façade. The size and quality of the sculpture and plinth, if not the quality of the stone, would have impressed, its Phrygian character being immediately apparent to all who saw it. Such was surely the intention. It has to be assumed that the piece was commissioned by the ruler of the city, who chose to install the image of a deity, very probably Matar, rather than an image of himself, as might have been done in the Neo-Hittite world. Undoubtedly, the principle intention was protection, combined with the projection of Phrygian-ness—a projection that simultaneously legitimized royal power. In a sense, then, this sculpture defined the city upon entry through what might have been the most powerful gate in terms of symbolism as well as physical strength.

As described in chapter 3, the northeastern side of the rear section of the gate was closed off by the construction of a rather miserable timber-framed wall with high footings made of small stones and mudbricks. At the northwestern end of this wall there was probably a doorway with a high threshold. This threshold, which would have served to deflect storm water running through the gate, was not designed for ease of access. By the same token, the doorway into this new room restricted views of the sculpture even at times when the door itself might have been open. The room's floor was clean and

²⁴⁰ For the projected line of the Lydian defenses, see Greenewalt et al. 2003, fig. 46 on pp. 132–33; for the topography, figs. 47A and 47B on pp. 134–35. For the defenses, see Greenewalt, Cahill, and Rautman 1987; Greenewalt 1989, 1992, 1997; Greenewalt and Heywood 1992; Greenewalt and Rautman 1998, pp. 471–74 and 487–99; 2000, pp. 656–74; and Cahill and Kroll 2005, pp. 591–600.

²⁴¹ A plan and reconstructions are published together in Greenewalt et al. 2003, fig. 11 on pp. 52–53, figs. 29A and 29B on pp. 92–93, and figs. 32 and 33 on pp. 98–101; fig. 30, on pp. 94–95, is an earlier, incorrect attempt at a reconstruction showing the court on the inside. A detailed account is given in Ratté 2011, pp. 108–12 and figs. 199–209 on pp. 235–42.

²⁴² Greenewalt 1989, p. 265 and fig. 2 on p. 269; Greenewalt and Rautman 1998, pp. 487–90.

²⁴³ It has also been suggested on more than one occasion that Phrygian influence can be seen in the adoption of a tradition of elite tumulus burials, but on the other hand, differences between Lydian and Phrygian tumuli are perhaps greater than similarities (see Ratté 2011, with nn. 6 and 7; Olivier and Kelp, eds., 2012).

devoid of any indications of cultic or other activity. There can be no doubt that the statue was standing at the time of the destruction and that only a few pieces were broken off it in the initial collapse of the North Tower walling. It was not thrown down before the destruction, neither was it recovered for decent burial after the fire. Thus there is no useful comparison to be made between the walling off of this goddess representation while it was still set up on its base and its subsequent destruction, and the postdestruction ritual burial of colossal statues of kings and other sculptures in the gates of Neo-Hittite cities.²⁴⁴

At Boğazköy, some 50 km northwest of Kerkenes, a cultic installation was set up in the chambered southeastern gate to the Iron Age stronghold on the Büyükkale in Level-Ia.²⁴⁵ Here, a stone statue of a goddess, most probably Matar, accompanied by two young musicians stood in a built shrine with her back to the chamber wall. This piece, which belongs to the same genre as the Kerkenes statue and to which it must be quite close in time, demonstrates that such sculpture was more widespread to the east of the Kızılırmak than is documented by the archaeological record.

SEMI-ICONIC IDOL

A semi-iconic idol, presumably representing a specific but unidentifiable deity, was uncovered in the court. It had been partly smashed by collapse of the North Tower but was nevertheless largely still in situ on top of a flight of built steps. Earlier, it was suggested that there was possible evidence for the existence of a built niche protecting the idol, which faced into the gate court. Part of a second stone recovered from nearby shepherd's walling might also have come from the gate court, in which case the variety of semi-iconic forms recognizable in the graffiti at the front of the passage would have been replicated by images set up in the court. It is notable that the excavated idol faced directly forward, not toward the entrance passage, in such a way that it did not dominate the court. In fact, it could not be

viewed by arrivals until the inner end of the gate passage was reached, and a full frontal view would have involved moving across the court rather than advancing directly toward the double doors in the front façade. Graffiti at the front of the gate demonstrate that the cult was not restricted to an elite.²⁴⁶ Huge double-sided sandstone idols representing one or more deities in similar semi-iconic form were recovered from the Monumental Entrance to the Palatial Complex. There is some evidence that these kinds of idols do represent deities and that pairs of idols may represent a goddess and her consort.²⁴⁷ However, the location of the single idol in the Cappadocia Gate is quite different from similar rock-cut idols in the Phrygian Highlands or at Dümrek. Its location, set to one side of the doors, is obviously connected with entry but would still have allowed ritual activity, such as the placing of offerings on the steps if that was an element of ritual, to occur without impeding passage through the gate. On the other hand, the idol stands at the top of an extension to the paved road that is angled up to it, but there is no stone-paved area in front of it that would have provided for a gathering of devotees. These observations imply that the idol's main purpose was protective and that it was not primarily intended to be an object of veneration. If this is correct, one purpose of carving graffiti that depict this or similar idols might also have been to seek protection.

At Boğazköy, in the same gate as the shrine containing the statue just mentioned, a small semi-iconic idol of the same general type as the Kerkenes stela was recovered, not, alas, in situ.²⁴⁸

ANICONIC STELA

Also discovered was an aniconic stela, more formless than the semi-iconic idol but likewise depicted on graffiti at the front of the gate and paralleled at the Monumental Entrance to the Palatial Complex. This was installed after the paving had been laid, but long enough before the destruction of the city for its top to have been polished by passing hands. The stone itself was roughly trimmed to shape on one side. The

²⁴⁴ Ussishkin 1970 and 1989, to which may be added the dramatic new discoveries at Tell Tayinat (preliminary notice in Harrison 2012).

²⁴⁵ Bittel 1958, pp. 61–72; 1970, pp. 146–53.

²⁴⁶ The same argument is made for Old Phrygian writing at Kerkenes (see Brixhe and Summers 2006).

²⁴⁷ The strongest evidence comes from the double relief at Faharet Çeşme to the west of Ankara. For broad discussion, see Berndt-Ersöz 2006b and 2007, and chapter 6 in this volume.

²⁴⁸ Bittel 1970, p. 152, fig. 37.

manner of its setting into the pavement, which involved the removal of paving stones that were then used as packing around the base, was rather shoddy. Were it not for the similarities between this stone and its counterpart at the Monumental Entrance, it might be doubted that the setting up of this stone was an act that was presumably at the behest of, and must certainly have been sanctioned by, the ruling elite. While there is no indication of a place for libation or offerings adjacent to the stela, it is possible that the neatly sunken stone in the center of the pavement at the top end of the entrance passage served this purpose and thus parallels the installation at the Monumental Entrance. If this was indeed the case, we would have clear evidence for ritual or ceremonial activity in connection with passage through the gate over and above touching of the stela's top. The position of the stela, against the inner wall face at the corner of the Middle Tower, indicates exit rather than entry and is thereby analogous to the position of the aniconic stela at the Monumental Entrance, which was set against the inner side of the door post.

Parallels are difficult to find, but the stela at the Cappadocia Gate bears only the slightest indication of trimming. Had it not been found in position, it would not have been recognized for what it is. The most shapeless of the graffiti at the front of the entrance passage offer little comfort. Evocative pieces of living rock abound in the cultic landscapes of the Phrygian Highlands as well as at Dümrek. It is impossible to know whether any of these were venerated or, if so, which ones. Farther afield, three aniconic stone stelae set up outside the gateway into the citadel of Troy VII, referred to in chapter 1, point to western connections, although they fall outside the strictly Phrygian sphere both chronologically and culturally.²⁴⁹

CONCLUDING REMARKS

An extensive literature exists concerning the association of gates with images of rulers and deities in the ancient Near East, and particularly in the

Neo-Hittite world of Anatolia, Cilicia, and North Syria. Little of this seems to be directly applicable to Kerkenes. It is difficult to decide the extent to which these differences are cultural, underpinned by contrasts between ancient Near Eastern tradition on the one hand, or western Anatolian, Aegean, and Balkan on the other, as well as to what degree they might be chronological.²⁵⁰ From a positivist point of view, how much differences in the amount and scale of activities at large open gates might reflect environment, especially climate, are matters for debate, but today conditions at Kerkenes are not significantly less favorable than those at Hattusa, where, in the Late Bronze Age, there was very considerable public activity in the open air. Ancient gates in general were both physical and symbolic boundaries, defensive in a spiritual sense as well as in the military and administrative sense. Monumental gates were often embellished with sculpture, and sometimes texts, that emphasized various aspects of power, performance, legitimacy, and divine performance.²⁵¹ The purpose here has been to demonstrate the generally western and specifically Phrygian aspect of the association of deities and cultic images with the Cappadocia Gate.²⁵²

We are left with unanswered questions. It is perhaps possible to identify a trend in the monuments erected within the gate. The earliest monument was the almost life-sized representation of a goddess accompanied, it might be thought, by a pair of lions and supported by a pair of protective sphinxes. Certainly later is the semi-iconic idol on a built stepped monument. If—and it is not possible to know—the erection of the stepped monument and semi-iconic idol coincided with the building of the chamber on the northeastern side of the rear section of the gateway, then there is not only a marked change from representational to semi-iconic, but also a very radical change in visibility and access; the statue is hidden from sight and accessible, if at all, only via a small door with a high threshold, while the idol is set up in the open court, in front of the façade. Third, and very probably last, a completely aniconic stela was set up in the pavement, where it was rather

²⁴⁹ Korfmann 1998.

²⁵⁰ Miller (2012, p. 679) discusses Mesopotamian influence with regard to Hittite gates, urging caution.

²⁵¹ There are many wider discussions of statuary, stelae, and relief sculpture in Neo-Hittite gates; these include Ussishkin 1970 and 1989, Mazzoni 1997, and Gilibert 2011.

²⁵² Catherine Draycott, in Draycott and Summers 2008, pp. 17–21, provides discussion concerning statues of rulers; G. Summers 2006a provides selected references to similar Phrygian semi-iconic representations.

crudely fixed in place by stones lifted from the pavement and packed around its base. It is impossible to know the meaning of these changes. Could they reflect a shift in belief that entailed a change from representation of a deity in human form to one that was semi-iconic or completely aniconic, or are we to imagine completely different types of deities represented in very different ways? One possibility is a change in the cultic functions attached to the gate, possibly in tandem with the installations of cultic imagery at the Monumental Entrance to the Palatial Complex. If so, and if the statue from the Palatial Complex entrance was secular, or perhaps a hero, was there also a trend to depict deities in semi-iconic form, as might be witnessed by the large double-sided idols from the same monumental entrance and court? Given the general parallels between the Cappadocia Gate and the Monumental Entrance, it is not difficult to imagine a shift in public function from one to the other. Such a shift might go some way to explain the way in which silt was allowed to accumulate in the Cappadocia Gate court as, presumably, the mud plaster peeled from the walls. Another question is whether the Cappadocia Gate was special in these respects, or whether statuary and idols were set up at some or all of the other six city gates. Without excavation there is no way of knowing. And last, there is the question of the date. The pottery evidence, such as it is, is consistent with construction in the second half of the seventh century. The historical background, not considered in this volume, is also consistent with a date

after the Cimmerian invasions and the demise of the Neo-Hittite states in Tabal, that is, not earlier than the 640s. Art-historical analysis of the statue and carved plinth is inconclusive. It is hoped that as soon as suitable timbers are found, dendrochronology will solve the riddle.²⁵³

Finally, it might be of interest to add here that research at Kerkenes was instigated to fill a major lacuna in our knowledge and understanding of the Iron Age between the Kızılırmak (the Red River, the classical Halys) and the headwaters of the Euphrates, that is, between Phrygia and Urartu, and also between the Pontic Mountains to the north and the Lands of Tabal (as roughly defined by the distribution of Luwian hieroglyphic inscriptions) to the south.²⁵⁴ Central to the selection of Kerkenes was the idea that remote sensing at a major site where so much was visible on the surface could make a major impact on the understanding of Iron Age cities on the Anatolian plateau. Remote sensing did provide, and is still providing, remarkable imagery, but it does not reveal monumental stone architecture, statuary, human victims of destruction, and so forth. Kerkenes is, therefore, an example of archaeological exploration that was first and foremost driven by curiosity and intuition, combined with the application of cutting-edge technologies, the results of which were followed up by traditional excavation on a scale commensurate with the size of the site and its monumental architecture.²⁵⁵ Every discovery, not least those at the Cappadocia Gate, has been a surprise. There are more surprises yet to come.

²⁵³ G. Summers 2009.

²⁵⁴ It had been anticipated that the heyday of Kerkenes was the eighth century rather than, as has turned out, the first half of the sixth.

²⁵⁵ G. Summers and F. Summers 2010.

CHAPTER 13

KERKENES SONUÇ RAPORLARI 1

KAPADOKYA KAPISI KAZILARI

TÜRKÇE ÖZET / TURKISH SUMMARY

İNGİLİZCEDEN ÇEVİREN GÜZİN EREN

Bu cilt, 1999 ve 2011 yılları arasında Kapadokya Kapısı'nda yürütülen kazıların sonuç raporunu içermektedir. Kazılar hakkında daha detaylı bilgiler, ilgili senenin *Kerkenes Haberler* baskısında ve *Uluslararası Kazı, Araştırma ve Arkeometri Sempozyumu* yayınlarında bulunabilir. Kerkenes internet sitesi de oldukça kapsamlı bilgiler sunmaktadır.

GİRİŞ

Kerkenes Dağ'daki Demir Çağı başkenti, İç Anadolu'nun merkezinde, Sinop-Kayseri hattı üzerinde yer alır. Kapadokya Kapısı adını verdiğimiz alanın kazıları 2014 yılında tamamlanmıştır. Kent kapısı tek evrelidir; arka tarafına üç oda ilave edilmiştir. Yapı, bütün kenti saran, MÖ 540'lardaki yangın esnasında yanarak yıkılmıştır.

BÖLÜM 1. GENEL BİLGİ. KAZI STRATEJİSİ, YÖNTEMİ VE SİMGELER SİSTEMİ

Kerkenes, Yozgat İli, Sorgun İlçesinde yer alan granitik bir dağdır. Kerkenes kelimesi kerkenez kuşu anlamına gelir. Bu bölümde, Kerkenes'in konumu ile iklim, civar çevrenin görünüşü, yöredeki belirginliği ve su kaynakları mevcudiyetinin ilişkisi anlatılmaktadır. Kiremitlik adı verilen alan, 1490 metrede kentin en yüksek noktasını oluşturur; kentin en alçak noktası ise 240 m aşağıda, Su Kapısı'ndadır. Kentin hisarı Kale, sudan yoksundur. Kalenin oldukça

yüksekte bulunan bir kült mekanı ve sığınak olması mümkündür.

Kentin inşasının doğal çevreye etkisi, özellikle de ormansızlaşma konusu, bu bölümde tartışılmaktadır. Kent nüfusu tarımsal faaliyetlerle yoğun olarak uğraşmış gibi görünmektedir.

Bölümün geri kalanı şu kısımlara ayrılmıştır: *Kentin Sıfırdan İnşası, Kronoloji, Kentin Pteria Olarak Tespiti, "Kapadokya Kapısı" İsmi, Kapadokya "Kapısı" Kazılarının Gerekeşi, Kazı Stratejisi ve İlerleyişi, Temizlik Çalışmaları Başlangıcında "Kapadokya Kapısı" ve Simgeler Sistemi*. Bunların burada bir arada özetlenmesi daha yararlı olacaktır.

Kerkenes'in, Zippalanda Fırtına Tanrısı'nın ikametgahı olarak bilinen Hitit Daha Dağı ile tanımlanması muhtemeldir, ancak kentte bu zamana kadarki araştırmalarda MÖ ikinci binyıl buluntusuna rastlanmamıştır. Demir Çağı kenti yeni bir yere kurulmuştur. Merkezi planlamanın varlığına dair kanıtlar bulunmaktadır. Kronolojisi ile ilişkili olarak, seramiklerinin Orta Frig stilinde olduğu ve Alişar IV seramiğinden sonra geldiği söylenebilir. Akhemenid Dönem seramiğine rastlanmamıştır. Kentin, muhtemelen MÖ yedinci yüzyılın ikinci yarısında kurulduğu ve 540'larda Kiroş ve Kroisos arasındaki çarpışma esnasında yıkıldığı öne sürülmüştür. Bu döneme dair yazılı kaynakların sayısı azdır ve yorumlanmaları güçtür. Bu bölümde Kerkenes'in Pteria olarak tanımlanmasını destekleyecek kaynaklar (Herodotus Ktp. I. 72) sunulmaktadır. Kentin yıkılmasına dair tarihi belgeler irdelenmiş ve sorumlusunun Kroisos olduğu önerilmiştir. Pers İmparatorluğu zamanında satraplık merkezi

olasılıkla Kayseri'dir ve bu dönemde bir kentsel merkez olarak Kerkenes terk edilmiştir.

Kapadokya Kapısı adı, H. H. von der Osten'in erken kaynakları ile karışıklığı önlemek adına seçilmiştir. Bu isim, aynı zamanda kapının baktığı yönü vurgular. Kapadokya Kapısı'nın 7 kilometre uzanan kent suru içerisindeki önemi, arkeolojik araştırma için seçilmesini kaçınılmaz kılmıştır. Buna ek olarak, yedi kent kapısı içinden özellikle bu kapının araştırma için seçilmesinde alanın lojistik önemi de etkili olmuştur. Kapının kerpiç yerine tümüyle taştan inşa edilmiş olması ve bazı bölümlerinin 5 metre yüksekliğe kadar korunmuş olması şaşırtıcıdır. Kazıların başlamasından önce kapı ve çevresinin yerli çobanlarca nasıl kullanıldığı da bu bölümde anlatılmaktadır. Arkeolojik yaklaşımımızın arka planındaki düşünceler ve arazi çalışmasının ilerleyişi ayrıca sunulmuştur. Kapının genel hatları, temizlik çalışmalarının başlamasından önce yüzeyde görülen kalıntıların yardımıyla plana dökülmüş olsa da bu aşamada yıkılmış yapının derinliğine dair tahmin yürütülememiştir. Bu bölümün son kısmında kazının kayıt sistemi tanıtılmıştır.

BÖLÜM 2. KAPADOKYA KAPISI KONUMUNUN CBS ANALİZİ

CBS analizleri iki konunun araştırılması için kullanılmıştır. Bunların ilki, Hitit Zippalanda'sı olduğu tahmin edilen Uşaklı Höyük ile Hitit Ankuwa'sı olduğu öngörülen Alişar Höyük arasındaki eski rota ile ilişkili olarak Kapadokya Kapısı'ndan geçen yolu değerlendirmektedir. Bu yolun, henüz kanıtlanamasa bile, Hitit menşeli olması muhtemeldir. Konuların ikincisi ise, Kapı Kulelerinin tepesine yerleştirilmiş muhafızların, gözlem yapan diğer kişilere oranla daha iyi bir görüş açısına sahip olup olmadıklarını keşfetmektir. Görüş açıklığı (viewshed) analizlerinin sonuçları, sur şevinin tabanından 12 metre yüksekte dahi, tepenin yamacından geçen bu yolun çok az bir kısmının görünür olduğuna işaret etmiştir.

BÖLÜM 3. KAPADOKYA KAPISI KAZILARI

Bu bölüm, cildin en önemli bölümüdür ve açığa çıkarılan tüm öğelerin ayrıntılı açıklamalarını içermektedir.

KAPADOKYA KAPISININ KONUMU

Giriş niteliğindeki bu bölüm, kent kapısının bulunduğu alanın topografyasını anlatırken, kapı temellerinin sert alttoprak veya granit anakayanın üzerinde oturan kil katmanının içine hangi yöntemle oturtulduğunu ortaya çıkaran sondajlarda elde edilen kanıtları sunmaktadır. Kapının tasarımı, su sızması, surun iki tarafında yer alan yapay havuzlar ve drenaj gereksinimi ile ilişkili olarak irdelenmiştir.

KAPADOKYA KAPISININ PLANI

Kapı üç bölümden oluşur. Kapının ön kısmı Güney, Orta ve Doğu olmak üzere üç kule içerir. Giriş koridoru, Güney ve Orta Kulelerin arasından geçerken, bir duvar Orta ve Doğu Kuleleri birleştirir. Surun ön yüzü taş şev ile güçlendirilmiştir. Orta ve Güney Kulelerin üst kısımları kumtaşı ile bezenmiştir. Kapının merkez kısmı dörtgen biçiminde geniş bir avlu içerir. Kent kapısının arka kısmı, Kuzey ve Batı Kulelerinden, önünde ve arkasında her biri ahşaptan çift kanatlı kapıları taşıyan iki fasattan ve zemini taş döşeli merkezi bir geçitten oluşur. Kapının kullanım sürecinde bu arka kesmin iç tarafına üç adet oda eklenmiştir. Kapının genişliği toplam 38,8 metre olup, önünden arkasına derinliği 34 metredir.

Şevin bir kısmı özgün yüksekliği olan 5 metreye kadar korunmuştur. Duvarlar granitten taş sıralarının aralarına yaklaşık her 1 metrede ahşap hatıllar yerleştirilerek inşa edilmiş, yüzleri çamur ile sıvanmıştır. Giriş geçidinin genişliği 6,6 metredir. Giriş geçidi ve avlunun zemini taş döşelidir. Arka kısımdaki merkezi geçit ve kapının arkasındaki cadde de taş döşeme mevcuttur. Kapı yapısında kültle ilişkili üç adet eser açığa çıkarılmıştır. Anikonik stel Orta Kulenin kuzeydoğu köşesinde, avluda yer alır. Basamaklı anıt üzerinde oturan yarı-ikonik stel yine avluda bulunur. Üzerinde kabartmalı yazıt bulunan bir kaidenin üstünde oturan, gerçek boyutlu, giysili kadın heykeli ise arka kesimin kuzey köşesinde, kuzey fasat ile Kuzey Kulenin birleştiği yerde yer alır.

Ahşap fasatların her ikisi de çift kanatlı bir kapıyı taşımıştır. Kapıların her biri 1,7 metre genişliğindedir ve bu genişlik eşiklerin derinliği ile eşleşmektedir. Arka kesimde bu fasatların arasından geçerken, sol tarafta iki oda (Oda 1 ve 2) sağ tarafta ise bir oda (Oda 3) yer alır. Bu son odanın inşası, heykel ve ona ait kaidenin görüntüsünü bloklamıştır. Bu bölümde kent kapısı planının simetrisi ve oranları tartışılmaktadır.

STRATİGRAFİ VE İNŞA EVRELERİ

Bölüm 3'ün bu kısmı, kapının özgün planı, yapı malzemeleri, inşa yöntemleri ve evreleri, taş işleme teknikleri ve ilişkili taşçı aletleri ile duvar örme konularını detaylı şekilde ortaya koymaktadır. Ana duvarlar kuru inşa tekniği ile taştan örülmüş, duvar yüzünde gözlemlendiği üzere küçük taşlarla araları doldurulan yatay hatıllar ile desteklenmiştir. Duvar yüzleri kabaca sıvanmış ve gerekli olduğu yerlerde yine ahşap hatıllar ile desteklenmiştir. Sur şevinin yüzü kiklop stili ile benzerlik gösterir. Hatıllar duvar yüzünden biraz geri çekilerek örülmüş ve çamur sıva ile gizlenmiştir. Fasatlar ahşaptandır; kapılarla ilişkili olduğu düşünülen demir parçalar içerme-ktedir. Yerleşim yeri dışından getirilen kumtaşı, muhtemelen köşelerde parapet oluşturacak şekilde, ön kulelerin üst kısmında kullanılmıştır. Yarı-ikonik idol ve üzerine oturduğu basamaklar, beyaz renkli wackestone taşına benzer taştan yontulmuştur. Orta Kulenin iç kısmında dökülmüş kerpicing varlığına dair çok güçlü olmayan deliller bulunmuştur.

SURLARIN TASARIMI

Kulelerin ve duvarların gerçekte ne kadar yüksek olduğunu kestirmek kolay değildir. Yapının, şu anki yüksekliğinin iki katı olduğu düşünülürse, şevin 10 metre olması gereklidir ve ön kuleler birkaç metre daha yükseltilmiş olabilir. Zeminin yukarı doğru eğimli olmasından ötürü, ön kulelerin çok yüksek olmadığı varsayılabilir. Duvarın üst tarafına erişimi sağlayabilecek basamaklar için ise hiçbir kanıt bulunmamıştır.

MERKEZ VE KUZAY KULELERİNİN İNŞASI

Bu bölümde, kulelere ait belgeler ile kapı avlusunda açılan Açma TR13'ten elde edilen stratigrafik tabakalaşma sunulmaktadır. Temel sonuçlar arasında, ilk olarak avludaki zemin döşemesinin ikincil kullanım olduğu, ikinci olarak duvar yüzünü kaplayan çamur sıvanın yangından önce yüzeyden akarak avlu yüzeyinde biriktiği, ve son olarak da kapı yapısının sürekli olarak son derece temiz tutulduğu sayılabilir.

KAPADOKYA KAPISI ÖĞELERİNİN DETAYLI BETİMİ

Bu bölümde Kapadokya Kapısı'nın elemanları tarif edilmektedir. Yapı elemanları, öncelikle akaç olmak

üzere, dışarıdan içeriye sırasıyla tanıtılmaktadır; dolayısıyla bu tanıtımda akacı takiben Şev, Giriş Yolu, Avlu, Zemin Döşemeleri, Giriş Yolu ile Avludaki Yüzeyler ve Akaç, Arka Kesimdeki Fasatlar ve Kapılar, Arka Kesmin Zemin Döşemesi ve diğer üç oda gelir. Kireçtaşı heykel ve kumtaşı heykel kaidenin tarifi ile başlayan bölüm, son olarak kült eserlerin anlatımı ile tamamlanmaktadır. Yontu eserlerin kataloğu Bölüm 5'te sunulmaktadır; burada kaidenin, Oda 3'ten sonra ve olasılıkla kapı yapısının tamamlanmasından hemen sonra inşa edildiği ifade edilmektedir. Heykelin görüntüsünün ne zaman ve hangi nedenlerle bloklandığı bilinmemektedir.

Basamaklı anıt ve yarı-ikonik idol, kapı yapısının nispeten daha geç eklentileri gibi görünmektedir. Anıt, kapı avlusunun tam karşısında yer alır ancak giriş geçidine bakmamaktadır. Anıtın küçük basamakları bir üst kata tırmanmak için tasarlanmamıştır. Sunulara dair herhangi bir ize rastlanmamıştır. İdolün, avlu çevresinde yüksek duvarlar ve kuleler ile çevrili olması, herhangi bir astronomik düzene sahip olma ihtimalini ortadan kaldırmaktadır. Bu bölümde, basamaklı anıt ve idolün, ahşap bir niş ile korunmuş olabileceğine dair kanıtlar tartışılırken; böyle bir nişin çift beşik çatıya sahip olabileceği ve zemin döşemesinin hemen yakınında bulunan fenestre demirin de bununla ilişkili olabileceği önerilmektedir. İdolün ahşap kapılar arkasında gizli tutulma ihtimali de gündeme getirilmiştir. Son olarak anikonik stel anlatılmıştır. Orta Kulenin iç yüzüne yaslı olacak şekilde taş zemin döşemesine oturtulmuş stel cilalıdır; buradan geçen sayısız insanın dokunmasıyla bu parlak halini almış olması olasıdır.

BURÇ

Küçük bir burç, kapı yapısının güneyinde, şehir duvarındaki keskin dönüşten yaklaşık 28 metre ötede sura eklemlenmiştir. Bu yapının işlevi kesin değildir; ancak yüzeyde açığa çıkan bir anakaya parçasının üzerine inşa edildiği önerilmektedir.

GÜNEY KULENİN ÖNÜNDEKİ YAPI

Kentin yıkımından önce, Güney Kulenin ön tarafına bir hayvan barınağı inşa edilmiştir. Bu yapının, şehir surlarının görüntüsünü herhangi bir engelden uzaklaştırmak için özel bir çaba gösterilmediğine işaret etmek dışında bir önemi yoktur.

BÖLÜM 4. KAPADOKYA KAPISI: MİMARİ BELGELEME, KONSERVASYON VE ÇEVRESEL ETKİLERİN DENETLENMESİ

Kapadokya Kapısı'nın koruması ve kısmi restorasyonu büyük zorluklar teşkil etmiştir. Bu bölüm, karşılaşılan sorunları ve buna bağlı olarak izlenen restorasyon ilkelerini incelemektedir. Bölümde, yüzeyde görülen kalıntıların ilk koruma çalışmalarından, 2011'deki mevcut projenin tamamlanmasına dek projenin tarihçesi, tamamlanan çalışmalara ait detaylar da sunularak anlatılmaktadır. Geleceğe yönelik olarak, eğer Kapadokya Kapısının uzun dönemli korunması hedef alınır ise, ek bakım ve konservasyon çalışmalarının gerekli olacağı belirtilmektedir.

BÖLÜM 5. HEYKEL, İDOL VE STEL

Bu bölümün ilk kısmı olan Kazı, Belgeleme, Konservasyon ve Teşhir, kültle ilişkili üç adet eseri özetlemektedir. Bu eserlerin tümü özgün yerlerinde bulunmuştur. İlki, parçalanmış durumdaki yumuşak beyaz kireçtaşından bir heykeldir; bu heykel, üzerine iki sfenksin yontulduğu kumtaşından geniş bir kaide üzerinde oturmaktadır. Bu kaide, ön fasat kapılarının merkezine bakacak şekilde, 3 No.lu odanın kuzey köşesine çapraz olarak yerleştirilmiştir. İkincisi Frig tipinde anikonik bir idoldür; kuzey fasat ile Kuzey Kulenin birleşerek oluşturduğu köşedeki basamaklı anıt üstüne oturmaktadır. Üçüncüsü, Orta Kulenin yanındaki anikonik steldir. Sfenks bloğu, idol ve stel şu an Yozgat Müzesi'ndedir; bunlara ait diğer parçalar Kerkenes Kazı Deposu'nda yer almaktadır.

Yanmış kapının çökmesi ve devamında bozulması, *Toprak Altında Kalma Süreci* başlığı altında tarif edilmiştir. Kültle ilişkili bu eserlerin hepsi kapı yapısı çöktüğünde özgün yerinde olmalıdır. Çökme olayı, heykel ve idolu kısmen toprak altında bırakmıştır. Heykelin geri kalanının kaybolmasından, erozyon sorumludur. Kapı yapısını etkileyen daha geç tarihli tek faaliyet, olasılıkla Hellenistik Dönem'e ait tümülüslerin inşasıdır. Bundan sonraki bölüm başlıkları ise *Kaide ve Heykelin Kazısı*, *Kaide ve Heykelin Belgelenmesi*, *Yarı-ikonik İdolün Kaldırılması ve Restorasyonu* ile *Aikonik Stelin Kaldırılmasıdır*.

KABARTMALI HEYKEL: KARŞILIKLI OTURAN ÇİFT SFENSKLİ KUMTAŞI KAİDE

Bloğun betimi ardından, insan başlı, aslan gövdeli, kanatlı sfenkslerin duruşu ve pozisyonunun tarifi gelmektedir. Sfenksler profilden resmedilmiştir; başları önde, kuyrukları arka ayakların arasında, kıvrılmış vaziyette karşılıklı oturmaktadır. Kırık parçaların onarımı esnasında, sfenkslerin ön kollarının, düz bir çıkıntı üzerinde duran heykeli, aşağıdan desteklemiş gibi yukarı kaldırdıkları önerilmiştir. Bu kısmı takiben *Saç ve Yüz Parçaları*, *Kanatlar*, *Yele ve Tüy Uçları* ile *Bacaklar*, *Pençeler* ve *Kuyruklar* detaylı olarak betimlenmiştir. Sfenkslerin *Cinsiyeti* belirsizdir. Bölümün tartışma kısmında bu sfenksler, Dağlık Frigya örnekleri, Geç-Hitit yontuları, Yeni Asur Dönemi fildişi eserleri ve Batı Yunan sanatından örnekler ile karşılaştırma yapılarak daha geniş çerçevede değerlendirilmeye çalışılmış; ancak henüz gerçek bir paralel bulunamamıştır.

TAM PLASTİK YONTU: GERÇEK- BOYUTLARDAN HEYKEL

Bu heykelin yalnızca parçaları korunagelmiştir. Heykel, Eosen Dönem'e ait kireçtaşından yontulmuştur. Heykel birkaç bin parçadan oluşmakta ve bunlardan olasılıkla bini geçkini yontu izleri taşımaktadır. Bu parçaların birçoğu başparmak tırnağından daha küçüktür. Buna ek olarak, heykelin gövdesine ait olabilecek tanımlanamamış birçok parça bulunmuştur. Parçaların korunmuşluk dereceleri oldukça farklıdır; kimi çok iyi, kimi çok kötü durumdadır. Bu değişkenlik, hem çökme sonrası asitli yeraltı suyuna maruz kalma ve yanmışlık derecelerine, hem de çöküntü esnasında heykelin hangi kısımlarının kırılarak parçalandığına bağlıdır. Heykelin, yontu kaidesinin merkezindeki kare biçimli derin zıvana yuvasına oturmasını sağlayan zıvanası korunmuştur, ancak heykelin yerinde yontulmuş olması ihtimal dışı görünmektedir.

HEYKEL PARÇALARI KATALOĞU

Heykelin her parçası bir harf ile tanımlanmıştır. C ile işaretlenmiş bir parça, pilili giysi ya da kumaşa tutturulmuş, Frig tipinde üç fibulanın betimini koruması bakımından özel önem taşır. Parçanın yuvarlak profili, fibulanın çok yüksek ihtimalle yana doğru dökümlenen giysiyi sol göğsün üzerinde topladığına işaret etmektedir, ki bu durumda bu

parça, insan formunda bir dişinin gerçek ölçülerindeki heykelinin merkezine denk gelir. Tanımlanan diğer parçalar arasında pilili kumaş ve olası saç örgüsü betimleri yer alır. Pergel ile çizilmiş pul deseni içeren diğer parçaların, heykelin yanında duran bir çift aslana ait olma ihtimali vardır.

TARTIŞMA (İRDELEME)

Frig tipindeki üç fibulanın betimi, heykelin gerçek ölçülerde olduğunu doğrulamaktadır. Benzer şekilde, kadiye yontulmuş sfenklere yüzleri de gerçek ölçülerdedir. Doğrusu, heykelin kapı yapısının arka kesminin kuzey köşesindeki yeri, mimarinin ölçeği ile uyumlu bir eserin yapımını gerektirmiş olmalıdır. Heykelin konusu giysili bir figürdür. Pilili örtünün gerçek ölçülerde bir elbise ya da etek olduğu tahmininin doğru olması halinde, figür muhtemelen insan formunda olacaktır. Heykelin yakın paralelleri yoktur; dönemin tam plastik yada $\frac{3}{4}$ plastik heykelleri üzerinde Frig tipinde fibula bulunmaz; yine de Boğazköy'de bulunan, yanında çocuk müzisyenler yer alan tanrıça heykeli gövdesinin büyük ölçüde restore edildiği göz önüne alınırsa, figürün bu çeşit süs öğeleri taktığı düşünülebilir. Yine, MÖ geç yedinci ya da erken altıncı yüzyılın heykelleri arasında, pilili kumaş giyen figürün bir bacağına öne atılmış şekilde sade kumaş kıvrımları ile örtülmüş olduğu bir örnek daha yoktur. Heykelin muhtemelen %10 kadarlık kısmını oluşturan korunagelmiş parçalar arasında kemer, püskül veya ayak parçaları yoktur ve yüzü ya da polosu temsil eden parçalar bulunmamaktadır.

İşlenmiş parçaların büyük çoğunluğu iki farklı ölçü kullanılarak pergel ile yontulmuştur. Bazı parçalar, heykelin bacak ve göğüs kısmına ait gözükmektedir; bu durumda figürün ön ayakları üzerinde çömelere duran bir ya da daha fazla sayıda yırtıcı hayvan ile beraber ayakta durduğunu hayal etmek zor değildir. Pul desenlerinin kürkü temsil etmesi halinde, yırtıcı hayvanın aslan olması muhtemeldir; ancak kuş ya da farklı hayvanların bileşiminden oluşan bir yaratık olması da mümkündür. Heykelin tam plastikten ziyade, arka kısmı düz, $\frac{3}{4}$ plastik heykel olması daha olası gözükmektedir. C parçasının giysili bir kadının göğsünü temsil ettiği tahminimiz doğruysa, heykelin ana temasının gerçek boyutlu bir kadın figürü olduğu şüphe götürmezdir;

ki bu koşullarda heykelin tanımı için en uygun aday bir Frig tanrıçası olacaktır.

Yüzey İşlemeleri, Kireçtaşı, Fibulalar ve Pul Desenli Parçaların detaylı açıklamalarını, 3 No.lu Oda Hakkında Genel Görüşler bölümü takip etmektedir. Heykelin olası işlevi tartışılırken, Frig dünyasına özgü doğası vurgulanmıştır. Bu heykelin Frig tanrıçası Kibele olarak tanımlanmasını gerekçeleri açıklanmaktadır; ancak, örneğin yerel bir koruyucu olma ihtimali gibi, başka olasıklar da ortaya konmuştur. Yerine ilk yerleştirildiğinde heykelin üzerinin örtülü olması olasılık dahilindedir; çünkü yapıldığı taşın, bölgenin sert iklimine karşı korunmuş olması gereklidir. Heykelin, 3 No.lu odanın inşası esnasında neden duvarlar arkasında bırakıldığı anlaşılammıştır. Bölüm sonunda, yerel bir yontu ekolünün varlığı önerilmiştir.

YARI-İKONİK İDOL VE BASAMAKLI ANIT

Bu bölümde, basamaklı anıtın en üst basamağı ile yarı-ikonik idolün detaylı betimini başka yerlerde bulunmuş benzer idollerin tartışması takip eder. Kerkenes idolü bir dizi basamağın üzerine yerleştirilmiş olarak bulunan tek idoldür; fakat kaya oyma örnekleri bilinmektedir ve buna benzer birçok idol bulunur. Olası bir diğer idole ait parçalar da yine bu bölümde tarif edilmektedir.

ANİKONİK GRANİT STEL

Stelin betimi ve tartışması dahilinde, stelin kente giren insanlardan çok kentten çıkanları hedef almış olduğu öne sürülmüştür.

BÖLÜM 6. GRAFFİTİLİ BLOKLAR

Altıncı bölümde Susanne Berndt-Ersöz, kapı ön geçidinin köşe duvarına yerleştirilmiş iki adet kumtaşı bloğun üzerine kazınmış graffitileri tanımlamaktadır. Bunların arasında, birisi basamaklı anıt üzerinde oturana benzer, diğeri yuvarlak başlı olmak üzere iki çeşit yarı-ikonik idol, çok sayıda anikonik stel ve diğer semboller yer alır. Alfabetik karakterlere rastlanmamıştır. Sonuç kısmında Kerkenes'te bulunan graffitiler, Gordion ve Midas Şehri'nde bulunanlar ile karşılaştırılmıştır.

BÖLÜM 7. KAPADOKYA KAPISI YIKIM TABAKASINDA BULUNAN İNSAN İSKELETİ KALINTILARI

Bu bölümde Yılmaz Selim Erdal, şehir yangını esnasında kapının çöküşü esnasında can veren iki bireyi rapor etmektedir. Kapadokya Kapısının ön geçidinde bulunan iskeletler erişkin bir kadın ve bir erkeğe aittir. Kapı yapısının taş moloz ve ahşap kalasları altındaki yanık toprak üzerinde yatar pozisyonda bulunan iskelet kalıntıları, arkeolojik kazıların nadir örneklerindedir. Bütün veriler birlikte değerlendirildiğinde, bireylerin ölüm sebebi Kapadokya Kapısının girişindeki batı duvarının yangın sonucu çöküşü olarak önerilebilir. Kalıntılar parçacıdır. İskeletlerin parçaları, toprak özellikleri ve ölüm sonrası yıkım koşullarına bağlı olarak eksik bulunmuş olsa da, bireylerin ölümleri sırasında bir travmaya uğradıkları gözlenmiştir. Dahası, bireylerin yangın esnasında oluşan dumanı fazla solumaları nedeniyle ölmüş olmaları da muhtemeldir; ancak gerçek ölüm nedenlerine dair kanıtları bireylerin iskelet kalıntılarında bulmak, kemiklerin özellikle Kerkenes'te iyi korunmamalarından ötürü mümkün olmamıştır.

Yangından etkilenen kadın birey, bir eliyle yüzünü korur şekilde, sol eli vücudunun hemen altında yüzüstü düşmüş halde bulunmuştur; sağ bacağı uzanır, sol kaval kemiği dikey durumdadır. Duvarın çökmesiyle düşen yanık kalas/hatıllar bu bireyin vücudunun arka kısmını ciddi şekilde etkilemiştir; ancak vücudun ön kısmındaki ve hemen altındaki bölgelerde sıcaklık 300 dereceden az olmalıdır. Öte yandan, taşların ve ahşap kalasların vücudun hemen üstünde bulunduğu yerlerde sıcaklık 650 dereceye kadar yükselmiştir. Bu nedenle, kemikler siyah, koyu ve açık griye dönmüştür. Sol kaval kemiğinde sıcaklığın 950 derece veya daha fazlasına çıkmış olması mümkündür. Kaval kemiğinin mavimsi beyaz rengi, sadece bazı kemiklerin çatlak ve çekintili durumu ve toprak yüzeyinin sertliği, ya bu yangın olayının örneğin bir iki saat gibi çok uzun süreli bir olay olmadığına, ya da yüksek ısının çöken duvarın altında kalan bedenin her yerine ulaşmadığına işaret etmektedir.

Her ne kadar kanıtları kemiklerde bulunamasa da, kapı avlusundaki birey, tahripkar yangınla çöken yapının altında kalarak hayatını kaybetmiş gibi gözükmektedir. İskeletin üzerinde bulunan duvar çöküntüsü, bireyi yangının doğrudan etkilerinden korumuş olabilir; ancak bu yanan çöküntünün,

bireyin vücudunu ezerek ve/ya dumandan zehirlenmesine neden olarak ölümüne sebebiyet vermiş olması da mümkündür.

BÖLÜM 8. ESERLER

Kapadokya Kapısı kazılarında bulunan tüm eserler kataloglanmıştır, ancak sayıları çok azdır. Savaş aletleri arasında bakır alaşımdan kovanlı muhtelif ok uçları ve demirden mahmuzlu ok uçları yer alır. Bu aletlerin hiçbiri kapı yapısının zorla ele geçirildiğine işaret edecek şekilde özgün yerlerinde bulunmamıştır.

Altın ve elektrumdun yapılmış çok kaliteli kişisel süs eşyası şehrin iç tarafında, kapının hemen arkasında zemin döşemesi üzerinde bulunmuştur. Eser, kafes işi altın ve elektrum ile, sac metal, burçulu ve boncuklu teller ve küçük taneciklerden oluşmaktadır. Tomurcuklu çiçek ve yaprak bezemesi, dört küçük yuvardan oluşan piramit biçimli goncalar ile çevrelenmiştir. Eser bütündür, ezilmiş olsa da mükemmel durumdadır. Eserin Lidya'da üretilmiş olması mümkündür.

Diğer bakır alaşımı kişisel süs eşyaları arasında Frig tipinde iki fibula, birkaç firkete, saç iğnesi ve sarmal halka yer alır. Fritten tek bir boncuk Kerkenes'te ve daha geniş ölçekte Frigya'da boncukların yokluğunun altını çizmektedir. Aletler arasında ise yuvarlak biçimli, metal bir ağırlık, bir adet bıçak sırtı ve bir dizi ağırşak bulunmaktadır.

Kerkenes'te mimaride kullanılan demir sayısı oldukça fazladır. Kapadokya Kapısında açığa çıkarılan önemli demirler arasında bir adet fenestre bantlı ve üç adet düz bantlı demir yer alır ki üzerinde çivilerinin bulunduğu sonrakiler kapılardan gelmektedir. Diğer çivi ve demir parçaları kataloğu tamamlamaktadır.

BÖLÜM 9. DEMİR ÇAĞI SERAMIĞI

Kapı yapılarında genel olarak beklendiği üzere, burada da çok az sayıda çanak çömlek bulunmuştur. Bunların arasında üç parça boyalı panelleri ile Alişar V seramiğine paralellik göstermektedir ve bölgenin tipik seramikleri arasındadır. Tek renkli mallar ve pişirme kapları Gordion'daki Orta Frig Dönemi'nin tipik seramiklerine benzer. İnsize bezemeli bir tescik ve çok yüzlü kabartma bezemeli bir seramik

parçası dikkate değerdir. İki adet seramik parçası alfabetik olmayan graffito içermektedir; bir tanesi fırınlanmadan önce, diğeri ise tamamlanmış kabın üzerine kazınmıştır.

BÖLÜM 10. DEMİR ÇAĞI TABAKALARINDAN HAYVAN KEMİKLERİ

Evangelia Ioannidou-Pişkin hayvan kemiklerini etüt etmiştir. Kemikler sayıca azdır, ve iyi korunagelmemiştir; yine de Kerkenes'te hayvanların hayatına dair bilgiler sunmaktadır. Kemiklerin bazıları, at ve köpek kemikleri gibi, kapıya başka yerden gelmiş olmalıdır; ancak kemiklerin çoğu kapı yapısında tüketilen öğünleri temsil eder. TR04 Açmasında, üç adet sığır ve bir adet koyun kafatasından oluşan, tahminen özel bir depo- zıt yer alır. Muhtemelen bir keçiye ait bir diğer kafatası, parçalanmış olarak TR23 Açmasında açığa çıkmıştır. Bunun yanında TR25 açmasında tek se- ferde tüketilmiş bir yemeğin kalıntıları bulunur; ancak TR24 açmasında bir noktada yoğunlanmış ke- miklerin, birçok öğünün atıklarını oluşturması yük- sek ihtimaldir. Kemiklerin bir çoğu, yaklaşık olarak eşit oranda koyun ve keçi türüne aitken, domuz ve sığır küçük bir oran ile temsil edilmektedir. Besin düzenine yer yer kuş türleri ve yaban domuzu ile yaban tavşanı gibi avlanan hayvanların tüketilmesi ile çeşitlilik katılmıştır.

BÖLÜM 11. ERKEN BİZANS DÖNEMİ KALINTILARI

Bu bölümde, şehir içinde kapı yapısının arka tarafındaki Bizans yapı kompleksi anlatılmaktadır. Bu yapı, yüzeyde görülen kalıntılar temel alınarak belgelenmiş, ancak kazılmamıştır. Bizans Dönemi'nde kapı yapısı yeniden kullanılmamış gibi gözükmektedir.

BÖLÜM 12. YORUM

Sonuç bölümü Kapadokya Kapısı'na dair yorumları içermektedir ancak büyük ölçüde detay içeren bir çalışma değildir. Kapı, Kerkenes ve diğer altı kent kapısına dair bilinenler ve Saray Kompleksinin Anıtsal Girişi ile kıyaslanmaktadır. Bu bölümde kapının kente giriş ve çıkışı sağlamasının dışındaki diğer işlevlerine yönelik görüşler sunulmuştur. Taş surların çevresinde bir açıklık olarak daimi bir zayıf nokta oluştursa da, Kapadokya Kapısı anıtsallığı ve askeri tasarımı sayesinde bir yandan fiziksel ko- ruma sağlarken, kült ile ilişkili tasvirlerin alana yerleştirilmesi ile manevi korumayı da beraberinde getirmiştir. Kamusal diğer faaliyetlere dair herhangi bir iz bulunmamıştır.

Kapının tasarımı, inşası ve bakımı üzerine düşünülmüştür. Tasarımı Frig tipindedir. İnşası için gereken iş gücü ve doğal kaynaklar hakkında fikir yürütülebilir. Anadolu'nun Kapadokya Kapısı'na benzer diğer anıtsal kapıları, örneğin Boğazköy, Gor- dion, Midas Şehir, Delikli Taş ile Geç-Hitit kapıları ve son olarak Sardis sur kapısı sunulmuştur. Heykel ve kült ile ilişkili diğer eserler hakkında yorumlar öne sürülmüştür. Sonuç tespitleri genele yöneliktir ve Kerkenes'te daha birçok beklenmedik keşfin bizleri beklediği gözlemi ile sonlandırılmıştır.

APPENDIX 1

CONCORDANCE OF SITE INVENTORY AND IDENTIFICATION NUMBERS

<i>K No.</i>	<i>ID No.</i>	<i>Description</i>	<i>Chapter; Plate</i>
K99.083	99CAPPU00met01	Point, iron	ch. 8; pl.171a
K00.099	00CT50U01met01	Bilobate arrowhead, copper alloy	ch. 8; pl. 156a
K00.100	00CT51U01met01	Fibula, copper alloy	ch. 8; pl. 159a
K00.102	00CT11U01met01	Dome-headed tack, copper alloy	ch. 8; pl. 160i
K00.105	00CT50U01met02	Pin, copper alloy	ch. 8; pl. 160a
K00.117	00CT50U02met01	Tweezers, copper alloy	ch. 8; pl. 160h
K00.122	00CAPPU00met01	Bilobate arrowhead, copper alloy	ch. 8; pl. 156b
K02.124	02TR03U11met01	Fibula, copper alloy	ch. 8; pl. 159b
K02.141	02TR04U04met01	Tack, iron	ch. 8; pl. 173a
K02.144	02TR03U05pot01	Juglet with incised decoration	ch. 9; pl. 179
K07.223	03TR13U08stn01	Semi-iconic idol, stone	ch. 5; pls. 138–139
K07.224	04TR13U08stn02	Top step for K07.223, stone	ch. 5; pls. 138–140a
K07.225	99CAPPU00stn01	Upper block with graffiti, sandstone	ch. 6; pls. 142–145
K07.226	99CAPPU00stn02	Lower block with graffiti, sandstone	ch. 6; pls. 142, 146–148
K09.234	09SURFU00met01	Follis of Maurice Tiberius (AD 582–602)	ch. 11; pl. 185a
K09.235	09TR22U11met01	Bilobate arrowhead, copper alloy	ch. 8; pl. 156e
K09.236	09TR12U09met01	Bilobate arrowhead, copper alloy	ch. 8; pl. 156c
K11.244	11TR23U11met01	Trilobate arrowhead, copper alloy	ch. 8; pl. 157a
K11.245	11TR23U08met01	Bilobate arrowhead, copper alloy	ch. 8; pl. 156f
K11.246	11TR24U20met01	Hairgrip, copper alloy	ch. 8; pl. 159f
K11.249	11TR23U56stn01	Sphinx statue base, sandstone	ch. 5; pls. 103–119
K11.250	11TR23U22stn01	Life-sized statue, soft limestone	ch. 5; pls. 120–137
K11.251	11TR23U48met01	Openwork ornament, gold and electrum	ch. 8; pl. 158
K11.252	11TR24U07met01	Band, iron	ch. 8; pls. 165a, 166–167
K11.253	11TR24U07met02	Band, iron	ch. 8; pl. 165
K11.254	10TR13U14met01	Fenestrated band, iron	ch. 8; pls. 163–164

<i>K No.</i>	<i>ID No.</i>	<i>Description</i>	<i>Chapter; Plate</i>
K11.255	11TR23U33met01	Trilobate arrowhead, copper alloy	ch. 8; pl. 157c
K11.256	11TR30U10met02	Trilobate arrowhead, copper alloy	ch. 8; pl. 157b
K11.258	11TR23U09met02	Tanged arrowhead, iron	ch. 8; pl. 157d
K11.259	11TR23U09met04	Tanged arrowhead, iron	ch. 8; pl. 157e
K11.260	11TR23U11met02	Tanged arrowhead, iron	ch. 8; pl. 157f
K11.261	11TR23U22met01	Hairgrip, copper alloy	ch. 8; pl. 159d
K11.262	11TR24U21met01	Hairgrip, copper alloy	ch. 8; pl. 159g
K11.263	11TR24U22met03	Spiral ring, copper alloy	ch. 8; pl. 160f
K11.264	11TR24U21met02	Weight, metal alloy	ch. 8; pl. 161c
K11.265	11TR24U17met01	Dome-headed tack, copper alloy	ch. 8; pl. 160j
K11.266	11TR24U11met02	Tack, copper alloy	ch. 8; pl. 160k
K11.267	11TR23U09met03	Dome-headed nail, iron	ch. 8; pl. 170e
K11.268	11TR24U07met05	Dome-headed nail, iron	ch. 8; pl. 169d
K11.269	11TR24U07met06	Dome-headed nail, iron	ch. 8; pl. 169c
K11.270	11TR24U07met07	Dome-headed nail, iron	ch. 8; pl. 169b
K11.271	11TR24U07met08	Dome-headed nail, iron	ch. 8; pl. 169a
K11.272	11TR24U04met01	Dome-headed nail, iron	ch. 8; pl. 170a
K11.273	11TR23U22pob01	Biconical whorl, baked clay	ch. 8; pl. 162c
K11.274	11TR24U17pot01	Sherd with graffito	ch. 9; pl. 178e
K11.275	11TR24U25pot01	Sherd with graffito	ch. 9; pl. 178d
K11.276	11TR24U19pot01	Miniature pot, ceramic	ch. 9; pl. 178c
K11.277	11TR24U19pot02	Miniature pot, ceramic	ch. 9; pl. 178b
K11.278	09TR22U17stn01	Aniconic stela, granite	ch. 5; pl. 141

APPENDIX 2

CONCORDANCE OF IDENTIFICATION NUMBERS ORDERED BY TRENCH, THEN BY UNIT

<i>ID No.</i>	<i>K No.</i>	<i>Description</i>	<i>Chapter; Plate</i>
Surface			
99CAPPU00met01	K99.083	Point, iron	ch. 8; pl. 171a
99CAPPU00stn01	K07.225	Upper block with graffiti, sandstone	ch. 6; pls. 142–145
99CAPPU00stn02	K07.226	Lower block with graffiti, sandstone	ch. 6; pls. 142, 146–148
00CAPPU00met01	K00.122	Arrowhead, copper alloy	ch. 8; pl. 156b
09CAPPU00met01	—	Hairgrip, copper alloy	ch. 8; pl. 159c
07SURFU00stn01	—	Semi-iconic idol fragment(?), stone	ch. 5; pl. 138
09SURFU00met01	K09.234	Follis of Maurice Tiberius (AD 582–602)	ch. 11; pl. 185a
CT11			
00CT11U01met01	K00.102	Dome-headed tack, copper alloy	ch. 8; pl. 160i
CT50			
00CT50U01met01	K00.099	Bilobate arrowhead, copper alloy	ch. 8; pl. 156a
00CT50U01met02	K00.105	Pin, copper alloy	ch. 8; pl. 160a
00CT50U02met01	K00.117	Tweezers, copper alloy	ch. 8; pl. 160h
00CT50U02pot01	—	Painted sherd	ch. 9; pl. 180b
00CT50U02pot02	—	Large jar, sherd	ch. 9; pl. 180c
CT51			
00CT51U01met01	K00.100	Fibula, copper alloy	ch. 8; pl. 159a
TRO3			
02TR03U03met01	—	Tack, iron	ch. 8; not illustrated
02TR03U05pot01	K02.144	Juglet with incised decoration	ch. 9; pl. 179
02TR03U11met01	K02.124	Fibula, copper alloy	ch. 8; pl. 159b
02TR03U11met02	—	Sheet fragment, copper alloy	ch. 8; pl. 161a
TRO4			
02TR04U02met01	—	Tack, iron	ch. 8; not illustrated
02TR04U03pot01	—	Faceted black polished sherd	ch. 9; pl. 180a
02TR04U04met01	K02.141	Tack, iron	ch. 8; pl. 173a

<i>ID No.</i>	<i>K No.</i>	<i>Description</i>	<i>Chapter; Plate</i>
02TR04U04met02	—	Pin shaft fragment, copper alloy	ch. 8; not illustrated
TR12			
09TR12U09met01	K09.236	Bilobate arrowhead, copper alloy	ch. 8; pl. 156c
TR13			
03TR13U08stn01	K07.223	Semi-iconic idol, stone	ch. 5; pls. 138–139
04TR13U08stn02	K07.224	Top step for K07.223, stone	ch. 5; pls. 138–140a
10TR13U14met01	K11.254	Fenestrated band, iron	ch. 8; pls. 163–164
10TR13U14met02	—	Sheet copper alloy with wood adhering	ch. 8; not illustrated
10TR13U15skl01	—	Human skeleton SK3	ch. 7; pls. 154c–155
10TR13U16met01	—	Arrowhead, socketed	ch. 8; pl. 156d
TR22			
09TR22U01pob01	—	Whorl fragment, baked clay	ch. 8; pl. 162d
10TR22U01pot01	—	Patterned crater sherd	ch. 8; pl. 174b
09TR22U08met01	—	Rod, iron	ch. 8; pl. 172c
09TR22U11met01	K09.235	Bilobate arrowhead, copper alloy	ch. 8; pl. 156e
09TR22U17stn01	K11.278	Aniconic stela, granite	ch. 5; pl. 141
09TR22U20met01	—	Fragment, iron	ch. 8; not illustrated
09TR22U20skl01	—	Human skeleton SK2	ch. 7; pls. 149–154
TR23			
11TR23U08met01	K11.245	Bilobate arrowhead, copper alloy	ch. 8; pl. 156f
11TR23U09met01	—	Nail shank, iron	ch. 8; pl. 170g
11TR23U09met02	K11.258	Tanged arrowhead, iron	ch. 8; pl. 157d
11TR23U09met03	K11.267	Dome-headed nail, iron	ch. 8; pl. 170e
11TR23U09met04	K11.259	Tanged arrowhead, iron	ch. 8; pl. 157e
11TR23U09pob01	—	Whorl, baked clay	ch. 8; pl. 162a
11TR23U09pob02	—	Whorl fragment, baked clay	ch. 8; pl. 162b
11TR23U10gfa01	—	Bead fragment	ch. 8; pl. 160g
11TR23U10pot01	—	Sherds from juglet	ch. 9; not illustrated
11TR23U11met01	K11.244	Trilobate arrowhead, copper alloy	ch. 8; pl. 157a
11TR23U11met02	K11.260	Tanged arrowhead, iron	ch. 8; pl. 157f
11TR23U11wdn01	—	Arrow shaft fragment, wood	ch. 8; not illustrated
11TR23U12met01	—	Ferrule with nail, iron	ch. 8; pl. 160l
11TR23U12met02	—	Nail shank, iron	ch. 8; pl. 170d
11TR23U20pot01	—	Miniature jar	ch. 9; pl. 178a
11TR23U20pot02	—	Small black polished jar fragments	ch. 9; not illustrated
11TR23U20wdn01	—	Wood fragment	ch. 8; not illustrated
11TR23U21met01	—	Sheet metal	ch. 8; pl. 161b

<i>ID No.</i>	<i>K No.</i>	<i>Description</i>	<i>Chapter; Plate</i>
11TR23U22met01	K11.261	Hairgrip, copper alloy	ch. 8; pl. 159d
11TR23U22pob01	K11.273	Biconical whorl, baked clay	ch. 8; pl. 162c
11TR23U22stn01	K11.250	Life-sized statue, soft limestone	ch. 5; pls. 120–137
11TR23U24met01	—	Dome-headed nail, iron	ch. 8; pl. 170c
11TR23U24met02	—	Dome-headed nail, iron	ch. 8; pl. 170b
11TR23U31met01	—	Sheet, lead	ch. 8; pl. 173b
11TR23U31met02	—	Melted lead	ch. 8; pl. 173c
11TR23U31met03	—	Nail shank fragment, iron	ch. 5; ch. 8; pl. 170h
11TR23U33met01	K11.255	Trilobate arrowhead, copper alloy	ch. 8; pl. 157c
11TR23U33met02	—	Fragments, iron	ch. 8; not illustrated
11TR23U36met01	—	Hairgrip, part, copper alloy	ch. 8; pl. 159i
11TR23U48met01	K11.251	Openwork ornament, gold and electrum	ch. 8; pl. 158
11TR23U56stn01	K11.249	Sphinx statue base, sandstone	ch. 5; pls. 103–119
TR24			
11TR24U03pot01	—	Patterned jug sherds	ch. 9; pl. 174a
11TR24U03pot02	—	Cooking pot sherds	ch. 9; pl. 177d
11TR24U04met01	K11.272	Dome-headed nail, iron	ch. 8; pl. 170a
11TR24U04met02	—	Loop fragment, iron	ch. 8; pl. 172b
11TR24U04met03	—	Nail, iron	ch. 8; pl. 170f
11TR24U04met04	—	Sheet with nails, iron	ch. 8; pl. 172a
11TR24U04pot01	—	Bowl sherd	ch. 9; pl. 177a
11TR24U04pot02	—	Patterned crater sherds	ch. 9; pl. 176
11TR24U04pot03	—	Cooking pot	ch. 9; pl. 177c
11TR24U06met01	—	Shaft fragment, copper alloy	ch. 8; not illustrated
11TR24U07met01	K11.252	Band, iron	ch. 8; pls. 165a, 166–67
11TR24U07met02	K11.253	Band, iron	ch. 8; pl. 165
11TR24U07met03	—	Band, iron	ch. 8; pl. 168
11TR24U07met04	—	Dome-headed nail fragment, iron	ch. 8; pl. 169e
11TR24U07met05	K11.268	Dome-headed nail, iron	ch. 8; pl. 169d
11TR24U07met06	K11.269	Dome-headed nail, iron	ch. 8; pl. 169c
11TR24U07met07	K11.270	Dome-headed nail, iron	ch. 8; pl. 169b
11TR24U07met08	K11.271	Dome-headed nail, iron	ch. 8; pl. 169a
11TR24U11met01	—	Sheet fragments, copper alloy	ch. 8; not illustrated
11TR24U11met02	K11.266	Tack, copper alloy	ch. 8; pl. 160k
11TR24U11met03	—	Sheet fragments, copper alloy	ch. 8; not illustrated
11TR24U11met04	—	Trilobate arrowhead fragment with wood,	ch. 8; not illustrated
11TR24U11met05	—	Sheet fragments, copper alloy	ch. 8; not illustrated
11TR24U11wdn01	—	Arrow shaft fragment 11TR24U11met04	ch. 8; not illustrated

<i>ID No.</i>	<i>K No.</i>	<i>Description</i>	<i>Chapter; Plate</i>
11TR24U15met01	—	Hairgrip fragments, copper alloy	ch. 9; pl. 159e
11TR24U15met02	—	Sheet fragments, copper alloy	ch. 8; not illustrated
11TR24U17met01	K11.265	Dome-headed tack, copper alloy	ch. 8; pl. 160j
11TR24U17pot01	K11.274	Sherd with graffito	ch. 9; pl. 178e
11TR24U18wdn01	—	Wood fragment	ch. 8; not illustrated
11TR24U19pot01	K11.276	Miniature pot, ceramic	ch. 9; pl. 178c
11TR24U19pot02	K11.277	Miniature pot, ceramic	ch. 9; pl. 178b
11TR24U20met01	K11.246	Hairgrip, copper alloy	ch. 8; pl. 159f
11TR24U20met02	—	Blade fragment, iron; <i>see</i> 11TR24U21met03	ch. 8; pl. 161d
11TR24U21met01	K11.262	Hairgrip, copper alloy	ch. 8; pl. 159g
11TR24U21met02	K11.264	Weight, metal alloy	ch. 8; pl. 161c
11TR24U21met03	—	Blade, iron; <i>see</i> 11TR24U20met02	ch. 8; pl. 161d
11TR24U22met03	K11.263	Spiral ring, copper alloy	ch. 8; pl. 160f
11TR24U22met04	—	Hairgrip fragments, copper alloy	ch. 8; pl. 159h
11TR24U22met05	—	Plate with nails, iron	ch. 8; pl. 171b
11TR24U22met06	—	Pin, copper alloy	ch. 8; pl. 160e
11TR24U22met07	—	Pin, copper alloy	ch. 8; pl. 160d
11TR24U22met08	—	Pin, copper alloy	ch. 8; pl. 160c
11TR24U25pot01	K11.275	Sherd with graffito	ch. 9; pl. 178d
11TR24U25pot02	—	Bowl sherd	ch. 9; pl. 177b
TR25			
09TR25U02pot01	—	Sherds from neck of spouted vessel	ch. 9; not illustrated
10TR25U12pot01	—	Shallow bowl sherd	ch. 8; pl. 175d
10TR25U12pot02	—	Shallow bowl sherd	ch. 8; pl. 175e
10TR25U12pot03	—	Cooking pot sherd	ch. 8; pl. 175a
10TR25U12pot04	—	Cooking pot sherd	ch. 8; pl. 175b
10TR25U12pot05	—	Cooking pot sherd	ch. 8; pl. 175b
TR30			
11TR30U02met01	—	Nail, iron	ch. 8; not illustrated
11TR30U10met01	—	Shank fragment, copper alloy	ch. 8; not illustrated
11TR30U10met02	K11.256	Trilobate arrowhead, copper alloy	ch. 8; pl. 157b

APPENDIX 3

CONCORDANCE OF TRENCHES

Concordance of Trenches from 1928 through 2011*

<i>Name</i>	<i>Code</i>	<i>Number</i>	<i>Year</i>	<i>Location</i>
Schmidt Test Trench	STT	1–14	1928	Varia
Test Trench	TT	15	1996	North Sector
Test Trench	TT	16	1996	Central Area, Two-Roomed Building
Test Trench	TT	17	1996	Palatial Complex
Test Trench	TT	18	1996	Central Area, East
Test Trench	TT	19	1996	South Sector, Stables
Test Trench	TT	20	1998	North Sector
Test Trench	TT	21	1998	North Sector
Test Trench	TT	22	2000	Palatial Complex
Test Trench	TT	23–25	2004	Transportation
Test Trench	TT	26–32	2007	Transportation
Test Trench	TT	33–38	2008	Transportation
Clearance Trench	CT	1	1999	Palatial Complex, Glacis Niche
Clearance Trench	CT	2	1999	Palatial Complex, South Glacis
Clearance Trench	CT	3	1999	Palatial Complex, South Glacis and Niche
Clearance Trench	CT	4	1999	Palatial Complex, South Glacis S Corner
Clearance Trench	CT	5	1999	Palatial Complex, South Glacis S End
Clearance Trench	CT	6	1999	Palatial Complex, South Glacis S End
Clearance Trench	CT	7	1999	Palatial Complex
Clearance Trench	CT	8	1999	Palatial Complex
Clearance Trench	CT	9	1999	Palatial Complex
Clearance Trench	CT	10	1999	Palatial Complex
Clearance Trench	CT	11	1999	Cappadocia Gate, Glacis N of buttress
Clearance Trench	CT	12	1999	Cappadocia Gate, Glacis at wall and buttress
Clearance Trench	CT	13	2000	Palatial Complex, Structures A–D
Clearance Trench	CT	14	2000	Palatial Complex

* Trenches excavated at the Cappadocia Gate are in gray. They are also listed separately at the end of this appendix.

EXCAVATIONS AT THE CAPPADOCIA GATE

<i>Name</i>	<i>Code</i>	<i>Number</i>	<i>Year</i>	<i>Location</i>
Clearance Trench	CT	15	2000	Palatial Complex, Structure C
Clearance Trench	CT	16	2000	Palatial Complex, Structures A-D
Clearance Trench	CT	17	2000	Palatial Complex
Clearance Trench	CT	18	2000	Palatial Complex, Structures A-D
Clearance Trench	CT	19	2000	Palatial Complex, Structures A-D
Clearance Trench	CT	20	2000	Palatial Complex, Structure B
Clearance Trench	CT	21	2000	Palatial Complex
Clearance Trench	CT	22	2000	Palatial Complex, Structures A-D
Clearance Trench	CT	23	2000	Palatial Complex, Structures A-D
Clearance Trench	CT	24	2000	Palatial Complex, Structures A-D
Clearance Trench	CT	25	2000	Palatial Complex
Clearance Trench	CT	26	2000	Palatial Complex
Clearance Trench	CT	27	2000	Palatial Complex
Clearance Trench	CT	30	2000	Palatial Complex, North Platform
Clearance Trench	CT	48	1999	Cappadocia Gate, Glacis at South Tower
Clearance Trench	CT	49	1999	Cappadocia Gate, front of Entrance Passage
Clearance Trench	CT	50	2000	Cappadocia Gate, Glacis at Middle and East Towers
Clearance Trench	CT	51	2000	Cappadocia Gate, Court
Clearance Trench	CT	52	2007	Cappadocia Gate, NW of South Tower
Trench	TR	1	2002	Palatial Complex, Structure B
Trench	TR	2	2002	Palatial Complex, Audience Hall
Trench	TR	3	2002	Cappadocia Gate, Entrance Passage
Trench	TR	4	2002	Cappadocia Gate, NW of North Tower
Trench	TR	5	2003	Palatial Complex, Ashlar Building
Trench	TR	6-10	2003	Central Area, Megarons
Trench	TR	11	2003	Palatial Complex, Monumental Entrance
Trench	TR	12	2003	Cappadocia Gate, Entrance Passage
Trench	TR	13	2007, 2009, 2010, 2011	Cappadocia Gate, NE side of Court
Trench	TR	14-21	2004, 2005	Palatial Complex, Monumental Entrance
Trench	TR	22	2009, 2010, 2011	Cappadocia Gate, Entrance Passage and SW side of Court
Trench	TR	23	2011	Cappadocia Gate, NE of Rear Section
Trench	TR	24	2011	Cappadocia Gate, SW of Rear Section
Trench	TR	25	2009, 2010	Cappadocia Gate, Glacis and East Tower

<i>Name</i>	<i>Code</i>	<i>Number</i>	<i>Year</i>	<i>Location</i>
Trench	TR	26	2009	Cappadocia Gate, NE of Gate
Trench	TR	27	2010	“Temple”
Trench	TR	28	2010	“Temple”
Trench	TR	29	2011	North End Urban Block
Trench	TR	30	2011	Cappadocia Gate, NW of Gate

Trenches Excavated at the Cappadocia Gate

<i>Trench No.</i>	<i>Area</i>	<i>Year(s)</i>
CT11	Cappadocia Gate, Glacis between buttress and South Tower	1999
CT12	Cappadocia Gate, Glacis at wall and buttress	1999
CT48	Cappadocia Gate, Glacis at South Tower	1999
CT49	Cappadocia Gate, front of Entrance Passage	1999
CT50	Cappadocia Gate, Glacis at Middle and East Towers	2000
CT51	Cappadocia Gate, Court	2000
CT52	Cappadocia Gate, NW of South Tower	2007
TR03	Cappadocia Gate, Entrance Passage, front	2002
TR04	Cappadocia Gate, Rear of North Tower	2002
TR12	Cappadocia Gate, Entrance Passage, center	2003
TR13	Cappadocia Gate, NE side of Court	2007, 2009, 2010, 2011
TR22	Cappadocia Gate, Entrance Passage and SW side of Court	2009, 2010, 2011
TR23	Cappadocia Gate, NE of Rear Section	2011
TR24	Cappadocia Gate, SW of Rear Section	2011
TR25	Cappadocia Gate, Glacis and East Tower	2009, 2010
TR26	Cappadocia Gate, NE of Gate	2009
TR30	Cappadocia Gate, behind Gate	2011

APPENDIX 4

LISTS OF UNITS OF EXCAVATION BY TRENCH

Excavation at the Cappadocia Gate was in trenches and, in early seasons, in clearance trenches. Each trench was excavated in units numbered consecutively from 01. In writing the description for publication, numbers were ascribed to the three rooms in the rear section of the gate: Rooms 1 and 2 on the southwestern side; and Room 3, which contained the sculpted plinth and stela, on the northeastern side. Room walls, because they are so few, have not been assigned a separate set of numbers.

Lists of units together with abbreviated descriptions are provided for ease of reference. Unit numbers are included on the plans and drawn sections as well as in the text and catalogs where appropriate.

Clearance Trench CT11

Collapse at buttress

Clearance Trench CT12

Collapse where buttress meets city wall

Clearance Trench CT48

01. Glacis
02. Silty surface at glacis base
03. Collapse

Clearance Trench CT50

01. Rubble
02. Silty surface against base of glacis
03. Sand against base of glacis
04. Stones in collapse
05. Burning in structure in front of East Tower
06. Northeast wall of structure in front of East Tower
07. Stones between northeast wall of structure in front of East Tower and glacis
08. Southeast wall of structure in front of East Tower
09. Northwest wall of structure in front of East Tower

10. Fill of structure in front of East Tower
11. Feature in east corner of structure in front of East Tower
12. Hearth in west corner of structure in front of East Tower

Clearance Trench CT51

01. Collapse

Clearance Trench CT52

01. Topsoil and collapse
02. Wall of South Tower
03. Wall between South and West Towers

Trench TRO3

01. Top of stone rubble
02. Silty leveling in front of gate
03. Collapse
04. Collapse with sandy content
05. Late fill
06. Late fill
07. Crude late walling
08. Late tumble
09. Late wash and tumble
10. Collapse
11. Drain fill
12. Collapse
13. Collapse
14. Base of collapse
15. Silty area of passage surface
16. Silty area of passage surface

Trench TRO4

01. Topsoil
02. Tumble
03. Collapse
04. Silty deposit on surface
05. Surface
06. NW face of North Tower

Trench TR12

01. Topsoil and rubble
02. Collapse
03. Lower collapse
04. Late crude walling
05. Entrance passage northeast wall face
06. Entrance passage southeast wall face
07. Entrance passage surface
08. Stone drain edge
09. Burning at base of collapse
10. Spine of paving stones
11. Stiff clayey makeup below burning on surface
12. Sandy silt
13. Protruding bedrock

Trench TR13

01. Rubble fill
02. Middle Tower northwest wall face
03. Middle Tower northeast wall face
04. Southeast wall face
05. Northeast wall face
06. North Tower southeast wall face
07. North Tower southwest wall face
08. Stepped monument
09. Stones between North Tower and semi-ionic idol
10. Burning on steps of stepped monument
11. Stone pavement
12. Burned surface
13. Stone pavement extension
14. Burning on pavement extension
15. Human skeleton
16. Silt on pavements
17. Pit behind aniconic stela
18. Mud plaster
19. Earlier layer of mud plaster
20. Thick silt between paving and collapse
21. Thick silt between paving and collapse
22. Silt and iron pan on pavement
23. Striated surfaces with iron panning
24. Leveling fill
25. Mud plaster on surface
26. Striated surfaces
27. Mud plaster on surface
28. Granite debris
29. Thick iron pan on surface
30. Leveling fill
31. Construction surface
32. Gray subsoil
33. Stiff orange clay subsoil

34. Stones adjacent to and beneath Middle Tower, natural
35. Bedrock
36. Mud plaster, Middle Tower
37. Mud mortar, Middle Tower
38. Foundation trench for Middle Tower

Trench TR22

01. Collapse
02. Collapse
03. Collapse
04. Silt on paving
05. Collapse
06. Stone pavement
07. Addition to stone pavement
08. Burning
09. West Tower wall face
10. Silt
11. Collapse in entrance passage
12. Possible post base in entrance passage paving
13. Stone drain
14. Drain fill
15. Silt
16. Mud plaster on west wall of entrance passage
17. Aniconic stela
18. Paving to west of drain
19. Stone packing around aniconic stela
20. Human skeleton
21. Space in paving behind aniconic stela

Trench TR23

01. Topsoil and stone, southeastern half of trench
02. Collapse
03. Molten and fused stone, associated with footings of front façade
04. Fallen burned mudbrick and fill, southeastern half of Room 3
05. Stone and burned-out timber of front façade behind the stepped monument
06. Burned debris associated with 03 and 05
07. Mud plaster and debris adhering to the face of the North Tower (= 27)
08. Pavement in rear passage
09. Base of collapse and destruction between pavement and wall of Room 3
10. Part of the collapse in Room 3
11. Stone footings, northwestern wall of Room 3
12. Filling of threshold slot in the front façade
13. Topsoil and stone, northwestern half of trench

14. Mudbrick, upper part of the northwestern wall of Room 3
 15. Void created by burning post, southeast of Room 3 wall
 16. Lower stone footings of façade wall behind the stepped monument
 17. Lower portion of collapse in the northwestern half of Room 3
 18. Surface of northeastern strip between the pavement and Room 3
 19. Stones resembling displaced pavement, threshold slot of the front façade
 20. Burning above pavement and northeastern strip over northwestern end of the rear passage
 21. Pavement in northwestern end of rear passage
 22. Collapse and fill of Room 3, northwestern half
 23. Burned surface of Room 3
 24. Burned debris above the southeastern end of the front threshold
 25. Makeup or fill below Room 3
 26. Construction surface at limit of excavation below Room 3
 27. Mud plaster on North Tower wall face (= 07)
 28. North Tower wall
 29. Stone footings of rear façade
 30. Wall of front façade (= 05 and 16)
 31. Fill of mortise in sculpted plinth
 32. Rear threshold pavement
 33. Pavement behind gate
 34. Timber slot in rear threshold
 35. Burned layer
 36. Silty layer below burning
 37. Laid stones
 38. Post position in rear façade
 39. Door post in Room 3 wall, southeastern side of door
 40. Threshold in Room 3 wall
 41. Timber elements, northwestern end of Room 3 wall
 42. Timber elements, northeast end of front façade
 43. Mud plaster, southwestern face of front façade
 44. North Tower, northwestern wall face
 45. Foundation trench of North Tower, northwestern wall face
 46. Stiff red clay, natural
 47. Silty subsoil
 48. Burning on the pavement behind the gate
 49. Silty subsoil
 50. Foundation trench of North Tower, southwest wall face
 51. North Tower, southwest face = 28
 52. Beam slot
 53. Beam slot
 54. Beam slot
 55. Beam slot
 56. Plinth, sculpted
- Trench TR24
01. Topsoil and base of 2010 dump
 02. Collapse of West Tower walling
 03. Collapse over southwestern half of trench
 04. Room 1, fill below burned floor
 05. Wall between Room 1 and the central passage
 06. Stone and burned-out timbers of front façade between Room 1 and the gate court
 07. Collapse in the central passage
 08. Wall between Rooms 1 and 2
 09. Collapse and fill of Room 2
 10. Stone platform in corner of Room 1
 11. Burning above rear passage surfaces
 12. Pavement of rear passage
 13. Mud plaster on outside face of Room 1 wall U05
 14. Burned surface of Room 1
 15. Topsoil and base of 2010 dump
 16. Burned surface of southwest strip
 17. Burned debris filling front threshold slot
 18. Collapse in northwest half of trench
 19. Burning on pavement and surface of southwest strip
 20. Collapse and fill in Room 2
 21. Destruction on floor of Room 2
 22. Base of destruction and surface of southwest strip
 23. Stone drain
 24. Topsoil in northwest corner
 25. Makeup below floor of Room 2
 26. Makeup below floor of Room 1
 27. Stone walling of rear façade
 28. Stone pavement to the northeast of the gate, inside city
 29. Threshold of doorway into Room 2
 30. Threshold of rear façade
 31. Wall between Room 2 and the central passage
 32. Stone wall of animal pen
 33. West Tower wall face
 34. Post base against northeast wall of Room 2

35. Beam slot in front façade
36. Beam slot in front façade
37. Beam slot in front façade
38. Beam slot in front façade
39. Rear threshold top of stone fill
40. Timber slots in rear façade
41. Timber slot in front façade
42. Stone rubble makeup

Trench TR25

01. Stone tumble
02. Stone tumble
03. Glacis face of East Tower
04. Glacis fill at East Tower
05. Construction face inside glacis by East Tower
06. Wall of East Tower
07. Glacis face in front of city wall
08. Glacis fill in front of city wall
09. Construction face inside glacis in front of city wall
10. City wall face
11. Clayey surface beneath collapse
12. Black silty level in glacis at junction of tower and city wall
13. Lowest glacis fill below 12
14. Setting stones for glacis
15. Foundation trench for glacis
16. Bedrock
17. Subsoil

Trench TR26

01. Rubble and collapse

Trench TR30

01. Topsoil
02. Silt
03. Stone surface
04. Bedrock
05. Natural soil
06. Red clay, natural
07. Stone wall of animal pen
08. Collapse
09. Collapse
10. Burning
11. Pavement
12. Surface east of pavement
13. Silty layer on pavement beneath burning

APPENDIX 5

PLACE NAMES

Places

- Afyon 72, 137
 Ain Dara 60
 Alaca Höyük 7, 60, 136, 140
 Alişar Höyük 4, 5, 15, 17, 113, 146
 Ankara xxvii, 8, 13, 14, 40, 50, 58, 59,
 60, 69, 139, 142
 Antioch 132
 Arslankaya 60, 72
 Arslantepe *see* Malatya (Arslantepe)
 Boğazköy xxxv, 5, 7, 12, 41, 56, 68, 72, 73, 83,
 84–85, 93, 120, 137–38, 142, 149, 151
 Burmeç 60
 Büyükkale 56, 137–38, 142
 Çadır Höyük 17
 Çalapverdi 8
 Carchemish 71
 Corinth 70
 Delikli Taş 83, 137, 140, 151
 Dişli Köy 25
 Dorylaion 8
 Dümrek 69, 73–74, 142, 143
 Ephesus 97
 Eskişehir 8, 137
 Faharet Çeşme 142
 Fındık 83
 Fort Shalmaneser 60
 Gordion xxxiii, xxxv, 5–14, 7, 8, 16, 21,
 26, 29, 30, 69, 73, 83–85, 93–94, 97, 113, 119,
 120, 136, 137, 138–39, 141, 149, 150, 151
 Guzana 70
 Hacettepe University xxix, 87
 Harran 30
 Hattusa 3, 21, 48, 60, 68, 71, 137, 140, 143
 Istanbul xxviii, xxix, 47
 İvriz 70
 Kalehisar 7
 Kaman Kalehöyük 5, 120
 Kayseri xxiii, 8, 9, 145, 146
 Kerameikos 60
 Khorsabad 30, 70
 Kırkinler 83
 Küçük Höyük (Gordion) 93, 119, 138
 Kuşaklı Höyük (Yozgat) *see* Uşaklı
 Malatya (Arslantepe) 71
 Manisa xxviii, 61
 Maraş 70
 Midas City 8, 38, 74, 83, 84–85, 93,
 97, 137, 139–40
 Nallı Kaya 83
 New York 71
 Niğde 8, 30, 113, 140
 Nimrud 60
 Pazarlı 7
 Persepolis 8, 69–70
 Pişmiş Kale 83
 Porsuk 30
 Pteria xxiii, xxxiii, 6–8, 15, 24, 61, 139, 145
 Şahmuratlı village xxviii, 3, 9, 15, 17, 25, 61
 Sakçagözü 60
 Salamis (Cyprus) 70
 Sardis 6, 8, 60, 139, 141, 151
 Şarhöyük 8
 Sinop (Sinope) xxiii, 7, 145
 Sivas xxviii, 47, 50, 51
 Sorgun xxviii, 3, 10, 50, 61, 145
 Südburg (Boğazköy) 84, 138
 Tell Halaf 70
 Tell Tayinat 142
 Theupolis (Antioch, modern Antakya) 132
 Troy 143
 Tyana 140
 Urfa 30
 Uşaklı Höyük 15, 146
 Vulci 70
 Yassıhöyük (Gordion) 137
 Yozgat xxvii–xxviii, 3, 10, 11, 14, 25, 26,
 49, 55, 58, 61, 74, 97, 132, 145, 148
 Zincirli 70
 Zippalanda 4, 15, 145, 146

Regions and Territories

Ancient Near East	60, 61, 143
Attica	60, 70, 71, 139
Cappadocia	xxiii, 3–4, 7–8, 16, 45
Cilicia	6, 140, 143
Köhnüş Valley	38
Lydia	xxxiv, 6, 8, 24, 60, 97, 138–39, 141
Mediterranean	3
Mesopotamia	60, 143
North Syria	60, 140, 143
Persia	xxxiv, 6
Phrygia	xxxiii–xxxv, 6–8, 41, 61, 70, 73, 83–85, 135, 137, 144
Phrygian Highlands	6, 38, 40, 60, 69, 73, 137, 140, 142, 143
Tabal	6, 8, 144
Urartu	xxxv, 6, 144

Rivers

Kanak Su	114
Kızılırmak (the Red River, the classical Halys River)	xxxiv, 6–8, 73, 113, 114, 142, 144

Mountains

Erciyes Dağı	3, 9, 45
Göllüdağ	5, 113, 140
Kerkenes Dağ	<i>passim</i>
Mount Daha (Hittite, probably Kerkenes Dağ)	4, 15, 145

Kerkenes

Cappadocia Gate	<i>passim</i>
East Gate	15, 17, 131, 135
Göz Baba (Southwest) Gate	15, 131, 135, 140
Keykavus Kale	3, 131

APPENDIX 6

TECHNICAL ABBREVIATIONS

Materials

These abbreviations are employed in the Finds Identification Numbers. They can be used to search the Kerkenes archives and the online finds catalog.

arc	architectural stone object or fragment
bon	bone and ivory
cmp	composite object or fragment
gfa	glass, faience, frit, or amber
met	metal
pob	pottery or baked-clay object
pot	pottery
skl	skeleton (human)
stn	stone
wdn	wood (object)

Photographic Archive

Each photograph archive entry begins with two numbers giving the year, followed by two letters for the medium (slide, digital, etc.), and two further letters that indicate either the category (blimp film, view film, etc.) or the camera with which it was taken. The archive can be searched by year and by medium. Slides and negatives are housed in folders arranged by the same system. All digital photographs are archived by year and by camera. There is not (yet) a full searchable archive by subject (e.g., by area or by trench), but the online finds catalog does include photo archive numbers of the best images of each object.

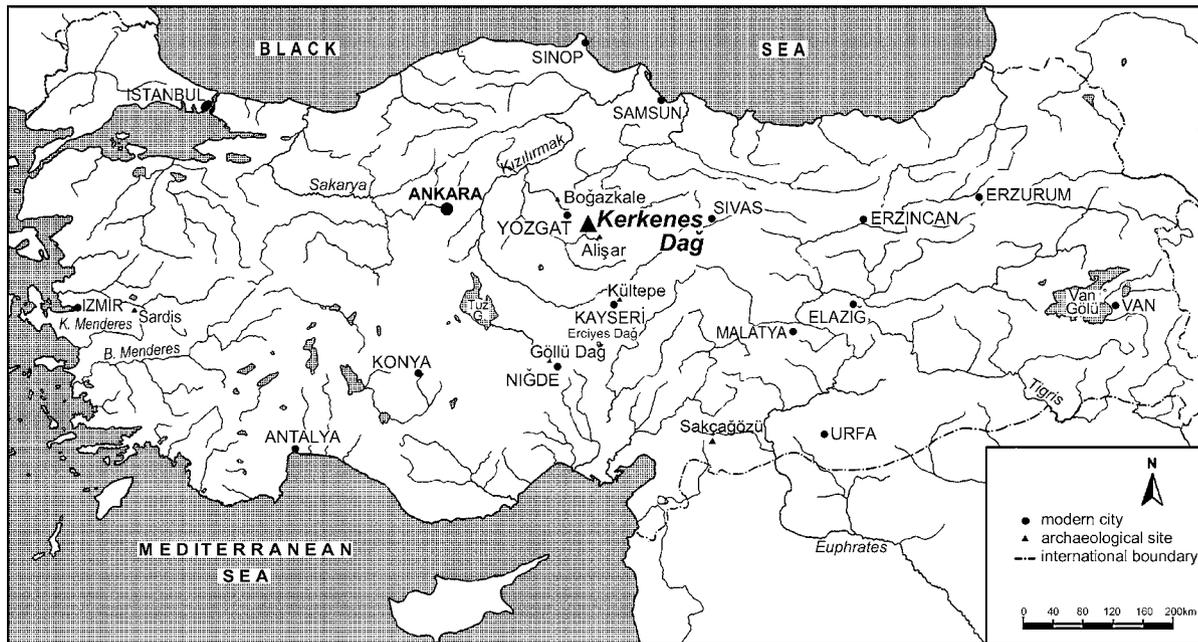
Medium

bw	black-and-white film
dp	digital photograph
sl	slide film

Category

bf	blimp film
hb	hot-air balloon
vf	view film

PLATES

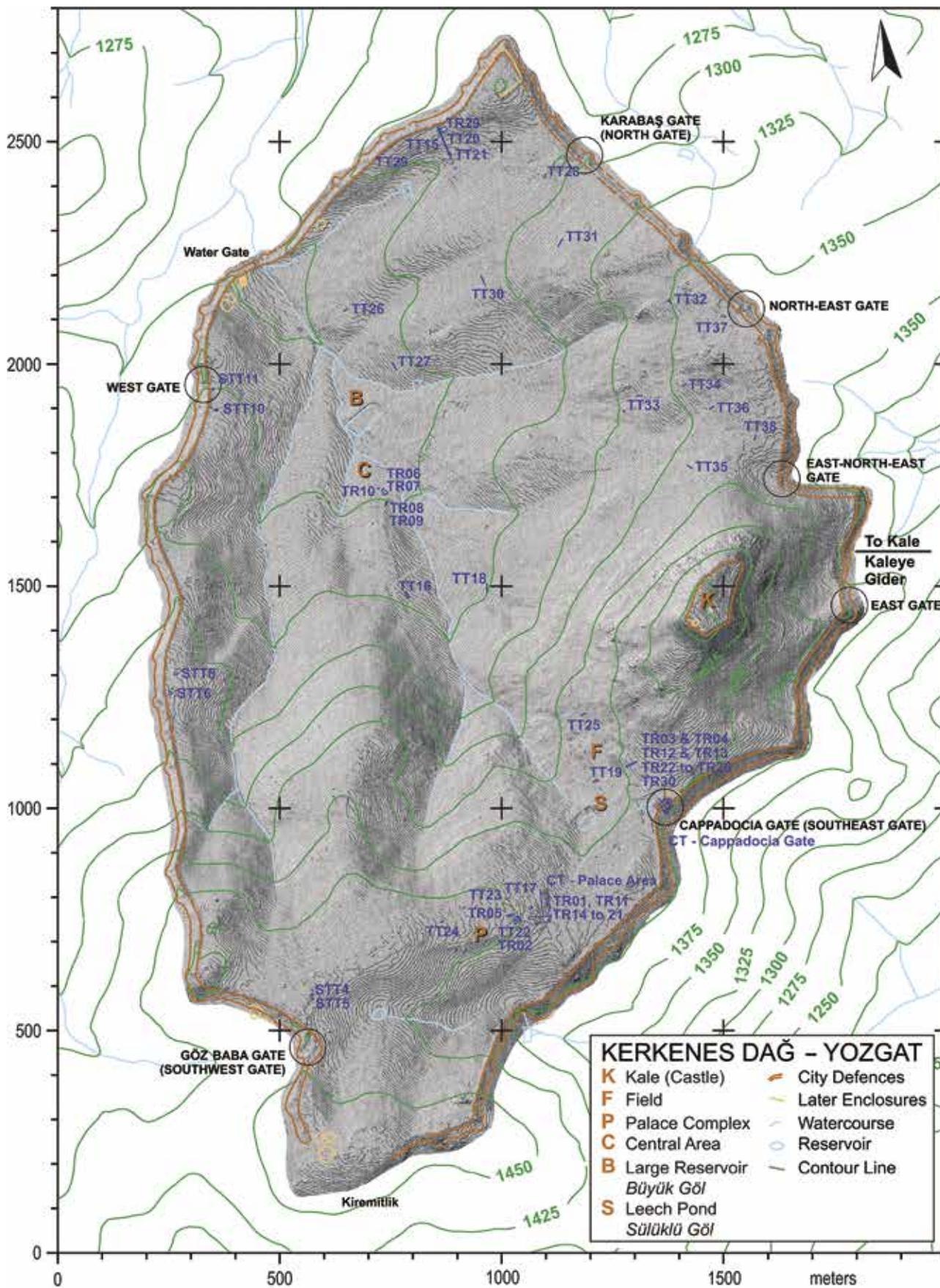


(a) Map showing the location of Kerkenes |

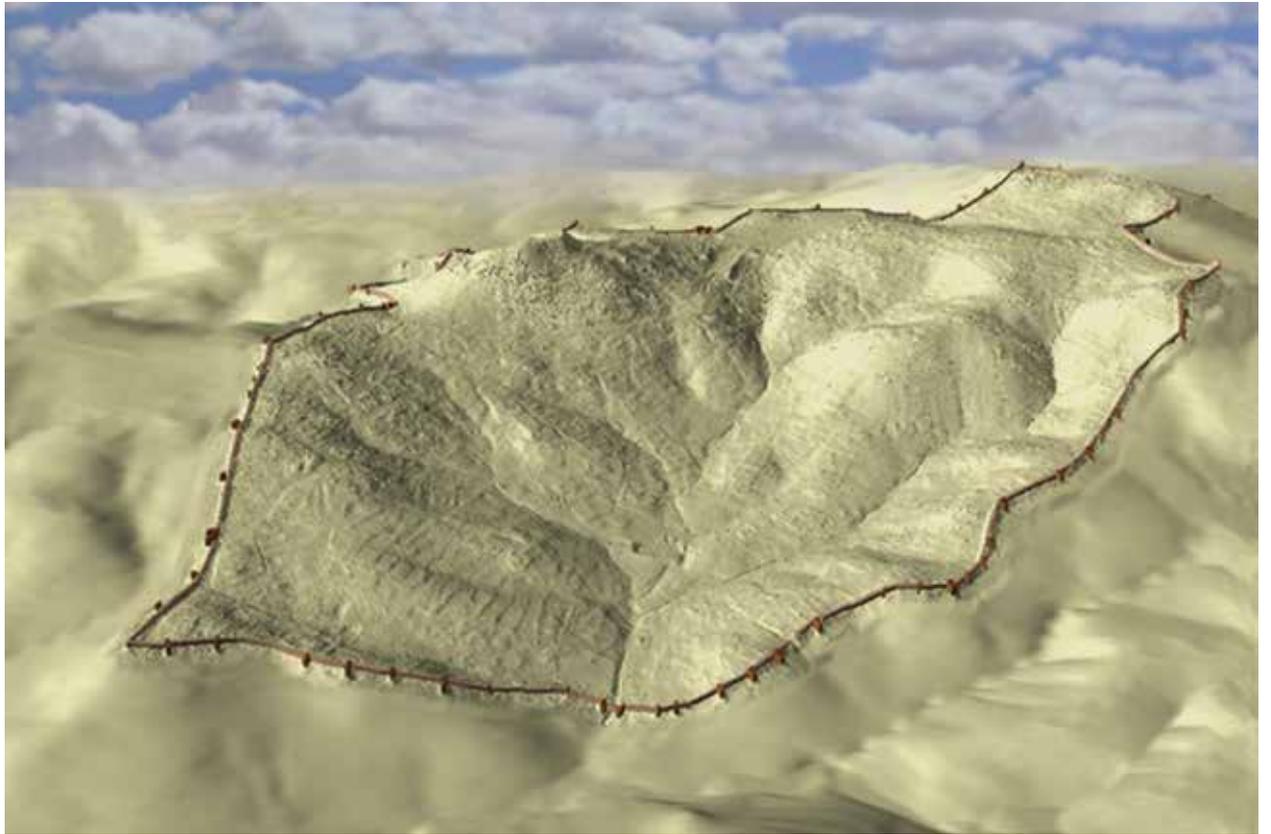


(b) View of Kerkenes from the north, taken from a manned hot-air balloon. |
The Cappadocia Gate pierces the defenses at upper left. |

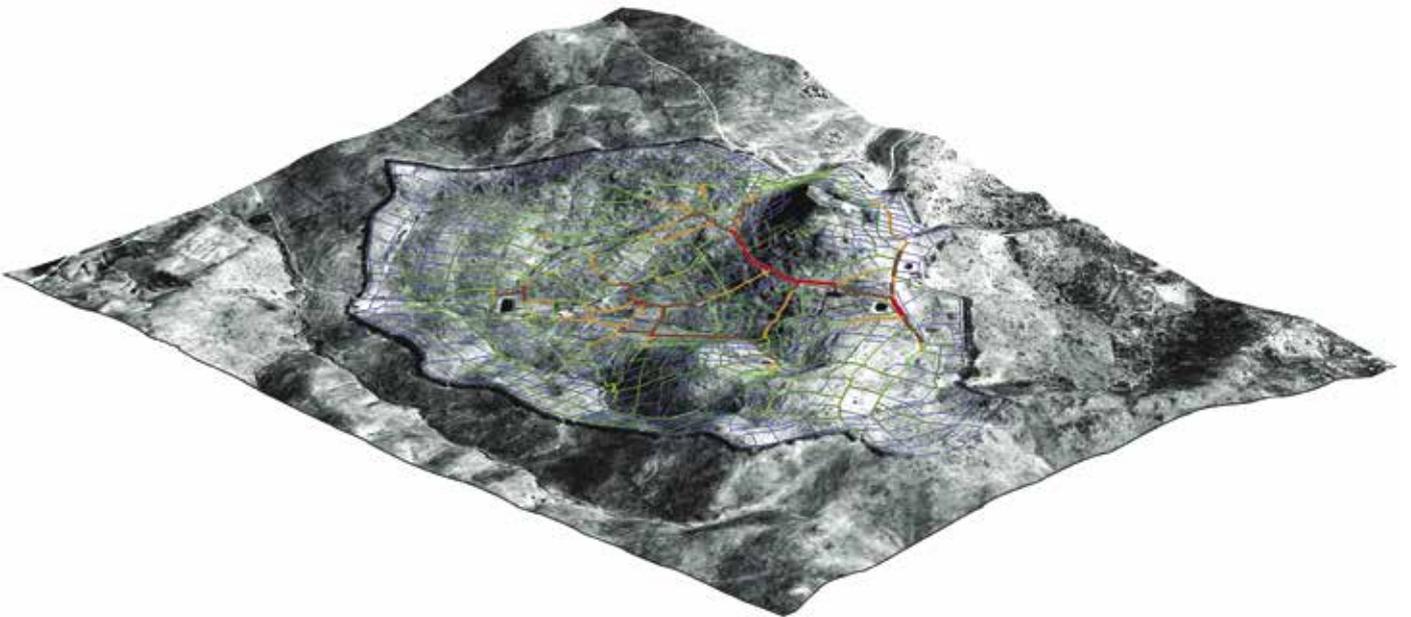
PLATE 2 | PLAN OF THE IRON AGE CITY



Trench Location	□	Schmidt Test Trench	S TT (1996)
Clearance Trench	CT (1999, 2000)	Test Trench	TT (1996, 1998, 2000)
Trench	TR (2002, 2003, 2004, 2005, 2009, 2010, 2011)	Transportation Trench	TT 23-38 (2004, 2007, 2008)



(a) The Iron Age city with the Cappadocia Gate at center top |



(b) The Iron Age city with the street plan reconstructed by Scott Branting. The Cappadocia Gate is at upper right. |

PLATE 4 | VIEWS OF THE SITE



| (a) The city from the northwest



| (b) The Cappadocia Gate and portions of the city wall, the kale, the field with royal stables, and the leech pond



(a) Looking east from the hot-air balloon with the Cappadocia Gate at right |



(b) Kerkenes, Hittite Mount Daha, in winter with Uşaklı Höyük in the foreground |

PLATE 6 | VIEWS OF THE SITE



| (a) Oaks growing on the slopes of the Kerkenes Dağ



| (b) Blimp photo of the Cappadocia Gate before excavation



(a) The glacis on the southwestern side of the gate before excavation |



(b) The track over the South Tower in 1999 |

PLATE 8 | VIEWS OF THE ANIMAL PENS



| (a) In 2000, looking southwest

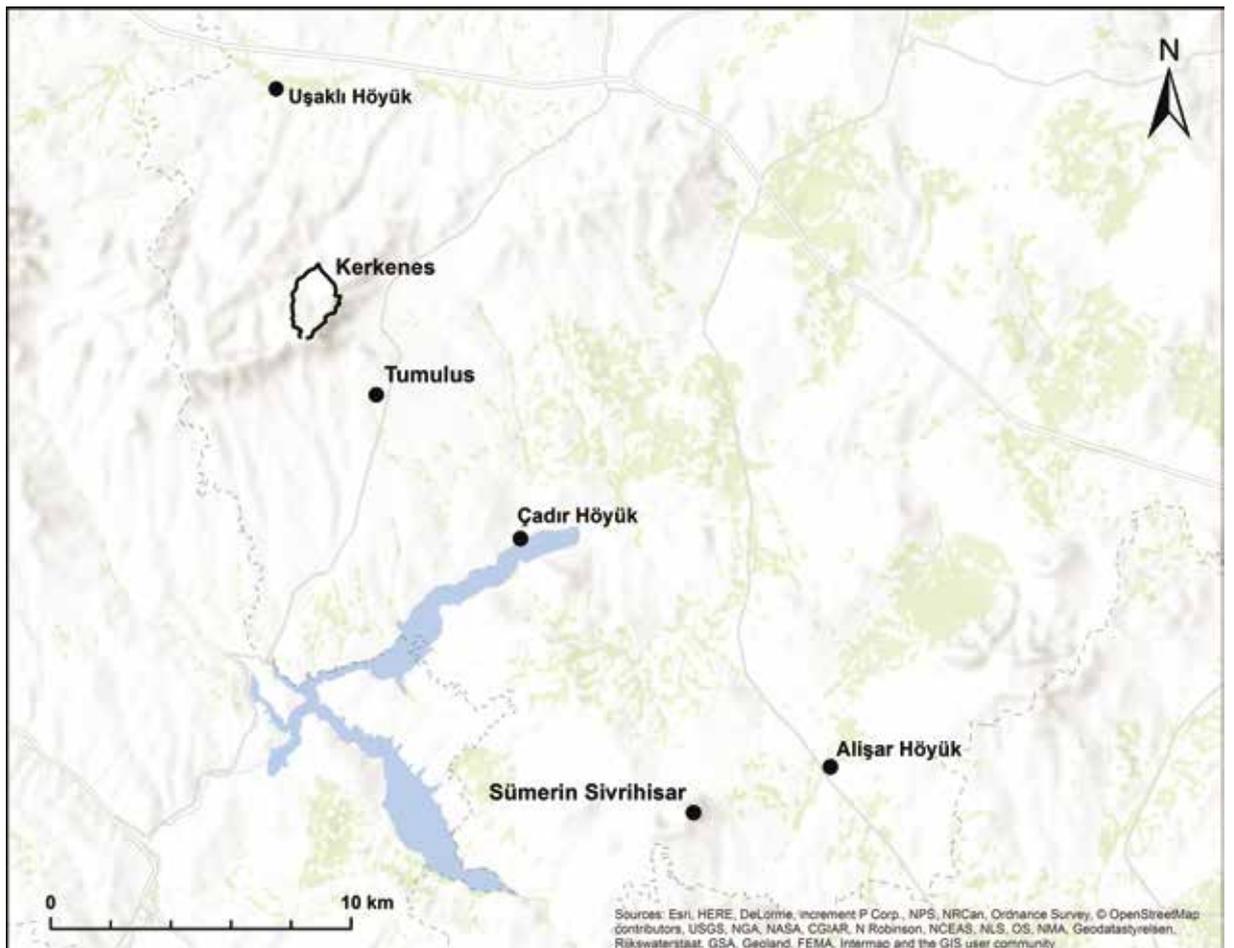


| (b) By 2009 the animal pens were no longer adjacent to the gate structure. Temporary wooden constructions were used for lambs, in addition to the stone sheep pens.

PHOTOS (a) ooslvf1407, (b) o9dpng2129



(a) Making stereo photographs of the glacis |



(b) Kerkenes in relation to Çadır Höyük and Alişar Höyük, with the most prominent tumulus on the plain |

PLATE 10 | THE ROAD LEADING TO THE CAPPADOCIA GATE



| (a) The road seen from the slopes below the gate. “B” marks the small site just beyond the visible end of the Iron Age road; “T” indicates the large tumulus in the plain; “S” is above Sümerin Sivrihisar close to Alişar Höyük.



| (b) The road leading up the hillside to the Cappadocia Gate, with the sharp bend in the middle distance

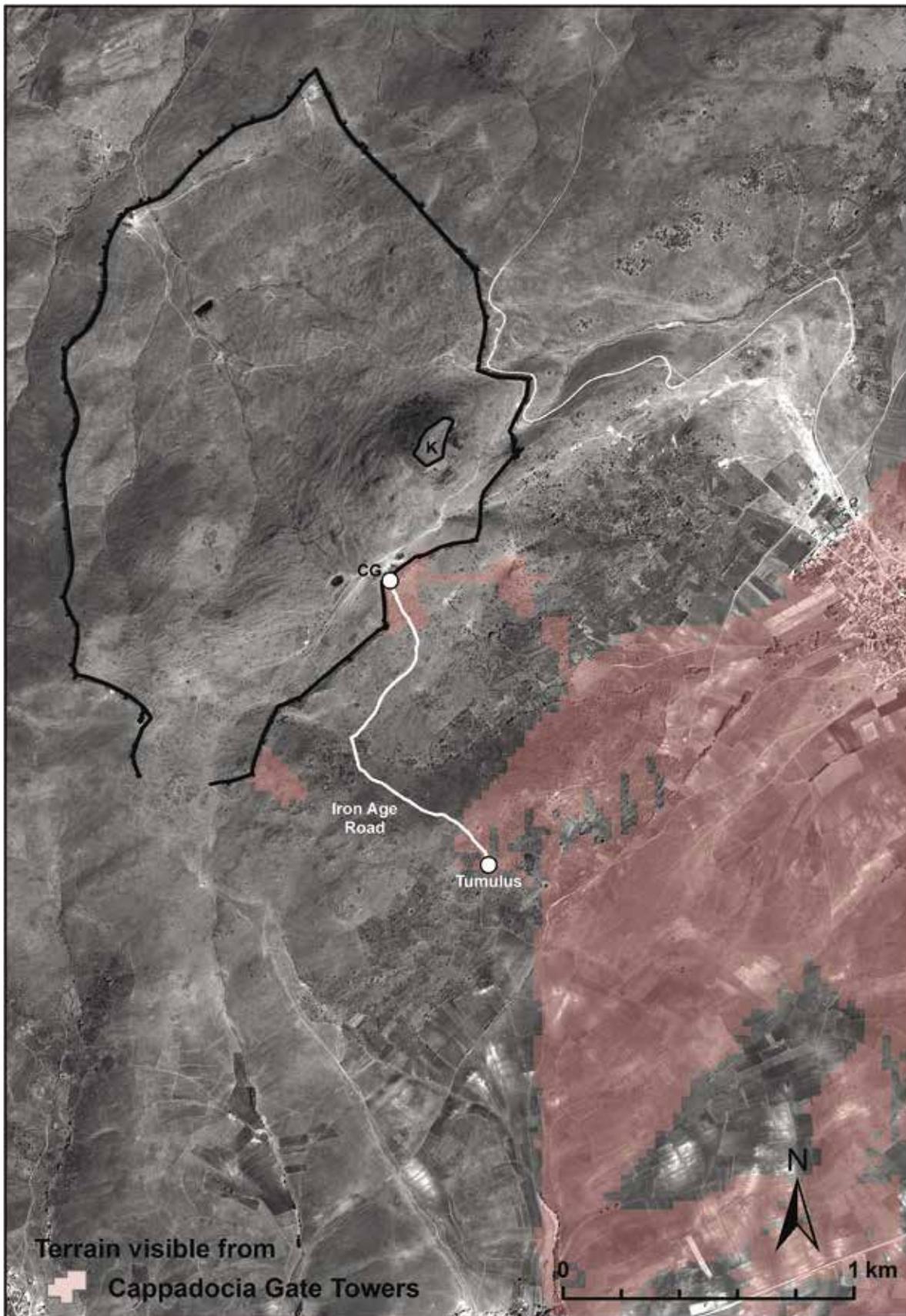


(a) |

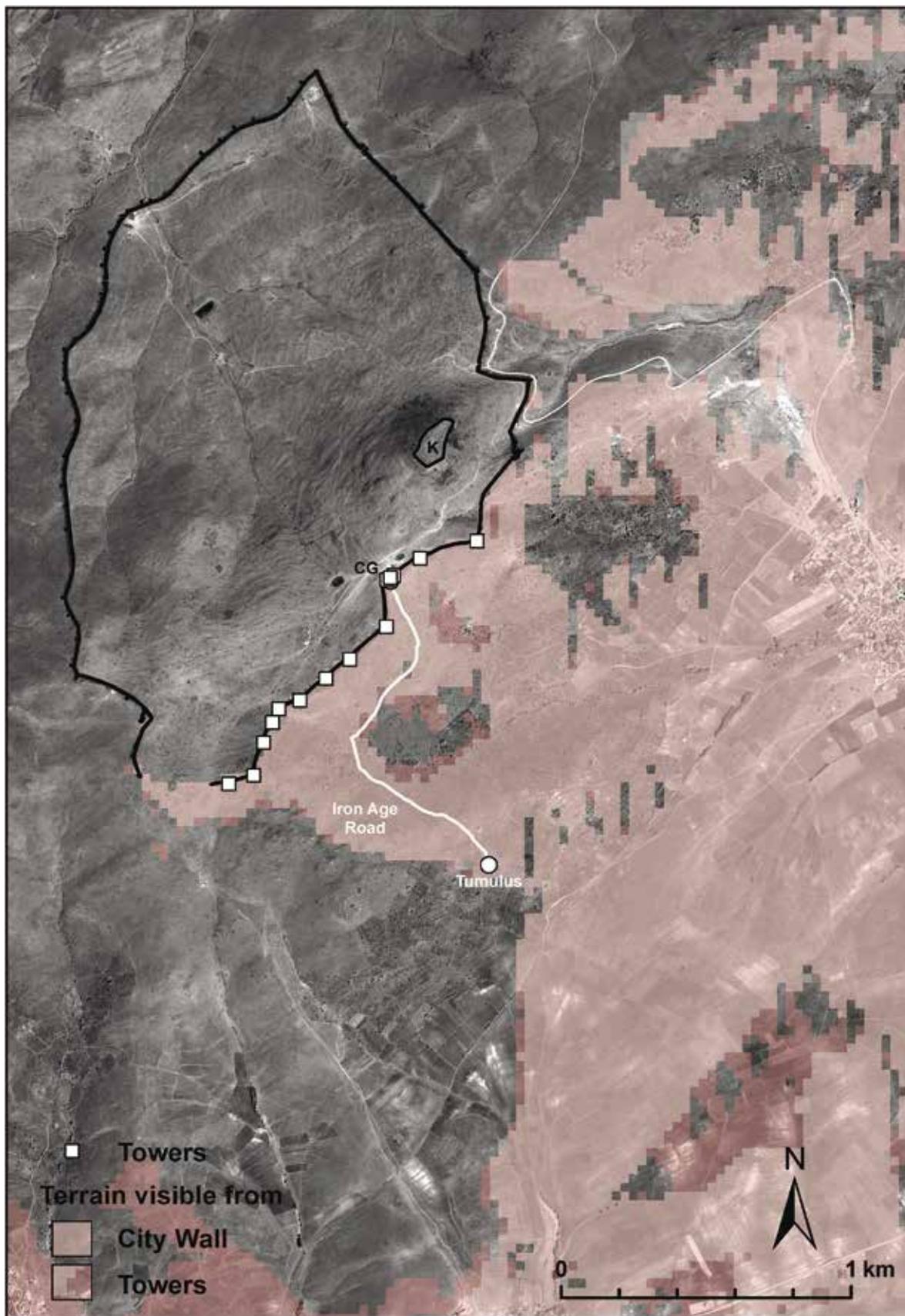


(b) |

PLATE 12 | VIEWSHED OF THE THREE TOWERS

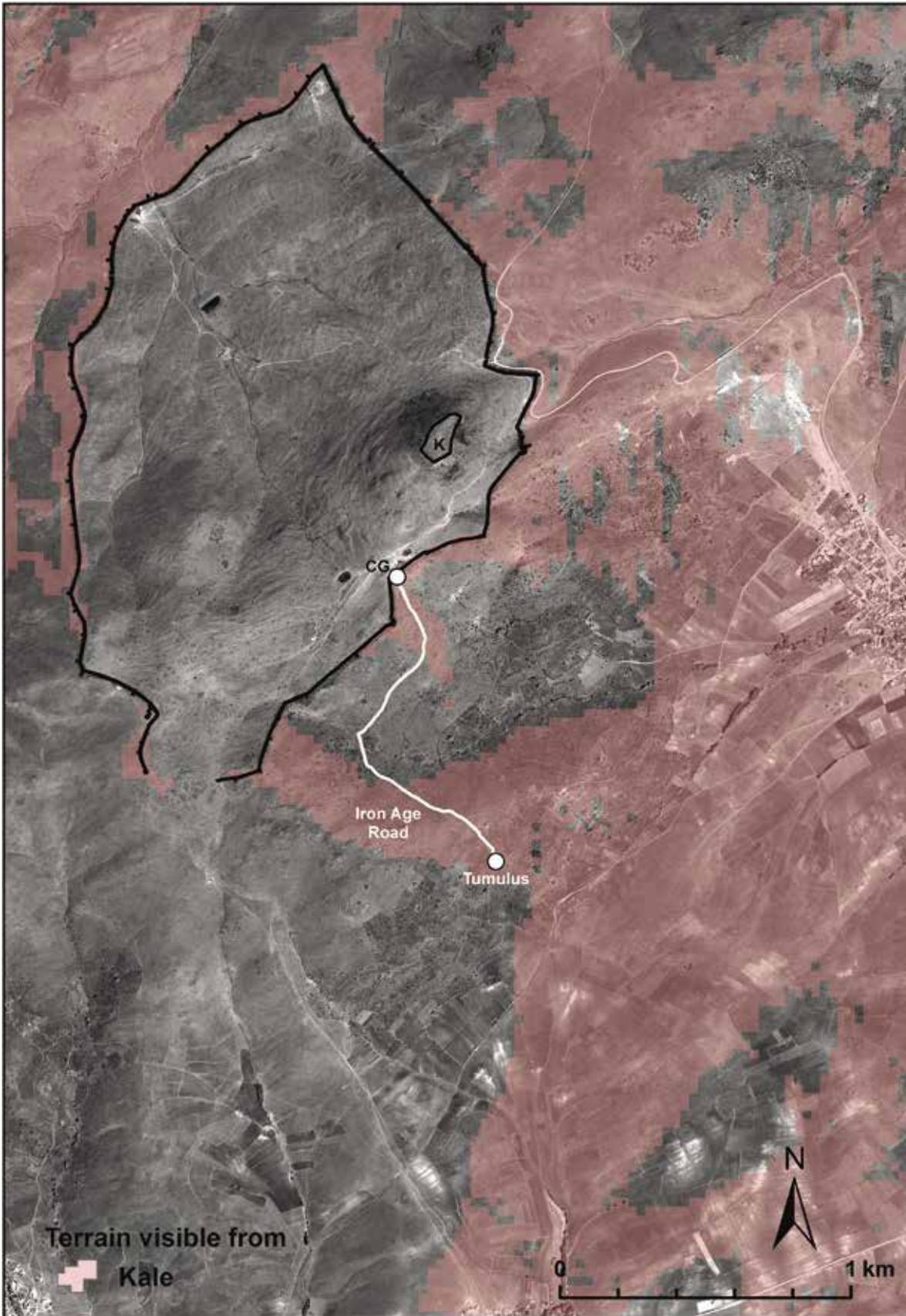


Viewshed of the three towers along the front of the Cappadocia Gate, showing the visible terrain in a pink semitransparent tone. Only the upper portion of the Iron Age road could be observed from the Cappadocia Gate. "CG" = Cappadocia Gate; "K" = Kale.

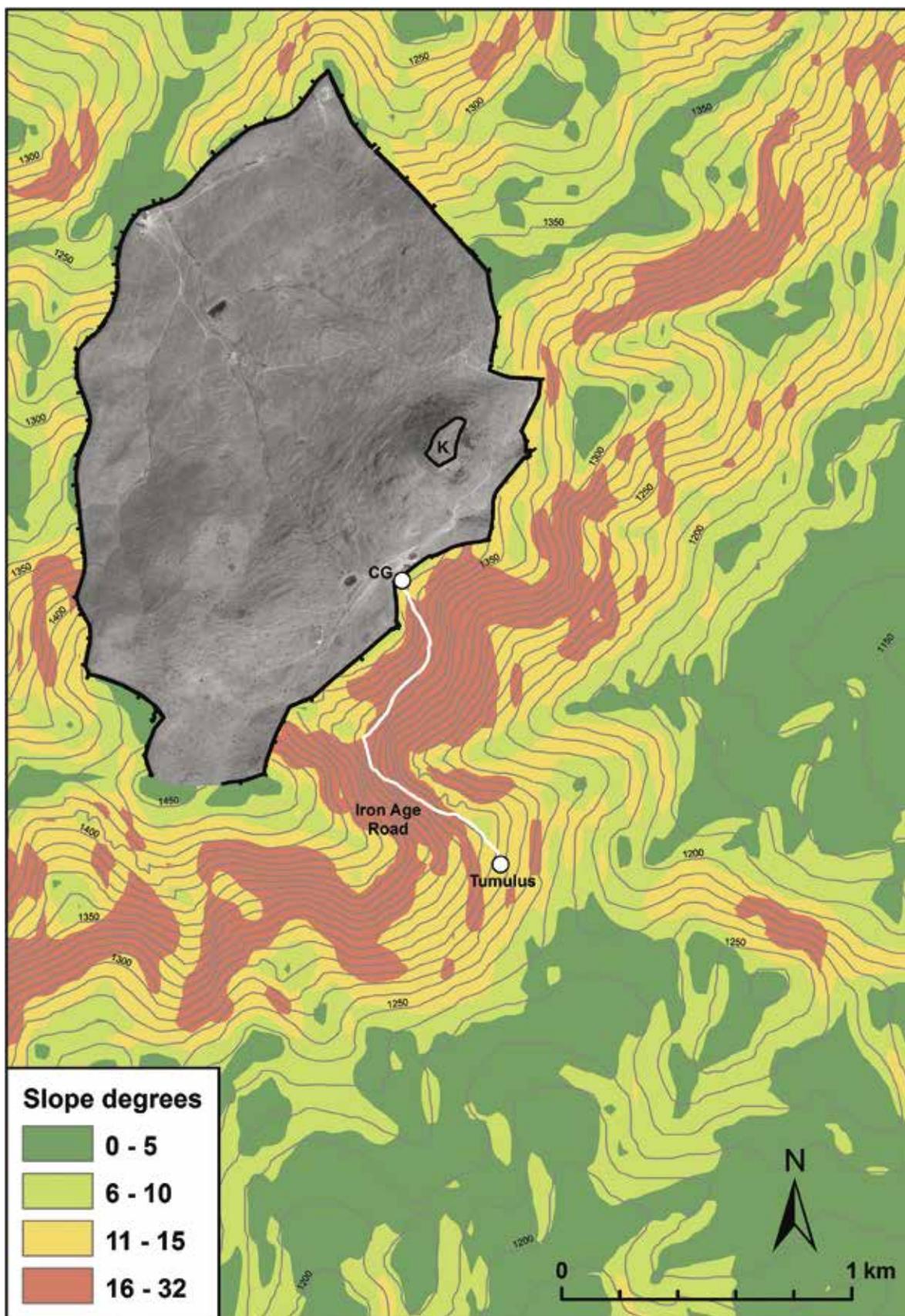


Viewshed showing the terrain visible from the city wall and the towers along the southeastern stretch of the defenses over ca. 2 km. Not surprisingly, the viewshed of the towers is slightly larger than that of the wall top and covers the area visible from the wall top. "CG" = Cappadocia Gate; "K" = Kale.

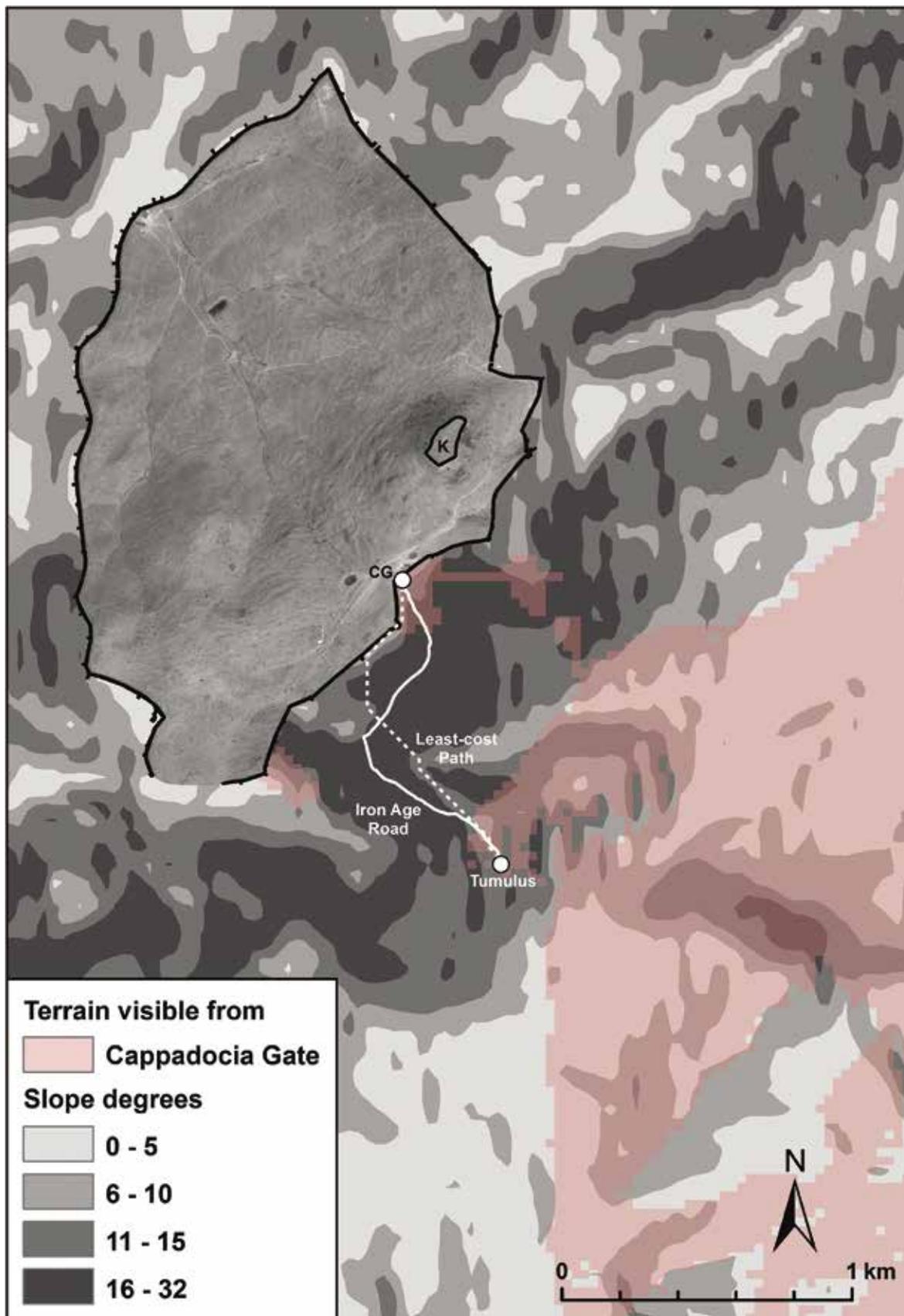
PLATE 14 | VIEWSHED OF THE KALE



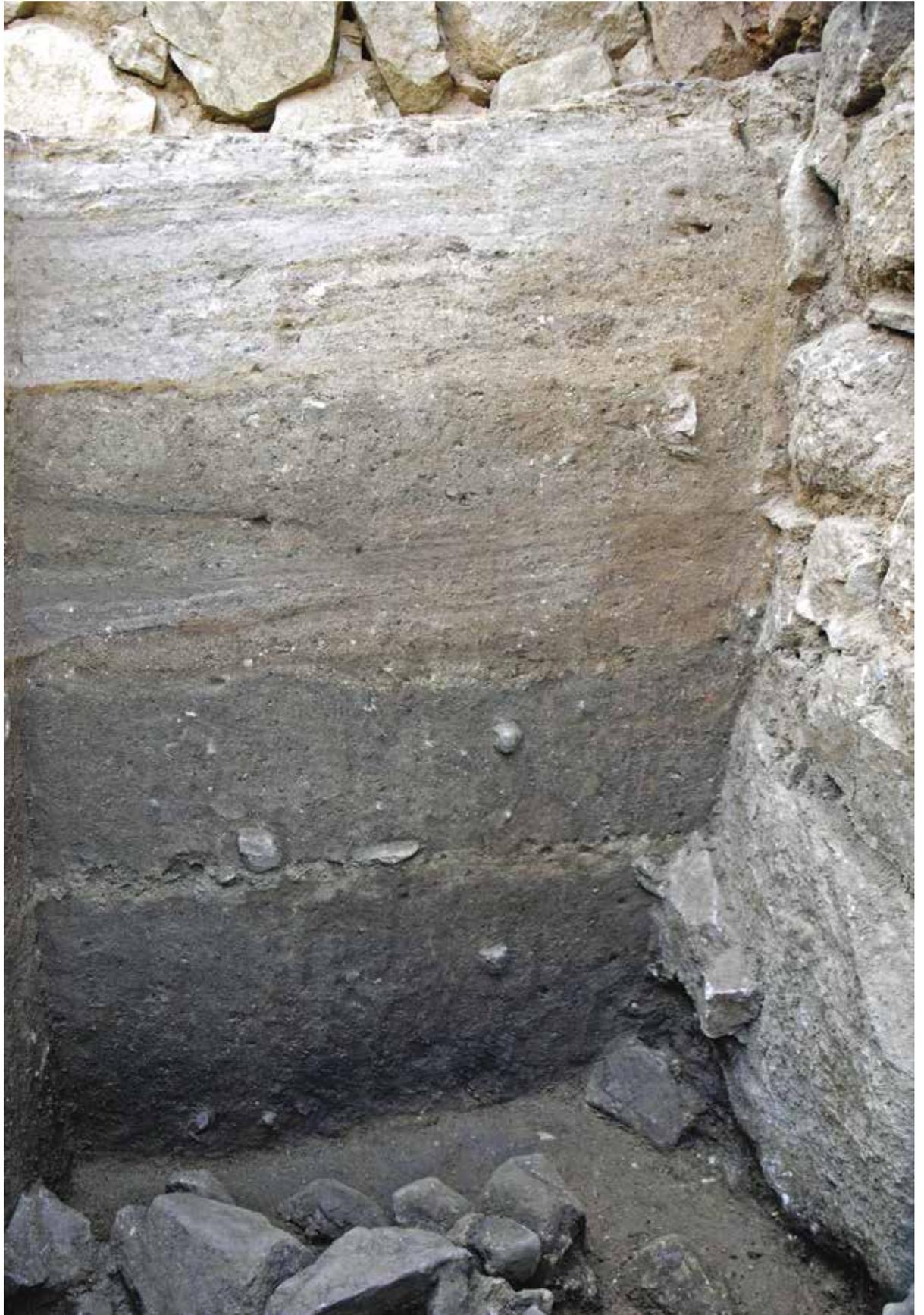
Viewshed showing, in a pink semitransparent tone, the terrain visible from the kale. Command of the immediate approaches to the southeastern side of the city, the gray area traversed by the road, was thus not obtained from the kale. "CG" = Cappadocia Gate; "K" = Kale.



Slope map of the terrain around the city walls, with the Iron Age road traversing the steep slopes from the Cappadocia Gate to the Tumulus near the base of the mountain. Contour lines are at 10 m intervals. "CG" = Cappadocia Gate; "K" = Kale.



Least-cost path (dashed) compared with the actual line of the Iron Age road (solid white). The pink semitransparent tone shows the terrain visible from the Cappadocia Gate, indicating that anyone approaching the gate could not have been seen until they were within a few hundred meters. "CG" = Cappadocia Gate; "K" = Kale.



See pl. 60 for location, pl. 85 for section drawing |

PLATE 18 | BASE OF THE TRENCH AND GLACIS FACE



| (a) Small stones filling the shallow foundation trench in front of the glacis against the stretch of city wall to the northeast of the gate



| (b) Small stones propping the glacis face at the required incline in front of the West Tower



(a) The front of the Cappadocia Gate in 2000, before excavation of the passage and interior |



(b) The Cappadocia Gate in 2011, with the kale behind. A tree grows in front of the South Tower, with the entrance passage behind. The Middle Tower awaits restoration, while the niche and the East Tower were restored in 2010 with funding from the US government's Ambassadors Fund for Cultural Preservation. |

PLATE 20 | VIEWS OF THE COURT AND ENTRANCE PASSAGE



| (a) The paved court with the centrally paved rear section in the middle distance, the carved plinth behind the vertical scale to the right, and the stepped monument after removal of the idol and collapse of the tower corner



| (b) Looking down the entrance passage with the granite stela by the corner of the Middle Tower



(a) Bostankayası to the southeast of the Cappadocia Gate, showing the jointed granite |



(b) Sandstone blocks (with some granite) fallen from the northwestern corner of the Middle Tower, with the aniconic stela behind |

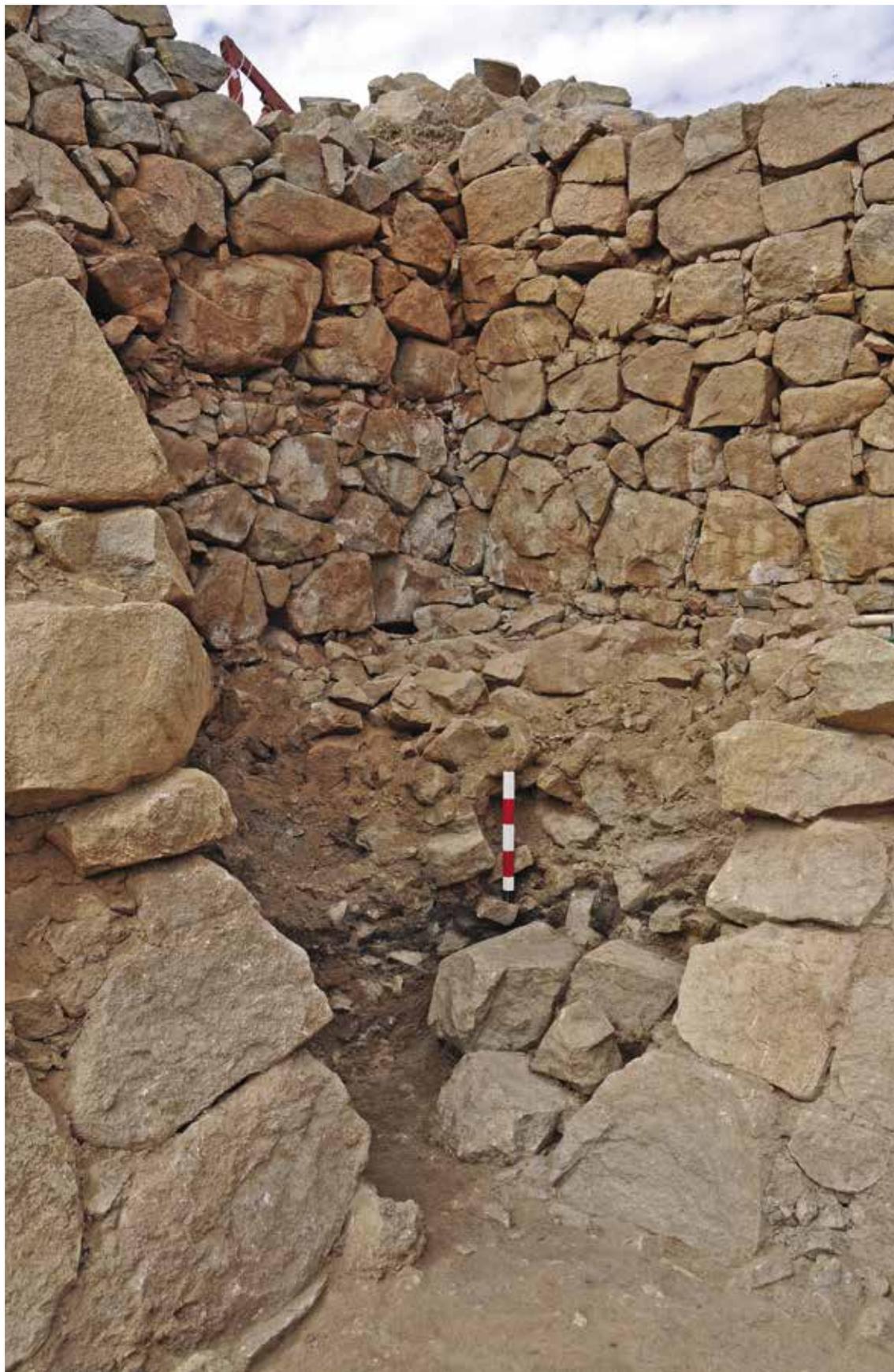
PLATE 22 | SANDSTONE BLOCKS FALLEN FROM THE NORTHEASTERN CORNER OF THE MIDDLE TOWER



| (a)



| (b)



Junction of the East Tower (at left) and the city wall in TR25. One beam slot can be seen in the tower wall, with a second, lower beam in both the tower and the city wall where removal of the glacis core has been halted.

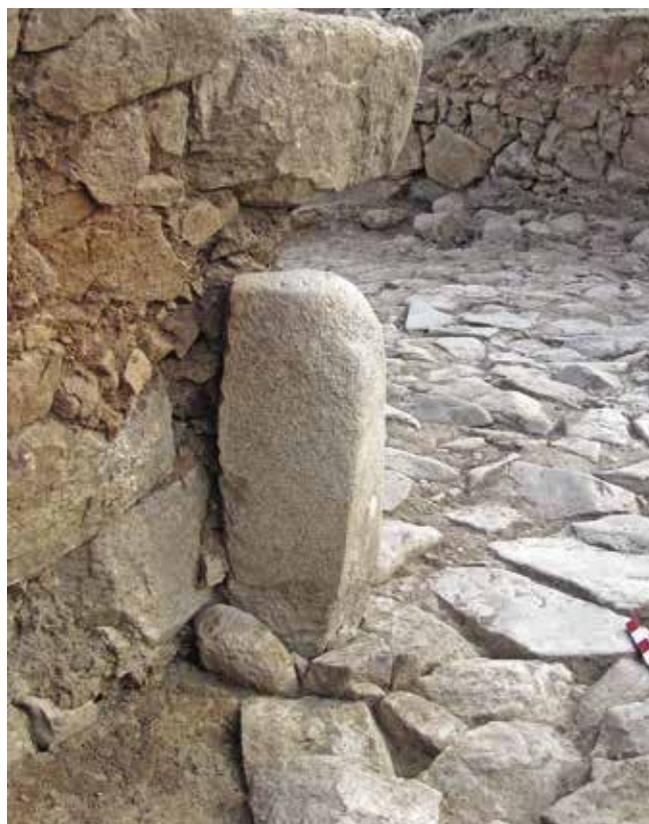
PLATE 24 | EVIDENCE OF THE USE OF MUDBRICK AND MUD PLASTER



(a) A portion of the section through the court behind the Middle Tower. Light-colored silt lies on the pavement, with burning above. A pile of mudbrick-like debris fell immediately before the stone walling.



(b) The aniconic stela with the burned surface of the silt and a fallen sandstone block against the inner face



(c) The aniconic stela with silt removed to reveal the packing stones



(a) Cornerstone of the West Tower showing pecking marks |



(b) Face stone in the northeastern wall of the passage showing pecking marks where trimmed |

PLATE 26 | THE MIDDLE TOWER WITH THE STELA IN POSITION



| (a) Southwestern face of the Middle Tower at the top of the entrance passage



| (b) Southwestern half of the Middle Tower inner face



(a) Wall and Middle Tower forming the southeastern side of the court after the collapse of the western corner, with fallen sandstone from the northern corner on the edge of the pavement |



(b) The eastern corner of the court as found |

PLATE 28 | DISPLACEMENT OF FACE STONES IN THE NORTH TOWER



(a) The southeastern face of the North Tower, showing the extent to which the corner was leaning. The stones at upper right are not in their original positions.



(b) Upper face stones of the North Tower in Room 3 had slipped out of position and were removed. Part of the top of the sandstone sphinx block is at bottom center.



(a) Upper face stones in the center of the West Tower showing the extent to which they were displaced above the void left by the horizontal beams



(b) The western corner of Room 2 with the West Tower wall at left, the face of the rear façade behind the scale, and the stone leveling and drain below the floor exposed. The large rectangular stone in the corner supported a vertical timber in the façade. When the façade frame and the horizontal beams in the tower face burned away, the uppermost two stones in the tower slid into the void, while the façade wall face slipped forward.

PLATE 30 | THE WEST TOWER AND PASSAGE WALL



| (a) The southeastern face of the West Tower with the passage wall. Displaced stones were removed before the walling could be revealed.



| (b) The upper end of the passage wall with the West Tower at right



(a) The southwestern side of the passage with the glacis built against the vertical face of the South Tower |



(b) The external corner of the East Tower with the face of the city wall butted against it |

PLATE 32 | THE EXTERNAL FACE OF THE WALLING



| (a) The external face of the walling and corner of the East Tower. The lower portion has not been exposed.



| (b) Detail of the external face of the walling



| (c) Detail of the external face of the walling, central section



(a) Looking south over Room 1 in the course of excavation, with the door not fully cleared and before the lower part of the West Tower wall face was exposed



(b) Room 1 with the face of the West Tower exposed

PLATE 34 | ROOM 3



| (a) The walls of the southeastern half of Room 3 with the North Tower behind



| (b) The inner face of the Room 3 wall, southeastern half, with the edge of the front façade at left



| (c) The outer face of the Room 3 wall, southeastern half

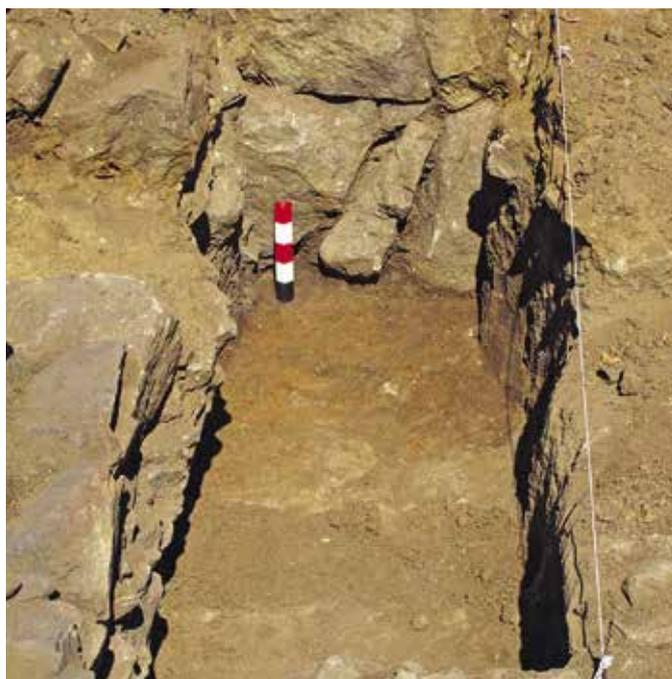


(a) The inner face of the front façade in Room 1 |



(b) The outer face of the front façade, southwestern end, with the large stone capping the drain behind the right side of the horizontal meter scale |

PLATE 36 | EXCAVATIONS IN THE NORTH TOWER



Left to right: (a) Sondage in the northeastern corner, beneath the sphinx base. The footings of the rear façade are set in a U-shaped trench cut into sterile sandy soil. Granite stones and sandy clay makeup were laid against the footings of the façade and the North Tower. The 0.5 m scale rests on stiff, sterile orange clay. (b) The sondage extended to reveal the base of the southeastern face of the North Tower, constructed on stiff orange clay with the façade footings at left.



Left to right: (c) The northern corner of the North Tower, abutted by timber structure and stone footings of the rear façade, cut into sterile sandy soil; thick silty clay lies against the second stone, with burned collapse above. (d) Inclined stones laid against the outside, northwestern base of the rear façade, with the northern corner of the North Tower behind.



(a) Capstones over the drain beneath Room 2 |



(b) Detail of the front façade footings butted against the West Tower, with the large stone capping the drain |

PLATE 38 | THE GLACIS



| (a) The glacis at the buttness and adjacent wall in 1999



| (b) The glacis, with the South Tower at right, showing different techniques of carrying the facing around corners



(a) The glacis as first uncovered, with displaced stone in the face of the East Tower, the figure by the Middle Tower, and the tree at the South Tower front. The structure in front of the East Tower is partially exposed.



(b) The buttress glacis

PLATE 40 | THE GLACIS FACE



| (a) Glacis face to the north of the buttress



| (b) Glacis face, south-central section of the western stretch



(a) Glacis face, north-central section of the western stretch |



(b) Glacis face, central section of the western stretch |

PLATE 42 | THE GLACIS FACE



| (a) Glacis face at the junction of the western and northern stretches



| (a) Glacis face at the junction of the western and northern stretches



(a) The front of the entrance passage as first exposed in 1999, showing the very loose stone fill |



(b) The glacis in front of the Middle Tower |

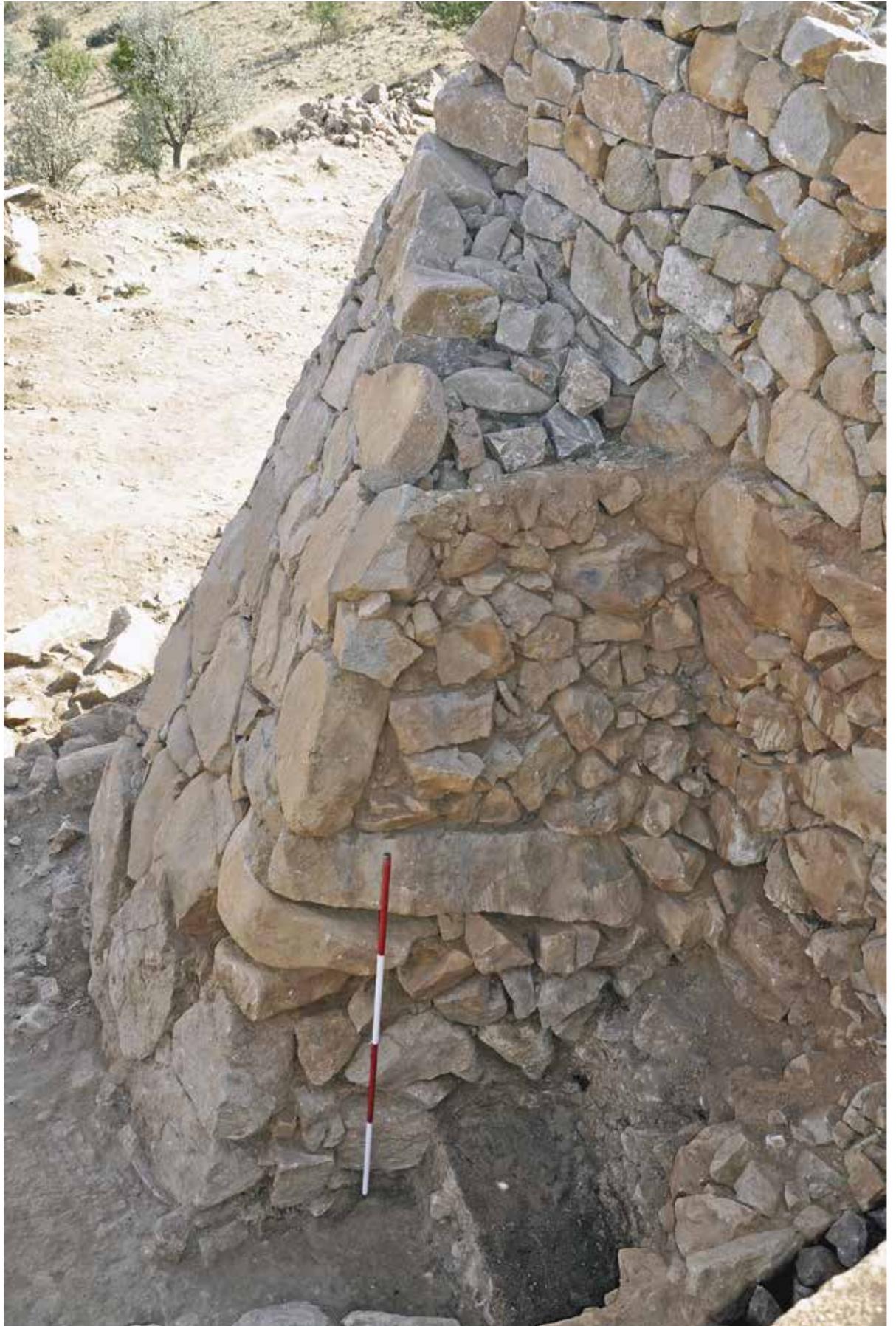
PLATE 44 | THE GLACIS



| (a) The glacis in the recess between the Middle and East Towers preserved to its original height, with stones of the vertical wall preserved at top center



| (b) The glacis in front of the East Tower, with the footings of the structure in front



The phases of glacial construction against the side of the East Tower, with part of the midden-like deposit in the base of the glacial fill |

PLATE 46 | EXCAVATION OF THE GLACIS AND WALL



| (a) The northeastern side of the East Tower in the course of excavation, with the glacis partially restored



| (b) The junction of the East Tower and city wall in the course of excavation



(a) The East Tower and city wall junction showing how a space was left between two stretches of glacia, with traces of activity and midden-like deposits in the sheltered corner



(b) The East Tower and city wall before renewed excavation in 2010. The glacia on the tower corner collapsed before the fire. The corner of the tower itself was rebuilt in 2003 and the path revamped in 2009.

PLATE 48 | THE ENTRANCE PASSAGE



(a) The southwestern side of the entrance passage during the excavation of TR12, with large stones against the base of the wall where flowing water had undercut it



(b) The northeastern side of the entrance passage after excavation of TR03 and TR12 and temporary conservation of the upper walling, with new stones marked by chalk

PHOTOS (a) o3slvf3623, (b) o3slvf4405



(a) The slightly sunken stone in the center of the entrance passage after rain. Marks toward the upper left and lower right are 1 m apart. |



(b) The court looking toward the West Tower in 2010 |

PLATE 50 | THE COURT



| (a) The court looking toward the North Tower in 2010



| (b) The court looking toward the Middle Tower and the entrance passage



(a) Part of the fused mass of granite rubble, partially vitrified, in the front façade to the northeast of the threshold |



(b) Horizontal timber slots at the base of the rear façade. The northwestern corner of the central pavement is beneath the scale, the doorway into Room 2 at center left, the northwestern corner of the central pavement at center right. One slot is fully exposed; to the left of it can be seen the end of a second slot. There were probably two additional slots farther to the left that were not exposed. |

PLATE 52 | THE FRONT FAÇADE



(a) A portion of the southwestern end of the front façade, with the threshold at left and a partially excavated horizontal timber slot at center. The southwestern corner of the central pavement is at left, the paved court is at the top of the picture.



(b) Ghosts of three timber elements in the front façade immediately to the southwest of the threshold. The scale rests on the court pavement.

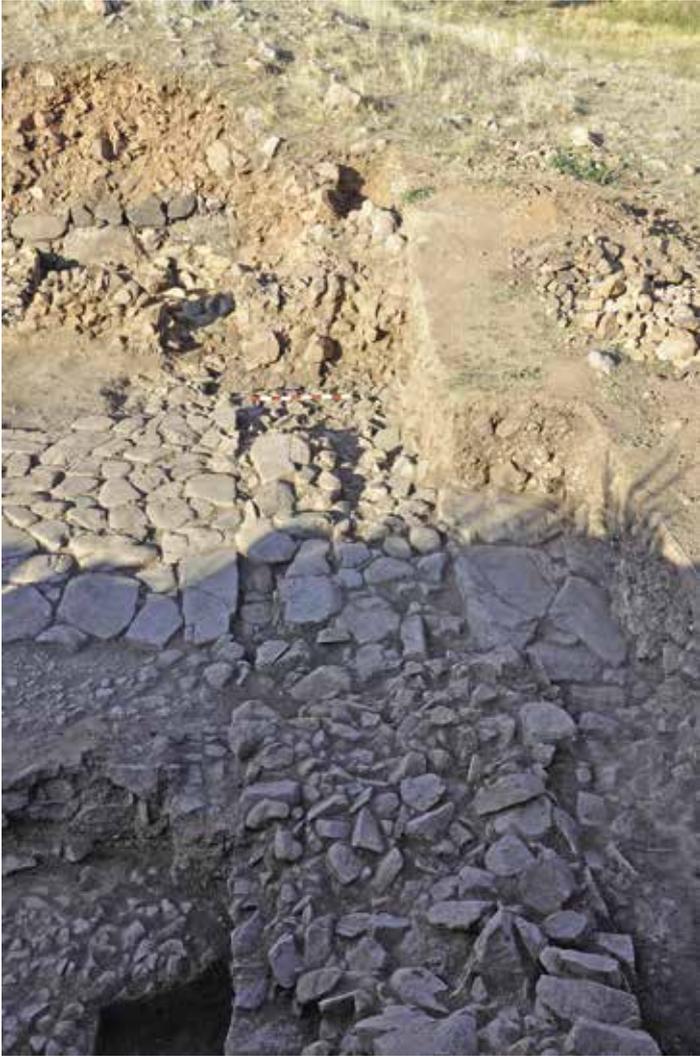


(a) The rear part of the gate from the North Tower |

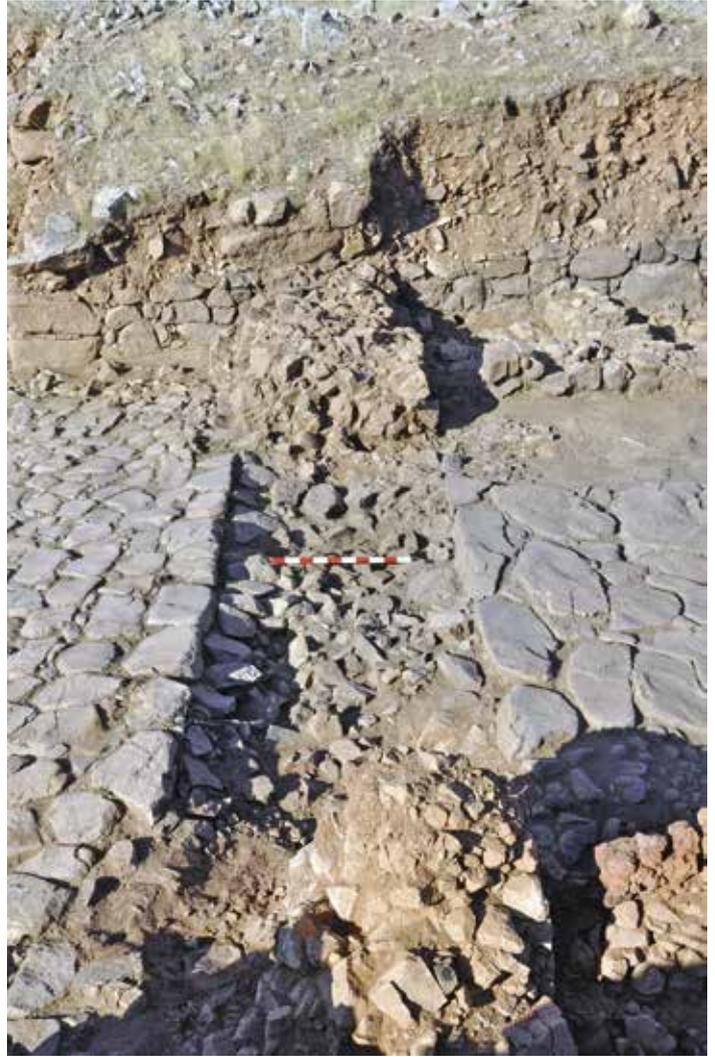


(b) Looking across the front façade from the West Tower |

PLATE 54 | THE STONE THRESHOLDS



| (a) The threshold in the front façade



| (b) The rear façade with the secondary stone threshold, the central paved passage at left, and the large pavers at the end of the street at right



PHOTO 11dpcg1262

PLATE 56 | COLLAPSED STONE AGAINST THE GLACIS AND IN THE ENTRANCE PASSAGE



(a) Collapse against the side of the buttress, with a dark layer of ash and charcoal against the glacial face stones



(b) Section across the front of the entrance passage



(c) Collapse against the glacial face in front of the Middle Tower

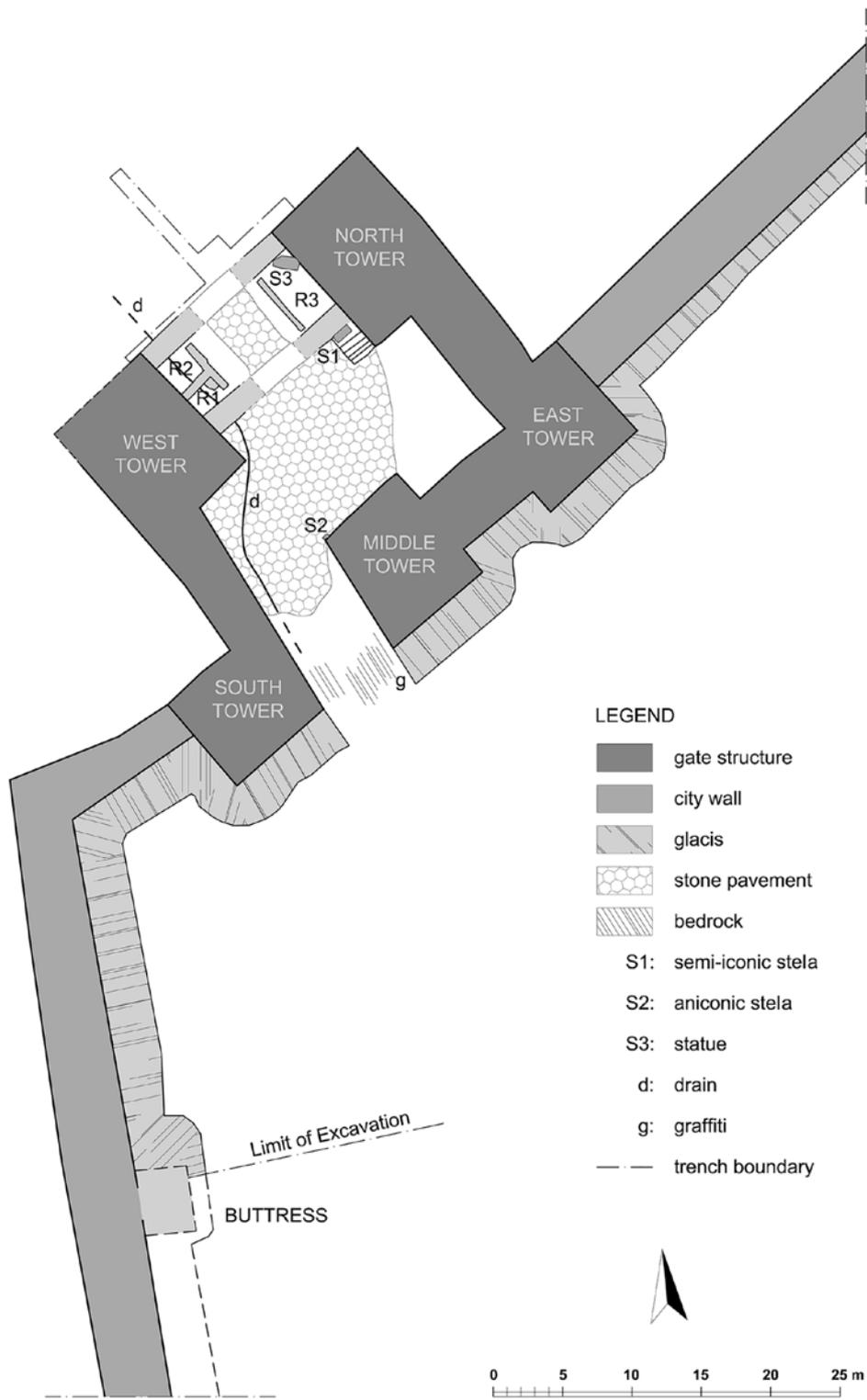


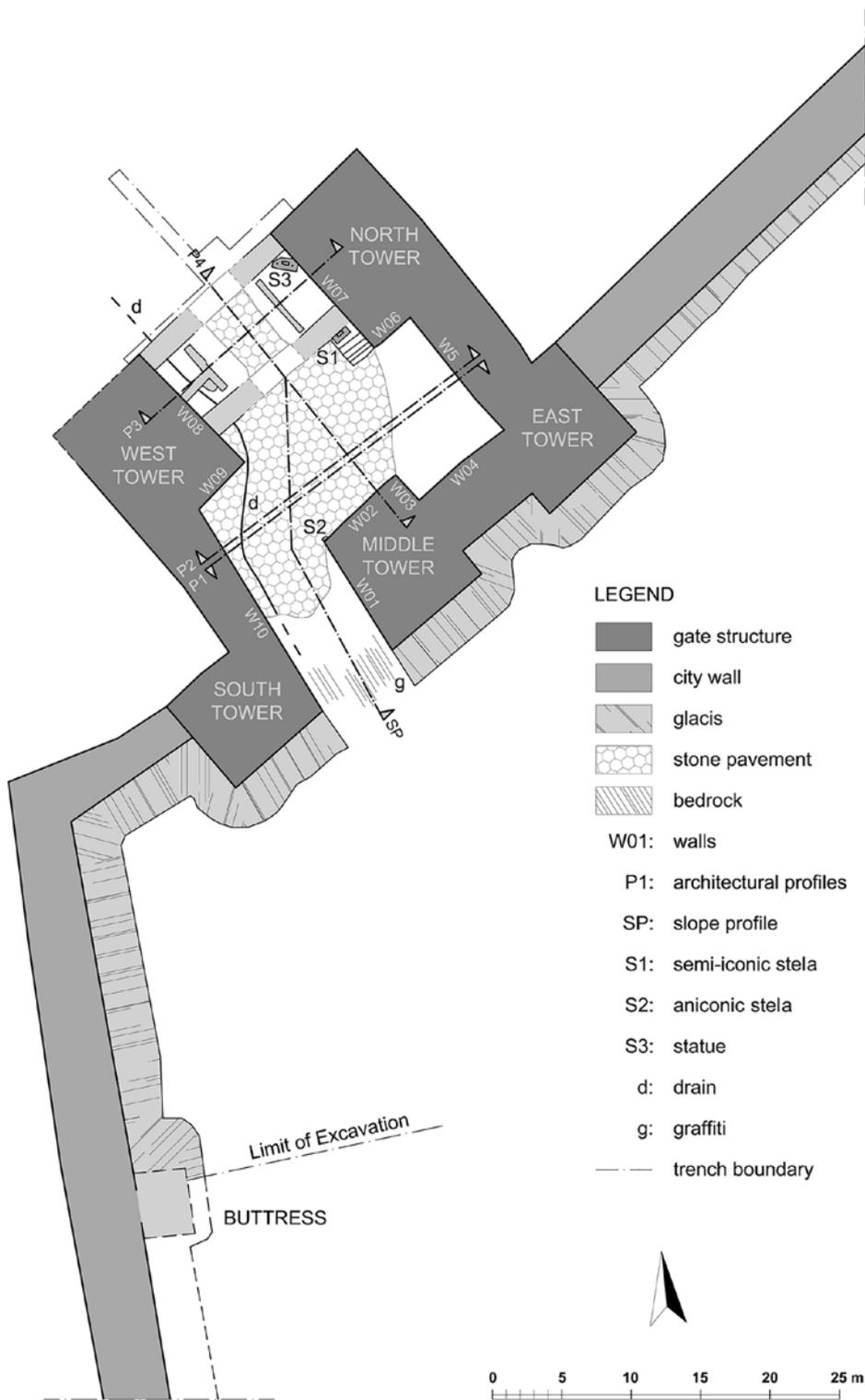
(a) Section across the center of Room 3 looking northwest |



(b) Section through the northeastern wall of Room 2 showing how it was pushed over when the gate collapsed |

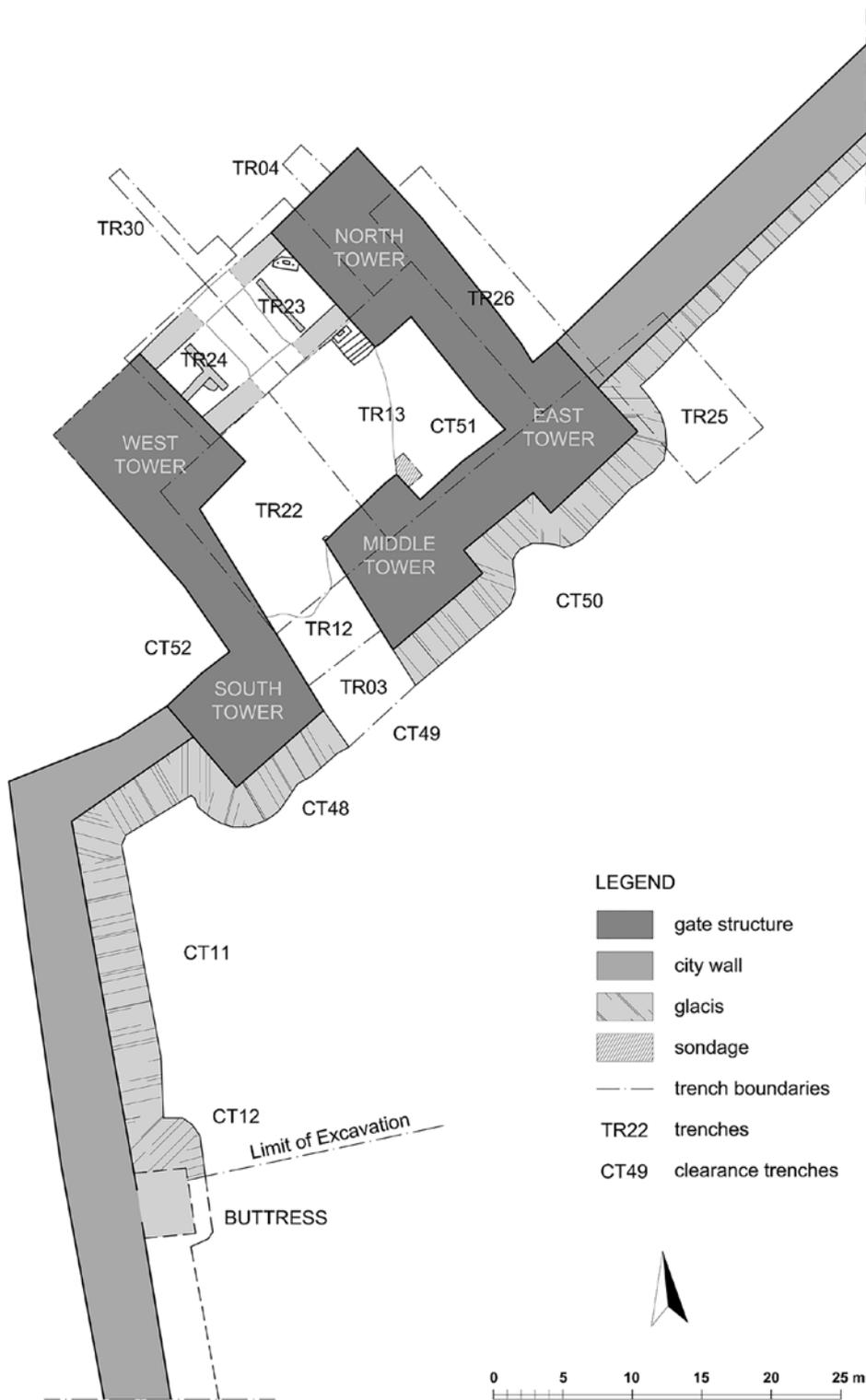
PLATE 58 | BLOCK PLAN OF THE CAPPADOCIA GATE



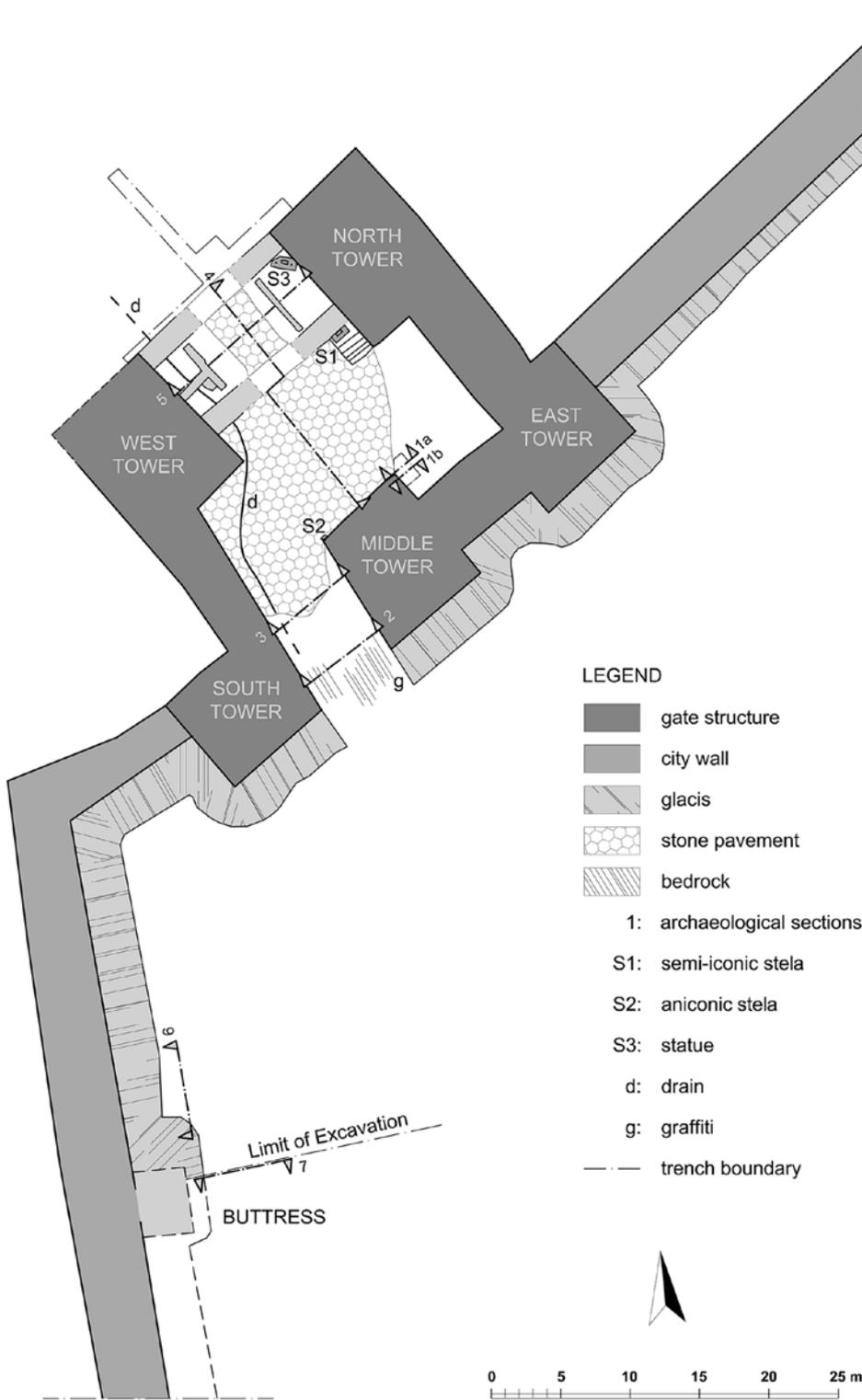


Plan 2
 Locations of architectural profiles
 and wall elevations (pls. 71-75) at
 the Cappadocia Gate

PLATE 60 | PLAN OF TRENCHES AT THE CAPPADOCIA GATE



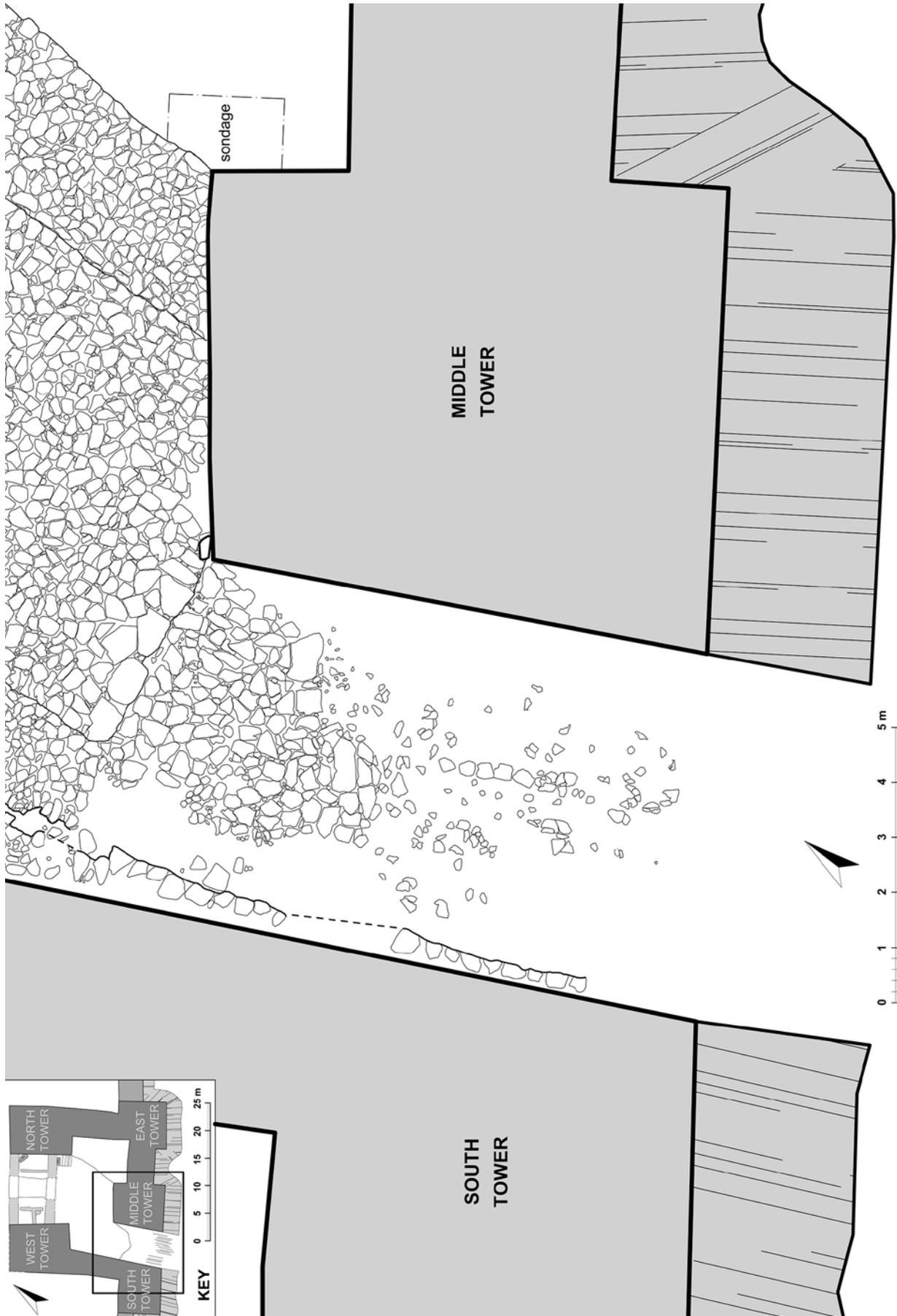
| Plan 3



Plan 4 |
For section drawings, see pls. 85-89



S2: skeleton 2
S3: skeleton 3



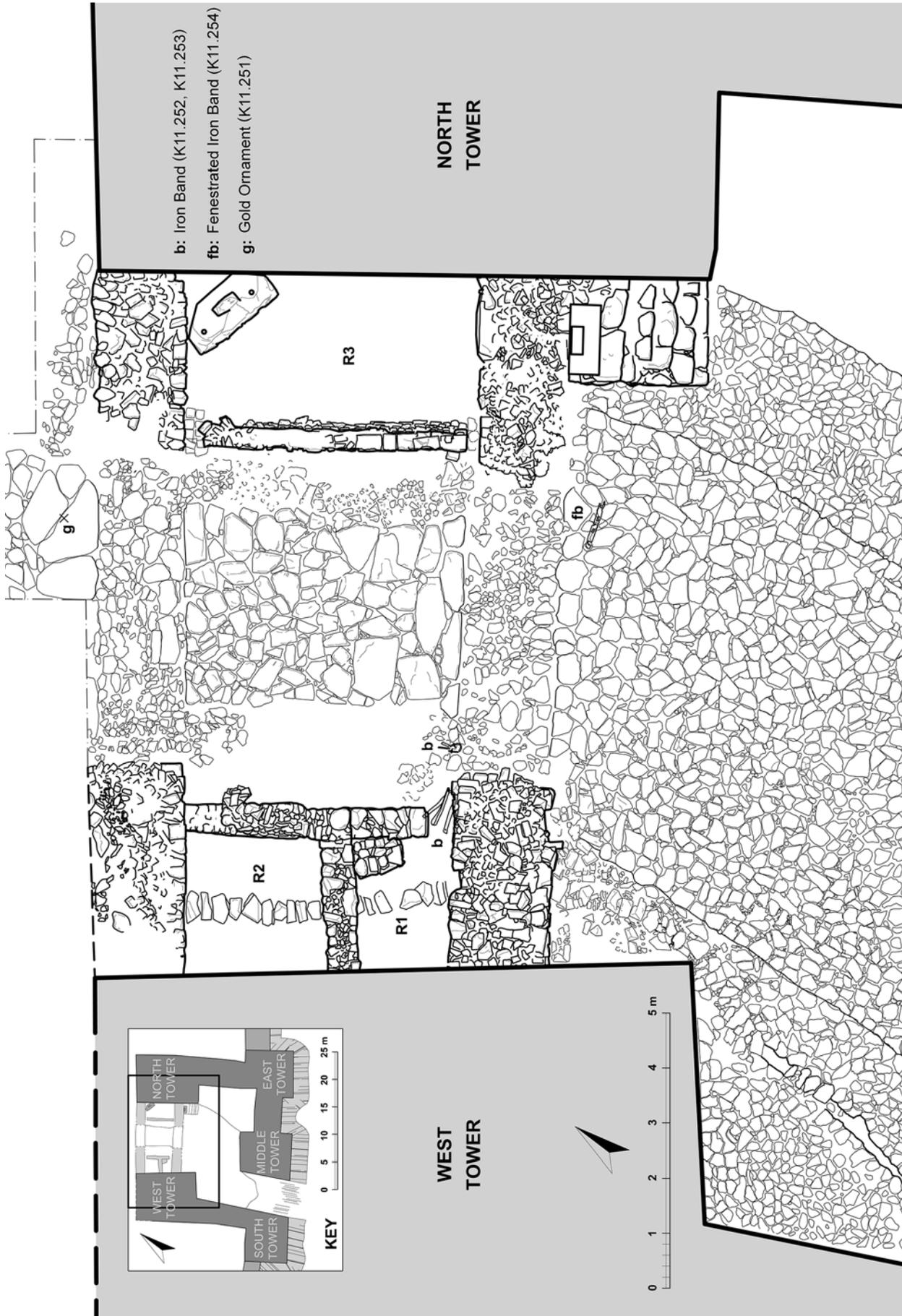
| Plan 6

DRAWING by Ahmet Çinici



| Plan 7

DRAWING by Ahmet Çinici





| Plan 9

DRAWING by Ben Claasz Cockson and Ahmet Çinici



| Plan 10

DRAWING by Ben Claasz Cockson and Ahmet Çinici



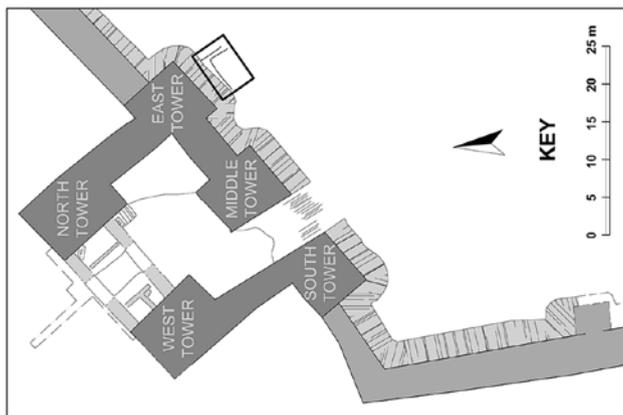
| Plan 11

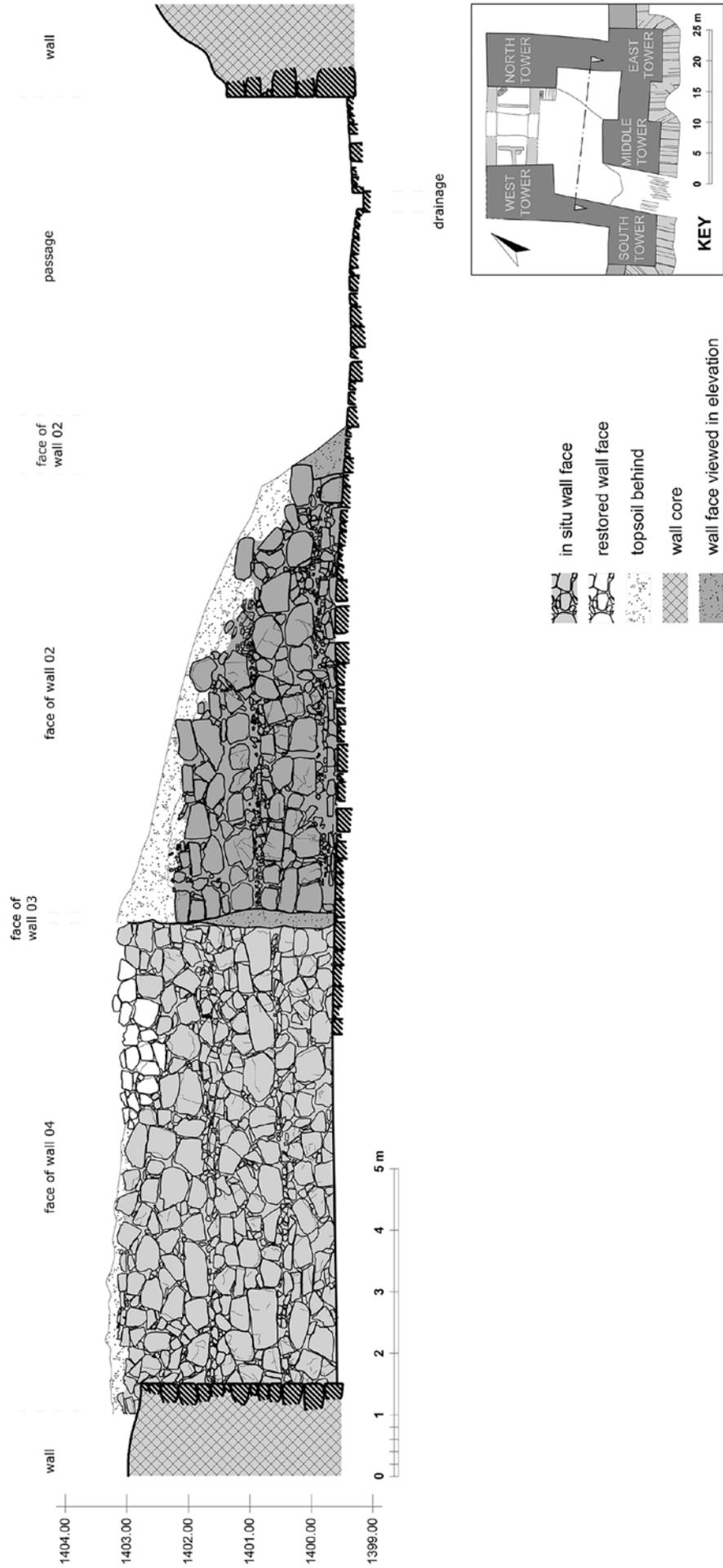
DRAWING by Ben Claasz Cockson and Ahmet Çimici



Plan 12
Fallen sandstone blocks in the court and entrance passage and the location of the two victims of the destruction

DRAWING by Ben Claasz Cookson and Ahmet Çinici

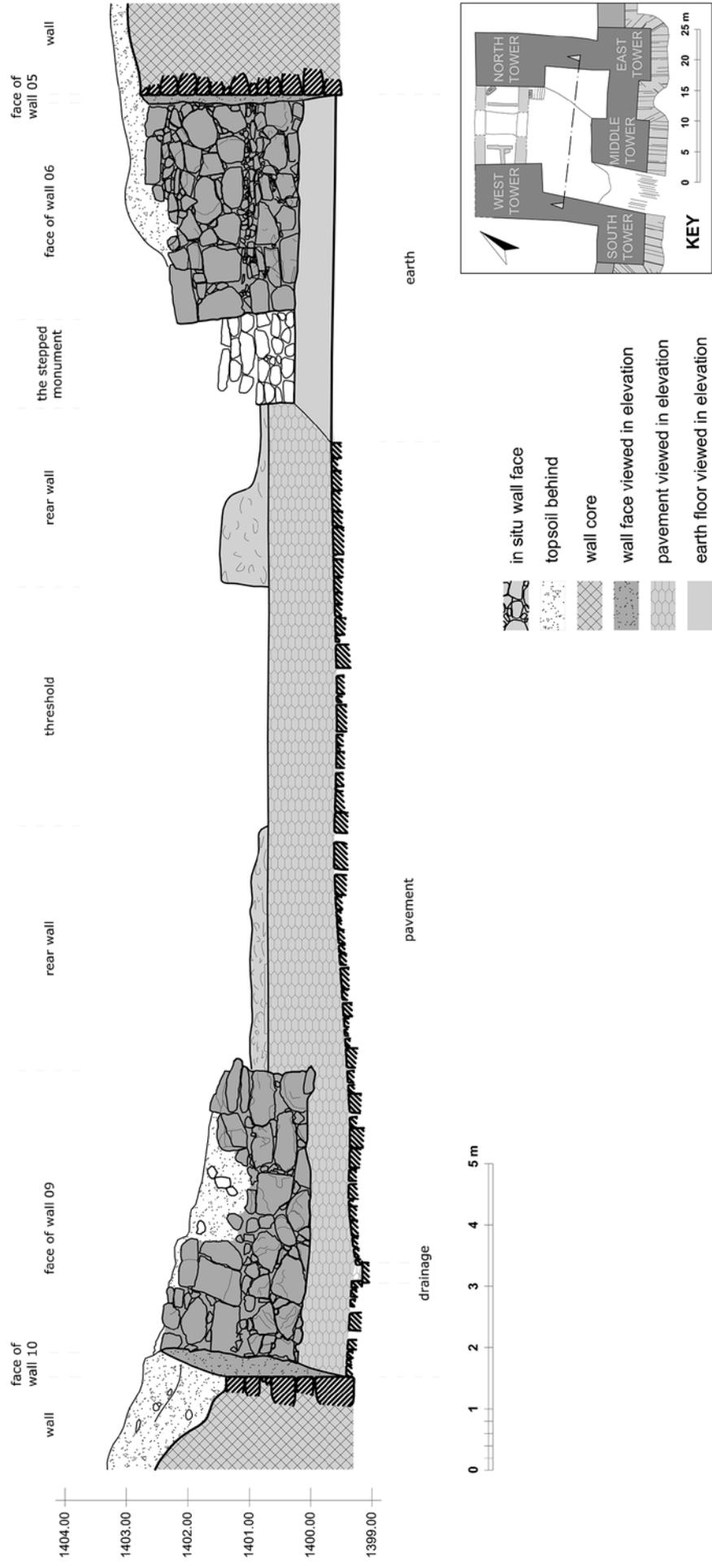




| Profile 1

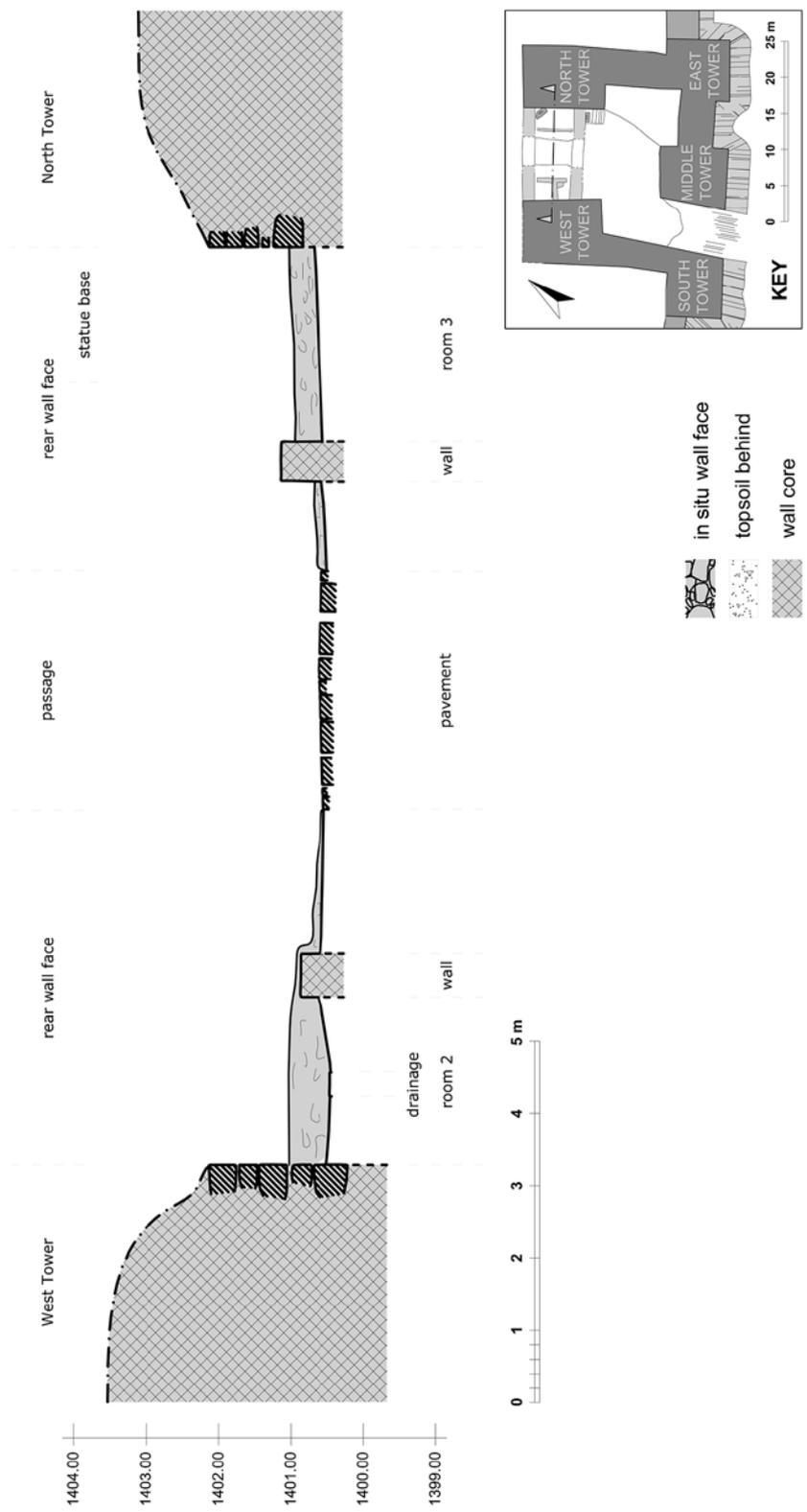
DRAWING by Ahmet Çinici

PLATE 72 | PROFILE THROUGH THE REAR SECTION AND THE COURT



| Profile 2

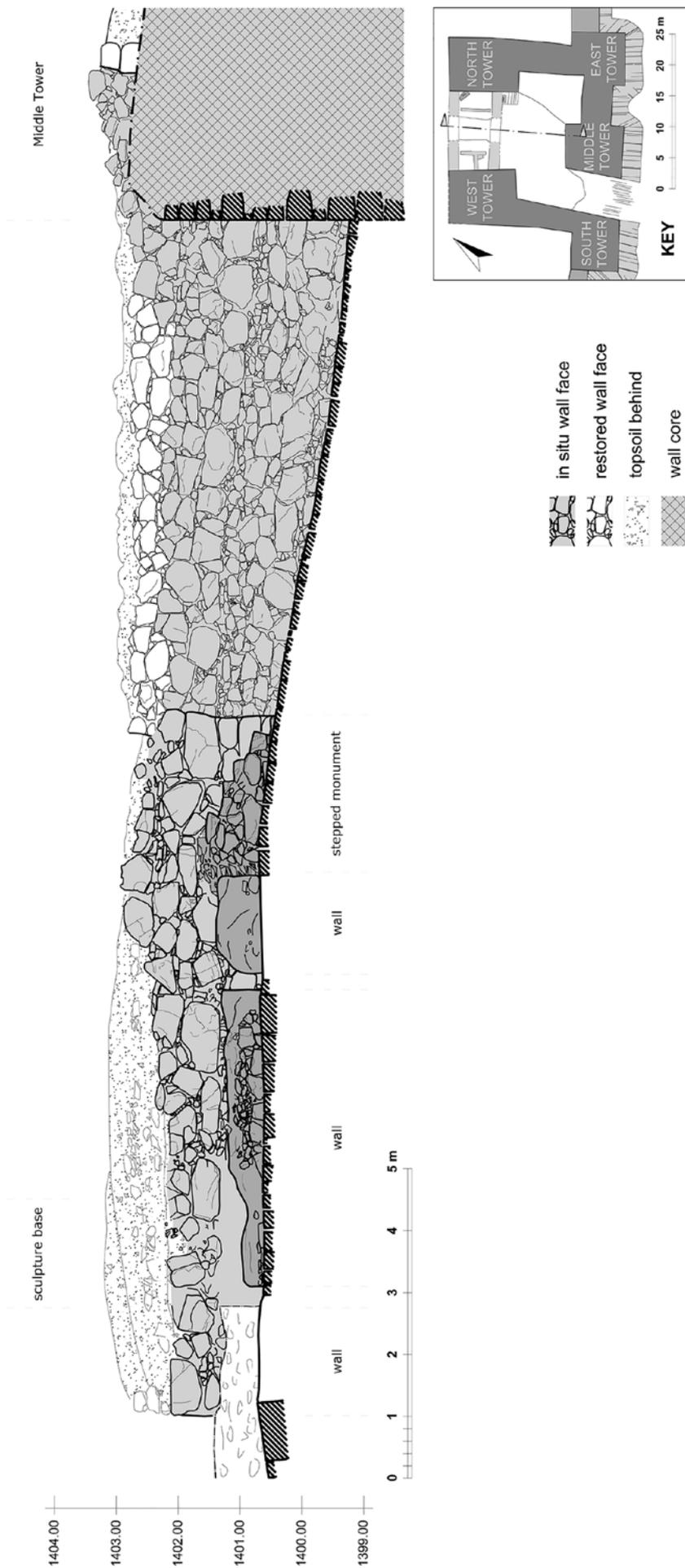
DRAWING by Ahmet Çinici



| Profile 3

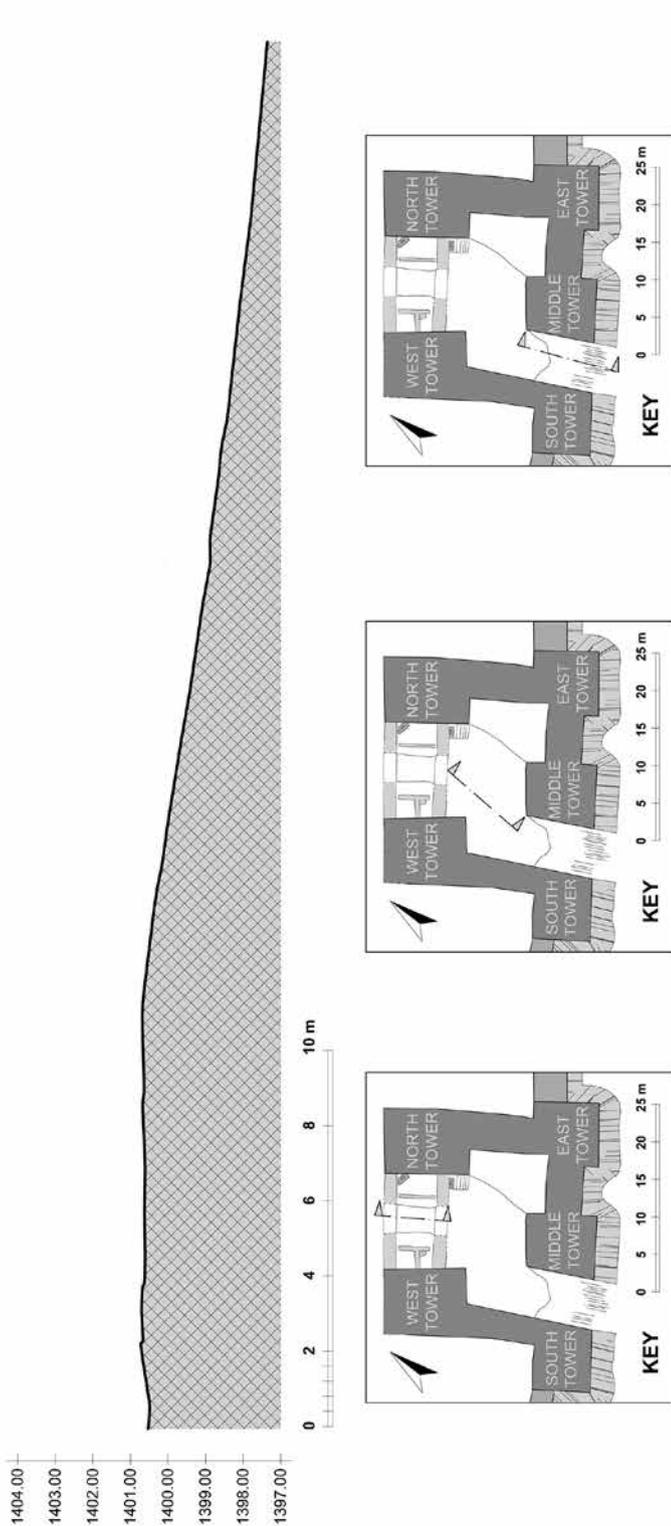
DRAWING by Ahmet Çinici

PLATE 74 | PROFILE THROUGH THE REAR CENTRAL PASSAGE AND COURT



| Profile 4

DRAWING by Ahmet Çinici

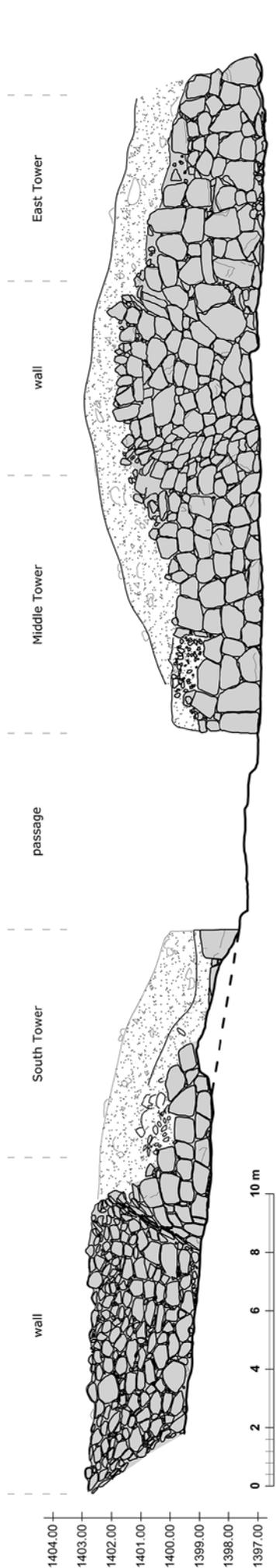


Profile 5
Bent profile through the entrance passage and across the court to the center of the front façade

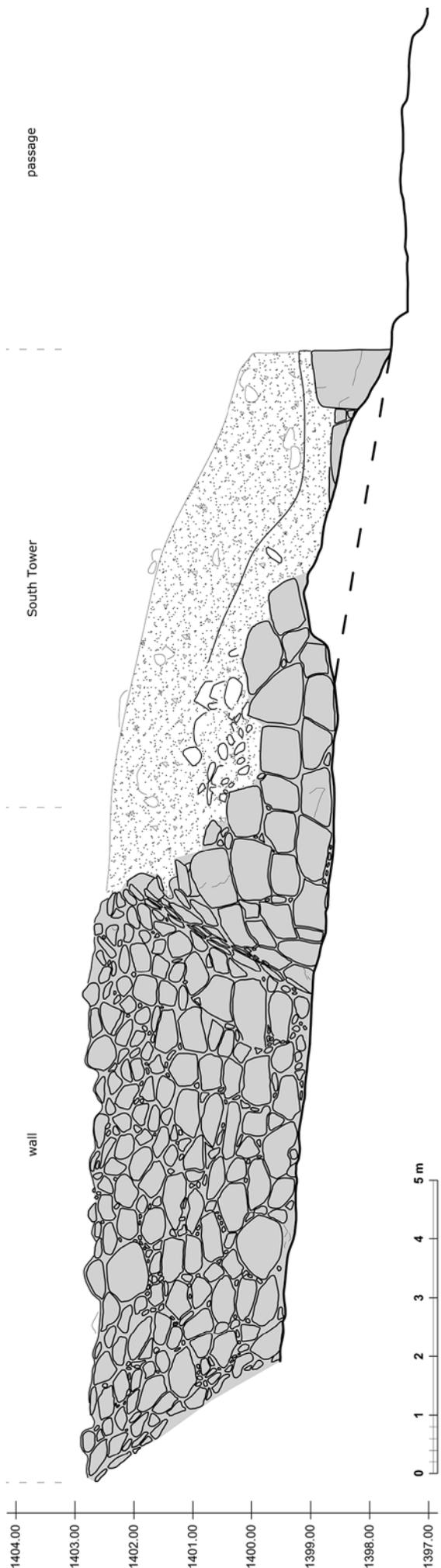
DRAWING by Ahmet Çinici

PLATE 76 | ELEVATION OF THE GATE AND SOUTH TOWER

in situ glaciis face
top soil behind

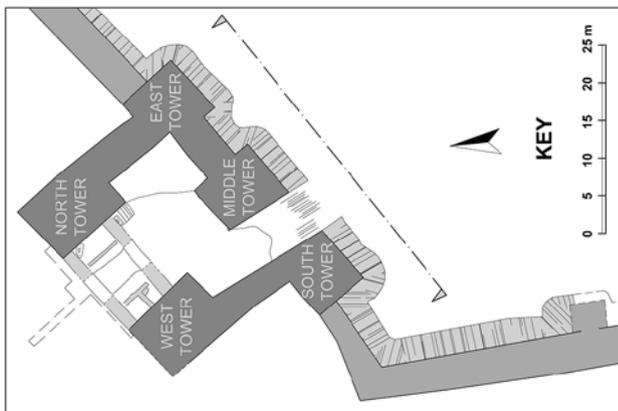
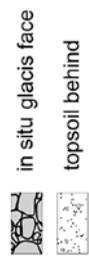
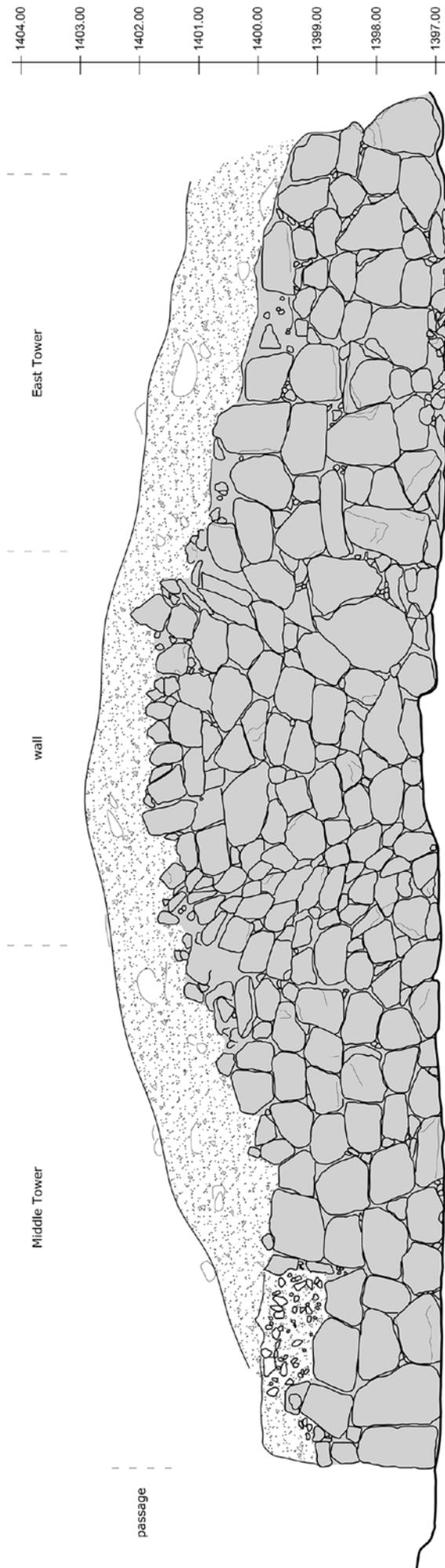


Elevation 1a
The front of the gate



Elevation 1b
The front of the South Tower and city wall

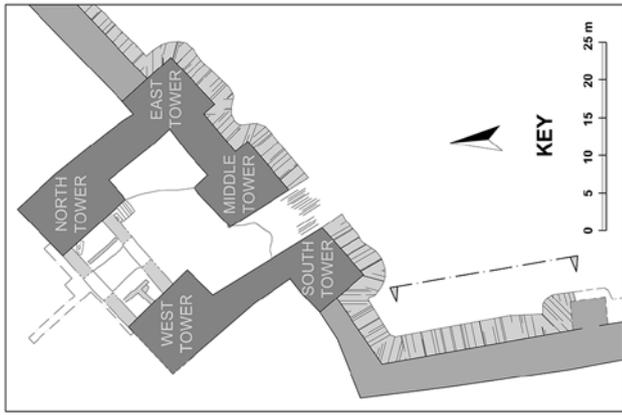
DRAWINGS by Ahmet Çiniçi from stereo photographs; rectified drawings by Kemal Gülcen



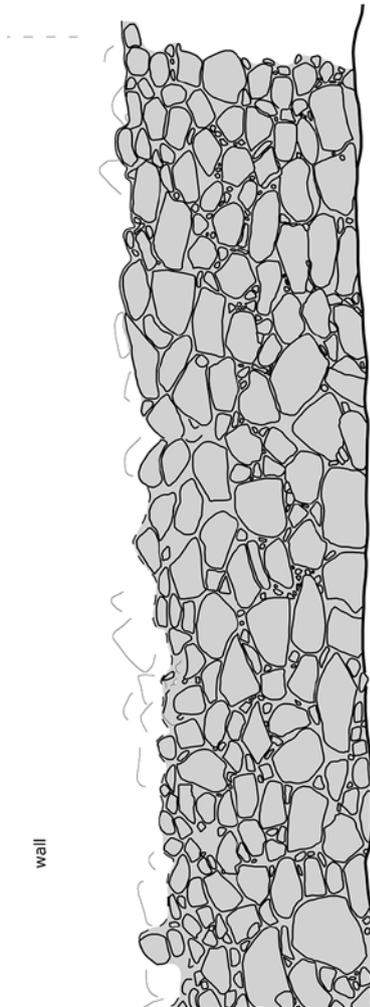
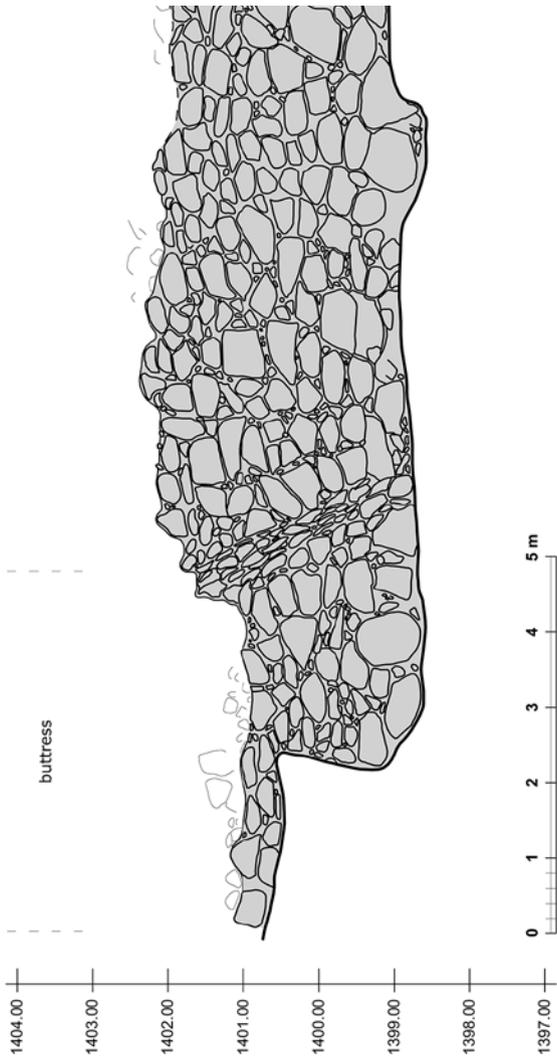
| Elevation 1c

DRAWING by Ahmet Çinici from stereo photographs; rectified drawing by Kemal Gülcen

PLATE 78 | ELEVATION OF THE CITY WALL AND BUTTRESS FRONT TO THE WEST OF THE GATE



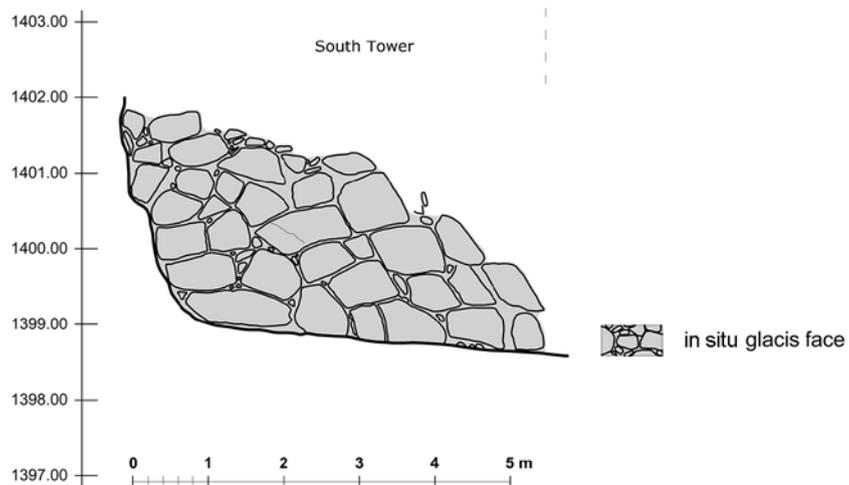
in situ glaciis face



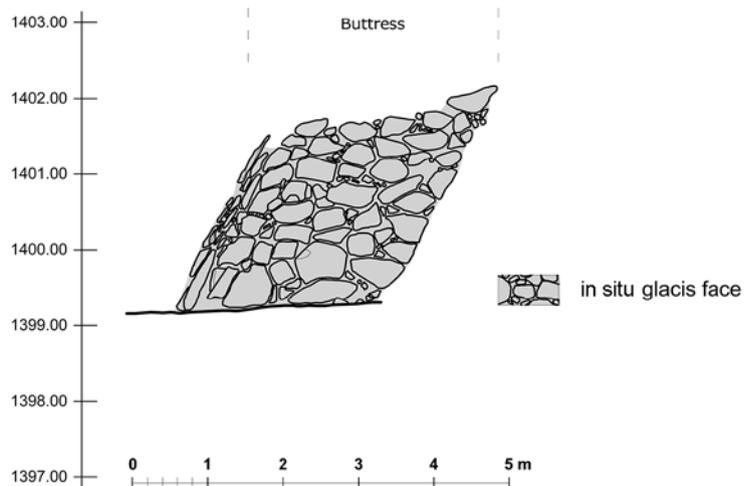
| Elevation 2

DRAWING by Ahmet Çinici from stereo photographs; rectified drawing by Kemal Gülçen

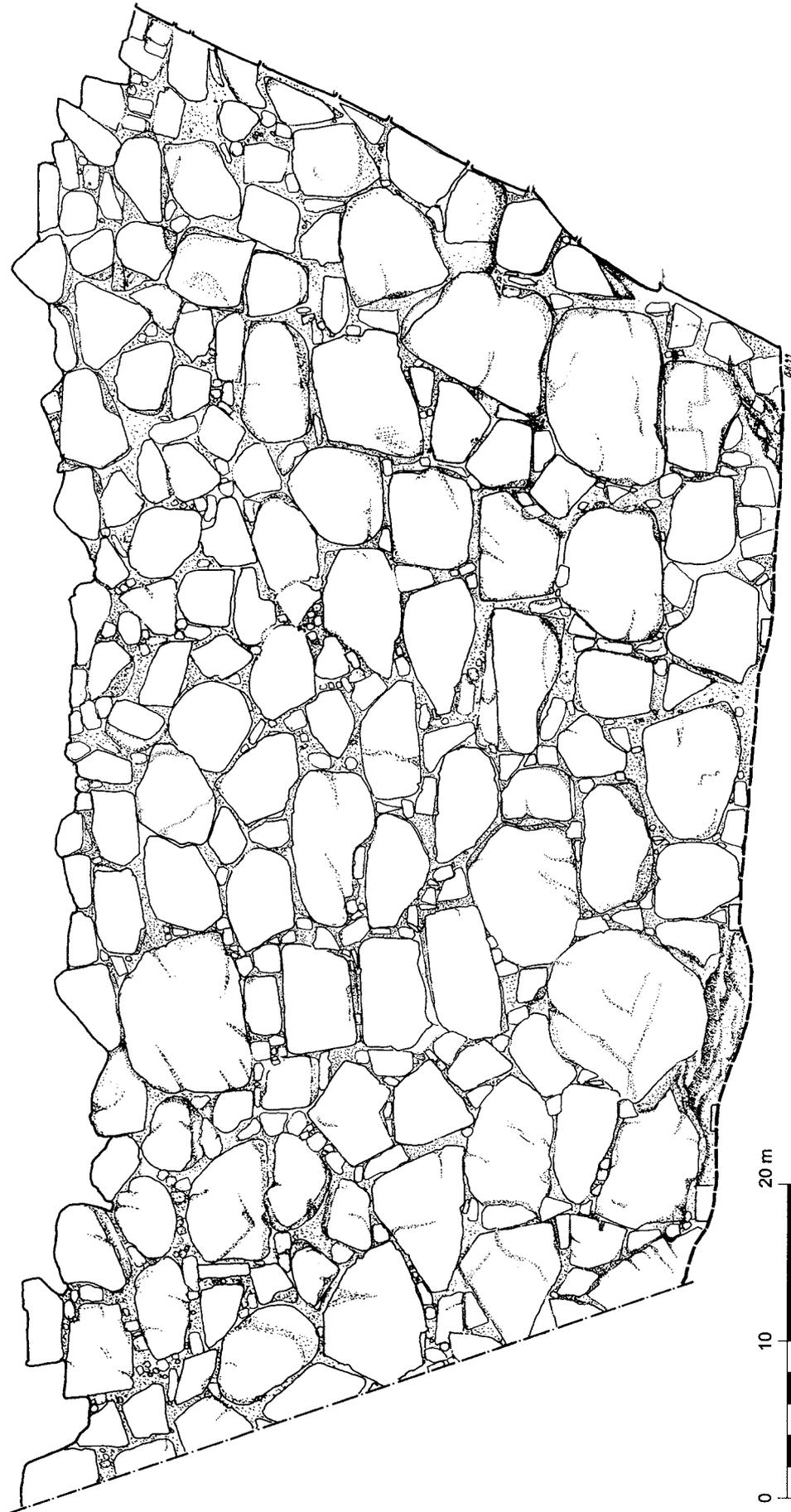
ELEVATIONS OF THE SOUTH TOWER AND BUTTRESS | PLATE 79



Elevation 3
The western side of the South Tower



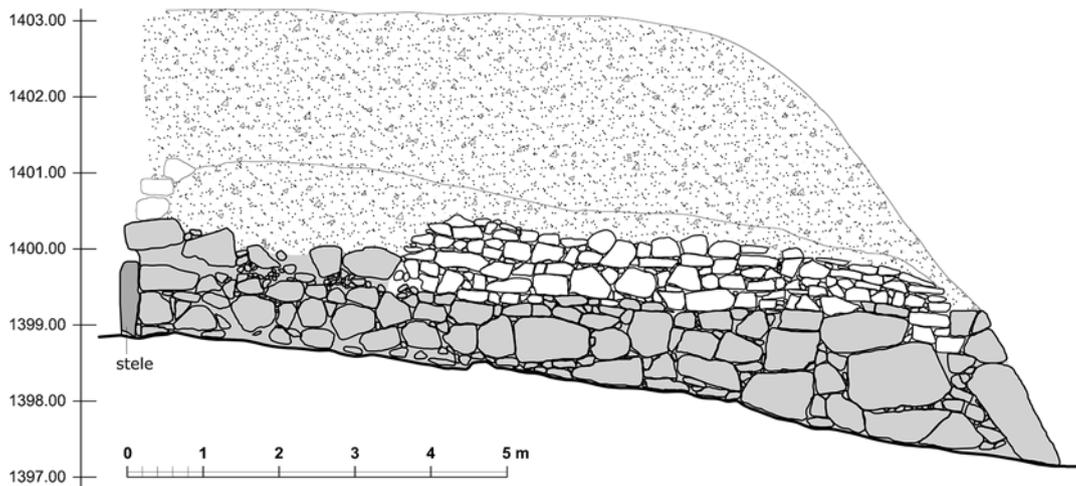
Elevation 4
The northern side of the buttress



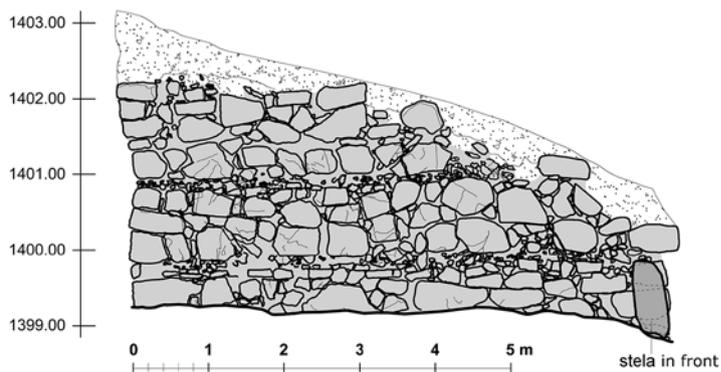
Elevation 5
Between the South Tower and the acute corner in the city wall

DRAWING by Ömür Harmanshah

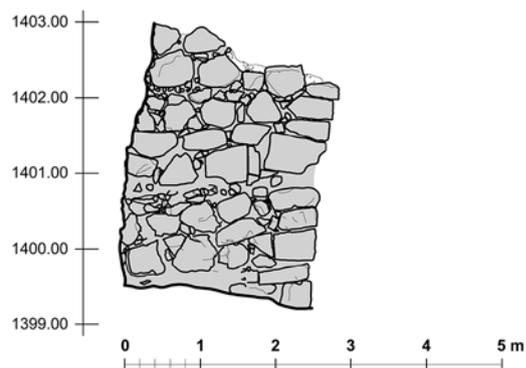
ELEVATIONS OF THE ENTRANCE PASSAGE AND MIDDLE TOWER WALLS | PLATE 81



Elevation 6
Northeastern face of the entrance passage (wall 01)



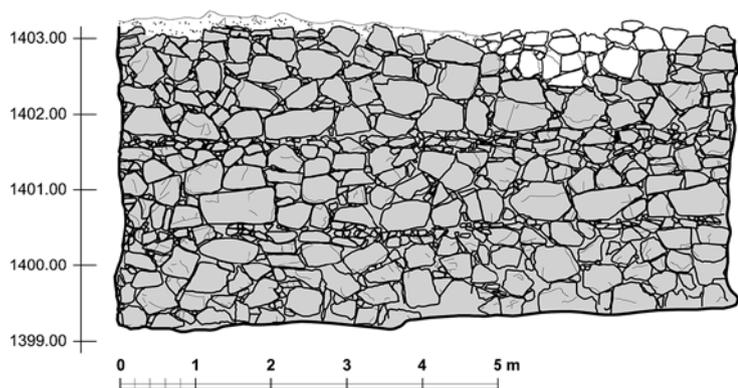
Elevation 7
Southeastern face of the Middle Tower (wall 02)



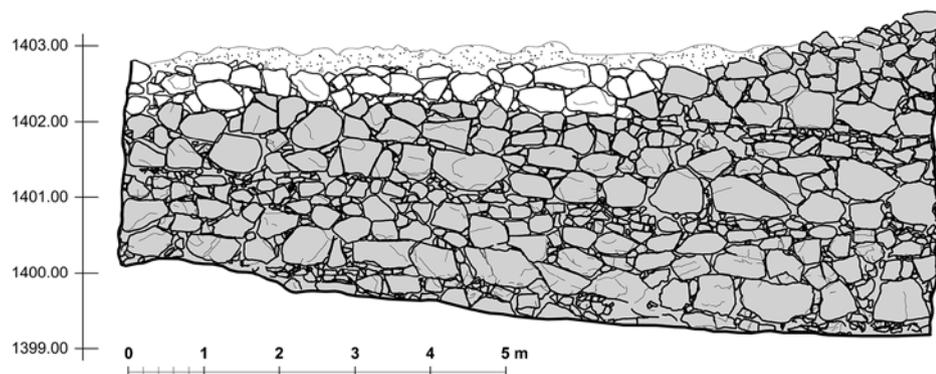
Elevation 8
Northeastern face of the Middle Tower (wall 03)

-  in situ wall face
-  restored wall face
-  topsoil behind

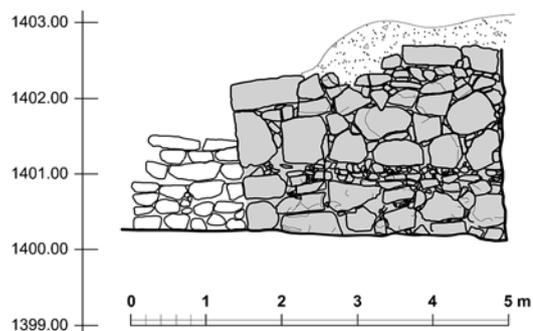
PLATE 82 | ELEVATIONS OF THE COURT AND NORTH TOWER WALLS



Elevation 9
Southeastern face of the court (wall O4)



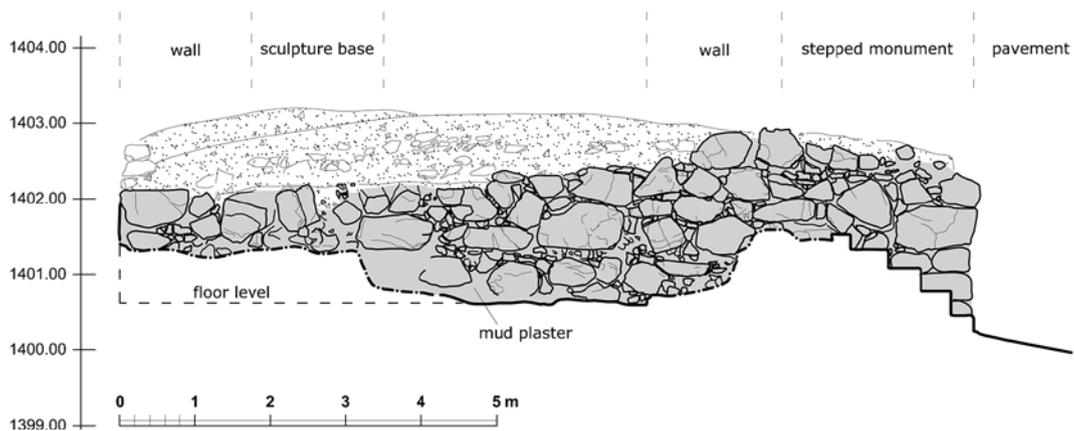
Elevation 10
Northeastern face of the court



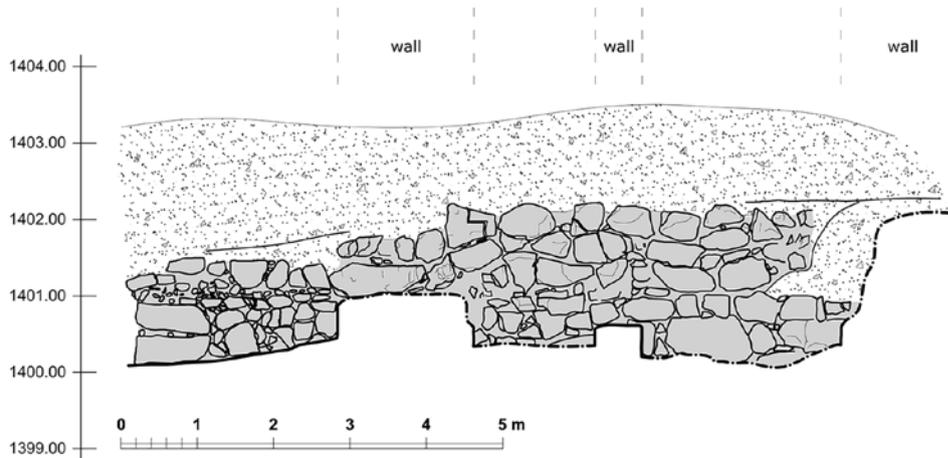
Elevation 11
Southeastern face of the North Tower

-  in situ wall face
-  restored wall face
-  topsoil behind

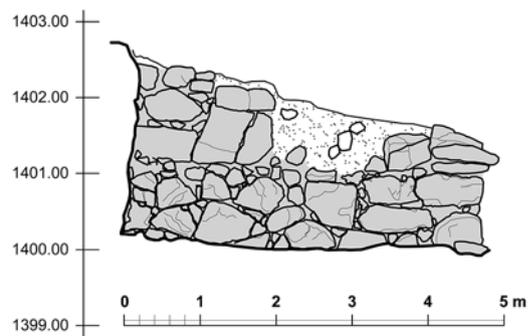
ELEVATIONS OF THE NORTH AND WEST TOWERS | PLATE 83



Elevation 12 |
Southwestern face of the North Tower (wall 07, Middle Tower)



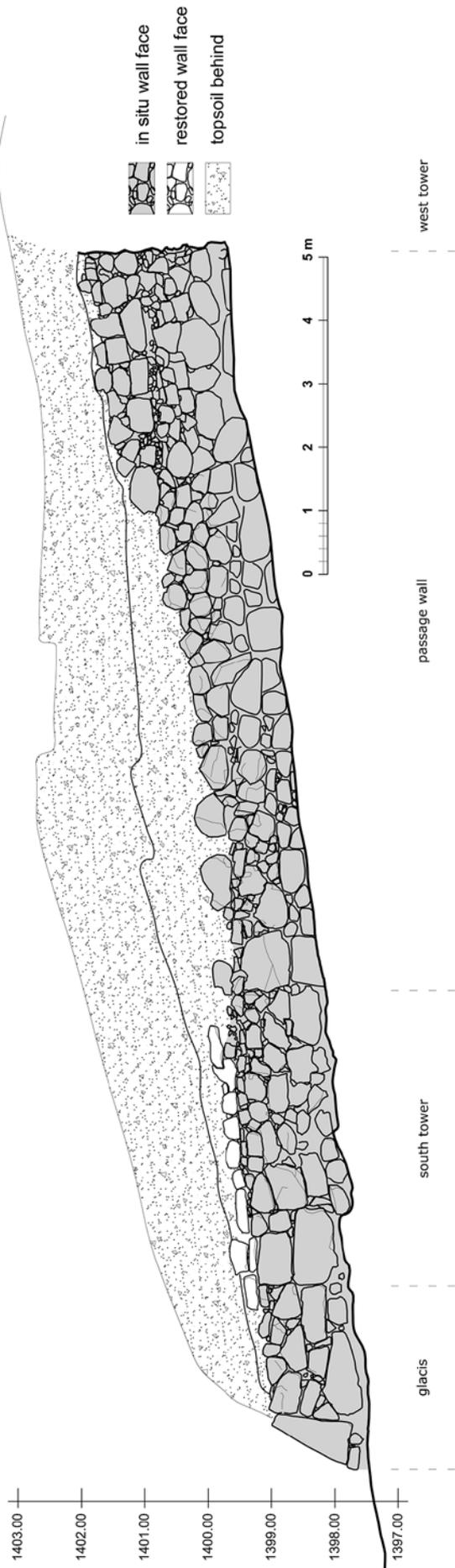
Elevation 13 |
Northeastern face of the West Tower (wall 08)



Elevation 14 |
Southeastern face of the West Tower (wall 09)

-  real surface
-  unreal surface
-  in situ wall face
-  top soil behind

PLATE 84 | ELEVATIONS OF THE ENTRANCE PASSAGE AND ROOM 3 WALLS



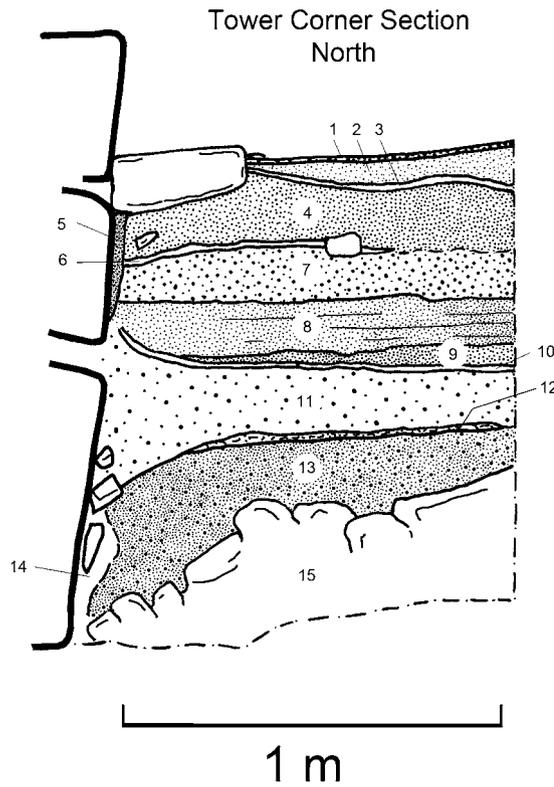
Elevation 15
Southwestern face of the entrance passage (wall 10)



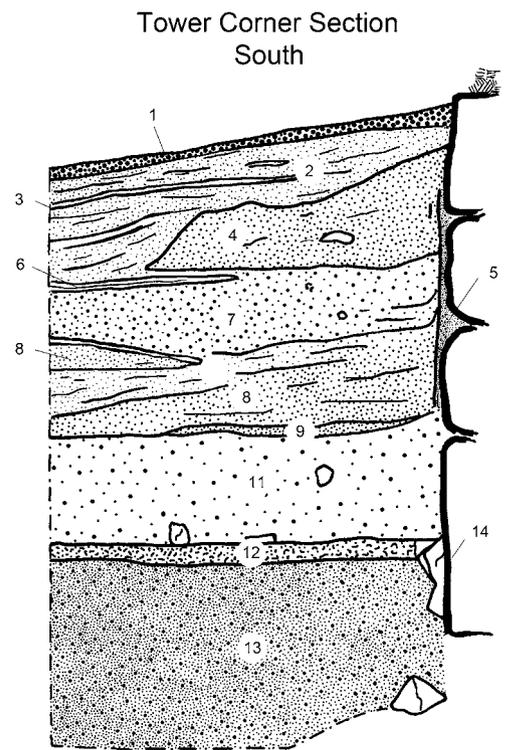
Elevation 16
Outer, southwestern face of the wall forming Room 3

Elevation 17
Inner, northeastern face of wall forming Room 3

Strata below the burned surface in the sondage against the northeastern face of the Middle Tower. (See pl. 17 for a photograph and pl. 61 for location.)



Section 1a |

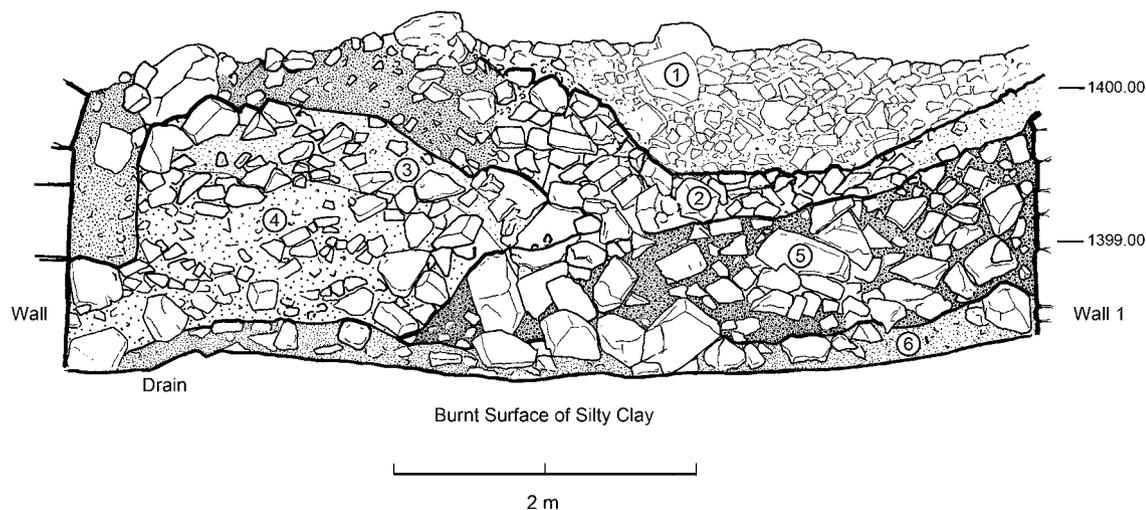


Section 1b |

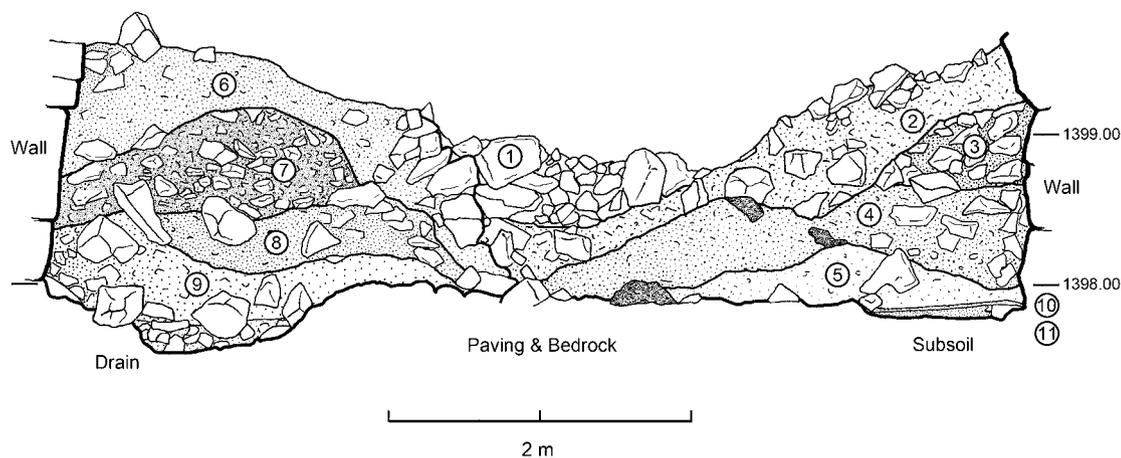
Number	Description	Unit(s)
1	Burned surface from destruction of gate	—
2	Gray sandy with lines of white and iron pan	22
3	Iron pan	—
4	Gray silty with stones and patches of iron pan	23, 25
5	Mud plaster	36
6	Iron pan	—
7	Gray silty clay with greenish pebbles, leveling	24
8	Layers of silty clay with patches of iron pan	24, 26, 27
9	Clayey soil with granite chips	28
10	Surface with iron pan	29
11	Sandy clay fill	30
12	Construction surface	31
13	Subsoil, dark gray-brown silty clay	32
14	Foundation trench, stones and soft sand	37
15	Eroding granite bedrock	35

Levels in the two drawn sections

PLATE 86 | SECTIONS ACROSS THE ENTRANCE PASSAGE



Section 2
 Across the front of the entrance passage
 (See pl. 43a for a photograph and pl. 61 for location.)



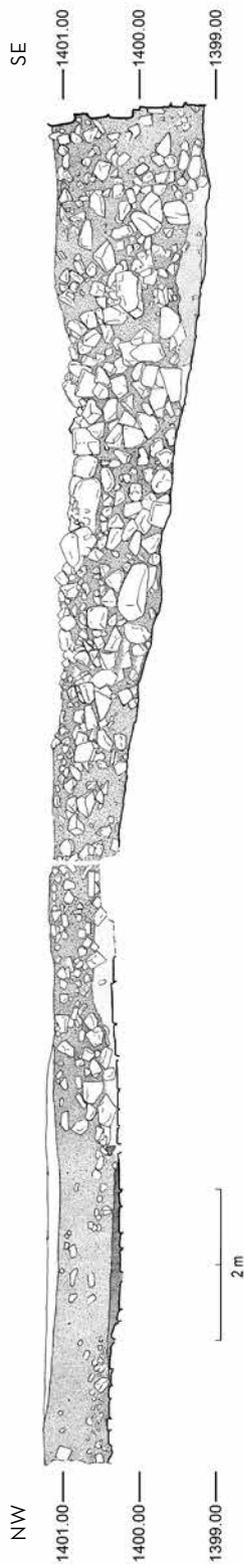
Section 3
 Across the middle of the entrance passage
 (See pl. 56b for a photograph and pl. 61 for location.)

Note to Sections 2 and 3

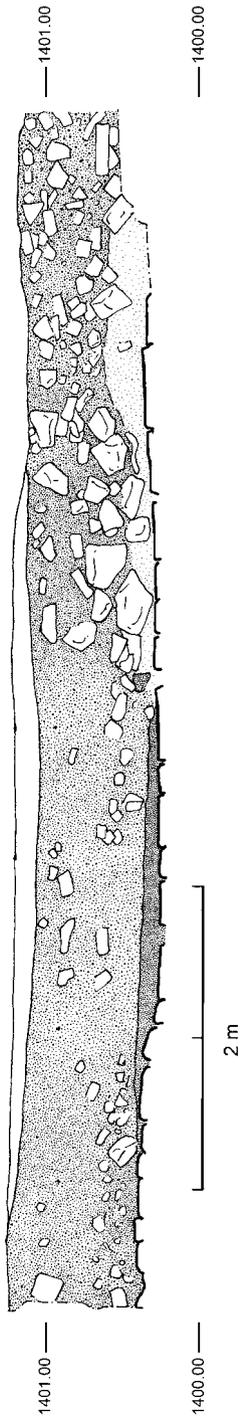
The gate collapsed during the fire, while more must have fallen soon thereafter, to the base of level 1 in Section 2, and the base of levels 1 and 2 in Section 3. The hollow in the center of the passage seems to have been a rough track in Byzantine times, when stones were roughly piled up on the left side, in level 2 at the top and level 6 below, to retain the very loose rubble fill. The skeleton of a woman killed by the fall

of the burning structure was found farther up the entrance passage, at the base of level 6 in Section 2.

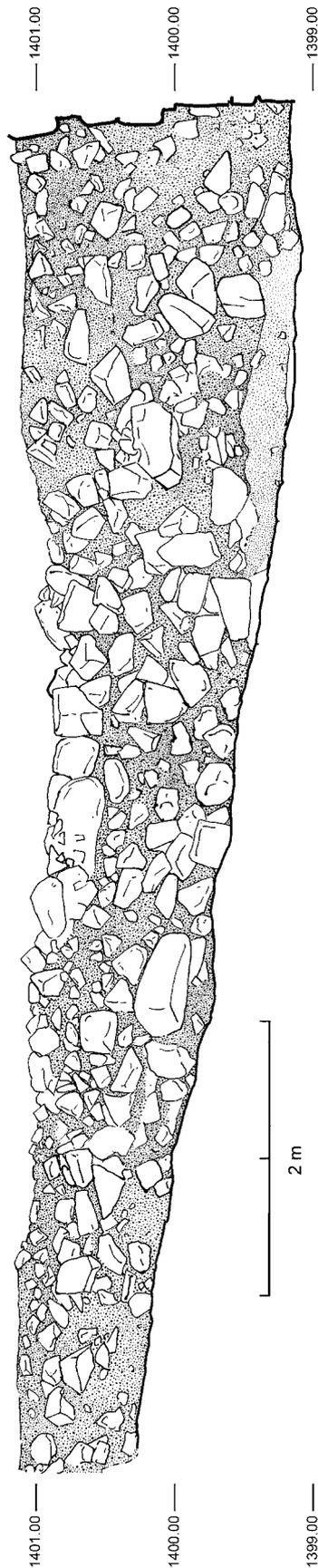
When Section 2 was recorded, excavation had halted at the burned surface of silty clay. This clay is thought to have derived from thick mud wall plaster that was not preserved in situ where these two sections were located. In later seasons this surface was removed to reveal the stone pavement beneath.



Section 4a
Through the center of the rear part of the gate and court at 1:100. (See pl. 61 for location.)

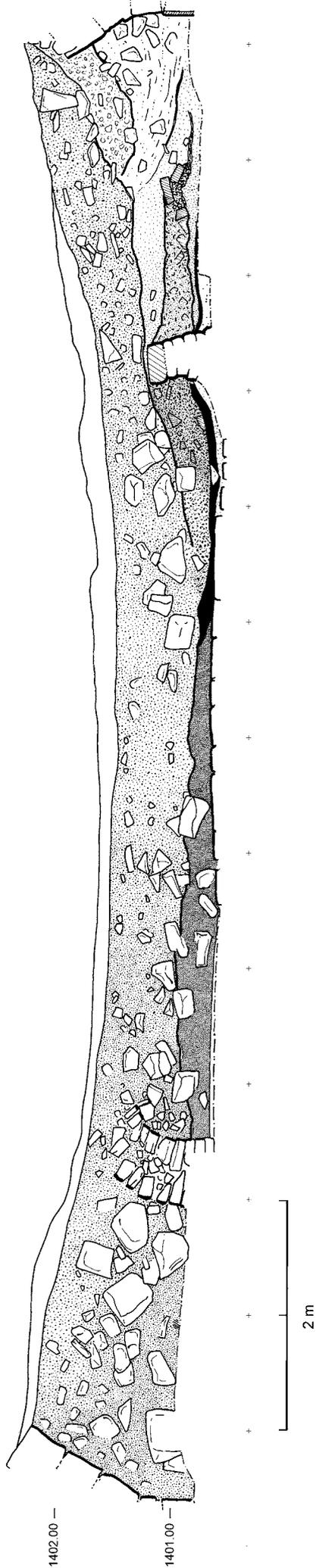


Section 4b
Northwestern portion of section 4a (above), through the center of the rear of the gate. Burned debris from the rear façade and debris from the front façade lie directly on the pavement, beneath postdestruction accumulation. (See pl. 61 for location.)



Section 4c
Southeastern portion of section 4a (above), through the court. Toward the south end the putative mudbrick collapse above silt on the pavement is shown. The section was only cut through the lower part of the very loose stone collapse. (See pl. 61 for location.)

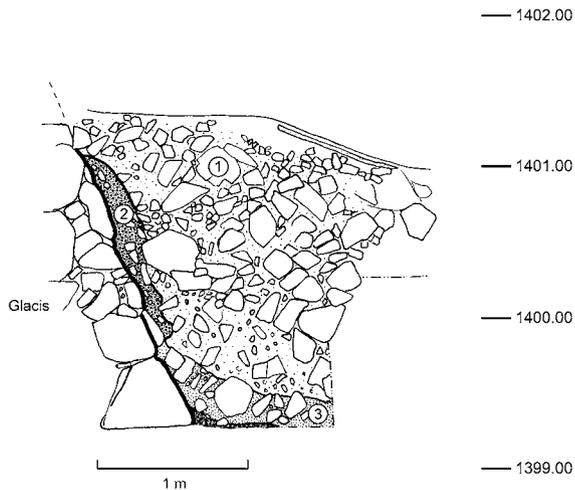
DRAWINGS by Ben Claasz Cockson



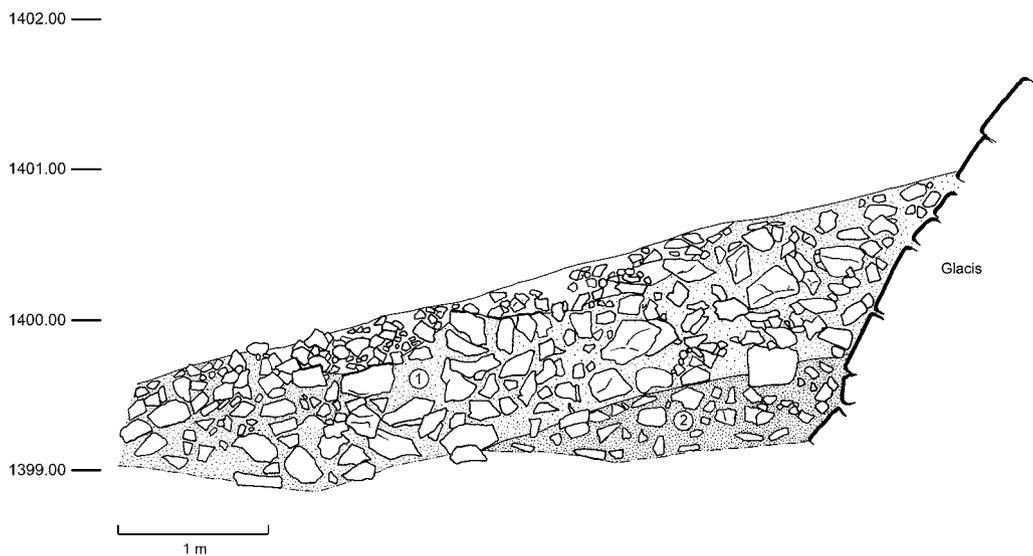
Section 5
Across the rear section. In Room 2, at left the floor was not drawn because the precarious face of the West Tower collapsed before it could be reached. At right the burned mudbrick collapse from the wall of Room 3 is shown above the burned surface. There was a thick accumulation of burned debris above the central passage. (See pl. 61 for location.)

DRAWING by Ben Claasz Cockson

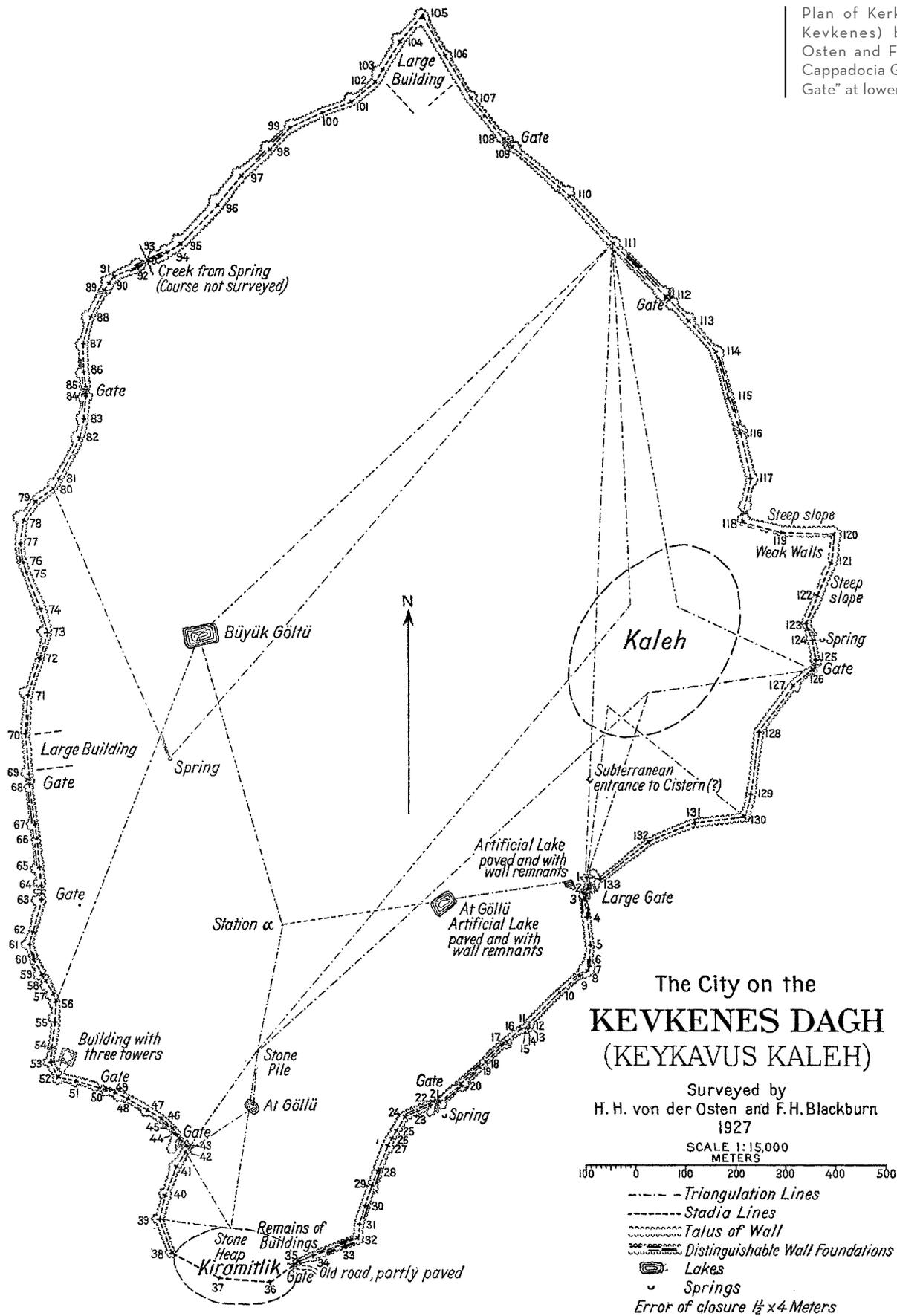
Section 6
The collapse against the side of the buttress. (See pl. 61 for location.)



Section 7
The collapse against the front of the buttress. (See pl. 61 for location.)



Plan of Kerkenes (then named Kevkenes) by H. H. von der Osten and F. H. Blackburn. The Cappadocia Gate is marked "Large Gate" at lower right



PLAN von der Osten 1928, fig. 4

Plan of the defensive system at Kerkenes Dağ, showing the survey as it was completed by 1998

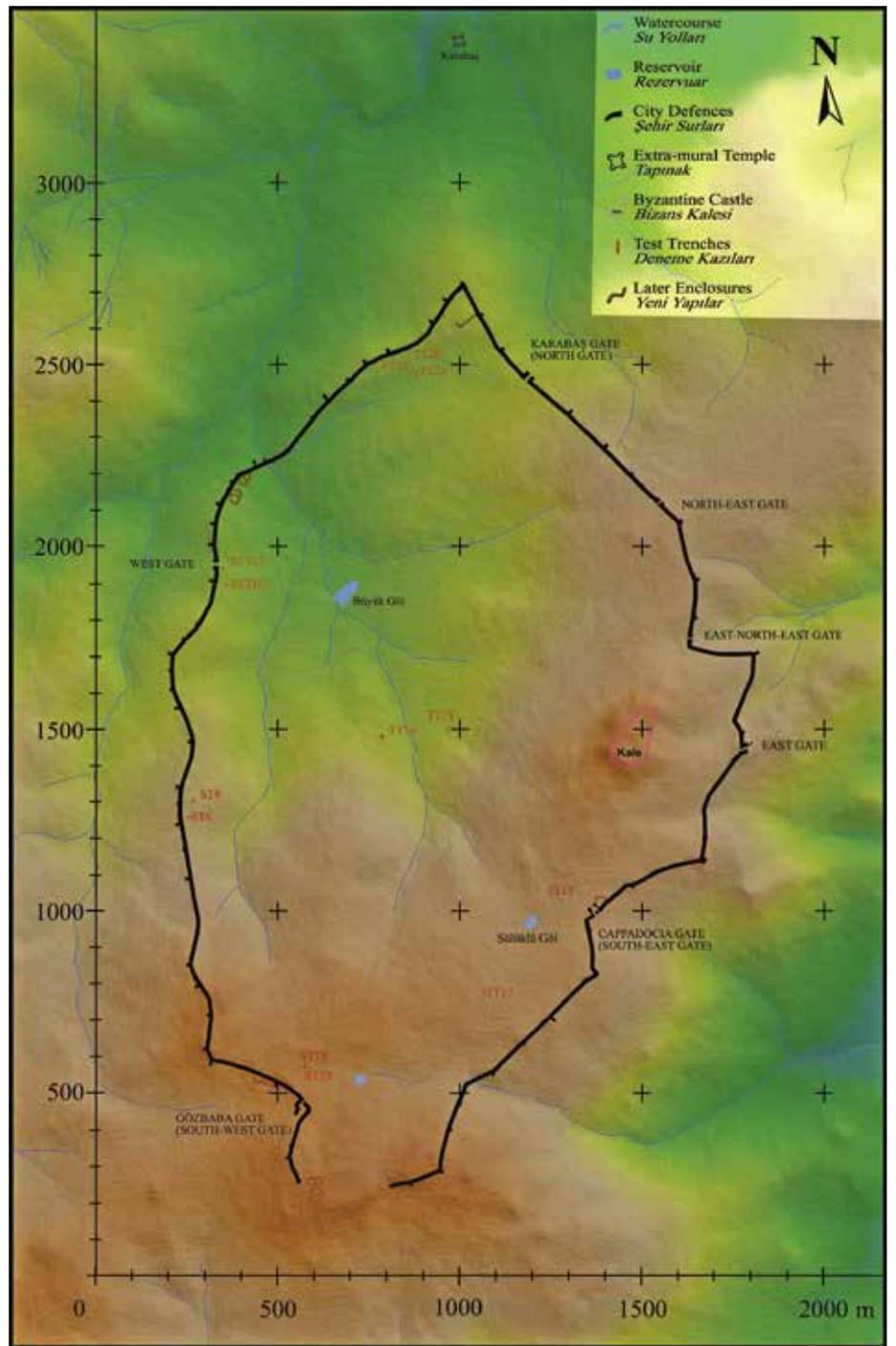
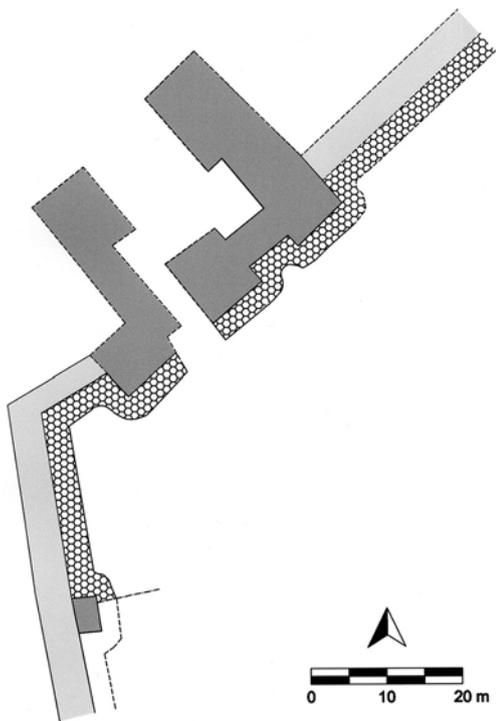
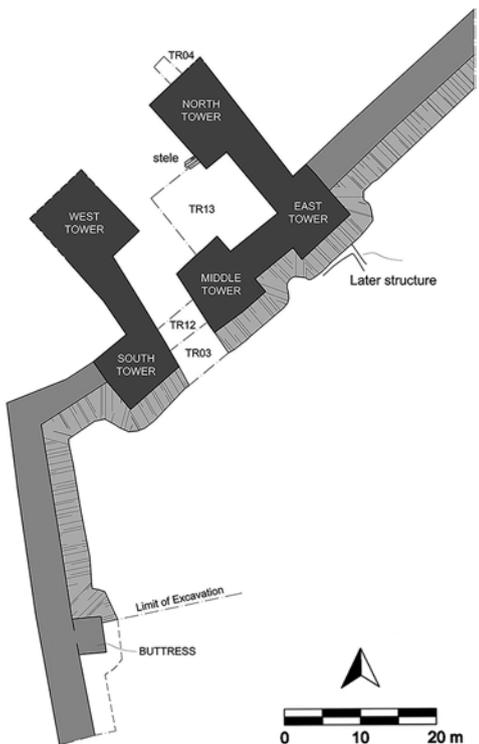


PLATE 92 | CAPPADOCIA GATE BLOCK PLANS

| (a) As reconstructed from the preserved wall tops in 1998-2001



| (b) At the base of the walls as exposed by 2010



(a) The intensity of the fire caused some facing stones to lose their structural integrity and load-bearing capacity; these stones are fragile and are easily fragmented into small pieces, further dislocating the rubble infill behind them.



(b) Once fully recorded, the upper courses of stones from the northeastern wall of the Middle Tower were moved back before the remaining fill was removed.



(c) Restoration of the glacis was essential if the very loose fill of rubble and soil was to be stopped from washing down.





| (a) Small and medium-sized stones were selected to fill up the space behind the facing glacial stones.



| (b) Evidence was revealed during the work on the southeastern corner of the East Tower that timber beams were used on the exterior faces of the city wall as well.



(a) As a safety measure, the restored tower walls were raised to form a parapet to prevent visitors from walking too near the edge. |



(b) Once the eastern side of the glacis was built up to the height of the adjacent stretch of glacis, it was found necessary to relocate two slipped stones before rebuilding the top of the glacis. |



(a) The southeastern corner of the East Tower was rebuilt with comparatively smaller stones that can be distinguished from original work.



(b) A mechanical excavator with a backhoe and front bucket was used both as a lift or crane to haul and raise the building stones and as movable scaffolding for the masons.



(a) The junction between the East Tower and the massive defensive wall |



(b) The Cappadocia Gate glacis at the end of the 2010 restoration campaign |

PLATE 98 | ARCHITECTURAL RESTORATION



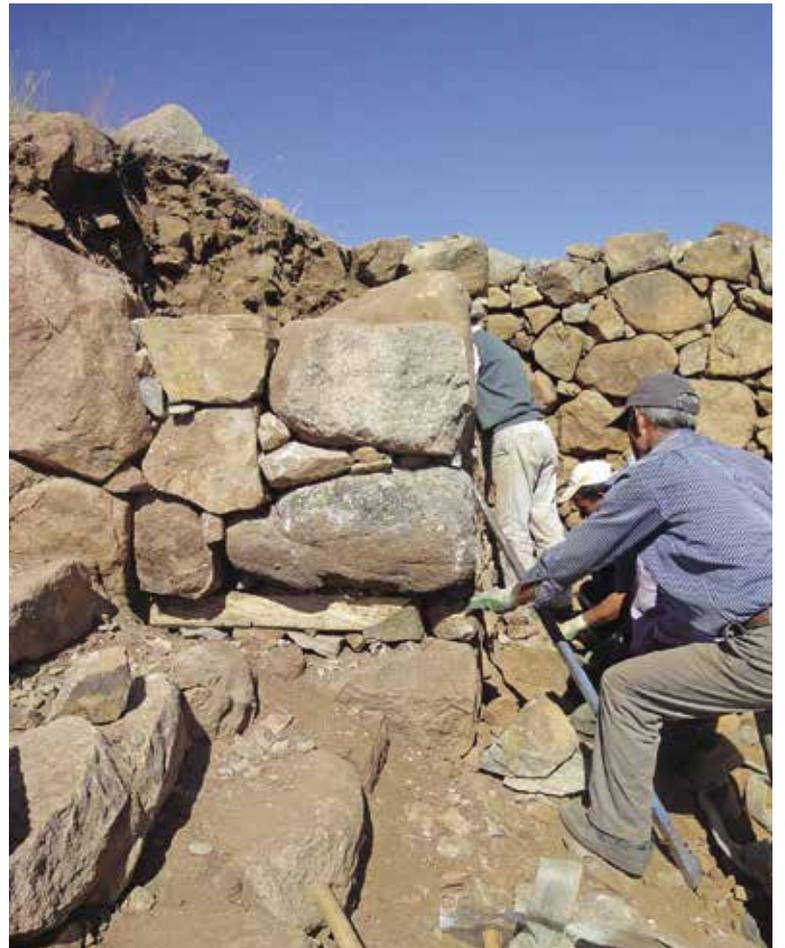
(a) The loss of horizontal timber beams due to fire or deterioration has led to the dislocation of the face stones and created wall surfaces that incline outward.



(b) The western side of the front passage adjoining the southern face of the West Tower was rebuilt to function as a temporary retaining wall against the infill that was likely to have washed down on to the gate court pavement otherwise.



(a) The northern face of the Middle Tower was rebuilt according to the survey and documentation project during the 2011 season. However, as horizontal timber beams were not used, this part collapsed after heavy rains.



(b) The location of a horizontal timber beam on the western face of the North Tower next to the stepped pedestal of the semi-ionic stela

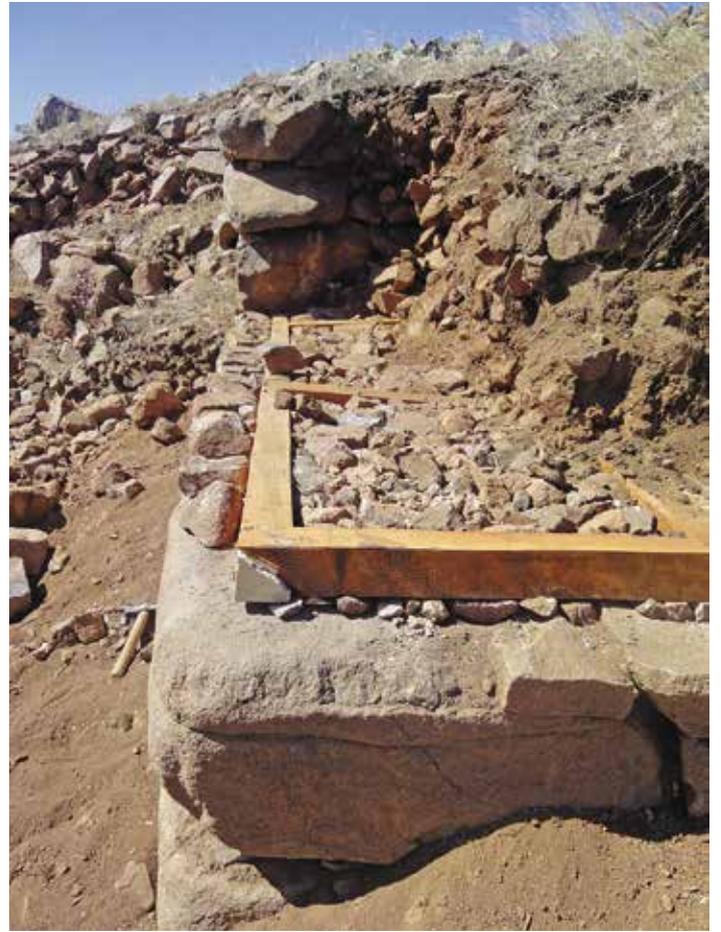
PLATE 100 | ARCHITECTURAL RESTORATION



| (a) At the North Tower the wall top was raised to the level of the adjoining walls.



| (b) The southern and eastern faces of the West Tower were dismantled down to the level of the horizontal timber beam.



(a) The horizontal timber beams were located ca. 5–10 cm inside the wall faces, as they were in the original masonry, so that they would not be visible from the surface and prone to rapid deterioration.



(b) The southern face of the West Tower completed and the western wall of the front gate passage being cleared of fallen debris before the building of a temporary retaining wall

PLATE 102 | ARCHITECTURAL RESTORATION



| (a) Face stones above the sphinx block slipped forward from the southeastern face of the North Tower.



| (b) The poor wall forming Room 3, with the sphinx block behind



(a) During excavation, with the leaning face of the North Tower |



(b) The front fully uncovered |

PLATE 104 | OBLIQUE VIEWS OF SPHINX BLOCK K11.249 DURING EXCAVATION



| (a)



| (b)



(a) The sphinx on the right showing the poor condition when found. Stones to the right of the block are fragments of the limestone sculpture not yet lifted. The tenon is in situ. |



(b) The sphinx on the left when found with the statue tenon in situ. |

PLATE 106 | SPHINX BLOCK K11.249 AND TENON OF STATUE K11.250



(a) Sphinx block K11.249 on the granite rubble makeup with pieces of sandstone, probably waste from trimming the back corners, used to level the base before it was carved.



(b) The tenon of the statue K11.250 in situ

(a) The depth of relief carving, the smooth side of the block, and the toolmarks on the angled back corner



(b) The back with the angled corner at left

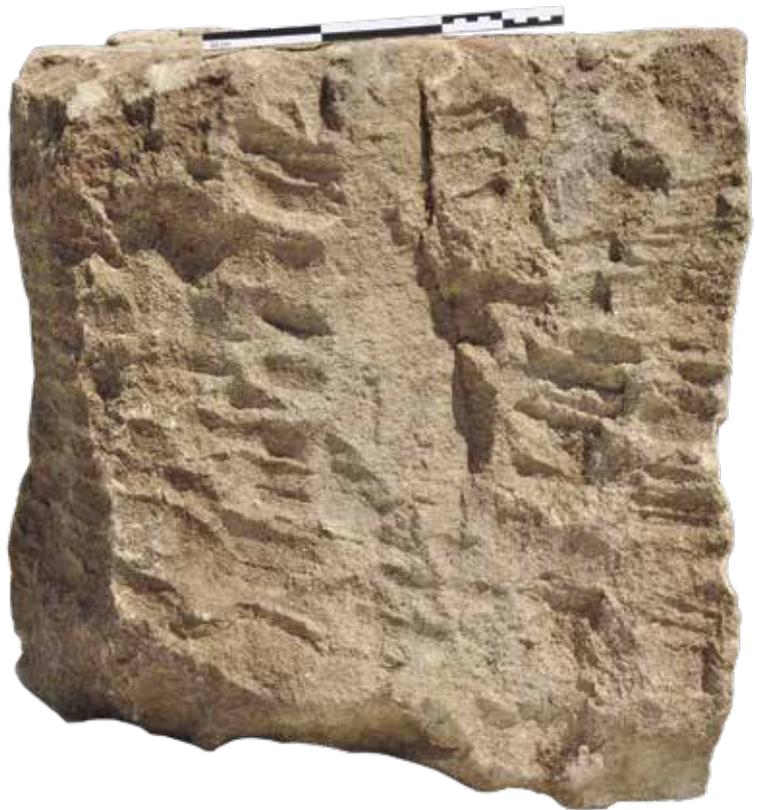
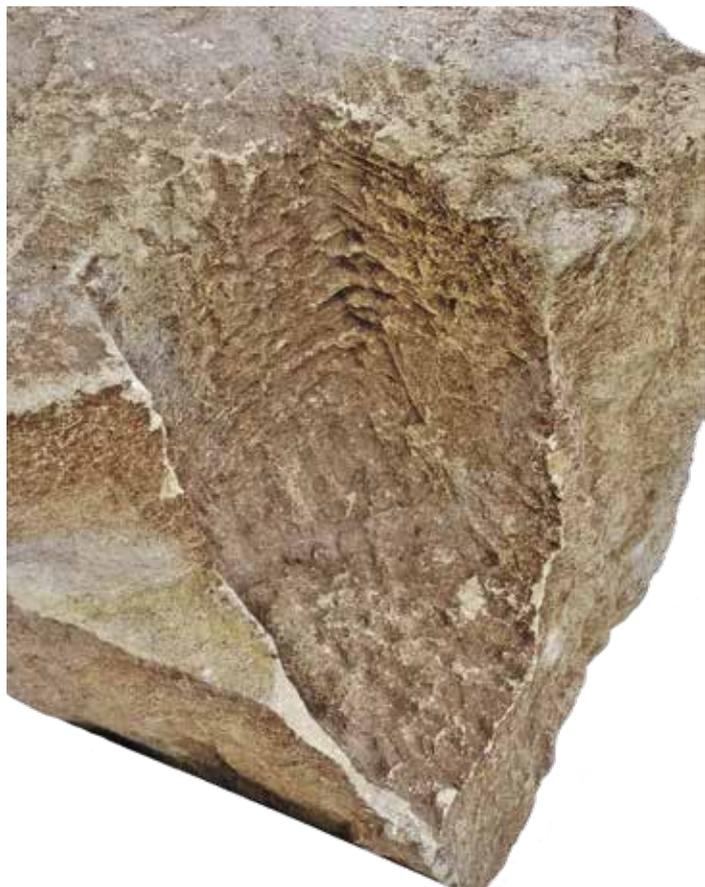


PLATE 108 | THE RIGHT-HAND END AND MORTISE OF SPHINX BLOCK K11.249

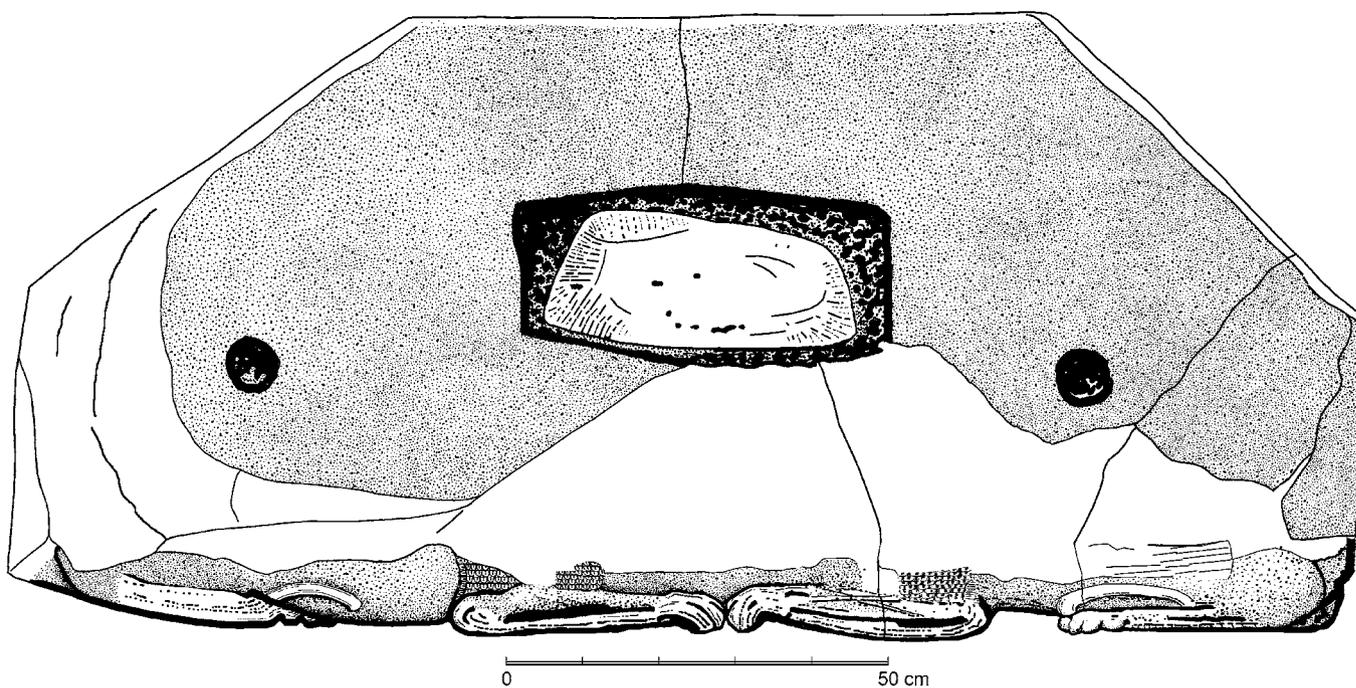
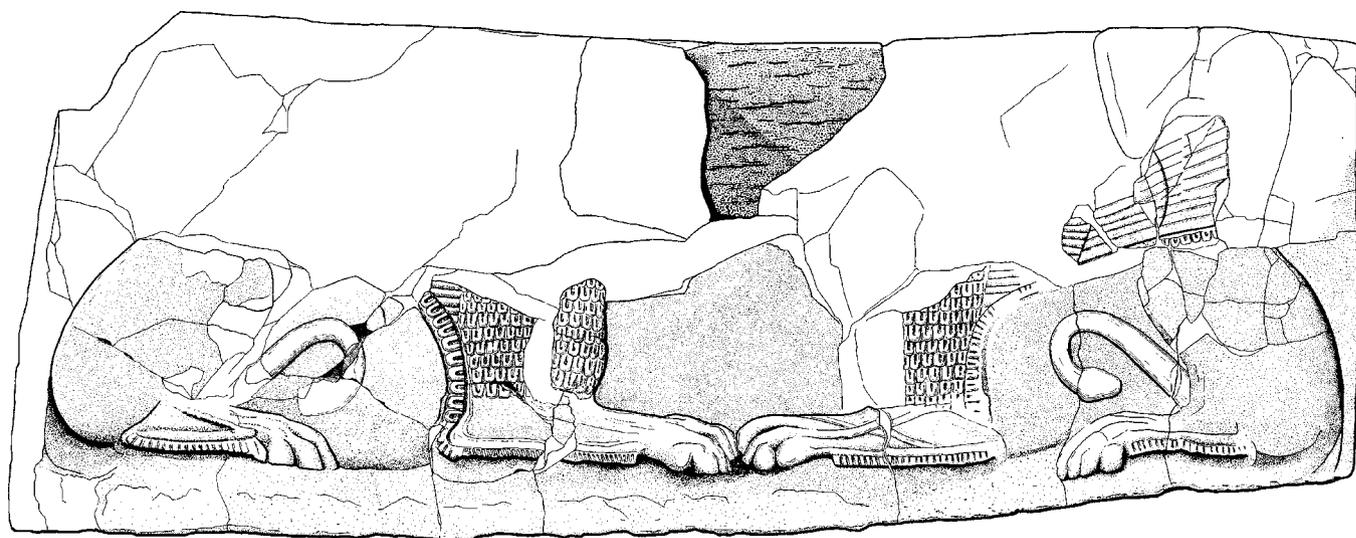
| (a) The right-hand end



| (b) The right-hand side of the mortise



| (c) The left-hand side of the mortise showing toolmarks



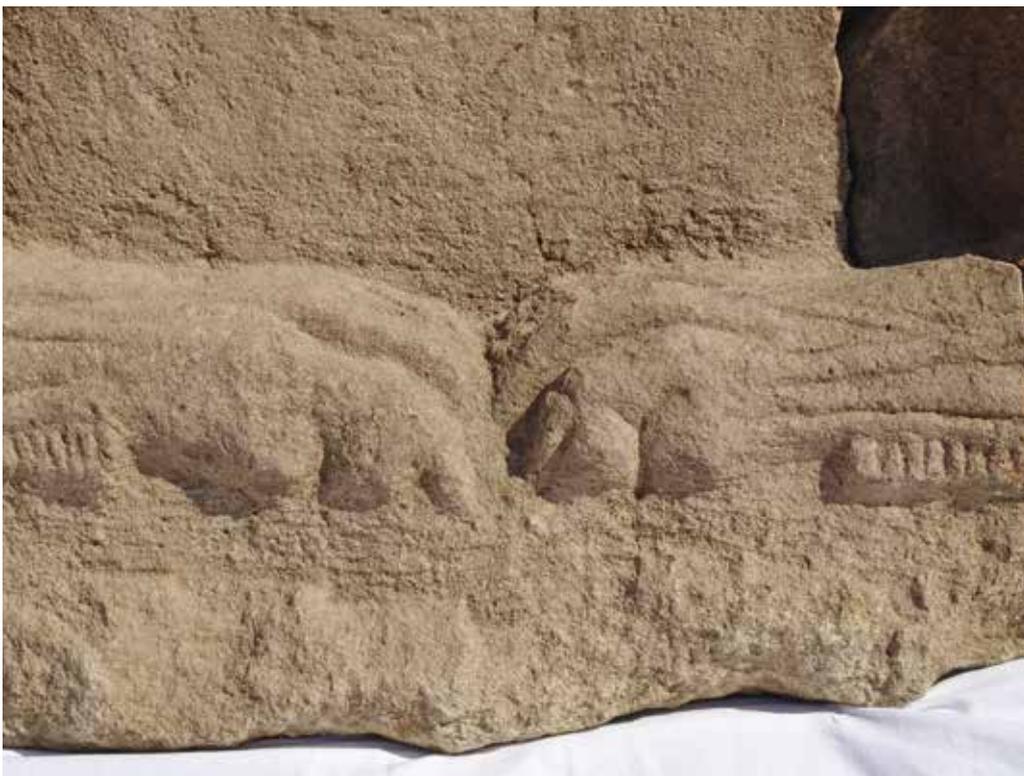
Top to bottom: (a) Photo of the front; (b) drawing of the front; (c) drawing of the top with the limestone statue tenon in the mortise hole

PHOTO 11dpnd1127 by Geoffrey D. Summers
DRAWINGS by Ben Claasz Cockson

PLATE 110 | THE CLAWS OF SPHINX BLOCK K11.249



| (a) Looking down on the claws



| (b) Frontal view of the claws

(a) The right sphinx, mended |



(b) The left sphinx, mended |





| (a) Detail of the wing on the sphinx at right

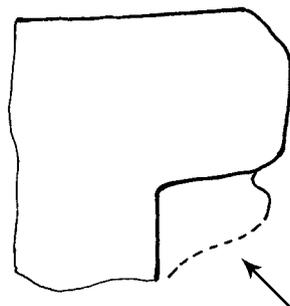
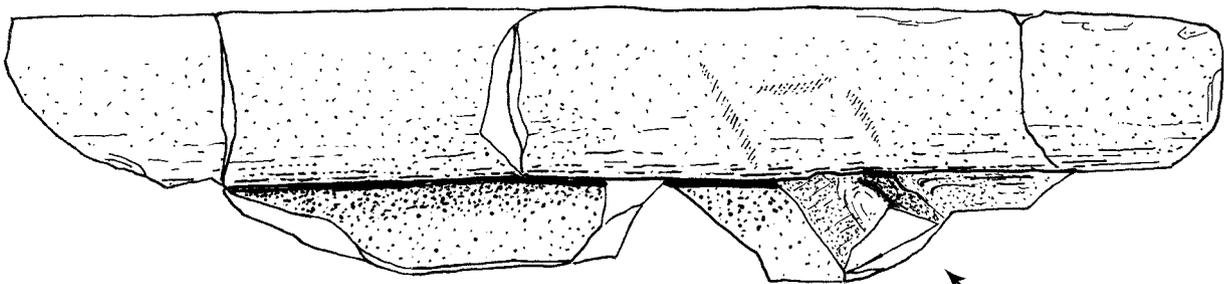


| (b) Detail of the fur, base of the wing, fringe, and tail knot

(a) Top of the ledge |



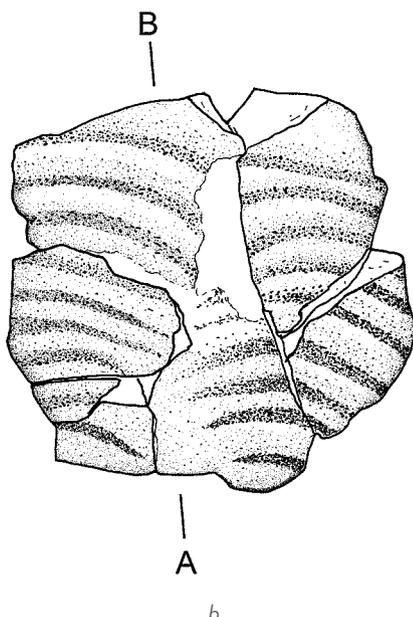
(b) Front view of the ledge with the tips of the claws |



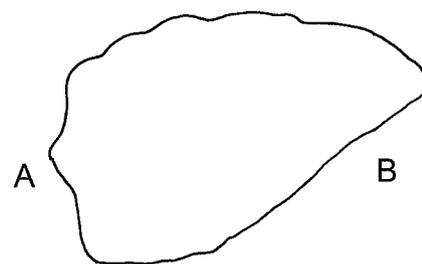


α

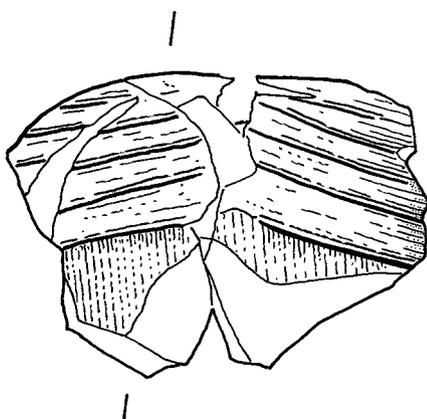
Left: (α) The conical hole on the right-hand side of the top
 Below: Piece B. (b) Looking down on the top of the hair with the upper part of the forehead at top and the rough surface where broken away at bottom; (c) oblique front view showing the hairstyle and part of the smoothed forehead



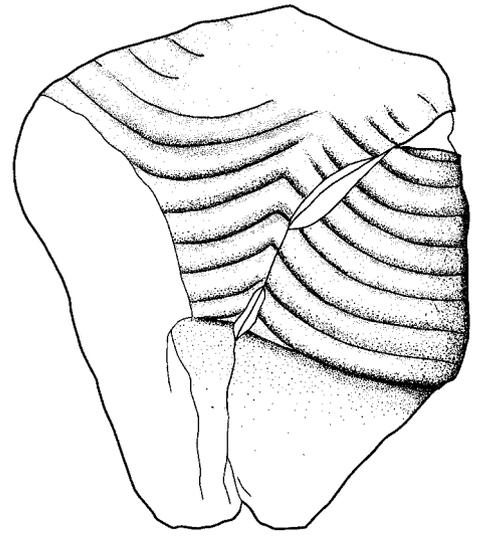
b



c

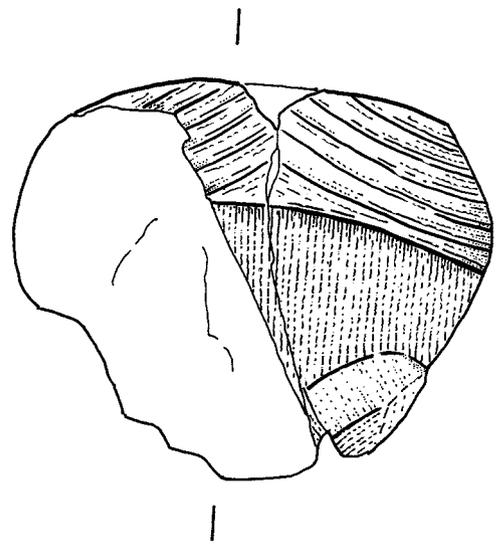


Piece C. (a) Parts of the hair, forehead, and eye orbit of the second sphinx



a

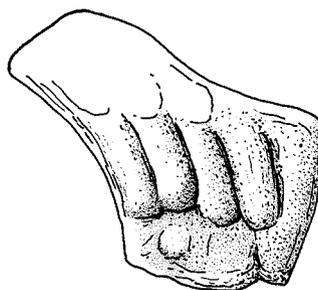
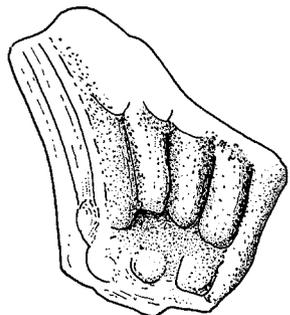
(b) Part of the right eye orbit at lower right, smoothed forehead, and waves of ribbed hair



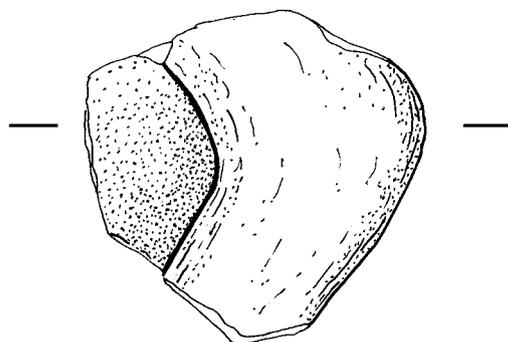
b



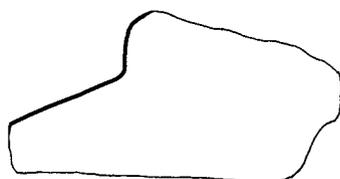
PLATE 116 | FRAGMENTS OF SPHINX BLOCK K11.249



(a) Piece D. Hair sweeping round the shoulder and ending in curls

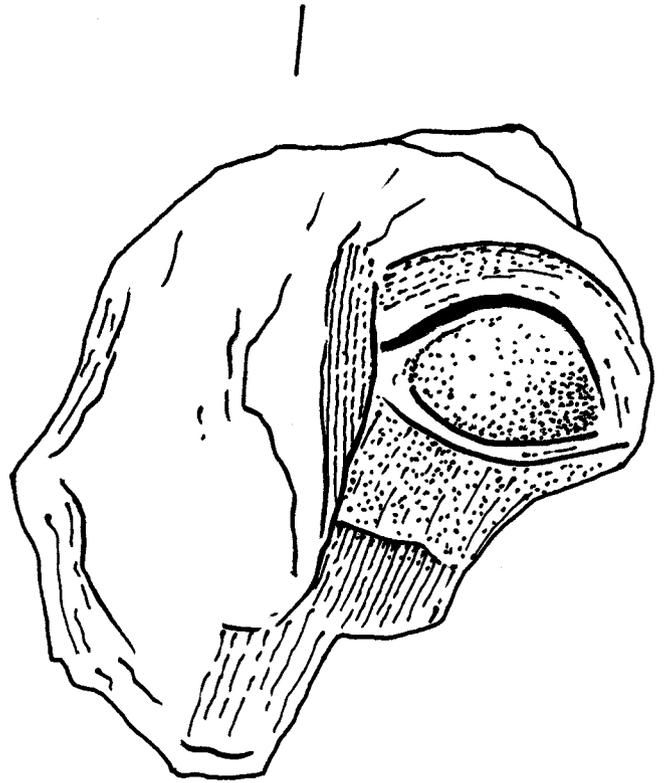


(c) Piece F. Hair ending in curl

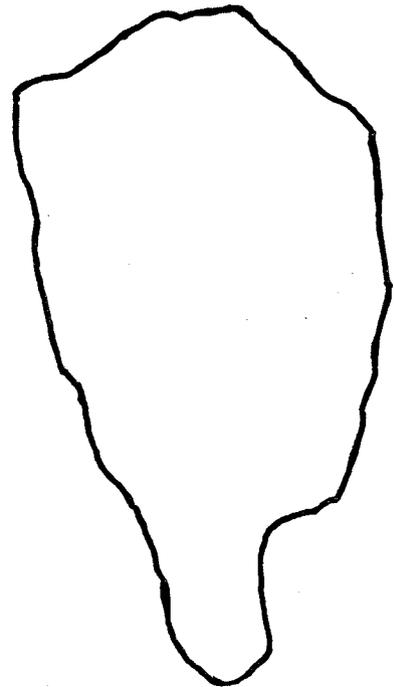


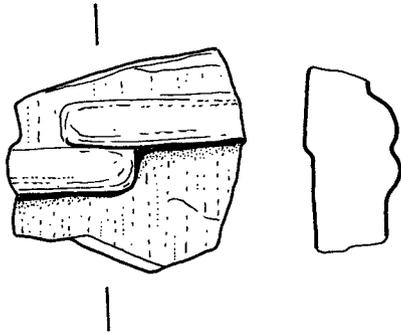
(b) Piece E. Hair sweeping around the shoulder. The side of the hair has broken away.



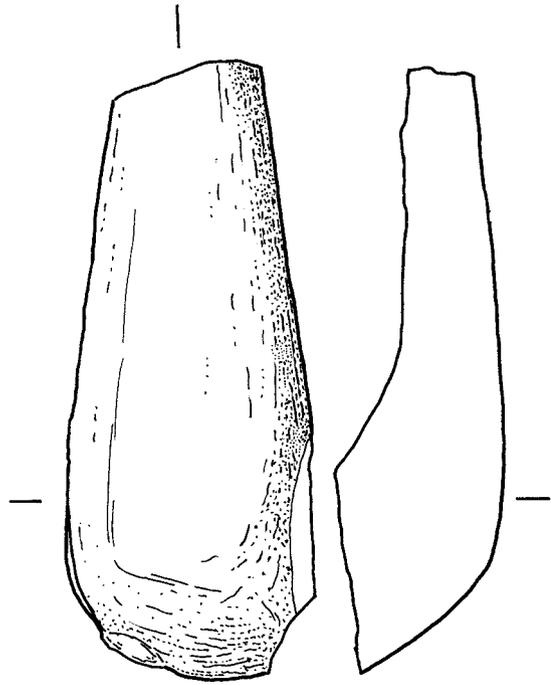


Piece G. Part of the face, with the left eye of a sphinx |

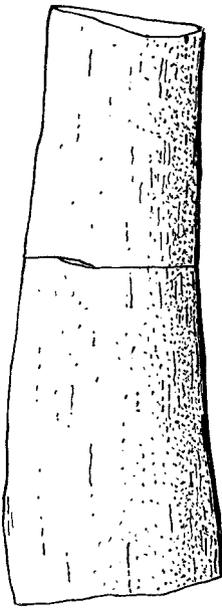




| (a) Piece H. Arm fragment with armband



| (b) Piece I. Forearm fragment



| (c) Piece J. Forearm fragment

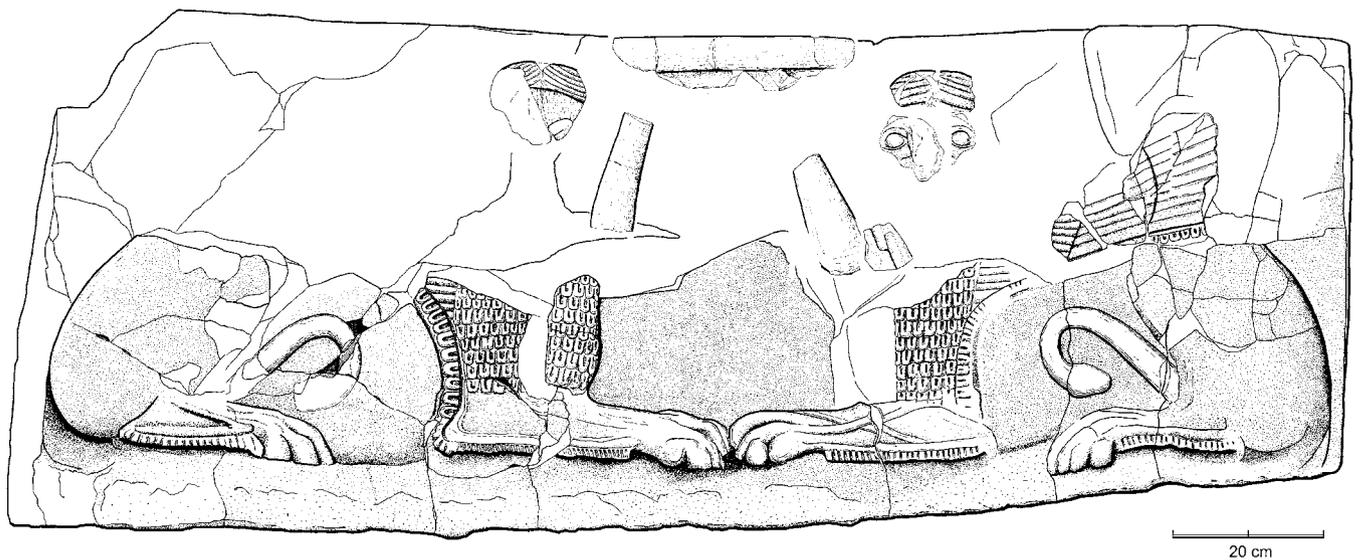


| (d) Piece K. Fragment with fringe below





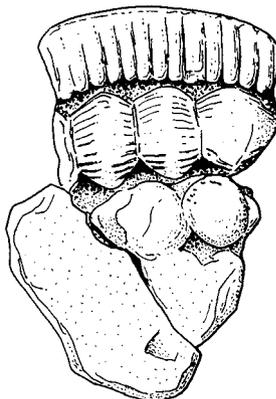
(a) Statue fragments by the side of the sphinx block during excavation. Note the very poor condition of the soft limestone as well as the way in which it is cracked and broken.



(b) Reconstruction of the sphinx block K11.249

PLATE 120 | STATUE K11.250, PIECES A-B

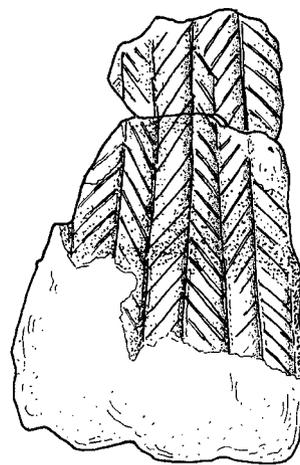
Piece A. (a) Rounded fragment with bead-like elements; (b) back showing broken surfaces



a

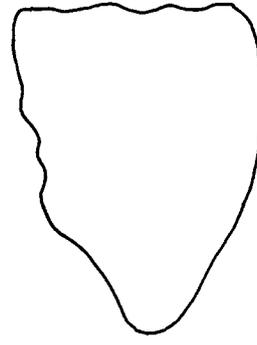
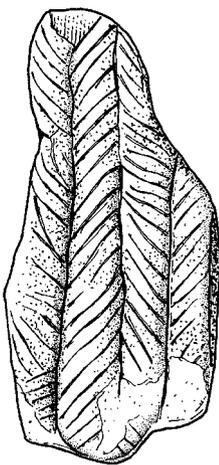
b

Piece B. (c) Corner with loops of hanging braids; (d) left face; (e) right face with loop at bottom; (f) end with underside of loops



c

d



e

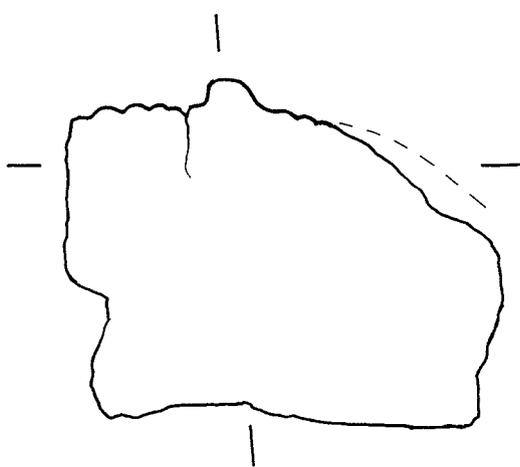
f



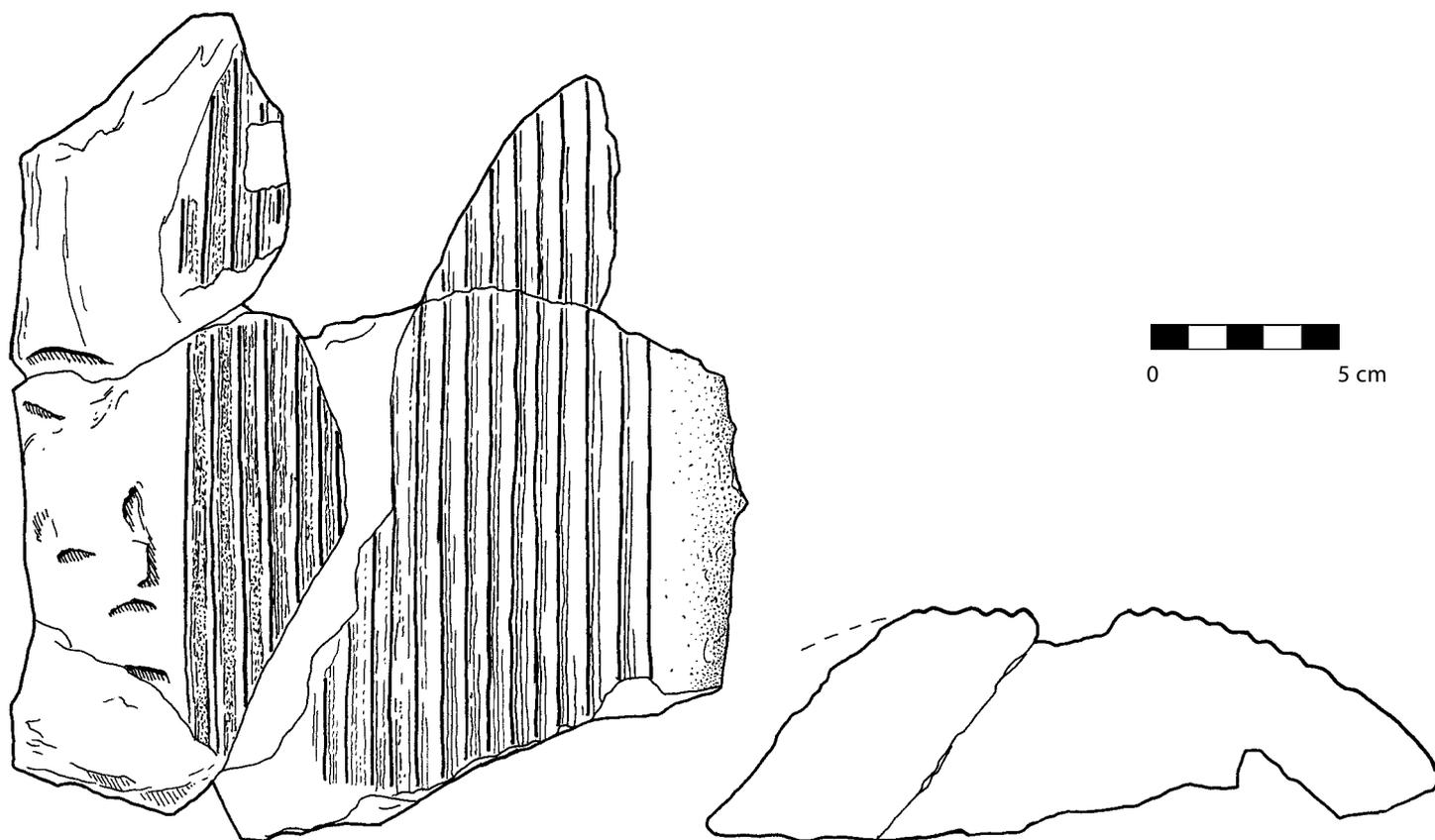
PHOTOS (a) 12dpnd0765, (c) 12dpnd0770, (d) 12dpnd0771, (e) 12dpnd0777, (f) 12dpnd0781 by Geoffrey D. Summers; (b) 12dpkc0572 by Ben Claasz Cooxson
DRAWINGS by Ben Claasz Cooxson



| (a) Pleated drape with fibulae

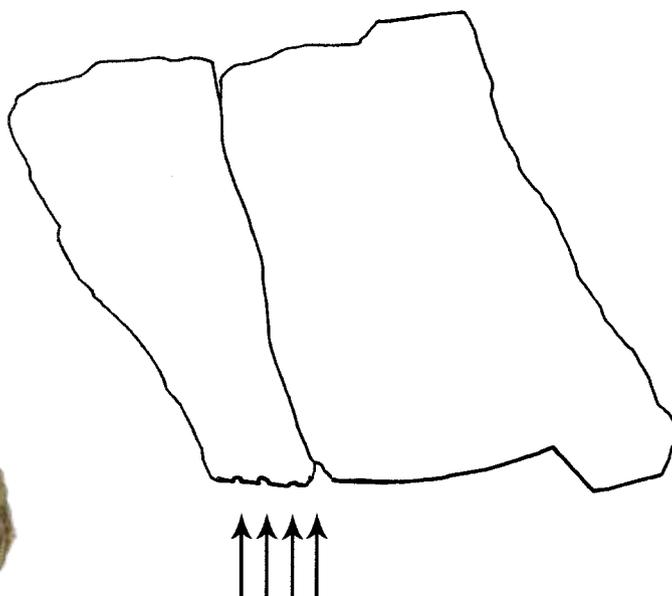
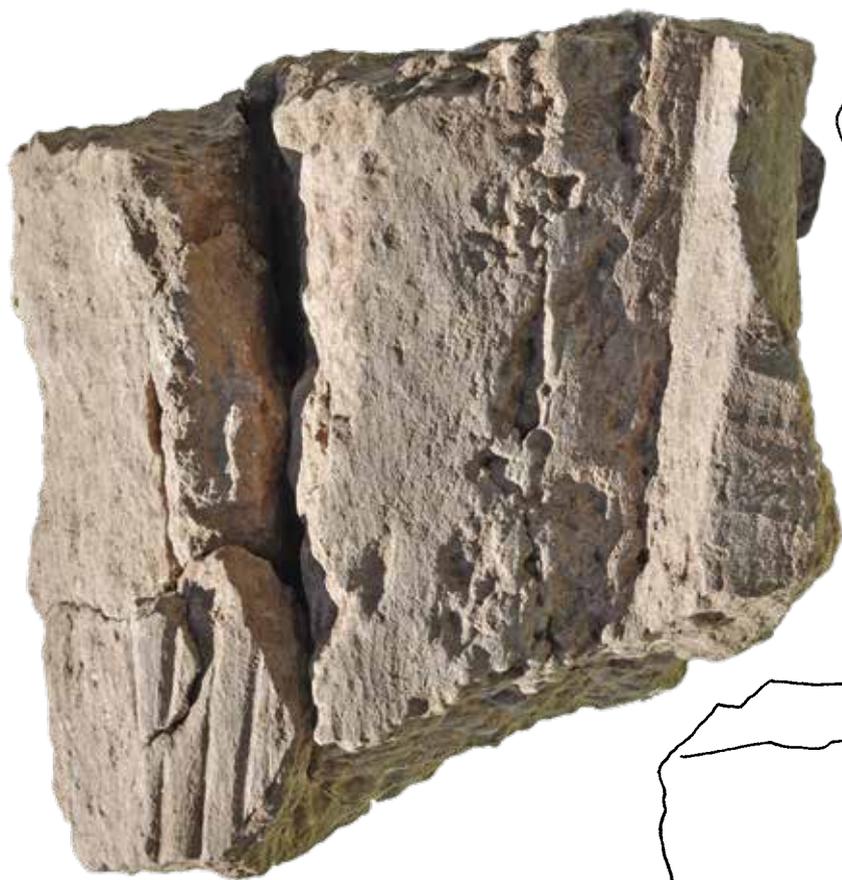


Left to right: (b) Detail of fibula terminal; (c) cross section; (d) longitudinal section showing the curve and the position of the fibulae |

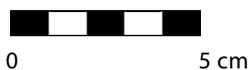
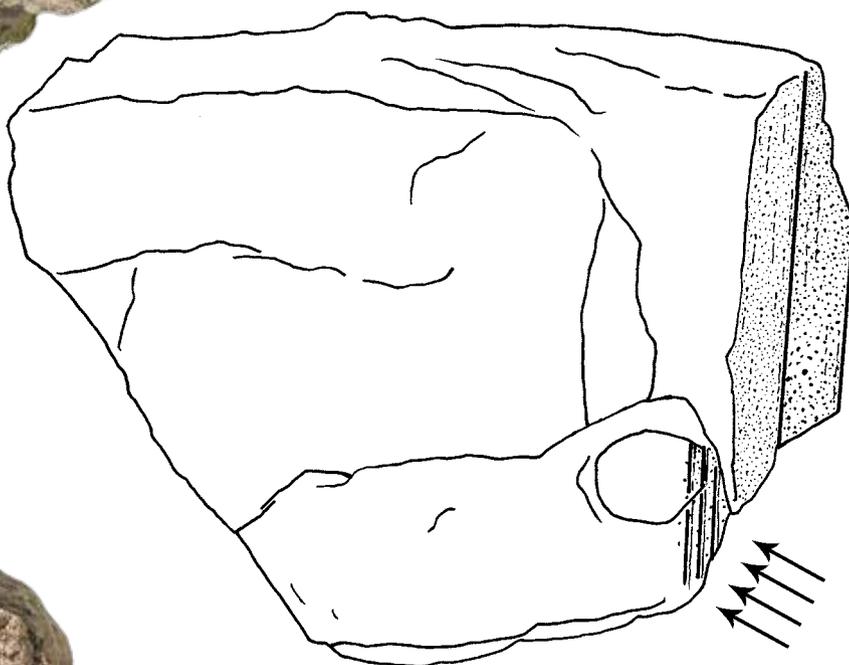


| Part of the lower portion of the pleated drape, joining fragments with plain band and fillet

PHOTO 12dpnd0848 by Geoffrey D. Summers
DRAWING by Ben Claasz Cooekson



(a) Piece E. Joining fragments of pleated drape with plain band and fillet



Left to right: (b) Piece F. fragment of pleated drape and plain surface; (c) Piece G: joining fragments of pleated drape; (d) Piece H: fragment of pleated drape; (e) Piece I: joining fragments of pleated drape

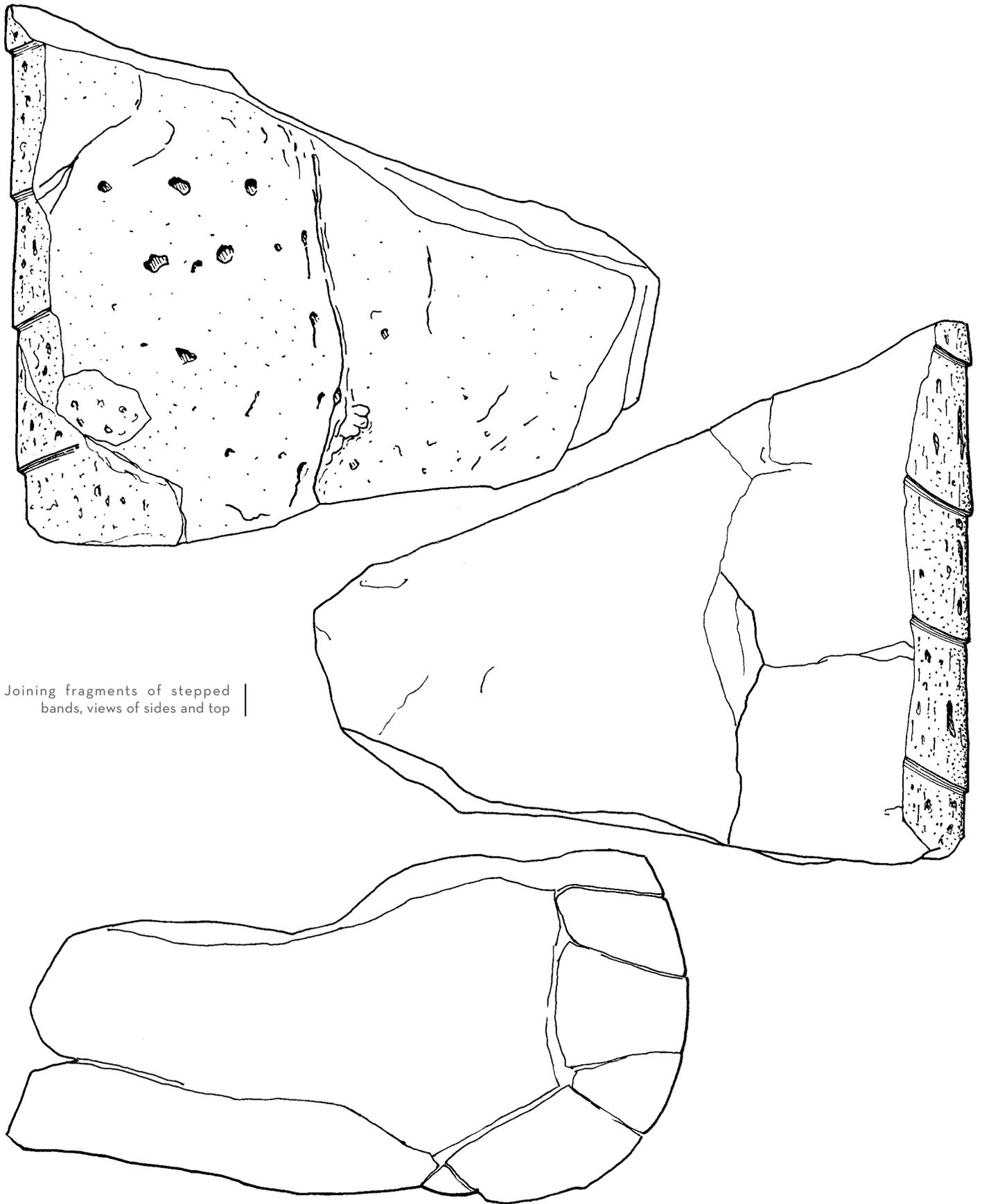


(a) Joining fragments of stepped bands, front view



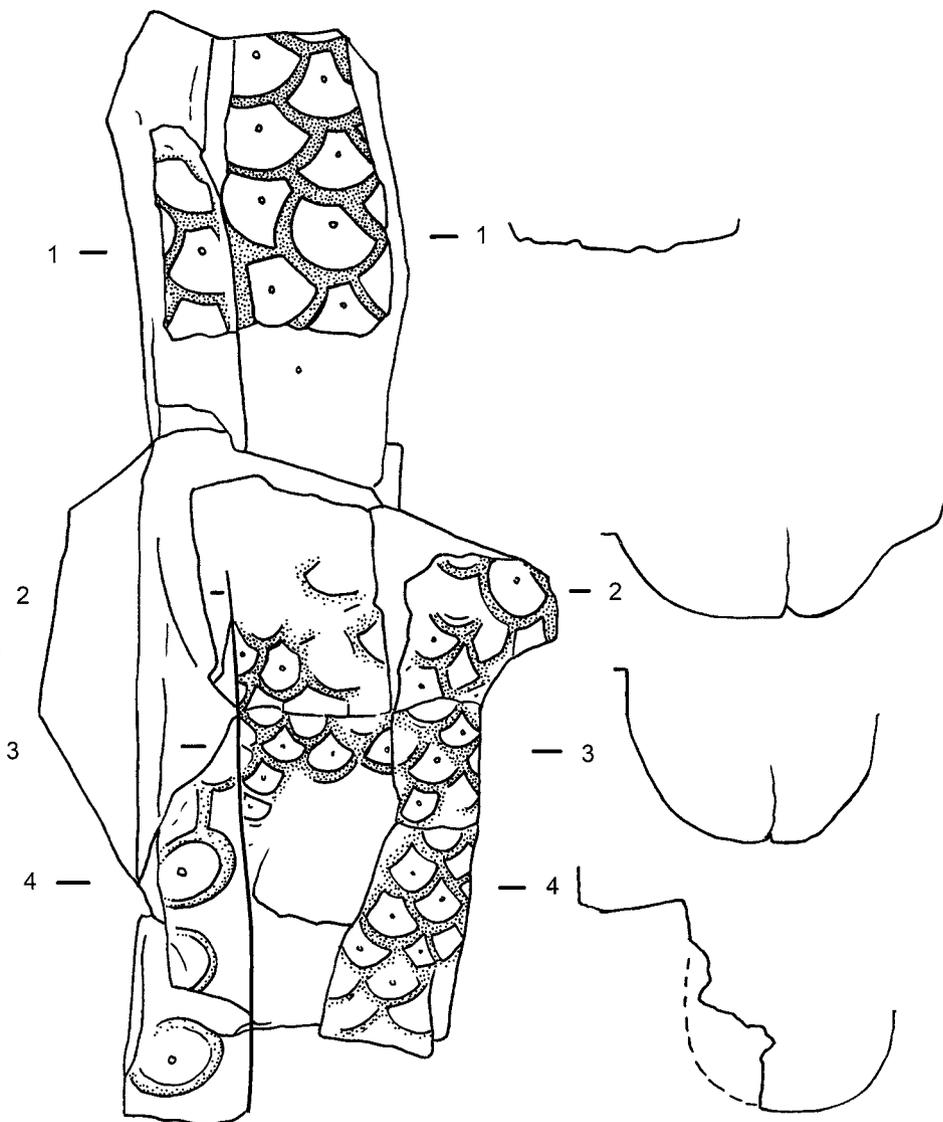
(b) Joining fragments of stepped bands, oblique view





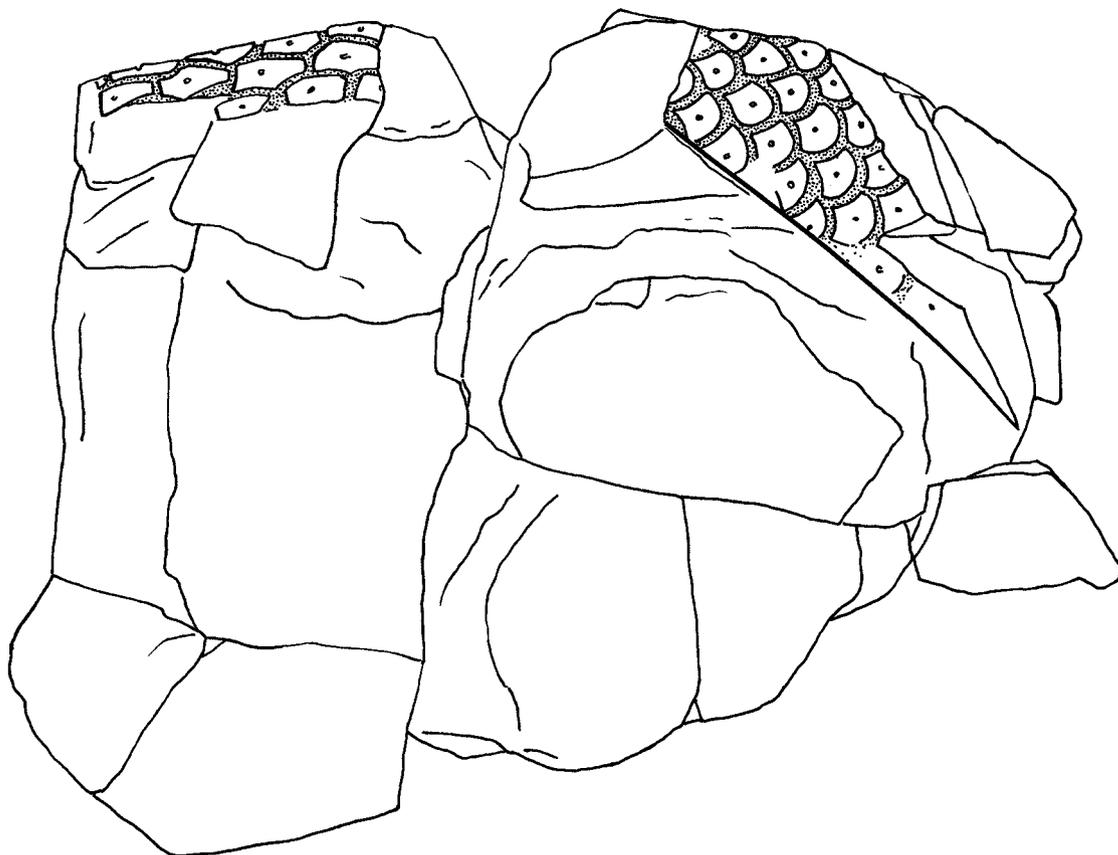
Joining fragments of stepped bands, views of sides and top

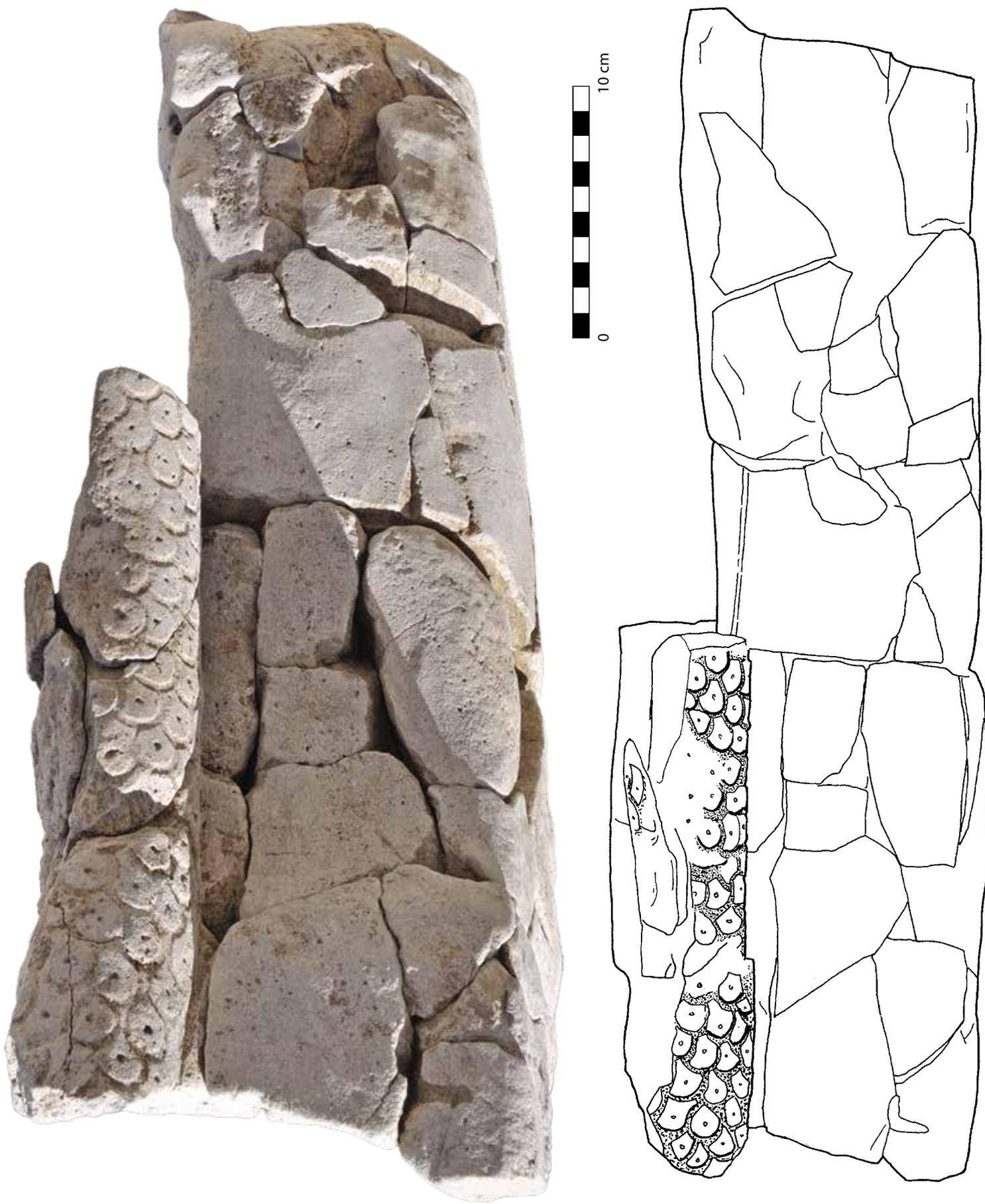




(a) Front view, many joining fragments with two sizes of scales (above); (b) left side (left)







| Front view of numerous joining fragments mended into two portions

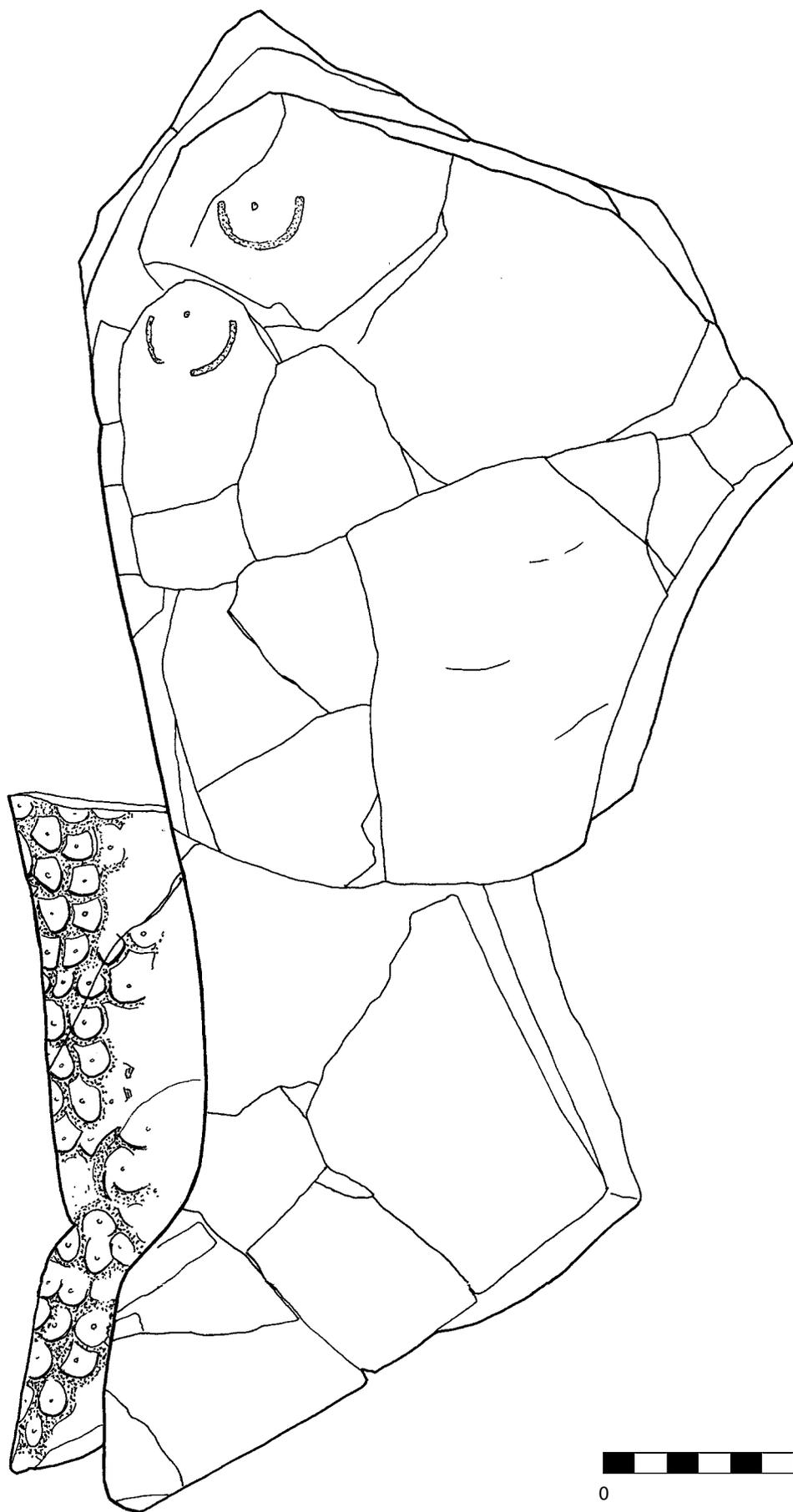
PHOTO 12dpnd0801 by Geoffrey D. Summers
DRAWING by Ben Claasz Cooekson



Oblique view of the front and finished side |

PHOTO 12dpnd0804 by Geoffrey D. Summers

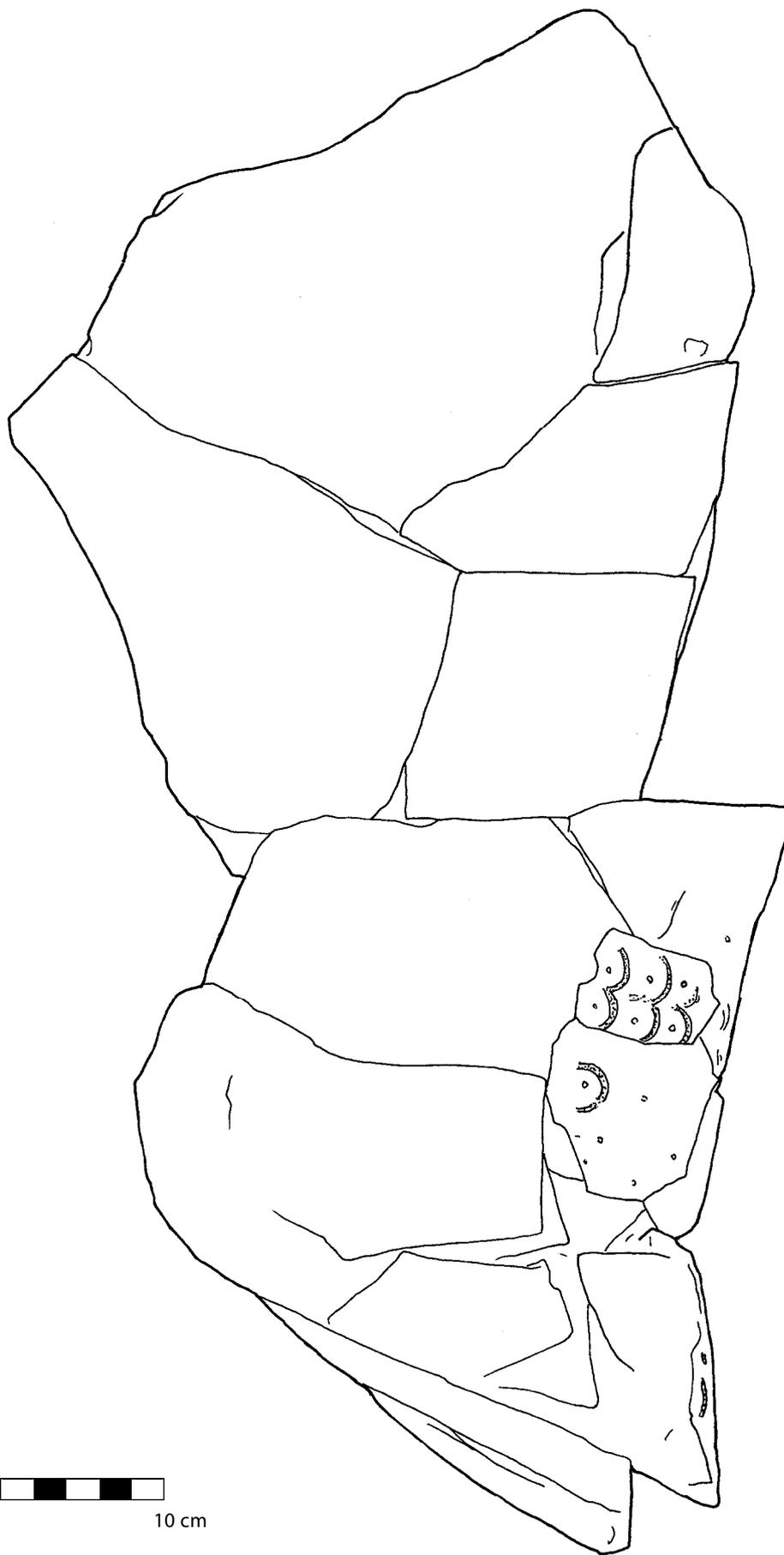






0

10 cm





| Top to bottom: (a) upper portion, with two sizes of scale; (b) lower portion, with two sizes of scales

PHOTOS (a) 12dpnd0747 by Geoffrey D. Summers; (b) 12dpkc0531 by Ben Claasz Cooekson

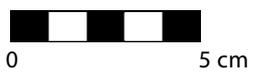
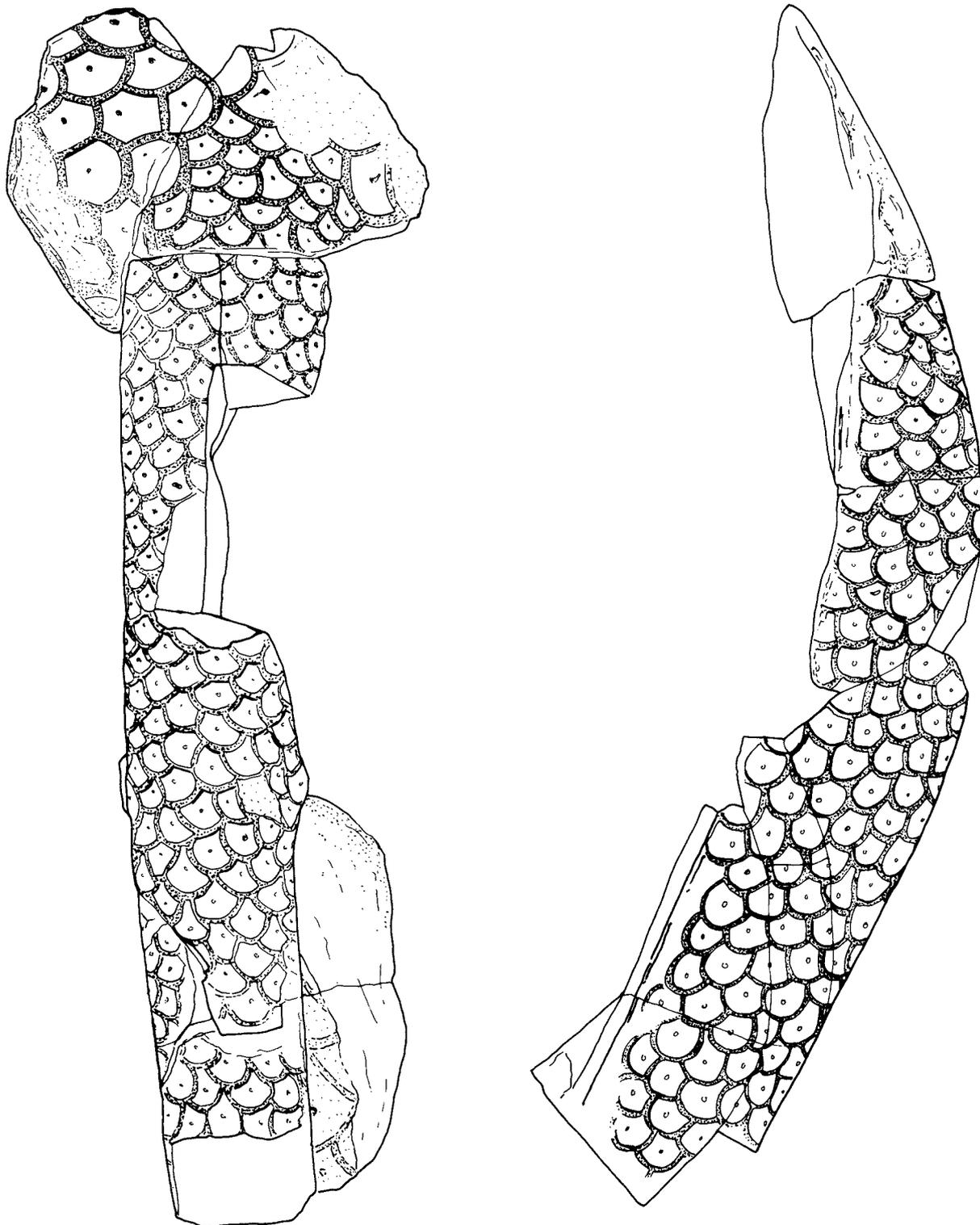


PLATE 136 | STATUE K11.250, PIECES N-P



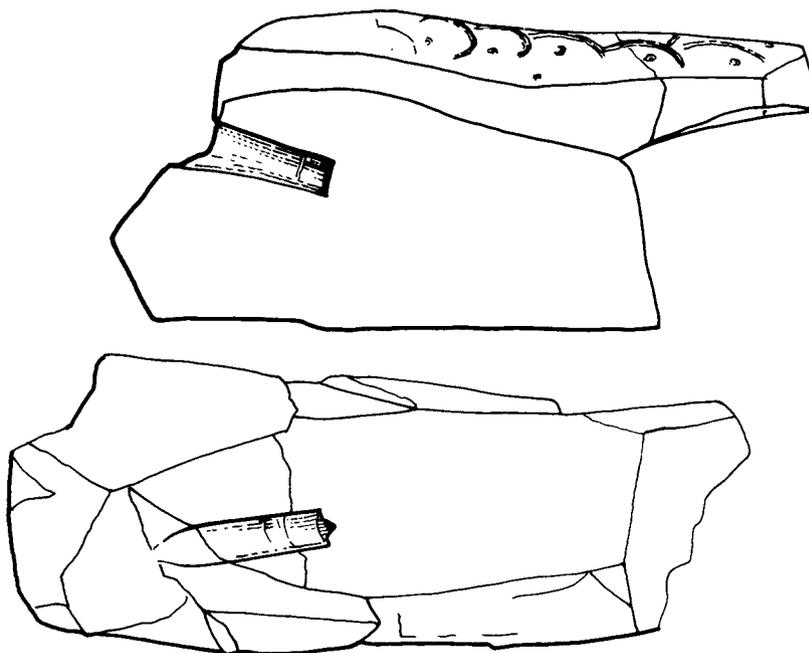
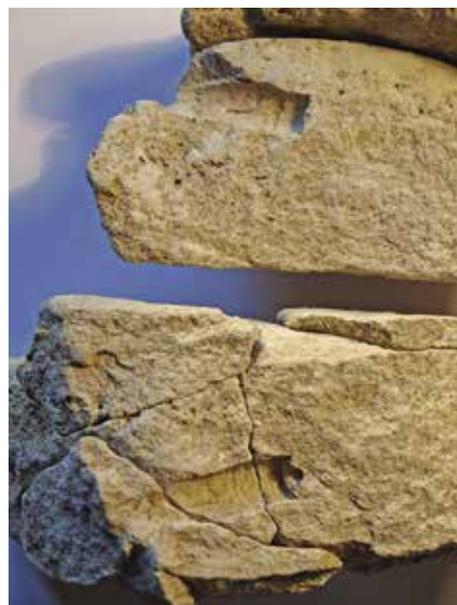
a



b



c

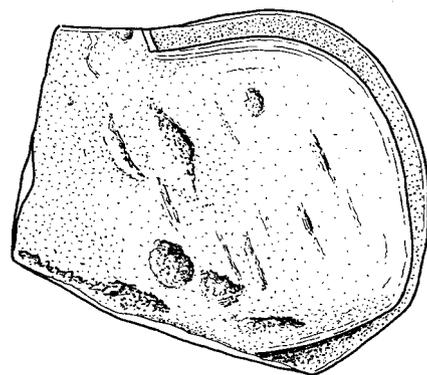


d

| (a) Piece N: ten joining fragments; (b) piece O: five joining fragments; (c-d) piece P: fragments joined (c) and separated to show drilled dowel hole (d)

PHOTOS (a) 12dpkc1494 by Noël Siver; (b) 12dpkc0502, (c) 11dpkc2909 by Ben Claasz Coockson; (d) 11dpkc2908 by Joseph Lehner
DRAWINGS by Ben Claasz Coockson

(a) Possibly a paw, front |



(b) Back |

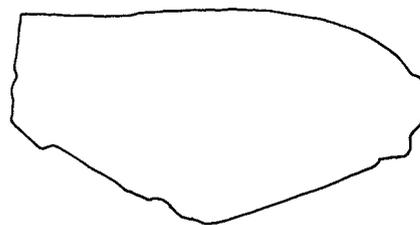
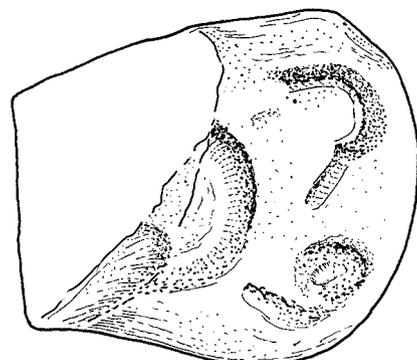


PLATE 138 | SEMI-ICONIC IDOL KO7.223



| (a) When first uncovered



| (b) Restored, before the discovery of additional head fragments



| (c) The stepped monument with the idol restored in Photoshop



| (d) The idol (KO7.223) and top step (KO7.224) fully restored

PHOTOS (a) o3dpjv6173 from Kerkenes archive; (b) o5dpnk0116 by Murat Akar; (c) o9dpcp1705 with Photoshop reconstruction by Ali Çınkır; (d) 10dpkc1715 by Ben Claasz Coockson

(a) Front elevation |

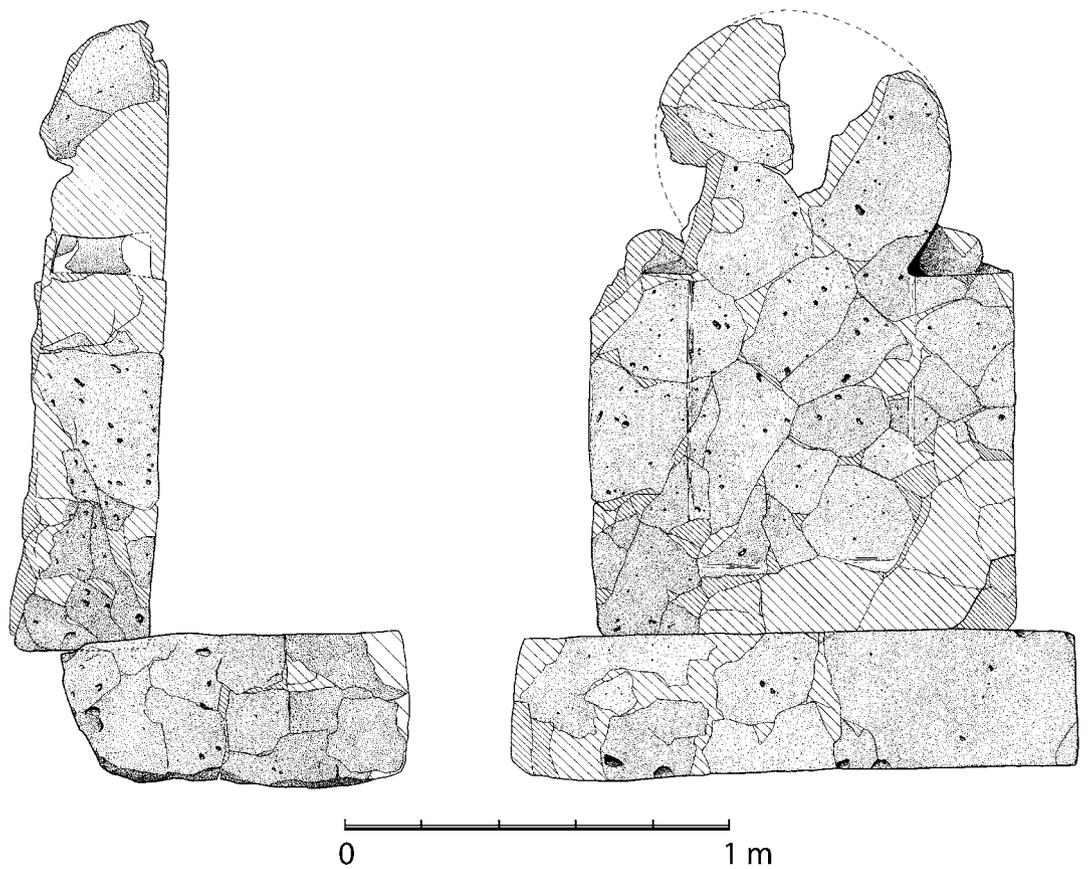
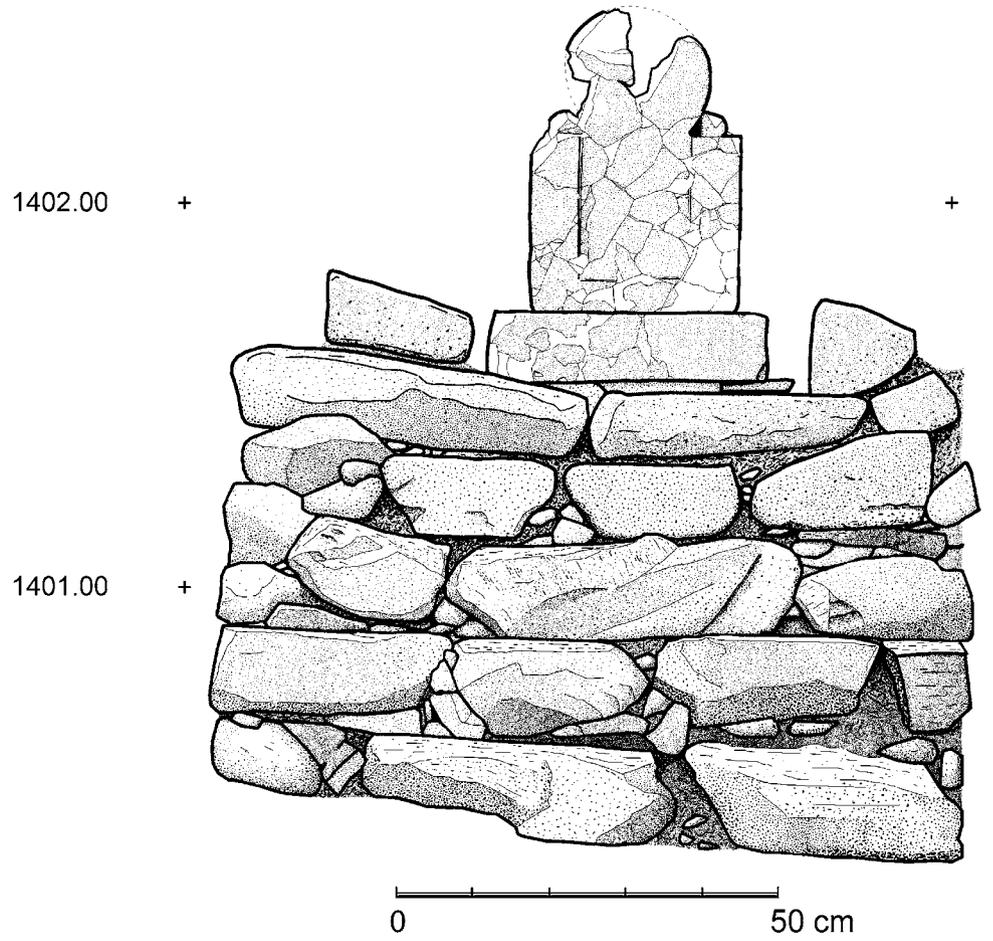
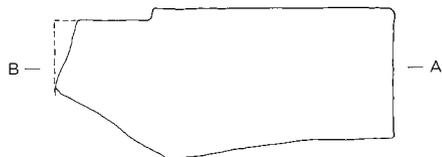
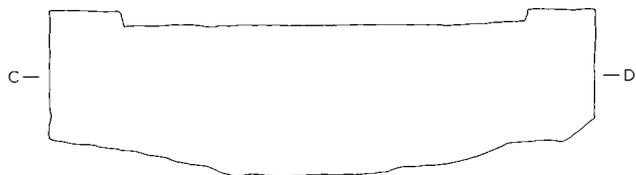
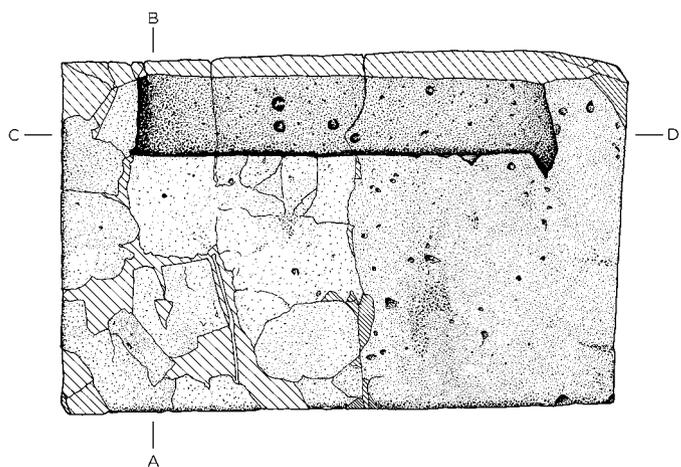


PLATE 140 | TOP STEP OF THE STEPPED MONUMENT AND POSSIBLE IDOL



| (a) Top step of the stepped monument (Ko7.224)



| (b) Fragment of a possible second idol (o7SURFUoostnoi)





(a) Southwestern side |



(b) Northeastern side |



(c) Front |



(d)



(e)

(d) Front and southwestern side; (e) northeastern side and front |



PLATE 142 | THE TWO SANDSTONE BLOCKS WITH GRAFFITI, Ko7.224 AND Ko7.225



| (a) The blocks in situ at the glacia corner



| (b) The graffiti in situ at the glacia corner

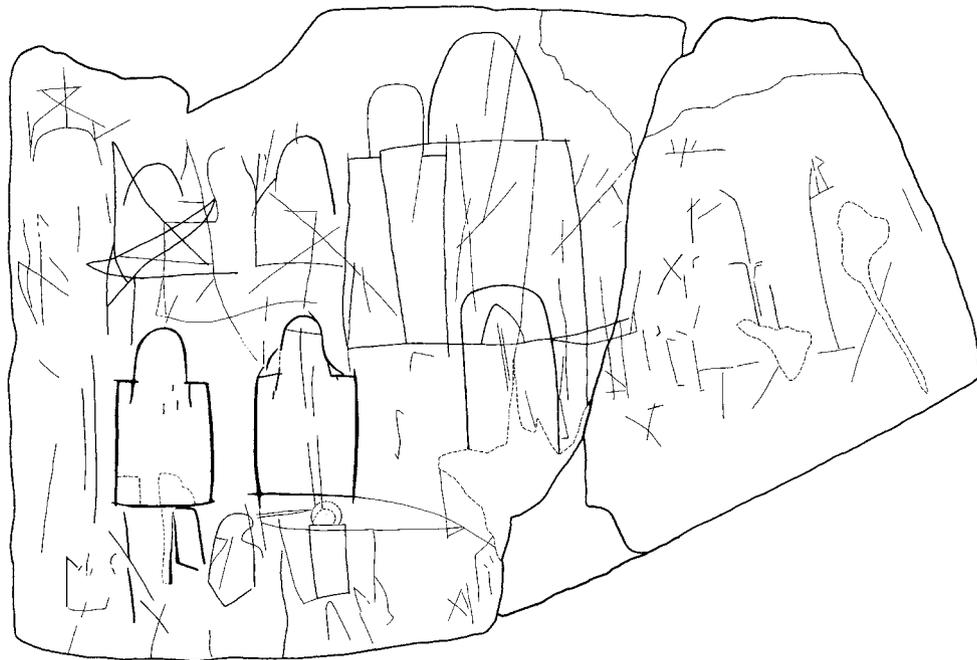


PLATE 144 | TOOLMARKS ON THE UPPER BLOCK Ko7.225

(a) Glacis face, showing marks made with a single pointed tool

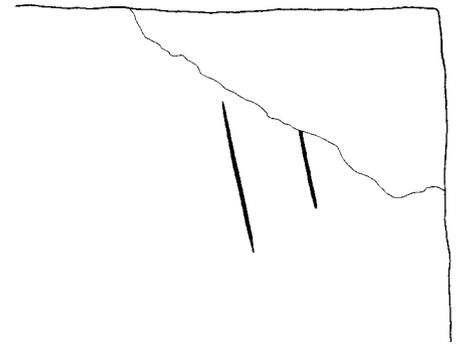


(b) Inner side, showing rough marks made with a bladed tool



(c) End, showing trimming marks made by a bladed tool





(a) upper face, showing roughly smoothed finish and two incised lines; glaucis side at left and passage side at top

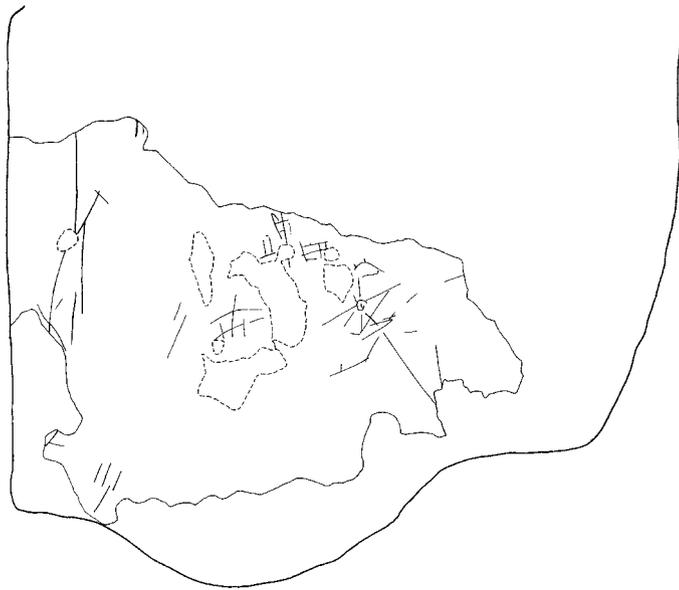


(b) Underside, showing toolmarks |

PLATE 146 | LOWER BLOCK K07.226 WITH GRAFFITI ON THE ENTRANCE PASSAGE FACE



PHOTO o8dpkc1010 by Joseph Lehner
DRAWING by Susanne Berndt

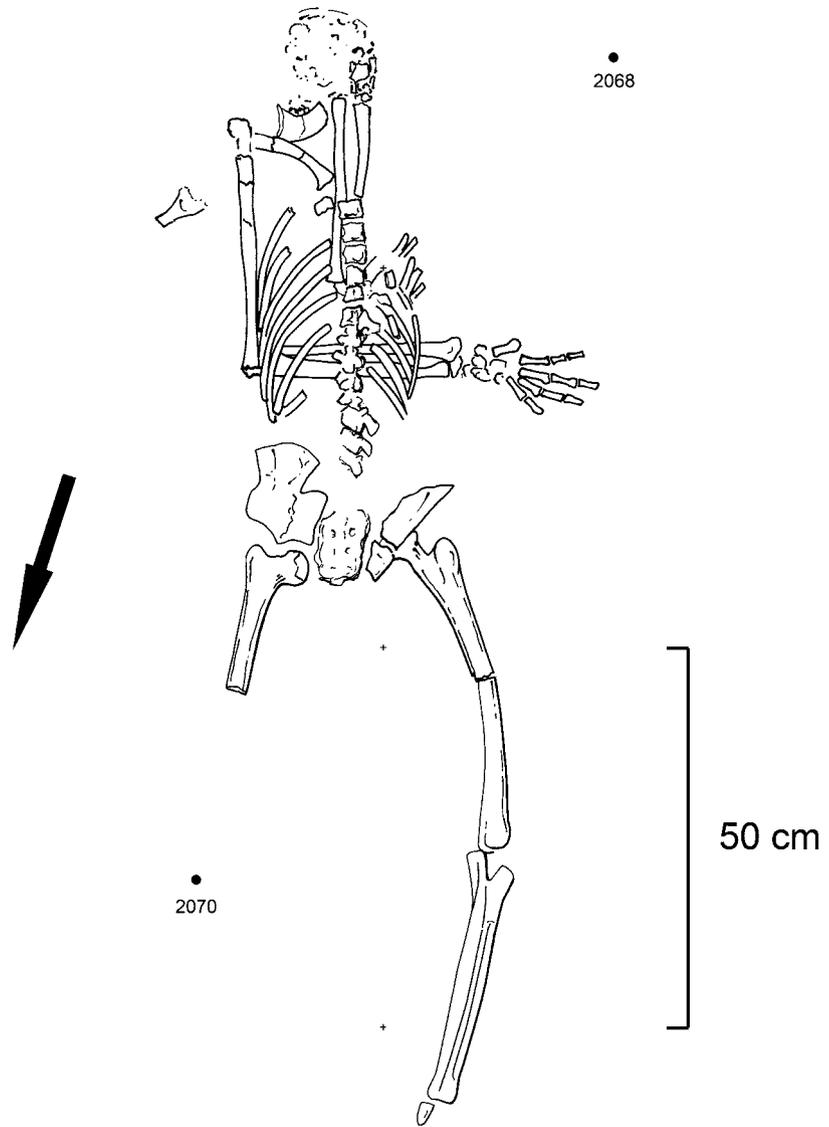


| (a) Inner face



| (b) Underside, showing the arched trimming to fit over the granite stones below







| (a) Skeleton SK2 in the entrance passage being excavated by Nuri Arslan and Yasemin Özarlan



| b) The in situ condition



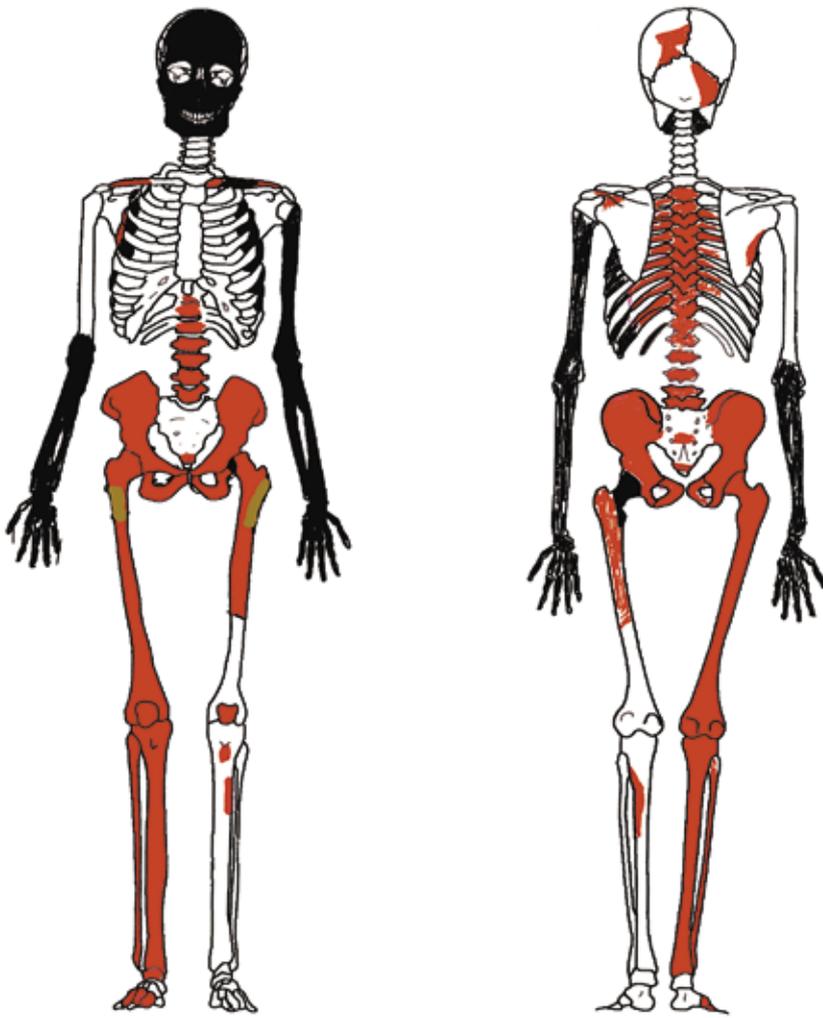
(a) Skeleton SK2 during excavation |



(b) The left hand of skeleton SK2 after removal of the skull |



(a) Burned soil around the right tibia of skeleton SK2



(b) Diagram of burned and unburned parts of skeleton SK2. Red = burned; black = unburned; white = absent.

(a) Fragments of frontal (unburned), parietal, and occipital (burned) bones; (b) black color on the ventral surface and gray on the dorsal surface of the vertebral cospes; (c) different colors on the external surface of the ribs



a



b

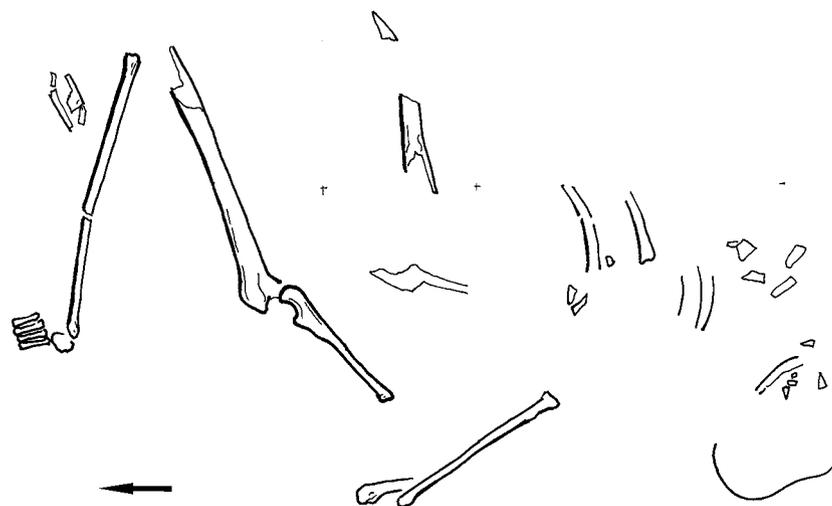


c





(a) Brown area on anterior surface of the femora (left); (b) bluish-white and white-colored bone fragments of left tibia. Twisting, shrinkage, and transversal checking on the tibia fragments (below)



(c) Plan of skeleton SK3

PHOTOS (a) 12dpkc1805, (b) 12dpkc1806 by Yilmaz Selim Erdal
DRAWING by Ben Claasz Cockson

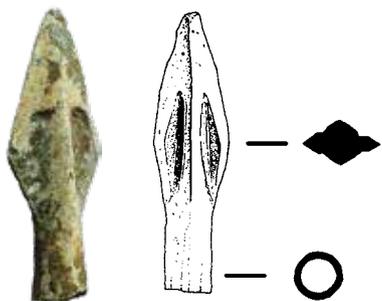


(a) Showing the partially burned silty surface with the impressions made by large stones falling from the wall tops

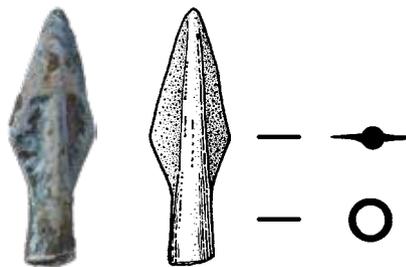


(b) Before it was covered at the end of the 2010 season. The badly preserved skull is at center right and the left foot in the lower left corner.

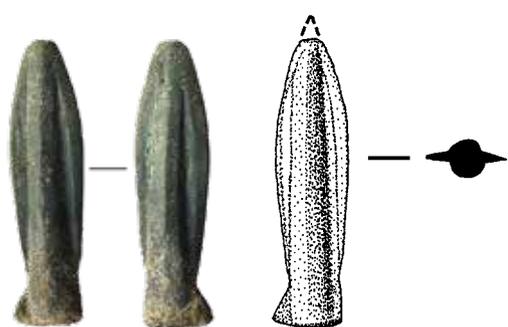
PLATE 156 | BILOBATE ARROWHEADS



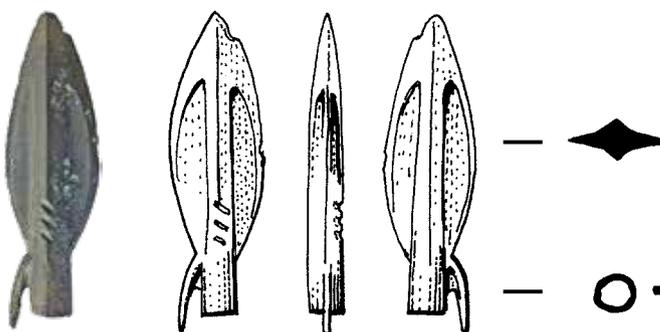
| (a) K00.099



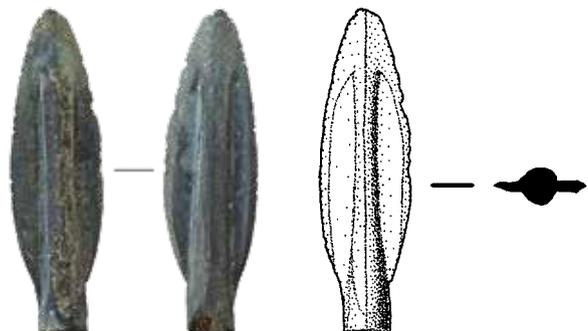
| (b) K00.122



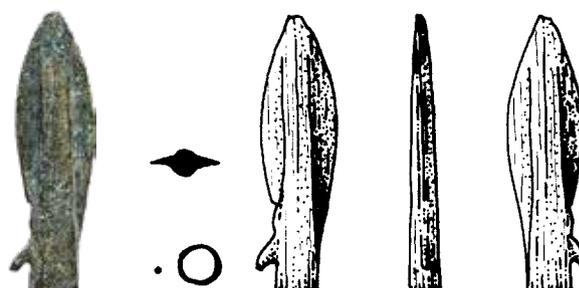
| (c) K09.236



| (d) 10TR13U16meto1



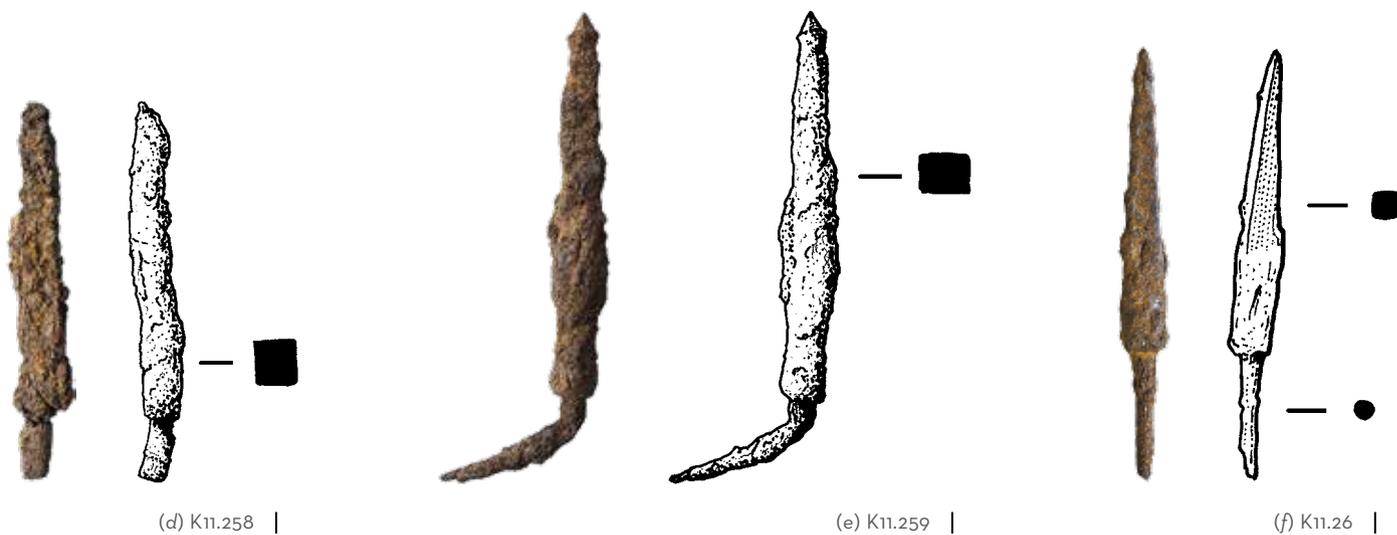
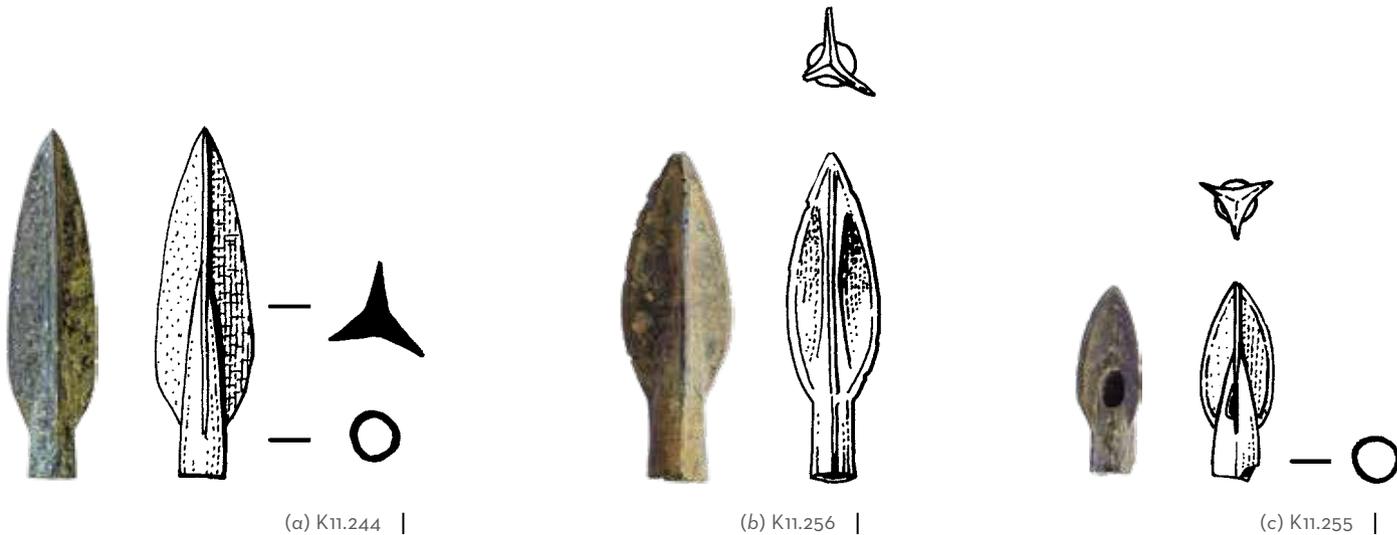
| (e) K09.235



| (f) K11.245

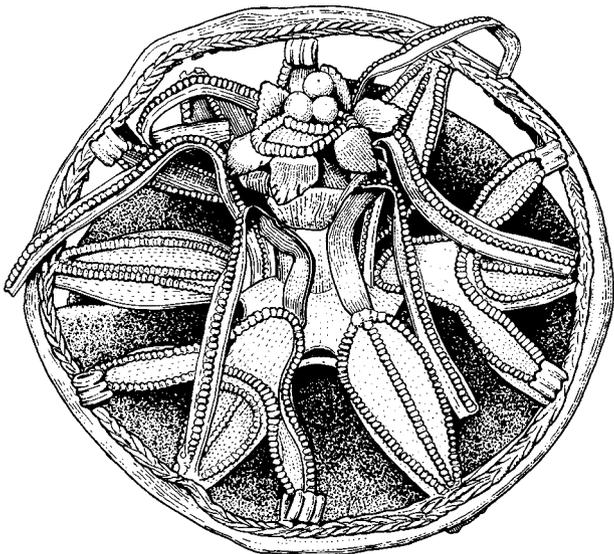


PHOTOS (a) 11dpkc2716 by Ben Claasz Coockson; (b) 05dpnk1011 by Murat Akar;
 (c) 10dpkc1216, (e) 10dpkc1218, (f) 11dpcco624 by Joseph Lehner; (d) 12dpkc1104 by Noël Siver
 DRAWINGS (a) by Hanna Kepka; (b) by David Stronach; (c), (e) by Jack Scott; (d), (f) by Ben Claasz Coockson





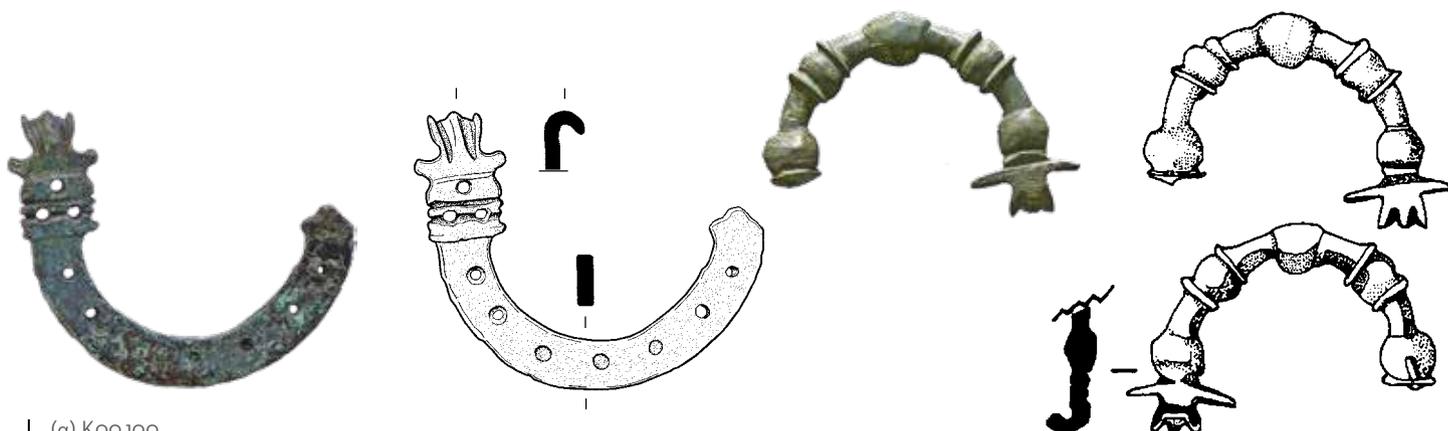
a



| (a) As found; (b) after detachment of the second plate

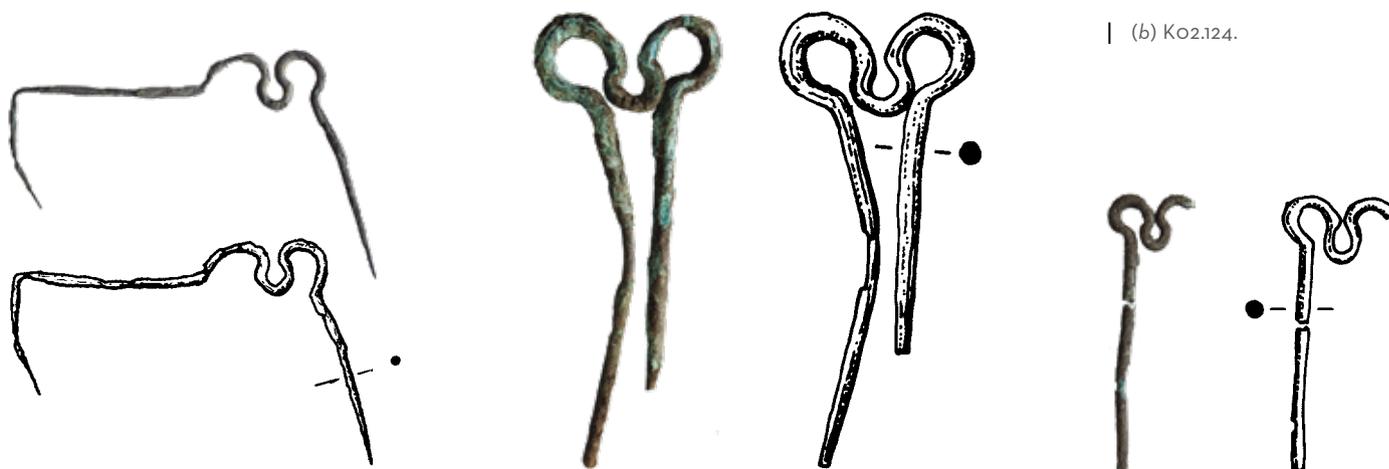


b



| (a) K00.100

| (b) K02.124.



| (c) 09CAPPU00meto1

| (d) K11.261

| (e) 11TR24U15meto1



| (f) K11.246

| (g) K11.262

| (h) 11TR24U22meto4

| (i) 11TR23U36meto1



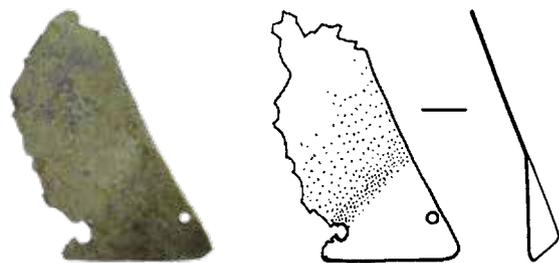
PHOTOS (a) 05dprk1010, (b) 08dprk1138 by Murat Akar; (c) 11dprnd3504, (i) 11dprnd3110 by Geoffrey D. Summers;
 (d) 11dprcc0657, (e) 11dprcc0677, (f) 11dprcc0626, (g) 11dprcc0664, (h) 11dprcc0639 by Joseph Lehner
 DRAWINGS (a) by David Stronach; (b) by Judith Sellers; (c), (d),(e), (f), (g), (h), (i) by Ben Claasz Coockson

PLATE 160 | ASSORTED METAL OBJECTS

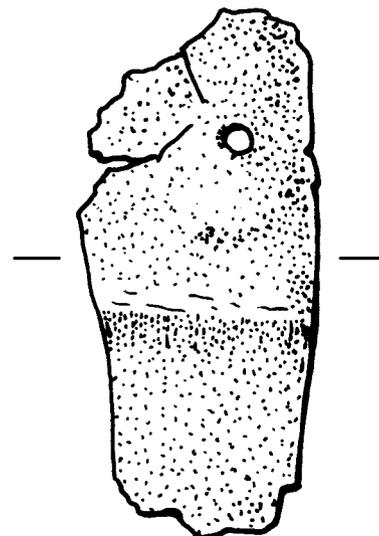


(a) Ornamental pin K00.105; (b) three tulip-headed pins during conservation: 11TR24U22meto8, 11TR24U22meto7, 11TR24U22meto6; tulip-headed pins (c) 11TR24U22meto8, (d) 11TR24U22meto7, and (e) 11TR24U22meto6; (f) spiral ring K11.263; (g) bead 11TR23U10gfa01; (h) tweezers K00.117; domed tack heads (i) K00.102 and (j) K11.265; (k) tack K11.266; (l) ferrule and nail 11TR23U12meto1

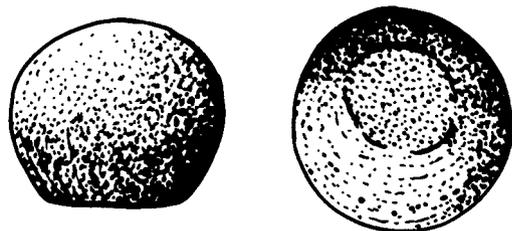
PHOTOS (a) oodpol1408 by Ben Claasz Coockson; (b) 11dpcco638, (c) 11dpcco642, (d) 11dpcco641, (e) 11dpcco640, (g) 11dpcco656, (j) 11dpcco683, (k) 11dpcco634, (l) 11dpcco681 by Joseph Lehner; (f) 12dpkc1106, 12dpkc1107 by Noël Siver; (h) 05dpnk1009, (i) 05dpnk1007 by Murat Akar
 DRAWINGS (a, h, i) by Isabelle Ruben; (c), (d), (e), (f), (g), (j), (k) by Ben Claasz Coockson



a

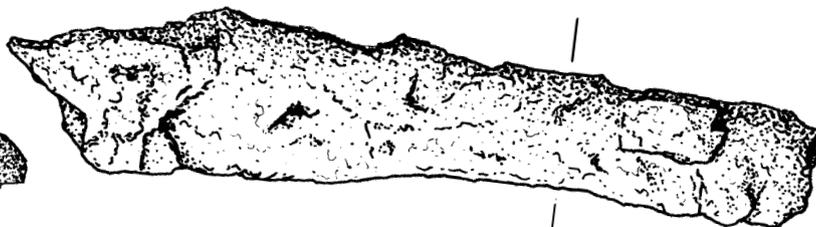
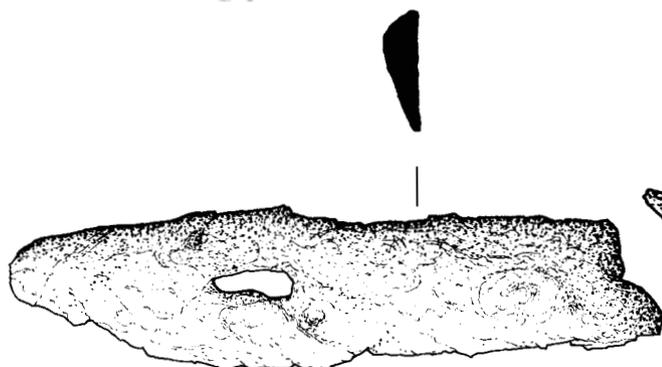


b



c

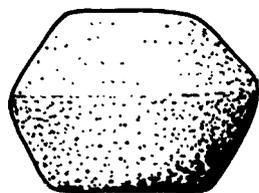
(a) Copper sheet fragment 02TRO3U11meto2; (b) copper alloy sheet fragment 11TR23U21meto1; (c) weight K11.264; (d) iron knife blade with perforation for attachment of handle 11TR24U21meto3 and 11TR24U20meto2



d

PHOTOS (a) 12dpkc1105 by Noël Siver; (b) 11dpcco644, (c) 11dpcco668, 11dpcco669, 11dpcco670, (d) 17dpkc0102 by Joseph Lehner
DRAWINGS (a) by Judith Sellers; (b), (c), (d right) by Ben Claasz Coockson; (d left) by Dominique Langis-Barsetti

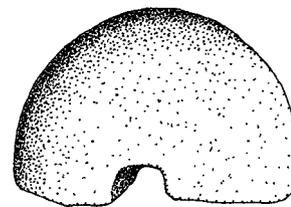
PLATE 162 | POTTERY AND BAKED-CLAY WHORLS



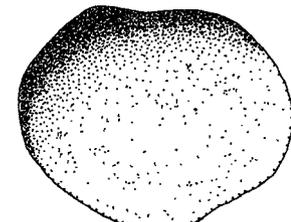
| (a) 11TR23U09pob01



| (b) 11TR23U09pob02



| (c) K11.273



| (d) 09TR22U01pob01



0 2 cm

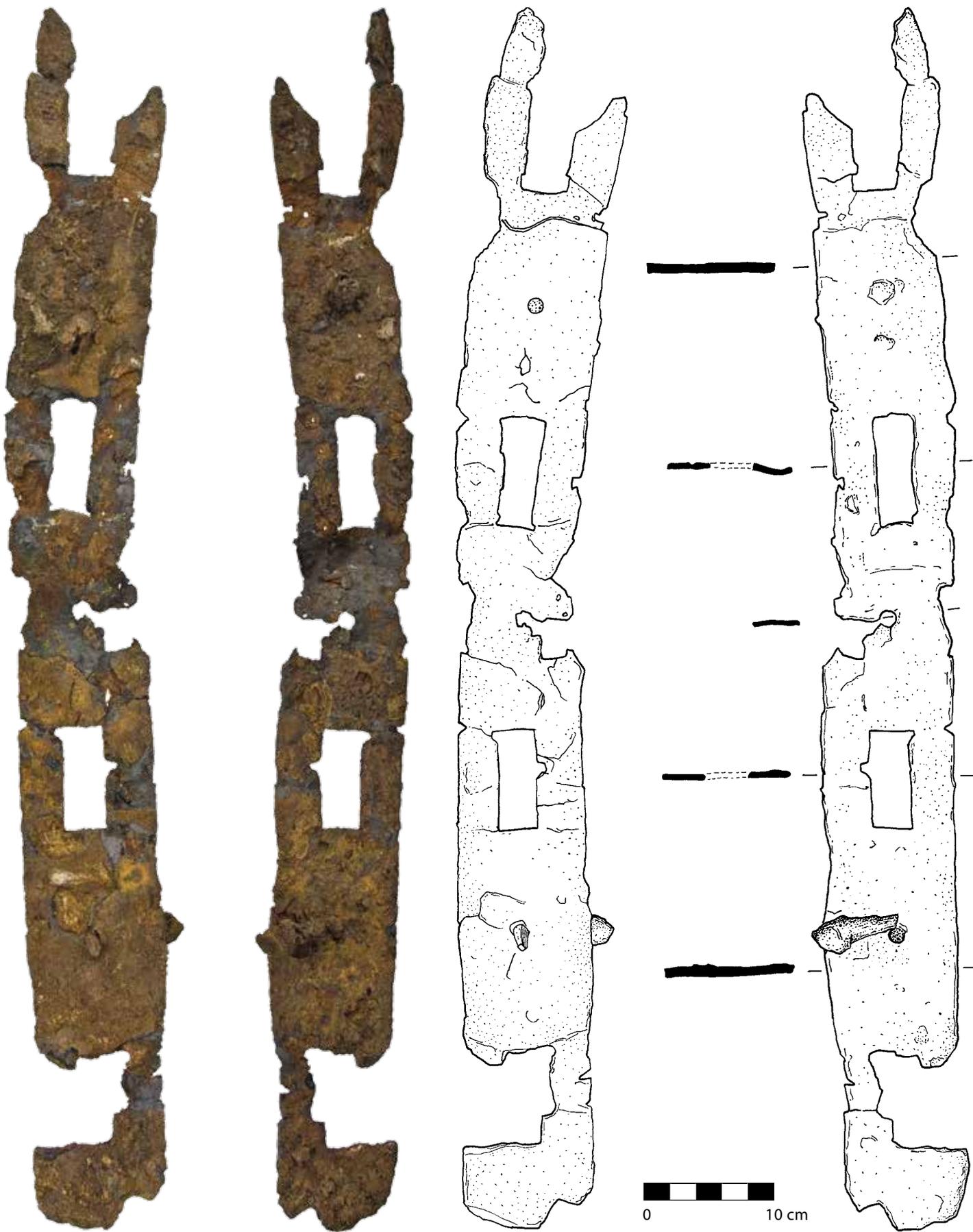


PHOTO 11dpcc0601 by Joseph Lehner
DRAWING by Ben Claasz Coockson



| (a) Detail



| (b) Additional fragments





(a) Iron bands K11.252 and K11.253 in situ |



(b) Iron band K11.253 in sealed storage |



(c) Iron band K11.253 |

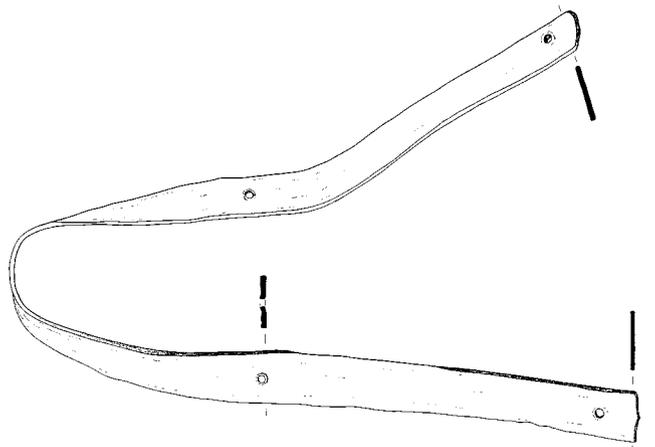
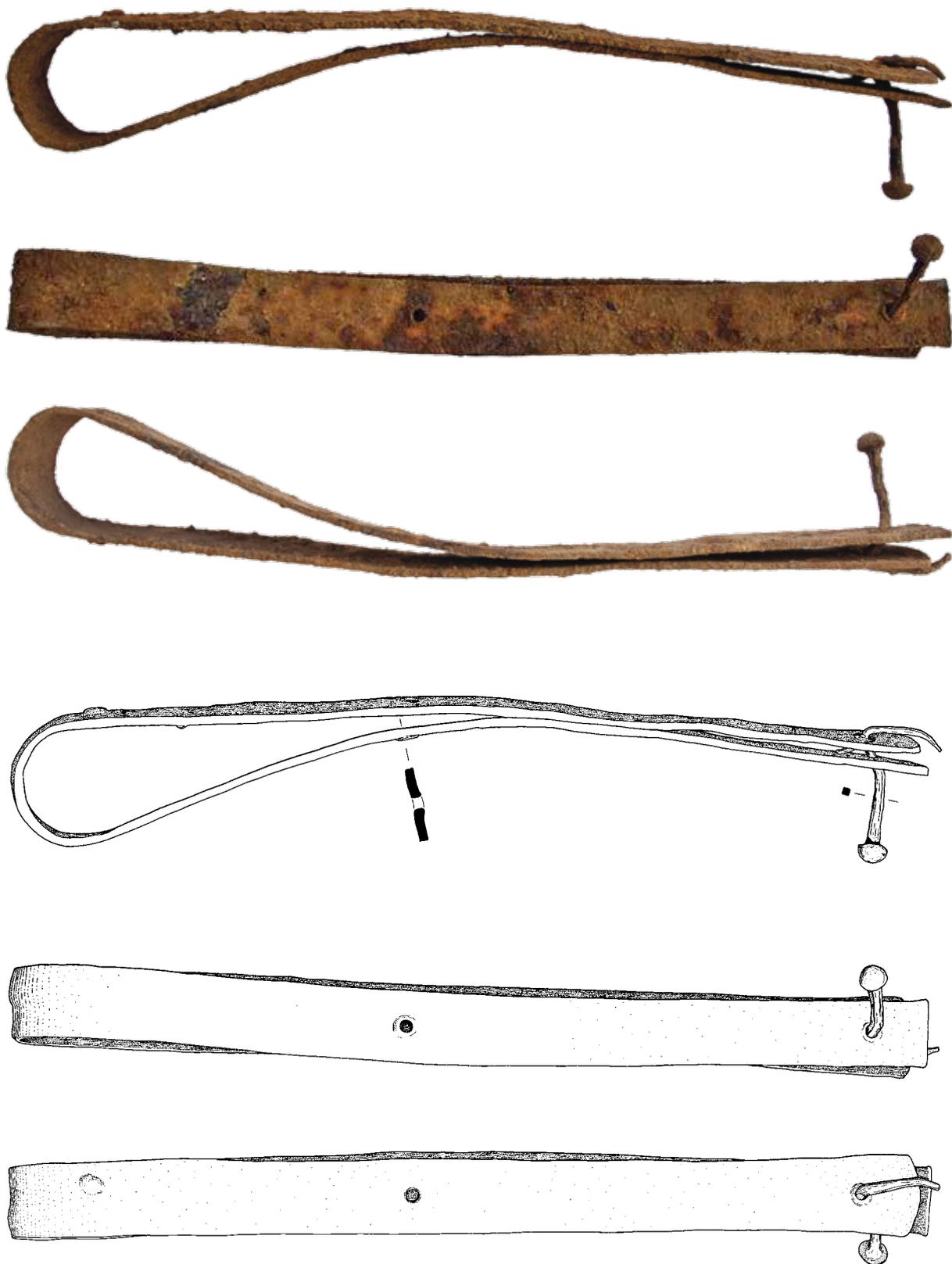


PLATE 166 | IRON BAND K11.252



PHOTOS 11dpcc0603, 11dpcc0604, 11dpcc0605 by Joseph Lehner
DRAWINGS by Ben Claasz Cooekson



(a) Detail showing the nail bent over and the head of the smaller nail used to secure the larger. One end of the band is rounded, while the other, behind, has been cut straight. |



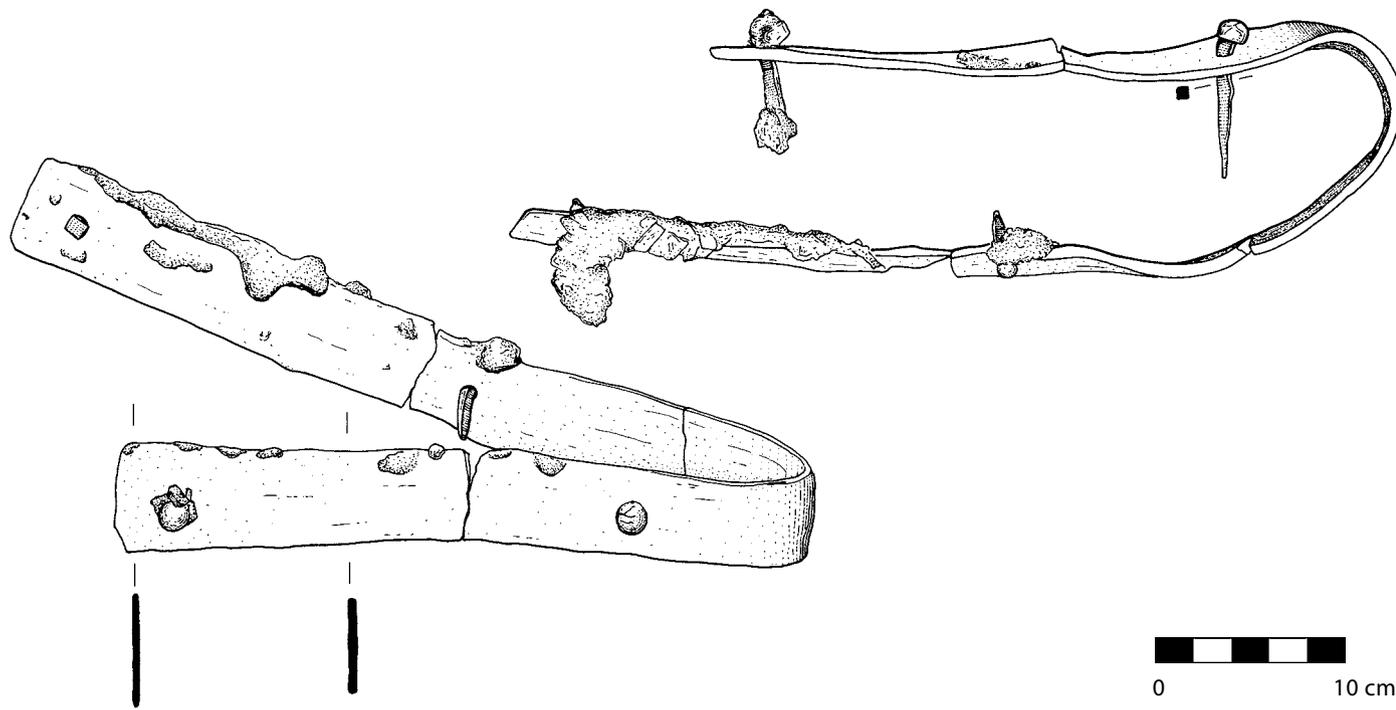
(b) The large dome-headed nail with its lower portion bent over and the smaller nail inserted from the other side. |

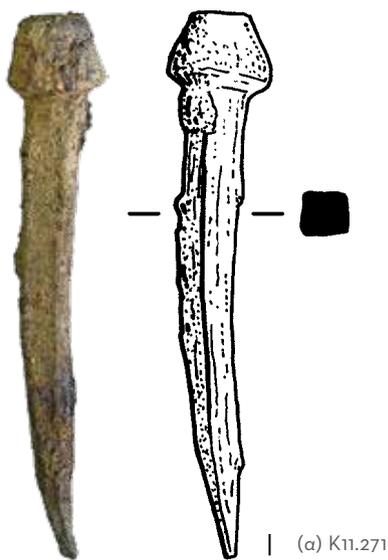


(a) Iron band 11TR24U07met03 in situ

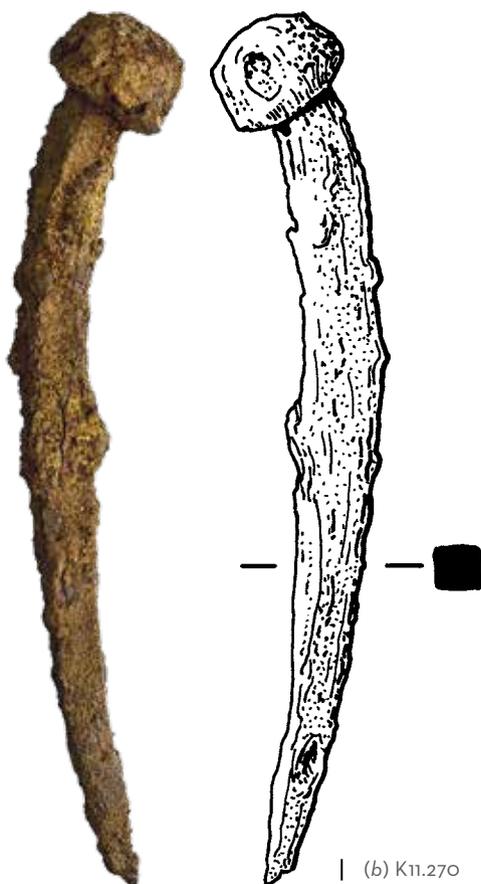


(b) Iron band 11TR24U07met03 |

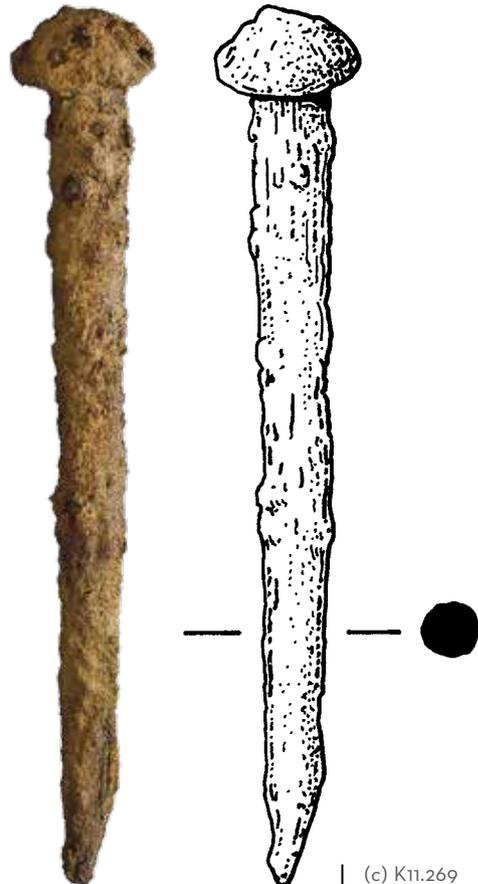




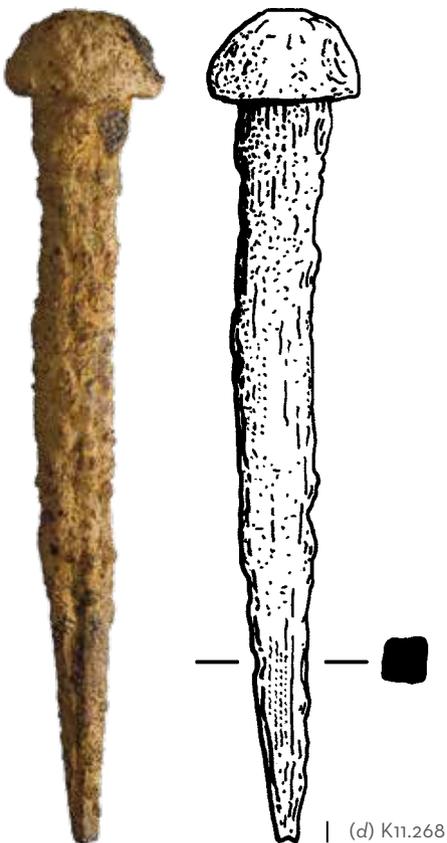
(a) K11.271



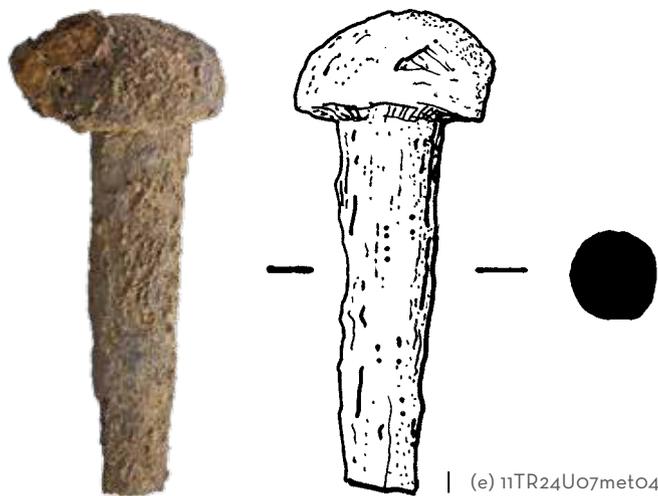
(b) K11.270



(c) K11.269

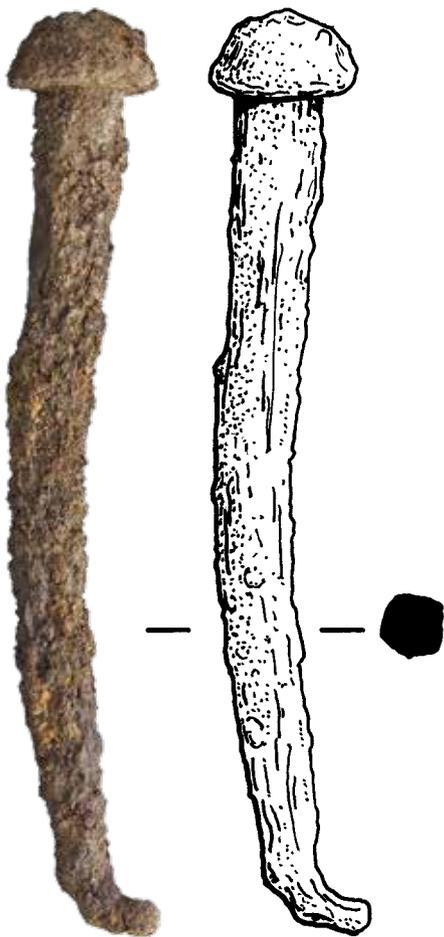


(d) K11.268

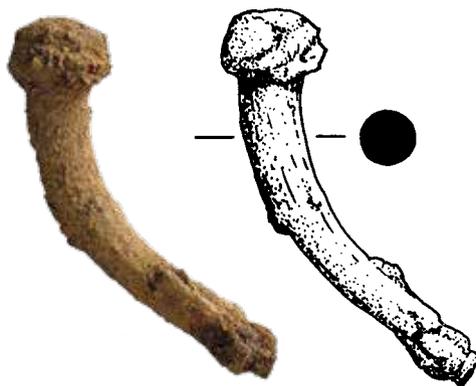


(e) 11TR24U07met04

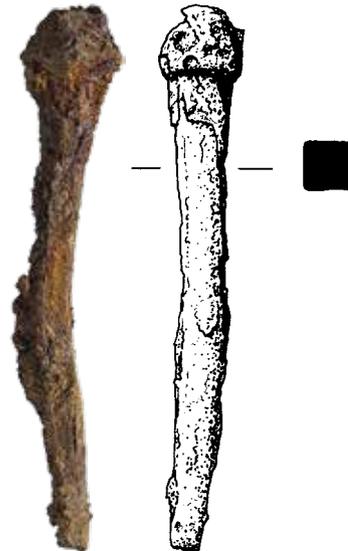
PLATE 170 | IRON NAILS



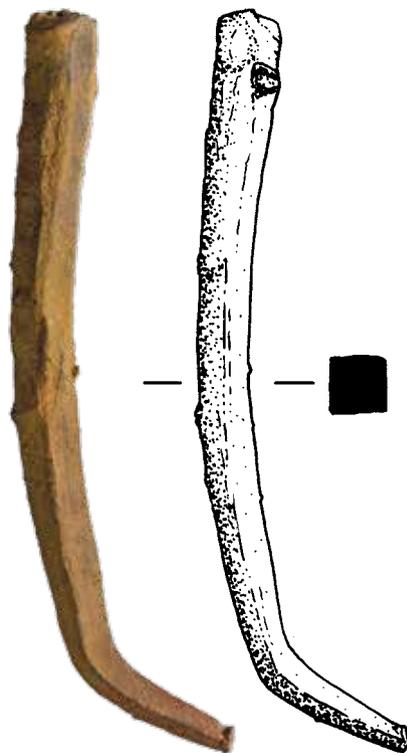
| (a) K11.272



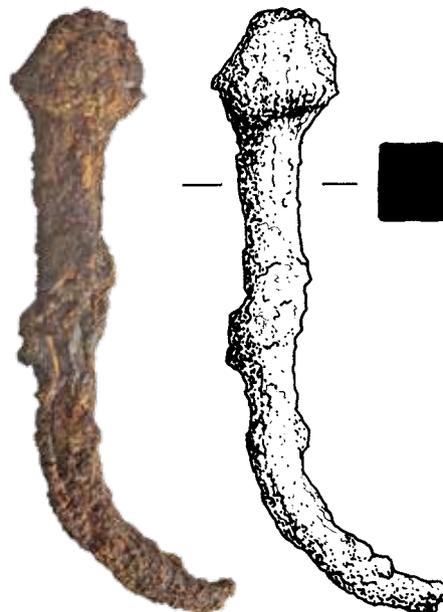
| (b) 11TR23U24meto2,



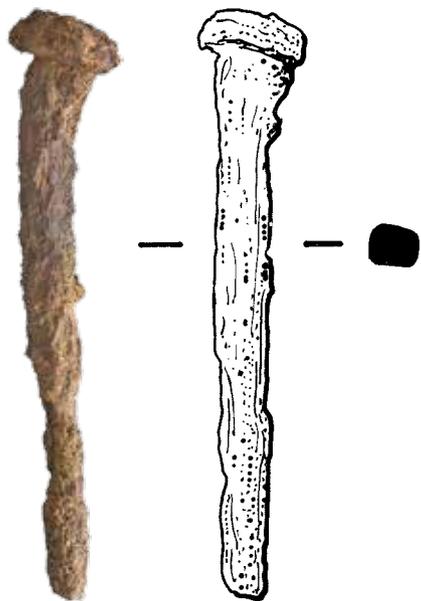
| (c) 11TR23U24meto1



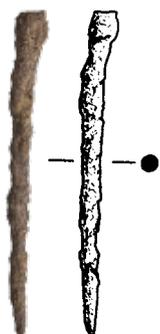
| (d) 11TR23U12meto2



| (e) K11.267



| (f) 11TR24Uo4meto3

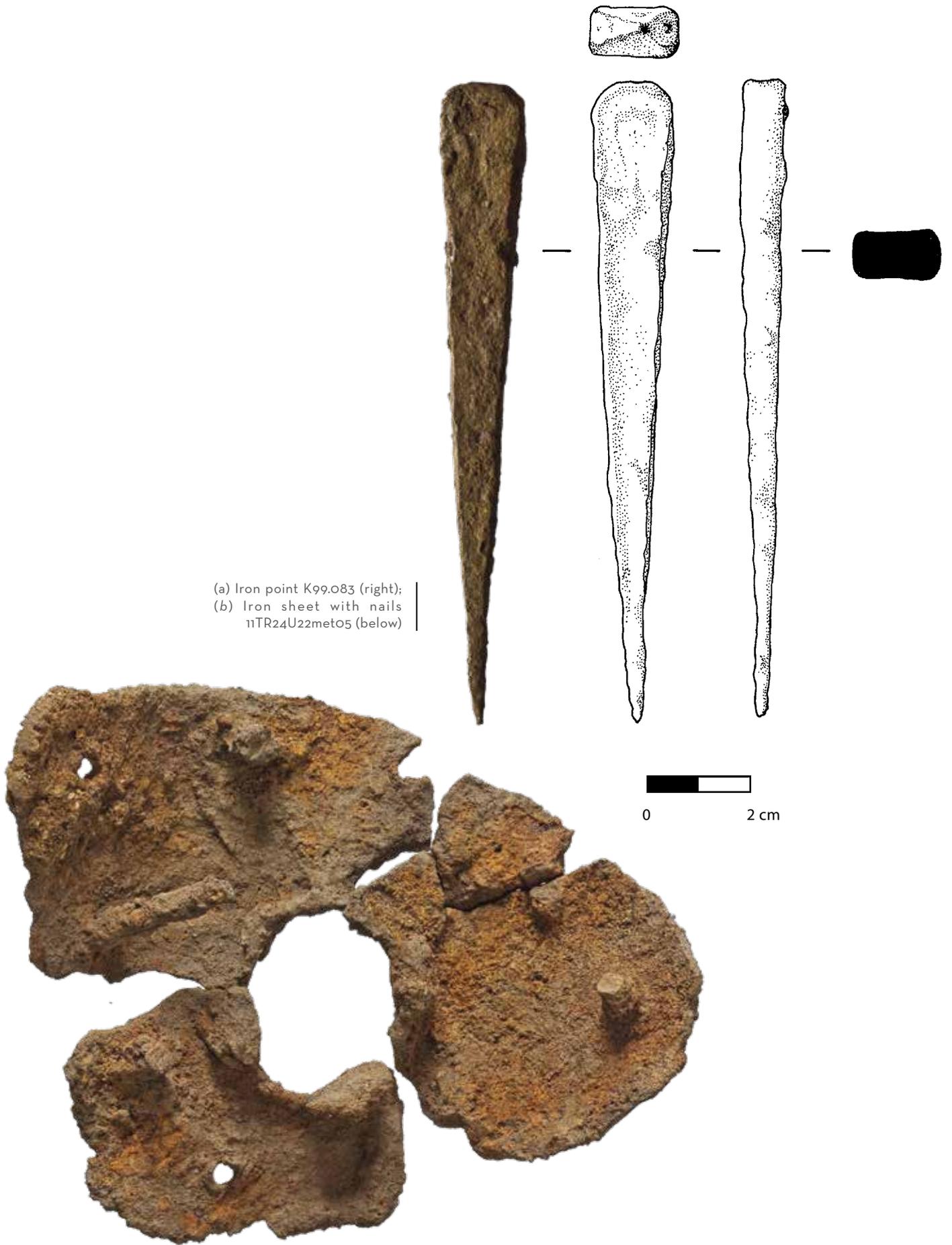


| (g) 11TR23Uo9meto1



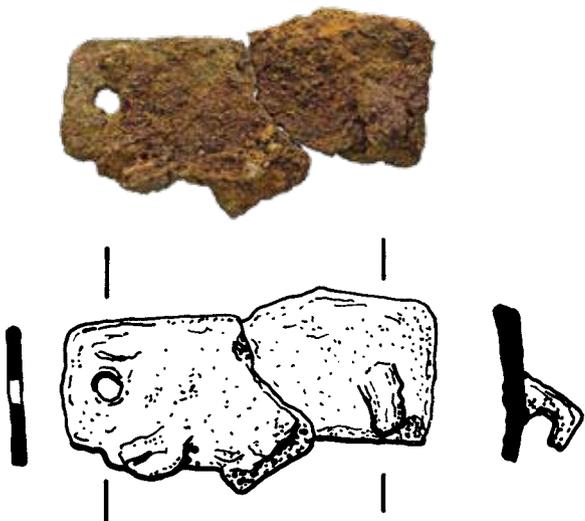
| (h) 11TR23U31meto3





(a) Iron point K99.083 (right);
(b) Iron sheet with nails
11TR24U22meto5 (below)

PLATE 172 | ASSORTED IRON OBJECTS



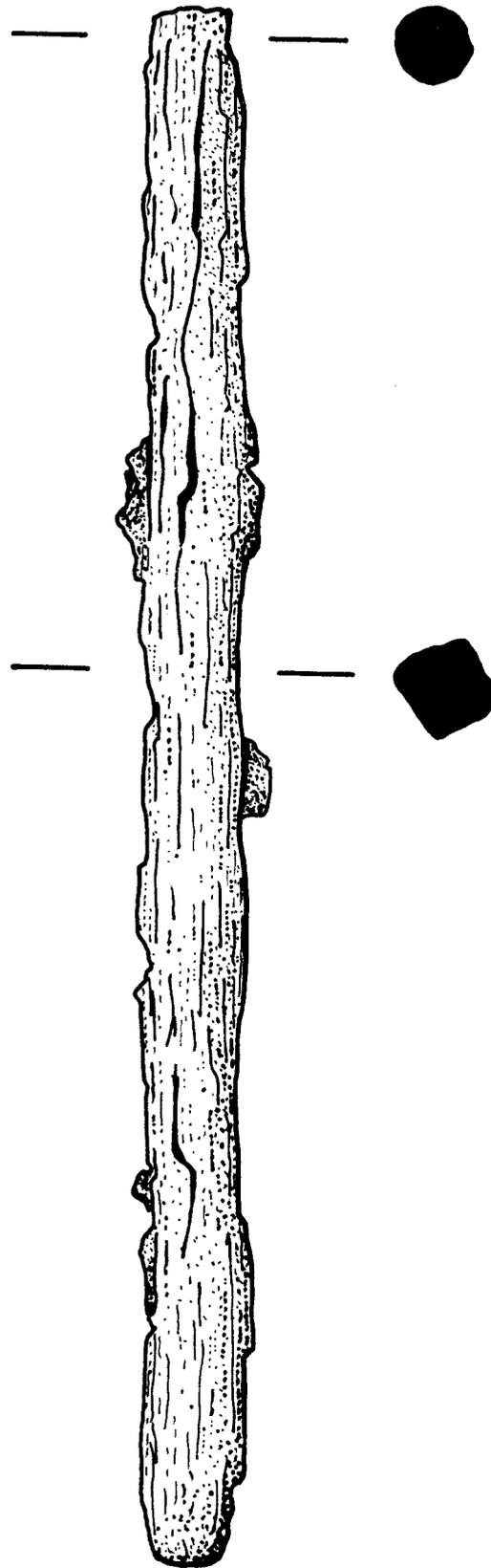
(a) Iron sheet with nails
11TR24Uo4meto4

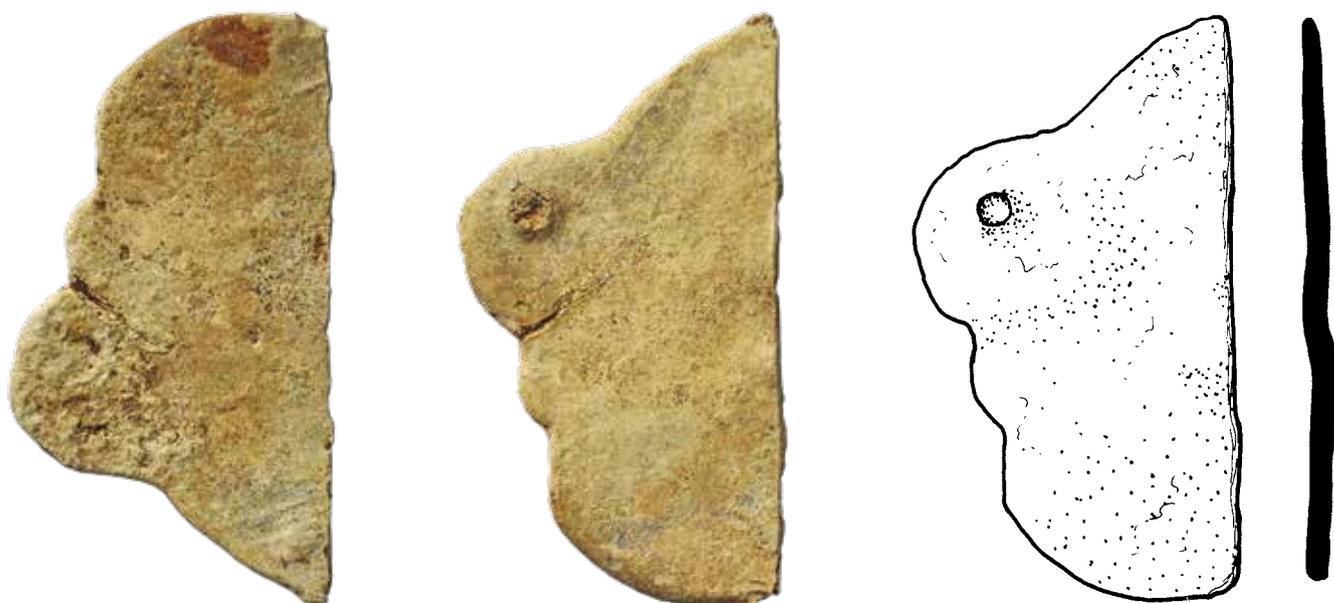


(b) Iron loop 11TR24Uo4meto2

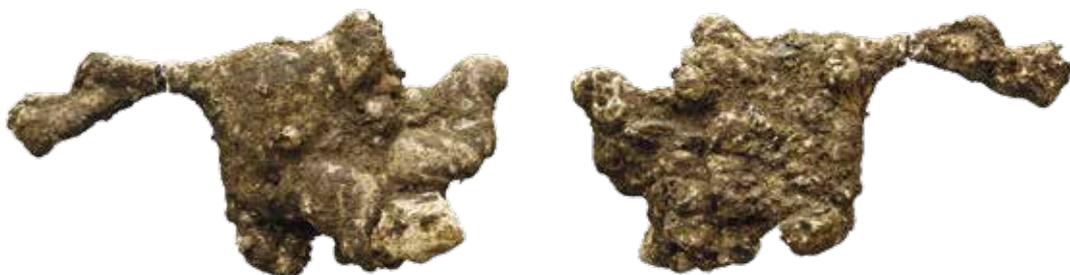


(c) Iron rod 09TR22Uo8meto1





(b) Cut lead sheet 11TR23U31meto1 |

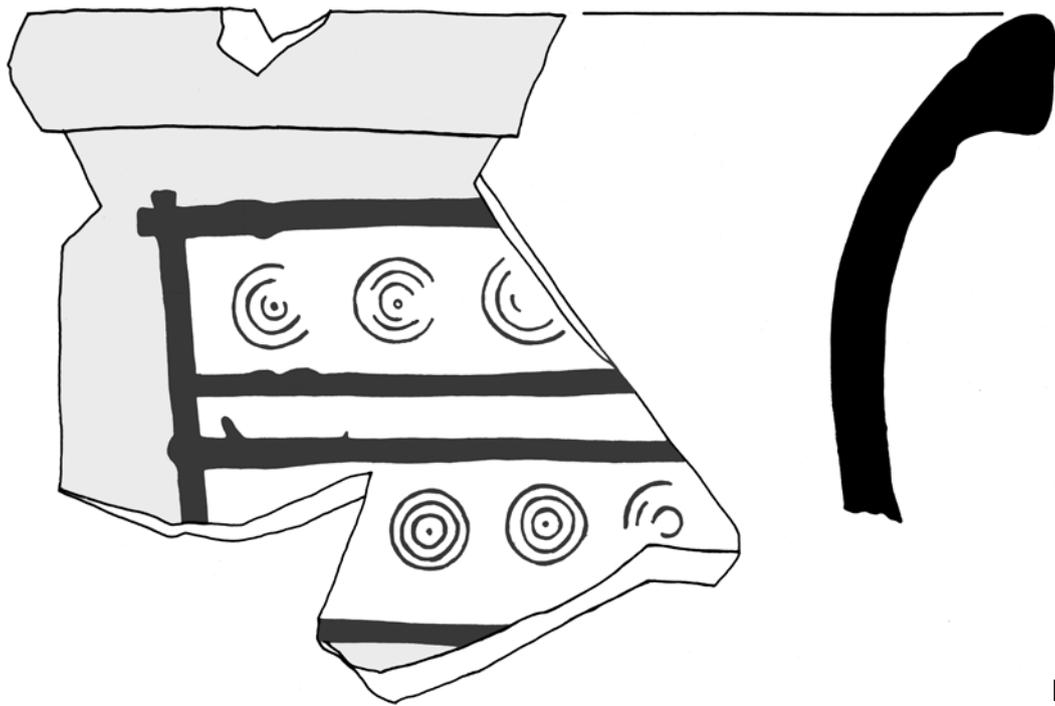
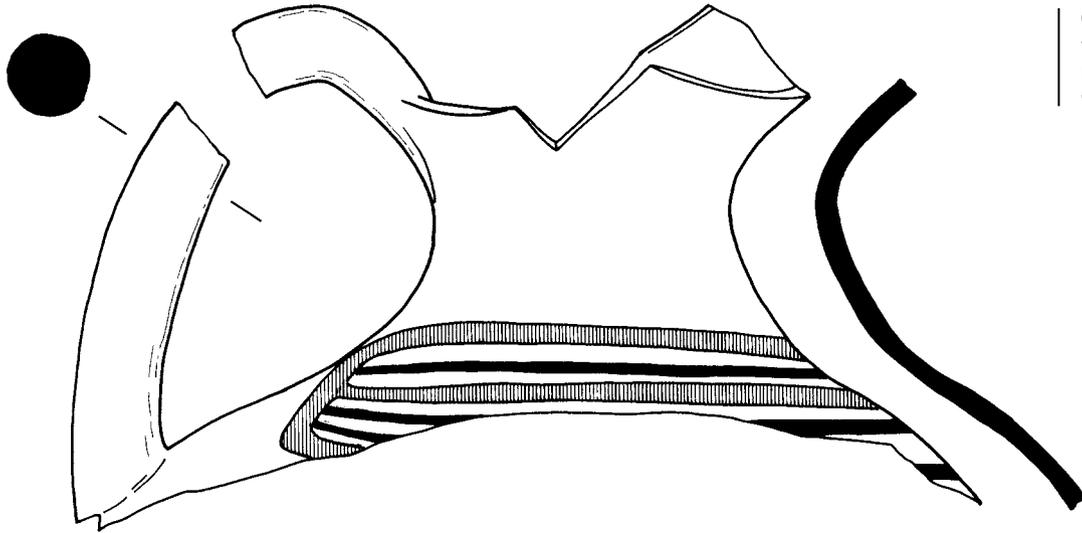


(c) Melted lead 11TR23U31meto2 |

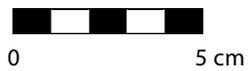


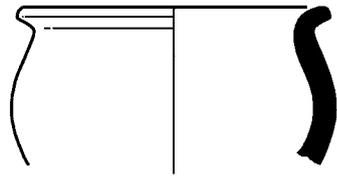
PLATE 174 | POTTERY FROM CONSTRUCTION OF THE GATE

(a) Jug 11TR24U03pot01
with cut-away spout and
polychrome paneled
decoration

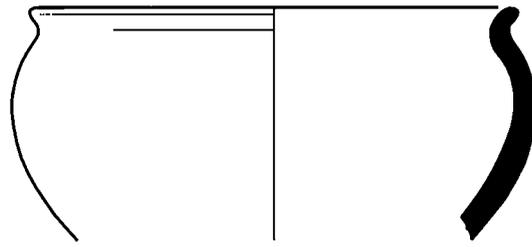


(b) Paneled crater 10TR22U01pot01

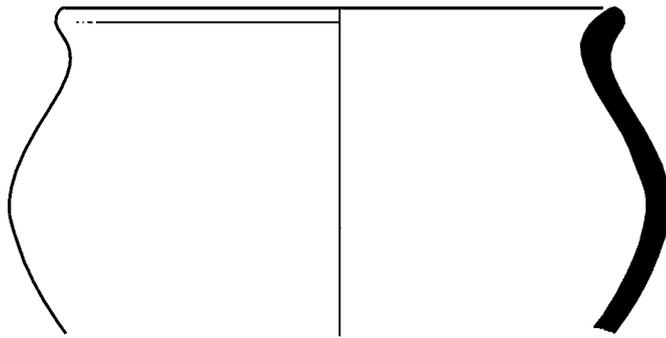




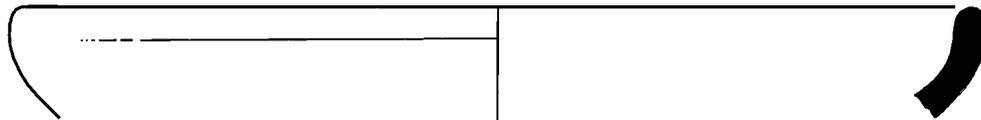
(a) Cooking pot 10TR25U12pot04 |



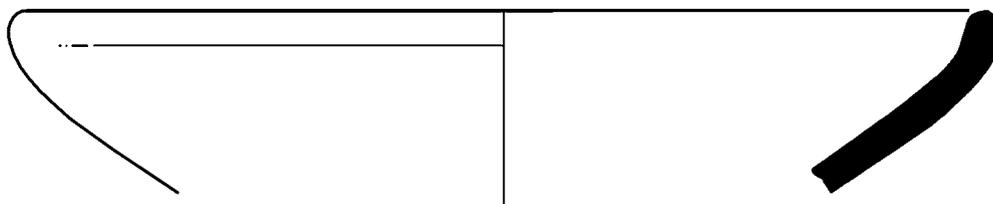
(b) Cooking pot 10TR25U12pot03 |



(c) Cooking pot 10TR25U12pot05 |



(d) Bowl 10TR25U12pot01 |



(e) Bowl 10TR25U12pot02 |



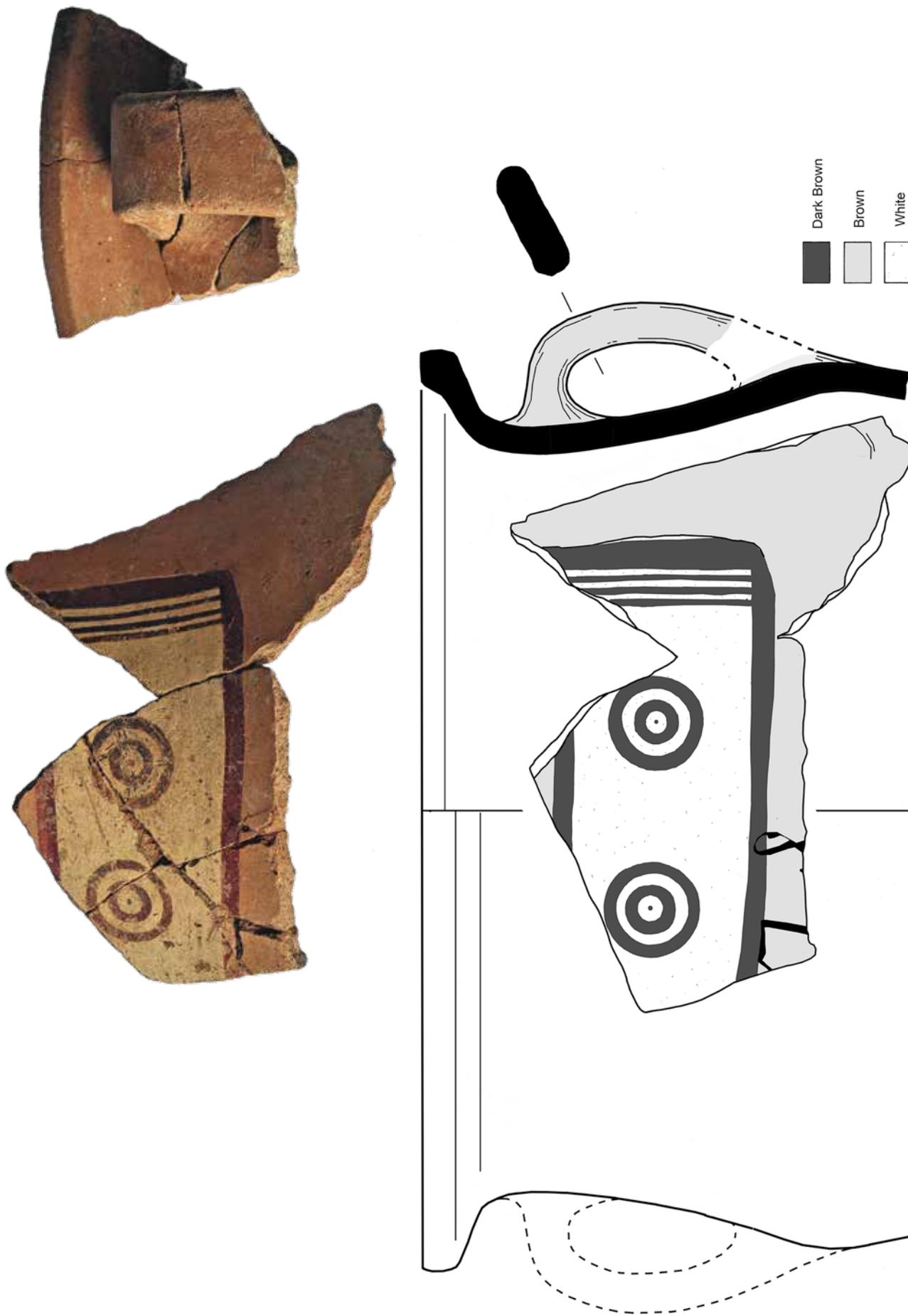
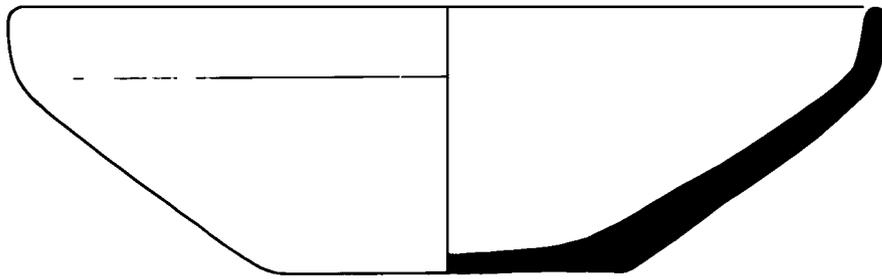
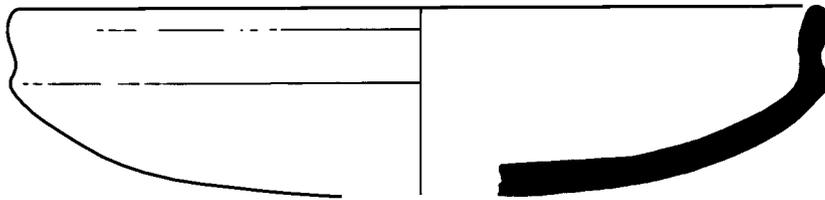


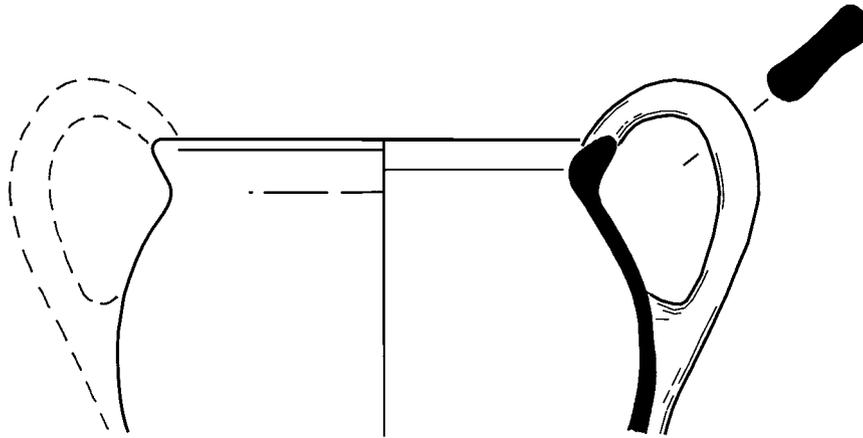
PHOTO 11dpnd3408 by Geoffrey D. Summers
DRAWING by Dominique Langis-Barsetti and Ben Claasz Coockson



(a) Simple bowl with flat base
11TR24U04pot01



(b) Dish 11TR24U25pot02



Cooking pots (c) 11TR24U04pot03
(left); (d) 11TR24U03pot02 (below)

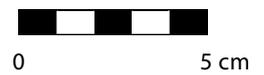
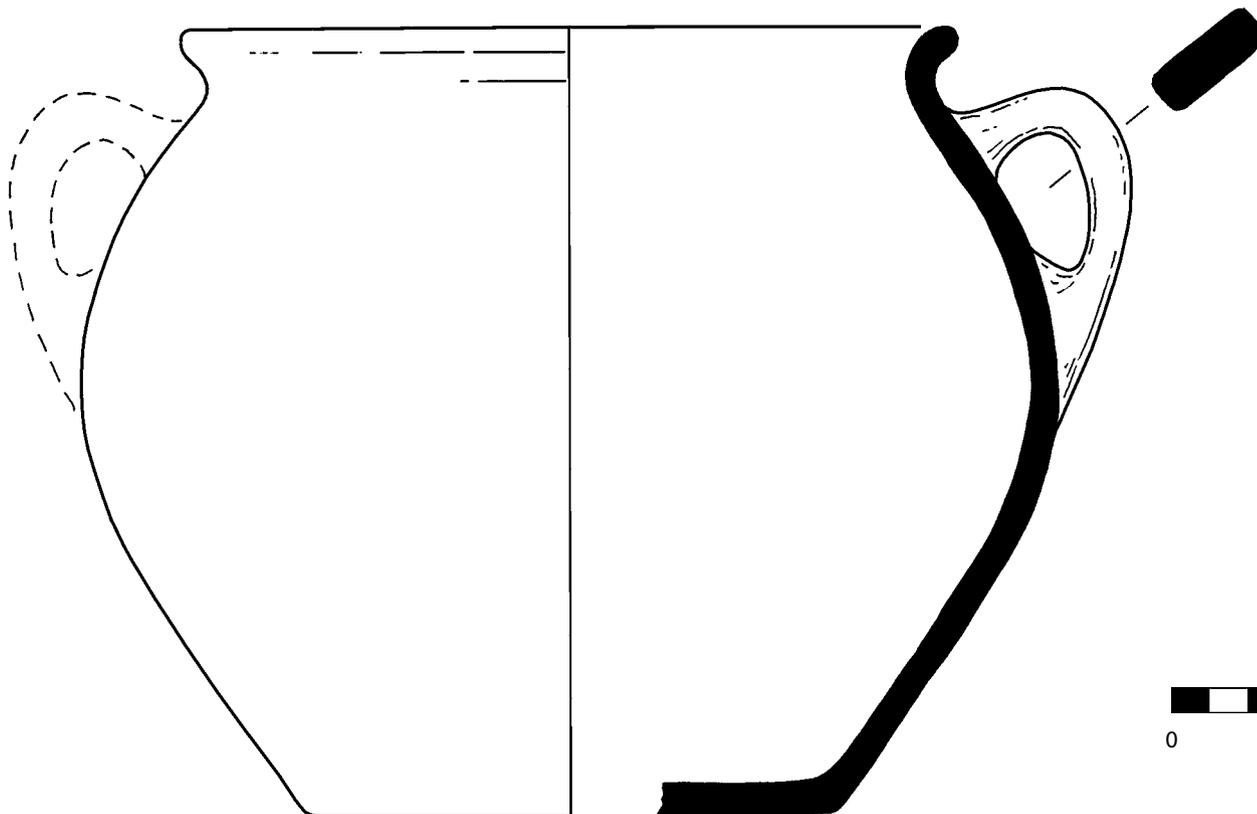
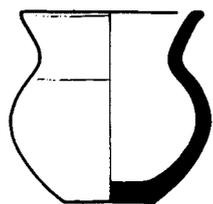


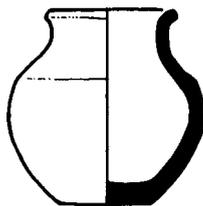
PLATE 178 | MINIATURE POTS, NONALPHABETIC GRAFFITI ON VESSEL SHERDS



| (a) 11TR23U2opot01



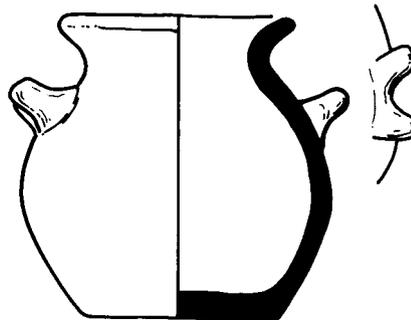
| (b) K11.277



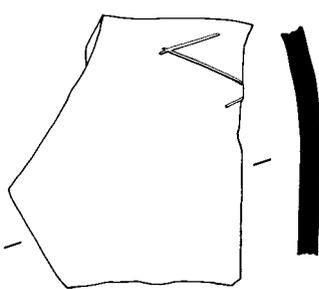
(a-c) Three miniature pots from the rear section of the gate; (d, e) nonalphabetic graffiti on vessel sherds



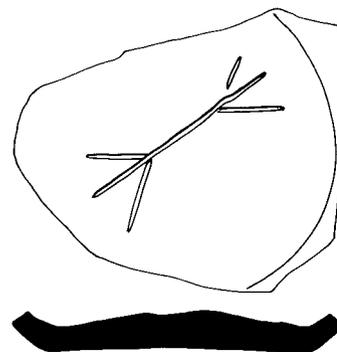
| (c) K11.276



| (d) Jar shoulder sherd K11.275



| (e) Pot base K11.274



PHOTOS (b) 11dpcco674, (c) 11dpkc3244, 11dpkc3245 by Joseph Lehner and Geoffrey D. Summers; (d) 11dpnd3411, (e) 11dpnd3419 by Geoffrey D. Summers
DRAWINGS (a-c) by Dominique Langis-Barsetti and Ben Claasz Coockson; (d, e) by Ben Claasz Coockson

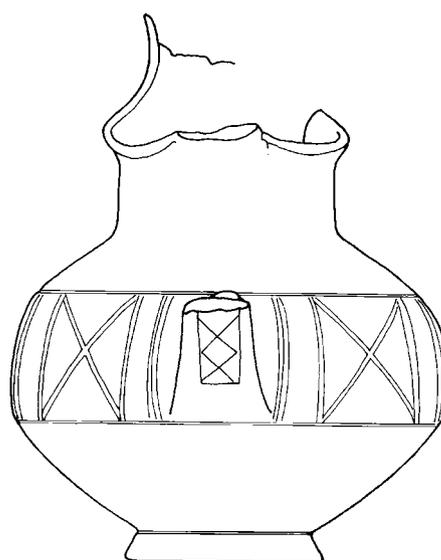
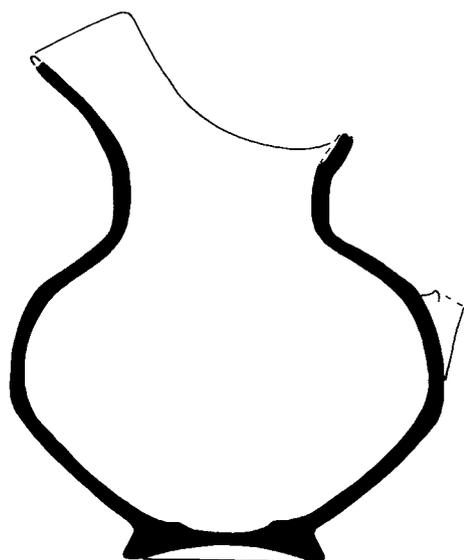
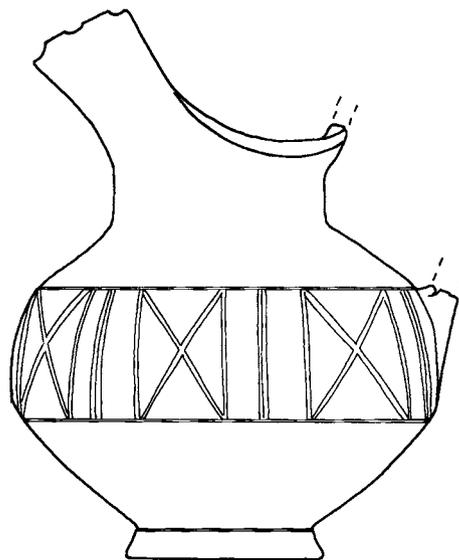
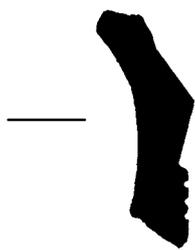
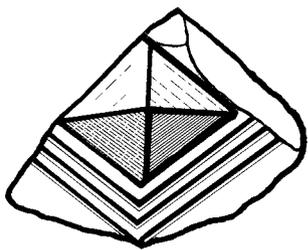
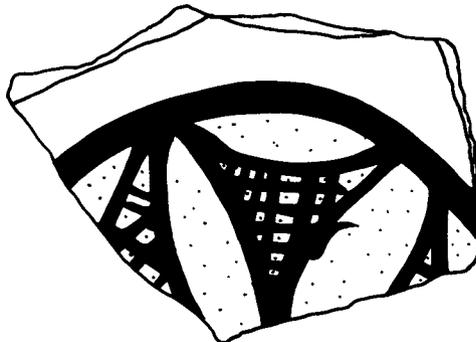


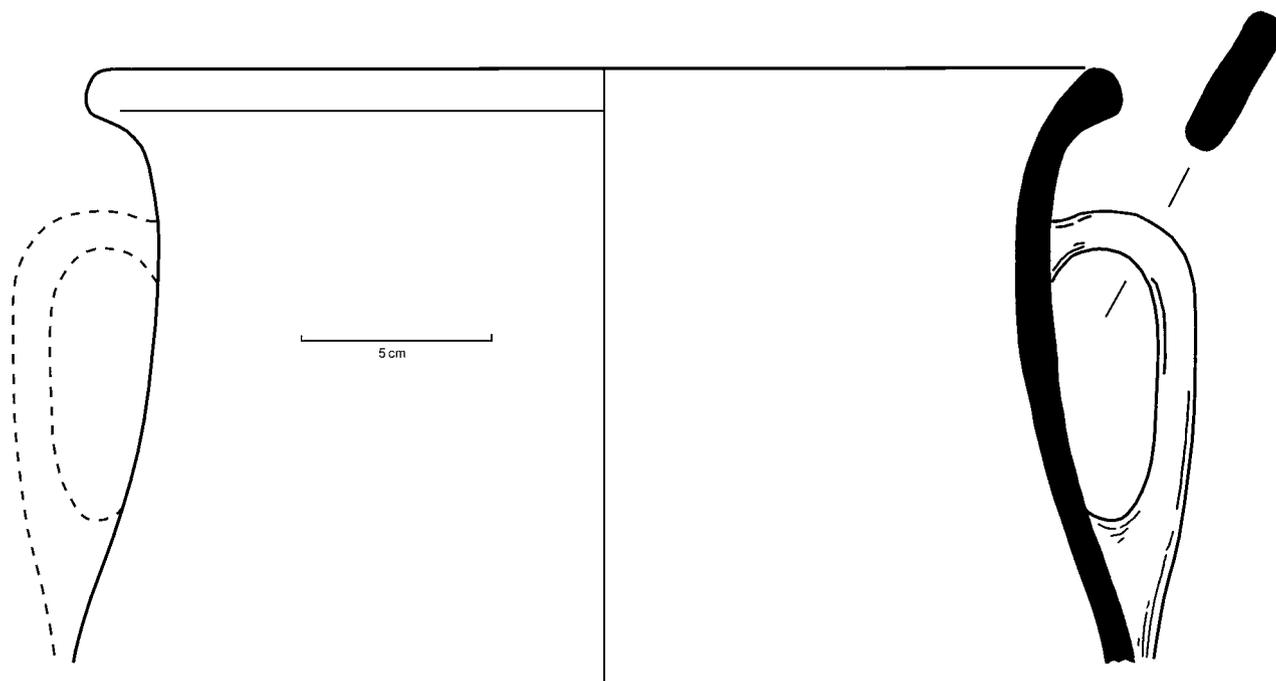
PLATE 180 | POTTERY SHERDS



(a) Sherd with faceted lozenges
o2TRo4Uo3poto1



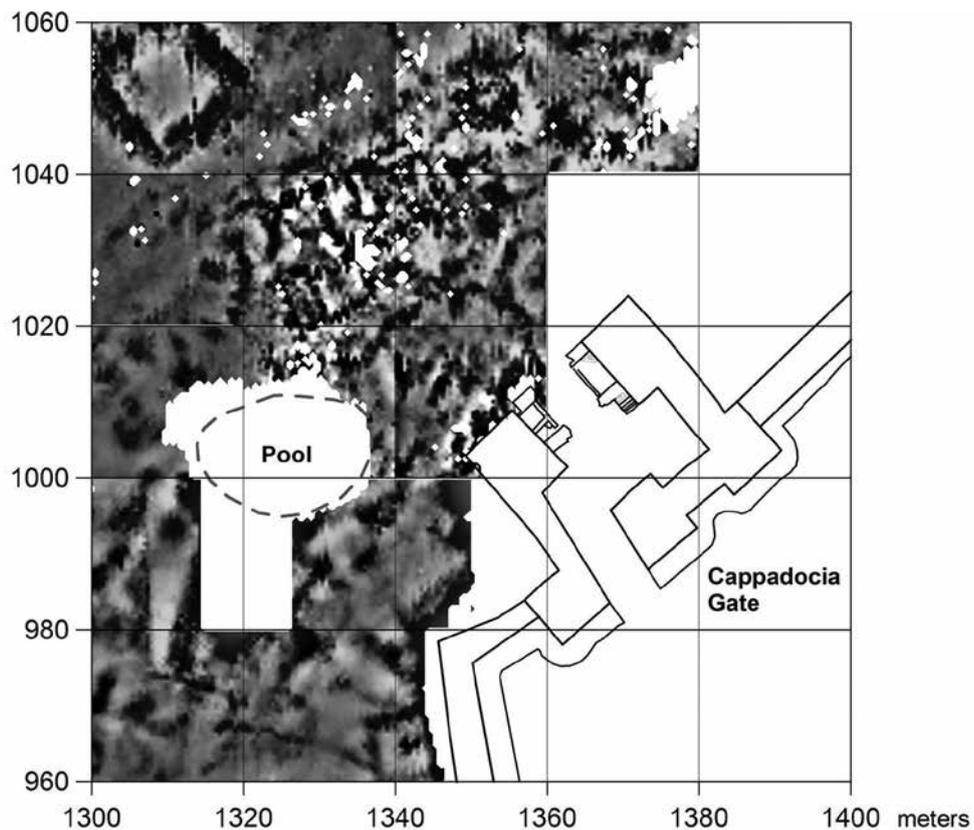
(b) Painted sherd
ooCT5oUo2poto1



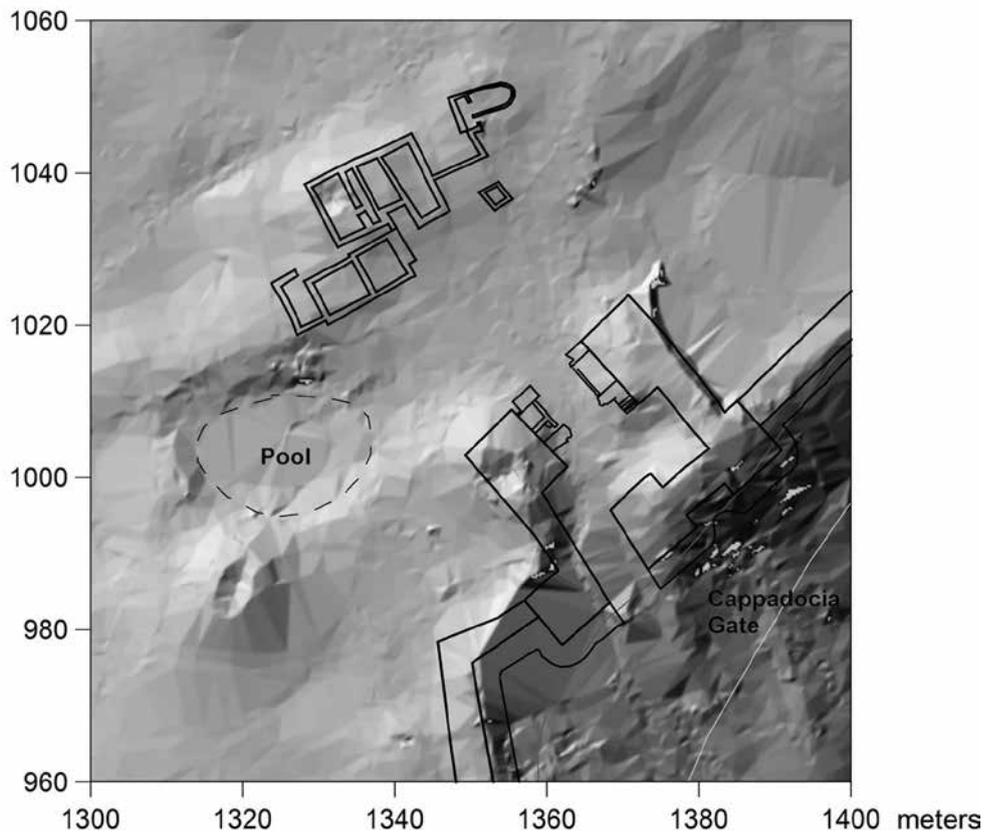
(c) Large jar ooCT5oUo2poto2

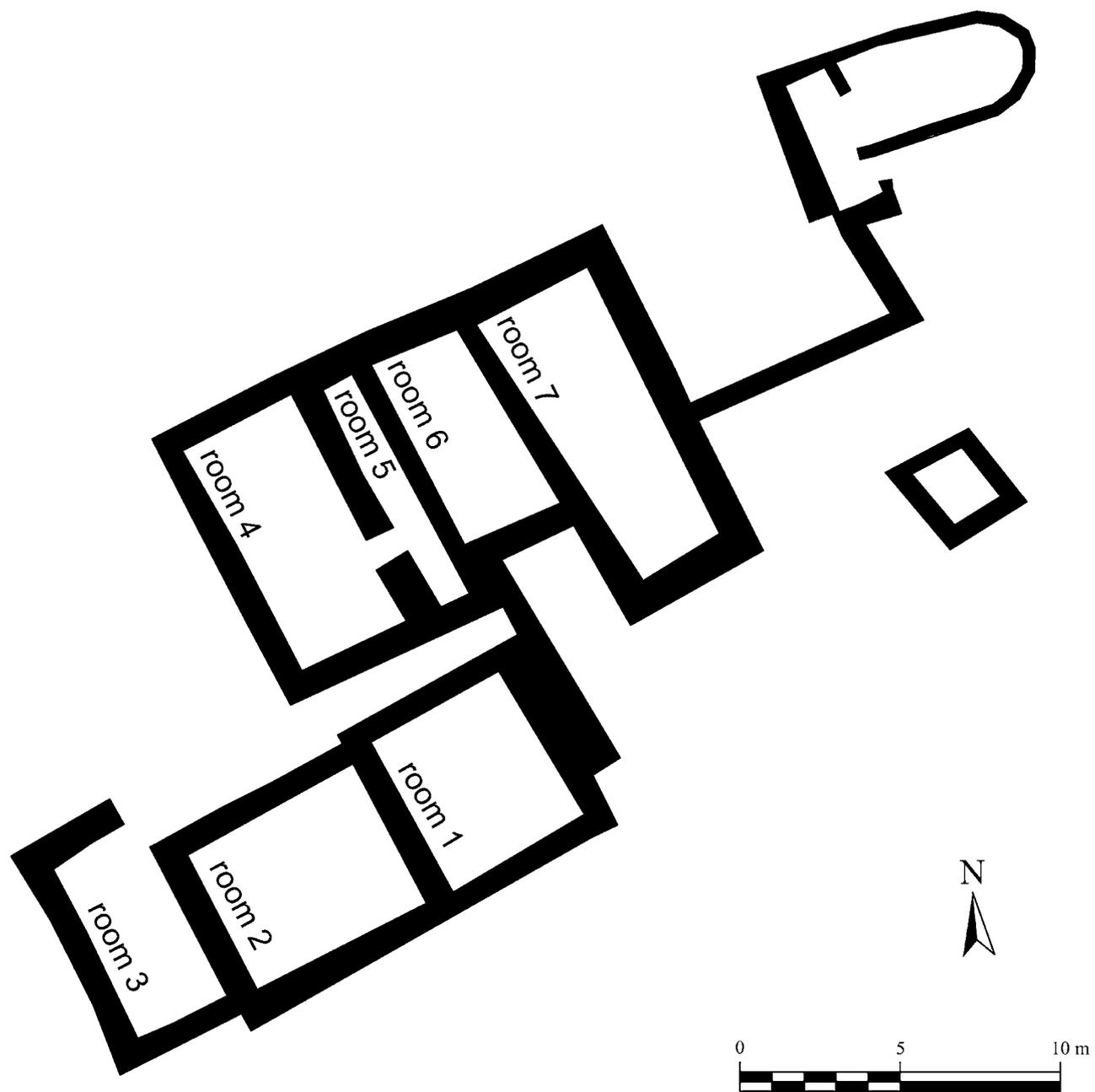


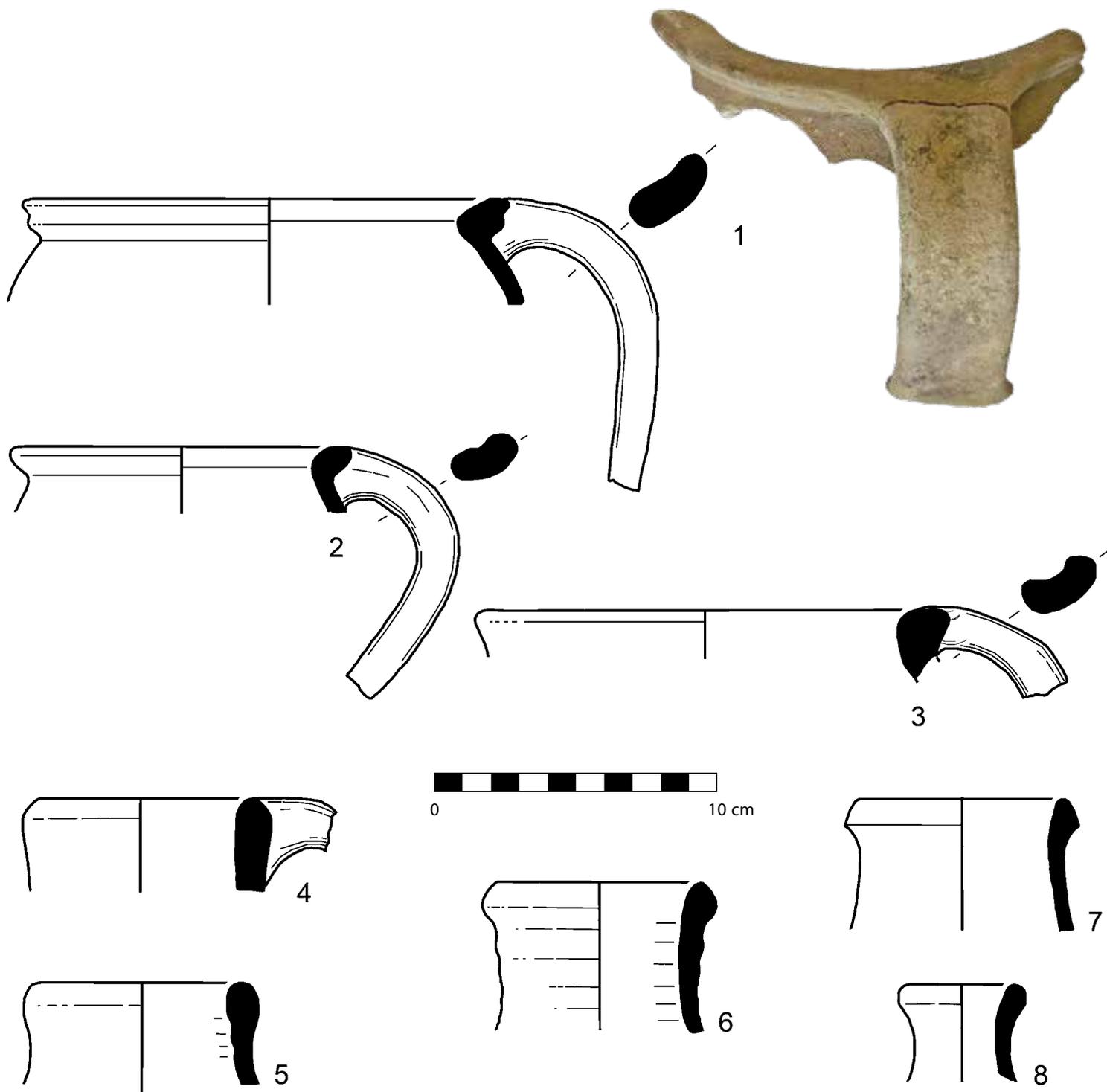
(a) In the resistivity survey of the area



(b) Drawn over the GPS simulation

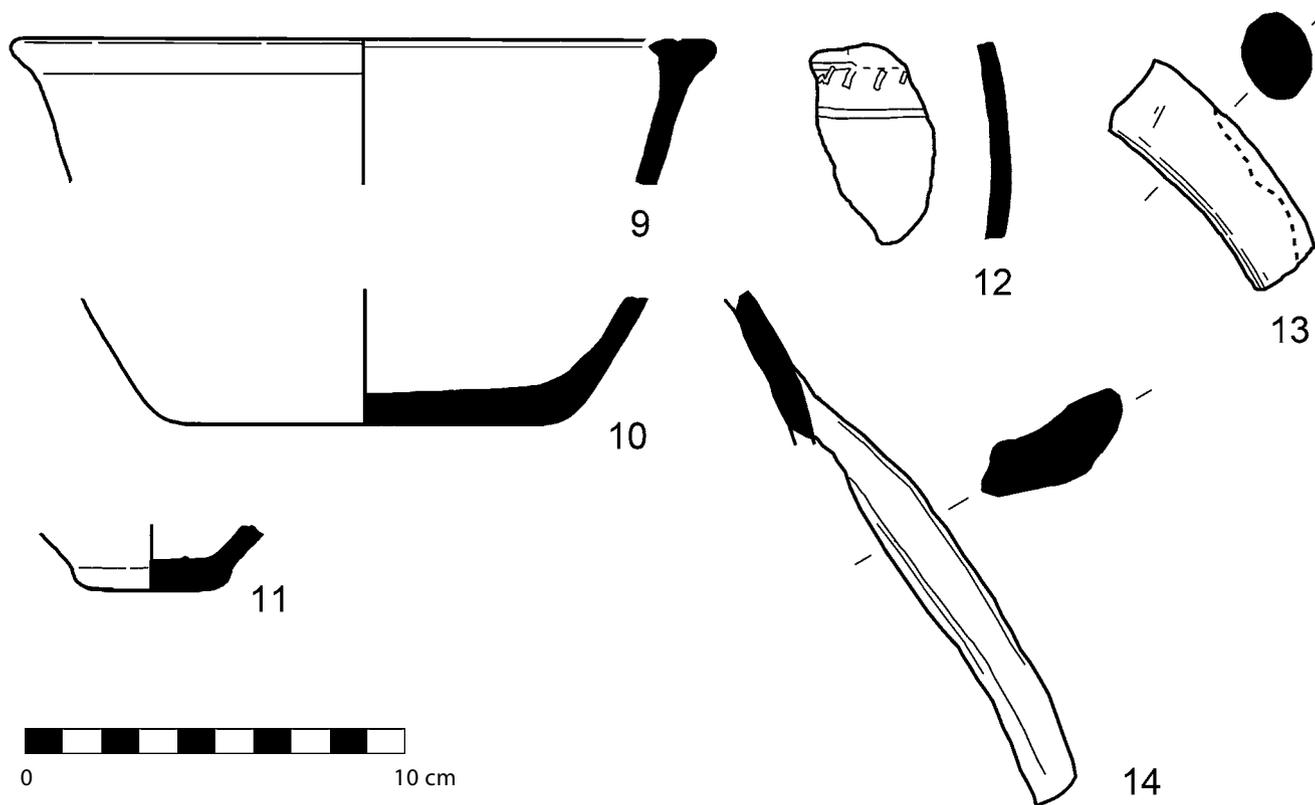






- (1) Rim and handle of jar. Orange body, moderately abundant medium-sized grit inclusions. Diameter 18 cm. The largest fragment recovered at the Cappadocia Gate.
- (2) Rim and handle of jar. Orange body, moderately abundant medium-sized grit inclusions. Diameter 12 cm.
- (3) Rim and handle of jar. Orange body, moderately abundant medium-sized grit inclusions. Diameter 18 cm.
- (4) Rim and handle of jug. Orange body, moderately abundant medium-sized grit and chaff inclusions. Diameter 8 cm.
- (5) Rim of jug. Orange body with brown-orange core, moderately abundant medium-sized grit inclusions. Diameter 8 cm.
- (6) Rim of jug. Orange body, moderately abundant medium-sized grit inclusions, ribbing on interior and exterior.
- (7) Rim of jug. Orange-red body, moderately abundant medium-sized grit inclusions. Diameter 8 cm.
- (8) Rim of jug or bottle. Orange-red body, moderately abundant medium-sized grit inclusions. Diameter 4 cm.

PLATE 184 | EARLY BYZANTINE PLAIN WARE

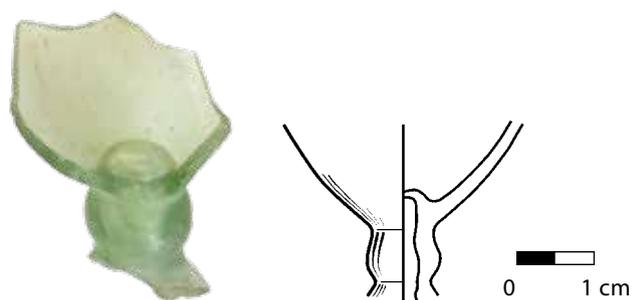


(a) Plain ware pieces:

- (9) Rim of bowl. Orange-red body, moderately abundant medium-sized grit inclusions. Diameter 20 cm.
 (10) Base. Orange-red body, moderately abundant medium-sized grit inclusions. Diameter 12 cm.
 (11) Base. Orange body, moderately abundant medium-sized grit inclusions, raised spiral from manufacturing on interior. Diameter 4.5 cm.
 (12) Body sherd. Orange body, moderately abundant medium-sized grit inclusions, incised decoration (see pl. 184b for photo).
 (13) Handle. Red-orange body, moderately abundant medium-sized grit inclusions, single incision on exterior at join with vessel body.
 (14) Strap handle. Orange body, moderately abundant medium-sized grit inclusions, ribbing on vessel interior.



(b) Incised sherds (farthest to right shown in 184a, no. 12, above)



(c) Fragment of a glass goblet



(a) Bronze follis of Maurice Tiberius (AD 582-602) (KO9.234), now curated in the Yozgat Museum |



(b) The outer face of the pen wall with the Iron Age street surface at the base of TR30. The accumulation beneath and against the pen wall contained abraded pottery and tile fragments. |

