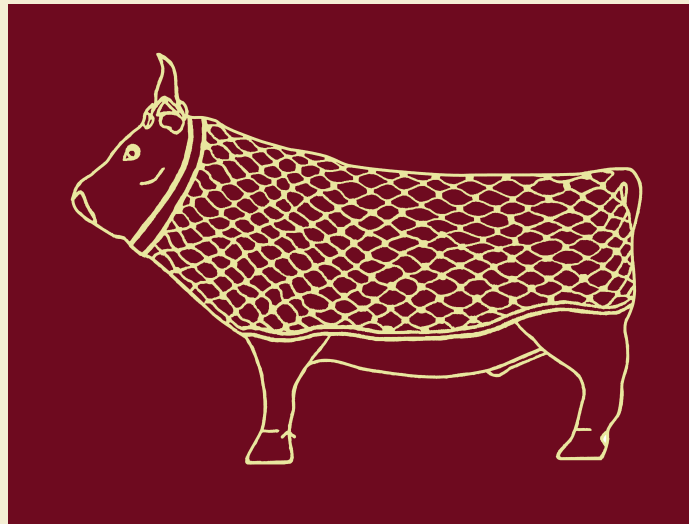


# Pseira X

## The Excavation of Block AF



# Pseira X

## The Excavation of Block AF

---



Frontispiece. Excavating in Room AF 3A/B.

PREHISTORY MONOGRAPHS 28

# Pseira X

## The Excavation of Block AF

---

by

Philip P. Betancourt

*with contributions from*

Eleni Armpis, Costis Davaras, Heidi M.C. Dierckx,  
Cheryl R. Floyd, Glynis Jones, John C. McEnroe, George Mitrakis,  
George H. Myer, Marianna Nikolaidou, David S. Reese, Mark J. Rose,  
Maria C. Shaw, Ian Smith, Eleni Velona, and Fotini Zervaki

edited by

Philip P. Betancourt and Costis Davaras



*Published by*  
INSTAP Academic Press  
Philadelphia, Pennsylvania  
2009

**Design and Production**  
INSTAP Academic Press

**Printing**  
CRWGraphics, Pennsauken, New Jersey

**Binding**  
Hoster Bindery, Inc., Ivyland, Pennsylvania

Library of Congress Cataloging-in-Publication Data

Betancourt, Philip P., 1936-

Pseira X : the excavation of Block AF / by Philip P. Betancourt ; with contributions from Eleni Armpis ... [et al.] ; edited by Philip P. Betancourt and Costis Davaras.

p. cm. — (Prehistory monographs ; 28)

Includes bibliographical references and index.

ISBN 978-1-931534-56-7 (hardcover : alk. paper)

1. Pseira (Extinct city) 2. Pseira Island (Greece)—Antiquities. 3. Excavations (Archaeology)—Greece—Pseira Island. 4. Historic buildings—Greece—Pseira Island. 5. Architecture, Minoan—Greece—Pseira Island. 6. Minoans—Greece—Pseira Island. I. Armpis, Eleni. II. Davaras, Kostas. III. Title. IV. Title: Pseira 10. V. Title: Pseira ten.

DF221.C8B567 2009

939'.18—dc22

2009046257

Copyright © 2009  
INSTAP Academic Press  
Philadelphia, Pennsylvania  
All rights reserved  
Printed in the United States of America

---

# Contents

LIST OF ILLUSTRATIONS IN THE TEXT. . . . .	vii
LIST OF TABLES. . . . .	ix
LIST OF FIGURES. . . . .	xiii
LIST OF PLATES. . . . .	xv
PREFACE. . . . .	xvii
ACKNOWLEDGMENTS. . . . .	xix
ABBREVIATIONS. . . . .	xxi
PART I. HISTORY OF THE EXCAVATION	
1. Introduction, <i>Philip P. Betancourt</i> . . . . .	3
2. Architectural Phases 1 to 3 (Early Phase), <i>Philip P. Betancourt, Marianna Nikolaidou, and Eleni Velona</i> . . . . .	5
3. Architectural Phases 3 (Late Phase) to 5, <i>Philip P. Betancourt, Eleni Armpis, George Mitrakis, Marianna Nikolaidou,</i> <i>Eleni Velona, and Fotini Zervaki</i> . . . . .	17
PART II. ARCHITECTURE AND MATERIAL CULTURE	
4. Architecture in Block AF South, <i>John C. McEnroe</i> . . . . .	29
5. Architecture in Block AF North, <i>John C. McEnroe</i> . . . . .	33
6. Pottery from Block AF, <i>Cheryl R. Floyd</i> . . . . .	39

7. Ground and Chipped Stone Tools from Block AF South, <i>Heidi M.C. Dierckx</i> . . . . .	95
8. Ground and Chipped Stone Tools from Block AF North, <i>Heidi M.C. Dierckx</i> . . . . .	99
9. Stone Weights from Block AF, <i>Heidi M.C. Dierckx and Philip P. Betancourt</i> . . . . .	105
10. Miscellaneous Objects from Block AF, <i>Philip P. Betancourt</i> . . . . .	107
11. Plaster from Block AF, <i>Maria C. Shaw and Philip P. Betancourt</i> . . . . .	113
12. Analysis of the Plaster, <i>George H. Myer and Philip P. Betancourt</i> . . . . .	121
13. Plant Remains from Block AF, <i>Glynis Jones and Ian Smith</i> . . . . .	125
14. Lithic Materials from Block AF, <i>Philip P. Betancourt</i> . . . . .	127
15. Faunal Remains from Block AF, <i>David S. Reese</i> . . . . .	131
16. Fish Remains from Block AF, <i>Mark J. Rose</i> . . . . .	143
17. Comments on the Mud Mortar, <i>Philip P. Betancourt</i> . . . . .	151
PART III. INTERPRETATION AND CONCLUSIONS	
18. Architectural History, <i>Philip P. Betancourt</i> . . . . .	155
19. Room Functions and Activities in the Buildings, <i>Philip P. Betancourt</i> . . . . .	163
APPENDIX A. POTTERY STATISTICS, <i>Cheryl R. Floyd</i> . . . . .	171
APPENDIX B. FABRIC PERCENTAGES, <i>Cheryl R. Floyd</i> . . . . .	223
REFERENCES. . . . .	229
INDEX. . . . .	237
FIGURES	
PLATES	

---

## List of Illustrations in the Text

Illustration 1.1.	Map of eastern Crete. . . . .	2
Illustration 1.2.	Plan of the town on Pseira Island. . . . .	4
Illustration 2.1.	State plan of Building AF South. . . . .	7
Illustration 2.2.	Plan and section looking west of AF 3A/B, AF 3C, and AF 3D in Block AF South. . .	9
Illustration 2.3.	Archaeological section of the strata in Room AF 3D and its relation to Room AF 3C, looking west. . . . .	10
Illustration 2.4.	Plan of the foundation deposit in Rooms AF 3A/B and AF 3C in Block AF South. . .	11
Illustration 2.5.	State plan and sections of Building AF North, looking east. . . . .	14
Illustration 3.1.	Stratigraphical section in Room AF 6, showing the four floors and the strata above them. . . . .	19
Illustration 3.2.	State plan in Rooms AF 8 and AF 9 and architectural section A-A', looking west. . .	21
Illustration 3.3.	State plan and stratigraphical section in Room AF 9, showing the units. . . . .	24
Illustration 4.1.	The west wall of Block AF South, probably built before Architectural Phase 1. . . .	30
Illustration 4.2.	Walls at the south of the block, Architectural Phases 1 and 2 in Block AF. . . . .	30
Illustration 4.3.	Architectural Phase 3 in Block AF South. . . . .	31
Illustration 4.4.	Column base and cut slab buried in the floor of Room AF 3/4. . . . .	32

Illustration 5.1. Architectural Phase 3 in Block AF North. . . . .34

Illustration 5.2. Architectural Phase 4 with the east wall of Building AU. . . . .35

Illustration 5.3. Architectural Phase 5 in Block AF. . . . .35

---

# List of Tables

Table 10.1.	Summary of the discoid weights. . . . .	111
Table 13.1.	Charred plant remains from Block AF. . . . .	126
Table 16.1.	Block AF: taxa and number of indentified specimens (NISP). . . . .	144
Table 16.2.	Anatomical distribution in Block AF and elsewhere at Pseira and in Crete. . . . .	146
Table 16.3.	Taxa present at Middle Minoan and Late Minoan sites. . . . .	147
Table A1.	Building AF South, Phase 2, Room AF 3C, MM II floor packing. Unit AF 3C-4. . . . .	173
Table A2.	Building AF South, Phase 2, Room AF 3C, MM II floor level. Unit AF 3C-3. . . . .	173–174
Table A3.	Building AF South, Phase 2, Room AF 3D, MM II floor level. Units AF 3D-3, AF 3D-4, and AF 3D-5. . . . .	174
Table A4.	Building AF South, Phase 2, Room AF 3D, MM II collapse over the floor. Units AF 3D-1 and AF 3D-2. . . . .	175
Table A5.	Building AF South, Phase 2, Room AF 3E, MM II stratum. Units AF 3E-3 and AF 3E-4. . . . .	175–176
Table A6.	Building AF South, Phase 2, Space AF 2, MM II stratum. Unit AF Drain-1. . . . .	176
Table A7.	Area AF South, Phase 3, Room AF 2, LM I floor. Unit AF 2-2. . . . .	177
Table A8.	Area AF South, Phase 3, Room AF 2, mixed MM II–LM I collapsed debris above the floor. Units AF 2-1, AF 2 South-1. . . . .	178–179

Table A9.	Area AF South, Phase 3, Room AF 3A/B, MM II–LM I deposit on a floor. Units AF 3A-3, AF 3B-3, AF 3B-4, AF 3B-5, and AF 3B-6. . . . .	179–181
Table A10.	Area AF South, Phase 3, Rooms AF 3A/B, mixed MM–LM IB debris from collapse of building. Units AF 3E-Surface, AF 3E-1, AF 3E-2, AF South-Surface, AF 3B-Surface, AF 3B-1, AF 3B-2, AF 3C-2, AF 3-1, AF 3-2, and AF 3-3. . . . .	182–185
Table A11.	Building AF South, Phase 5, Room AF 1 and Space AF 4, LM IB floor level. Units AF 1-3 and AF 4-3. . . . .	185–187
Table A12.	Building AF North, Phase 5, Space AF 10, LM IB floor and debris from collapse of building. Unit AF 10-Surface. . . . .	187
Table A13.	Building AF North, Phase 5, Room AF 1 and Space AF 4, LM IB-Final debris from collapse of building. Units AF South-1, AF 1-1, AF 1-2, AF 4-Surface, AF 4-1, and AF 4-2. . . . .	188–190
Table A14.	Building AF North, Phase 5, Room AF 5A, LM IB-Final floor level. Unit AF 5A-4. . . . .	190
Table A15.	Building AF North, Phase V, Room AF 5A, LM IB-Final debris from collapse of building. Units AF 5A-3, AF 5A-2, and AF 5A-1. . . . .	191–192
Table A16.	Building AF North, Phase 5, Room AF 5B, LM IB floor level. Unit AF 5B-4. . . . .	192–193
Table A17.	Building AF North, Phase 5, Room AF 5B, LM IB debris from collapse of building. Units AF 5-2, AF 5-3, AF 5B-1, AF 5B-2, and AF 5B-3. . . . .	193–195
Table A18.	Building AF North, Phase 5, Rooms AF 5A, AF 5B, and Area to the West, LM IB-Final debris from collapse of building with LM IIIA:2 disturbance. Units AF 5-Surface and AF 5-1. . . . .	195–198
Table A19.	Building AF North, Phase 5, Room AF 6, LM IB lowest ground floor at 8.42 m asl. Unit AF 6-7. . . . .	198–199
Table A20.	Building AF North, Phase 5, Room AF 6, LM IB floor at 8.48 m asl. Unit AF 6-6. . . . .	199–200
Table A21.	Building AF North, Phase 5, Room AF 6, LM IB-Final ground floors and collapsed upper story with LM IIIA:2 disturbance. Units AF 6-4 and AF 6-5. . . . .	200–202
Table A22.	Building AF North, Phase 5, Room AF 6, LM IB-Final collapsed upper story and debris from collapse of the building. Units AF 6-Surface, AF 6-1, AF 6-2, and AF 6-3. . . . .	202–204
Table A23.	Building AF North, Phase 5, Room AF 7, LM IB-Final debris from collapse of building with LM IIIA:2 disturbance. Units AF 7-1, AF 7-2, AF 7-3, AF 7-4, AF 7-5, AF 7-6, AF 7-7, AF 7-NE Corner, and AF-Cleaning of the N wall. . . . .	204–207
Table A24.	Building AF North, Phase 5, Room AF 8, LM IB floor level at 9.28 m asl. Units AF 8-5, AF 8-5N, AF 8-5 NE Corner Feature, AF 8-5W, and AF 8-6W. . . . .	207–209
Table A25.	Building AF North, Phase 5, Room AF 8, LM IB debris from upper story and collapse of building with LM IIIA:2 disturbance. Units AF 8-2, AF 8-2N, AF 8-2W, AF 8-2 (SW corner), AF 8-3, AF 8-3N, AF 8-3W, AF 8-3 near N Wall, AF 8-4, AF 8-4N, AF 8-4W, and AF 8-4 NE Corner Feature. . . . .	209–212

Table A26.	Building AF North, Phase 5, Room AF 8, mixed Minoan and Byzantine Surface Stratum. Units AF 8-1, AF 8-1N, and AF 8 and 9 W Wall. . . . .	.213–214
Table A27.	Building AF North, Phase 5, Room AF 9, LM IB paved surface. Units AF 9-6, AF 9-6E, and AF 9-6W. . . . .	.214–215
Table A28.	Building AF North, Phase 5, Room AF 9, LM IB-Final debris and collapsed mudbrick wall dividing Rooms AF 8 and AF 9, with LM IIIA:2 disturbance. Units AF 9-4 and AF 9-5. . . . .	.216–218
Table A29.	Building AF North, Phase 5, Room AF 9, LM IB debris from upper floor and collapse of building. Units AF 9-1, AF 9-2, and AF 9-3. . . . .	.219–220
Table A30.	Building AF North, Space AF 11, LM IB and Byzantine debris outside the building. Units AF 11-All, AF 11-1N (surface), AF 11-Surface 1E, AF 8-2 Outside to the North, AF 8-1 Outside to the North, N of AF 8, AF 8-1N, AF 8-2N of N, AF 11-N, and AF 11N of AF 7. . . . .	.221–222
Table B1.	Fabric percentages (by count) from Phase 2 (MM II). No ceramic remains come from Phases 1 and 4. . . . .	.225
Table B2.	Fabric percentages (by count) from Phase 3 (MM II–LM I). No ceramic remains come from Phases 1 and 4. . . . .	.225
Table B3.	Fabric percentages (by count) from Phase 5 (LM IB and LM IB-Final). No ceramic remains come from Phases 1 and 4. . . . .	.225–226
Table B4.	Average percentages of sherds (by count) in Phase 2 (MM II). No ceramic remains come from Phases 1 and 4. . . . .	.226
Table B5.	Average percentages of sherds (by count) in Phase 3 (MM II–LM I). No ceramic remains come from Phases 1 and 4. . . . .	.226
Table B6.	Average percentages of sherds (by count) in Phase 5 (LM IB and LM IB-Final). No ceramic remains come from Phases 1 and 4. . . . .	.226
Table B7.	Average percentages of sherds (by count) in all phases. . . . .	.227
Table B8.	Percentages of sherds (by count) in various fabrics according to vessel types in Phase 5 (Building AF North). . . . .	.228



---

# List of Figures

- Figure 1. Pottery from Rooms AF 3C, AF 3D, AF 3E, and AF 2. Scale 1:3.
- Figure 2. Pottery from Rooms AF 2 and AF 3A/B. Scale 1:3.
- Figure 3. Pottery from Rooms AF 3A/B, AF 3C, and AF 3E. Scale 1:3.
- Figure 4. Pottery from Rooms AF 3A/B, AF 3C, AF 1, and AF 4. Scale 1:3.
- Figure 5. Pottery from Room AF 1 and Space AF 4. Scale 1:3.
- Figure 6. Pottery from Room AF 1, Space AF 4, and Room AF 5A. Scale 1:3.
- Figure 7. Pottery from Rooms AF 5A and AF 5B. Scale 1:3, except as noted.
- Figure 8. Pottery from Rooms AF 5A and AF 5B. Scale 1:3.
- Figure 9. Pottery from Rooms AF 5A and AF 5B. Scale 1:3.
- Figure 10. Pottery from Rooms AF 5A and AF 5B. Scale 1:3.
- Figure 11. Pottery from Rooms AF 5A, AF 5B, and AF 6. Scale 1:3.
- Figure 12. Pottery from Room AF 6. Scale 1:3.
- Figure 13. Pottery from Room AF 6. Scale 1:3.
- Figure 14. Pottery from Room AF 6. Scale 1:3, except as noted.
- Figure 15. Pottery from Rooms AF 6 and AF 7. Scale 1:3.
- Figure 16. Pottery from Room AF 7. Scale 1:3.
- Figure 17. Pottery from Rooms AF 7 and AF 8. Scale 1:3.
- Figure 18. Pottery from Room AF 8. Scale 1:3.

- Figure 19. Pottery from Room AF 8. Scale 1:3.
- Figure 20. Pottery from Room AF 8. Scale 1:3.
- Figure 21. Pottery from Room AF 8. Scale 1:3.
- Figure 22. Pottery from Rooms AF 8 and AF 9. Scale 1:3.
- Figure 23. Pottery from Room AF 9. Scale 1:3.
- Figure 24. Pottery from Room AF 9. Scale 1:3.
- Figure 25. Pottery from Room AF 9. Scale 1:3.
- Figure 26. Pottery from Room AF 9 and Space AF 11. Scale 1:3.
- Figure 27. Pottery from Space AF 11. Scale 1:3.
- Figure 28. Pottery from Space AF 11. Scale 1:3.
- Figure 29. Pottery from Space AF 11. Scale 1:3.
- Figure 30. Pottery from Space AF 11. Scale 1:3.
- Figure 31. Pottery from Space AF 11 and the wall between AF 1 and AF 5B. Scale 1:3.
- Figure 32. Ground stone tools from Block AF. Scale 1:3.
- Figure 33. Obsidian, quartz crystals, and ground stone tool from Block AF. Scale 1:1, except as noted.
- Figure 34. Ground stone tools from Block AF. Scale 1:3.
- Figure 35. Ground stone tools and obsidian from Block AF. Scale 1:3, except as noted.
- Figure 36. Quartz crystals, obsidian, and ground stone tools from Block AF. Scale 1:1, except as noted.
- Figure 37. Obsidian and ground stone tools from Block AF. Scale 1:3, except as noted.
- Figure 38. Ground stone tools from Room AF 6. Scale 1:3, except as noted.
- Figure 39. Ground stone tools from Rooms AF 6 and AF 7. Scale 1:3, except as noted.
- Figure 40. Ground stone tools, obsidian, and quartz crystals from Rooms AF 7 and AF 8. Scale 1:3, except as noted.
- Figure 41. Ground stone tools from Room AF 9 and Space AF 11. Scale 1:3.
- Figure 42. Ground stone tools, quartz crystals, and stone weights from Block AF. Scale 1:3, except as noted.
- Figure 43. Miscellaneous cataloged objects from Block AF. Scale 1:3, except as noted.
- Figure 44. Miscellaneous cataloged objects from Block AF. Scale 1:3, except as noted.
- Figure 45. Miscellaneous cataloged objects from Block AF. Scale 1:3.

---

# List of Plates

- Plate 1A. Block AF, looking south.
- Plate 1B. Aerial photograph of Block AF and the surrounding parts of Katsouni Peninsula on Pseira Island.
- Plate 2. Room AF 1, looking north.
- Plate 3A. Detail of the stairs and the west wall in Room AF 1.
- Plate 3B. Strips of plaster in situ within the soil in Room AF 1.
- Plate 4A. Space AF 3A (the Pillar Crypt), looking north, with Space AF 2 at the upper right.
- Plate 4B. Space AF 3A looking west, with the column base in situ (upside down) where it fell into AF 3A from the upstairs room.
- Plate 5A. Detail of the red limestone column base found in Space AF 3A.
- Plate 5B. Lifting the column base in Space AF 3A.
- Plate 5C. Column base in situ in Space AF 3A.
- Plate 6A. General view of Room AF 1, looking northwest.
- Plate 6B. Blocked doorway in the west wall of Room AF 1 leading to Room AF 5B, as seen from inside AF 1.
- Plate 6C. Triton shell in situ in the fill in Room AF 5A.
- Plate 7A. Southeast corner of Room AF 6, with the doorway at the left.
- Plate 7B. Southwest corner of Room AF 6, showing the hearth at left.
- Plate 8A. Southwest corner of Room AF 6 with a hearth with a cooking pot (**AF 194**) in place.

- Plate 8B. Stone mortar (**AF 480**) in situ in Room AF 6.
- Plate 8C. The northwest corner of Room AF 6, showing the bedrock with a mortar (**AF 479**) carved into it in the corner.
- Plate 9A. Room AF 6, looking west from the street outside the building.
- Plate 9B. Room AF 8, after excavation, looking west.
- Plate 10A. The west wall of Rooms AF 8 and AF 9, looking southwest.
- Plate 10B. Building AF, looking southwest.
- Plate 11A. Rooms AF 9 and AF 8, looking north.
- Plate 11B. Conical cups in situ in Unit AF 9-6.
- Plate 11C. Room AF 8 after excavation of Unit AF-5, looking east.
- Plate 12A. Spaces AF 4 (at left) and AF 1 (at right), looking northwest.
- Plate 12B. Space AF 4, looking east.
- Plate 13A. Space AF 11 (exterior street), east of Room AF 6, looking west.
- Plate 13B. The north wall of AF North, looking east, showing the poorly built wall (at left) added after the LM IB destruction to help hold up the building's north wall (after excavation to remove the rubble between the two walls).
- Plate 13C. The L-shaped bench at the east of the entrance to Building AF North, looking south.
- Plate 14. Minoan pottery, scale 1:2 except as marked.
- Plate 15. Minoan pottery, scale 1:2 except as marked.
- Plate 16. Minoan pottery, scale 1:2 except as marked.
- Plate 17. Minoan pottery, scale 1:2 except as marked.
- Plate 18A. Plaster strips, upper sides.
- Plate 18B. Plaster strips, lower sides.
- Plate 19A. Plaster strips B, C, and F, upper sides.
- Plate 19B. Plaster strips B, C, and F, lower sides.
- Plate 20A. Edge of plaster strip D.
- Plate 20B. Plaster strip H, upper side.
- Plate 20C. Plaster strip H, lower side.
- Plate 21A. Shells and conical cup used as a floor deposit in Room AF 3B.
- Plate 21B. Detail of a shell (PS 3669) from the floor deposit in Room AF 3A/B and 3C (no. 9 on Ill. 2.4).

---

# Preface

During the process of surveying and photographing the parts of Pseira that had not been excavated by Richard Seager in 1906–1907, the photographer (Mike Betancourt) noticed small bits of red-painted plaster among the walls in Block AF, the most southern group of walls on the Pseiran peninsula. He informed John McEnroe of the discovery, and after a brief discussion with the director, a decision was reached to make a test trench at the location of the plaster (AF 1). The block turned out to be one of the most important areas at the site because of its long succession of building phases.

Block AF was not an easy area to excavate. Many of the rooms were remodeled and altered repeatedly during its long period of habitation. Radical changes were made to some of the buildings in this block at several points in their history, and the information that they provide is a testament to the hard work and keen insights of the trench supervisors, the architect, and the many other staff members who worked on this complicated group of rooms.

This southern group of buildings at the edge of the town is important for several reasons. It has examples of complex architectural details including a “pillar crypt,” elaborate upstairs floors, a well-preserved U-shaped staircase, and a well-designed kitchen, all of which contribute significantly to our knowledge of East Cretan building practices. It also provides a good compliment to Building BS/BV, a grander building at Pseira (published in *Pseira* III). Like BS/BV, one building in the block had evidence for cult practices, but the architectural settings for the ceremonies are different in the two structures.

Block AF provides the fullest sequence of building phases from any one area at Pseira, with habitation extending from before MM II to LM III. Unlike the Pseiran buildings that had been thoroughly looted in antiquity, many of the objects in Block AF were broken but not removed, so a more complete range of finds could be excavated. In addition to domestic pottery, the houses furnish examples of stone tools,

stone vessels, loom weights, inscriptions in Linear A, cult objects, animal bones, marine shells, and a wide range of material recovered from water sieving. This latter category, with burned grain, fish bones, shells, and other categories of materials, fills many gaps in our knowledge of Pseiran life.

Philip P. Betancourt

---

# Acknowledgments

The Pseira project was an American-Greek collaboration (*synergasia*) directed by Philip P. Betancourt and Costis Davaras. It was sponsored by Temple University, the Archaeological Institute of Crete, and the Archaeological Society of Crete, under the auspices of the Greek Ministry of Culture and the American School of Classical Studies at Athens. Additional financial assistance for the work published in this volume was given by the following persons and institutions: the Institute for Aegean Prehistory; the National Endowment for the Humanities, an independent federal agency; The University of Pennsylvania Museum of Archaeology and Anthropology; the Society for the Preservation of the Greek Heritage; the Arcadia Foundation; the Mellon Corporation; Hamilton College; Queen's University, Kingston, Ontario; and other donors.

Thanks are extended to all those who assisted with the project: Directors for Prehistoric and Classical Antiquities, Yannis Tzedakis (1985–1990, 1993–1999), Ios Zervoudaki (1990–1992), Katerina Romiopoulou (1992–1993), and Liana Parlama (1999–2000); the late Nikos P. Papadakis, Epimeletis and Supervisor for the 24th Ephorate for Prehistoric and Classical Antiquities. The directors are also grateful to the Directors of the American School of Classical Studies at Athens, Stephen G. Miller (1985–1987), William D. Coulson (1987–1997), and James D. Muhly (1997–2002) for their assistance.

Heidi Dierckx, author of the sections on stone implements, would like to thank Harriet Blitzer for her advice on the study of stone tools and for her help in their cataloging. She would also like to thank Jeffrey S. Soles and Costis Davaras for allowing her to study and refer to the stone material from the excavations at Mochlos, and David Romano for allowing her to examine stone implements in the University of Pennsylvania Museum of Archaeology and Anthropology.

The excavations and studies for Block AF took place between 1990 and 1997. Excavations were conducted in 1990–1991 under the direction of the editors of this

volume with the supervision of several trench supervisors: Eleni Armpis, George Mitrakis, Marianna Nikolaidou, Eleni Velona, and Fotini Zervaki. The architectural study was conducted by John C. McEnroe with the help of several assistants: Anne Barnosky (1990–1992), Joan Beaudoin (1992), Senta C. German (1989–1992), Naomi Horowitz (1991), Sharon Rathke (1989–1990), and Paul Scotton (1991). A plan of the site was completed in 1992 using data prepared by the entire team of architects listed in *Pseira* IV. Field photographs were taken by Michael W. Betancourt (1990), George Mitrakis (1992), and Philip P. Betancourt (1990–1994, 2006–2007). Aerial photographs were made in 1992 by J. Wilson and Eleanor E. Myers. The water-sieving operation was supervised by Jonathan Chapman (1990) and Ian Smith (1991). Technicians Nikos Daskalakis and Andreas Klinis provided special expertise in excavation. The architecture was cleaned in 2005 and 2006. Alekos Nikakis provided expertise in consolidation of the architecture.

Mary A. Betancourt supervised work in the apotheki. Profile drawings were by Teresa Howard (1990–1992), Jenny Hope Simpson (1991), Krista Gustafson (1990–1992), Marie T. Naples (1990–1991), Jeanne Pond (1990), Michael W. Betancourt (1990), Eleni Velona (1990), Naomi Horowitz (1991), Ursula Hawlitschka (1992), and the authors of the individual sections. Catalog entries for the material presented here were made by Mary A. Betancourt (1990–1993) and Laurie Schmitt (1991–1992), as well as by the individual authors. Conservators included Asaf Oron (1992) and Vanessa Edwards (1992). Object photography was by George Mitrakis (1992–1993) and Philip P. Betancourt (1990–1994).

Other studies were made by the authors of the individual sections. Samples for analysis were collected by the trench supervisors under the supervision of Philip P. Betancourt and were studied in the laboratories listed in the following chapters.

Assistance with editing and preparation of illustrations was given by Elizabeth Shank, Louise Langford-Verstegen, and Andrea Powers.

---

# Abbreviations

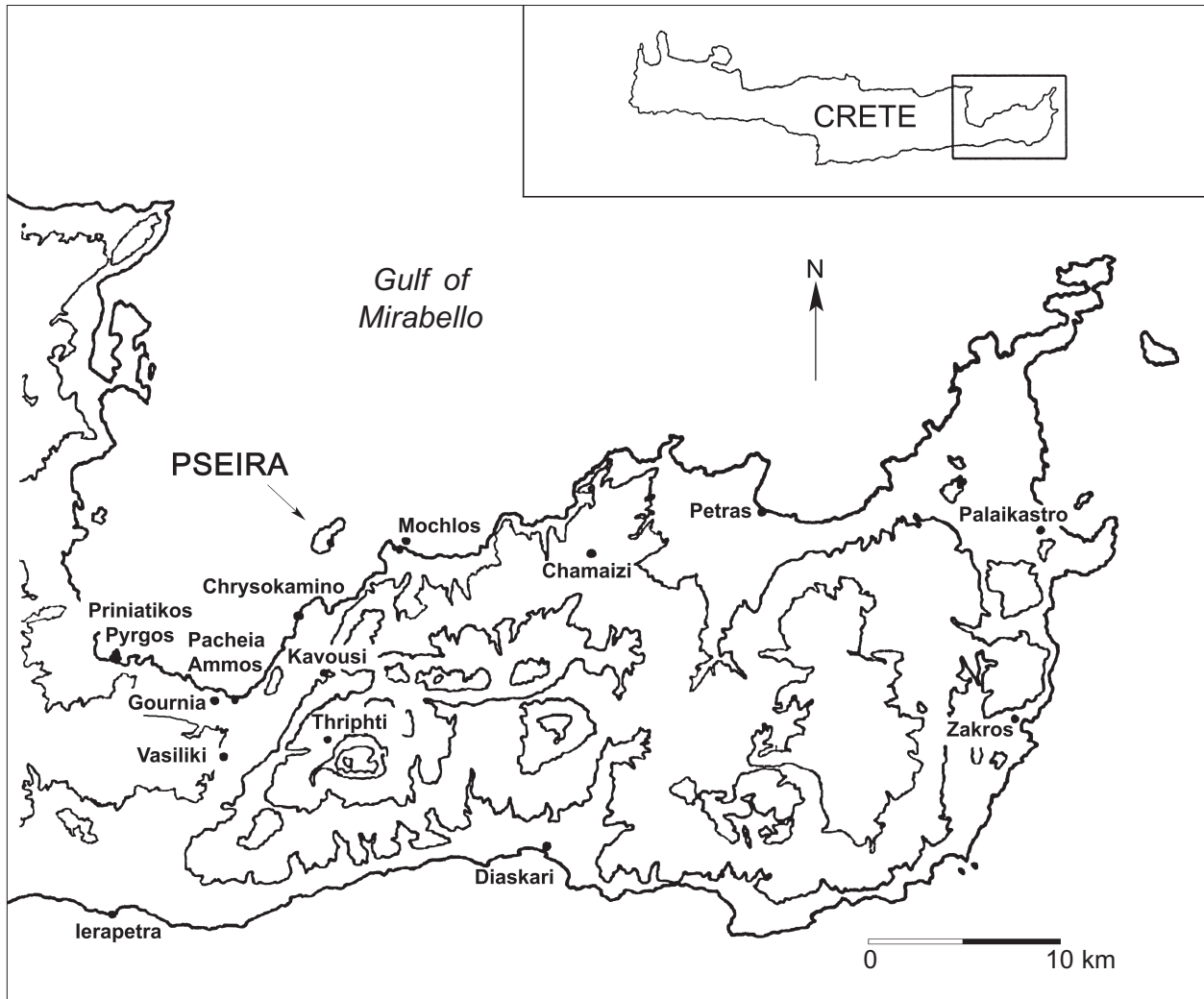
ca.	approximately	pers. comm.	personal communication
CF	Coarse Fabric	pers. obs.	personal observation
cm	centimeters	PF	Phyllite Fabric
d	diameter	PS	excavation number
dim	dimension	<i>Pseira I</i>	P.P. Betancourt and C. Davaras, eds. <i>Pseira I: The Minoan Buildings on the West Side of Area A</i>
EM	Early Minoan	<i>Pseira II</i>	P.P. Betancourt and C. Davaras, eds. <i>Pseira II: Building AC (the "Shrine") and Other Buildings in Area A</i>
F	fused	<i>Pseira III</i>	P.P. Betancourt and C. Davaras, eds. <i>Pseira III: The Plateia Building</i> , by Cheryl R. Floyd
FF	Fine Fabric	<i>Pseira IV</i>	P.P. Betancourt and C. Davaras, eds. <i>Pseira IV: Minoan Buildings in Areas B, C, D, and F</i>
gr	gram	<i>Pseira V</i>	P.P. Betancourt and C. Davaras, eds. <i>Pseira V: The Architecture of Pseira</i> , by J. McEnroe
ht	height	<i>Pseira VI</i>	P.P. Betancourt and C. Davaras, eds. <i>Pseira VI: The Pseira Cemetery 1</i>
kg	kilograms	<i>Pseira VII</i>	P.P. Betancourt and C. Davaras, eds. <i>Pseira VII: The Pseira Cemetery 2. Excavation of the Tombs</i>
L	left		
LM	Late Minoan		
m	meters		
m asl	meters above sea level		
max	maximum		
MFCC	Mirabello Fabric, Cooking Class		
MG	Middle Geometric		
MM	Middle Minoan		
MNI	Minimum Number of Individuals		
NISP	Number of Individual Specimens		

<i>Pseira VIII</i>	P.P. Betancourt, C. Davaras, and R. Hope Simpson, eds. <i>Pseira VIII: The Archaeological Survey of Pseira Island Part 1</i>	R	right
		th	thickness
		UF	unfused
<i>Pseira IX</i>	P.P. Betancourt, C. Davaras, and R. Hope Simpson, eds. <i>Pseira IX: The Archaeological Survey of Pseira Island Part 2. The Intensive Surface Survey</i>	unk	unknown
		w	width
		ws	water-sieved sample included
		wt	weight

Part I

---

# History of the Excavation



*Illustration 1.1. Map of eastern Crete.*

---

# Introduction

*Philip P. Betancourt*

Pseira Island, occupied intermittently from the Neolithic period until the Byzantine era, was an important Minoan seaport along the northeastern coast of Crete during the Bronze Age (Ill. 1.1). Its excavation uncovered substantial remains from a Minoan town consisting of about 60 buildings (see *Pseira* I–IX). Houses were arranged in irregular blocks that were divided by roadways providing easy pedestrian access between different parts of the community.

Block AF is situated at the southern tip of the peninsula where the main part of the Minoan settlement was constructed (the peninsula is named Katsouni, a local Cretan word for a long curved knife or any feature resembling its shape; see Ill. 1.2). Several successive phases of construction can be identified in the architecture in this block of houses, making it the most stratigraphically complex location excavated by the Pseira project. The earliest surviving architecture is from MM I–II or earlier. It consists of a massive retaining wall at the west side of the area, and it probably supported Minoan buildings from its earliest phase. Houses were constructed here in MM I to MM II, and they were replaced by later structures that were destroyed in MM IIB. After a pause, new buildings were erected. Another general

destruction of the community can be assigned to Late Minoan IA, securely dated to the period of the eruption of Thera by the presence of pumice on the floors that were covered before the next building phase.

After this major destruction of the block in LM IA, the tip of the peninsula (Area AF South) was abandoned, and new construction took place farther away from the sea. The southern parts of the block were kept as outdoor space during the rest of the life of the town. The new construction resulted in two different sets of rooms, both of them situated in Area AF North.

The new LM IB buildings re-used some of the earlier rooms (AF 1, AF 5A, and AF 6B) and added additional interior spaces on the north (AF 6 to 9). An important household shrine in the upstairs space above these new rooms used a series of imported Knossian ceramic vases as well as a white-painted bull figurine and several other cult objects. Among the pottery pieces were rhyta decorated in the Marine Style and related decorative traditions. In another destruction (at the end of LM IB), the block was damaged by fire.

Casual re-occupation in the partly ruined rooms continued in LM IB-Final and LM III, until the ceilings finally collapsed. This part of the peninsula



---

## Architectural Phases 1 to 3 (Early Phase)

*Philip P. Betancourt, Marianna Nikolaidou, and Eleni Velona*

Pseira is an offshore island on the eastern side of the Gulf of Mirabello, a large bay in northeast Crete (Ill. 1.1). Its Minoan town was excavated by Richard Seager in 1906 and 1907 (Seager 1910), and the editors of this volume returned to the island in 1984 to begin a new project (Betancourt and Davaras, eds., 1995, 1998a, 1998b, 1999, 2001, 2002, 2003; Betancourt, Davaras, and Hope Simpson, eds., 2004, 2005). Block AF was excavated by the modern expedition.

Block AF is at the southern end of Katsouni Peninsula on a level part of the peninsula's spine (Frontispiece; Ill. 1.2; Pls. 1A, 1B). The land slopes down quickly at the east of the block where bare cliffs rise above the sea, but the landscape is not as rugged at the west where a more gradual descent terminates at the water's edge at the southeastern side of the small Pseiran harbor. South of the block, the peninsula is bare rock that is washed most years by turbulent seas.

Before work began at this location, a few walls were above ground, but the architecture was mostly covered with soil. The west wall of Room AF 1, some of the stones of the massive wall west of Spaces AF 3A/B, and a few other stones were exposed, so that the upper parts of several walls could be traced on the modern ground surface.

Vegetation consisted of grass and low bushes. A few small fragments of Minoan plaster, some showing traces of red paint, were lying on the surface within Room AF 1. The relation between Areas AF South and AF North was not visible before excavation.

Goals and objectives for the investigation of the block were formulated in 1990. This block was chosen as one of the locations for detailed investigation. The main goal of the work was to achieve as complete an understanding of the block as its excavation would show. Additional goals included an analysis of the artifacts and archaeological materials that would be excavated, their proper understanding within their contexts, and an appreciation of the role that this block played within the community at Pseira. Several specific objectives were planned:

1. Excavation, recovery, and recording of the building or buildings as well as the objects and archaeological materials within their contexts, using modern methodology
2. Completion of plans, photographs, descriptions, and discussions of the architecture
3. Completion of drawings, photographs, descriptions, discussions, statistical tables, and other information on the artifacts and

archaeological materials uncovered by the excavation

4. Study of the excavated information within its local, regional, and international contexts
5. Conservation of both architecture and finds
6. Publication of the results of the project

Block AF was divided into two sections after sufficient excavation had taken place to establish that Area AF South and Area AF North contained different buildings. Before work began, the entire block was regarded as a single location consisting of the architectural remains at the eastern side of the tip of the main Pseiran peninsula.

The region near AF was first investigated in the archaeological campaign of Richard Seager in 1906 or 1907. Seager's workmen excavated a pit in the exterior space east of Room AF 6, immediately east of the doorway leading from the street into that room. They excavated through the paved roadway at this location, reaching the bedrock without uncovering any architecture aside from the paved street. They did not excavate inside the building. Seager's small trench was not mentioned in his publication (Seager 1910). No other part of Block AF was previously excavated.

When Block AF was examined after the removal of bushes and before work began, the upper parts of most of the walls delineating the rooms could be traced on the surface. This examination allowed the rooms to be numbered for convenience in mapping, and the process of excavation and its recording system were organized on the basis of the architectural divisions. Rooms and exterior spaces were numbered from AF 1 through AF 11.

The excavation took place over two seasons. Area AF South was excavated during 1990 and 1991 under the supervision of Marianna Nikolaidou and Eleni Velona. The work was directed by the editors of this volume (for the excavation system at Pseira and the conventions and nomenclature for the site, see Betancourt and Davaras, eds., 1995, xvii, xviii).

Paleobotanists Jonathan Chapman (1990) and Ian Smith (1991) operated the water separation machine for retrieval of microscopic remains and sorted the resulting flot and residue. For theory and practice of this type of machine, the reader may consult French (1971) and Peterson (2009). Sampling strategy for water sieving involved the collection of five samples of 15 kg each from floor levels (one from each corner of the room and one from the center of the room), with additional samples collected where visual inspection indicated the presence of carbonized organic remains. For the MM II deposit in Space AF 3C, the only deposit yielding this type of material, 100% of the soil was water sieved.

Additional cleaning, drawing, and consolidation of architecture took place in 2005. The consolidation was accomplished under the supervision of Alekos Nikakis. Drawing was accomplished by Gayla Weng and Judith Papit. Philip Betancourt supervised the work.

Architect John McEnroe divided the construction of the buildings in this block into five phases based on the sequence of walls and other architectural features like roads and paved surfaces. The methodology used the physical evidence of the walls and their superposition and bonding to determine the specific sequence in which they were constructed. The study of the pottery was by Cheryl Floyd. Her research agreed with the sequence of these phases based on the architecture, and she assigned pottery dates for many of the architectural events that made up the individual steps in the construction of the walls. In addition to dates provided by architecture and pottery, the presence of waterworn pumice from the island of Thera's LM IA volcanic eruption provided a *terminus post quem* for contexts containing this material (for the identification of Pseira's pumice, see Vitaliano and Vitaliano 1996). The following discussion of the process of excavation is organized by the block's architectural phases.

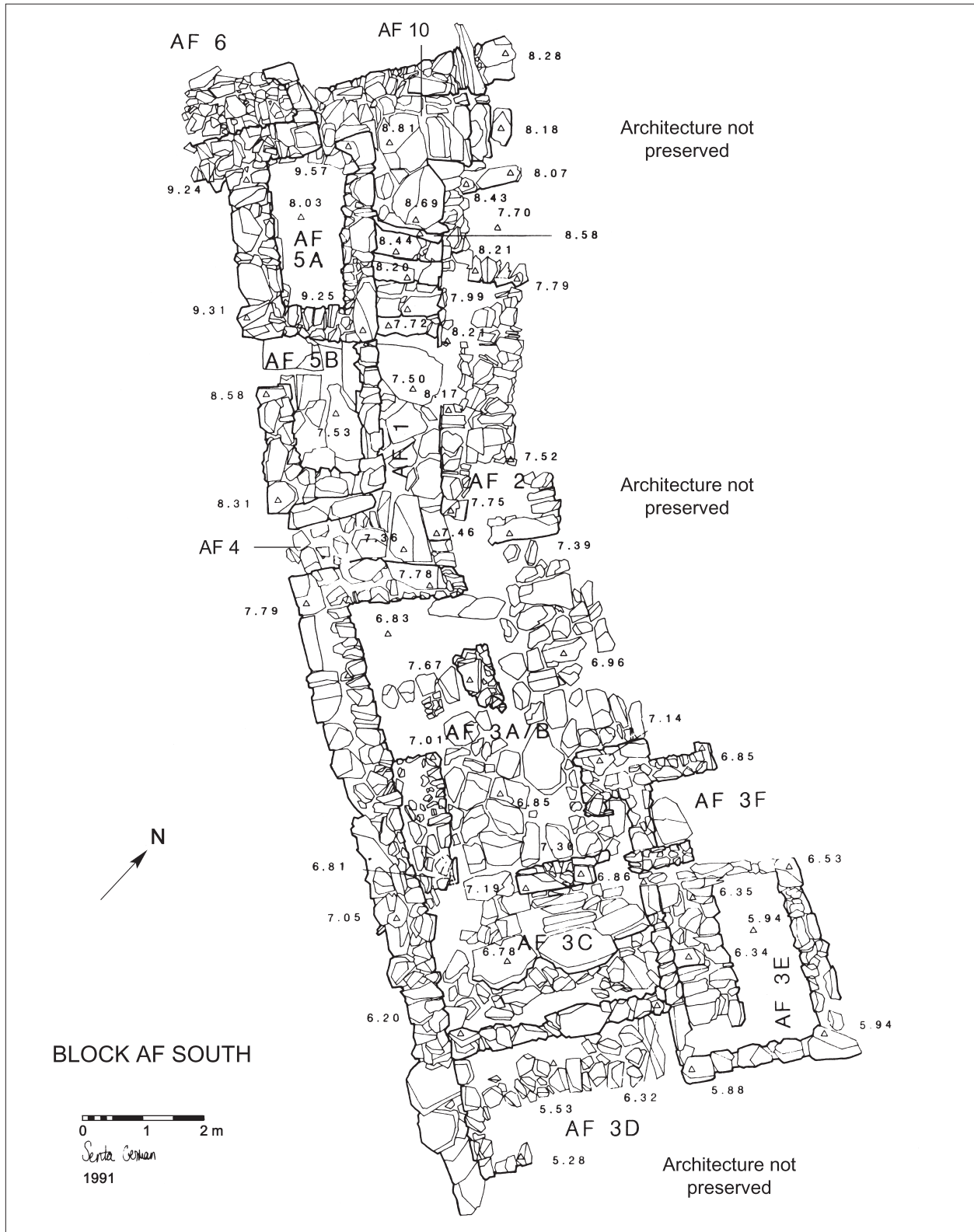


Illustration 2.1. State plan of Block AF South.

## *Excavation of Architectural Phase 1*

Room AF 3D, a space that preceded the construction of Building AF South, was found at a low level at the southern edge of the block of rooms (Ill. 2.1). Marianna Nikolaidou supervised the work. The earliest construction in this part of the site was a massive wall at the west side of the block, which seems to be earlier than Architectural Phase 1. No rooms from before Phase 1 were discovered in Block AF, but sherds from Final Neolithic to MM I found in later fills and in debris fallen from walls and roofs showed that early structures once stood in the vicinity. Because it was common at Pseira for early walls to be demolished to provide building materials for later construction, these early sherds probably belong to the buildings that were the predecessors of Architectural Phase 1.

### SPACE AF 3D

Space AF 3D was a rectangular architectural space south of the later building's Room AF 3C (Ills. 2.1–2.3). Because of the slope of the hill at this point, the modern surface was at 5.71 m asl at the north of the room but only at 5.25 m asl just south of the existing architecture. The upper pass in the room (unit AF 3D-1) removed soil down to 5.58/5.45 m asl. The soil was hard and compact. It was yellowish red (5YR 4/6) in color and filled with stones of various sizes that had fallen from the Minoan walls. Many paving slabs of greenish gray metacarbonate were present along with the rest of the fallen material (for metacarbonate, a subvariety of the local limestone, see Betancourt 2001b). The tilted paving slabs were encountered at about 5.58/5.53 m asl.

The excavation was continued as a separate pass (unit AF 3D-2), which removed the soil associated with the tilted paving slabs found at the bottom of the higher unit. The pass excavated about 10 cm of soil, from ca. 5.58/5.53 to 5.49/5.43 m asl, exposing

the slabs and demonstrating that they were across the entire room. Only a few small pieces of pottery and some tiny fragments of charcoal were present in the level, which consisted of the fallen floor from the room on the upper story. It had collapsed all at once, falling down into the ground floor. The yellowish red soil was soft, and it only contained small stones and a few sherds. The pottery, from MM IB or MM IIA, provided a date for the end of this phase. After removal of the tilted slabs, a slab pavement resting partly on bedrock (the floor of the room, at 5.49 to 5.43 m asl) was found at the base of the level. Unit AF 3D-5 later removed a small lens of soil from above the floor at the northwest end of the room.

The excavation of units AF 3D-3 and AF 3D-4 extended from 5.49/5.43 m asl to ca. 5.20 m asl. This set of units removed the slab floor and investigated under it. Unit AF 3D-3 was excavated in the southern part of the room, and AF 3D-4 was in the northwestern part of the room (bedrock was already visible at the northeast). This pass of 2 units uncovered the floor packing for the paved surface and the fill of soil under the floor. The soil was darker and browner than the sediment in the higher levels (the color was strong brown, 7.5YR 4/6). It was also lumpy and soft, and it contained a few tiny fragments of charcoal. The pottery was not very diagnostic, but its date was in MM IB or early MM II.

No traces of architecture were found south of this room, but the south wall of the space was not an exterior wall, so the architecture must have once extended in this direction. The topography south of AF 3D was rocky and uneven, and it would have been difficult to construct a stable structure here. Considering the evidence for several destructions on this part of the site, it is not surprising that little was preserved on this area that consisted mostly of exposed bedrock.

## *Excavation of Architectural Phase 2*

Besides the remains in AF 3D discussed above, Architectural Phase 2 was only explored in two trenches, AF 3C and AF 3E (Ills. 2.1–2.4). Parts of

two rooms were found. The rooms were probably part of the same house, a large building that occupied this part of the peninsula until it was destroyed

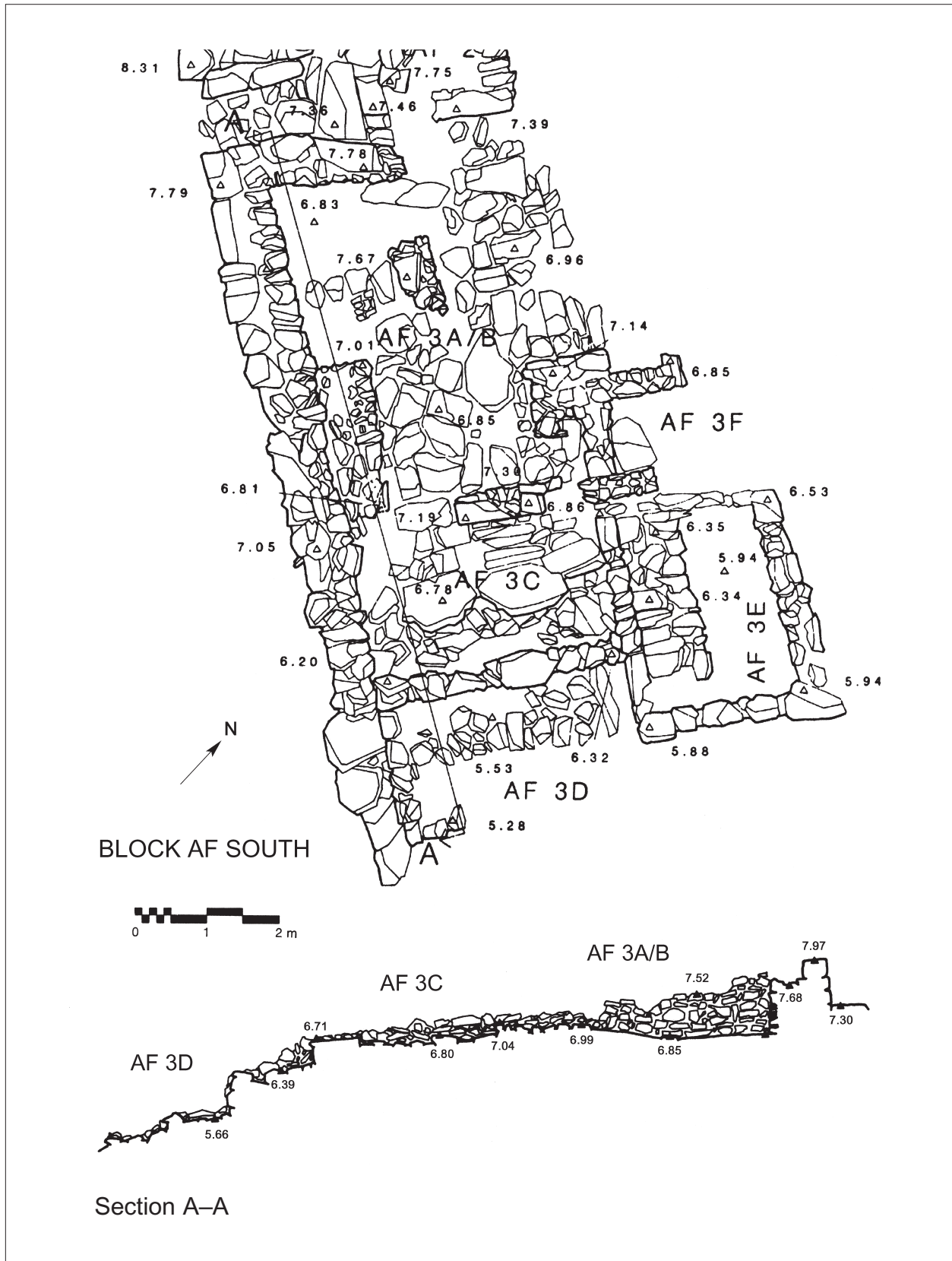


Illustration 2.2. Plan and section looking west of Rooms AF 3A/B, AF 3C, and AF 3D in Block AF South.

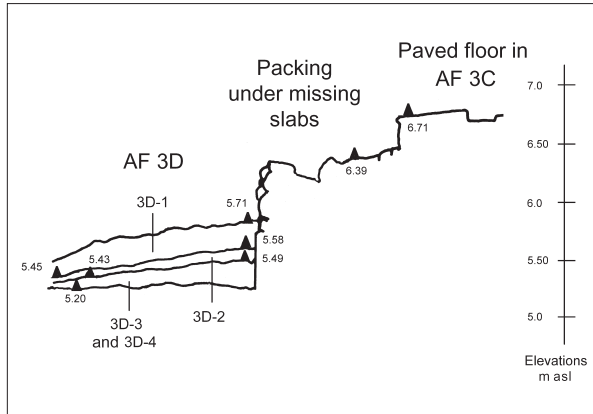


Illustration 2.3. Archaeological section of the strata in Room AF 3D and its relation to Room AF 3C, looking west.

at some time within early MM II. The work was supervised by Marianna Nikolaidou.

#### ROOM AF 3C, EARLY LEVELS

Strata under the slab floor of the Architectural Phase 3 building were investigated in Room AF 3C. Unit AF 3C-3 was excavated from 6.6/6.48 to 6.23/6.22 m asl. The soil was compact and filled with angular blocks of limestone, slabs of metacarbonate, and tiny pieces of charcoal. Its color was yellowish red (5YR 4/6). Walls at the east and the south were below the level of the paving slabs from Phase 3, demonstrating that the room preceded the later architecture. The latest pottery was from MM II. The fallen slabs of metacarbonate suggested that the house had had an upper floor with a paving of stone slabs. A clay floor was at the base of the pass.

Unit AF 3C-4 was the pass removed next, below unit AF 3C-3. It was excavated down to 6.13 m asl. It removed the empty clay floor and the packing beneath it. The pottery was from MM II, with earlier sherds included as well. The level below the floor consisted of loose soil whose color was strong brown (7.5YR 4/6). The packing contained many small bits of charcoal, including carbonized grains. All the soil was water sieved.

#### SPACE AF 3E

Space AF 3E was a small room visible outside the southeast corner of the Phase 3 building at the south of Block AF (Ill. 2.4). Its excavation uncovered the corner of a small rectangular room whose walls were at a lower level than the Phase 3 architecture. The room had a platform at its west side. Because of the slope of the hill, the upper surface extended from 6.55 m asl (the top of the visible architecture at the north) to 5.83 m asl at the south. The first pass below the surface level (AF 3E-1) excavated down to 6.06/5.79 m asl. The soil was reddish brown (5YR 4/4), compact, and filled with stones fallen from the walls. Only a few sherds were present. The latest sherds were from MM II.

The next two passes, AF 3E-2 and AF 3E-3, removed additional fill down to 5.85/5.77 m asl. The soil color was strong brown (7.5YR 4/6). The bottom of the trench was reached with unit AF 3E-4. The excavation showed that the room's poorly preserved walls ran underneath the Phase 3 building that was destroyed at the end of LM IA, confirming that this room was part of its predecessor. Little was found in the space, because the stones from the collapse of the walls had fallen into an almost empty room. No clearly defined floor was present.

## *Excavation of Architectural Phase 3*

A large house was constructed on the site of the Phase 2 building after the earlier building's destruction (Ill. 2.1). The date of the destruction of Architectural Phase 2 was established by **AF 20**, a MM IIB carinated cup found beneath the construction of Phase 3. The new building lasted until a violent earthquake destroyed it at the end of LM IA. Although the northwestern part of the structure

survived the destruction, and some of its rooms were remodeled and re-used in a later period (Architectural Phase 5), most of the eastern rooms collapsed and fell into the sea at the end of LM IA. Marianna Nikolaidou supervised most of the excavation, but Eleni Velona oversaw the work in Space AF 4 and in Rooms AF 5A and AF 5B.